



Study measuring economic impacts of various possible changes to EU working time rules in the context of the review of Directive 2003/88/EC

Final Report

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Abbreviations

AA	Administrative Action
AB	Administrative Burden
AC	Administrative Cost
BAU	Business-as-usual
BDS	Eurostat’s Business Demographic Statistics
BDS	Business Demography Statistics
CJEU	Court of Justice of the European Union
EBTP	European Business Test Panel
EC	European Commission
EPL	Employment Protection Legislation
EQLS	European Quality of Life Survey
EU	European Union
EWCS	European Working Condition Survey
GDP	Gross Domestic Product
HORECA	Hotel/Restaurant/Café sector
HR	Human Resources
IA	Impact Assessment
IAG	Impact Assessment Guidelines
IO	Information Obligation
LFS	Eurostat’s Labour Force Survey
MS	Member State
OECD	Organisation for Economic Cooperation and Development
SBS	Structural Business Statistics
SCM	Standard Cost Model
SME	Small and Medium Size Enterprise
TFP	Total Factor Productivity

Executive summary

1 Background

The way in which working time is regulated and organized has a significant social and economic impact. At EU level, Directive 2003/88/EC (the Working time Directive, hereafter WTD) aims to provide minimum standards common to all Member States in order to protect workers from health and safety risks associated with excessive or inappropriate working hours and inadequate rest periods.

The process to review the WTD began in 2003/2004 with proposals by the Commission to amend the Directive. However, neither the Council and the Parliament (in 2009) nor the European social partners (in 2011/12) were able to reach agreement on an amended text. The process of negotiation was accompanied by a number of background studies and reports, including a detailed implementation report on the current WTD¹, a study on the social and economic impact of existing working time rules and developments in working time organisation²³ and a study on the potential administrative burden and economic impact of a range of proposed options for amendment of the WTD⁴.

In 2014, the Commission services detailed their analysis of potential issues and outlined possible options to move forward in the review of the WTD. The review process seeks to examine and possibly address a number of interrelated issues:

- Insufficient legal clarity resulting from issues left open in the WTD and as a result of a significant body of case law, meaning that in order for national authorities, employers and workers to ascertain their legal position it is now necessary to turn to several CJEU judgements in addition to the text of the WTD (as implemented) for a full interpretation of the regulations. Furthermore, although the CJEU has clarified the legal position in relation to issues such as on-call time and compensatory (daily) rest, issues such as the position in case of delayed weekly rest, or whether the WTD applies per worker or per contract, remain unclear.
- The Commission also identifies areas where the WTD has been applied incorrectly (e.g. with regard to the derogation for 'autonomous workers' or the monitoring or enforcement of conditions linked to the opt-out).
- Areas are also identified where long-hours working persists either as a result of infringements or the interpretation of derogations provided for by the Directive. Some of the challenges in this area result from changes in the patterns of working hours or indeed contractual arrangements which have developed since the Directive was adopted.
- Finally, a public consultation, which attracted widespread attention among SMEs and their representative organisations earmarked the WTD as a piece of legislation being considered among the most burdensome for SMEs. A need to explore further to what extent these perceived burdens arise from the WTD itself or from the national implementation of working time rules was identified⁵.

The Commission services therefore preliminarily consider a number of possible options, ranging from no further legislative action (which might include the issuing of an interpretive Communication aimed at clarifying the current legal acquis), through sectoral

¹ COM (2010) 802 and SEC (2010) 1611 of 21.12.2010

² Study to support an impact assessment on further action at European level regarding Directive 2003/88/EC and the evolution of working time organisation, Deloitte (2010)

³ See <http://ec.europa.eu/social/main.jsp?catId=157&langId=en&newsId=964&moreDocuments=yes&tableName=news>

⁴ Economisti Associati; Review of the Working Time Directive 2003/88/EC measuring administrative costs and burdens of various position options (2012, unpublished).

⁵ European Commission Staff Working Document; Monitoring and Consultation on Smart Regulation for SMEs; SWD(2013) 60 final of 7.3.2013

solutions to amending the WTD on the basis of previous proposals up to wider legislative amendment, taking account of changes in working time patterns and associated requirements. This does not prejudge the decision of the Commission on whether a new legislative initiative will be pursued or on its possible content and structure.

2 Purpose and scope of the study

The current study was commissioned to inform the Commission’s impact assessment process; the purpose was to:

- Review existing research and studies on the administrative costs and burdens and broader economic impact of working time regulation associated with current provisions.
- Against the baseline situation
 - quantify the administrative costs and burden associated with the potential options for legislative change;
 - assess the regulatory impact of these options on SMEs; and
 - carry out an in-depth analysis and econometric/statistical modelling of the foreseeable economic impact at national and EU level of these potential amendments in working time rules.

The possible legislative changes considered by this study are summarised in Table 1 below, with a brief assessment of their likely impact on employers and workers.

Table 1 Details of possible legislative changes being considered

Possible change	Detail of possible change	Likely impact on main stakeholders
1a	Change in calculation of on-call time towards maximum working time and rest periods, making it possible to distinguish between active and inactive parts of on-call time (thus allowing only part of on-call time spent on an employers’ premises to be counted as working time.	Greater flexibility for employers if changes are implemented by Member States. Potential of longer working hours for workers with potential associated health and safety risks and other associated impacts.
1b	Change in calculation of stand-by time towards maximum working time and rest periods, potentially counting more of stand-by time towards maximum working hours	Reduced flexibility for employers; potential health and safety benefits for workers due to reduced working hours and other associated impacts.
1c	No change in calculation of stand-by time but cap on maximum weekly stand-by hours	Reduced flexibility for employers, particularly in countries without any cap at present; potential health and safety benefits for workers due to reduced working hours and other associated impacts.
2	Lengthening of the reference period within which compensatory rest needs to be taken	Greater flexibility for employers if changes are implemented by Member States. Potential of longer working hours for workers with potential associated health and safety risks and other associated impacts.
3	Increase in reference period for taking weekly rest from 2 weeks to 3 or 4 weeks	Greater flexibility for employers if changes are implemented by Member States. Potential of longer working hours for workers with potential associated health and safety risks and other associated impacts.
4	Increase in reference period for calculation of maximum working time from currently 4 months to either 6 or 12 month (by law)	Greater flexibility for employers if changes are implemented by Member States. Potential of longer working hours for workers with potential associated health and safety risks and other associated impacts.

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Possible change	Detail of possible change	Likely impact on main stakeholders
5	Clearer definition of 'autonomous workers' to bring this in line with original intentions of WTD (specifying material criteria to be met, e.g. control over volume and organisation of own working hours)	Would potentially bring more workers under the scope of the Directive; reducing flexibility for employers and potentially reducing working hours for certain categories of workers.
6	<p>Tightening of opt-out provisions: Re-enforced conditions such as</p> <ul style="list-style-type: none"> • Requiring employers who use the opt-out to keep records of all working hours of workers who have agreed to it • Providing that a worker may not validly be asked to opt-out prior to an employment contract, during a probationary period, or within one month after the conclusion of an employment contract • Requiring employers to keep written proof of the workers' prior consent to opt-out and to include in the consent form information to the worker about his or her rights under article 22.1 of the Directive • Requiring national authorities to compile information about its use, to evaluate the health and safety effects of the use for the workers concerned and to report their findings to the European Commission <p>Restriction of use of opt-out when linked to other options (e.g. greater flexibility in relation to on-call time or compensatory rest)</p> <p>Suppression of the opt-out</p>	Reduced flexibility for employers; potentially bringing more workers under the scope of the Directive; potentially greater administrative requirements
7	Clarification that in case of concurrent contracts with same employer, WTD applies per individual	Potential health and safety benefits as working hours per individual are restricted; reduced earnings ability from several jobs
8a	Obligation on employer to inform workers well in advance of substantial changes in work patterns	Reduced flexibility for employers; potential improvements to working hours planning and work-life balance for workers
8b	Right to request flexible working and requirement for employer to provide reasons for refusal	Potential for greater challenges in workforce planning for employers; potential improvements in work-life balance for workers
8c	Greater flexibility in taking minimum daily rest to support work-life balance (e.g. possibility to break minimum daily rest to leave work early and perform some tasks in the evening)	Potential for greater challenges in workforce planning for employers; potential improvements in work-life balance for workers

3 Approach and methodology

This study relied on:

- A desk review of literature at national and transnational level.
- In-depth interviews with national stakeholder (relevant ministries, labour inspectorates, Human Resource service providers, social partners).
- In-depth interviews with individual enterprises.

In total over 90 stakeholders were interviewed for this research⁶. In addition, 125 companies in the three target sectors (manufacturing, utilities and hotels and restaurants⁷) and size categories responded to questions on the economic impact and likely administrative burdens associated with possible changes considered relevant in the national context. This detailed research focussed on 10 countries⁸, although the impacts of proposed possible changes were also estimated for the whole of the EU. Results were scaled up on the basis of assessments of the likely impact of legislative changes on the 10 in-depth study countries, which were considered to be representative of the wider situation in the EU, and using data on affected populations available for all EU Member States. This assumes that the legal situation in the 10 countries provides a fair representation of the range of legal arrangements found in the rest of the EU in the baseline. The 10 countries were chosen for the variety of working time arrangements, existing regulation in the baseline and economic structures (e.g. share of SMEs and larger companies) they represent. This was intended to provide as close an approximation of the variety of situations present in the EU as possible.

3.1 Establishment of the baseline situation

An elaboration of the baseline situation is critical in order to:

- Establish the extent to which current provisions at national level meet, exceed or fall short of current legislative requirements and to assess whether the status quo situation (or any forthcoming developments that would impact the status quo) is suitable to address the potential issues with the current WTD.
- Determine the possible problems arising from a failure to address issues with the WTD, based on the available evidence on the impact of the status quo on matters such as workers' health and safety, employment, productivity, competitiveness, work-life balance and so on.
- Estimate the population of workers and enterprises covered by the WTD and potentially affected the possible legislative changes.

3.2 Assessment of administrative burdens

The assessment of administrative costs and burdens was carried out using the Standard Cost Model (SCM) approach. To estimate the administrative costs (AC) related to each possible change, Information Obligations and associated Administrative Actions linked to possible changes are assessed and costed. Of particular relevance is the calculation of Administrative Burdens (AB), which is the Administrative Cost minus any existing business-as-usual costs, which would arise even in the absence of the new Information Obligation.

The scale of the impact on AC and AB is largely influenced by the size of the affected population, which depends on the existing legislative framework and the representation of sectors (and company sizes) utilising different working time practices (e.g. on-call time etc.). In this study EU level datasets, triangulated with national datasets and information from interviews were used to determine the size of the affected population.

⁶ This included 29 employers' organisations and 13 trade union organisations. This imbalance resulted from more employers responding to enquiries by the study team (despite the fact that more trade union than employers' organisations were originally contacted). A full account of the number of interview conducted per country can be found in Annex 6 to this report.

⁷ Only human resource managers were targeted in this part of the research, as questions focussed on administrative burdens resulting from reporting procedures likely to be linked to possible changes of the Directive.

⁸ Czech Republic, France, Germany, Hungary, Italy, the Netherlands, Poland, Spain, Sweden and the UK: these countries were selected to provide a balance of different systems of regulating working time (including the impact of collective agreements), different economic structures and performance, as well as a geographical balance.

3.3 Modelling and simulation of impacts of the possible changes to the Working Time Directive

The economic impact of the different possible changes to the WTD would ideally be modelled in such a way that would allow the identification and quantification of their respective impact on all relevant variables, both in the short term and in the long-run. The challenge of this is, however, that the types of policy changes involved are quite elusive in terms of economic modelling. There is no direct statistical data that would make it possible to relate the number and organisation of hours worked (distribution of working time across weeks, months and years) and the specific economic outcomes (productivity, labour demand, wages) in a structural way. Results are therefore likely to over-estimate the impact of such changes.

Macro-economic sector data from EU KLEMS⁹ was employed to identify the relationship between labour demand and labour costs. Furthermore, information from the legal mapping was used to establish a relationship between total factor productivity (TFP) and the strictness of working time regulation.

Similar to the AC and AB calculations, the scale of the socio-economic impact is significantly influenced by the estimations of the size of the affected populations.

3.4 Key methodological challenges

Key methodological challenges and shortcomings were encountered in the estimation of the affected population, the calculation of AC and AB and the estimation of the socio-economic impact. These were due to:

- The relative dearth of national assessments of the administrative burdens linked to working time regulation.
- Price and time calculations were drawn from interviews and from preparatory desk research. The main challenge related to the fact that employers found it difficult to quantify and/or estimates the price and time required by each administrative action linked to the possible changes.
- The limited availability of studies measuring the size of the economic impact of working time regulation.
- The diversity of legal definitions at national level and the lack of European and national data on groups of workers affected by different potential changes in working time regulation limited the possibility to precisely estimate the affected population (e.g. different definition of on-call and stand time and lack of data on workers on-call and stand at national level, by sectors and occupations; lack of comparable data on the size of the population of workers affected by rules on compensatory rest, etc.). Data shortcomings in this field led to a likely over-estimation of affected populations. Lack of data also meant that impacts could not be disaggregated by sector or skill level for individuals most likely to be affected by various potential legislative changes.
- It is challenging to model the socio-economic impact of the proposed changes to working time legislation as this is likely to be small. The lack of reliable comparable data and inability to deliver a sectoral breakdown means that it is not possible to model labour elasticities in different sectors, although some are significantly more affected by some of the potential changes than others (e.g. in relation on-call and stand-by time).

⁹ The EU KLEMS database contains measures of Economic growth, productivity, employment creation, capital formation and technological change at the industry level for all European Union Member States up to 2008. <http://www.euklems.net/index.html>

- It is not possible to provide a quantitative estimation of the potential benefits of changes in working time regulation (e.g. in terms of improvements to health and safety), meaning that it is not possible to balance any administrative or socio-economic costs modelled against any potential benefits in a quantitative way.

4 The baseline situation

The review of the baseline situation covered the current legal status quo, the size of the workforce affected by the issues highlighted as being of concern in the current WTD and the likely impact of maintaining the status quo (i.e. no revision of the WTD) on worker health and safety and various socio-economic indicators.

4.1 The legal baseline

This study mapped the baseline legal situation in relation to current provisions governing all the areas where possible changes are being considered in a sample of 10 countries. Table 2 below briefly summarises the current provisions of the Directive and the baseline position in the study countries, as well as the associated likely impact potential changes to the WTD. It is important to bear in mind that changes allowing for greater flexibility would not need to be implemented by Member States. On the contrary, more stringent regulations would have to be transposed in all countries not currently meeting such revised standards. For the assessment of likely administrative burden arising, as well as socio-economic impact, full compliance with the current legal acquis was assumed.

4.2 The affected population

Against the backdrop of the national legislative frameworks and the methodological issues highlighted above, affected population for each possible change has been estimated as follows, with all figures being considered as upper band estimates:

Estimations of the affected population
<i>On-call and stand-by time (possible changes 1a-c)</i>
The calculation of the on-call and stand-by population is particularly challenging due to the lack of consistent legal definitions at national level as well as the lack of European and national data. The only available comparative dataset which gathers such information is the European Working Conditions Survey (EWCS) which does not distinguish between on-call and stand-by time. At national level, only one survey could be identified which distinguishes between these two concepts as defined in EU legislation ¹⁰ . Using the information in these datasets, it was established that 33 million individuals (18% of the workforce) across the EU have on-call work as part of their work schedule, whereas 6.1% of workers (11 million) have some form of stand-by arrangement incorporated in their working arrangements. Only an estimated 7 million of these could be affected by any cap on stand-by hours, as the remainder cannot be considered to work on stand-by on a regular basis.
<i>Timing of compensatory rest (possible change 2)</i>
It was assumed that missed minimum daily rest can in practice occur when very long hours are worked during a single day (which can be due to on-call or stand-by arrangements) or for individuals on alternating shift work patterns. Such arrangements make it more likely that minimum daily rest will be missed, thus leading to entitlements to compensatory rest. Based on these assumptions, the size of this group of workers at EU level was estimated at 33 million individuals (18% of all workers).
<i>Reference period for minimum weekly rest (possible change 3)</i>
Rules regarding reference periods for minimum weekly rest mainly affect individuals with working patterns which can include working 7 days per week (or 6 working days and frequently working long hours). Based on these assumptions, it can be estimated that around 4.9% of EU workers (8.8 million individuals) could be impacted by a change in these rules.
<i>Reference period for the calculation of the 48 hour work (possible change 4)</i>
Based EWCS data, it is estimated that 8.1% of all workers (14.7 million) regularly work long hours over an extended period of time and could thus be affected by any rules which could provide greater legal flexibility in the reference period.
<i>Autonomous workers (possible change 5)</i>

¹⁰ BIS (2012); The Fourth Work-life Balance Employee Service; Employment Relations Research Series 122

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This study estimated that 3.6 million individuals (2% of workers in the EU) fall into this category.

The opt-out (possible changes 6)

The population affected by changes in the opt-out provisions is delimited by the sectors covered and varies significantly from country to country.

Application of the WTD in the case of concurrent contracts with the same employer (possible change 7)

Lack of data did not allow for an estimation of the affected population in this area. Country level evidence from interviews appears to indicate that this may be an issue concentrated in certain sectors (e.g. the health care sector in the Czech Republic), but is otherwise not widespread.

Measures to assist the reconciliation of work and family life (possible changes 8a-c)

The potentially affected population for such measures is likely to consist of workers with caring responsibilities.

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Table 2 Legal baseline and likely impact of proposed changes in 10 study countries

Possible change	Current provisions of WTD	Current regulations in study countries	Likely impact
1a	Under the current legal acquis as established in SIMAP ¹¹ , Jaeger ¹² and Dellas ¹³ , on-call time (spent on an employers' premises or a location designated by the employer) should be entirely counted as working time	3 of the 10 countries reviewed do not have a legal definition of on-call time in general employment legislation (CZ, ES, FR). In France and Spain, the use of on-call time is limited to specific sectors and occupations (e.g. doctors). Polish and Hungarian legislation has some (but less specific) provisions, whereas Germany, the Netherlands and Sweden clearly elaborate these concepts in labour law. The UK has interpreted the meaning of on-call time in case law. Collective agreements play a limited role in this area in most of the sample countries (beyond setting out how these forms of work should be remunerated).	Greater flexibility for employers in all study countries if change is implemented. Risk of longer working hours for workers.
1b	Only stand-by hours actually worked are counted as working time	In the Czech Republic the concept of stand-by time unknown. The UK has interpreted the meaning of stand-by time in case law. All other countries consider only hours worked on stand-by as working time. Collective agreements play a limited role in this area in most of the sample countries (beyond setting out how these forms of work should be remunerated).	Reduced flexibility for employers in all study countries (with possible exception of CZ); potential health and safety benefits for workers due to reduced working hours.
1c	No cap on stand-by hours (bearing in mind overall limits on working hours)	Caps on stand-by time exist in some countries as a function of restrictions on overtime. Germany, Hungary, the Netherlands and Sweden set caps on the number of on-call hours, but these are above the limits being assessed.	Reduced flexibility for employers, particularly in countries without any cap at present; potential health and safety benefits for workers due to reduced working hours.
2	CJEU judgements stipulate that compensatory rest must be taken immediately.	Only two countries among the 10 studied make reference in their legislation as to when compensatory rest must be taken (ES, UK). In both cases, legislative provisions are less stringent than those set out by the CJEU.	Greater flexibility for employers in all study countries if change implemented. Risk of longer working hours for workers.
3	Workers are entitled to 24-35 hours uninterrupted weekly	Six of the 10 countries considered provide for a two weeks reference period to calculate weekly rest with few using the possibility to extend this to 3 weeks. Some Member States restrict this extended reference period to certain groups of workers	Greater flexibility for employers if change implemented, with a somewhat more significant impact in CZ, DE, FR, PL and SE

¹¹ Judgement of 3 October 2000, case C-303/98, see http://eur-lex.europa.eu/smartapi/cgi/sga_doc?smartapi!celexplus!prod!CELEXnumdoc&lg=en&numdoc=698J0303

¹² Judgement of 9 September 2003, Case C-151/02, see <http://curia.europa.eu/juris/cgi-bin/gettext.pl?lang=en&num=79969090C19020151&doc=T&ouvert=T&seance=ARRET>

¹³ Case C-19/04, see <http://curia.europa.eu/jcms/upload/docs/application/pdf/2009-02/cp050104en.pdf>

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Possible change	Current provisions of WTD	Current regulations in study countries	Likely impact
	rest (with some derogations available).	(CZ, HU) while others apply it to all workers. Germany, France, Poland and Sweden currently only allow a one week reference period. Although provisions on this issue are included in some collective agreements, these usually mirror national legislation.	among study countries for minimum weekly rest. Risk of longer working hours for workers.
4	A maximum four month reference period is set for the calculation of the 48-hour weekly working time limit. Member States can derogate from this for certain sectors up to a period not exceeding 6 months. Collective agreements can extend this period to a 12 months in any sector.	At present, apart from Spain (where the legal reference period is one year) all study countries have a basic reference period of less than (and including) four months set in legislation (although there are some exception for certain categories of workers). The shortest reference periods were found in France (three months) and the Czech Republic (7 days). All Member States expect Spain use the possibility to derogate from the legal reference period by collective agreement. In Germany, France, Hungary, Italy and Sweden, this possibility is relatively widely used whereas in Poland and the Czech Republic the use of this derogation is not widespread.	Increased flexibility for employers in all study countries with the exception of Spain if implemented. The impact may be somewhat less significant in the Netherlands and Sweden where collective agreements already make more extensive use of a 12 month reference period. Risk of longer working hours for workers.
5	Member States can stipulate that a range of the key provisions of the Directive do not apply to autonomous workers (e.g. 'managing executives or other persons with autonomous decision making power, family workers and individuals officiating at religious ceremonies').	The Czech Republic is the only country studied not using this derogation. Where the derogation is used, several definitions can be identified. Two main trends emerge. Germany, Hungary, Poland restrict the definition to managers, while France, Sweden and the UK include both autonomous workers (who can be workers other than managers) and managers in the derogation foreseen in their legislation.	A more elaborated definition focussing on workers with genuine control over their own time would require stricter regulation in France, Italy, the Netherlands, Spain, Sweden and the UK. Potential health and safety benefits for more individuals falling under scope of WTD for the first time.
6	The opt-out provides Member States with the possibility to allow employers to ask	The 2010 Deloitte report showed that the use of the opt-out increased significantly across the EU following the SIMAP/Jaeger rulings, with its provisions primarily being applied in the health care sector (and a number of other sectors relying on 24-hour operation). Among the 10 countries, the UK, Germany, Hungary and France are the	A full phasing out of the opt-out or its suppression when combined with other possible changes would have the greatest impact in the UK and a lesser impact in

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Possible change	Current provisions of WTD	Current regulations in study countries	Likely impact
	workers to work beyond the 48-hour limit to average weekly working time, as long as the worker freely and individually agrees and can revoke this agreement without suffering prejudice.	only countries currently allowing the use of the opt-out. In France and Hungary, it is only used in the healthcare sector where there is an important share of on-call work ¹⁴ , and is not authorised under labour law applying to the private sector. In Germany, a collective agreement must authorise the use of the opt-out to make it legal (this is only applied in sectors which regularly use on-call work, such as the health care sector). The Czech Republic used the opt-out primarily for doctors in the hospital sector until January 2014, when it was phased out. ¹⁵ In the UK the opt-out is not restricted to any sector and is widely used.	Germany, France, Poland, the Netherlands and Spain. With regard to provisions tightening up the use of the opt-out, a number of countries have requirements to monitor and record working hours, but requirements to report and assess its impact on workers are poorly developed and would therefore require enhanced provisions in many countries. Potential health and safety benefits for workers due to reduced working hours.
7	No specific provisions in WTD as to whether rules apply by worker or by contract	None of the 10 Member States have explicit provisions on the application of the WTD in their legislation contains, as to whether this applies by worker or contract in the case of concurrent contracts with the same employer. The UK is the only country where case law is available which stipulates that the WTD applies per individuals in such situations.	All countries would need to apply stricter regulations. Potential health and safety benefits for workers due to reduced working hours.
8a	No provisions	Currently, all 10 Member States provide for an obligation for the employer to inform workers early regarding changes in working patterns. In the Czech Republic, Germany, Spain and Sweden, employers are required to give workers two weeks' notice regarding changes in working patterns, while in France, Hungary and Poland, the minimum notice period is set at one week.	Proposed change unlikely to require amendments in study countries.
8b	No provisions	The UK is the only Member State in the sample of 10 having a right for all workers to request flexible working in its legislation. There is an obligation for the employer to justify the refusal for business reasons. The Czech Republic, Hungary, Italy, Spain and Sweden do not have a legal right to request flexible working time arrangements, although in Sweden this is provided in some collective agreements, In Germany and France such rights are restricted to certain groups of workers, such as parents of younger children and certain working time arrangements.	Significant changes required in CZ, HU, IT, ES and SE; somewhat less in DE, FR and PL; UK unaffected. Potential benefits from improved work-life balance.
8c	No provisions	None of the countries allow for flexibility in taking minimum daily rest on the basis of legislation, although this is possible in some Member States by collective agreement.	Changes required in all study countries.

¹⁴ Commission Staff Working Document (2010)

¹⁵ See <http://www.eurofound.europa.eu/eiro/2014/02/articles/cz1402069i.htm>

4.3 Impact of maintaining the status quo on health and safety and other socio-economic factors

The WTD was primarily intended to curtail the negative impact of long hours working on workers' health and safety. However, the regulation of working time can also have an impact on work-life balance, as mentioned above, as well as on employment, productivity, competitiveness and other factors.

In assessing the state of the art of the literature on these issues, it is important to draw a distinction (in practice often blurred or impossible to distinguish) between the impact of the implementation of the WTD and that of national working time regulation. It is also crucial to bear in mind the interaction with collective agreements, other employment protection legislation and indeed wider economic and labour market conditions.

Few empirical studies exist seeking to clearly quantify the economic impact of working time regulation (let alone the WTD specifically) in any of these areas. The most researched field with regard to the impact of working time regulation focusses on the health and safety impact of such provisions. However, even such studies are patchy and tend to focus narrowly at national, sector or occupational level. Few provide clear estimates of the economic costs and benefits of specific working time regulations, making their use in any quantification limited.

Available studies clearly point to the detrimental effect of long hours working^{16 17 18 19} and unsocial working hours^{20 21 22} (night work, certain types of shift work) on physical and mental wellbeing²³), with an exponential increase in health impairments being recorded as working hours increase.

Evidence on the impact of working hours regulation on productivity and competitiveness is partly linked to health and safety and work-life balance considerations, with both improved health and safety performance and improved work life balance (and associated increased job satisfaction) being linked to productivity improvements^{24 25}.

Findings in the literature regarding the employment creation potential of working hour reductions can be considered to be mixed. The main body of evidence in this field stems from France when some effects on employment creation were evident following the introduction of the 35 hour week, but could be considered to be confounded by incentives

¹⁶ DG Employment (2010), Study to support an Impact Assessment on further action at European level regarding Directive 2003/88/EC and the evolution of working time organisation

¹⁷ Brenscheidt, presentation BAuA

¹⁸ H. F. McIntyre et al (2010), Implementation of the European Working Time Directive in an NHS trust: impact on patient care and junior doctor welfare. <http://www.clinmed.rcpjournals.org/content/10/2/134.full.pdf>

¹⁹ Dr. Żołnierczyk- Zreda B., *Long work-time and healthy of workers*, Central Institute for Labour Protection, 2010

<http://www.ciop.pl/32005>

²⁰ A range of other associated issues such as the children of shift workers underperforming at school and being less likely to go on to Higher Education; a higher incidence of broken relationships among shift workers; and, less involvement in interests and participative institutions was also identified.

²¹ ILO (2012) Fagan C., Lyonette C., Smith M., Saldana-Tejeda A., The influence of working time arrangements on work-life integration or 'balance': A review of the international evidence <http://goo.gl/zJi6c5>

²² Fundación para la Prevención de Riesgos Laborales et alia (2009): "Los tiempos de la organización del trabajo: incidencia de los riesgos psicosociales en los sistemas de trabajo a turnos", [Working time organization: the incidence of psycho-social risks of night working"], Secretaría de Salud Laboral UGT CEC <https://w110.bcn.cat/UsosDelTemps/Continguts/Noticies/2012/octubre12/libro%20turnos%20UGT.pdf>

²³ Eurofound (2012), Overview Report of the 5th European Working Conditions Survey <http://goo.gl/KWXCO>

²⁴ Dr. Żołnierczyk- Zreda B., *Long work-time, mental illness and life style*, Central Institute for Labour Protection, 2010 <http://www.ciop.pl/35103>

²⁵ ILO (2012), Golden, L., The effects of working time on productivity and firm performance: a research synthesis paper <http://goo.gl/AOSlkh>

provided to companies for hiring during the same period²⁶ ²⁷. A study looking at the impact of working hours reductions in Portugal in the 1990s finds a positive impact in the sense that these legislative changes prevented job destruction²⁸.

Literature on the impact of working time regulation on training is largely confined to studies on the impact of the WTD and the SIMAP and Jaeger rulings on the health care sector in the UK; these studies point to a deterioration in training conditions (and hours of training being offered) in certain specialisms. Such findings have to be balanced against results which show reduced fatigue, reductions in accidents and some improvements in care outcomes for patients. At the same time there is evidence that provisions of the WTD linked to compensatory rest can lead to some cancellations of appointments and operations which can have detrimental effects on patients²⁹.

The picture is therefore a complex one with mainly the evidence on health and work-life balance impacts more or less unequivocally pointing to positive effects of reduced working hours. This research did not examine in detail when reduced working hours may have a detrimental effect on wellbeing as a result of the impact on incomes, although it is clearly recognised in the literature the health and safety impact of low working hours and indeed unemployment are equally significant. Evidence on employment impacts and other socio-economic factors is more limited or inconclusive.

5 Impact of possible changes to the WTD

The impact of the possible changes to be assessed by this study was considered from five perspectives:

- Legal impact (changes required from the baseline)
- Impact on administrative costs and burdens
- Socio-economic impact (primarily impact on employment)
- Regulatory impact for SMEs; and
- General/political impact and stakeholder views

Each are briefly summarised in turn for all the potential legislative amendments being considered.

5.1 Legal impact

The potential legal impact of the possible changes was highlighted in table 1.1 above.

5.2 Impact on Administrative Burdens

The estimated AC and AB resulting from the various proposed changes are presented in Figure 1 below. Summing up the estimates for all scenarios one arrives at the figure of €3,588 million for the whole of the EU in the first year and €2,431 million in subsequent years³⁰. However, it should be noted that AB / AC effects generally cannot be summed up this way, as this does not take into account interactions between possible scenarios. Nevertheless it provides an overall indication of the magnitude of the administrative burdens associated with the potential new information obligations arising from the possible changes considered (see Table 2.1 in the main body of the report). Only in the

²⁶ Bunel M. et Jugnot S. (2003), 35 heures : évaluation de l'effet emploi, *Revue Économique*, Vol. 54, n° 3

²⁷ Logeay, Camille, and Sven Schreiber. 2006. Testing the effectiveness of the French worksharing reform: A forecasting approach. *Applied Economics* 36: 2053–68.

²⁸ Raposo, P and Van Ours, J (2010); How a reduction of standard working hours affects employment dynamics; *De Economist* (2010) 158:193-207

²⁹ Report of the Independent Working Time Regulations Taskforce to the Department of Health (2014) The implementation of the Working Time Directive and its Impact on the NHS and Health Professionals; <https://www.rcseng.ac.uk/policy/documents/wtd-taskforce-report-2014>

³⁰ Costs linked to the potential elaboration of the definition of autonomous workers are one-off costs.

case of possible changes 2 (rules on compensatory rest) and 5 (rules on autonomous workers) do the estimated figures exceed €1 billion for the EU28 in the first year.

One of the few available examples of comparable assessments at the national level, a UK study in 2008, estimated the overall administrative burden of the WTD (three information obligations were costed in the study) at €55.2 million in recurring costs per year³¹. When relatively similar costs relating to the requirement for record keeping on working or rest hours are compared, the present study estimates the resulting AB to be at an average of around €168 million³² for one such obligation for the whole of the EU.

Overall, it should be noted that comparisons with other studies, or indeed the presentation of total figures for all possible changes being considered are of limited value (and are only presented for illustrative purposes here), because of the specific underlying circumstances (and study methods) which need to be taken into account, as well as interactions between policy options.

The comparison shows that the AB imposed by the possible changes is in many cases lower than the AC. In some cases, such as the possible changes to the on-call time and weekly rest, the AB imposed will be nil, as the administrative actions needed in these two areas are already fulfilled by employers under the status quo. The only changes discussed which would impose an extra burden equal to total AC are the changes in relation to the definition of autonomous workers. In this case all employers as first step would have to familiarise themselves with the new definition, regardless whether they have autonomous workers under the current definition. Subsequently, employers that have autonomous workers (under the old or new definition) will have to adjust their files. These are therefore one-off costs, whereas AB arising in relation to other possible change are of an ongoing nature.

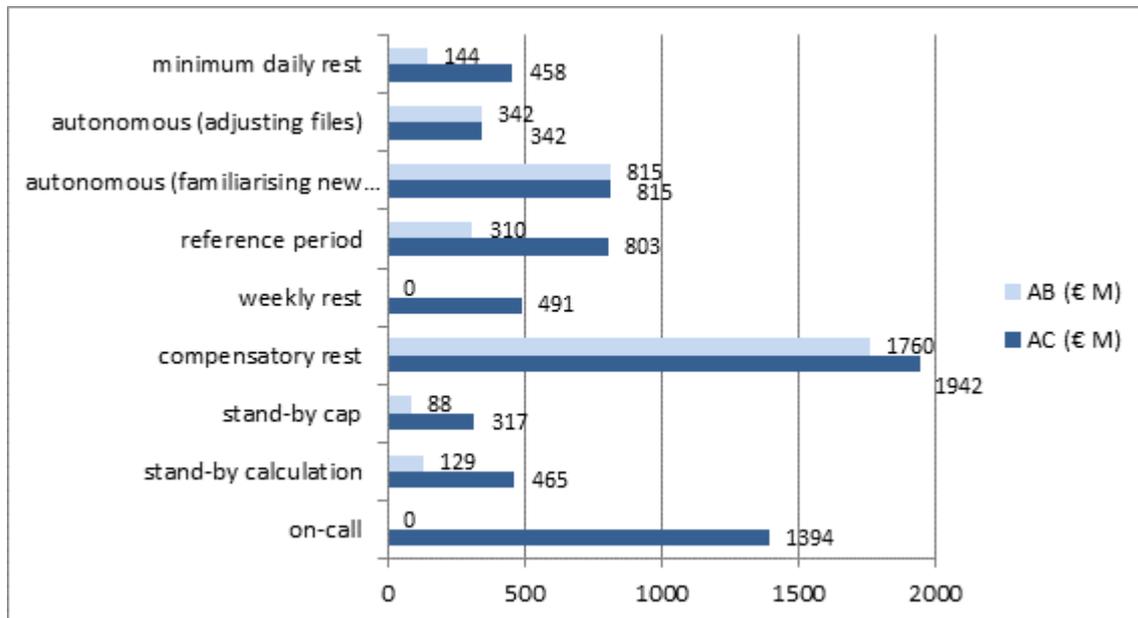
In terms of relative magnitude, considering changes where AB are of an ongoing nature, changes to regulations on compensatory rest are most significant, followed by changes to regulations on the reference period, minimum daily rest and the calculation of stand-by time.

Between 90-95% of these AB are borne by SMEs, while the overall contribution of SMEs to total EU-27 value added was more than 57% (€3.4 trillion) in 2012.

³¹ BERR (2008), Employment Law Admin Burdens Survey 2008: Final Report, December 2008, pg4

³² Calculated as the average of the AB arising from the information obligations linked to the possible changes relating to minimum daily rest period, overall reference periods and the two options relation to stand-by working (see Figure 1 below).

Figure 1. Comparison between the average administrative burdens and administrative costs for each possible change (€M)



Source: own elaboration

The AB linked to changes relating to the opt-out provisions, as well as regarding concurrent contracts and the potential measures linked to improving work-life balance (possible changes 8a-c) were already considered in the 2012 report³³. Among these, the opt-out provisions and work-life balance measures (particularly in relation to the right to request flexible working) were linked to the most significant AB. When the AB assessed by both reports are considered, the burdens linked to the possible changes considered by the 2012 study were second (work-life balance provisions and the right to request flexible working in particular) and third (opt-out provisions) only to the potential financial costs to businesses associated with the change to compensatory rest provisions.

5.3 Socio-economic impact

As indicated above, it is extremely challenging to estimate the socio-economic impact of the proposed changes to the WTD. The simulation carried out was designed to highlight any potential employment effects, which are likely to be over-estimated, not least because of the limitations associated with the comparable data sources available. All employment effects referred to are forecast to occur over a timeframe of approximately two or three years³⁴.

The simulation carried out for this study shows that a positive employment impact is associated with possible changes related to on-call work, compensatory rest, weekly rest and reference period. However, it is crucial to highlight the modest relative impact when compared to the level of total employment in the EU. For example, for the potential change to the regulation of on-call work, which demonstrates the largest potential

³³ Economisti Associati; Review of the Working Time Directive 2003/88/EC measuring administrative costs and burdens of various position options (2012, unpublished).

³⁴ It is particularly difficult to estimate the timeframe of the impact due to the fact that changes to the WTD lead to indirect changes to the labour costs rather than direct changes. Additionally laws and directives affect the labour costs before (anticipation) as well as after their implementation once firms adjust to the new regulation. From U.S. literature it emerges that adjustments to new regulations occur approximately within 1-2 quarters, therefore it could be assumed that in an European environment the timescale is likely to be approximately 2-3 years.

impact, the possible employment creation effect is equivalent to 0.193% of total EU employment.

As indicated above, it is important to carefully interpret these results in relation to actual employment creation effects which might actually occur in practice. These hinge on the assumption of the estimated elasticity for a given production relationship, and that more of the factor labour would be used if it became cheaper. They are also dependent on estimations regarding the affected populations which are higher bound estimates and rely on limited data sources. Similarly, it is critical to distinguish between the micro- and macro-level effects of potential changes. For example, the introduction of the possibility to count inactive parts of on-call time differently from active parts of on-call time for the purposes of the calculation of maximum working hours and compensatory rest would potentially allow a given organisation to deliver the work or service with fewer workers. Hence, one could expect lower labour demand. However, as such a change essentially translates into lower per unit labour costs, economic theory predicts that this would lead, on the macro level, to more firms hiring workers.³⁵ In reality, the decision whether per unit lower labour costs lead to additional recruitment depends on a number of complex factors. For instance, in sectors which are not part of a more competitive market or where other considerations limit recruitment decisions³⁶, this potential may not in effect lead to additional employment creation. This could, for instance, be considered to be the case in the health care sector where either budgetary considerations or skill shortages may lead employers to decide to perform the same service with fewer workers (working longer hours).

It should further be noted that the simulation did not take into account possible links with the opt-out scenario and assumes that Member States would avail themselves of the possibility to introduce greater flexibility in their regulation, which is not a foregone conclusion.

The second largest positive employment effect was predicted in relation to revisions to compensatory rest rules, again resulting from reductions in the cost factor labour. As in relation to the change in on-call time, it must be borne in mind that at the micro level, the proposed changes could lead to a reduced demand for labour as individual workers can be asked to work longer and macro-level effects are dependent on the sectoral, occupational and economic environment in which they occur (similar to those linked to the change to the calculation of on-call time).

The simulation predicted negative employment effects for possible changes relating to stand-by work, autonomous workers, the opt-out, early information about working patterns and the right to request flexible working.

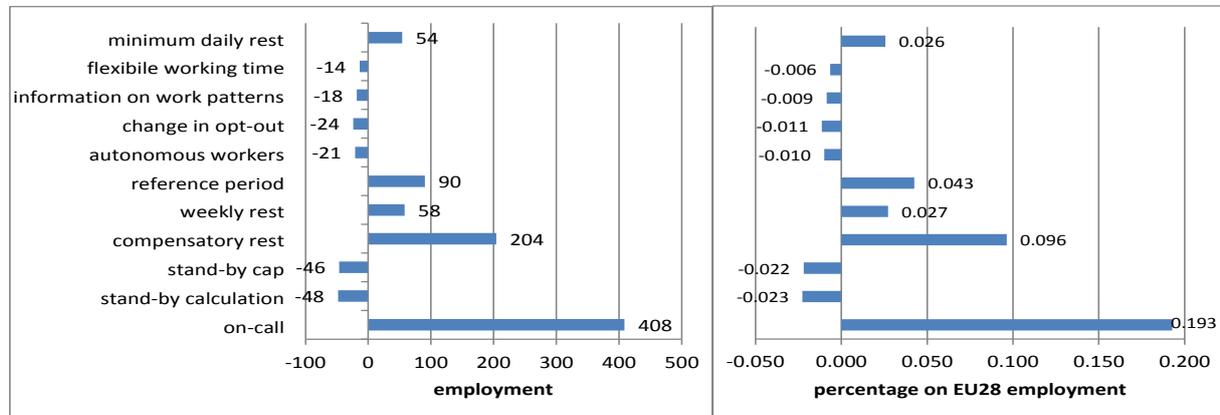
When considering these results, it must also be borne in mind that the potential benefits of reduced working hours in terms of health and safety or improved work-life balance could not be simulated and is therefore not taken into account here. This is important because the literature referred to above clearly points to negative health and safety impacts of increased working hours, which can lead to increased costs to employers

³⁵ A decrease in labour cost will result in general into more employment as the cost of recruitment is reduced. This is the result of using the labour elasticities. A cheaper input will, according to economic theory, be used more intensively. While this economic outcome is the most efficient one, there are -- of course -- also circumstances under which one could assume that such a liberalisation with savings in employment would not lead to more employment in that sector: those sectors were not all parts of the market are competitive. E.g. in (semi) public sector organisations where specific tasks have to be performed, a liberalisation in WTD might not necessarily lead to more employment as the tasks to be performed can be done with less personnel. Uncertainty about future (employment) prospects can also lead to low increases of employment just as adjustment costs might prohibit firms from expanding employment (see for the seminal overview on labour adjustment costs: Hamermesh, D. S., & Pfann, G. A. (1996). Adjustment costs in factor demand. *Journal of Economic Literature*, 1264-1292.)

³⁶ Such as overarching budgetary considerations, for instance in the public sector; or decisions to prioritise the increase in shareholder value in the short-term.

resulting from increased staff absences and staff turnover which can potentially damage productivity and competitiveness.

Figure 2 Employment impact (in thousands) for each possible changes and percentage on total EU28 employment



Source: own elaboration

5.4 Regulatory impact for SMEs

The study also looked at the regulatory impact of existing regulation as well as potential legislative amendments on SMEs.

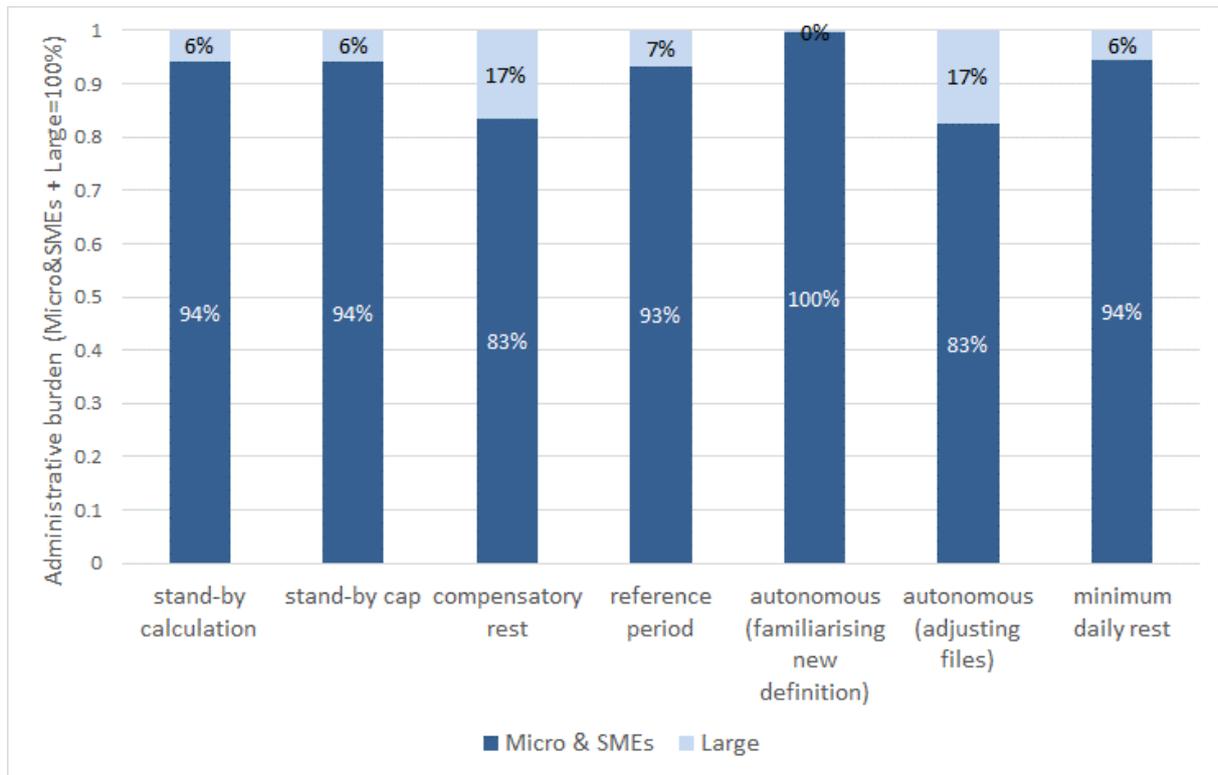
When interpreting the comparative results between SMEs and large companies it is important to remember that in Europe the number of workers in SMEs is larger than the number of workers in large companies³⁷. Therefore, any change can be expected to have larger aggregate effects on SMEs than on large companies. Additionally, the categorisation of employment by size classes is presented based on survey data related to site level (and not company level) leading to a higher estimated proportion of workers in SMEs relative to estimates drawing from company-level data. Therefore, the estimates on AB can be expected to be overestimated for SMEs and underestimated for large enterprises.

Overall it appears that changes are likely to impact SMEs more than large companies. The share of the estimated AB for SMEs is between 83% and 99%, depending on the potential legislative change being considered, while the overall contribution of SMEs to total EU-27 value added was more than 57% (€3.4 trillion) in 2012.

The highest relative share of SMEs in total AB is found in the case of possible change 5 (and specifically the familiarisation with a new definition of 'autonomous worker'), followed by changes relating to the reference period for weekly rest. Furthermore, the proportion of autonomous workers is likely to be greater in SMEs.

³⁷http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/performance-review/files/supporting-documents/2013/annual-report-smes-2013_en.pdf According to the Annual Report on European SMEs 2012/2013 the European Commission, in 2012 SMEs accounted for around 66.5% of all European jobs (in the private sector). Facing data availability problems this study relies on SME/large split based on data reported in the European Working Conditions Survey (EWCS) that focuses on the size of the site at which a person is employed rather than company as a whole. Resulting proportion of workers in SMEs is around 85% and hence the reported figures likely overestimate the total administrative burden falling on SMEs relative to large enterprises.

Figure 3. Distribution of AB of the proposed changes to the WTD (for those change where AB is not zero) between SMEs and large companies



Source: Own elaboration

The results presented in Figure 3 above are in line with what was reported by enterprises in the interviews carried out for this study. Representatives of SMEs reported that changes to the calculation of stand-by time, the extension of the reference period and flexibility in minimum daily rest would be linked to the most significant administrative burdens.

Furthermore, the economic impact of changes in working time regulation on SMEs might be different from the impact of larger companies, as changes in overhead costs affect them more significantly. They are also less likely to be able to invest in infrastructure supporting the measurement of working time, the existence of which would reduce any additional costs incurred as a result of some of the potential changes for larger companies (e.g. the use of information technology to record working time).

5.5 General/political impact and stakeholder views

Stakeholders from social partner organisations, national ministries and individual employers in the 10 study countries were consulted on their views regarding the suitability and potential impact of the potential changes to the WTD being examined by this study. While these findings are not indicative of potential impact, they can support discussion of possible courses of action in this complex area of legislation.

A number of possible changes particularly polarised stakeholders' views. Employers and some labour ministries favoured greater flexibility in relation to the calculation of on-call time. However, some ministries also expressed concern about any further amendments in this area, as it was felt that employers had now accommodated themselves to the requirements of the SIMAP/Jaeger court cases. A renewed change in this area was therefore considered likely to impose further burdens. In other countries, greater

flexibility in this area was welcomed, although in some Member States this was qualified when considering a possible link with the suppression of the opt-out. Some ministerial representatives (and employers) were keen to see access to both possibilities, or were more favourable towards retaining opt-out possibilities in an either/or scenario. Even among the employers favouring this option, some concern was expressed over health and safety impact of potentially longer working hours, which would have to be monitored. Trade unions were strongly opposed to this possible change citing health and safety concerns.

Extended reference periods for the calculation of maximum working hours were also favoured by employers and ministries, particularly in countries where this option is not currently available or the weakness of collective bargaining means that is not accessible to many employers. Trade unions were not in favour of introducing this possibility in law. Stakeholders across all 10 countries showed little appetite for an across the board increase in the reference period for weekly rest, with most arguing that current provisions offered sufficient flexibility. There was a widely expressed concern over the health and safety impact of longer reference periods.

An extended reference period for taking compensatory rest was only favoured by employers and ministries in half the countries studied, with some concerns being raised over administrative burdens associated with having to monitor rest taken over a longer period of time. Health and safety concerns were expressed in relation to this possible change by employers and trade unions alike.

Trade unions generally favoured the suggestion to introduce a cap on stand-by time (although some argued that workers preferred predictable stand-by schedules which can mean one week on and one week off stand-by). Stand-by caps or changes in the calculation of stand-by time were strongly opposed by employers and ministries. Employers argued that this could lead to recruitment difficulties and greater skills shortages in some tight labour markets and sectors. Trade unions also favoured a right at the European level to allow workers to request flexible working while employers were opposed to this.

A significant degree of nervousness existed about a possible tightening of the definition of an autonomous worker at EU level. Depending on the precise nature of the formulation, such changes were considered by some to have potentially significant cost effects, bringing additional groups of workers under the full remit of the WTD's provisions. SME representatives in particular considered the existing provisions allowing for exemptions from the provisions of the WTD to be crucial, particularly for managers of SMEs. Although this is not among the possible changes being explored, a number of trade unions spoke out in favour of the suppression of the autonomous worker derogation.

In all countries under study where the opt-out is used, trade unions favoured its phasing out, arguing that the use of the opt-out contributed to a long hours culture with negative health and safety and productivity implications, also resulting from increased staff turnover and sickness absence. Where the opt-out is used, ministries and employer representatives favoured its retention. In most countries, its retention was preferred (where necessary) to other options introducing greater flexibility for employers. Restrictions on the opt-out were considered to have differential impacts on different sectors. This is clear in countries where the provisions are only used for certain sectors (i.e. the healthcare sector). However, even in countries where the use of the opt-out is rather widespread, different sectors assess the impact of its removal differently. The most significant impacts are perceived in the manufacturing, energy, transport (covered by different regulations) and in the public sector. Overall, it is therefore notable that despite the fact that the more widespread use of the opt-out could be seen have resulted from the implications of the SIMAP / Jaeger rulings, it does not appear that stakeholders

among governments and employers view greater flexibility in on-call provisions and compensatory rest as a panacea for allowing the phase out of the opt-out provisions.

Some proposed changes were either considered likely to have a minor impact or were not supported by any of the stakeholders consulted. The impact of a change regarding the application of the WTD by individual in the cases of concurrent contracts with the same employer was considered to be difficult to assess because of a lack of information on the scale of this phenomenon, but on the whole considered likely to be minor. Stakeholder consultations overwhelmingly demonstrated the view that proposals on greater flexibility in the taking of minimum daily rest (over 14 instead of 11 hours) would not be welcome or workable.

Overall, stakeholders considered the likely administrative burden imposed by the proposed changes to be relatively minimal, as they were mainly linked to the recording of working hours, which generally takes place as a matter of course. Somewhat more concern on this was expressed on the part of the SME representatives. Socio-economic impacts were therefore seen to be potentially more significant, particularly in relation to the possible changes linked to stand-by time, where the greatest potential costs were perceived to lie for employers. For workers, the most detrimental socio-economic effects were considered to arise from reducing the amount of on-call time to be counted as effective working time. It is notable that most stakeholders agreed on the potentially negative health and safety impact of provisions potentially extending individuals' working hours.

Conclusions

The WTD has been drawn up with the prime objective of protecting workers' health and safety. Despite the relative limitations of the existing literature on the socio-economic impact of the WTD or wider working time regulations, it is possible to conclude that there is sufficient evidence to indicate a negative health and safety impacts of long hours working. Long and inflexible working hours also have a negative impact on work-life balance which could affect worker motivation and retention. While studies show the negative impact of long working hours on workers' well-being, it is beyond the scope of this study to simulate such results (or indeed the benefits of specific reductions in working hours).

Although recent Eurofound data³⁸ shows that collectively agreed as well as actual working hours have been declining in recent years, some evidence of long hours working persist. New working patterns and types of contracts also mean that a number of workers combine several jobs which can cumulate to long working hours.

Legislative mapping carried out for this study, as well as stakeholder interviews demonstrate that significant differences exist in the implementation of the current legal acquis, with a limited number of countries maintaining arrangements which could be considered as being in contravention of the current WTD, others take a minimalist approach to the implementation of the WTD while in a third category of Member States these minimum requirements are exceeded. Collective bargaining adds further nuance to these provisions, although in relation to the assessment of the possible changes, the impact of the status quo with regard to bargaining outcomes is limited. Issues of enforcement were not considered in detail by this study, but as is the case in many areas of legislation, it is clear that a more stringent enforcement could play some role in addressing the concerns identified.

³⁸ Eurofound (2014); Developments in collectively agreed working time 2013; <http://eurofound.europa.eu/observatories/eurwork/comparative-information/developments-in-collectively-agreed-working-time-2013>

The goal of this study was to assess the impact of a number of possible legislative changes in terms of administrative costs and burdens, the regulatory impact for SMEs, and the broader socio-economic impacts. The impact on administrative burdens and the socio-economic impact show the following results in relation to each possible change:

- Greater flexibility in the calculation of working time for on-call workers would have a potential positive effect on employment creation (estimated to 0.193% of the total employment in EU28) while bearing no administrative burdens for employers. However, as indicated above positive (and negative) predictions of employment effects are likely to be over-estimated, due to the way in which impacts had to be modelled and the available data on affected populations used. In addition, in sectors which are not part of a highly competitive market, where labour elasticity is limited, and/or where other considerations strongly affect recruitment decisions (e.g. specific skills; workforce shortages), a greater flexibility may not necessarily lead to additional employment creation. This could, for example, be the case in (semi) public sectors such as the health care sector. Finally, uncertainty about future (employment) prospects can also lead to low increases of employment just as adjustment costs might prohibit firms from expanding employment. Therefore, the macro-level effect of potential changes will depend on the specific sectoral, occupational and economic environment in which it is set;
- A more flexible timing of compensatory rest is the possible change with the second highest potential positive impact on employment (estimated to 0.096% of total employment in EU28) while bearing administrative burdens of around €1,760 million across Europe. As the compensatory rest scenario is also most likely to be found in combination with on-call hours, the same proviso applies to macro-level employment effects as indicated above and actual employment effects are therefore likely to be smaller;
- Possible changes to the reference period are likely to have a potential positive impact on employment (0.043% of total employment in EU28) with an administrative burdens around €310 thousand across Europe;
- Possible changes to weekly rest would have a potential positive effect on employment creation (estimated to 0.043% of total employment in EU28) with no additional administrative burdens for employers;
- Possible changes to minimum daily rest would potentially have a positive impact on employment (estimated to 0.026% of total employment in EU28) with an administrative burdens around €144 thousand for employers across Europe;
- Possible changes to stand-by calculation and stand-by cap would potentially have a negative impact on employment (-0.022 and -0.023 of total employment in EU28) with an administrative burdens around €129 thousand for stand-by calculation and €88 thousand for a stand-by cap;
- Possible changes to definition of autonomous workers would potentially have a negative impact on employment (estimated to -0.010% of total employment in EU28) with around €815 thousand in additional one-off administrative burdens in relation to the administrative actions of familiarising with the new changes and €342 thousand to adjust the company's files;
- Possible changes to the opt-out would potentially have a negative impact on employment creation (estimated to -0.011% of total employment in EU28).

It is crucial to bear in mind that these assessments do not take account of the costs or benefits of potential health and safety effects, and any potential knock-on effects on productivity or competitiveness.

All findings as summarised in the table below should be viewed against the background of the methodological restrictions of this study.

Table 3 Overall impact of the possible changes to the WTD

	Impact on employment (light grey denotes positive employment impact, dark grey negative employment impact)	Impact on administrative burden (light grey denotes positive employment impact, dark grey negative employment impact; ranking from 1-11 with 1 being highest burden)	Impact on changes required to national legislation (light grey denotes positive employment impact, dark grey negative employment impact ; ranking from 1-12 with 1 being most additional flexibility and 12 greatest additional change)	Socio-economic impact	Stakeholder views
On-call (1a)		10	3	Potentially negative health and safety and productivity impact	Most employers and many ministries in favour, trade unions opposed.
Compensatory rest (2)		1	1	Possible negative health and safety and productivity impact	Some employers and ministries in favour, but also concerns, trade unions opposed

Study measuring economic impacts of various possible changes to EU working time rules in the context of the review of Directive 2003/88/EC - VC/2013/119 – Final Report

	(EI) Impact on employment (from most positive to most negative; green denotes positive employment impact, red negative employment impact)	(AB) Impact on administrative burden (in ranking from 1-11 with 1 being highest burden)	(L) Impact on changes required to national legislation (in ranking from 1-12 with 1 being most additional flexibility and 12 greatest additional change; green denotes more flexibility, red less flexibility)	Socio-economic impact)	Stakeholder views
Reference period (4)		6	2	Possible negative health and safety and associated impacts	Most employers and ministries in countries not yet significantly using derogation in favour, trade unions opposed
Weekly rest (3)		11	4	Possible negative health and safety and associated impacts	Limited interest, trade unions opposed
Right to request flexible working (8b)		2	8	Positive work life balance effect	Trade unions in favour, most employers and ministries opposed
Early information on changes in working patterns (8a)		n/a	n/a	Limited impact	Limited interest
Autonomous worker (5)		4	6	Could improve health and safety for many workers newly under Directive	Concerns over impact; trade union want suppression of derogation

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	(EI) Impact on employment (from most positive to most negative; green denotes positive employment impact, red negative employment impact)	(AB) Impact on administrative burden (in ranking from 1-11 with 1 being highest burden)	(L) Impact on changes required to national legislation (in ranking from 1-12 with 1 being most additional flexibility and 12 greatest additional change; green denotes more flexibility, red less flexibility)	Comments (stakeholder views and wider socio-economic impacts)
Opt-out (6)		3	5	Possible positive health and safety and associated impact Employers and ministries opposing phase out/suppression; trade unions want to abolish
Stand-by cap (1c)		9	9	Possible positive health and safety and associated impact Employers and most ministries opposed; some trade unions in favour
Stand-by calculation (1b)		8	11	Possible positive health and safety and associated impact Employers and most ministries opposed; some trade unions in favour
Concurrent contract (7)	n/a	n/a	7	Limited impact Limited interest
Flexibility in minimum daily rest (8c)			10	Potentially significant impact as not considered workable No interest; not considered workable

Note: - Light grey indicates: employment creation, more flexibility, low administrative burdens; dark grey indicates employment reduction, less flexibility, high administrative burdens

1 Introduction

ICF (previously ICF GHK) was appointed by DG Employment, Social Affairs and Inclusion in March 2014 to carry out a *Study measuring economic impacts of various possible changes to EU working time rules in the context of the review of Directive 2003/88/EC*, under specific Service Order VC/2013/119 of the Multiple Framework Contract for the provision for Evaluation and Impact Assessment Services to DG EMPL.

This document provides the final report for this study.

1.1 Background

The way in which working time is regulated and organised at EU and national level has important economic and social impacts. The length, intensity and patterns of working hours have been shown to have clear health and safety effects, as well as impacting on gender equality and the ability to reconcile work and private life. They can also affect access to training both within and outside of work. Such social impacts can themselves have wider economic and labour market effects. Additionally, there can be more direct impacts of working time regulation on productivity, enterprise performance and competitiveness, and on employment opportunities. For instance, in the years of the recent economic crisis, working time regulation allowing for flexibility in working hours or time banking has allowed many enterprises to limit the impact of the economic slowdown on employment by enabling a temporary reduction in working hours while maintaining employment relationships (and containing to a certain degree the negative impact on salaries)³⁹. As will be discussed in more detail in section 3.2 of this report, the questions whether an extension of working hours leads to a proportionate increase in productivity or whether the reduction of working time can have an impact on employment creation are complex with neither argument being ultimately proven. Thus, with regard to its *overall* effect on the economy, the (limited) available literature on the impact of working time regulation remains uncertain.

Throughout the 20th century, and during the last two decades, working time patterns and work organisation have shifted, both as a result of wider societal, economic and technological developments and as a result of regulation at the international, national and European level. Overall, there has been a reduction in working hours throughout the century, as well as a greater demand – both from employers and workers – for greater flexibility. On the employer side, flexibility is called for to respond to fluctuations in demand resulting, at least in part – from more ‘just in time’ systems of production, whereas workers are seeking better ways to reconcile work and family life, particularly with the increasing entry of women onto the labour market.

1.1.1 The scope of current EU working time regulation and the debate on the potential amendment of Directive 2003/88/EC

Article 153 of the Treaty on the Functioning of the European Union (TFEU) provides the EU with the competence to support and to complement activities of the Member States in the area of social policy and, specifically, as regards the improvement of the working environment to protect workers' health and safety. In accordance with the principle of minimum harmonisation in EU social law, the Working Time Directive 2003/88/EC (henceforth referred to as WTD), relying on Article 153 of the TFEU (ex-Article 137(2) of the TEC), sets a framework of minimum safety and health requirements for the organisation of working time and, as such, establishes common minimum standards for

³⁹ Kümmerling, A and Lehdorff, S (2014) The use of working time-related crisis response measures during the Great Recession; ILO; Conditions of Work and Employment Series, No 44

all Member States. Governments are always allowed to set higher standards in their national laws.

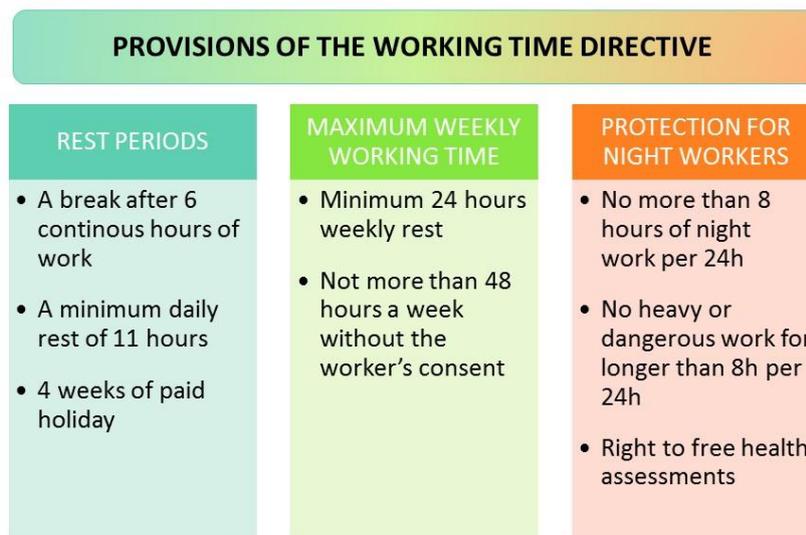
The core principles of the WTD have also been enshrined in the Charter of Fundamental Rights of the EU, Article 31 of which guarantees all workers the right to limitation of their working hours, to daily and weekly rest and to paid annual leave. These principles therefore derive from EU primary law, with which secondary law such as the WTD has to comply.

The WTD applies to all sectors of activity, both public and private, including healthcare and emergency services. In terms of personal scope, the Directive does not apply to self-employed workers.

1.1.2 The main provisions of the WTD

The WTD was adopted by the European Parliament and Council with the purpose of improving the working environment by improving workers' health and safety. It codifies two previous Directives (Council Directive 93/104/EEC⁴⁰, later amended by Directive 2000/34/EC⁴¹, see Figure 1.1 for the main provisions of the Directive).

Figure 1.1 The main provisions of the WTD



As stated above, the Directive covers all workers in all sectors of activity in the public and private sector, with the exception of a number of areas (particularly in the transport sector) to which sector-specific legislation applies. The Directive contains the following key provisions:

- Limit to average weekly working time (a maximum of 48 hours per week on average, including overtime, normally calculated over a reference period of no longer than 4 months);
- Daily and weekly rest periods (normally 11 consecutive hours daily and 24-35 hours' uninterrupted rest weekly);

⁴⁰ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31993L0104:EN:HTML>

⁴¹ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32000L0034:EN:HTML>

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- A rest break during working time (where working hours are longer than six hours);
- Paid annual leave of at least 4 weeks per year;
- Additional protection for night workers in the form of
 - A limit of 8 working hours, on average, per 24 hours;
 - Work not to exceed 8 hours in any 24 hour period if it involves special hazard or physical or mental strain;
 - Right to a free health assessment ahead of the commencement of an assignment and thereafter at regular intervals;
 - Right to a transfer (wherever possible) to day work if suffering from health problems as a result of night work;
 - Measures to require employers who regularly use night work to notify the responsible authorities if requested.

It is important to emphasise that the WTD does not regulate the remuneration of working time. In accordance with Article 153(5) TFEU, the matter of pay does not fall within the competence of the EU to adopt harmonising measures. The WTD does contain a provision (Art. 7) on minimum paid annual leave, throughout which normal remuneration should be maintained. But the WTD does not in any way set levels or amounts of remuneration, or even whether certain working time should be remunerated at all. This means that the determination by the CJEU whether something constitutes 'working time' or not is only relevant for the purposes of applying the limits set by the WTD and not whether this time is remunerated or not, and at what rate. Indeed, the Member States are entirely free to decide for example whether inactive on-call time at the workplace has to be remunerated at all, or at a lower rate than active working time, based on national legislation and case law. For instance, the Supreme Court in Austria stated that on-call may be paid differently than normal working hours. In the Netherlands, however, the Supreme Court decided that the Minimum Wage Act is applicable to employment relationships based partially or wholly on on-call agreements, and the worker has to be paid the minimum wage for the additional hours. In the UK, *Hughes v Graham and another t/a Graylyns Residential Home* [2008] demonstrated the differences between the application of the Working Time Regulations and the application of National Minimum Wage Regulations, since although all on-call / sleeping-in time was counted in the calculation of rest breaks etc., only sleeping-in time actually worked counted toward payment of the national minimum wage⁴².

The WTD contains a number of important derogations which Member States can chose to avail themselves of, which are designed to increase flexibility for employers especially in certain types of activities, while at the same time giving due regard to the health and safety of workers. Member States can determine to derogate from provisions on:

- Minimum daily rest (Article 3); Rest breaks (Article 4);
- Weekly rest periods (Article 5);
- Maximum weekly working time (Article 6);
- Length of night work (Article 8); and
- Reference periods (Article 16).

⁴² See [EIRO \(2006\)](#)

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This means that derogations are possible from all the core provisions of the Directive, except the right to paid annual leave under Article 7 and the health assessment that has to be offered to night workers under Article 9.

Firstly, a derogation is available to Member States when, on account of the specific characteristics of the activity concerned, the duration of working time is not measured and/or predetermined or can be determined by the workers themselves. This includes *inter alia* 'managing executives or other persons with autonomous decision making power, family workers and individuals officiating at religious ceremonies'. Member States can determine that Articles 3 to 6, 8 and 16, do not apply to such workers (Article 17(1) of the Directive), also sometimes referred to as 'autonomous workers',

Secondly, Member States can derogate from Articles 3, 4, 5, 8 and 16 (so not the 48-hour average weekly working time limit) in the case of certain activities, described in Article 17(3), where the worker's place of work and his place of residence are distant from one another, in the case of security and surveillance activities, activities involving the need for continuity of service or production or where there is a foreseeable surge of activity, and in the case of certain persons working in railway transport. When making these derogations to rest periods, Member States need to ensure that workers receive equivalent compensatory rest or, in entirely exceptional circumstances, other appropriate protection (Article 17(2)). When derogating from the reference period to calculate average weekly working time (normally 4 months) on the basis of this derogation, the extended reference period cannot exceed 6 months (Article 19).

Thirdly, in accordance with Article 17(4), Member States can derogate from the provisions on daily and weekly rest in the case of shift work activities or in the case of activities involving periods of work split up over the day. The same conditions as regards compensatory rest as applicable in relation to Article 17(3) apply.

Fourthly, collective agreements can extend the reference period to calculate average weekly working time to up to 12 months for any kind of activity, subject to compliance with the general principles relating to the protection of the safety and health of workers, of allowing, for objective or technical reasons or reasons concerning the organisation of work (Articles 18 and 19).

Fifthly, the so-called individual 'opt-out' provision permits Member States not to apply the maximum 48-hour working time limit prescribed by Article 6, if an individual worker voluntarily agrees to this (and is not subject to any detriment for not giving or revoking consent; Article 22). In that case, only an indirect limit of 78 hours to weekly working time applies, deriving from the application of the daily and weekly rest periods. Considering the possibility to apply a 14-day reference period to the provision of weekly rest, this means that 92 hours can be worked in individual weeks.

The Directive has been subject to significant case-law and in particular some judgements by the Court of Justice of the EU (CJEU) have had an important impact on the implementation of the Directive at Member State level. In the SIMAP⁴³, Jaeger⁴⁴ and Dellas⁴⁵ cases, the CJEU was called on to clarify whether (in-active) on-call time would have to be considered as working time or as rest time, since this was not clearly defined in the WTD. The CJEU answered that all on-call time should be counted entirely as

⁴³ Judgement of 3 October 2000, case C-303/98, see http://eur-lex.europa.eu/smartapi/cgi/sga_doc?smartapi!celexplus!prod!CELEXnumdoc&lg=en&numdoc=698J0303

⁴⁴ Judgement of 9 September 2003, Case C-151/02, see <http://curia.europa.eu/jurisp/cgi-bin/gettext.pl?lang=en&num=79969090C19020151&doc=T&ouvert=T&seance=ARRET>

⁴⁵ Case C-19/04, see <http://curia.europa.eu/jcms/upload/docs/application/pdf/2009-02/cp050104en.pdf>

working time when workers are required to be physically present at the workplace or at a place designed by their employer. Conversely, stand-by time, where a worker is at home or a place of his choosing but required to be contactable and ready to work if called upon, only has to be counted as working time for the hours actually worked. Similarly, the CJEU also held that compensatory rest following a period of missed minimum daily rest had to be taken immediately.

1.1.3 The review of the WTD

The process to review the WTD began in 2003/2004 with proposals by the Commission (and discussed in Council) to amend the Directive. Two of the issues discussed – the opt-out provisions and the reference period for calculating working time – needed to be reviewed as a result of requirements enshrined within the Directive. The other two main issues debated (the definition of on-call time and the timing of compensatory rest) arose from the rulings of the CJEU in SIMAP/Jaeger.

The main proposals for amendment discussed at the time included:

- Either the abolition of – or further restrictions placed on – the individual opt-out of the 48-hour rule;
- To treat on-call time differently from normal working time (distinguishing between active and an inactive on-call periods);
- To allow more flexibility in the timing of compensatory rest;
- To allow the reference period for averaging weekly working time to be extended to a maximum of 12 months by law (and not only by collective agreement).

However, the Council and the Parliament were eventually unable to reach agreement on these proposals, which ultimately lapsed with the legislative mandate in 2009.

A two stage consultation process of the European social partners⁴⁶ and subsequent (ultimately abortive) social partner negotiations between November 2011 and December 2012 were accompanied by a number of background studies and reports, including a detailed implementation report on the current WTD⁴⁷, a study on the social and economic impact of existing working time rules and developments in working time organisation⁴⁸, a range of studies on working time published by Eurofound⁴⁹ and a study on the potential administrative burden and economic impact of a range of proposed options for amendment of the WTD⁵⁰.

In 2014, the Commission services preliminarily identified issues and possible options to move forward with the Review of the WTD. The review process seeks to examine and possibly address a number of interrelated issues:

- Insufficient legal clarity resulting from issues left open in the WTD and as a result of a significant body of case law, meaning that in order for national authorities, employers and workers to ascertain their legal position it is now necessary to turn to several CJEU judgements in addition to the text of the WTD (as implemented). Furthermore, although the CJEU has clarified the legal position in relation to

⁴⁶ COM (2010) 106 of 24.03.2010 and COM (2010) 801 of 21.12.2010 respectively

⁴⁷ COM (2010) 802 and SEC (2010) 1611 of 21.12.2010

⁴⁸ Study to support an impact assessment on further action at European level regarding Directive 2003/88/EC and the evolution of working time organisation, Deloitte (2010)

⁴⁹

See

<http://ec.europa.eu/social/main.jsp?catId=157&langId=en&newsId=964&moreDocuments=yes&tableName=news>

⁵⁰ Review of the Working Time Directive 2003/88/EC measuring administrative costs and burdens of various position options (2012, unpublished).

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issues such as on-call time and compensatory (daily) rest, issues such as the position in case of delayed weekly rest, or whether the WTD applies per worker or per contract, remain unclear (while this is important in case of workers having concurrent contracts).

- The Commission also identifies areas where the WTD has been applied incorrectly (e.g. with regard to the derogation for 'autonomous workers' or the monitoring or enforcement of conditions linked to the opt-out).
- Areas are also identified where long-hours working persists either as a result of infringements or the interpretation of derogations provided for by the Directive. Some of the challenges in this area result from changes in the patterns of working hours or indeed contractual arrangements.
- Finally, a public consultation which attracted widespread attention among SMEs and their representative organisations earmarked the WTD as a piece of legislation being considered among the most burdensome for SMEs. A need to explore further to what extent these perceived burdens arise from the WTD itself or the national implementation of working time rules was identified⁵¹. In this context it is also important to underline stated REFIT (Regulatory Fitness and Performance Programme) objectives of a possible review of WTD: clearer and simpler rules will be easier to understand and apply by workers and employers, including SMEs and public services.

A number of possible options are therefore preliminarily considered, ranging from no further legislative action (which might include the issuing of an interpretive Communication by the Commission aimed at clarifying the current legal acquis), over sectoral solutions to amending the WTD on the basis of previous proposals (e.g. the 2009 text in the conciliation procedure) or a wider legislative amendment, taking account of changes in working time patterns and associated requirements. This does not prejudge the decision of the Commission on whether a new legislative initiative will be pursued or on its possible content and structure.

The latest analysis undertaken in the context of the Review also takes account of changing working patterns as a driver behind the requirement to review the provisions of the WTD. For instance:

- Technological advances make it easier for workers to work in stand-by arrangements at home (which currently does not have to be counted as working time under the WTD) rather than working on-call in the workplace, because of improved connectivity and the ability to deliver some work from home. This may diminish the organisational and financial challenges of the SIMAP/Jaeger/Dellas cases, but could lead to a lack of protection for the workers involved. Depending on the specific discipline and requirements regarding the proximity of home base to workplace in certain professions necessitating regular on-call duties, home-based on-call working could be considered to be less feasible for workers in certain sectors most affected by the court rulings (e.g. doctors), but shifts in the use of stand-by working could nonetheless have an impact, as demand for stand-by working could be seen to increase in a 24 hour service economy.
- Technological advances and cultural changes may increase the possibility and desire of workers to work flexibly (for instance working a shorter day at the office, followed by a few hours break to deal with family matters and later returning to

⁵¹ European Commission Staff Working Document; Monitoring and Consultation on Smart Regulation for SMEs; SWD(2013) 60 final of 7.3.2013

work from home or using other flexitime arrangements according to individual preferences). Such arrangements may not be sufficiently facilitated by the WTD, because it requires that daily rest periods should be uninterrupted, and also because it does not provide a right for a worker to request such flexible arrangements.

- There could be an increase in working arrangements which give more 'autonomy' and 'ownership' to workers (potentially limited to knowledge intensive sectors). This may translate into more result driven work obligations which adds relevance to the need to restrict or clarify the autonomous worker derogation. While it is already clear under current case law that such workers would not fall within the scope of the derogation unless they can determine their own working time (when and how much), this may need to be codified/clarified.
- Changes in patterns of contractual arrangements such as the rise of limited hour contracts or zero hour contracts could increase the need to address the question of concurrent contracts with the same employer and the application of the WTD per individual or per contract to protect workers on such contracts from working excessively long hours.

The current analytical framework in terms of issues and options shall be seen as preliminary but it provides at this stage a valuable basis to underpin the impact assessment work in practice. This study is a further contribution to the review process of the WTD.

1.2 Study objectives

The present study seeks to build on and enhance the results of a series of existing studies and assessments which have already been carried out within the context of the review of the WTD. Its aim is to contribute to the ongoing review process.

More specifically, as set out in the Terms of Reference, its purpose is to complete the following five tasks:

- **Task 1:** To review existing research on the administrative costs and burdens and broader economic impact of working time regulation associated with current provisions;
- **Task 2:** To provide a maximum of two short, high quality analysis papers evaluating the data and methodological approach used in existing studies of the administrative burden associated with EU working time rules, carried out at the national or EU level (this is presented as an optional element of the work; its added value and purpose have been confirmed at the inception meeting);
- **Task 3:** To quantify the administrative costs and burden associated with the potential options for legislative changes;
- **Task 4:** To specifically assess the regulatory impact of these options on SMEs; and
- **Task 5:** An in-depth analysis and econometric/statistical modelling of the foreseeable economic impact at national and EU level of these potential variations in working time rules. This should specifically focus on assessing the potential impact of these options on productivity, labour market participation, training and retraining and company performance in the private sector.

1.3 Problems identified, and potential changes to the WTD to be assessed

The key conceptual tools underpinning the evaluation was an outline of the problems identified which the options preliminarily envisaged seek to address, as well as the related intervention logic. The problem tree relating to the issues identified with the

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current position is presented in Figure 1.2, whereas the associated intervention logic for the amendment of the regulation of working time at the European level is presented in Figure 1.3.

Figure 1.2 Problem tree

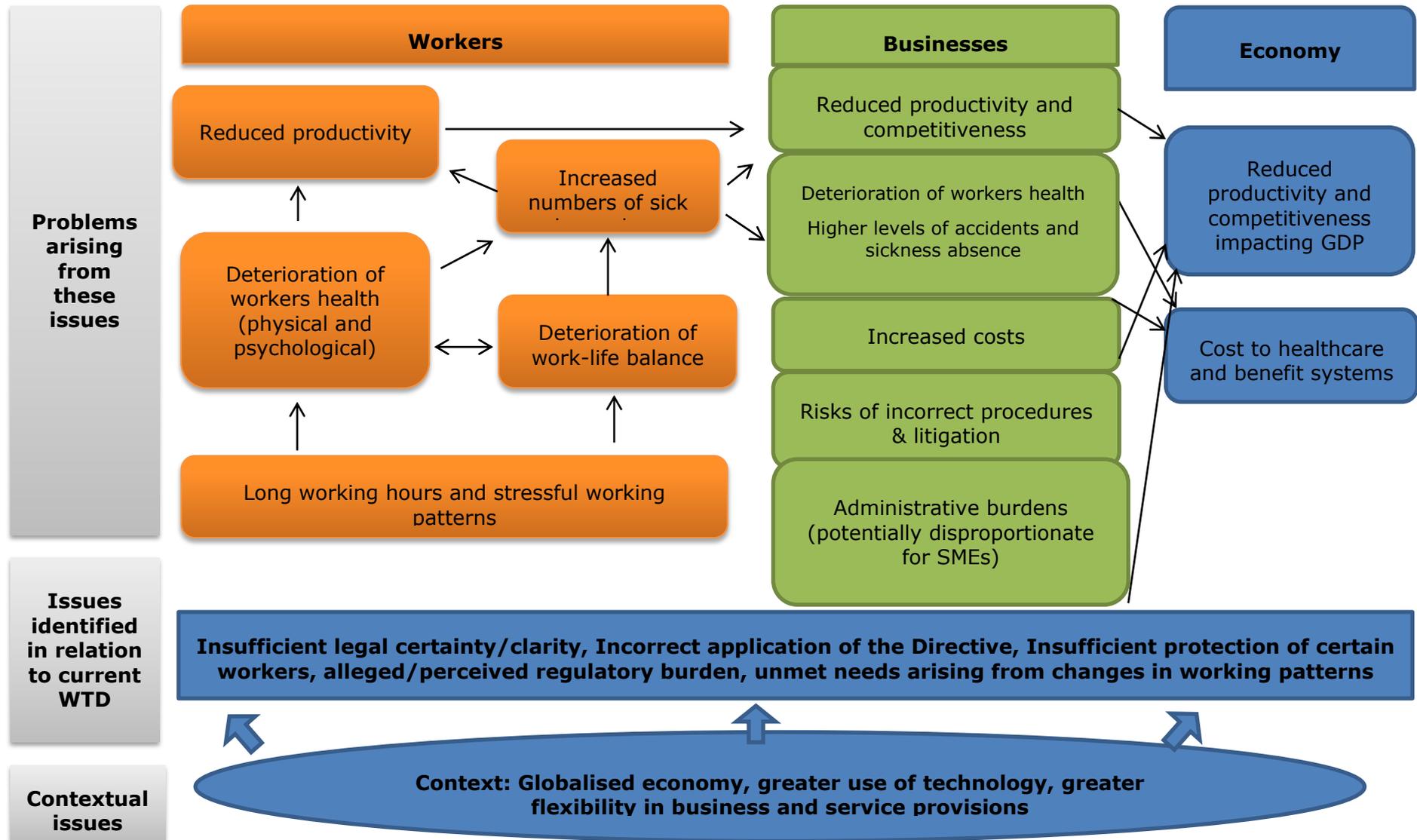
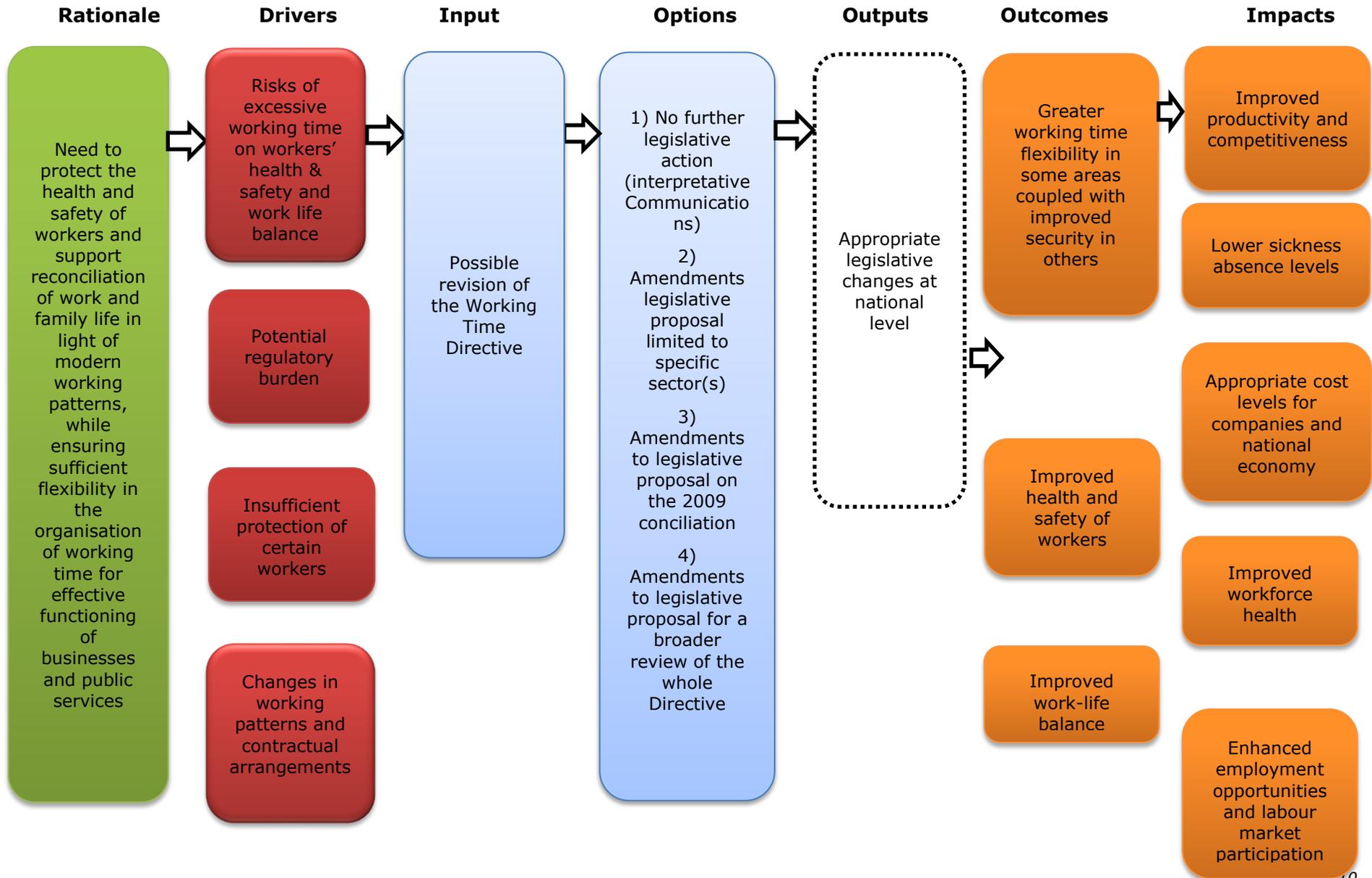


Figure 1.3 Intervention logic



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The preliminary analytical framework as recently set for the Review of the Working Time Directive elaborates the broad options being considered for the review of the Directive (e.g. no further legislative action; amendments only in relation to specific sectors; amendment based on the 2009 conciliation position; amendment based on broader review of the Directive). Some of those options consist of a combination of changes to various rules.

Table 1.1 below outlines the possible combination of legislative changes being considered with regard to different policy options. This schematic is indicative and will remain under review throughout the Commission's impact assessment process.

This study aims to measure the administrative burden and socio-economic impact associated with various possible changes to the Directive to help feed the Commission's Impact Assessment.

A number of the potential legislative changes considered in these options have already been assessed by a previous study. The 2012 study by Economisti Associati et al (unpublished) considered the following options for the purposes of assessing administrative costs and burdens (see box below). They are assessed in this study from the perspective of socio-economic impacts and regulatory impacts for SMEs.

A study carried out by Deloitte (2010) on behalf of the European Commission assessed the social and economic impact of current working time rules and the implications for work organisation of major changes in the world of work over the last two decades. This study paid particular attention to the use of the opt-out and the impact of rules on on-call time and compensatory rest (as well as the opt-out) on public services.

To complement existing assessments, this study looks at the following possible changes, which are elaborated in more detail in section 4 of this report.

Possible legislative changes to be assessed by this study

- The calculation of on-call and of stand-by time for the purposes of the Directive
- The timing within which missed minimum rest hours must be taken
- The reference period over which average weekly working time may be calculated
- The context of existing derogations to the Directive including the scope of Article 17 which relates to 'autonomous workers'.
- Various options in relation to the opt-out provision
- Measures to improve work-life balance

Possible legislative changes previously assessed in relation to administrative costs and burdens arising (2012 study)

- Obligation for employers to inform workers well in advance about any substantial changes to the pattern of work
- Right for a worker to request changes to their working hours and patterns with an associated employer obligation to consider and give reasons for any refusal
- Requiring employers who use the opt-out to keep records of all working hours of workers who have agreed to it
- Providing that a worker may not validly be asked to opt-out prior to an employment contract, during a probationary period, or within one month after the conclusion of an employment contract

- Requiring employers to keep written proof of the workers' prior consent to opt-out and to include in the consent form information to the worker about his or her rights under article 22.1 of the Directive
- Requiring national authorities to compile information about the use of the opt-out, to evaluate the health and safety effects of the use for the workers concerned and to report their findings to the European Commission (to the extent to which this is not already required in law or practice)
- Clarifying that if a worker works under concurrent employment contracts with the same employer Member States should ensure that the 48-hour rule limit to average weekly working time is applied per worker and not per contract.

Table 1.2 summarises the hypothetical impact of these changes on different stakeholders (workers, businesses and the state), which was tested throughout the study.

In terms of in-depth data collection, this study focussed on the following countries: The Czech Republic, France, Germany, Hungary, Italy, the Netherlands, Poland, Spain, Sweden and the UK. These countries were considered not only geographically representative, but also using different approaches to the regulation of working time.

The sectors assessed in detail were: manufacturing, hotels and catering and the utilities sector. These sectors were selected on the one hand to reflect their importance in European and national economies and on the other their use of working time arrangements at the centre of the assessment, including on-call and stand-by arrangements. It should be noted that in parallel, a separate study was conducted looking at the impact of possible changes to the WTD on the health care sector.

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Table 1.1 Schematic of possible changes to WTD under different policy options

Key provisions of the WTD	Possible changes	Policy options			
		1 (no further legislative action)	2 (amending legislative proposal limited to specific sectors)	3 (amending legislative proposal based on 2009 conciliation)	4 (amending legislative proposal for a broader review of WTD)
On-call time	Provision of greater flexibility in counting on-call time (e.g. distinction between passive and active on-call time)		X	X	X
Stand-by time	Arrangements regarding stand-by time		X	X	X
Opt-out	Limitation to the use of the opt-out		X	X	(x)
	Elimination of the opt-out after a transition period			(x)	
Rest periods and compensatory rest	Further flexibility as regards the timing of compensatory rest (minimum rest) and rest periods			X	X
Reference periods	Added flexibility as regards the calculation of reference periods		x	X	X
Autonomous workers	Tighter definition of autonomous workers			X	
Concurrent employment contracts	Clarification of the scope of the application of the Directive			X	
Derogations	Formulating simpler and clearer rules for derogations				X
Reconciliation	Legal measures to support reconciliation of work and family life			X	

Table 1.2 Hypothetical impacts of potential policy changes on workers, employers and the state

Key provisions of the WTD and related possible changes and combined possible changes	Workers	Employers	The state/society
<p>On-call time (possible change 1a)</p> <ul style="list-style-type: none"> 75% of on-call time to be counted as working time 50% of on-call time to be counted as working time 	<p>Increased working hours → Deterioration in work-life balance → deteriorating physical/mental health → reduced job satisfaction → increased risk of accidents and sick days associated with accidents and ill health → reduced retention → reduced productivity</p>	<p>Increased flexibility in allocation of working time and work organisation → potentially reduced labour cost/requirement to recruit → potentially increased competitiveness; but also possibility of increased risk of absence due to sickness and accidents, reduced staff satisfaction → reduced productivity and competitiveness → deterioration of public profile</p> <p>Potential administrative burden of closer monitoring of working hours</p>	<p>Potential costs to health and benefit system of increased accidents and workplace sickness</p> <p>Unclear economic benefits/disbenefits linked to impacts on productivity and competitiveness</p>
<p>Stand-by time (possible change 1b)</p> <ul style="list-style-type: none"> 40% of stand-by time to be counted as working time 20% of stand-by time to be counted as working time <p>Stand-by time (possible change 1c)</p> <ul style="list-style-type: none"> 0% of stand-by time not worked to be counted as working time, but 12 hours per week limit on the 	<p>Potentially reduced working hours → improvement in work-life balance → improvement in physical/mental health → improved job satisfaction → reduced risk of accidents and sick days associated with accidents and ill health → increased retention → increased productivity</p>	<p>Reduced flexibility in allocation of working time and work organisation → potentially increased labour cost/requirement to recruit → potentially reduced competitiveness; but also possibility of reduced risk of absence due to sickness and accidents, increased staff satisfaction → increased productivity and competitiveness → improvement of public profile</p> <p>Potential administrative burden of</p>	<p>Potential reduced cost to health and benefit system of reduced accidents and workplace sickness</p> <p>Unclear economic benefits/disbenefits linked to impacts on productivity and competitiveness</p>

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Key provisions of the WTD and related possible changes and combined possible changes	Workers	Employers	The state/society
<p>volume of this form of work</p> <ul style="list-style-type: none"> 0% of stand-by time not worked to be counted as working time, but 24 hours per week limit on the volume of such work 0% of stand-by time not worked to be counted as working time, with possibility to use derogation to set a different cap through collective agreement 		<p>closer monitoring of working hours</p>	
<p>Rest periods and compensatory rest (possible change 2a)</p>	<p>Longer uninterrupted working hours → Deterioration in work-life balance → deteriorating physical/mental health → reduced job satisfaction → increased risk of accidents and sick days associated with accidents and ill health → reduced retention → reduced productivity</p>	<p>Increased flexibility in allocation of working time and work organisation → potentially reduced labour cost/requirement to recruit → potentially increased competitiveness; but also possibility of increased risk of absence due to sickness and accidents, reduced staff satisfaction → reduced productivity and competitiveness → deterioration of public profile</p>	<p>Potential costs to health and benefit system of increased accidents and workplace sickness</p> <p>Unclear economic benefits/disbenefits linked to impacts on productivity and competitiveness</p>
<p>Rest periods and compensatory rest (possible change 2b)</p>	<p>Longer periods of working without (weekly) rest periods → potentially detrimental impact on work life balance → deteriorating physical/mental health → reduced job satisfaction → increased risk of accidents and sick days associated with accidents and ill health → reduced retention → reduced productivity</p>	<p>Potential administrative burden of closer monitoring of working hours/rest periods</p>	

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Key provisions of the WTD and related possible changes and combined possible changes	Workers	Employers	The state/society
<p>Reference periods (possible change 3)</p> <ul style="list-style-type: none"> • Possibility of setting 6 months reference period in all cases • Derogation making it possible to set a 12 month reference period by legislation 	<p>Longer periods of long-hours working (followed by periods with reduced working hours) → unclear impact on work-life balance (depends on organisation of working patterns) → deteriorating physical/mental health → reduced job satisfaction → increased risk of accidents and sick days associated with accidents and ill health → reduced retention → reduced productivity</p>	<p>Increased flexibility in allocation of working time and work organisation → potentially reduced labour cost/requirement to recruit → potentially increased competitiveness; but also possibility of increased risk of absence due to sickness and accidents, reduced staff satisfaction → reduced productivity and competitiveness → deterioration of public profile</p> <p>Potential administrative burden of closer monitoring of working hours over longer period of time</p>	<p>Potential costs to health and benefit system of increased accidents and workplace sickness</p> <p>Unclear economic benefits/disbenefits linked to impacts on productivity and competitiveness</p>
<p>Opt-out (possible change 6)</p> <ul style="list-style-type: none"> • Reinforced conditions for use of opt-out • Requirement to keep records of hours worked for opted out workers • Restrictions on when worker can be asked to sign opt-out • Requirement to keep written proof • Requirement for national authorities to evaluate health and safety impact of use of opt-out 	<p>Potentially reduced working hours</p>	<p>Potential administrative burden of closer monitoring of working hours/documentation linked to opt-out</p> <p>Reduced flexibility in allocation of</p>	<p>Potential reduced cost to health and benefit system of reduced accidents and workplace sickness</p> <p>Unclear economic benefits/disbenefits linked to impacts on productivity and competitiveness</p> <p>Cost to state of monitoring impact of opt-out</p>

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Key provisions of the WTD and related possible changes and combined possible changes	Workers	Employers	The state/society
<ul style="list-style-type: none"> Restrictions on use of opt-out (when combined with other possible changes) Suppression of opt-out 	<p>→ improvement in work-life balance → improvement in physical/mental health → improved job satisfaction → reduced risk of accidents and sick days associated with accidents and ill health → increased retention → increased productivity</p>	<p>working time and work organisation → potentially increased labour cost/requirement to recruit → potentially reduced competitiveness; but also possibility of reduced risk of absence due to sickness and accidents, increased staff satisfaction → increased productivity and competitiveness → improvement of public profile</p>	
<p>Autonomous workers (possible change 5) Tighter definition</p>	<p>Potentially reduced working hours for a larger group of workers → improvement in work-life balance → improvement in physical/mental health → improved job satisfaction → reduced risk of accidents and sick days associated with accidents and ill health → increased retention → increased productivity</p>	<p>Potentially reduced flexibility in allocation of working time and work organisation → potentially increased labour cost/requirement to recruit → potentially reduced competitiveness; but also possibility of reduced risk of absence due to sickness and accidents, increased staff satisfaction → increased productivity and competitiveness → improvement of public profile</p> <p>Potential administrative burden of closer monitoring of working hours</p>	<p>Potential reduced cost to health and benefit system of reduced accidents and workplace sickness</p> <p>Unclear economic benefits/disbenefits linked to impacts on productivity and competitiveness</p>
<p>Concurrent employment contracts (possible change 7) Application per individual in case of multiple contracts with same employer</p>	<p>Potentially reduced working hours → if not taking up additional job elsewhere</p> <p>Potential improvement in work-life balance → potential improvement in physical/mental health → potentially improved job satisfaction → reduced risk of</p>	<p>Potentially reduced flexibility in allocation of working time and work organisation → potentially increased labour cost/requirement to recruit → potentially reduced competitiveness; but also possibility of reduced risk of absence due to sickness and</p>	<p>Potential reduced cost to health and benefit system of reduced accidents and workplace sickness</p> <p>Unclear economic benefits/disbenefits linked to impacts on productivity and competitiveness</p>

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Key provisions of the WTD and related possible changes and combined possible changes	Workers	Employers	The state/society
	<p>accidents and sick days associated with accidents and ill health → potentially increased retention → potentially increased productivity</p> <p>If taking up additional job elsewhere → potential for reduced work life balance and job satisfaction → potential impact on health and wellbeing and associated impacts</p>	<p>accidents, increased staff satisfaction → increased productivity and competitiveness → improvement of public profile</p> <p>Potential administrative burden of closer monitoring of working hours</p>	
<p>Reconciliation (possible changes 8a-c)</p> <ul style="list-style-type: none"> Requirement to inform early regarding changes in working patterns Right to request to work flexibly Greater flexibility regarding uninterrupted taking of minimum daily rest 	<p>Ability to better plan work life balance commitments</p> <p>Improvement in work-life balance → improvement in physical/mental health → improved job satisfaction → increased retention → increased productivity. Health impact depends on whether working time is reduced.</p> <p>Improvement in work-life balance → improvement in physical/mental health → improved job satisfaction → increased retention → increased productivity.</p>	<p>Potentially reduced flexibility in allocation of working time and work organisation → potentially increased labour cost/requirement to recruit → potentially reduced competitiveness; but also possibility of reduced risk of absence due to sickness and accidents, increased staff satisfaction → increased productivity and competitiveness → improvement of public profile</p>	<p>Potentially reduced cost to state of childcare; impacts on health and benefit system depend on options taken by workers; potential cost to benefit system if worker draws lower wages.</p>

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Key provisions of the WTD and related possible changes and combined possible changes	Workers	Employers	The state/society
	Potentially negative impact of not obtaining 11 hours uninterrupted daily rest, if so → deteriorating physical/mental health →increased risk of accidents and sick days associated with accidents and ill health → reduced productivity		

1.4 Structure of the report

The remainder of this report is structured as follows:

- Section 2 provides an overview of the key methodological approaches used for the completion of this study and main challenges encountered.
- Section 3 delivers an overview of the literature pertaining to administrative burdens and economic impacts associated with working time regulation, which has contributed to informing the study approach and methodology as well as contributing to establishing the baseline. A detailed bibliography of source material for the study can be found in Annex 1.
- Section 4 contains the main outputs of this study and discusses, in turn, the impact of each of the possible changes to the WTD under study. Based on the example of the in-depth study countries, it analyses the legal baseline situation, discusses the resulting necessary legislative changes and the resulting administrative burden and economic impact against the background of an assessment of the affected populations. This section also provides an overview of the stakeholder views gathered as part of this study.
- Section 5 draws together relevant findings on the regulatory impact of working time regulation on SMEs and the impact of the proposed possible changes.
- Section 6 summarises stakeholder views on the possible changes being examined.
- Section 7 draws overall conclusions from the assessments on administrative costs and burdens and socio-economic impacts of possible changes to the WTD.
- Annex 1 provides a bibliographic overview of the literature reviewed for this study.
- Annex 2 provides a more detailed country level legal mapping for 10 Member States
- Annex 4 provides a more detailed rationale for the assessment of Business-As-Usual (BAU) Cost estimates used in the costing of Administrative Burdens
- Annex 3 provides a paper assessing the methods and data used by national administrative burden studies on working time regulation
- Annex 4 delivers a note of WTD secondary survey analysis
- Annex 5 contains details of time needed for each administrative action
- Annex 6 contains detail of the numbers of stakeholders and companies consulted for the study

2 Methodological approach

This section sets off the methodological approaches employed for the assessment of Administrative Cost and Burdens, as well as the socio-economic impact of different potential changes to the WTD. It clearly sets out the key methodological challenges and associated provisos which must be taken into account when assessing the findings discussed in section 4, 5 and 7 below.

Overall approach

This study relied on a desk review of literature at national and transnational level, as well as stakeholder interviews with relevant ministries, labour inspectorates, HR service providers, social partners and individual employers. Over 90 stakeholders⁵² (out of approximately 160 contacted) and 125 enterprises⁵³ (out of approximately 560 contacted) in the three target sectors (representing different size categories) were interviewed for this research⁵⁴.

Assessment of the baseline situation

An elaboration of the baseline situation is critical in order to establish the extent to which current provisions at national level meet, exceed or fall short of current legislative requirements and to assess whether the status quo situation (or any forthcoming developments in the status quo) are suitable to address the issues with the current WTD identified by the Commission services in their analytical framework as preliminarily set in the context of the Review of the WTD. It also serves to determine the likely issues arising from a failure to address these concerns, based on the available evidence on the impact of the status quo on questions such as workers' health and safety, employment, productivity, competitiveness, work-life balance and so on. Finally, a study of the baseline situation also allows for an estimation of the populations of workers affected by these challenges and therefore the number of workers and enterprises affected by the legislative changes being assessed.

Assessment of administrative burden

The assessment of administrative cost and burden has been carried out using the Standard Cost Model (SCM) approach. To estimate the administrative costs (AC) related to each possible change a two-step approach has been applied:

- The first step of the analysis involved the identification of information obligations (IO) associated with the possible changes described above. The identification of IO for each possible change enabling describing the associated administrative actions (AA) which would be required to fulfil the new or modified obligations.
- The second step involved the identification of the costs associated with each AA.

Some of these requirements are considered as potentially new, whereas those relating to the general recording of working hours are unlikely to be new. The administrative costs (AC) to be calculated consist of two different cost components: the business-as-usual costs (BAU) and administrative burdens

⁵² This includes 29 employers' organisations and 13 trade union organisations. The imbalance resulted from more employers responding to enquiries by the study team (despite the fact that more trade unions than employers' organisations were originally contacted).

⁵³ Only human resource managers were interviewed at company level, as questions primarily revolved around the administrative burdens resulting from different possible changes to working time regulations.

⁵⁴ Details of the number of interviews carried out by country can be found in Annex 6 to this report.

(AB). While the business-as-usual costs correspond to the costs resulting from collecting and processing information which would be done by an entity even in the absence of the legislation, the administrative burdens stem from the part of the process which is done solely because of a legal obligation (i.e. certain new/amended provisions of the WTD). In order to calculate AC in the SCM approach the quantity (Q) of the population affected has to be calculated as well as the price (P) for a specific action.

With regard to price calculations, these were drawn from interviews and from preparatory research. It is clear that both (P) and (Q) are based on the best possible approximations and distinctions are made between costs for large companies and SMEs. All provisos and potential data shortcomings are clearly highlighted in the assessment.

In each case, the size of the affected population depends on the existing legislative framework as well as the representation of sectors (and company sizes) utilising different working time practices (e.g. on-call time etc.). In order to obtain comparable figures, EU level datasets, triangulated with national datasets and information from interviews have been used as there are no reliable data on the affected population. The lack of comparable data poses significant challenges for the assessment of the affected population for all possible changes being considered.

Modelling and simulation of economic impacts of the possible changes to the WTD

Assessing the economic impact of possible changes to the WTD is challenging for a number of reasons:

- The WTD addresses several issues that are seen by economic actors as a given, and economic actors adjust to them. Changes in these circumstances nonetheless have an impact, although its measurement can be elusive against other confounding factors.
- Key aspects of the WTD affect firms only indirectly. It interferes, if at all, with the work organisation or scheduling of work. This makes it harder to estimate any effects, as direct data is usually not available.
- It is challenging to model the socio-economic impact of the proposed changes to working time legislation as this is likely to be small. The lack of reliable comparable data and inability to deliver a sectoral breakdown means that it is not possible to model labour elasticities in different sectors, although some are significantly more affected by some of the potential changes than others (e.g. in relation on-call and stand-by time).
- The diversity of legal definitions at national level and the lack of European and national data on groups of workers affected by different potential changes in working time regulation limited the possibility to precisely estimate the affected population (e.g. different definition of on-call and stand time and lack of data on workers on-call and stand at national level, by sectors and occupations; lack of comparable data on the size of the population of workers affected by rules on compensatory rest, etc.). Data shortcomings in this field led to a likely over-estimation of affected populations. Lack of data also meant that impacts could not be disaggregated by sector or skill level for individuals most likely to be affected by various potential legislative changes.
- The lack of sectoral data means that it is not possible to model labour elasticities for different sectors, although some are significantly more affected by some of the potential changes than others.
- Some of the positive aspects resulting from legislation protecting workers only emerge in the longer-term or they avoid events that might have low

incidence. The long term effects of better health and the lower likelihood of accidents are therefore harder to measure. It is therefore not possible to provide a quantitative estimation of the potential benefits of changes in working time regulation, meaning that it is not possible to balance the assessment of potential costs (administrative or in terms of employment) with potential benefits.

- Existing studies can only provide limited lessons for the research as economic impact assessment is patchy and poorly quantified (and in some cases contradictory).

The impact of the different possible changes to the WTD on the economy would ideally be modelled in such a way that would allow the identification and quantification of their respective economic impact on all relevant variables, both in the short term and in the long-run. The challenge of this is, however, that the types of policy changes involved are quite elusive in terms of economic modelling. There are no direct statistical data that would allow to relate the organisation of hours worked (distribution of working time across weeks, months and working years) and the specific economic outcomes (productivity, labour demand, wages) in a structural way.

These challenges were dealt with by using a multifaceted approach. Macro-economic sector data is used in order to identify the relation between labour demand and labour costs. For this EU KLEMS data was used which also allows linking the productivity and value added to the factor inputs.

Empirical estimations were used to determine macroeconomic relationships that were included in the simulations (labour demand, TFP). As mentioned above, the likely incidence of populations of workers being affected by the changes was also estimated to determine which part of the economy will be affected and by which percentage.

Furthermore, it is important to distinguish between the micro and macro level effects of changes in working time regulation. Changes which are likely to lead to a decline in the cost of the factor labour may well have effects at the organisational level which allow employers to perform the same task with fewer workers, but economic theory postulates that labour cost reductions should lead to a greater use of the factor labour. However, whether this is the case in reality depends on a range of complex factors which are difficult to model and are likely to mean that employment effects are over-estimated for some possible changes.

This study relied on a desk review of literature at national and transnational level, as well as stakeholder interviews with relevant ministries, labour inspectorates, HR service providers, social partners and individual employers. Over 90 stakeholders⁵⁵ (out of approximately 160 contacted) and 125 enterprises⁵⁶ (out of approximately 560 contacted) in the three target sectors (representing different size categories) were interviewed for this research⁵⁷.

⁵⁵ This includes 29 employers' organisations and 13 trade union organisations. The imbalance resulted from more employers responding to enquiries by the study team (despite the fact that more trade unions than employers' organisations were originally contacted).

⁵⁶ Only human resource managers were interviewed at company level, as questions primarily revolved around the administrative burdens resulting from different possible changes to working time regulations.

⁵⁷ Details of the number of interviews carried out by country can be found in Annex 6 to this report.

2.1 Analysis of administrative costs – the Standard Cost Model approach

The EC Impact Assessment Guidelines (IAG) require that “for all policy options, the IA should provide details of the information obligations that are likely to be added or eliminated for businesses, citizens and national/regional/local administrations”⁵⁸.

Hence, the first step of the analysis involved the identification of information obligations (IO) associated with the possible changes described in the introduction and in more detail in section 4. The identification of IO for each possible change then enabled a description of the associated administrative actions (AA) which would be required to fulfil the new or modified obligations.

The administrative costs and burdens are then assessed applying the so-called EU Standard Cost Model (SCM), a quantification tool prescribed by the IAG for all “those cases in which the change in administrative burden is likely to be significant”⁵⁹.

2.1.1 Identification of SCM parameters

To estimate the administrative costs (AC) related to each possible change a two-step approach has been applied:

- The first step of the analysis involved the identification of information obligations (IO) associated with the possible changes described above. The identification of IO for each possible change enabling describing the associated administrative actions (AA) which would be required to fulfil the new or modified obligations.
- The second step involved the identification of the costs associated with each AA.

Table 2.1 below provides a summary of the IO and AA identified for each possible change.

Table 2.1 List of information obligations (IO) and administrative actions (AA) likely required to meet information obligations arising from considered possible changes

Possible change	Information obligations (IO)⁶⁰	Is the IO new (additional to current situation)?	Administrative action (AA)
Possible changes 1A, 1B, 1C			
1a. change in rules in the calculation of on-call time	Keeping the record of on-call / stand-by time	Potentially yes	AA1.1 Maintaining the records of on-call / stand-by time for all workers with certain share counted towards weekly working time limit
1b. change in rules in the calculation of stand-by time			
1c. cap on stand-by time			
Possible changes 2 and 3			
2. Lengthening of the period when	Keeping the record of time when compensatory rest is taken	Potentially yes	AA2.1 Maintaining records of when daily/weekly rest is taken

⁵⁸ European Commission, *Impact Assessment Guidelines* (IAG), 15 January 2009.

⁵⁹ European Commission, *Impact Assessment Guidelines* (IAG), 15 January 2009.

⁶⁰ The information obligations (IO) identified appear to be classified under category 12 “Other” of the standardised classification of types of information obligations to be followed.

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Possible change	Information obligations (IO) ⁶⁰	Is the IO new (additional to current situation)?	Administrative action (AA)
compensatory rest can be taken following a period of missed minimum daily rest 3. increase of the reference period for the taking of weekly rest			
Possible change 4 4. extension of reference period for calculating the maximum weekly working time	Keeping a detailed record of hours worked per week over the reference period	No	AA 4.1 Maintaining a record of hours worked per week over the reference period
Possible change 5 5. change in the definition of 'autonomous workers'	Keeping information on whether a worker is autonomous	Potentially yes	AA 5.1 Familiarising with the new obligation and a new definition AA 5.2 Adjusting the worker data file
8c. flexibility in minimum daily rest	Keeping information on working hours out of employers' premises	Potentially yes	AA 8.1 Introduction of a new monitoring process

Source: Own elaboration

The development of IO and AA for each possible change in WTD allows an estimation of the impact in terms of administrative costs (AC).

The administrative costs (AC) consist of two different cost components: the business-as-usual costs (BAU) and administrative burdens (AB). While the business-as-usual costs correspond to the costs resulting from collecting and processing information which would be done by an entity even in the absence of the legislation, the administrative burdens stem from the part of the process which is done solely because of a legal obligation (i.e. certain new/amended provisions of the WTD) (Figure 2.1).

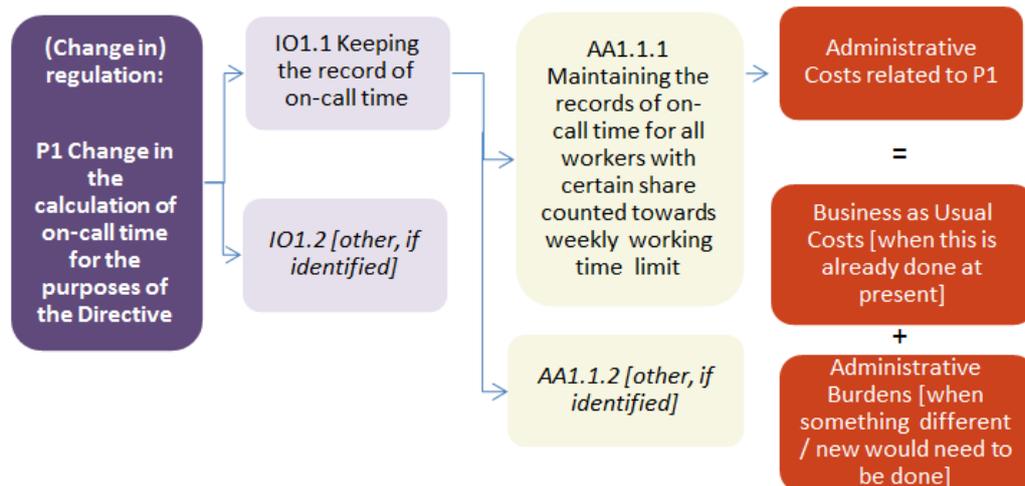
Figure 2.1 Administrative costs, BAU and administrative burdens



Source: adapted from European Commission, *Impact Assessment Guidelines*, January 2009. SEC (2009) 92.

The AAs identified in the previous section are at the core of quantifying the administrative costs and burdens. Figure 2.2 provides an illustration.

Figure 2.2 Accounting for administrative costs and burdens related to specific administrative activity – an example



Source: own elaboration

One important remark to be made here is related to the definition of business as usual costs. The considered possible changes are related to the modification of the existing legislative act (WTD) rather than introducing any new legislation / regulation. The WTD has been transposed to national legislations and current business practises can be assumed to meet information obligations reflecting relevant national regulations concerning working time. As a result, the only viable and feasible reference point for comparison is the no-change scenario, i.e. when the WTD remains unchanged (along with the interpretations stemming from court cases). This implies that AC are estimated as the sum of:

- Business as usual (BAU) costs related to any given administrative activity defined as reflecting the current situation, i.e. when WTD remains in place and is intact; and
- Administrative burdens (AB) are identified as those related to a given administrative activity as introduced, removed or modified by a given possible change in the WTD.

In the interviews the distinction between BAU and AB has been achieved by confirming for every AA considered whether it is already performed or not.

The method used for assessing administrative costs (AC) and administrative burdens (AB) is the EU Standard Cost Model (SCM). The key variables of the model are:

- The quantity (Q), which is calculated as the number of entities (population – either companies or workers) affected by a policy action multiplied by an average frequency of required actions (per year) in a typical entity. In case of multiple relevant administrative activities per information obligation these will be treated separately if needed to calculate the administrative cost per information obligation.
- The price (P), which is the typical/average cost per action and is estimated by multiplying a tariff (based on average labour cost per hour including prorated overheads) and the time required per action. In cases where certain activities are

outsourced (e.g. to companies handling human resource management, working time recording, salary calculation, etc.) these outsourcing costs are also taken into account.

Hence, the core equation of the SCM is as follows:

$$AC = \sum Q * P ,$$

where AC denotes administrative costs, P stands for the price as determined above and Q stands for quantity as described above.

For each of the analysed possible changes the price and quantity variables may differ between countries, economic sectors and size of companies. This is related to different existing national rules on working time (beyond the WTD), sector-specific working time arrangements, economies of scale in management of the workforce and in handling HR obligations in larger companies and different national arrangements and capacity of public institutions in dealing with working time issues.

2.1.2 The calculation of administrative costs and burdens

This section describes the approach used to estimate AC and AB associated with the analysed possible changes to the WTD. In order to assess the real impact of the proposed possible changes (i.e. estimating the AB), it is important to determine the BAU costs, which correspond to the proportion of costs related to any administrative activity already carried out at present.

The definition of the **quantity variable (Q)** in the SCM core equation requires the estimation

of two main variables, which are:

- The population affected by a particular AA. The unit of analysis used to estimate the population is represented by the number of workers or the number of enterprises which are affected by each AA. The estimation of the affected population is based as much as possible on reliable EU and Member States level statistics or data collected from surveys. Given that precise data identifying relevant populations are typically not directly available, assumptions are needed to produce estimates. These are always explicitly presented and discussed.
- The frequency of the required AA identified for each possible change.

Hence, Q is calculated as follows:

$Q = \text{Population affected by the possible change} * \text{Frequency}$
--

For the sake of increased clarity of the presentation and transparency of the assumptions made when discussing populations affected by specific possible changes to the WTD the distinction is made between the two concepts:

- 'target population' – defined as the population of workers, companies, countries, etc. that may potentially be affected under a given possible change. Their situation may potentially change in certain ways; and
- 'affected population' – the subgroup of the 'target population' that is actually expected to be affected, i.e. whose situation is expected to change in practice.

To illustrate the logic behind this distinction the example of certain changes in calculating working time for workers on stand-by is considered. In the first approximation all workers on stand-by could be potentially affected hence this group can be considered as target population. However, after a closer analysis of the situation it may be that in some countries existing national-level legislation (or collective agreements in some sectors) implies that the considered change does not de facto lead to any meaningful modification of the situation of stand-by workers in these countries or sectors. It may also be that

some categories of workers on stand-by are unlikely to be affected due to the characteristics of their work. If this is true, such cases should be excluded from the estimate of the 'affected population'.

It is the 'affected population' concept that enters the Q formula above. It is worth noting that the two population concepts may be identical for some possible changes and may differ for other possible changes.

The **price (P)** of an AA is estimated on the basis of two main variables:

- The time required to perform the activity (this time variable indicates the amount of time required by workers of various staff categories to perform given administrative processes)
- The tariff, which consists of the hourly rate of the persons in the company dealing with the information obligation. The tariff is made up of the following components: (i) the hourly labour cost of the administrative staff performing the AA), (ii) overhead costs (i.e. all the costs associated with the use of office materials, depreciation of desks, computers, etc.). In order to closely follow the approach used by Economisti Associati et al (2012), the overhead rate is set at 25 per cent.

Hence, P is calculated as follows:

$$P = \text{Tariff} * \text{Time}$$

In addition, the study also takes into account the external costs, which are costs related to the acquisition of outsourced services, buying necessary equipment, etc.

In order to estimate the AB related to each possible change, it is of crucial importance to have quantitative figures of the business-as-usual (BAU) costs. In the context of this study, the BAU is estimated as a proportion of the target group that is already compliant with the AAs imposed under different possible changes considered.

The remainder of this section discusses the definitions and methods used to estimate AC and BAU for each possible WTD changes analysed from the perspective of associated administrative costs and burdens in this study.

2.1.2.1 Estimation of the Q variable - identification of affected populations

As indicated above, the study distinguishes between two concepts of affected populations:

- 'target population'; and
- 'affected population'.

The two populations above may be identical for some scenarios and may differ for other scenarios. It is the size of the 'affected population' that is ultimately of interest and that enters the SCM calculations for the assessment of administrative costs and burdens. It is also typically the same population that matters for the assessment of broader socio-economic impacts.

The enterprise populations are split between micro companies and SMEs on one hand and large enterprises on the other hand. For the purpose of the assessment of administrative costs and burdens the large enterprises are defined as those with at least 250 workers. All smaller companies are defined as SMEs. This is in line with the approach taken by the Economisti Associati (2012).

The approach to estimating affected populations differs depending on the analysed possible change. The main sources of data on workers were the European Working Conditions Survey (EWCS) and the European Quality of Life Survey (EQLS). Information from these representative EU-level surveys was then triangulated with results from more focused country-specific surveys, legal mapping and in-depth analysis (including

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interviews) in the ten countries studied in depth. The approach to estimating affected populations is described in more detail in section 4 focusing on the effects of analysed possible changes to the WTD. Tables 2.2 and 2.3 provide a snapshot by giving the total number of affected workers (and when possible also employers). Table 2.2 relates to the possible changes assessed from all perspectives in this study and Table 2.3 shows the affected population for the possible change already covered in the 2012 study.

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Table 2.2 Estimates of size of affected populations for all new possible changes analysed in this study (thousand of workers, thousand of enterprises)

Possible changes	1A	1B	1C	2	3	4	5 workers	5 enterprises	8C
AT	598	199	136	516	137	223.7	71	304	113
BE	740	247	168	688	113	232.4	269	276	202
BG	491	164	112	534	204	322.5	111	266	157
CY	82	27	19	56	10	19.7	7	59	19
CZ	1,184	395	269	806	207	0.0	0	302	136
DE	5,925	1,975	1,346	6,666	1,087	2,827.5	0	2,293	558
DK	485	162	110	336	86	204.0	56	143	269
EE	124	41	28	135	23	33.2	46	40	36
EL	993	331	226	735	276	347.6	70	132	113
ES	1,203	401	273	1,591	1,008	1,096.3	0	1,367	508
FI	205	68	47	365	27	87.3	87	143	147
FR	5,916	1,972	1,344	5,018	609	0.0	633	1,253	1,668
HR	495	165	112	417	148	174.9	29	163	90
HU	417	139	95	330	154	356.4	0	495	109
IE	267	89	61	260	50	104.9	189	149	146
IT	1,629	543	370	2,065	733	1,616.8	300	2,304	467
LT	135	45	31	112	45	84.9	100	99	83
LU	58	19	13	42	6	16.1	6	35	8
LV	170	57	39	161	45	87.8	50	81	48
MT	28	9	6	14	10	11.4	9	14	8
NL	822	274	187	1,019	92	399.6	288	363	626

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Possible changes	1A	1B	1C	2	3	4	5 workers	5 enterprises	8C
PL	2,983	994	678	3,029	1,204	1,654.8	0	776	670
PT	834	278	189	656	204	287.2	51	604	142
RO	2,941	980	668	2,428	774	1,101.8	145	392	260
SE	459	153	104	610	106	354.8	204	413	452
SI	115	38	26	175	50	100.4	21	111	45
SK	428	143	97	535	138	353.0	58	244	69
UK	3,326	1,109	756	4,098	1,343	2,575.1	831	2,547	2,340
EU28	33,054	11,018	7,509	33,396	8,888	14,674	3,630	15,366	9,488

Source: own elaboration.

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Table 2.3 Estimates of size of affected populations for possible changes analysed in by “Economisti Associati, 2012” (thousand of workers)

Possible changes	6		7				8A		8B			
	MIN		MAX		MIN		MAX		SMEs (<250)	Large (>=250)	SMEs (<250)	Large (>=250)
	SMEs (<250)	Large (>=250)										
AT	..	..	..	..	..	..	..	..	537	45	253	43
BE	0	..	0	..	..	..	..	..	521	90	287	92
BG	106	26	334	77	..	..	..	..	183	10	306	39
CY	11	6	38	18	..	..	..	..	24	0	31	3
CZ	0	..	52	..	2.1	1.3	6.3	3.8	6.3	3.8	614	27
DE	0	..	330	..	..	..	..	..	7356	582	4146	648
DK	..	..	..	..	3.8	9.9	12.6	22.2	425	34	85	19
EE	16	3	49	11	..	..	..	..	103	4	66	6
EL	..	..	..	..	..	..	..	..	280	8	366	35
ES	0	..	104	..	5.8	11.3	20.5	25.7	2284	53	2298	108
FI	..	..	..	..	..	..	..	..	303	16	161	36
FR	0	..	93	..	..	..	..	..	4147	539	2663	715
HU	0	..	25	..	0.4	0.9	1.3	2.0	385	67	335	116
IE	..	..	..	..	..	..	..	..	257	38	82	50
IT	..	..	..	..	..	..	..	..	1026	44	1861	280
LT	..	..	..	..	..	..	..	..	99	4	167	13
LU	..	..	..	..	..	..	..	..	40	6	20	4
LV	0	..	4	..	0.7	1.0	2.4	2.1	91	4	101	7
MT	5	2	15	5	0.1	0.1	0.3	0.2	10	1	13	3
NL	0	..	26	..	..	..	..	..	502	117	321	72
PL	0	..	91	..	0.5	29.9	4.7	59.8	1785	170	755	188
PT	..	..	..	..	1.9	2.6	6.8	5.9	654	34	416	20
RO	..	..	..	..	0.3	0.4	0.5	0.8	994	129	439	93
SE	..	..	..	..	0.1	0.1	1.5	1.0	427	76	416	28
SI	..	..	..	..	..	..	..	..	57	14	95	23
SK	0	..	19	..	0.2	0.8	0.7	1.8	321	15	168	20
UK	2711	2759	3389	3218	..	..	..	..	4014	685	1141	505
EU27					15.9	58.3	57.7	125.4	27439.1	2815.2	17397.3	3212.0

2.1.2.2 Estimation of the P variable

The 'price' [P] of an administrative activity imposed by a legal obligation is estimated on the basis of information on two main variables:

- the time required to perform the relevant activities, and
- the tariff, i.e. the applicable labour cost, including overheads. Where required by the business process, a third variable

The third element that could be added to this are external costs, i.e. costs associated with outsourcing of certain AAs or costs associated with buying specific software, equipment, etc. enabling the performance of any given AA in house. While working time tracking systems and software emerged as a potential solution easing certain AAs identified, it was concluded that new AAs do not increase complexity of working time recording and reporting to the degree that would likely lead to a major shift to working time tracking solutions among enterprises that currently select to rely on more traditional approaches. Hence, no external costs have been identified and estimated in this study.

The time (TM) variable measures the time needed to perform the identified AAs necessitated by the IOs related to the analysed possible changes to the WTD. Its measurement makes the distinction between time inputs of senior officials / managerial staff, such as directorial level HR staff or general manager in SMEs and clerical staff. The tariff variable measures the unit labour costs of the staff involved in the execution of AAs augmented by a standard 25% overhead.

2.1.2.3 Time variable

The quantification of time variable used two main sources:

- Interviews with enterprises in countries covered by the in-depth analysis; the interviews included direct questions asking for estimates of time inputs that would be needed to perform the identified AAs. Answering such questions proved very challenging and only in a few countries was it possible to build country-specific estimates directly based on responses to these questions. The main difficulties were related to the fact that AAs were considered highly hypothetical and theoretical for companies that did not have own experiences in carrying analogous AAs. Furthermore, employers were not able to separate specific AAs of interest from other activities related to recording working and/or rest time of workers. Two types of information received from these interviews were used
 - Direct estimates on the time inputs needed to perform specific AAs as defined in the questionnaire; and
 - Estimates on time inputs needed to carry out overall working time recording tasks as required for various purposes (e.g. complying with working time regulations, remuneration, etc.); when only such estimates were provided only a certain fixed share (10%) was assumed to be related to specific AAs
- Selected estimates created for the purpose of the Economisti Associati (2012) study. Some of the AAs identified in the 2012 study could be treated as analogous to the ones considered in this study. Specifically, the Economisti Associati (2012) estimate on the variable TM8: Average no. of minutes to record and appropriately store data on weekly hours of opted-out workers was used to inform estimates of time needed to perform AA4.1, i.e. average time needed to maintaining a record of weekly hours worked over the reference period as well as AA5.2 i.e. average time needed to adjust the worker file and maintain standard accounting of working time for a worker. Additionally, Economisti Associati (2012) estimate on TM5: average no. of minutes to become familiar with the IO and design an appropriate procedure to record weekly hours of opted-out workers was used to inform an

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estimate on time needed to perform AA5.1 average time needed to learn about the new definition of autonomous workers.

Given the need to identify estimates applicable for normally efficient entities, in line with the SCM methodology of median of values reported in interviews was applied, calculated separately for SMEs and large companies and further separating between time inputs of senior and clerical staff.

The extrapolation from existing information to the EU level was ensured by assuming specific values for countries not covered by in-depth interviews and those countries covered by interviews where they did not provide sufficient responses to enable separate country-level estimation. These countries were assigned average values (calculated per AA, distinguishing between SMEs and large companies and further between time inputs of senior and clerical staff) for the countries for which estimates were available.

Overall, given that more precise and reliable information could only be gathered for few countries, the majority of country-level time variable values should be considered as EU-level averages rather than reflecting any country-specific circumstances (e.g. prevailing business practices, etc.). Hence, country-level values (as reported in detail in Annex 4) should not be interpreted separately. Table 2.4 below provides average values calculated across all 28 EU Member States to provide a general picture.

To ensure consistency and improve readability of the table all values are reported per year. It is worth noting that data were originally reported in various units (e.g. per week, per month, per annum and for the company as a whole and/or per worker, etc.) reflecting different ways in which respondents think about them.

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Table 2. 4 Average time inputs needed to perform AAs for analysed possible changes to the WTD, average value for EU28 (unit defined)

AA	Possible change	Time variable	Company size	Staff category	minutes	Unit
AA1.1	1A, 1B, 1C	Average time needed to record of on-call / stand-by time	SME	senior	32	minutes per on-call (stand-by) worker per year
			SME	clerical	73	minutes per on-call (stand-by) worker per year
			large	senior	15	minutes per on-call (stand-by) worker per year
			large	clerical	10	minutes per on-call (stand-by) worker per year
AA2.1	2, 3	Average time needed to record when daily/weekly rest is taken	SME	senior	43	minutes per worker who acquires right to compensatory rest following missed minimum daily (weekly) rest, per year
			SME	clerical	83	minutes per worker who acquires right to compensatory rest following missed minimum daily (weekly) rest, per year
			large	senior	40	minutes per worker who acquires right to compensatory rest following missed minimum daily (weekly) rest, per year
			large	clerical	55	minutes per worker who acquires right to compensatory rest following missed minimum daily (weekly) rest, per year
AA4.1	4	Average time needed to maintaining a record of weekly hours worked over the reference period	SME	senior	67	minutes per worker (who works >48 h/w in some weeks) per year

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AA	Possible change	Time variable	Company size	Staff category	minutes	Unit
			SME	clerical	151	minutes per worker (who works >48 h/w in some weeks) per year
			large	senior	67	minutes per worker (who works >48 h/w in some weeks) per year
			large	clerical	57	minutes per worker (who works >48 h/w in some weeks) per year
AA5.1	5	Average time needed to learn about the new definition of autonomous workers	SME	senior	44	minutes per enterprise (one-off)
			SME	clerical	52	minutes per enterprise (one-off)
			large	senior	45	minutes per enterprise (one-off)
			large	clerical	6	minutes per enterprise (one-off)
AA5.2	5	Average time needed to adjust the worker file and maintain standard accounting of working time for a worker	SME	senior	60	minutes per worker whose status changes to non-autonomous per year
			SME	clerical	144	minutes per worker whose status changes to non-autonomous per year
			large	senior	60	minutes per worker whose status changes to non-autonomous per year
			large	clerical	48	minutes per worker whose status changes to non-autonomous per year
AA8.1	8C	Average time needed to record hours worked from	SME	senior	32	minutes per worker using additional working-time flexibility

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AA	Possible change	Time variable	Company size	Staff category	minutes	Unit
		home				per year
			SME	clerical	73	minutes per worker using additional working-time flexibility per year
			large	senior	15	minutes per worker using additional working-time flexibility per year
			large	clerical	10	minutes per worker using additional working-time flexibility per year

Source: own elaboration.

Table 2.5 Estimation of the BAU factor

Possible change	CZ	FR	DE	HU	IT	NL	PL	ES	SE	UK	Other
1a	n/a	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
1b+c	100%	100%	80%	100%	30%	100%	30%	30%	100%	50%	72%
2	0%	30%	0%	0%	0%		0%	0%		0%	
3	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
4	0%	100%	70% average	50% average	70% average	50% average	50% average	100%	70% average	50%	62% average
5	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
8a-c	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Source: own elaboration

2.1.2.4 Tariff variable

In order to ensure consistency with the Economisti Associati (2012) study, the same approach to calculating labour costs was followed. Given that the tariff values used in the 2012 report referred to 2010 while the current study takes the 2013 situation as the basis for calculations, Eurostat's data on labour costs index change between 2010 and 2013 was used to update the figures⁶¹. Given that the Economisti Associati (2012) data did not include Croatia the figures for this country were constructed on the basis of a ratio of labour costs between Croatia and Italy as of 2012 (no 2010 figures were available) as reported by the Eurostat series: labour cost, wages and salaries (including apprentices)⁶². Table 2.6 lists the values used expressed in EUR per hour.

Table 2.6 Tariff data used for SCM calculations, labour cost plus overhead (EUR per hour)

	Senior official	Clerical staff
AT	63.5	26.9
BE	60.9	27.5
BG	5.7	1.9
CY	34.9	11.0
CZ	14.9	6.1
DE	52.4	28.5
DK	60.0	32.3
EE	10.5	5.2
EL	24.4	10.8
ES	42.8	15.0
FI	53.1	24.8
FR	57.6	23.7
HU	15.6	6.5
IE	52.0	25.9
IT	72.3	23.7
LT	8.4	3.6
LU	69.2	34.0
LV	8.0	5.3
MT	19.7	10.5
NL	42.8	25.4
PL	17.2	6.7
PT	32.1	10.3
RO	16.8	6.7
SE	60.2	27.2
SI	21.7	12.0
SK	9.9	3.7
UK	59.5	27.0
HR	25.1	8.2

Source: Based on Economisti Associati (2012) data updated to 2013 using the Eurostat's labour cost index.

2.1.2.5 Estimation of the BAU Factor

The Business as usual (BAU) costs are the costs resulting from collecting and processing information which would be done by entities even in the absence of the considered

⁶¹ Specifically, the series of Labour cost for LCI (compensation of workers plus taxes minus subsidies) for business economy was used to update the 2010 data to 2013.

⁶² Labour cost, wages and salaries (including apprentices) - NACE Rev. 2 (source LCS 2012) [lc_n12costot_r2] in Industry, construction and services (except activities of households as employers and extra-territorial organisations and bodies).

changes to the WTD. In practice this means that assessment of BAU costs requires gathering information on current business practices in relation to information obligations and administrative activities related to the analysed possible changes in the WTD. Enterprises may carry out certain activities at present for at least three reasons:

- First, they may be doing this to fulfil obligations currently stemming from the WTD;
- Second, they may be doing this to fulfil obligations stemming from specific national legislation, or collective agreements going beyond the requirements of the WTD;
- Third, there may be a specific business rationale for certain administrative activities irrespective of external requirements.

With BAU costs being part of the total administrative costs, one useful way of thinking about BAU is to express it as percentage of total AC. The BAU factor defined this way in practice corresponds to the share of affected population that currently complies with the IOs that might be imposed by the possible changes to the WTD.

Precise information on the BAU for the different IOs is not readily available, therefore the assessment of the BAU costs implies a high degree of approximation underpinned by strong operational assumptions. The assessment of the BAU is based on assumptions and estimates supported by information gathered from interviews with national stakeholders and companies as well as legislative mapping and desk research.

Table 2.5 above summarises the assumptions used in calculating the BAU for different countries. Whenever possible a distinction between SMEs and large enterprises was also made (reflected in average figures for a number of countries). A more detailed elaboration of the rationale behind these assumptions is provided in Annex 4.

2.2 Statistical modelling of the impact of changes to the WTD at the national and EU level

2.2.1 Introduction

This section discusses the modelling of the economic impact of the proposed possible changes to the WTD.

The model is based on a desk review of related research, insights from labour economic models, and empirical data based on several main sources. First, the occurrence of several of the key aspects of working time which the WTD seeks to regulate (e.g. on-call working) is assessed using the European Working Conditions Survey, as this is the only EU wide survey that details the working conditions of workers across countries and sectors. The assessment of the reaction of labour demand to changes in labour costs is based on macroeconomic estimates of labour demand elasticity using EU KLEMS, a macroeconomic data-set that allows a comparative assessment of the study factor demand relationships across European countries. Additional data is used to feed into the parameters of the simulation, which make these consistent with the most recent data by country and sector.

The baseline situation is established in relation to the current legal framework under the assumption of full compliance. All employment effects are evaluated relative to the most recent EU LFS data, which at the time the work was performed were available for the year 2013.

Quantitative and qualitative information from the in-depth case studies in 10 countries is used to make assumptions about the cost aspect of each of the possible changes being assessed. This information fed into the economic analysis, determining where and how

potential changes would affect the organisations positively or negatively, and helped to determine the key parameters of the model.

The economic analysis builds on an attempt to identify potential effects of a number of possible changes to the WTD, to estimate the scope of the impact, i.e. which countries and sectors are likely to be more or less affected, and the size of the effect: what are the likely costs, and how would they impact on other economic variables.

2.2.2 Approaches and assumptions underpinning economic modelling

The impact of the different possible changes to the WTD on the economy would ideally be modelled in such a way that would allow the identification and quantification of their respective economic impact on all relevant variables, both in the short term and in the long-run. The challenge of this is, however, that the types of policy changes involved are quite elusive in terms of economic modelling. There are no direct statistical data that would make it possible to relate the organisation of hours worked and the specific economic outcomes (productivity, labour costs, labour demand) in a structural way.

Typically, in impact evaluation it is desirable to directly model the impact of a policy change. Often this is done by examining similar changes, using data that observe the period before and after the policy change (see, e.g. the 'potential outcomes' approach, as described in Holland, 1986). These approaches compare economic outcomes before and after the policy change, to analyse the (direct) impact of the regulation. The assumptions and data requirements underpinning these types of approaches are significant. One has to assume that the policy change is unanticipated, immediately enacted and enforced. Furthermore, it would be necessary to observe the same actors before and after a policy change, or at least to compare the same types of populations. These assumptions are, in the context of the introduction of possible amendments to the WTD, or similar national legislative changes in working time regulation, likely to be violated.⁶³

A further challenge, in addition to the weak data and theoretical problems in evaluating empirically the impact on changes in working time regulation, is that a number of the proposed potential changes to be considered, in particular in relation to on-call working and compensatory rest (and to some extent also in relation to the reference period) are likely to impact mainly on certain sectors, size of organisation and/or occupations. They will also have a differential impact at Member State level as a result of the existence of different realities in regulation and collective agreement. Thus it is hard to identify the impact at the macro level, as this is likely to be small, and only affects part of the labour market. Using aggregate sector based data will thus make it difficult to identify effects, while specific organisational level data is not readily available or not representative for the entire economy. At the same time, there is insufficient sectoral data available on the affected populations to model sectoral differences in impact.

These challenges were dealt with by using a multifaceted approach. Macro-economic sector data was used in order to identify the relationship between labour demand and labour costs. For this EU KLEMS data is used which also allows linking the productivity and value added to the factor inputs. To establish the occurrence of different situations and working time arrangements likely to be impacted by the possible changes to the Directive (e.g. share of use of on-call and stand-by arrangements etc.), EWCS micro data was used. This allows the identification of differences across countries, sectors and size

⁶³ The necessary assumptions are likely to be violated in many respects: Unanticipated changes of working time regulations are in the context of law making and the involvement of the actors quite unlikely. Further, most changes are announced. This will lead to a change in behaviour prior to the enactment. Further problems lie in the identification and matching of data. In principle all these problems can be overcome, but the identification and result will be weakened, and a generalisation problematic.

classes. However, the identification hinges on a few questions that only partially identify working time regulations.

Information about the cost and employment impact of the scenarios could not be identified directly through the qualitative interviews as companies were reluctant or unable to quantify effects. However, the implied costs⁶⁴ have been translated through the qualitative interviews into assumed implications on labour costs in order to parameterize the model.

The assumptions on the changes in labour costs were based on the evaluation of the impact any possible change has on those employment relationships that are affected by it. It is therefore based on the assessment of the legal baseline in the countries studied in-depth and the assessment of the likely impact of proposed changes based on this baseline made by the study team, as informed also by interviews carried out with stakeholders. The (indirect) labour cost changes are a proxy for identifying likely employment effects (as direct labour costs/wages are not directly impacted by EU legislation). The relative size of the change of each possible change assessed reflects its impact (based on the analysis of likely changes required to existing legislation), whereas the absolute size of the impact of each change is unknown (and likely to be different, most likely smaller).

The table below shows the assumptions underpinning the model.

Table 2.7 Assumptions about changes to indirect labour costs result from different possible changes

Element	Assumed changes to indirect labour costs	Description
1a	-20%	Counting part of on-call time as working time (rather than 100%)
1b	+20%	Counting stand-by time towards working time
1c	+10%	Cap on stand-by time
2	-10%	Daily compensatory rest
3	-10%	Weekly rest
4	-10%	Reference period for the calculation of maximum work hours per week
5	+10%	Definition of autonomous workers
6	+10%	Opt-out
7	+1%	Multiple contracts
8A	+1%	employers to inform workers well in advance of any substantial changes to their work patterns
8B	+1%	The right for workers to request changes to their working hours and patterns
8c	+10%	Flexibility in minimum daily rest

Source: own estimations

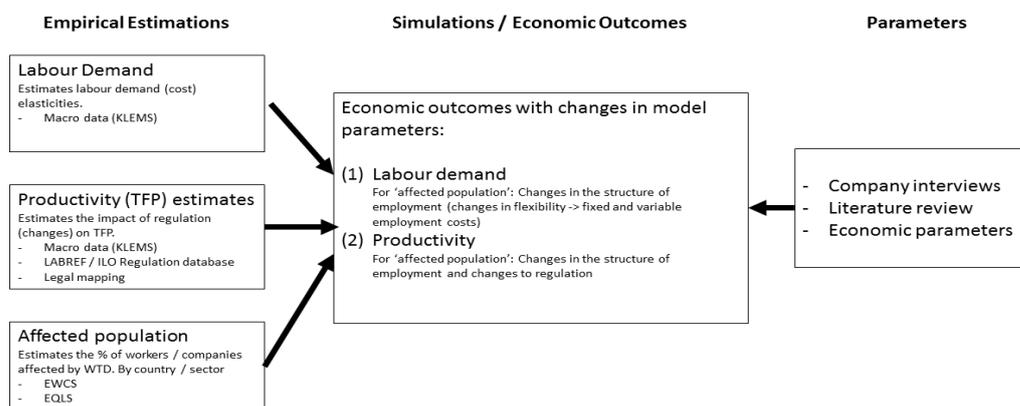
⁶⁴ Labour costs in our calculations only relate to indirect labour costs/overhead costs as EU Working Time legislation cannot directly impact wage costs.

Calculations of the cost and benefits of possible changes to the WTD only account for overhead/indirect costs of employment, while direct costs were not included, as EU legislation cannot directly impact wage costs. Possible changes thus cannot directly affect the number of hours remunerated (although indirectly, this may be the case), although they can affect the number of hours worked.

According to Eurostat⁶⁵ direct costs mainly include wages and salaries while overhead costs largely include employers' actual social contributions, in particular employers' statutory social security contribution costs linked to additional recruitment. Based on this definition the costs and benefits of possible changes to the WTD were calculated net of the share of wages and salaries over the labour cost. This was done by using the Labour cost index (variable "lc_lci_r2_itw") by components, as provided by Eurostat.

As shown in the Figure 2.3 several (sets) of empirical estimation are used to determine macroeconomic relationships that are used in the simulations (labour demand, TFP). Although productivity impacts are mentioned here, these could not be measured directly.

Figure 2.3 Flowchart of methodological approach



2.2.3 Impact of proposed changes to the legislation in different countries

The WTD (and the possible changes being considered) potentially affects the working hours and work organisation of some workers including potentially bringing additional workers under the coverage of the Directive for the first time. For any given change to the Directive at European level such an effect will materialise at the national level if the Directive is at present a binding constraint on working time for workers and enterprises. It will not be the case e.g. if national legislation is stricter and hence changes to the WTD would not change the legal environment in the considered country. It can also lead to greater flexibility in relation to some possible changes, but it remains within the remit of the Member States whether such changes are transposed at the national level.

The legal mapping presented in section 4 draws a picture of the current position in the ten Member States targeted for detailed analysis. A review of the baseline situation allows an assessment of the impact of the potential changes at the national level. It also provides an indication how likely it is that changes to the WTD have on economic impact on the country and/or sector which feeds into the development of the affected population.

⁶⁵ http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Labour_cost

The relevant implication of a more restrictive element of possible changes to the WTD (e.g. for workers previously defined as 'autonomous workers' brought under the scope of the WTD) for the organisation of work is as follows: Any binding restriction on the number of permitted working hours will result in a reduction of the hours worked per affected worker. *Ceteris paribus*, the same total hours of work would have to be covered by a larger number of workers.

A firm has four possible reactions to a decrease in the allowed working time: (i) reduce production; (ii) increase the number of workers; (iii) substitute for labour by using more other inputs (capital); (iv) making more efficient use of workforce (e.g., through training, scheduling, intensification of effort).

An increase in the number of workers will increase the costs linked to employment⁶⁶, as well as resulting in additional fixed recruitment costs.

Any change that reduces flexibility in the number of hours an individual can work (e.g. proposed changes to stand-by time) has the potential to require employers to spread the work hours among more workers. Thus overall, the average costs to employers will increase, unless significant health and safety (and associated) benefits can be obtained from workers working shorter hours. On the other hand, any increased flexibility in the organisation of working hours (e.g. through options allowing for a distinction to be made between active and inactive on-call time and only an active part to be counted as working time; greater flexibility in reference periods to take compensatory rest or weekly minimum rest; as well as a longer reference period for the calculation of working time being available for all workers) could increase the number of hours an individual is allowed to work and thus could alter work organisation (e.g. in relation to requirements to take rest). This has the potential to lead to a reduction in labour costs (as through lower fixed employment costs for fewer workers overall labour costs are reduced). Economic theory predicts that a reduction in the cost factor labour should lead to an increased use of this factor at the macro level.

Greater or lesser flexibility in the organisation of working time can potentially have different implications on the benefits and costs for workers, which could ultimately also impact on employers. For instance, adverse health and safety implications resulting from longer working hours (and delayed rest) could increase costs associated to sick leave, staff turnover and reduce productivity while potentially beneficial effects from greater restrictions on working hours could lead to reductions in such costs and increases in productivity.

As made clear by the discussion above, in considering the employment effects of changes in working time regulation, it is important to distinguish between the micro and macro level effects of changes in working time regulation. Changes which are likely to lead to a decline in the cost of the factor labour may well have effects at the organisational level which allow employers to perform the same task with fewer workers, but economic theory postulates that labour cost reductions should lead to a greater use of the factor labour. However, whether this is the case in reality depends on a range of complex factors which are difficult to model and are likely to mean that employment effects are over-estimated for some possible changes. For instance, if legislative changes primarily affect sectors with low labour elasticities, employment effects will be significantly lower than predicted.

2.2.4 Macroeconomic estimates of labour demand

One of the key variables that is potentially affected by the WTD is labour costs. The potential changes would lead directly or indirectly to higher or lower labour costs, as

⁶⁶ Only indirect costs are taken into account here.

indicated above. By restricting the maximum number of hours per worker, organisations are potentially forced to keep a larger pool of workers available (unless productivity increases). The opposite is – of course – also true: having more flexibility in hour availability of workers would enable organisations to work with a smaller pool of workers. It is likely that the variable, hourly costs are similar or the same regardless of the number of workers. Increases in labour costs in this context thus come from the per-person fixed costs which are higher if more persons fill the same amount of total working hours.

The information gathered in the interviews on the specific costs (both administrative and other) of the proposed possible changes to the WTD can be loosely translated into country specific estimates for labour cost increases/decreases that take into account how much the specific policy will affect a country or sector (what is the percentage of workers affected and by how much). This information has been used in determining the assumed costs to simulate a likely country specific impact of changes to the WTD on labour demand.

In order to establish the relation between labour demand and labour cost, labour demand regressions are estimated for the available EU countries. This study follows Hamermesh (1993) in the specification of unconditional labour demand estimates as a function of nominal factor prices by sector country and time:

$$\ln L = \alpha + \beta \ln w + \gamma \ln r + \delta \ln m$$

With $\ln L$ the logarithm of the number of employed, $\ln w$ being the logarithm of wages – the factor reward for labour, or labour cost --, $\ln r$ the factor reward for capital, and $\ln m$ being the costs of intermediate inputs. α , β , γ and δ are the coefficients to be estimated.

Following the literature yearly observations were used with a fixed-effect specification by country and industry.⁶⁷

The EU KLEMS dataset was used which provides detailed sector based information on employment, capital and intermediate inputs, the factor costs and value added. The data were harmonized based on national statistical national accounts data. The harmonization based on comparable rules was developed to allow for comparative research.⁶⁸

As the data are developed as a harmonized cross-country data-set on the sectoral level it excels in the comparability of the data for the countries available. However, it does not provide any information beyond the sector level nor does it identify changes in the (individual) working time of workers. It was not possible to (directly) identify occupations within the data-set.

The following (derived) variables were used - all cost measures are measured in local currency, using current values:

- Employment: is measured as the log of total employment (headcount), based on the employment variable in the data-set.
- Labour costs: are measured as the log of labour compensation per hour, which is derived from the labour cost and the labour hours.

⁶⁷ Different specifications have been used. We have used undifferentiated, first and three year differentiated estimations. The most stable relation were found using one year differences. The main data goes from 1970-2007, while additional data using the new industrial classification is used from 2008-2012.

⁶⁸ See the EU KLEMS project page at <http://www.euklems.net/>. An analysis using the data can be found in: O'Mahony, Mary, and Marcel P. Timmer. "Output, input and productivity measures at the industry level: The EU KLEMS database." *The Economic Journal* 119, no. 538 (2009): F374-F403

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- Capital compensation: is directly measured as the log of the total capital compensation.
- Intermediate inputs: are also measured as the log of the total value of intermediate inputs.
- Productivity: is measured as the log of value added at current prices.

2.2.4.1 Estimated labour demand elasticities

Use was made of the longest available (consistent) time-series of the KLEMS data-set. Based on these time series we estimate the conditional demand elasticities by country and sectors. The estimated conditional elasticities are, in absolute values, in the interval of [0.128, 0.862] for the countries. All but Cyprus are significant. The range of elasticities by sector are estimated to be between [0.142, 0.734] for the sectors. Labour demand elasticities were estimated by country and sector. The results are reported in Tables 2.8 and 2.9 below.

Table 2.8 Estimated labour demand elasticities by country

Country	Elasticity of labour demand	Standard error
AT	0.136	(0.0229)
BE	0.265	(0.0206)
CY	.	(0.0369)
CZ	0.171	(0.0595)
DE	0.221	(0.0297)
DK	0.128	(0.0285)
EE	0.862	(0.0364)
EL	0.794	(0.0265)
ES	0.661	(0.0271)
FI	0.209	(0.0292)
FR	0.155	(0.0219)
HU	0.455	(0.0353)
IE	0.564	(0.0247)
IT	0.281	(0.0273)
LU	0.376	(0.0393)
LT	0.521	(0.0437)
LV	0.619	(0.0409)
MT	0.194	(0.0264)
NL	0.275	(0.0338)
PL	0.336	(0.0378)
PT	0.67	(0.0242)
SE	0.251	(0.0341)
SI	0.611	(0.0575)
SK	0.338	(0.0749)
UK	0.132	(0.0163)

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Source: Estimates based on the EU-KLEMS data. Elasticity for Cyprus was not significant.

These estimates are reasonably within the range described in the literature. Hamermesh (1993, p. 135) describes the range of (conditional) elasticities of demand for labour: *We know that the absolute value of the constant-output (i.e. conditional) elasticity of demand for homogeneous labour for a particular firm, and for the aggregate economy in the long run, is above 0 and below 1. Its value is probably bracketed by the interval [0.15, 0.75], with 0.30 being a good 'best guess'.* In a recent paper⁶⁹, Adam & Moutos (2014) provide estimates for the EU12 countries, they report that the *"the estimated conditional elasticities are bracketed in the interval [0.05, 0.80], with the (un-weighted) mean elasticity across the various methods ranging from 0.26 to 0.43."* In a recent meta-study on the level of labour demand elasticities Lichter et al. (2014) analysing more than 100 studies and estimates on labour demand estimates concluded: *our preferred estimate in terms of specification for the long-run, constant-output elasticity obtained from a structural-form model [...] is -0.246, bracketed by the interval [-0.072;-0.446]*".⁷⁰ The estimates used by the study are thus well within the usual range of labour demand elasticities.

The labour demand elasticities make it possible to evaluate the impact an increase in labour costs would have on the demand for labour. They provide the percentage reduction in labour demand following a percentage increase in labour costs. This assumes that there is no shift in the production technology, but rather a substitution between input factors.⁷¹ If regulations or labour market circumstances lead to different production methods or work organisations, a shift in the labour demand curve might also be possible.

Table 2.9 Estimated labour demand elasticities by sector

Sector	Elasticity of labour demand	Standard error
1 A AGRICULTURE, HUNTING AND FORESTRY	0.251	(0.009)
3 B FISHING	0.31	(0.055)
4 C MINING AND QUARRYING	0.178	(0.035)
5 D TOTAL MANUFACTURING	0.42	(0.036)
6 E ELECTRICITY, GAS AND WATER SUPPLY	0.187	(0.035)
7 F CONSTRUCTION	0.466	(0.039)
8 G WHOLESALE AND RETAIL TRADE	0.305	(0.039)
9 H HOTELS AND RESTAURANTS	0.207	(0.048)
10 I TRANSPORT AND STORAGE AND COMMUNICATION	0.279	(0.037)
11 J FINANCIAL INTERMEDIATION	0.142	(0.037)

⁶⁹ Adam, A., & Moutos, T. (2014). Industry-level labour demand elasticities across the Eurozone: will there be any gain after the pain of internal devaluation? CESifo Working Paper No. 4858, Munich.

⁷⁰ Lichter, Andreas, Andreas Peichl and Sebastian Sieglöck (2014), The Own-Wage Elasticity of Labor Demand: A Meta-Regression Analysis, ZEW Discussion Paper No. 14-016, Mannheim.

⁷¹ In addition the increase in costs could lead to a higher price of output, leading to lower product demand.

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1 3	K REAL ESTATE, RENTING AND BUSINESS ACTIVITIES	0.735	(0.043)
1 4	L PUBLIC ADMIN AND DEFENCE; COMPULSORY SOCIAL SECURITY	0.602	(0.033)
1 6	M EDUCATION	0.433	(0.040)
1 7	N HEALTH AND SOCIAL WORK	0.504	(0.039)
1 8	O OTHER COMMUNITY, SOCIAL AND PERSONAL SERVICES	0.501	(0.035)

Source: Estimates based on the EU-KLEMS data.

The elasticities used in the simulations are based on the relationships estimated above.⁷² For those countries that do not have EU KLEMS data, namely Bulgaria, Croatia, Romania, but also Cyprus (insignificant estimates), elasticity values were used as they proposed by Lichter et al (2014). As these are (relatively) new Member States, which tend to have higher labour demand elasticities, the upper end of their bracketed labour demand elasticities were used for the simulations.⁷³

2.2.5 Simulation

The simulations combined the information from the various sources and estimates. They combine the affected population, with the estimate of the labour demand elasticities and labour costs. The outcomes were linked to several other outcome variables such as total factor productivity and value added.

Use was made of estimates of the affected population as described in more detail below (section 4). This was in line with the affected population as it is used in the administrative burden estimate.

This information was then combined with the estimates of labour demand based on the EU KLEMS data.⁷⁴ These data were also used to (try to) establish a relation between TFP and the strictness of working time regulation.

Since there was no reasonable cost estimate that could be derived from the hypothetical situations assessed in the company interviews, the study used assumed increases or decreases in labour cost in the range of 1% and 20% depending on the likely cost impact a scenario has and derive its implications for labour demand (see table 2.7 above).

$$\Delta LF = LF_{2013} \times Elasticity \times AP \times \Delta LC$$

With ΔLF being the change in labour force of a country, LF being the labour force (in base year 2013), elasticity denotes the (estimated) elasticity of labour demand, AP stands for the affected population of a specific scenario, and ΔLC are the (assumed) changes in labour costs of a specific scenario.

From this, a possible (employment) impact per country was derived. Presented are both per country change in labour force (by scenario) and its implied percentage change relative to the 2013 labour force values. The results are presented in the next section for each of the proposed possible legislative changes.

⁷² The estimated elasticities are also combined with the (mean) elasticities reported in Lichter et al. (2014) in order to harmonize results.

⁷³ In essence, the labour demand for countries like these are likely to be bracketed at a higher level as the meta-estimates in their study show (cf. Lichter et al., 2014)

⁷⁴ For those countries without KLEMS data, we use estimated relationships from the literature.

2.2.5.1 Estimating Total Factor Productivity (TFP)

The proposed analysis of the labour cost and demand is related to the approach taken by the Deloitte (2010) study. Similar to this study, panel data estimations of the production functions at the sector level were used for the available countries within the KLEMS data. However, while the focus of the Deloitte study was on TFP⁷⁵, the current study concentrated on the labour demand and labour cost relationships which made it possible to identify possible employment effects.

In order to investigate an overall effect of working time regulation to TFP, separate regressions on TFP development in countries and sectors were used with an index of working time regulation stringency. The estimation can loosely be seen as a variation on the Deloitte study. In the current study, however the changes are related directly to an index of working time changes whereas the former study related it to the overall employment protection legislation (as it was identified by the OECD).

The OECD has also compiled several studies on employment legislation and its impact on working time⁷⁶. Several studies on working time and employment protection legislation, with a specific focus on countries in the developing world have been done by the ILO⁷⁷. In general it is difficult to identify direct (macroeconomic) impacts of these regulations on variables like TFP as the impact is likely to be spread across the period before enactment (anticipation effect) and also likely medium or long-term effects.

The LABREF database of the European Union was used to identify relevant changes in working time legislation. To this end all listed changes in the database that affect working time have been listed. Those changes were then examined and coded as 'adding flexibility' or 'strengthening' of the legislation, to indicate the direction of the change. This simple characterisation was used along with the country and time identification.⁷⁸

For the period 2000-2013 136 changes are identified as having a likely impact on working time. These changes were coded as either making legislation more or less stringent. These legislative changes were then added into an index of stringency to evaluate impact on TFP in a country using the EU-KLEMS data.

2.3 Summary of methodological challenges for the assessment of administrative burden and economic impact

Key methodological challenges and shortcomings were encountered in the estimation of the affected population, the calculation of AC and AB and the estimation of the socio-economic impact. These were due to:

- The relative dearth of national assessments of the administrative burdens linked to working time regulation.

⁷⁵ Total factor productivity (TFP) is a good macro-level measure that indicates how efficiently a sector in a country is able to transform inputs (mostly labour and capital) into outputs. If the new rules bring productivity benefits *above* merely increasing - or decreasing - the hours worked by workers (e.g. efficiency gains due to more flexibility in working schedules), TFP would capture these. However, linking TFP and employment legislation in general, or working time restrictions in particular is likely to show weak results at best.

⁷⁶ Causa, O. (2008), "Explaining Differences in Hours Worked among OECD Countries: An empirical analysis", OECD Economics Department Working Papers, No. 596, OECD Publishing.

⁷⁷ See, e.g., Lee, S., & McCann, D. (2007). Measuring working time laws: texts, observance and effective regulation. Labour institutions in the developing world: cultivating justice through labour law and policies, Janine Berg and David Kucera, eds., ILO and Palgrave MacMillan.

⁷⁸ While the ILO's NATLEX database is more extensive, it does not have any updated records for the countries and issues being studied. As a result only LABREF was used.

- The limited availability of studies measuring the size of the economic impact of working time regulation.
- The diversity of legal definitions at national level and the lack of European and national data on groups of workers affected by different potential changes in working time regulation limited the possibility to precisely estimate the affected population (e.g. different definition of on-call and stand time and lack of data on workers on-call and stand at national level, by sectors and occupations; lack of comparable data on the size of the population of workers affected by rules on compensatory rest, etc). Data shortcomings in this field led to a likely over-estimation of affected populations. Lack of data also meant that impacts could not be disaggregated by sector or skill level for individuals most likely to be affected by various potential legislative changes.
- Price and time calculations were drawn from interviews and from preparatory desk research. The main challenge related to the fact that employers found it difficult to quantify and/or estimates the price and time required by each administrative action linked to the possible changes.
- It is challenging to model the socio-economic impact of the proposed changes to working time legislation as this is likely to be small. The lack of reliable comparable data and inability to deliver a sectoral breakdown means that it is not possible to model labour elasticities in different sectors, although some are significantly more affected by some of the potential changes than others (e.g. in relation on-call and stand-by time).
- It is not possible to provide a quantitative estimation of the potential benefits of changes in working time regulation (e.g. in terms of improvements to health and safety), meaning that it is not possible to balance any administrative or socio-economic costs modelled against any potential benefits in a quantitative way.

3 Relevant research and studies on administrative costs and broader impacts of working time and its organisation

This study was informed by previous research both on the administrative, as well as the socio-economic impact of working time regulation. In line with a better regulation agenda adopted at EU level⁷⁹ as well as in many Member States, a generally accepted methodology for the assessment of administrative burdens has emerged – the so-called Standard Cost Model. Details of this approach were set out section 2 of this report. The same approach has also been adopted by the (limited number) of studies which have included an assessment of the administrative costs and burdens resulting from working time regulation which have been carried out in the Member States. The first part of this section provides an overview of the findings of these studies. This provides a limited picture of the administrative costs and burdens currently considered to be associated with working time regulation⁸⁰. Annex 3 delivers a more detailed overview of the methodology and findings used by such national studies, which in their approach do not differ significantly from this study.

Secondly, this section of the report provides a state of the art overview of the literature seeking to assess the socio-economic impact of working time regulation. This does not focus only on the WTD, as such literature is limited, but gives an important contribution to setting out the impact of working time regulation in the baseline (i.e. the status quo of current regulation). This overview of the baseline is complemented, in section 4 of this study, with a review of the legal status quo at national level and the impact of collective agreements on the regulation of working time.

3.1 The administrative studies associated with the EU working time regulation

Available studies on administrative burdens linked to the WTD and working time regulation more generally

Given the relative prominence of the issue of working time regulation and the WTD in the political debate, it is maybe surprising that beyond the studies carried out at European level at the request of the European Commission, relatively few national assessments of the administrative burden linked to working time regulation – or indeed the WTD specifically – are available. EU level studies point to the dearth of reliable data on which to base such assessments – a fact which is also borne out in the current study. When looking at available evidence, the measured burdens clearly depend on the particular provisions being assessed, as well as the national baseline situation and an assessment of the affected population. It is notable that the majority of national level studies assess administrative costs and burdens linked to the status quo, rather than specifically assessing the impact of any (potential) legislative changes.

An EU level study carried out in 2007 considers the administrative burdens associated with the WTD to be limited, as these mainly revolve around the recording of working time, which most employers already do as a matter of course. A study from 2010 carried out by Deloitte focussed more specifically on burdens associated with the CJEU judgements in the SIMAP and Jaeger cases and found more significant impacts relating the requirements to change working patterns. Finally, a study carried out in 2012 assessing the administrative burden associated with a number of legislative options (primarily revolving around the

⁷⁹ At EU level this is also in line with impact assessment guidelines.

⁸⁰ Only one study looks specifically at burdens associated with the WTD.

opt-out and work life balance measures) considered that the greatest burdens would arise from keeping records of working hours worked by workers that have opted-out and the right to request changes in working patterns for all workers.

At the national level, the UK is the only country which has carried out an assessment of the administrative burden specifically linked to the WTD. It estimates this burden to be in the region of €55.2 million, notably down from €237.4 million in 2005.

Studies assessing the administrative burden of labour legislation, which take account of national working time regulation also exist in Finland, Hungary, Ireland, Lithuania, Poland, and Sweden. Using the Standard Cost Model approach, the assessment in Finland (commissioned in 2010) considers that the annual administrative costs for employers in terms of complying with information obligations related to working time regulation more generally amount to €11.5 million. The share of administrative burden from the administrative costs was estimated at 15% (or €1.7 million). The Polish study estimated that the annual administrative cost associated with the recording of working hours of workers required by national working time regulation is €122.8 per employer. The Swedish Agency for Economic and Regional Growth estimates that the administrative costs of the information obligations associated with national working time regulations amount to €127.8 million in 2006.

This section provides a brief overview of existing studies on administrative costs and burdens associated with the implementation of the WTD (2003/88/EC) and working time regulation more broadly at the European and Member State level. A more detailed assessment of the methodology and data used in the national administrative burden studies reviewed is provided in a separate paper prepared for this study, which is included as Annex 3 to this report.

Despite the long running discussions and negotiations regarding the WTD, there have been relatively few studies and analyses measuring the administrative costs and burdens associated with its implementation. With the exception of European level studies, it is notable that existing national studies and analyses of administrative costs and burdens associated with the implementation of the WTD or working time regulation also tend to be part of studies and analyses that cover employment law more broadly. Only one study could be identified which specifically focusses on administrative burdens associated with the WTD, albeit within the framework of a wider assessment of administrative burdens on businesses.

The following sections provide a brief summary of the findings of such studies carried out at the European and national level. For more details on the precise obligations assessed by national level studies and the data sources and methods used, Annex 3 should be consulted.

3.1.1 European level studies

At the European level, a number of studies have been undertaken in recent years regarding the administrative costs and burdens associated with the WTD. In 2007, a study carried out by the European Commission found that the administrative costs and burdens are quite low since many companies already keep records of working hours for the purposes of payroll⁸¹. Another study for the European Commission focussing more on the impact of the CJEU rulings in the SIMAP and Jaeger cases, found that the Directive has resulted in one-off costs for business re-organisation, new systems for time and

⁸¹ European Commission Policy Department: Economic and Scientific Policy, 2007, Impact Assessment of Certain Aspects of the Working Time Directive.

remuneration measurement and increased personnel costs as a result of additional recruitment. However, it also stressed the difficulties in estimating such costs, particularly net costs (i.e. accounting for potential cost savings on overtime pay and payments for on-call time)⁸².

A further study requested by the European Commission and completed in 2012 assessed the administrative costs and burdens relating to a set of policy options for amending the WTD⁸³. The study focussed in detail on seven Member States, namely: the Czech Republic; Germany; Italy; the Netherlands; Poland; Sweden; and the United Kingdom. However, it also sought to provide aggregate estimates for administrative costs and burdens for the whole of the EU.

In this study, the administrative costs are defined as those costs that are incurred for a specific target group (enterprises, public authorities, etc.) in fulfilling an information obligation (IO) established by the regulation, i.e. a legal obligation to provide information in a broad sense (including labelling, reporting, registration, monitoring and assessment) either to public authorities or to private parties. The administrative burden is included in the administrative cost estimate but excludes those costs that result from collecting and processing information actions that would have been performed even without the legal obligation to do so. In terms of estimating the administrative costs and burdens the study adopted the EU Standard Cost Model (EU-SCM) approach.

In particular, the study considered seven policy options:

- Option 1 - Obligation for employers to inform workers well in advance about any substantial changes to the pattern of work.
- Option 2 - Right for a worker to request changes to their working hours and patterns: the employer is not obliged to agree, but must consider the request in light of both parties' need for flexibility and give reasons for any refusal.
- Option 3 - Requiring employers who use the opt-out to keep records of all working hours of workers who have agreed to it.
- Option 4 - Providing that a worker may not validly be asked to opt-out prior to an employment contract, during a probationary period, or within one month after the conclusion of an employment contract.
- Option 5 - Requiring the employer to keep written proof of the worker's prior consent to opt-out and to include in the consent form information to the worker about their rights under article 22.1 of the Directive.
- Option 6 - Requiring national authorities to compile information about use of the opt-out, to evaluate the health and safety effects of such use for the workers concerned, and to report their findings to the European Commission (to the extent that this is not already required under national law or practice).
- Option 7 - Multiple contracts: clarifying that if a worker works under concurrent employment contracts with the same employer, member States should ensure that the 48-hour limit to average weekly working time is applied per-worker and not per-contract.

As illustrated in Figure 3.1, in the assessment of this study, the policy option associated with the highest administrative cost and burden relates to the requirement to keep a

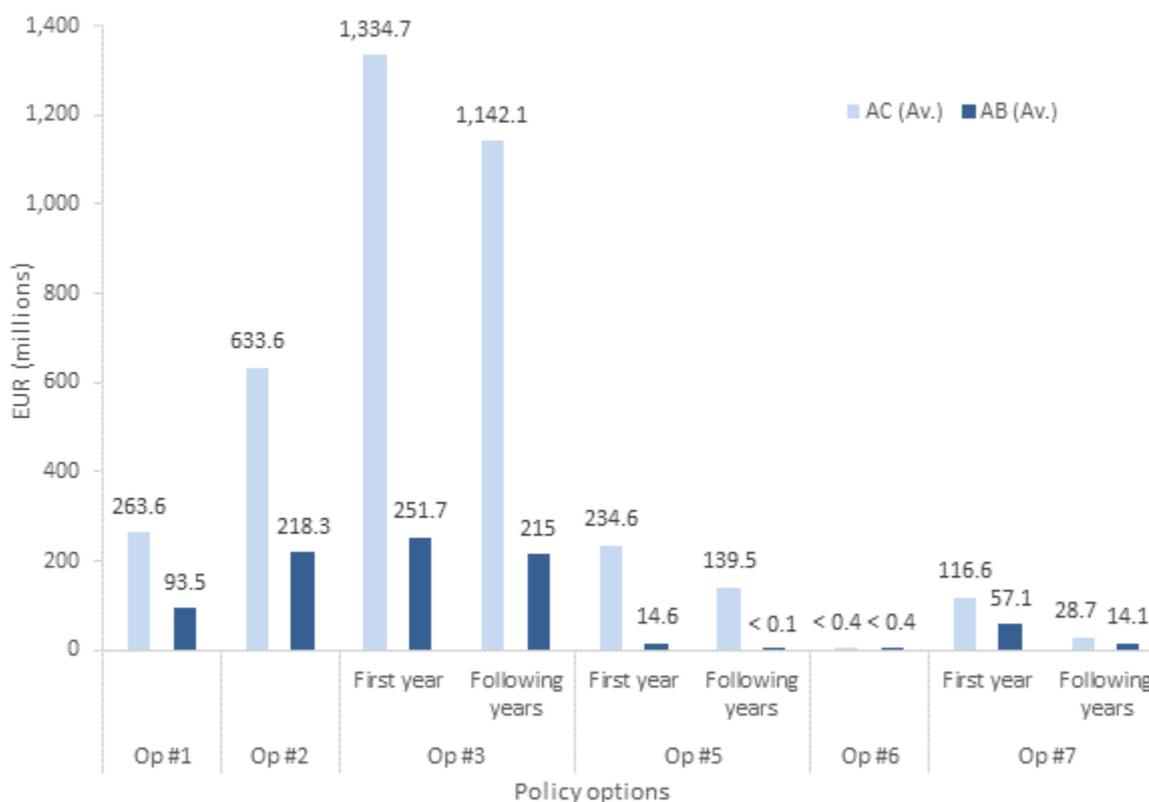
⁸² European Commission, 2010, Study to support an Impact Assessment on further action at European level regarding Directive 2003/88/EC and the evolution of working time organisation

⁸³ Economisti Associati et al (2012), Review of Working Time Directive 2003/88/EC: measuring administrative costs and burdens of various policy options.

record of working hours for workers that have opted-out (Option 3). The option that is associated with the second highest administrative cost and burden relates to the right for a work to request changes to their working hours and patterns (Option 2). Conversely, the requirement for national authorities to compile information about the use of the opt-out (Option 6) is associated with the lowest administrative costs and burden. Naturally though, this policy option is closely interrelated with policy option 3 in that it implies an obligation for employers who use the opt-out to keep written and detailed records of the working time of opted-out workers. As such, it may impose an indirect administrative cost and burden on employers. This is not reflected in the cost and burden of option 6.

Notably, Option 4 is deemed not to have a direct impact in terms of additional administrative costs for employers (i.e. there appear to be no information obligations that stem from this option). On the other hand, the study found that it may result in a slight reduction (up to 5%) in the number of opted-out workers and / or employers asking workers to opt-out. As such, policy option 4 may in fact have the effect of reducing the administrative costs and burden of the other policy options that are related to the opt-out.

Figure 3.1 Administrative costs (AC) and burdens (AB) for each of the proposed policy options



Source: *Economisti Associati et al, 2012 (unpublished)*

A further conclusion of the study is that the majority of the administrative burden (70-80%) would fall on SMEs. To a considerable extent, this reflects the likelihood of larger enterprises already having in place the administrative processes and systems to fulfil the proposed information obligations.

3.1.2 National level studies

Further to the European level studies reviewed above, working time regulation, which may cover the implementation of the WTD, but also national rules which may be more stringent, have also been subject to a number of (albeit few) national studies and

analyses. Such studies have generally been undertaken to assess the administrative costs and burdens associated with working time regulation more broadly (often as part of a wider assessment the administrative burdens linked to employment protection legislation) and are very rarely specific to the WTD (i.e. the UK assessment is the only one specifically focussing on the WTD, albeit within the framework of a wider assessment of administrative burdens on businesses). As indicated in the more detailed paper in Annex 3, when looking at the Information Obligations assessed in such studies, it is often difficult to determine whether these are obligations arising from the WTD or whether these already formed part of national legislation. Furthermore, all of these studies relate to administrative costs and burdens in the baseline, rather than assessing potential changes to legislation.

In Sweden, the Swedish Agency for Economic and Regional Growth has since 2006 calculated the administrative costs for employers with regard to over 4,000 information obligations across 17 different policy areas⁸⁴. Using a SCM approach, the administrative costs of the information obligations associated with working time regulation was estimated at €127.8 million (or 1,184 million SEK) in 2006⁸⁵. Since then, there have been no substantial changes to the legislation that have resulted in increased or reduced administrative costs. In 2012, the estimated administrative cost related to the working time legislation represented 1.3% of the total administrative cost to employers arising from regulatory information obligations.

Similar calculations have been undertaken in the United Kingdom. For example, in 2008, the Department for Business, Enterprise and Regulatory Reform (since 2009 the Department for Business, Innovation and Skills) commissioned a study to establish the department's progress against its 2007 Simplification Plan aimed at reducing the administrative burdens on business associated with meeting key employment law obligations⁸⁶. The research focused on those obligations that had previously been identified as imposing the greatest administrative burdens, covering a total of 13 Information Obligations (IOs).

The study estimated that the overall administrative cost for the 13 measured IOs was €985.1 million (or £782.2 million). This compared with an administrative cost of €1.6 billion (£1.3 billion) in 2005⁸⁷. A quarter of the overall costs in 2008 were comprised of internal costs and the remaining three quarters represented external costs. This compared with 30 per cent internal costs and 70 per cent external costs in 2005. Thus, whilst the overall administrative cost was smaller in the 2008 measurement exercise, the relative proportion of businesses that used external goods and services when undertaking the IOs had risen slightly. Moreover, external costs were still the primary contributor to the overall administrative cost.

With regards to the WTD, the estimated administrative burden was €55.2 million (£43.9 million), down from €237.4 million (£188.5 million) in 2005. The administrative burden for the WTD was broken down as follows:

- Maintaining records of workers' working time - €16.0 million (£12.7 million), representing a reduction of 76.9 per cent compared with 2005;

⁸⁴ <http://www.enklareregler.se/verktyg-for-enklare-regler/regelraken.html>

⁸⁵ Only administrative costs (rather than administrative burdens) were calculated.

⁸⁶ Lambourne et al, 2008, Employment Law Administrative Burdens Survey, Final Report, Department for Business, Enterprise and Regulatory Reform (BERR), London <http://webarchive.nationalarchives.gov.uk/20090609003228/http://www.berr.gov.uk/files/file49199.pdf>

⁸⁷ Department for Trade and Industry, 2006, Administrative Burdens Measurement Exercise, Final Report

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- Keeping records of workers covered by the maximum working week requirements and who opted out of the 48-hour per week limit - €7.5 million (£5.9 million), representing a reduction of 37.8 per cent;
- Obtaining workers' written consent to work more than 48 hours in seven days - €31.7 million (£25.2 million), representing a reduction of 79.7 per cent.

The significant reduction in the administrative burden for maintaining records of working time can largely be attributed to a reduction in external goods (e.g. time keeping software).

A study has also been conducted in Poland on behalf of the Ministry of Economy⁸⁸. This study estimated that the annual administrative cost associated with the recording of working hours of workers is €122.8 (514 PLN) per employer. Compared with the other administrative burdens emerging from the Labour Code and the Ministry of Labour and Social Policy regulations for employers, the recording of working hours is ranked 53rd out of 390 regulatory requirements.

In Finland, a 2010 study⁸⁹ commissioned by the Ministry of Employment and the Economy estimated the total administrative cost of all Information Obligations for employers at €5.8 billion, with the administrative burden making up €906 million or 16% of the total administrative cost. The estimates were derived using the SCM approach and interviews with around 60 employers.

The annual administrative costs for employers in terms of complying with information obligations related to national working time regulation was estimated at €11.5 million. The share of administrative burden from the administrative costs was estimated at 15% (or €1.7 million). The information obligation with the highest the administrative costs related to the systematic recording of completed working hours and associated remuneration for each worker, accounting for 82% of the administrative costs associated with working time regulation. The highest administrative burden related to the application for permission to derogate from regular working time/ hours, accounting for 75% of the administrative burden associated with working time regulation.

In addition to working time regulation, the study also estimated the administrative costs and burdens for employer in terms of complying with the information obligations related to annual leave. This was estimated at €43 million, with the share of administrative burden accounting for less than 1% of total administrative costs (€0.4 million).

Through a European Social Fund and Ministry of Internal Affairs-funded project, the Ministry of Economy in Lithuania commissioned a study that assessed the administrative burden across seven priority areas, including labour relations⁹⁰. The study assesses the administrative burden resulting from a number of articles from the 2002 Labour Code No. IX-926 (2002-06-04 *Lietuvos Respublikos darbo kodeksas* Nr. IX-926 (*Socialinės apsaugos ir darbo ministerija*)) (amongst a number of other legal acts).

The burden is assessed for the requirements for employers to make shift schedules publicly available in companies no later than 2 weeks prior to the commencement of the shifts. The administrative burden associated with the collection of this information from

⁸⁸ The Ministry of Economy, *Measurement of administrative burdens*, Warsaw 2010

http://www.mg.gov.pl/files/upload/8581/Raport_z_wykonania.pdf

⁸⁹ Ramboll Management Consulting, Deloitte Oy, Capgemini Finland Oy (2010) *Selvitys yrityksille aiheutuvista hallinnollisista kustannuksista – Työnantajavelvoitteet*. Ministry of Employment and the Economy

⁹⁰ http://www.ukmin.lt/web/lt/verslo_aplinka/geresnis_reglamentas/moksliniu_tyrimu_ (only available in Lithuanian)

existing data was estimated at €775,311 both in 2009 and 2011. The cost of the provision of this information to national authorities was additionally calculated at €193,827 in both years. Furthermore, the study calculated the cost of providing information on worker's working time to national authorities at €2,325,960 for all businesses.

In Hungary, a study which focused on a broad range of regulations impacting on businesses, found that 47% per cent of the total administrative burden in the legislative areas covered by the study (608 billion HUF or €1.96 billion) is related to employment⁹¹. In monetary terms, the administrative burden of employment legislation was estimated at €921.2 million (or 285.8 billion HUF).

Studies to estimate the administrative costs and burdens associated with the employment legislation have also been conducted in Ireland. In 2009, the administrative cost of the 11 IOs relating to the employment legislation was estimated at €89.7 million – the administrative burden was estimated at €64.3 million⁹². The majority of the administrative costs and burdens related to the regulation of working time - €68.4 million and €61.5 million respectively.

Three national studies therefore present information about the administrative burden associated with working time provisions (thus excluding business as usual costs, which are included in the calculation of administrative costs). These range between €1.7 million Euros in Finland and €61 million in Ireland. However, when looking at these figures it must be noted that precise detail about the IOs covered is not always provided and these estimates may therefore not entirely be comparing like with like. Some of the other studies identified only calculate administrative costs or only provide data on administrative burden on employers at the more aggregated level, thus not making it possible to separate out burdens associated with working time regulation.

The study from the UK also demonstrates a decline in administrative burden over time, which is mainly linked to one-off costs related to familiarisation with new legislation and new processes. However, it is also likely to reflect the methodological difficulties in assessing and measuring administrative costs and burdens. Indeed, whilst most national studies have adopted a SCM approach, the estimated administrative costs tend to be indicative and not statistically representative (due to limited sample sizes and non-random sample design). This is because the SCM measurement adopts a pragmatic approach to provide a reasonably consistent estimate of the administrative costs on businesses arising from regulation. It is also important to note that the nature of the estimation process means that the greater the level of disaggregation of the cost estimates, the greater the potential margins of error surrounding the cost estimate.

3.2 The economic impact of working time regulation

As indicated in section 1, working time regulation is seen to have an important socio-economic impact, e.g. on employment and productivity, as well as on health and safety and the ability to reconcile work and family life among other things.

This section will demonstrate that very little research is available which assesses the quantitative impact of working time regulation, let alone the WTD itself on these aspects. Where more quantitative studies are available, they look at the impact of different

⁹¹ Reszkető, Petra, Ágota Scharle, and Balázs Váradi. "Administrative Burden of Employment in Hungary." In *The Final Report of the Research Programme "The Focal Points of Hungarian Employment Policy, For the Future Workplaces (SROP 2.5.2.)"*, 2011.

http://budapestinstitute.eu/uploads/summary_admin_burden_employment_2011.pdf

⁹² Department of Enterprise Trade and Employment, 2009, Measuring the Administrative Burden on Irish Business Arising From Information Obligations under Company Law, Employment Law and Health and Safety Legislation

working hours patterns on health and safety, but rarely provide an insight into the direct impact of changes in such patterns on worker health and associated costs and benefits to employers and workers. While the literature can therefore demonstrate a beneficial impact of shorter working hours on health, safety and productivity, and includes a significant number of surveys of the positive impact of working time flexibility (for workers) on work-life balance, overall, it has to be concluded that changes to working time regulations such as those being discussed in section 4 of the report are unlikely to demonstrate significant macro-economic impact. These methodological challenges of such assessments were already elaborated in section 2 of this report.

State of the art in the literature on the economic impact of working time regulation

Working time regulation can demonstrate economic impact in a variety of interlinked ways. Changes in working or rest hours can:

- Impact the health and safety of workers (which in turn can impact productivity and competitiveness, as well as leading to other costs – or potential benefits for workers themselves, employers, the state and wider society)
- Lead to requirements for changes in work organisation and working patterns
- Influence competitiveness through productivity and labour costs
- Impact labour market outcomes (contributing to the creation or destruction of jobs and influencing the labour market attachment of workers)
- Impact on other factors such as access to training or gender equality.

In assessing the state of the art of the literature on these issues, it is important to draw a distinction (often blurred or impossible to distinguish) between the impact of the implementation of the WTD and that of national working time regulation. As above, it is also important to bear in mind the interaction with collective agreements, other employment protection legislation and indeed wider economic and labour market conditions.

Few empirical studies seek to clearly quantify the economic impact of working time regulation (let alone the WTD specifically) in any of these impact areas. The most researched field with regard to the impact of working time regulation focusses on the health and safety impact of such provisions. However, even such studies are patchy and tend to focus narrowly at national, sector or occupational level. Few provide clear estimates of the economic costs and benefits of specific working time regulations. Available studies clearly point to the detrimental effect of working long hours and unsocial working hours (night work, certain types of shift work) on physical and mental wellbeing), with an exponential increase in health impairments being recorded as working hours increase. There are a limited number of studies which find no ill health effects associated with long hours as long as the individuals have significant control over such hours, but the overwhelming body of evidence provides a clear message as to the adverse health impacts of long working hours. Those have nonetheless to be balanced against similar adverse health effects of unemployment.

Evidence on the impact of working hours regulation on productivity and competitiveness is partly linked to health and safety and work-life balance considerations, with both improved health and safety performance and improved

work life balance (and associated increased job satisfaction) being linked to productivity improvements. Potential perverse interactions in these areas may contribute to more mixed effects of increased working hours on productivity with studies finding no linear increases in productivity as working hours rise. Evidence regarding the employment creation potential of working hour reductions can also be considered to be mixed. The main evidence in this field stems from France where some effects on employment creation were evident, but could be considered to be confounded by incentives provided to companies for hiring available workers during the same period.

Literature on the impact of working time regulation on training is largely confined to studies on the impact of the WTD and the SIMAP and Jaeger rulings on the health care sector in the UK. These studies point to a deterioration in training conditions (and hours of training being offered) in certain specialisms. Such findings have to be balanced against results which show reduced fatigue, reductions in accidents and some improvements in care outcomes for patients. At the same time there is evidence that provisions of the WTD linked to compensatory rest can lead to some cancellations of appointments and operations which can have detrimental effects on patients.

The picture is therefore a complex one with only the evidence on health and work-life balance impacts more or less unequivocally pointing to positive effects of reduced working hours – without however pointing to a limit at which lower hours might again become detrimental because of impacts on incomes or job security. More longitudinal research is clearly required in this area, but changes along the lines of the possibilities assessed in this study are, on the whole, too ‘minor’ within the context of other policy influences to show any economic impact at the macro level.

Few empirical studies assessing the impact of the WTD (or general changes in working time regulation) on organisational arrangements at company level or on the wider economy exist. Most of the studies undertaken have examined the impact on workers of regulating working time. Among this research impacts on health and safety and productivity have been the most numerous. There have been few studies which have analysed the impact of WTD on either training or retraining or on labour market participation.

Actions which result in impacts in organisational arrangements; health and safety of workers; productivity; training and re-training; and labour market participation are often influenced by a wide range of causal factors. These factors include, for example, market demand; legislative compliance; and working time regulation pressure from workers. There are few studies which attempt to isolate the relative strength of these influences. Such studies are confined to the assessment of working time regulation on productivity, but there is some variance in the findings of the, relatively few, studies using these methods.

Furthermore, research has concentrated on the impact on workers resulting from organisational changes, rather than business impacts, with some studies seeking to establish the impact on worker motivations and gender issues. The majority of health and safety research has focussed on the physical and psychological impact of working patterns on workers.

The following sub-sections illustrate the issues associated with working time regulation in relation to

- organisational arrangements;
- health and safety of workers;

- productivity and company performance;
- training and re-training of workers;
- labour market participation; and,
- other types of socio-economic issues.

3.2.1 Organisational arrangements

Organisational arrangements describe the way in which companies are structured, this can relate to staffing structures and business models as they combine to respond to customer and legislative requirements whilst ensuring that the organisation can function profitably. A range of drivers combine to influence organisational change within companies in Europe. Such drivers include market-led issues such as short-term changes in the external business environment; long-term structural changes in the market place; and, internal business problems. Additionally it is necessary for organisations to adapt to legislative changes which necessitate changed to organisational arrangements.

Often the drivers noted above combine, albeit with different degrees of significance, to influence decisions regarding organisational structure. Such change may take many different forms, for example: formation of new organisational structures; more or less flexible and hierarchical working methods; establishment of new corporate cultures; introduction of new business practices; increased investment in education and training; new performance measurement techniques; or new reward systems. These changes can also impact the organisation in positive or negative ways; this may include impacts on, for example: operating efficiency; customer responsiveness; levels of innovation; greater use of technology etc.

Changes in organisational arrangements which result from legislative change can either lead to increased or reduced flexibility in the way in which organisations allocate labour, with associated changes in labour costs and business competitiveness. The literature makes a distinction between one-off costs and ongoing changes. Each of these types of change can impact on business growth, investment and employment. For individuals changes in organisational arrangements can impact on their hours of work, remuneration and their work environment. Additional impacts can be witnessed in terms of changes in levels of sickness absence.

This sub-section will present evidence which illustrates the influence of working time regulation on change in organisational arrangements.

3.2.1.1 Evidence of impacts for workers from changes in organisational arrangements

There have been few empirical studies assessing the impact of the WTD (or general changes in working time regulation) on organisational arrangements. As a result it is difficult to present a quantitative analysis of the way in which working time regulation has resulted in changes at the organisational level. A study by Deloitte (2010) noted that businesses were concerned about the WTD and that there were some significant organisational impacts.

Among the adaptive actions taken by organisations, the following steps are identified:

- organisations making available additional funds for recruiting;
- making changes to move staff into shift systems,
- increased use of fixed-term, temporary agency or self-employed staff (including contracting out of aspects of production or service delivery),
- redeployment (via role substitution or cross-cover),
- provision of childcare facilities or more flexible working arrangements,

**Study measuring economic impacts of various possible changes to EU working time rules in the context of the review of Directive 2003/88/EC - VC/2013/119
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- organisational re-engineering (including by the introduction of greater „democracy“, i.e. consultation of staff), and
- use of the opt-out

Whilst the study notes that these impacts are most significant in the health sector (because of the use of on-call working and the use of different shift systems) it is concluded that they are also seen to some extent in the other sectors, and in virtually every Member State. Some of these organisational changes are the result of general trends toward measures ensuring greater work-life balance (partly brought about and necessitated by increasing female employment rates) rather than as a direct consequence of any one legislative instrument such as the WTD⁹³.

In this respect it is also important to recognise other key trends which influence the organisation of labour. For many industries the increasing interconnectedness of the world economy through globalised production and service provision networks has led to changes in organisational arrangements. Reductions in world trade barriers and the proliferation of Information Technology have opened up the possibility for companies to harness the possibilities of tailored, just-in-time production methods. New challenges from low cost economies with increasingly highly educated workforces also present new possibilities to reorganise production and service delivery in ways not previously possible.

In relation to contractual arrangements, evidence from the European Foundation for the Improvement in Living and Working Conditions notes that the increased prevalence of part-time work in Europe is both a result of a need for a more flexible labour market and a demand among workers for a better work-life balance (also linked to the increasing entry of women into the labour market). The study highlights the importance of these drivers, however warning that where part-time work is introduced for the benefit of the organisation, typically this has a negative or neutral effect on work life balance and other factors. Where part-time work is introduced in response to the needs of workers, this has a positive effect on work life balance, job satisfaction and productivity.⁹⁴

Further evidence on the impact of changes in organisational arrangements can be found from studies conducted at national level. For example, studies in Hungary and Poland suggest that the transposition of the WTD in national working time regulation and broader labour law have led to changes in work organisation which have impacted on worker motivations. For example, in a 2013 survey in Poland respondents stated that flexible working time is a most demanded and valuable aspect of work. Requests for flexible working have doubled since 2011 (from 25% up to more than 50%), and fivefold since 2009. The authors attribute this to changes in labour market regulations and the promotion of work-life balance (and resulting awareness raising effects)⁹⁵. New working time regulations have provided greater flexibility in the scheduling of working hours (flexible start times). At the same time, improvements were made to maternity leave provisions. It is therefore possible that these significant changes are not only linked to greater awareness and demand for flexible working, but also due to a decline in requests for improved family leave provisions, which appear in the questionnaire alongside the option of more flexible working hours.

In Hungary, studies note that the implementation of the recent European labour law reforms aimed to provide more flexible work arrangements in order to enable companies

⁹³ European Commission, DG for Employment, Social Affairs and Equal Opportunities. (2010) "Study to support an Impact Assessment on further action at European level regarding Directive 2003/88/EC and the evolution of working time organisation"

⁹⁴ European Foundation for the Improvement in Living and Working Conditions (2007), Anxo et al, Part-time work in European companies <http://goo.gl/QqU41v>

⁹⁵ Czapiński J., Panek T., *Social Diagnosis – Objective and Subjective Quality of Life in Poland 2013*

to increase their competitiveness. However, the authors note that the new Labour Code generally increases contractual flexibility for employers and decreases the security of workers by lowering minimum standards (e.g. extra days of holiday based on age now subject to agreement, earlier it was guaranteed by law)^{96 97}.

These changes are recent, so the impact on employment or health and safety of workers has not been assessed yet.

In the UK, significant changes in the organisation of the provision of healthcare have been implemented as a result of the impact of the SIMAP and Jaeger rulings, but also as a result of the implementation of working time rules with regard to the working patterns of junior doctors in 2009 (e.g. changes in shift and on-call patterns). A report from 2009⁹⁸ provides an overview of a range of approaches used by individual hospitals to reshape their shift patterns. These include changes in the coverage of staff at night and training processes to deal with the implementation of the WTD for doctors in training.

A survey of workers in Spain found that flexible working time arrangements are the most frequent initiatives linked with work-life balance plans. The majority of the companies surveyed had introduced specific measures which improve on provisions in current Spanish legislation in collective agreements⁹⁹.

In France, a study conducted on private companies showed that the reduction of working time led to important reorganisation in companies that decided to apply the 35-hour week regime¹⁰⁰. A large majority of companies that reduced their working time under Law Aubry I introduced mechanisms on fluctuating working time schedules¹⁰¹.

3.2.2 Health and safety of workers

The length and intensity of work patterns can have a significant impact on health of workers (both physical and psychological) and their safety at work.

3.2.2.1 Evidence of impacts for workers relating to Health and Safety

Significant evidence relating to the impact of long working hours on the health and safety of workers is presented in the impact assessment undertaken by Deloitte in 2010¹⁰². The Deloitte report demonstrated unequivocally that long working hours have a detrimental impact on the safety, health, and work-life balance of the worker; secondly, there is an exponential increase in accident risk after 7-9 hours. This finding is supported by research carried out in Germany which states that risk of an accident increases

⁹⁶ Tóth, András (2012): The New Hungarian Labour Code - Background, Conflicts, Compromises – Working Paper Friedrich Ebert Stiftung, Budapest

⁹⁷ Lehoczkyné Kollonay Csilla: Génmanipulált újszülött – Új munkatörvény az autoriter és neoliberális munkajogi rendszerek határán, In: Az új munka törvénykönyve dilemmái (szerk.: Kun Attila), KRE ÁJK, Budapest, (2013). p. 53

⁹⁸ Ahmed, M et al (2009) A compendium of solutions for implementing the Working Time Directive for doctors in training from August 2009; Skills for Health Good practice compendium

⁹⁹ Meil, G. et alia (2009): “El desafío de la conciliación de la vida privada y laboral en las grandes empresas”, [“The challenge of work-life balance at large companies”] Dirección General de Igualdad de Oportunidades, Comunidad de Madrid; Universidad Autónoma de Madrid
<http://dialnet.unirioja.es/descarga/libro/490888.pdf>

¹⁰⁰ Temps de travail, Revenu et Emploi -
<http://www.ladocumentationfrancaise.fr/var/storage/rapports-publics/074000502/0000.pdf>

¹⁰¹ Doisneau L. (2000), Les conventions de réduction du temps de travail de 1998 à 2000 : embaucher, maintenir les rémunérations, se réorganiser, Premières Synthèses, n° 45.2, Dares.

¹⁰² DG Employment (2010), Study to support an Impact Assessment on further action at European level regarding Directive 2003/88/EC and the evolution of working time organisation

exponentially after 8 hours of work and is almost doubled after 12 hours of work¹⁰³. Thirdly, it is argued that there is no appropriate maximum limit for weekly working time.

A number of additional issues were highlighted which are important to understand when considering how the WTD and general working time regulation impacts on workers. Working at unusual times, notably weekends was found to be associated with physical and psychosocial impairments which cannot be addressed through compensatory rest. Shift work was also found to increase the risk of sleep, digestive and cardiovascular disorders¹⁰⁴.

The impact of flexible working hour patterns on health and safety may also be associated with some of the negative consequences of shift work. However, where flexible working is instituted at the request of a worker it is likely to be associated with fewer negative consequences. It is also noted that these issues are not mutually exclusive impacts, but rather they can combine to impact on individuals.

Research conducted for the ILO demonstrates the link between long working hours, often unsocial hours due to the nature of the shift, weekend work and negative health impacts. In addition, the volume, schedule (non-standard work rhythms) of working hours and the type of flexibility are all dimensions that impact on work-life balance and workers' physical and mental health¹⁰⁵. Well documented links between longer hours and health conditions, as well as unhealthy lifestyle (for example, smoking and alcohol consumption) are partly explained by insufficient recovery time. Directly related to the maximum limits set in the WTD, the research demonstrates that working more than 48 hours per week is associated with an increased risk in work-related health effects and deterioration of psychological/ physical condition. Workers that work at weekends are more likely to report health problems¹⁰⁶. The specific psychosocial risks that negatively impact workers' health and well-being include high demands and work intensity, emotional demands, lack of autonomy, ethical conflicts, poor social relationships, and job insecurity¹⁰⁷.

In the UK, a study which focussed on the impact of changes in patterns of work organisation on patient care and the welfare of junior doctors found that there was a notable increase in episodes of sick leave experienced by junior doctors. Following the implementation of new working arrangements sick leave among junior doctors more than doubled with just over 1 in 3 taking leave in the year to August 2007 and nearly 3 in 4 the following year. The number of days taken and the number of repeated episodes of leave increased. The changes in working practice necessary to comply with the WTD were considered to be associated with, and may have contributed to, a detrimental effect on the welfare of doctors in training¹⁰⁸.

¹⁰³ Brenscheidt, presentation BAuA

¹⁰⁴ A range of other associated issues such as the children of shift workers underperforming at school and being less likely to go on to Higher Education; a higher incidence of broken relationships among shift workers; and, less involvement in interests and participative institutions was also identified.

¹⁰⁵ ILO (2012) Fagan C., Lyonette C., Smith M., Saldana-Tejeda A., The influence of working time arrangements on work-life integration or 'balance': A review of the international evidence

<http://goo.gl/zJi6c5>

¹⁰⁶ ILO (2012) Fagan C., Lyonette C., Smith M., Saldana-Tejeda A., The influence of working time arrangements on work-life integration or 'balance': A review of the international evidence

<http://goo.gl/zJi6c5>

¹⁰⁷ Eurofound (2012), Overview Report of the 5th European Working Conditions Survey

<http://goo.gl/KWXCO>

¹⁰⁸ H. F. McIntyre et al (2010), Implementation of the European Working Time Directive in an NHS trust: impact on patient care and junior doctor welfare.

<http://www.clinmed.rcpjournals.org/content/10/2/134.full.pdf>

Despite these changes it is notable that there is consensus in the literature to suggest that there are no significant impacts on quality of care, as measured by length of stay, death during admission, or readmission or any adverse impacts on key outcomes associated with patient safety and quality of care, with some studies indeed suggesting improvements in care outcomes¹⁰⁹. A recent report by the Independent Working Time Regulations Taskforce to the UK Department of Health¹¹⁰ considers that in some specialities patient care has been affected primarily through the cancellation of appointments resulting from the requirements to take immediate compensatory rest following a missed period of minimum daily rest. These provisions were also considered to impact on continuity and frequency of handovers to different medical team which was considered could also impact care outcomes. The report also comments in detail on the impact of the provisions of the WTD and subsequent court cases on the training of junior doctors and specialists. Overall, it considers this impact to be detrimental, with more significant impacts in certain surgical specialisms. At the same time, it is, however, acknowledged that reduced fatigue can improve training as well as patient outcomes. The evidence in this area is therefore be no means clear cut and analyses on patient outcomes or the impact of working time regulation on training is missing in other countries.

Research in Poland suggests that long working hours greatly impact the health of workers, for example the likelihood of chronic diseases of the immune system is increased in the group of people working more than 60 hours per week. There are also studies that confirm that long working time is one of the reasons for early exit from the labour market in Poland¹¹¹.

In Spain research indicates that continued exposure to shift and night work is associated with frequent chronic stress. Additionally, long working hours and especially night work are clearly associated with sleeping disorders and negatively affect sleep quality. Other potential negative effects of shift and night work include digestive problems, depression and chronic fatigue. Accidents at work and on the way to work are more frequent among night workers and family and social life is negatively affected¹¹². Research in Sweden also illustrates a range of issues associated with shift work:

- Shift work increases disturbed and insufficient sleep. Thus, day sleep after night work is 1-4 hours shorter compared to night sleep during days off. Early morning work that starts before 6.00h is also associated with short sleep (~5-6 hours) and a feeling of not being well rested.
- Night work increases fatigue and tiredness and several studies have demonstrated micro sleep events during work. The increased levels of fatigue and tiredness are associated with reduced performance, increased risks for work-related injuries

¹⁰⁹ J. Hollum, J. Harrop, M. Stokes and D. Kendall. (2010) Patient safety and quality of care continue to improve in NHS North West following early implementation of the European Working Time Directive. QJM (2010) 103 (12): 929-940

¹¹⁰ Report of the Independent Working Time Regulations Taskforce to the Department of Health (2014) The implementation of the Working Time Directive and its Impact on the NHS and Health Professionals; <https://www.rcseng.ac.uk/policy/documents/wtd-taskforce-report-2014>

¹¹¹ Dr. Żołnierczyk- Zreda B., *Long work-time and healthy of workers*, Central Institute for Labour Protection, 2010
<http://www.ciop.pl/32005>

¹¹² Fundación para la Prevención de Riesgos Laborales et alia (2009): "Los tiempos de la organización del trabajo: incidencia de los riesgos psicosociales en los sistemas de trabajo a turnos", [Working time organization: the incidence of psycho-social risks of night working"], Secretaría de Salud Laboral UGT CEC
<https://w110.bcn.cat/UsosDelTemps/Continguts/Noticies/2012/octubre12/libro%20turnos%20UGT.pdf>

and accidents. Early morning work, which starts before 6.00h, is also associated with higher levels of tiredness compared to evening work and days off, but normally lower tiredness compared to night work. A study in Germany found that the risk of accidents is 35% higher for those working on a night shift as compared to day shifts¹¹³.

- Several studies show that night work is a risk factor for cardiovascular disease, breast cancer and gastro-intestinal diseases (such as ulcers). However, most of the studies on shift work and health refer to subjective health complaints.
- Extended on-call shifts (>12 hours) increase the risk for involuntary sleep episodes at work, human error and accidents driving home from work.
- The characteristics of the shift system is important for the prevalence of the problems associated with night work and shift work: Thus, rapid rotation, forward rotation, at least 11 hours of rest between shifts, late shift changeover time (\approx 7.00h) between the night and the morning shift, and avoiding long work shifts (>12 hours) have been associated with less problems with sleep, higher alertness and improved well-being.
- Some studies show that permanent night workers have fewer problems than rotating night workers, at least if steady night work is self-selected.
- A high degree of influence over working hours decreases the risk for sickness absence and early retirement. Thus, worker work hour control seems to moderate the association between burdensome work hours and health risks.
- Reduced working hours (without decreasing the salary) are associated with improved well-being and less work-family conflict, but the effects of biological health markers and sickness absence are small (and mostly non-significant).
- Older shift workers (>50 years) often report more disturbed sleep in connection with the night shift. Some studies report a gender difference in the tolerance of shift work and women with high double load (due to a high amount of un-paid work at home) may be more vulnerable to full time shift work, including night shifts¹¹⁴.

Research in Germany also found that non-standard working hours can have negative health impacts. According to a survey carried out by BauA and BiBB in 2012 on the extent and the impact of work on week-ends and bank holidays, clearly shows the negative impact of Saturday work and work on week-ends¹¹⁵.

The specific link between working-time and mental illnesses, such as depression, has been subject to research in Poland. This research found that workers who work longer than 60 hours per week are in the group of high risk of depression. But there are a few factors that can reduce the negative influence of long hours working. First, workers in companies where working hours were controlled and flexible are healthier than those in companies with only flexible work time. Flexible and controlled working time has a positive influence on potential stressed workers, like elderly workers or young mothers. Secondly, flexible working hours have a positive influence on productivity and the

¹¹³ Brenscheidt, presentation of the Baua

¹¹⁴ Kecklund, G., Ingre, M. and Åkerstedt, T., 2010, *Work hours, health and safety – an update of recent research*. Stress Research Reports No 322, Stockholm. ISBN 978-91-978746-0-1.
http://www.stressforskning.su.se/polopoly_fs/1.51631.1321968484!/Stressforskningsrapport_322.pdf

¹¹⁵ Baua 2014, Wochenendarbeit, (Fact sheet)

psychological comfort of workers because it gives them an opportunity to reconcile different social roles¹¹⁶.

The link between working hours and health is, however, not uniformly consistent in the literature. There are some references to the possible mitigating influence of flexible working on the negative consequences of long hours. For example, research in Poland at the Central Institute for Labour Protection found no significant correlation between long working hours (more than 8 hours per day) and poor health conditions. However, this finding related to long-hours workers with a relatively high degree of control over their own working time. This group of workers had an increased probability of being healthier when compared with long hours but relatively lower control over their working time.¹¹⁷ This research suggests that flexible working can have a positive effect on worker satisfaction when used alongside long hour working patterns.

3.2.3 Productivity and company performance

At a basic level productivity is a measure relating to the quantity or quality of output relative to the inputs required to produce it. Traditionally labour productivity is understood as a comparison between output achieved with units of time spent or numbers of workers employed and associated labour costs. It holds that the longer a production unit is usefully operational the more it can produce. The more that can be produced, the higher the turnover, usually associated with higher profit.

Despite the policy relevance of the relationship between working time regulation and economic impacts, the existing body of empirical results clearly linking variations in working time regulations with economic impact is scarce and often inconclusive. For instance, the recently published review of work carried out on the impact of significant changes in working time regulation in France over the last 18 years or so concludes that *'the macroeconomic impact is globally small: slight reduction of working time, poor job creation, unclear wage dynamics and limited stimulation of tourism'* (Askenazy, 2013)¹¹⁸.

Other empirical studies that investigate the relationship between productivity or employment with employment regulation have largely focussed on employment protection legislation, rather than the specific impact of changes in working time rules¹¹⁹. This is problematic, because assessments of the impact of the strictness of EPL either do not include working time regulation or – when they are included – their impact can be seen to be disguised by the influence of hiring and firing measures. Limited studies in this area point to no significant - or a slightly negative - relationship between the strictness of employment protection and the economic variable. However, these consider employment regulation which goals go beyond the determination of working hours. Botero et al. (2004) use employment regulation, including hours restrictions and dismissal procedures, to find that stricter employment protection is related to lower labour force participation and higher unemployment¹²⁰. Besley and Burgess (2004) use employment law variations

¹¹⁶ Dr. Żołnierczyk- Zreda B., *Long work-time, mental illness and life style*, Central Institute for Labour Protection, 2010 <http://www.ciop.pl/35103>

¹¹⁷ Central Institute of Labour Protection, *Opportunities to optimize working conditions and improve mental health of workers with the use of flexible working time.*, Warsaw 2009, http://www.zus.pl/files/dpir/20091210_badanie_mozliwosci_optymalizacji.pdf

¹¹⁸ P. Askenazy (2013), Working time regulation in France from 1996 to 2012, *Camb. J. Econ.* (2013) 37 (2): 323-347. doi: 10.1093/cje/bes084

¹¹⁹ Nicoletti, Giuseppe, and Stefano Scarpetta (2003): "Regulation, productivity and growth: OECD evidence." *Economic policy* 18, no. 36, 9-72

¹²⁰ Botero, J. C., Djankov, S., La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (2004). The regulation of labor. *The Quarterly Journal of Economics*, 119(4), 1339-1382

across Indian states to show that legislation offering greater protection to workers lowers economic growth¹²¹.

Existing studies on EPL do not make it possible to reach clear-cut conclusions with regard to the specific impacts of variations of working time regulation, since this is only one part, and not necessarily the most salient one, of EPL as considered in the above-mentioned studies. Therefore this evidence merely feeds into the present assessment and illustrates the scarcity of directly relevant findings and the complexity to reach them for the purpose of this study.

3.2.3.1 Evidence of impacts of regulating working time on productivity and company performance

It is intuitive to suggest that in order to increase production of goods and services operating hours could be increased. In the absence of recruitment of additional staff or the introduction of new shift patterns this requires the working hours of workers to increase. However this proposition is not borne out in the literature. Indeed it is demonstrated that manufacturing productivity does not increase commensurately when hours are extended and in many industries increased output per hour is actually associated with a shortening of hours. An ILO study found a 1% increase in working time above 1,925 hours annually leads to a 0.95% decrease in productivity¹²².

Flexible working time arrangements can have a positive impact on enterprise performance. For example, flexi-time arrangements and compressed work weeks have positive impacts on productivity, job satisfaction, staff retention and recruitment, and reduce absenteeism¹²³. Moreover, in general, they help companies to adapt output to demand fluctuations.

Additionally, as indicated above there is strong evidence which suggests that working longer hours increases the likelihood of illness and injury, thus causing a fall in productivity¹²⁴. Furthermore, ILO research indicates that measures to prevent very long hours, part-time work and the right to ask for flexible working hours are linked to productivity gains¹²⁵.

Whilst there is a significant amount of literature which illustrates that the elasticity between hourly productivity and working hours is negative and decreasing with working time, it is noted that the statistical significance of the results is weak due to the limited scope of such studies¹²⁶. It is important to note that organisational and public policy responses also impact on the extent to which working time regulation influences behaviours, for example:

- During the financial crisis, German exports experienced substantial contraction as demand for German products fell. Bosch (2009) considers that during previous recessions, German companies made more workers redundant. This meant when the recovery came, companies had to recruit in order to find workers and increase

¹²¹ Besley, T., & Burgess, R. (2004). Can labor regulation hinder economic performance? Evidence from India. *The Quarterly Journal of Economics*, 119(1), 91-134

¹²² ILO (2012), Golden, L., The effects of working time on productivity and firm performance: a research synthesis paper <http://goo.gl/AOslkh>

¹²³ ILO (2012), Golden, L., The effects of working time on productivity and firm performance: a research synthesis paper. <http://goo.gl/AOslkh>

¹²⁴ ILO (2012), Golden, L., The effects of working time on productivity and firm performance: a research synthesis paper. <http://goo.gl/AOslkh>

¹²⁵ ILO (2012) Fagan C., Lyonette C., Smith M., Saldana-Tejeda A., The influence of working time arrangements on work-life integration or 'balance': A review of the international evidence <http://goo.gl/zJi6c5>

¹²⁶ G. Cette, S. Chang, and M. Konte (2011), The decreasing returns on working time: An empirical analysis on panel country data. <http://goo.gl/I5y1vS>

capacity. This dampened the rate of growth during the recovery. During the recent recession, companies have been seeking to reduce the number of hours workers work rather than to making workers redundant¹²⁷.

- Empirical studies also suggest that short-time work schemes have been effective in reducing the vulnerability of employment during the global recession. Workers see short time work schemes as either an extended form of unemployment benefit giving them time to search for alternative work, or they simply see it as preserving their job for when economic conditions improve¹²⁸.

A study carried out in France¹²⁹ shows that companies that switched to a 35-hour a week regime (under Law Aubry I) saw their added-value growing by 5% more between 1997 and 2000 compared to companies that still applied the 39-hour a week legal duration. However the growth of the added-value is less important than the growth of employment. Thus, the apparent labour productivity seems to have increased more slowly in the companies with a 35-hour week than in those with a 39-hour a week regime. However, the study also says that this result was predictable as workers under a 35-hour contract work less than before and thus produce less¹³⁰. Labour costs under Aubry I were also impacted by the hiring subsidies offered to companies to encourage early adoption of the 35 hour week, thus impacting labour costs. On the whole, comparisons of companies with same features show that the differences between the companies applying the reduction of working and those who do not are not significant in terms of productivity¹³¹. The companies applying the 35-hour week saw their global productivity factors decreased by 3.7% compared to the 39-hour week companies.

Working in split shift pattern (where a person's working day is split into two or more parts) reduces productivity by 5% in industry and 9% in services sector. On average, workers without split working schedules have a 6.5% higher productivity than those with a split schedule¹³². Statistically, the relationship between the economic success of the company and the introduction of flexitime measures is not proven to be positive. This outcome is highly related to the fact that the data correspond to 2010 (an atypical year due to the economic turbulences produced by the economic crisis)¹³³.

Indeed there is evidence from Japan that suggests that measures to reduce working hours can increase productivity. A report also highlights the increase of productivity of companies, between 2004 and 2007, for those companies which introduced the shorter working time compared to companies which have workers who work more than 80 hours per month. 51% of companies with shorter working time increased productivity per worker, compared to 47% of other companies without a shorter working time.

¹²⁷ Bosch, G. (2009), Working time and working time policy in Germany. <http://goo.gl/c30vhv>

¹²⁸ European Commission DG ECFIN and DG Employment (2010), Short time working arrangements as response to cyclical fluctuations.

¹²⁹ Crépon B., Leclair M. and Roux S. (2004), RTT, productivité et emploi : nouvelles estimations sur données d'entreprises, Economie et Statistique n° 376-377

¹³⁰ Crépon B., Leclair M. and Roux S. (2004), RTT, productivité et emploi : nouvelles estimations sur données d'entreprises, Economie et Statistique n° 376-377

¹³¹ Crépon B., Leclair M. and Roux S. (2004), RTT, productivité et emploi : nouvelles estimations sur données d'entreprises, Economie et Statistique n° 376-377

¹³² Montañes Bernal (2011): "Tipos de jornada y productividad del trabajo", ["Working time modalities and labour productivity"], Universidad de Zaragoza, Consejo Económico y Social de Aragón.

http://www.aragon.es/estaticos/GobiernoAragon/OrganosConsultivos/ConsejoEconomicoSocialAragon/Areas/Publicaciones/PRODUCTIVIDAD_2.pdf

¹³³ Centro de Estudios Económicos Tomillo (2012): "Las nuevas formas de organización del tiempo y el espacio de trabajo en las empresas catalanas", ["New forms of working time and space organization and the Catalanian companies"], Department d'Empresa i Ocupació, Generalitat de Catalunya.

Companies which introduced not only shorter working times but also measures which seek to improve work-life balance further increased the rate of productivity per worker. The research indicated that 56% of companies which implemented both measures of shorter working time and work-life balance increased productivity, compared to 48% of companies which introduced one of the measures to increase productivity¹³⁴.

In terms of public sector productivity, evidence from a 2008 study in the UK illustrated that since the implementation of the WTD, 75% of junior doctors believe that patient care has deteriorated, 90% of junior doctors believe that direct contact with patients and training have decreased, more than half of specialist registrars think that their quality of life is worse on partial shifts and 57% of junior doctors and 67% of all grades think that doctors should be able to opt-out of the 48 hour week¹³⁵. However, this evidence is in contrast to a 2009 study which assessed the effect of implementing a 48-hours WTD-compliant rota on patient's safety and doctors' work sleep patterns. The study showed a reduction of 32.7% in medical errors occurring during the new working pattern compared to the traditional rota¹³⁶. Furthermore, the study by Deloitte¹³⁷ points to research comparing traditional work schedules in British hospitals with intervention schedules which were taking account of the EU working time directive: Cappuccio et al. (2009) showed an improvement regarding patient safety for the intervention schedule in comparison with the traditional schedule

Studies in Spain have highlighted that among the five types of reconciliation measures found, flexi-time initiatives, time schedule arrangements and leave are the most used by the employers. The most relevant benefits of introducing these initiatives for the companies are: improving their corporate image; improving the working environment; retain their talent; reducing the absenteeism and increasing labour productivity. As a result, implementing changes in working time regulation are positive for the economic and social outcomes of the companies, though this is not necessarily the most significant element influencing any productivity gains^{138 139}.

3.2.4 Training and re-training of workers

Training and re-training of workers relates to the investment linked to professional development of the workforce. This may be training associated with the current role held by an individual or training associated with a role which they may wish to take-up in the future. In some cases when organisations undergo restructuring this may also include

¹³⁴ http://www.esri.go.jp/jp/prj/hou/hou042/hou42_gairyaku.pdf

¹³⁵ H. Cairns & B. Hendry, Outcomes of the European Working Time Directive (2008) BMJ 2008;337:a942

<http://www.bmj.com/content/337/bmj.39541.443611.80>

¹³⁶ F.P Cappuccio, A. Bakewell, F.M. Taggart, G. Ward, C. JI, J.P. Sullivan, M. Edmunds, R. Pounder, C.P. Landrigan, S.W. Lockley, E. Peile on Behalf of the Warwick EWTd working group (2009) Implementing a 48 h EWTd-compliant rota for junior doctors in the UK does not compromise patients' safety: assessor-blind pilot comparison, QJ Med 2009; 102:271-282 http://wrap.warwick.ac.uk/624/1/WRAP_Cappuccio_Implementing.pdf

¹³⁷ DG Employment (2010), Study to support an Impact Assessment on further action at European level regarding Directive 2003/88/EC and the evolution of working time organisation

¹³⁸ López-Ibor et alia (2010): "Las políticas de conciliación de la vida familiar y laboral desde la perspectiva del empleador. Problemas y ventajas para la empresa", ["Work-life balance policies from the employer's perspective"], Cuaderno de Trabajo 02/2010, Universidad Complutense de Madrid. https://www.ucm.es/data/cont/docs/85-2013-11-29-ct02_2010_polit_concil.pdf

¹³⁹ Meil, G. et alia (2009): "El desafío de la conciliación de la vida privada y laboral en las grandes empresas", ["The challenge of work-life balance at large companies"] Dirección General de Igualdad de Oportunidades, Comunidad de Madrid; Universidad Autónoma de Madrid <http://dialnet.unirioja.es/descarga/libro/490888.pdf>

training in order to prepare a worker for redeployment into a different role within the organisation.

As the application of the WTD establishes maximum average weekly working hours and minimum rest periods for workers, it could have an impact of reducing the time that employers are willing to allow workers to participate in training measures that are not considered to be both important and urgent to day-to-day operations. Moreover the WTD may impact on strategic strengthening of workforce skills and competencies. Conversely, if the minimum standards of the WTD are implemented, this may have the impact of ensuring that all employers operate to the same standards, preventing a “race to the bottom” which allows strategic investment in training and re-training as a consequence of wage cost stability.

3.2.4.1 Evidence of working time regulation on training and retraining

Understanding impacts on the training and re-training of workers resulting from the introduction of working time regulation is problematic due to the fact that observed effects are not necessarily wholly attributable to working time regulation. Changes in working time regulation have in many cases been introduced on an incremental basis and often alongside industry specific changes (for example, changes to service delivery models; new industry standards and training requirements; and, organisational restructuring)¹⁴⁰.

A study in the UK compared the amount of work and training done before and after regulatory changes which reduced working hours. In the medical profession, for specialist registrars, there was an 18% decrease in the number of cases treated and an 11% decrease in the number of weekly training of junior doctors overseen. For senior house officers, there was a 22% decrease in the number of cases accompanied and a 14% decrease in the number of weekly training lists done. This is partly linked to the overall reduction in working time, but also depends on shift patterns instituted which would allow – or not allow – a doctor to follow up a case consistently and obtain the related training benefits. It is noted that this has an immediate impact on training of new doctors and will ultimately have a knock-on effect for consultant manpower availability¹⁴¹.

The report of Independent Working Time Regulations Task Force mentioned above also comments on the impact of the WTD and CJEU cases on training and states that training impact has varied by specialism. It cites a survey by the British Medical Association which indicates that doctors in specialties that require experiential learning of practical procedures are markedly less likely to believe that training can be delivered within a 48-hour week. Around 70% of psychiatry and emergency medicine trainees who responded to the BMA’s 2010 survey believed it possible to train in their specialty within a 48-hour week, but only 33% believed this possible in surgical training. It also reports a submission from the Royal College of Surgeons which argues that ‘the quality of training for surgeons of the future is being endangered as a result of these pressures associated with the WTD. Analysis they have conducted suggests that the number of hours available to surgical trainees for training and experience in compliance with the WTD may have been significantly reduced: That every month 280,000 surgical training hours could be

¹⁴⁰ Morrow, G. et al. (2012) The Impact of the Working Time Regulations on the Medical Education and Training: Literature Review, Durham University http://www.gmc-uk.org/The_Impact_of_the_Working_Time_Regulations_on_Medical_Education_and_Training___Literature_Review.pdf_51155615.pdf

¹⁴¹ D. J. Sim, S. R. Wrigley, and S. Harris (2004), Effects of European Working Time Directive on anaesthetic training in the United Kingdom, *Anaesthesia*, 2004, 59, pages 781-784 <http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2044.2004.03808.x/pdf>

lost owing to the WTD and doctors beginning their surgical training today will have 3,000 fewer hours to learn throughout their training, the equivalent of 128 whole days¹⁴².

No other studies on training impact could be identified in the Member States covered in-depth by this study.

3.2.5 Labour market effects

Arguably, one potential impact of working time regulation which seeks to reduce each individual's working hours could be to create additional jobs in the economy. Such arguments have partly underpinned the call for the 35-hour working week in France. Furthermore, the regulation of working time (and its level of flexibility) can impact on the ability of certain groups to take up employment (e.g. those with caring responsibilities). Finally, the strictness of working time regulation could also be argued to influence employers' decision on whether or not to recruit (and the costs associated with this).

3.2.5.1 Evidence of impacts of working time regulation on labour market outcomes

In France, a study assessed the impact on employment of the switch from a 39-hour maximum working week to a 35-hour week, as a result of reforms introduced between 1996 and 2002. In looking at these studies it is important to bear in mind some of the key features of this reform and the economic and political conditions in which it was carried out. The reform was implemented in two legislative steps (named Aubry I and Aubry II). In the first phase (1998-1999), financial incentives were provided to companies which made voluntary agreements with their employers to move to a 35-hour working week. In order to qualify for these subsidies, employers had to reduce working time by around 10% while at the same time increasing employment by 6% or refraining from carrying out already planned redundancies. Greater incentives were offered in relation to such voluntary working time reductions being effected for low skilled workers. The second phase from 2000 made the introduction of a 35 hour week the general limit for all companies with more than 20 workers (smaller companies were to be included after 2002). Subsequent to this reform, working hours above the statutory maximum were counted as overtime and subject to overtime premia, unless otherwise agreed at company level (e.g. through the annualisation of hours). A maximum limit of allowable overtime hours per year was also agreed upon (130 hours). In terms of the implementation of the Aubry II law, it is important to note that the socialist government, which had instituted the changes, lost power in 2002 and the new government made some changes, which could be seen to undermine some of the initial goals of the legislation (see Lehndorff, 2014¹⁴³). These changes limited the extent to which the 35 hour week was introduced in SMEs; the upper limit for overtime hours was raised and overtime working was encouraged by reducing social security contributions to be levied on overtime hours. At the same time, limits on hours accumulation on working time accounts were relaxed.

Although working hours initially dropped overall, one quarter of the initial effect (an average reduction by two working hours per week) was reversed under the new government. Nonetheless, the overall 1.5 hours reduction in weekly working hours is the largest measured in Western Europe in this time period, albeit being below the 4-hour reduction in statutory hours (Lehndorff, 2014). The increasing decentralisation of collective bargaining meant that the reduction in the effect of the 35-hour working week

¹⁴² Report of the Independent Working Time Regulations Taskforce to the Department of Health (2014); The implementation of the Working Time Directive and its impact on the NHS and health professionals

¹⁴³ Lehndorff, S (2014); It's a long way from normality: The 35-Hour Week in France; Industrial & Labor Relations Review July 2014 67: 838-863

was more limited than may have been intended by the new Sarkozy government. Overall, lower skilled workers and women were more likely to see a larger reduction in their working hours.

As the prime goal of the reform was to encourage job creation, a number of studies sought to assess the employment impact of the introduction of the 35-hour week. Bunel and Jugnot (2003¹⁴⁴) drew on panel data from comparable companies meaning that these companies were of the same size, the same sector and had a similar history of employment growth. The only difference between these two panels was that in one of the sample, companies were applying the reduction of working time while in the other panel, they did not and still applied a 39 hour week. The study estimated the net effect on employment of the Robien Law (which enabled firms to reduce worker hours rather than make redundancies) is 7.2% and that of the first Aubry Act (which introduced a system of incentives for companies to put in place in advance the working week of 35 hours) at 7%. In other words, these companies experienced a differential increase in their employment of 7.2% for some and 7% for the others. It additionally calculated that, the switch to a 35-hour week would have been 'directly responsible for approximately 300,000 jobs in the non-agricultural competitive sector over a five year period, or 18% of the jobs created between 1997 and 2001'¹⁴⁵.

Analyses of these labour market reforms are, however, not unanimously positive. It must be recognised that the reductions in working time and associated job increases were achieved with incentives to companies. Bunel and Jugnot (2003) raise the possibility that the employment impacts of the Aubry laws in particular should be more significantly attributed to the reduction of social security contributions on low wages, rather than a reduction in the legal duration of working time. Furthermore, Logeay and Schreiber (2006)¹⁴⁶ report that the legislation was introduced during a period of significant economic growth (French GDP grew on average by 3.5% between 1997 and 2001). As a result, assessments of the employment impact of the French law vary and often produce contradictory results (depending on the potential confounding factors being taken into account).

A study in Sweden calculated the impact on workers' wages as a result of changes to working hours. This study examined the main results arising from the introduction of new working time regulation in Sweden in the 1980s¹⁴⁷ and found that:

- actual hours worked only decreased by 40 percent of the intended reduction in standard hours;
- hourly wages for 2-shift workers increased relative to wages for daytime workers. This was due to the fact that their hours of work were reduced by a more significant level than other types of workers, whereas their wages did not decline commensurately; and,
- the wage increase was more pronounced for workers who had a larger reduction in actual hours.

¹⁴⁴ Bunel M. et Jugnot S. (2003), 35 heures : évaluation de l'effet emploi, *Revue Économique*, Vol. 54, n° 3

¹⁴⁵ Bunel M. et Jugnot S. (2003), 35 heures : évaluation de l'effet emploi, *Revue Économique*, Vol. 54, n° 3

¹⁴⁶ Logeay, Camille, and Sven Schreiber. 2006. Testing the effectiveness of the French worksharing reform: A forecasting approach. *Applied Economics* 36: 2053–68.

¹⁴⁷ Between 1983 and 1988 there was a gradual reduction in standard working time for 2-shift workers from 40 to 38 hours per week. The reduction was the result of a series of central agreements between the Swedish Employers Confederation (SAF) and the Swedish Trade Union Confederation (LO).

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In addition, a study by the Office of Labour Market Policy Evaluation (IFAU) in Sweden which looked at the impact of working time reductions on wages, actual hours and equilibrium unemployment, found that a general reduction in working hours is not associated with a long-term reduction in unemployment levels. This is because the reduction in working hours was actually found to result in higher hourly wages. The study concludes that that a long-term reduction in unemployment would only result from a decrease in hourly wages¹⁴⁸.

A study in Poland which sought to quantify the impact of working time regulation on labour market participation found that proposed changes in the Polish Labour Law (mainly in the field of working time regulation¹⁴⁹) could, by 2030:

- have a small positive impact on the employment rate, with more significant impact on the women employment rate and people between 25-54;
- reduce the average time of being unemployed to about 10 months (from 11.8 months in 2013)¹⁵⁰.

Gender-specific impacts are also observed in some of the studies that have examined the impact of introduction of changes in working time regulation. For example, it is noted that psychological conditions of highly educated women improve when the working time goes below 48 hours¹⁵¹.

A study in Spain also sought to establish the impact of changes in working time regulation on women; this study found that the effect of the law on eligible mothers within temporary contracts is negligible. However, it stated that the implementation of the law involves an 18% decrease in the likelihood of women aged between 23 and 45 without children being employed on a permanent contract. The study also found that the likelihood of women being hired on a fixed-term contract increased by 30%¹⁵².

The studies on the French reform of working time regulation showed that women were more likely to see a reduction in their working hours and were more likely to argue that the legislation had significantly improved their work-life balance (Lehndorff, 2014). In this context, it is, however, worth noting that one of the results of the French studies is that individuals report a significant increase in work related stress as they argue that their workload did not decrease in line with any working hours reduction.

There have, however, in recent years been a number of studies assessing the impact regulations around working time flexibility linked to short time working on the preservation of employment during the recent economic crisis (e.g. Glassner and Maarten (2012; ICF GHK (2010)¹⁵³¹⁵⁴. However, when looking at such studies, the important role

¹⁴⁸ Nordström Skans, O., 2001, *The effects of working time reductions on wages, actual hours and equilibrium unemployment* <http://www.ifau.se/Upload/pdf/se/2001/wp01-8.pdf>

¹⁴⁹ This includes an impact assessment of the possibility of interrupting the 11 hour daily rest period, establishing a 12-month reference period in law, establishing "working time accounts", etc.

¹⁵⁰ Lewandowski Piotr (red.), *Polish flexicurity. Impact Assesment 2013*, <http://www.polskieflexicurity.pl/pl/a/Polskie-flexicurity---Ocena-skutkow-regulacji>

¹⁵¹ ILO (2012) Fagan C., Lyonette C., Smith M., Saldana-Tejeda A., *The influence of working time arrangements on work-life integration or 'balance': A review of the international evidence* <http://goo.gl/zJi6c5>

¹⁵² Fernández-Kranz and Rodríguez-Plans (2011): "Unintended effects of a family-friendly law in a segmented labour market" <http://ftp.iza.org/dp5709.pdf>

¹⁵³ Glassner, Vera and Keune, Maarten (2012), *The crisis and social policy: The role of collective agreements*. *International Labour Review*, 2012, 151: 351–375

¹⁵⁴ ICF GHK (Mutual Learning Programme, 2010); *Employment measures to tackle the economic downturn: Short time working arrangements/partial activity schemes; Report of Peer Review organised under MLP*

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of collective agreements and the surrounding wider policy framework in support for short-time working (going beyond working time legislation) must be borne in mind.

4 Impact of possible changes

This section summarises the key findings of this study in relation to the administrative costs and socio-economic impacts arising from the proposed possible changes to the WTD. Prior to considering all possible changes it should be noted that these are not indicative of any amendments which may ultimately be proposed. Furthermore, in relation to any possible change providing greater flexibility than is currently foreseen, it is clear that Member States are not required to modify any (currently more favourable) provisions and the ultimately impact will therefore depend on national implementation and practice. Any possible changes leading to a stricter legislative position will need to be implemented (should current national provisions fall below these standards), but Member States are free to exceed any such requirements in national legislation. Any impact assessment can only consider the impact of the compliant transposition of such changes.

In addition, it must be borne in mind that the following assessment mainly focusses on the 10 selected Member States which have been chosen to provide a good representation of the current status of transposition of the WTD and broader working time regulation. When scaling up any potential impact (either administrative or economic), this is based on the assumption the situation in these 10 Member States provides a good approximation of the situation at EU level.

In order to present a clear and consistent picture, for each possible change, it outlines

- The current legal acquis at EU level,
- the content of the proposed changes; and
- the assumptions used to inform data collection about the possible change.

It then sets out the baseline situation at national level in terms of legislation and relevant collective agreements covering each discussed aspect of working time regulation and, based on this, the level of legislative change require in order to comply with proposed possible changes in EU legislation.

The economic impact and possible administrative burdens arising from possible changes to the WTD is significantly influenced by current legislation, collective agreements and company practice at Member State level. In the sections presenting the legislative mapping it is mainly the legal situation which is assessed, although it is clearly noted that in some countries sectoral and company level collective agreements have a significant role to play in determining working time. Where relevant, their impact in relation to the baseline situation is mentioned.

As well as presenting the baseline situation in 10 Member States in relation to each of the proposed changes, these sections assess the level of legislative change likely to be needed in different countries as a result of these proposals.

In summary, in carrying out this legal mapping, the following was taken into account:

- The distinction between requirements in national working time regulation arising directly from the implementation of the WTD and national provisions exceeding these requirements;
- The fact that stricter regulations than currently provided in the WTD will give rise to legislative changes at Member State level (in countries where these requirements are not already met) whereas possible changes leading to greater flexibility will only lead to a loosening of provisions at national level if Member States chose to do so;
- The fact that impact assessment guidelines require that any such assessment is carrying out in relation to the legal baseline under a presumption of full compliance with the current WTD;

- The importance of collective agreements (at various levels) in the regulation of working time, particularly in countries where collective bargaining plays an important role in setting working conditions.

Here it is important to note that the baseline situation used for impact assessment purposes takes account of the current legal situation¹⁵⁵, as well as any forthcoming changes already foreseen (e.g. as result of planned legal amendments and/or resulting from the need to address non-compliance with the current WTD). In the sections assessing the legislative baseline in relation to each possible change, two alternative assessments of the likely impact of potential changes are also provided for comparative purposes:

- a) An assessment based on the current legal situation without any amendments which would result from the Member State addressing non-compliance situations;
- b) An assessment of the current legal situation (without amendments) also taking into account working time regulation to sectoral or company level collective agreements, which are significant in regulating working time¹⁵⁶.

This assessment informed the assessment of administrative burden and economic impact in different countries and sectors.

- For each change the study has sought to dimension the potentially affected population, as different legislative options have differential impacts on sectors and types of workers.

The assessment of the affected population has an important impact on the scale of the administrative burdens and socio-economic impact measured and the process of identifying the relevant population is therefore discussed in detail in relation to each possible change.

Furthermore, the assessment of the administrative burden imposed by each possible change in the in-depth study countries and in the EU as a whole is provided, followed by an analysis of the respective socio-economic impact. The latter is presented here by order of magnitude rather than in relation to numerical impact, taking account of the methodological restrictions outlined above. For each assessment the quantitative data and estimates by country should be considered with caution, and data at EU aggregate level should be considered as indicative because of the assumptions underpinning each calculation.

Because of the specific emphasis placed on reducing regulatory burden on SMEs, any specific impact identified for SMEs is presented separately in section 5 below.

¹⁵⁵ This includes any collective agreements which have been made universally applicable by means of legislation.

¹⁵⁶ This assessment will be provided for the draft final report when all detailed national reports are available.

4.1 Possible change in rules in the calculation of on-call time and stand-by time

Summary of findings on possible changes 1a-1c

The possible changes proposed

- The possible change being proposed in relation to the calculation of on-call time (towards maximum working time limits and minimum rest) revolve around the possibility of introducing concepts of 'inactive' and 'active' parts of on-call time, allowing for only parts of on-call time spent on an employers' premises to be counted as working time. This change (if implemented at Member State level) could introduce greater flexibility for employers than is currently the case, but could also require workers to work longer hours with a possible attendant impact on health and safety.
- The possible changes to the calculation of stand-by time, on the other hand, would introduce less flexibility for employers by either ensuring that a larger share of stand-by time is counted as working time (possible change 1b) or introducing a cap on weekly stand-by time (possible change 1c).
- The change to provisions on on-call time was also considered in the context of a possible linked suppression of the opt-out.

Changes required to the baseline situation

- In looking at the legislative baseline situation in the 10 countries studied in depth, it is important to note that the majority of countries examined do not make a clear distinction in law between on-call and stand-by time.
- Based on an assumption of compliance with the current legal acquis, the proposed potential changes in the calculation of working time while being on-call would allow for greater flexibility in all countries examined (the lower the proportion of on-call time being counted as working time, the greater the impact). Potential changes in the calculation of working time while being on stand-by, on the other hand, would require stricter regulations in all countries (the greater the amount of time being counted as effective working time, the greater the impact).
- Applying a cap on the number of hours an individual could be asked to work on stand-by in any given week will impact all countries examined. Both the hypothetical 12 and 24 hours caps offer less flexibility than is currently available in all countries where a cap is specified (Germany, Hungary, the Netherlands and Sweden).

Administrative burden

- Among the three possible changes discussed above, the greatest administrative burden is associated with changes in the calculation of stand-by time. The indicative figure calculated based on the assumptions outlined is around €129 million EU wide, of which over 90% would be borne by SMEs.
- With regard to the introduction of a cap on stand-by time, the associated estimated AB is in the region of €88 million, with €83 million of this being borne by SMEs.
- The AB for possible change "on-call" is zero as the IO here are linked to the recording of working hours, which is already in place in all countries (therefore the BAU is 100%).

Socio-economic impact

- The simulation carried out based on the assumptions outlined above shows that by far the most significant employment impact from any of the changes being assessed by this study is related to possible change 1a (on-call time). The strongest employment effects are predicted for countries with the largest share of on-call workers, as well as the largest economies in the EU. It is important to be careful in interpreting these results as actual employment creation effects. These hinge on the assumption of the estimated elasticity for a given production relationship, and that more of the factor labour would be used if it became cheaper. Similarly, it is critical to distinguish here between direct micro-level effects of many scenarios. For example, greater flexibility in the calculation of on-call time for the purposes of maximum working time limits and compensatory rest would actually allow a given firm to work with fewer workers (on-call). Hence, one could expect lower labour demand. However, as this in essence this translates into lower per unit labour costs, it would, in principle, reduce the cost of the factor labour. This could lead, on the macro level, to more firms hiring workers. However, in sectors where labour elasticity is low or where other economic or organisational factors make it less likely that recruitment will occur, such additional jobs are less likely to materialise in practice. This is likely to be true for some of the key sectors drawing on on-call workers, such as the health care sector, therefore making it more likely that the same work will be performed by the same number of workers and reduce positive employment effects. It should also be noted that the simulation did not take into account possible links with the opt-out scenario and assumes that Member States would avail themselves of the possibility to introduce greater flexibility in their regulation.
- Both possible changes relating to stand-by time are projected to have negative overall employment impacts at EU level. While at micro-level, the proposed changes may require enterprises to recruit more workers, at the macro level, the increased cost in the factor labour is assumed to lead to job losses. The extent to which this is the case again depends on a range of complex economic and organisational factors making the impact in practice challenging to predict.
- The differential between simulated impacts for SMEs and large companies is difficult to quantify and varies from country to country.
- Health, safety and other impacts could not be quantified but the possible changes leading to greater flexibility could have detrimental effects on health and safety, as well as on productivity. Changes limiting the potential number of hours worked could have the opposite impact.

4.1.1 The current position and proposed changes being assessed

On-call time is not defined in the WTD, which features a binary approach that considers something either as working time or as rest time. As such, the CJEU was called on to clarify whether (in-active) on-call time would have to be considered as working time or as rest time. In the rulings in the SIMAP¹⁵⁷, Jaeger¹⁵⁸ and Dellas¹⁵⁹ cases, the CJEU

¹⁵⁷ Judgement of 3 October 200, case C-303/98, see http://eur-lex.europa.eu/smartapi/cgi/sga_doc?smartapi!celexplus!prod!CELEXnumdoc&lg=en&numdoc=698J0303

answered that all on-call time should be counted entirely as working time when workers are required to be physically present at the workplace or at a place designed by their employer. Conversely, stand-by time, where a worker is at home or a place of his choosing but required to be contactable and ready to work if called upon, only has to be counted as working time for the hours actually worked.

The modification of the WTD could potentially involve the introduction of different categories of time and / or explicitly allowing for rules to delimit the share of on-call time to be counted as working time. For the purposes of being able to estimate the impact of potential changes to on-call and stand-by regulations two values for both situations were assessed: 75% and 50% of on-call time at the workplace (or a place determined by the employer) not spent working counted as working time; and 40% or 20% stand-by time at home not spent working counted as working time.

In addition, another possible change assessed is – as an alternative to treating some of stand-by time not spent working as working time - to instead retain the status quo of 0% of such time being counted as working time, but to limit the volume of hours that can be worked on stand-by. Two values were assessed here: a cap of 12 or 24 hours per week, together with the possibility of a derogation via collective agreement which can provide for a different cap more suitable to the specific requirements of an activity or sector.

Compared to the current legal *acquis*, this would mean that the amount of time considered to be working time while on-call at the workplace could be reduced, but the amount of time considered on stand-by at home counted as effective working time could be increased (or caps on the volume of stand-by time introduced).

The hypothesis is that, given the status of the current case law, the first set of changes (greater flexibility in the regulation of on-call time) could (if transposed), in all of the countries considered¹⁶⁰, contribute to greater flexibility for employers compared to existing provisions. This will have a potential impact in sectors making significant use of on-call working and could, in turn, reduce the cost of labour by reducing the requirement for additional recruitment, but it could also in turn reduce the cost of the factor labour at the macro level¹⁶¹. It could also ease pressures on employers relating to the planning of work organisation and rostering.

Unless such provisions lead to additional requirements to change work organisation the overall economic impact could hypothetically be considered to be positive if lower labour costs are translated into greater recruitment. Furthermore, the associated requirement to work longer hours to reach the working time limit could exacerbate health and safety concerns for workers, which could in turn increase costs to businesses and society through increased worker absence and turnover and recourse to the health service and benefit systems. Productivity could also be impacted by longer hours working and accidents could be caused by inattentiveness linked to tiredness.

¹⁵⁸ Judgement of 9 September 2003, Case C-151/02, see <http://curia.europa.eu/jurisp/cgi-bin/gettext.pl?lang=en&num=79969090C19020151&doc=T&ouvert=T&seance=ARRET>

¹⁵⁹ Case C-19/04, see <http://curia.europa.eu/jcms/upload/docs/application/pdf/2009-02/cp050104en.pdf>

¹⁶⁰ Assuming full compliance with the current legal *acquis*.

¹⁶¹ It must be noted that pay (in relation to different forms of working time) is outside the remit of EU legislation and will need to be determined at the national, sectoral or company level. Indeed, it is entirely within the competence of Member states to determine how (different kinds) of working time are to be remunerated or not to be remunerated at all. Only fixed costs can be direct consequences of changes to WTD rules.

The second set of possible changes (enhanced requirement to count stand-by time as working time or to place a cap on the volume of such time), on the other hand, could lead to a tightening of respective provisions which could result in different cost impacts on businesses, but may also show some benefits with regard to worker well-being/health and safety.

The purpose of the next section is to reflect the results of the legal mapping in the 10 study countries being assessed in detail to establish current legislative provisions and therefore the extent to which the proposed possible changes would impact on the current legal acquis and thus gives rise to potential costs and benefits.

4.1.2 Comparative overview of Member States provisions

- Definition of on-call and stand-by time

Of the 10 Member States selected for in-depth review, 3 do not have a legal definition of on-call time in general employment legislation, largely because there is no separate concept of on-call time – with various specifications of the stand-by concept being used instead, or because the concept is limited to very specific sectors.

In the Czech Republic the concept of on-call time is not known and thus no definition exists in the Labour Code. Only stand-by time exists in this country, which cannot be performed at the employers' premises. In Spain, on-call time only concerns some specific occupations or sectors such as doctors or the transport sector and is regulated in sectoral legislation. France also limits the use of on-call time to some occupations such as doctors. There is no specific definition of on-call time, as effective working time is considered as the time during which the worker is at the disposal of the employer and cannot attend personal duties. In Poland and Hungary, legislation does not provide two clear and distinct definitions of on-call and stand-by time. The Polish Labour Code draws a distinction between on-call time spent on the employers' premises and stand-by time spent at a place of the worker's choosing, but no effective distinction is made in the treatment of on-call and stand-by time. Under both concepts, only periods actively spent working are counted as working time. In Hungary, both on-call and stand-by duty effectively exist in practice, but no definition is provided in the Labour Code for stand-by time. On-call time is mentioned in relation to the fact that the employers can choose the place where the worker has to stay while stand-by is linked to being at home.

Germany, the Netherlands and Sweden provide very clear definitions for the concepts of on-call time and stand-by time. Germany has three types of on-call/stand-by time to take into account different practical realities. In the UK, there is no definition of the concepts in working time regulation, but interpretations are available in case law.

There are no definitions of on-call and stand-by time in collective agreements in the majority of the ten in-depth countries. This is the case in Germany, Hungary, the Netherlands, Spain, and Sweden and in the UK. In France, the national statute of workers in the electricity and gas industries¹⁶² contains several definitions of stand-by time. However, it is worth noting that the basis of these definitions is the same that the one enshrined in national legislation. These specific definitions are due to the nature of work in the utility sector where stand-by time is very often used for emergency interventions which can be lead to dangerous situations if not immediately under control. As a result, several types of stand-by time have been defined but they are more definitions giving details on some type of interventions rather than definitions dramatically being different from the one in the Labour Code. For instance, the national

¹⁶² Decree No. 46-1541 of 22 June 1946 approving the national conditions of service of electricity and gas industries (*Décret n°46-1541 du 22 juin 1946 approuvant le statut national du personnel des industries électriques et gazières*)

collective agreement distinguishes the stand-by time relating to an emergency intervention (*astreinte d'alerte*) where the worker needs to immediately intervene and go to the workplace. Another type of stand-by time is the stand-by time in relation to supporting other workers.

Even though none of the ten Member-States have definitions of on-call or stand-by time in collective agreements (which differ significantly from legislation), such agreements are nonetheless important in determining how on-call and stand-by time should be organized and remunerated.

- Calculation of on-call and stand-by time

In relation to stand-by time, in the Czech Republic, France, Germany, Hungary, the Netherlands, Poland and Spain, only the time during which work is performed is counted as working time for the purposes of the calculation of maximum working hours and minimum rest periods (or compensatory rest). In Sweden and in the UK, there is no specific mention of how much of the time spent on stand-by is considered to be effective working time. In the UK, case law has sought to clarify this, while in Sweden provisions on the treatment of time spent on stand-by can be found in company collective agreements (the latter mainly cover rules on remuneration of such forms of work).

Concerning on-call time, France, Italy, Hungary, Sweden and the UK all consider that both active and inactive parts of on-call time spent in the workplace are to be counted as working time. In Sweden, the legislation indirectly implies this while in the UK inactive time spent on-call at the workplace has been fully recognised as effective working time in several court cases¹⁶³, in line with the case law of the CJEU. In Poland, legislation provides that on-call time is not considered as working time if the worker does not perform any work. This provision can be considered to be non-compliant with the requirements of the WTD and attendant case law and legal proceedings in this regard are currently under way (meaning that for the purposes of this study and any impact assessment a presumption of compliance needs to be made).

It is worth noting that while legislation stipulates what should be considered as effective working time for the purposes of the calculation of maximum working hours and rest periods, more detailed sectoral regulation and collective agreements are more concerned with remuneration to be granted for different parts of on-call and stand-by time. As already emphasised above, considerations of remuneration fall outside of the scope of regulation of the current WTD and any potential future revisions and remain in the remit of each Member State.

¹⁶³ *Gallagher v Alpha Catering*, EAT, [2004] EWCA Civ 1559
MacCartney v Oversley House Management, EAT, [2006] ICR 510
Anderson v Jarvis Hotels, EAT/0062/05

Table 4.1 Current Member States' provisions of on-call and stand-by time

Country	Legal Reference on-call and stand-by	Definition on-call time (at the workplace)	Definition stand-by time (at home) How much is counted as working time?	Maximum time of being on-call or stand-by (week, month)
CZ	Article 78(h) of the Labour Code	No definition of on-call time (only stand-by)	Stand-by (<i>pracovní pohotovost</i>) means a period during which a worker is on-call to perform work, as covered by their employment contract, and which in case of urgent need must be performed in addition to their shift schedule. Standby may only take place at a place agreed with a worker but it must be at a place other than the employer's workplace.	No clear limits but performance of work during standby above standard weekly working hours is defined as overtime work ¹⁶⁴ . As a worker must not be ordered to do more than 8 hours of overtime work in individual weeks and 150 hours of overtime work in one calendar year ¹⁶⁵ . It can be concluded that stand-by time is limited to 8 hours a day and 150 hours per year.
DE	The Working Hours Act (<i>Arbeitszeitgesetz, ArbZG</i>)	<i>Arbeitsbereitschaft</i> is a type of on-call time during which the worker remains at the workplace and decides themselves when to return to work/continue to carry out work. <i>Bereitschaftsdienst</i> is a type of on-call work where the worker can choose the place to carry out this type of shift, in general at the workplace or close to the workplace, at a reasonable distance so that they can quickly intervene at work should it be required by the employer	<i>Rufbereitschaft</i> is a type of stand-by time where the worker can choose the place to carry out this type of shift, in general at home or at a distance where they can intervene at work within a reasonable time should it be required by the employer. It is worth noting that <i>Rufbereitschaft</i> is only used in exceptional circumstances and is not used if a form of on-call is generally required due to the organisation of work.	Yes –stand-by (<i>Rufbereitschaft</i>). Limits are set in collective agreements or individual contracts.

¹⁶⁴ Section 95 of the Czech Labour Code

¹⁶⁵ Section 93 of the Czech Labour Code

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Country	Legal Reference on-call and stand-by	Definition on-call time (at the workplace)	Definition stand-by time (at home) How much is counted as working time?	Maximum time of being on-call or stand-by (week, month)
FR	Title II of Book I of the Third Part of the Labour Code – more specifically Article L3121-5 of the Labour Code	No specific definition of on-call time. However, the definition of 'actual working time' clearly includes on-call time in the workplace. ¹⁶⁶	Stand-by time is considered to be any period during which the worker, without being at the permanent and immediate disposal of the employer has to remain at home - or close to home - to be able to intervene to perform work for the company. Only stand-by time actually spent performing work is counted as working time (this includes travel time to the workplace).	There is no maximum for being on-call/on stand-by as long as the period respects the maximum number of working hours and the minimum rest period. However, social partners can set a maximum limit for being on stand-by.
HU	Section 117 of the Labour Code as amended by Act LXXIII of 2007	On-call time is not clearly defined in the Labour Code, but is referred to as the time a worker has to spend on-call at the employers' premises and be available to work. The entire period of on-call time has to be taken into account when calculating working time.	Stand-by time is spent at a location of a worker's choosing where they must be available to perform work where required. Only time actually spent working is counted as working time.	On-call time is limited to 24 hours covering the duration of daily scheduled working time, overtime and on-call duty. Stand-by periods must not exceed 168 hours per month.
IT	Legislative Decree 66/2003	On-call time spent on the employer's premises is considered to be working time in its entirety.	Stand-by time is time spent at a location of the worker's choosing while being ready to perform work. Only time actually spent working is counted as working time.	No limits are set.
NL	Working Hours	On-call time at the workplace	Stand-by time (<i>consignatie</i>) is defined as	Specific rules on-call time

¹⁶⁶ | Article L 3121-1 of the French Labour Code defines 'actual working time' (*'temps de travail effectif'*) as the time during which the worker is at the disposal of the employer and must follow the latter's instructions so that s/he cannot attend freely to personal activities. See Commission Staff Working paper, SEC(2010) 1611 final.

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Country	Legal Reference on-call and stand-by	Definition on-call time (at the workplace)	Definition stand-by time (at home) How much is counted as working time?	Maximum time of being on-call or stand-by (week, month)
	Decree 605/2005 amended the relevant national law	<p><i>(aanwezigheidsdienst)</i> is defined under the ATB is as a continuous period of 24 hours during which the worker, if necessary, in addition to the agreed shift is required to remain at the workplace to be called to quickly perform work.</p> <p>The employer has to provide for a reason that working time cannot be organised differently and that on-call work has to be regularly performed.</p>	<p><i>an interval between two consecutive shifts or during a break, in which the worker is only required to be able to perform in the event of unforeseen circumstances on-call as soon as possible to carry out the stipulated work.</i></p> <p>Stand-by time can only be used under exceptional circumstances and the employer cannot regularly rely on it. An employer can require from the worker to remain close to a workplace.</p>	<p><i>(aanwezigheidsdienst)</i> including limits are:</p> <ul style="list-style-type: none"> - a worker cannot be working on-call more than 52 times in a reference period of 26 consecutive weeks; - a worker cannot work more than 48 hours on average in a reference period of 26 weeks - A worker must have an uninterrupted rest period before and after working on-call for 11 hours; - A worker must get in every 7 day/ 24 hour period a minimum of 90 hours rest time – 1 time 24 hours and 6 times 11 hours of uninterrupted rest time <p>Rules on stand-by time (<i>consignatie</i>) are the following:</p> <ul style="list-style-type: none"> - Within a period of 28 times 24 hours a worker must have at least 14 times/ 24 hours no stand-by period and have 2 times for 48 hours of uninterrupted rest; - Stand-by cannot follow 11 hours before a night shift and 14 hours after a night shift; - Stand-by cannot last longer than 13 hours in every 24 hour period

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Country	Legal Reference on-call and stand-by	Definition on-call time (at the workplace)	Definition stand-by time (at home) How much is counted as working time?	Maximum time of being on-call or stand-by (week, month)
PL	Article 151 of the Labour Code	According to the Polish Labour Code, the employer 'may require the worker to remain ready to perform work in the workplace or another place designated by the employer outside normal working hours'. There is no distinction in the treatment on-call and stand-by time. Time spent on-call or on stand-by is not considered as working time if the worker does not perform effective work.		
ES		On-call time is only defined in specific sectoral regulations. Here, both active and inactive on-call time at the workplace are to be considered as effective working time	Stand-by time spent at a place of the worker's choosing is only counted as working time if work is performed.	
SE	Working Hours Act 1982 (as amended in 2005, SFS 2005:165)	On-call time spent on the employers' premises is counted as working time in its entirety.	Stand-by time spent at a place of the worker's choosing is only counted as working time if work is performed. Travel time to the employers' premises is not counted as working time.	On-call hours may be worked at a rate of not more than 48 hours per worker over a four-week period or 50 hours over a calendar month.
UK	Working Time Regulations 1998	The Working Time Regulations do not contain any specific provisions on whether on-call is to be considered as effective working time. However, UK courts have applied the ECJ interpretation saying that both active and inactive on-call time spent at the workplace must be considered as effective working time.	No specific definition of stand-by time is provided in the Regulations. This is interpreted by the courts.	

4.1.3 Level of changes for Member States' legislation to comply with the possible changes

Under a presumption of full compliance with the current WTD and case law, the possible change of counting only a certain percentage of on-call time as effective working time could lead to the introduction of more flexible provisions if fully transposed. Although Polish legislation does not currently meet these criteria, the presumption of compliance is made for the purposes of impact assessment¹⁶⁷. The Czech Republic is unlikely to be impacted as the concept of on-call time is not currently used. In France and Spain the impact of such a possible change could be more limited as on-call working is limited to certain sectors. In the other 7 countries the impact of the possible change could be felt in all sectors making use of on-call working.

Recognising a percentage of stand-by time as effective working time would lead to an important change in the legislation of all considered Member States. The impact of 40% of inactive stand-by time being counted as effective working time would clearly have a more significant impact than the recognition of 20% of stand-by time as effective working time.

In relation to setting a limit to the volume of stand-by time a worker can be required to do, the limit of 12 hours a week would require all 10 Member States to introduce stricter provisions. Where limits exist, they authorise the performance of a longer period of stand-by time. The same logic applies to the setting of a 24-hour weekly limit of inactive stand-by time even if the impact would be somewhat less significant than that of a 12-hour weekly limit. Current limits on stand-by time can be considered most restrictive in Sweden and the Netherlands, with limits in Sweden similar to the higher range of those being proposed.

On the possible change of using a derogation to set a different cap through collective agreement but not recognising any percentage of inactive stand-by time as effective working time, it would depend on the cap being set but is likely to imply no change at all or very little change in the 10 Member States.

As collective agreements are currently mainly used to set details on the remuneration of on-call and stand-by time, which is not governed by the Directive, the current status quo as set in collective bargaining has limited impact in this area.

¹⁶⁷ The tables relating to 'alternative baseline scenario' consider the current legal position.

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Table 4.2 Level of changes required in national legislation as a result of potential changes to the WTD with regard to on-call and stand-by regulations (assuming full compliance)

Possible changes to Directive	Impact of possible changes									
	CZ	DE	FR	HU	IT	NL	PL	ES	SE	UK
On-call time										
75% of on-call time to be counted as working time	0	-	0/-	-	-	-	-	0/-	-	-
50% of on-call time to be counted as working time	0	--	0/-	--	--	--	--	0/-	--	--
Stand-by time										
40% of stand-by time not worked to be counted as working time	++	++	++	++	++	++	++	++	++	++
20% of stand-by time not worked to be counted as working time	+	+	+	+	+	+	+	+	+	+
0% of stand-by time not worked to be counted as working time, but 12 hours per week limit on the volume of this form of work	++	++	++	+	++	+	++	++	++	++
0% of stand-by time not worked to be counted as working time, but 24 hours per week limit on the volume of such work	+	+	+	+	+	+	+	+	+	+
0% of stand-by time not worked to be counted as working time, with possibility to use derogation to set a different cap through collective agreement	+	+	+	+	+	+	+	+	+	+

Note: ++ indicates significantly stricter provisions required; + somewhat stricter provisions required; 0 indicates no change needed; - somewhat more flexibility compared to current provisions; -- significantly greater flexibility compared to current provisions.

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Table 4.3 Level of changes required in national legislation as a result of potential changes to the WTD with regard to on-call and stand-by regulations (alternative baseline a: current legal situation)

Possible changes to Directive	Impact of possible changes									
	CZ	DE	FR	HU	IT	NL	PL	ES	SE	UK
On-call time										
75% of on-call time to be counted as working time	0	-	0/-	-	-	-	++	0/-	-	-
50% of on-call time to be counted as working time	0	--	0/-	--	--	--	+	0/-	--	--
Stand-by time										
40% of stand-by time not worked to be counted as working time	++	++	++	++	++	++	++	++	++	++
20% of stand-by time not worked to be counted as working time	+	+	+	+	+	+	+	+	+	+
0% of stand-by time not worked to be counted as working time, but 12 hours per week limit on the volume of this form of work	++	++	++	+	++	+	++	++	++	++
0% of stand-by time not worked to be counted as working time, but 24 hours per week limit on the volume of such work	+	+	+	+	+	+	+	+	+	+
0% of stand-by time not worked to be counted as working time, with possibility to use derogation to set a different cap through collective agreement	+	+	+	+	+	+	+	+	+	+

Note: ++ indicates significantly stricter provisions required; + somewhat stricter provisions required; 0 indicates no change needed; - somewhat more flexibility compared to current provisions; -- significantly greater flexibility compared to current provisions.

Table 4.4 Level of importance of collective agreements in relation to on-call time and stand-by time

Possible changes to Directive	Role of collective agreements									
	CZ	DE	FR	HU	IT	NL	PL	ES	SE	UK
On-call time										
Calculation of on-call time	0	0	0	0	0	0	0	0	0	0
Stand-by time										
Calculation of stand-by time	0	0	0	0	0	0	0	0	0	0
Caps on the maximum volume of 0 stand-by time		+ ¹⁶⁸	+ ¹⁶⁹	++	+ ¹⁷⁰	++	+ ¹⁷¹	+ ¹⁷²	+ ¹⁷³	+ ¹⁷⁴

Note: ++ indicates that collective agreements play a significantly important role + somewhat important role; 0 indicates no role played by the collective agreements.

¹⁶⁸ Caps have not been identified in the collective agreements reviewed for this study. However, such caps are more likely to be found in company-level agreements. This is why the role of collective agreements has been identified as somewhat important.

¹⁶⁹ Idem

¹⁷⁰ Idem

¹⁷¹ Idem

¹⁷² Idem

¹⁷³ Idem

¹⁷⁴ Idem

4.1.4 Affected population

This section discusses the approach to and results of identifying the population expected to be affected by the possible changes regarding:

- Rules in the calculation of on-call-time (change 1A);
- Rules in the calculation of stand-by time (change 1B);
- Cap on stand-by time (change 1C).

With regard to a change in rules in the calculation of on-call time (change 1A), the target population consists of all workers working on-call and their employers. The affected population consists of on-call workers and their employers for whom there would be a change in the calculation of on-call time.

Only one EU-wide representative survey was identified containing an explicit question on the prevalence of on-call work, i.e. the European Working Conditions Survey (EWCS). The most recent wave of the survey was carried out in 2010. It contains question Q37E "Do you work on-call?" 18.5% of EU28 workers (i.e. excluding self-employed individuals) responded positively to the question of on-call work.

However, certain issues have been identified with this source with regard to assessing the true extent of on-call work:

- First, it is not possible to distinguish between on-call work performed at work premises or at another place indicated by the employer, i.e. the on-call work as defined for this study, and remaining contactable at home or another location of the workers' own choosing and being ready to resume work within an agreed timescale (stand-by work as defined in this study).
- Second, it is not possible to know much about the extent of on-call/stand-by work (number of hours per week/month) and its distribution over time (i.e. whether there is a pattern of similar number of hours every week or whether this is occasional, e.g. a few times per year).
- Third, it is possible that the question might have been misunderstood by some respondents who could have responded positively also in the case of e.g. zero-hour type contracts where there is no obligation for workers to take up employment when called.

Therefore, the information from the EWCS was re-interpreted taking into account another survey that covers a narrower population of workers (only those in the UK) but has more nuanced and specific questions on on-call work. Specifically, the study makes use of the 4th Work-Life Balance Employee Survey carried by the UK's Department for Business, Innovation and Skills (BIS, 2012)¹⁷⁵. It is notable that in this survey, there is quite a close match between the share of UK workers indicating that they work on-call in both surveys (13.54% in EWCS and 16.27% in BIS survey)¹⁷⁶.

Other questions in the BIS (2012) survey also contain interesting insights into the characteristics of the on-call working population. Specifically:

- 68% of them spent all of their on-call time at work premises and 32% spent a part of their on-call time at work premises (quarter of the time, on average), while

¹⁷⁵ BIS (2012), The Fourth Work-Life Balance Employee Survey, EMPLOYMENT RELATIONS RESEARCH SERIES 122. www.bis.gov.uk/policies/employment-matters/research

¹⁷⁶ The same is also true for other countries.

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- There was a significant variation in hours spent on-call and hours actually worked during this time: for instance among those who spent all on-call time actually working (48% of the total on-call population) the average on-call and working hours were 18 per calendar month; for those actually working for only part of their on-call time the average monthly on-call time was 50 hours and effective working time was 10 hours.
- 9% of all on-call workers worked on-call on a daily basis and a further 20% worked on-call every week; others worked less frequently (45%) and 27% had no regular pattern;
- Among those working on-call regularly but not daily (65%), 17% worked on-call for more than 100 hours per month and 13% worked on-call between 50 and 100 hours per month; 49% worked on-call less than 20 hours per month.

Assuming that the characteristics of on-call workers in the UK are broadly similar to those in the EU28 we conclude that 99% of those reporting on-call work in the EWCS survey might be classified as on-call workers by applying the definition used in this study (i.e. all workers who stay on-call at work premises for at least some time). Therefore, the remaining 1% of this group has been included in the stand-by population.

We apply this percentage to the most recent estimate of the size of the total population of workers in the EU28 taken from the 2013 Labour Force Survey published by the Eurostat (181 million) which provides a figure of around 33 million individuals having on-call arrangements as part of their work schedule in the EU28. Details are provided in Table 4.5.

This is likely to be an upper bound estimate given certain points raised above.

Table 4.5 Estimates of affected population for possible change 1A “rules in the calculation of on-call time” (thousands of workers and % of all workers)

	SMEs (<=250)		Large companies (>250)		Total	
	Thousand	% of all workers	Thousand	% of all workers	Thousand	% of all workers
AT	456	15%	143	22%	598	17%
BE	566	18%	174	24%	740	19%
BG	434	18%	57	28%	491	19%
CY	78	27%	4	40%	82	27%
CZ	1,084	30%	99	23%	1,184	29%
DE	5,036	16%	890	19%	5,925	17%
DK	432	20%	52	16%	485	20%
EE	119	23%	5	15%	124	22%
EL	917	45%	76	44%	993	45%
ES	985	8%	218	25%	1,203	9%
FI	199	11%	6	2%	205	10%
FR	4,628	24%	1,288	34%	5,916	26%
HR	454	40%	41	36%	495	40%
HU	327	11%	90	16%	417	12%
IE	210	17%	57	18%	267	17%

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IT	1,472	10%	158	7%	1,629	10%
LT	121	11%	14	26%	135	12%
LU	41	25%	17	33%	58	27%
LV	161	22%	9	20%	170	22%
MT	22	17%	6	30%	28	18%
NL	747	13%	75	7%	822	12%
PL	2,598	26%	385	20%	2,983	25%
PT	784	25%	49	18%	834	24%
RO	2,492	48%	448	43%	2,941	47%
SE	385	11%	74	11%	459	11%
SI	92	15%	23	19%	115	15%
SK	382	21%	46	28%	428	22%
UK	2,616	13%	710	13%	3,326	13%
EU28	27,840	18.0%	5,214	19.6%	33,054	18.3%

Source: Own elaboration

Regarding possible changes in provisions regarding the calculation of stand-by time (change 1B), the target population consists of all workers working stand-by and their employers. The affected population consists of stand-by workers and their employers for whom there would be a change in the calculation of stand-by time.

As indicated above, the EWCS survey does not make it possible to distinguish between remaining on-call (at work premises or other designated place) and on being on stand-by (at home or other place of workers' own choice). Hence, analogous to the calculation of the affected population for change 1A, a correction factor is applied based on the BIS survey to the share of on-call workers provided by the EWCS survey. The BIS survey indicates that:

- 68% of on-call workers spend all of their on-call time at work premises and 32% spent a part of their on-call time at work premises (quarter of the time, on average);
- Less than 1% spent all of their on-call time at home

Again, assuming that the characteristics of on-call workers population in the UK are broadly similar to that in the EU28 we conclude that 33% of those reporting on-call work in the EWCS survey might be classified as stand-by workers by applying the definition used in this study (i.e. all workers who stay on stand-by at home for at least some time). This in turn indicates that 6.1% of all workers have stand-by included in their work schedules, which gives an estimate of around 11.02 million workers across the EU. Details are provided in Table 4.6.

These figures are likely to be an upper bound estimate.

Table 4.6 Estimates of affected population for possible change 1B "rules in the calculation of stand-by time" (thousands of workers and% of all workers)

SMEs (<=250)		Large companies (>250)		Total	
Thousand	% of all worker	Thousand	% of all worker	Thousand	% of all worker

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		S		S		S
AT	152	5%	48	8%	199	6%
BE	189	6%	58	8%	247	6%
BG	145	6%	19	9%	164	6%
CY	26	9%	1	13%	27	9%
CZ	361	10%	33	8%	395	10%
DE	1,679	5%	297	6%	1,975	6%
DK	144	7%	17	5%	162	7%
EE	40	8%	2	5%	41	7%
EL	306	15%	25	15%	331	15%
ES	328	3%	73	8%	401	3%
FI	66	4%	2	1%	68	3%
FR	1,543	8%	429	11%	1,972	9%
HR	151	13%	14	12%	165	13%
HU	109	4%	30	5%	139	4%
IE	70	6%	19	6%	89	6%
IT	491	3%	53	2%	543	3%
LT	40	4%	5	9%	45	4%
LU	14	8%	6	11%	19	9%
LV	54	7%	3	7%	57	7%
MT	7	6%	2	10%	9	6%
NL	249	4%	25	2%	274	4%
PL	866	9%	128	7%	994	8%
PT	261	8%	16	6%	278	8%
RO	831	16%	149	14%	980	16%
SE	128	4%	25	4%	153	4%
SI	31	5%	8	6%	38	5%
SK	127	7%	15	9%	143	7%
UK	872	4%	237	4%	1,109	4%
EU28	9,280	6.0%	1,738	6.5%	11,018	6.1%

Source: Own elaboration

With regard to a possible change introducing a cap on stand-by time (change 1C), the target population is represented by workers working on stand-by and their employers in EU countries/sectors that currently do not have weekly caps (or have higher caps than considered under this scenario). The affected population corresponds to the target population in this case.

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The starting point is the estimate of the total stand-by population according to the procedure explained above (change 1B). Again for this scenario estimates provided by the EWCS are enhanced by applying a correction factor based on the BIS survey. Workers working on-call were asked to give the frequency of their on-call working in the BIS survey. Results show that:

- 9% of these workers were on-call on a daily basis;
- a further 20% on-call at least once a week;
- 18% work on-call not every week but more than once a week;
- 54% of workers who were obliged to be on-call did so once a month or at less frequent intervals (10% were on-call monthly, 17% regularly but less than monthly and 27% irregularly)

Hence, 65% of workers work on-call regularly but not daily according to the BIS survey. In addition, 49% of all workers who worked on-call regularly but not daily work up to 20 hours per month can safely be excluded from the share of affected population for the purpose of change 1C. This means that 31.85% of workers should be excluded from the whole population of stand-by workers (estimated for change 1B). Hence, the affected population for change 1C corresponds to 68.15% of stand-by workers estimated for change 1B, which translates to 4.1% of all workers in the EU28 (around 7.5 million individuals). Details are provided in Table 4.7.

Table 4.7 Estimates of affected population for possible change 1C “cap on stand-by time” (thousands of workers and% of all workers)

	SMEs (<=250)		Large companies (>250)		Total	
	Thousand	% of all workers	Thousand	% of all workers	Thousand	% of all workers
AT	104	4%	32	5%	136	4%
BE	129	4%	39	5%	168	4%
BG	99	4%	13	6%	112	4%
CY	18	6%	1	9%	19	6%
CZ	246	7%	23	5%	269	7%
DE	1,144	4%	202	4%	1,346	4%
DK	98	5%	12	4%	110	5%
EE	27	5%	1	3%	28	5%
EL	208	10%	17	10%	226	10%
ES	224	2%	49	6%	273	2%
FI	45	3%	1	1%	47	2%
FR	1,051	6%	293	8%	1,344	6%
HR	103	9%	9	8%	112	9%
HU	74	3%	20	4%	95	3%
IE	48	4%	13	4%	61	4%
IT	334	2%	36	2%	370	2%
LT	28	3%	3	6%	31	3%
LU	9	6%	4	8%	13	6%

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LV	37	5%	2	5%	39	5%
MT	5	4%	1	7%	6	4%
NL	170	3%	17	2%	187	3%
PL	590	6%	87	5%	678	6%
PT	178	6%	11	4%	189	6%
RO	566	11%	102	10%	668	11%
SE	87	3%	17	3%	104	3%
SI	21	3%	5	4%	26	4%
SK	87	5%	10	6%	97	5%
UK	594	3%	161	3%	756	3%
EU28	6,324	4.1%	1,184	4.4%	7,509	4.1%

Source: Own elaboration

4.1.5 Assessment of Administrative Burdens

For the group of possible changes “on-call”, “stand-by calculation” and “stand-by cap” the highest AB in absolute terms relates to the change regarding the “stand-by calculation” change followed by “stand-by cap”, while the change “on-call” would not entail any AB.

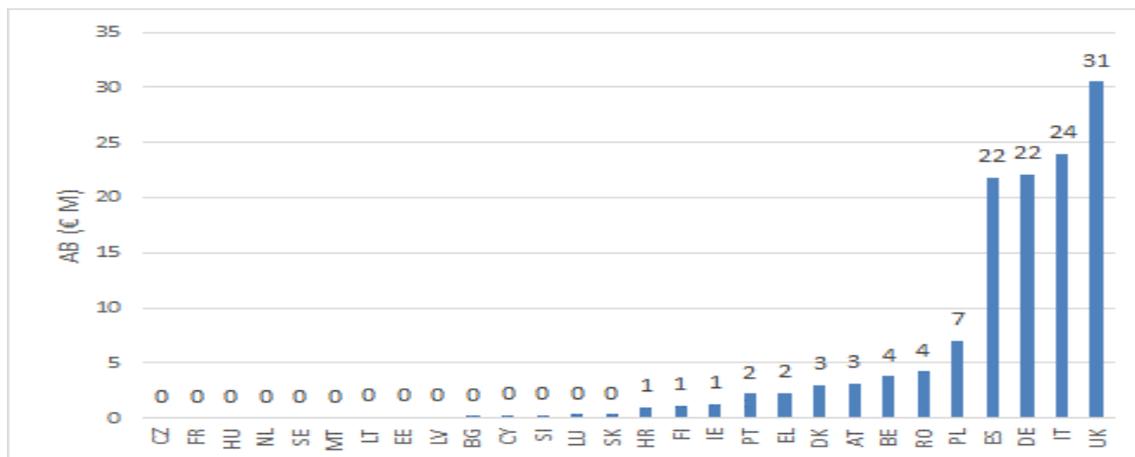
The AB is assessed as zero for the “on-call” change. This is because on-call time already has to be counted as working time; hence some system of recording on-call time is needed in all countries justifying the assumption of the BAU at 100%.

The estimates for the possible change regarding the calculation of stand-by time show that the AB for the EU is assessed at around €129 million; SMEs will bear approximately €120 million of this. The UK, Italy, Germany and Spain account for 76% of these AB. This is related to the larger number of workers estimated as stand-by workers and the above average cost of labour.

The estimates for the “stand-by calculation” show that at EU level the share of AB of AC would amount to around 28% (Figure 4.1). This means that this policy change would imply 28% additional costs compared to the assessed baseline. Poland, Spain, Italy and to a lesser extent the UK have the highest share of AB over total AC.

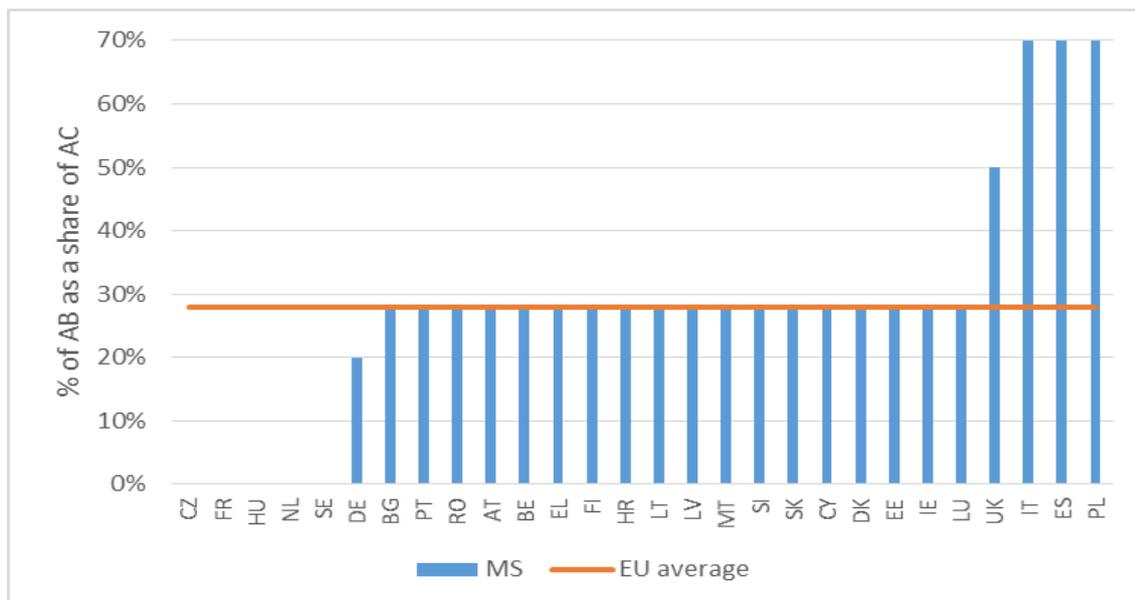
It is interesting to note that although Germany will bear a share over 22% of the overall EU AB, the relative share of the added AB compared to its baseline is amongst the lowest i.e. 20%.

Figure 4.1 Estimates administrative burdens for maintaining the records of stand-by time (AA1.1) according to possible change 1B “rules in the calculation of stand-by time”



Source: Own elaboration.

Figure 4.2 Share of administrative burdens as a share of administrative costs for maintaining the records of stand-by time (AA1.1) according to possible change 1B “rules in the calculation of stand-by time”



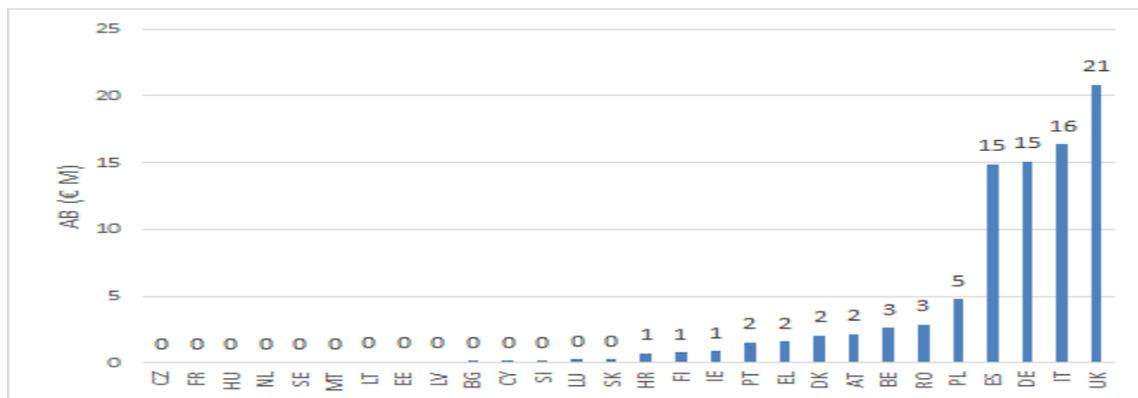
Source: Own elaboration

The estimates for the possible change “cap on stand-by time” show that the total AB amounts to €88 million, €83 of this will be borne by SMEs. UK, Italy, Germany and Spain account for 76% of the total AB (Figure 4.3).

At EU level the total AB amounts to approximately the 28% of the total AC, in line with the policy change linked to the calculation of stand-by time. Poland, Spain, Italy and, to a lesser extent the UK, show the highest share of AB of total AC. This means that this possible change would add relatively significant administrative burdens to these countries.

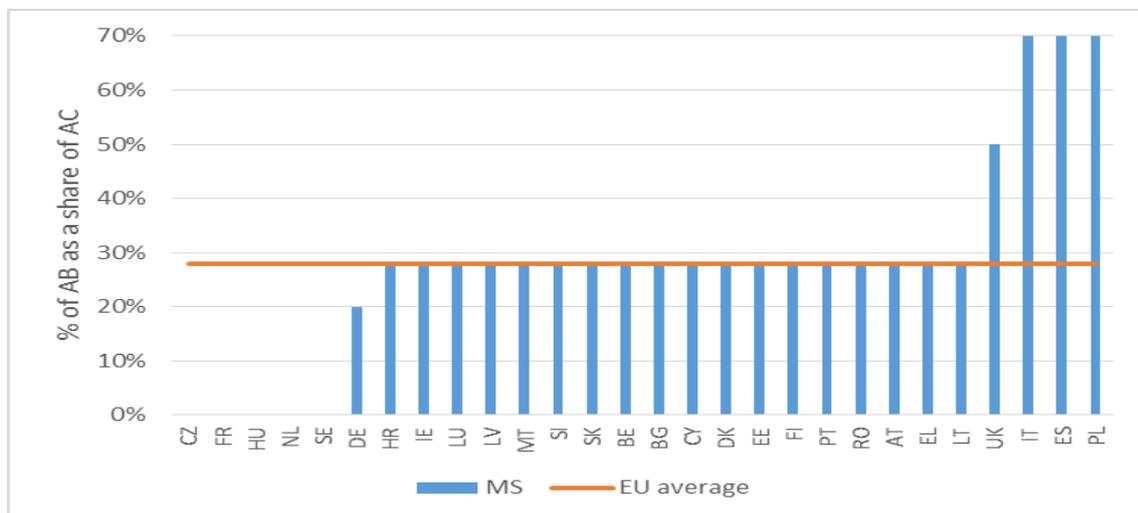
Although Germany will bear a share of over 15% of the overall EU AB, the relative share of the added AB of the total AC is amongst the lowest at 20%.

Figure 4.3 Estimates of administrative burdens for maintaining the records of stand-by time for all workers with certain share counted towards weekly working time limit (AA1.1) according to possible change 1C “cap on stand-by time”



Source: Own elaboration.

Figure 4.4 Estimates of administrative burdens as a share of administrative costs for maintaining the records of stand-by time for all workers with certain share counted towards weekly working time limit (AA1.1) according to possible change 1C “cap on stand-by time”



Source: Own elaboration

4.1.6 Socio-economic impact

On-call time and stand-by time are conceptually quite related. Both are supposed to provide the availability of the worker for tasks within a short period of time. From the qualitative interviews it is clear that there are several occupations and sectors for which such ‘availability’ is crucial to work processes. As indicated above, on-call and stand-by time differ in the freedom they give to the worker to use their time, both in terms of location and usage.

There are several issues that are important to answer in this context:

- How important is the availability of the worker to the processes of the firm (are there alternatives)?
- How are the hours of ‘waiting’ and ‘working’ during the on-call period interfering with the usual scheduling of workers in the firm (taking into account the legal limits)?
- Or put differently, how likely is this flexibility to push the worker beyond legal limits? What are the costs / possibilities to resolve this?

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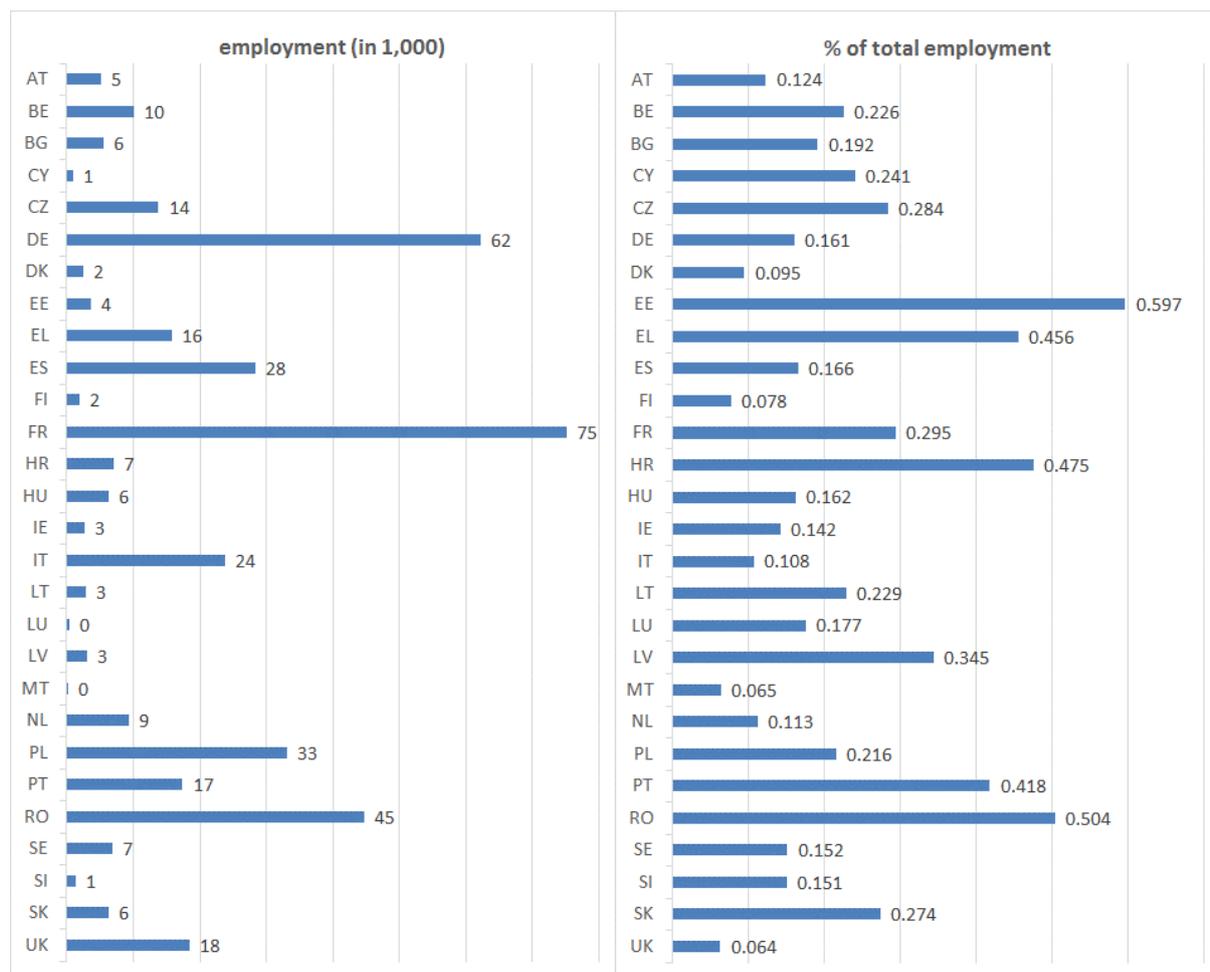
Albeit not governed by EU legislation and the WTD in particular, and therefore not relevant as such for the present impact assessment, from a practical perspective at company level it is also relevant to mention questions associated with remuneration for such periods of 'availability':

- What is the (wage) price for this availability paid by the firm?
- Potentially, what is the price of calling upon this worker?

In the assessment of socio-economic impact only certain fixed costs relating to the recruitment of new staff are taken into account, any negotiations about a differing remuneration for time on-call or on stand-by beyond the implications of the WTD are not considered.

The simulation outcomes are the result of a set of assumptions and estimates as they are described above. Combining the estimates of labour demand elasticities with the population that is likely to be affected and the assumed implications of a per-unit cost savings (in the case of relaxing existing rules regarding the amount of on-call time to be counted as effective working time) or cost increases (in the case of the more of stand-by time being counted as working time) yield an overall employment effect that is depicted in Figures 4.5– 4.7.

Figure 4.5 Employment impacts for possible change 1A "rules in the calculation of on-call time", by Member State



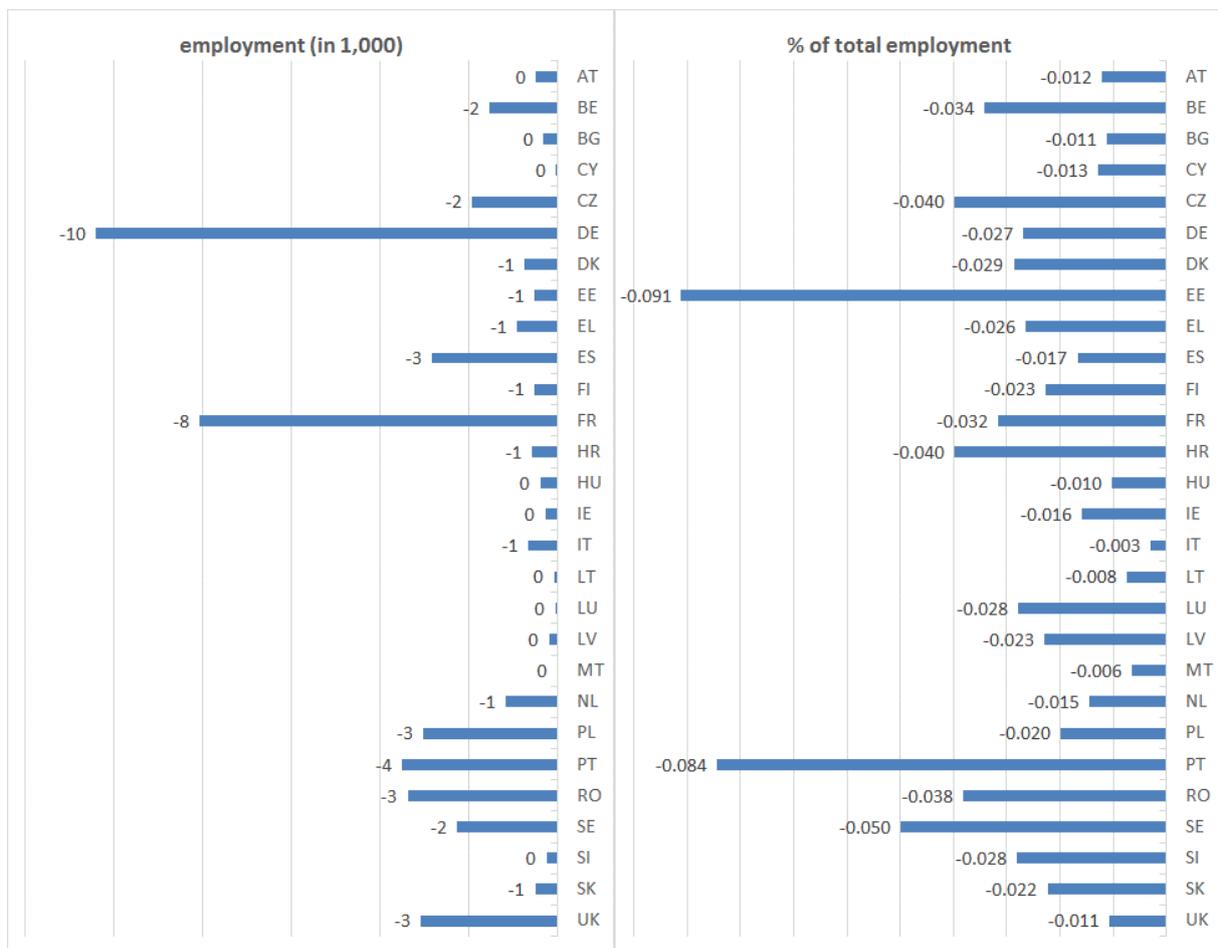
Source: own calculations. Note: The first panel shows employment impacts in thousands, while the second panel shows the employment impacts as a share of the total employment by country.

The impact of the first policy change in which only a share of the 'on-call' time is counted as working time is – in the context of other options considered in this study – quite significant. Overall the simulation predicts the highest employment increase compared to other policy changes and given our assumptions on cost savings (-20%) and the estimates of elasticities and affected population. Stronger employment impacts as a share of the total employment can be found in countries that have large shares of 'on-call' workers, such as Estonia, Romania, Croatia, Greece and Portugal. Whilst the largest employment effects in thousands arise in the larger economies, e.g. Germany, France and Poland in addition to the aforementioned Romania.

It is important to be careful in interpreting these results as actual employment creation effects. These hinge on the assumption of the estimated elasticity for a given production relationship, and that more of the factor labour would be used if it became cheaper. It is important to distinguish here between direct micro-level effects. For example the greater flexibility in the calculation of on-call time would actually allow a given firm to work with fewer workers (on-call). Hence, one could expect lower labour demand. However, in essence this translates into lower per unit labour costs, which would then allow enterprises to use the factor labour more cheaply. This could lead, on the macro level, to more firms hiring workers. However, in sectors where labour elasticity is low or where other economic or organisational factors make it less likely that recruitment will occur, such additional jobs are less likely to materialise in practice. This is likely to be true for some of the key sectors drawing on on-call workers, such as the health care sector, therefore making it more likely that the same work will be performed by the same number of workers and limit any positive employment effects.

The change which would apply a change in the amount of stand-by time which is counted as working time is likely to have a negative effect on employment.

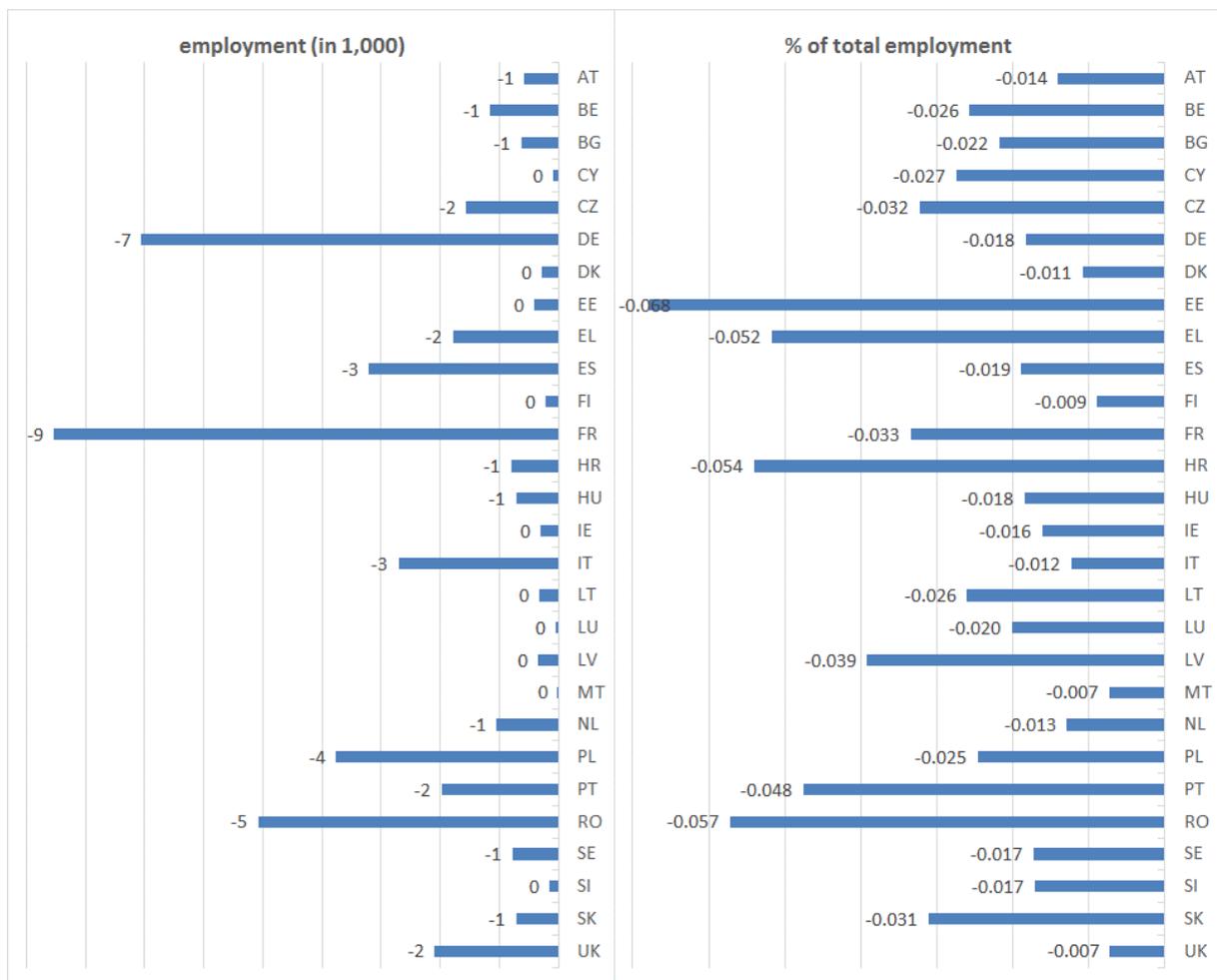
Figure 4.6 Employment change for possible change 1B “rules in the calculation of stand-by time”, by Member State



Source: own calculations. Note: The first panel shows employment impacts in thousands, while the second panel shows the employment impacts as a share of the total employment by country.

The same is true for the option which envisages placing a cap on stand-by time. Both possible changes would make current provisions at EU level, as well as in most countries, more restrictive, i.e. potentially impose a higher per unit labour cost. The resulting negative impact on employment is, however, more modest than the potentially positive impact of the change linked to on-call time. In each case jobs could be lost as a result of the implied increased labour costs (e.g. need to recruit additional staff). The reasons for the more modest impact are to be found in the smaller affected populations. Again, as with the possible change linked to on-call time (and other subsequent changes), it is important to distinguish here between direct micro-level effects of many scenarios. For example, in workplaces where stand-by is hard to replace, the introduction of requirements to count additional stand-by time as working time would potentially require employers to recruit additional workers as the working hours which can be worked by existing workers become more restricted. Hence, one could expect higher labour demand. In essence this translates into higher per unit labour costs, which would then make the factor labour more expensive. This could lead to more firms shedding labour where stand-by is replaceable, and ultimately also on the macro-level. However, impacts in practice depend on the complex set of factors, making actual employment effects difficult to predict

Figure 4.7 Employment change for possible change 1C “cap on stand-by time”, by Member State



Source: own calculations. Note: The first panel shows employment impacts in thousands, while the second panel shows the employment impacts as a share of the total employment by country.

Overall, if these possible changes were implemented at the same time (or at least one stand-by change), the overall effects of the somewhat more restrictive provision in one area (stand-by) and more flexible provision in another (on-call) could be a moderate increase in employment opportunities based on this model. This does not take account of any possible linked changes to opt-out provisions or the provisos set out above, which may change this balance.

4.2 Possible change in the rules allowing compensatory rest following a missed period of minimum daily rest and weekly rest

Summary of findings on possible changes 2 and 3

The possible changes proposed

Two possible changes discussed in this sub-section relate to the timeframe for taking compensatory rest (following minimum missed daily rest) and the reference period for taking minimum weekly rest. In relation to the first, the proposed change provides the opportunity for greater flexibility for employers

compared to the current legal acquis which requires compensatory rest to be taken immediately. Under the proposed change, a longer reference period for taking such compensatory rest would be introduced. With regard to the second issue, current provisions allow for a two week reference period to take minimum weekly rest (with some opportunities for derogations). The proposed change would see this increase to 3 or 4 weeks for all workers.

Both changes would therefore provide the opportunity for greater flexibility for employers, should Member States decide to implement them.

Changes required to the baseline situation

Only two countries currently make reference in their legislation as to when compensatory rest must be taken (ES, UK) and in both countries this is more flexible than required by the SIMAP and Jaeger judgements. Full compliance with the judgements therefore has to be assumed for the purpose of the assessments in this study.

In all countries providing the possibility to take compensatory rest within a reasonable time, but not exceeding 48 hours, or the possibility of taking the compensatory rest within 96 hours, could lead to more flexibility for employers.

Most of the countries examined currently use a two week reference period for weekly rest (CZ, DE, FR, PL and SE set a shorter reference period). An extension of this reference period to three weeks in law for all workers could provide greater flexibility in all 10 countries, with a somewhat greater impact in CZ, DE, FR, PL and SE.

Administrative burden

Estimates of administrative burdens arising from these two possible changes show that possible change 3 (extension of reference period for weekly rest) would not lead to any additional administrative burden, whereas possible change 2 regarding compensatory rest would bring an associated AB of €1.7 million across the EU, €1.4 million of which would have to be borne by SMEs.

Socio-economic impact

The simulation results estimate a positive employment effect of revisions to compensatory rest rules resulting from reductions in the cost factor labour. Again, it must be borne in mind that at the micro level, the proposed changes could lead to a reduced demand for labour as individual workers can be asked to work longer. Similar to the positive effects simulated for the on-call scenario, changes to compensatory rest rules are most likely to affect certain sectors where on-call time is prevalent, thus likely limiting the positive employment impact. The possible change with regard to the reference period for weekly rest has a more moderate effect but still with a job creation potential. Possible linked scenarios with the opt-out provisions are not taken into account here. More significant differential impacts by size of company can be found for possible change 2 than for possible change 3.

As both changes tend towards greater flexibility if implemented, they could lead to individuals being required to work longer which could have a detrimental health and safety as well as productivity impact.

4.2.1 The current position and proposed changes being assessed

Under the current *acquis* established by the Directive and subsequent case law¹⁷⁷, compensatory rest for missed daily rest has to be consecutive and taken immediately after a period spent on-call and when an 11 hour rest period cannot be achieved in a 24 hour period. With regard to weekly rest periods, the WTD (Art.5) stipulates that every worker is entitled to a minimum uninterrupted rest period of 24 hours plus the 11 hours' daily rest provided by Article 3 of the WTD. In addition to this, Article 16 currently allows Member States to lay down a reference period not exceeding 14 days for the application of Article 5. Furthermore, Member States can choose to derogate from these provisions (under Art 17) for a range of working situations (including sectors where continuity of service needs to be guaranteed or there are seasonal surges in requirements).

In order to gauge the impact of possible changes to provisions on daily rest periods the likely impact of two options is being assessed: the possibility of taking compensatory rest within a reasonable time, but not exceeding 48 hours measured against the possibility of taking the compensatory rest within 96 hours. With regard to weekly rest periods, it will be important to establish the impact of current provisions, particularly in relation to the use of the 2 week reference period and the derogations utilised in different Member States which could further increase reference periods (to three weeks). No evidence of the impact of a 3 week reference period was found, as this is not extensively used.

4.2.2 Comparative overview of Member States provisions

- Delay within which minimum compensatory rest must be taken

The majority of the 10 countries studied do not provide for a period of time within which compensatory rest must be taken. However, following the CJEU case law, it is assumed that in these countries compensatory rest must be taken immediately after a missed period of minimum daily rest. The UK and Spain are the only two Member States out of the 10 which make a reference to a period of time within which compensatory rest needs to be taken. This reference remains nonetheless very broad in UK law as the law states that the equivalent period of compensatory rest must be taken 'wherever possible'. Spain is the only Member State out of the 10 in-depth countries that provides a clear reference to the delay within which compensatory rest must be taken. According to Spanish law, missed minimum daily rest must be compensated with alternative rest periods within a four-week period. In the baseline for impact assessment, a situation of full compliance with CJEU case is therefore assumed, whereas 'alternative baseline' assessments can take into account the lack of - or broad - regulation of timescales within which minimum compensatory rest should be taken.

Provisions in collective agreements regarding the timeframe within which compensatory rest must be taken could only be found in 3 out of the 10 in-depth countries. These relate to a possible derogation from the 11-hours minimum rest period. In France, in case of shift work, the national collective agreement in the chemical sector¹⁷⁸ states that minimum daily rest can be reduced to 9 hours and workers will benefit from a period of rest equivalent to the one they could not take. The reference period to take this rest is one month. A different timescale is mentioned concerning night work in the chemical sector where the period of missed minimum rest must be taken closer to the period worked to enable effective rest. In Italy, in the national collective agreement for the electricity sector, workers who cannot take their 11-hour rest period must take their compensatory rest, if possible, by postponing the start of the following work period and in any case not later than in the following working week. In the national collective agreement for the metalworking sector, workers who have to remain at work for eight

¹⁷⁷ Jaeger Case C151/02 paragraph 95 and 97

¹⁷⁸ Convention collective nationale des industries chimiques et connexes du 30 décembre 1952

more hours after the end of their shift because of exceptional circumstances, can take (unpaid) compensatory rest the following day. If they have to prolong their shift by four hours, the (unpaid) compensatory rest may be taken within the following month. It should be noted that, according to the collective agreement, workers are not obliged to take such compensatory rest. Finally, in the Netherlands, the collective agreement in the hotels and restaurants sector states that after a shortened rest period, the next rest period must be of at least of 11 hours, prolonged by the number of hours that the worker has missed out of the 11 hours in the last rest period.

- Reference period for taking of minimum weekly rest to three weeks for all workers

Most Member States in the in-depth sample already provide the possibility to use a two-week reference period to calculate weekly rest. Some countries restrict it to specific cases (e.g. CZ, HU). Other Member States apply this as a general rule, e.g. Italy and Spain. In these two countries, weekly rest is calculated over a reference period not exceeding 14 days. The UK and the Netherlands provide the possibility for the employer to choose between two options. Indeed, workers can be entitled to either two uninterrupted rest periods each of at least 24 hours in each 14-day period or one uninterrupted rest period of at least 48 hours in each such 14-day period. Finally, Germany, France, Poland and Sweden calculate weekly rest over one week and do not mention a longer reference period.

Spain, Italy and France were the only countries in the study in which some collective agreements in the sectors assessed contained information on reference periods to calculate weekly rest. However, in these cases, the reference periods were identical to those set in national legislation: two weeks for Spain and Italy and one week in France.

Table 4.8 Current regulation of on missed minimum daily rest and reference period for taking weekly rest

Country	Minimum daily rest	Possibility of interrupting/reducing minimum daily rest	Time during which missed rest periods must be taken (after a period of on-call/stand-by time)	Reference period for the weekly rest
CZ	11 hours every 24 hours ¹⁷⁹	Minimum daily rest can be reduced to 8 hours within 24 consecutive hours in specific cases such as work in continuous operations, in agriculture, in public catering etc.	If the minimum daily rest is reduced to 8 hours, the worker's subsequent rest period must be extended by the time for which their preceding rest period was reduced. No delay mentioned in the law concerning missed minimum daily rest after a period of on-call/stand-by time.	The minimum weekly rest period in Czech labour law is of a minimum 35 hours during the week (seven-day period). In specific cases, the period of uninterrupted rest can be reduced to 24 hours provided that these workers are granted an uninterrupted rest period of at least 70 hours within two weeks ¹⁸⁰ .
DE	11 hours (uninterrupted) per day ¹⁸¹	11 hour uninterrupted daily rest. The ArbZG does not mention that the 11 hours have to be calculated in a 24 hour timeframe.	Missed minimum rest periods have to be taken immediately (e.g. after on-call) unless there is a derogation in collective agreement.	No specific reference in ArbZG, but general prohibition (with exceptions) of Sunday working.
FR	11 consecutive hours in 24 hour ¹⁸² .	Derogations from the minimum daily rest of 11 hours are possible if inserted in collective agreements ¹⁸³ . This only concerns cases such as activities involving the need for continuity of service or production, activity of watch	All derogations to the 11-hour daily rest mentioned in the left column must be subject to the allocation of periods of rest at least equivalent to the workers concerned. There is no delay mentioned in the law concerning the timing during which this equivalent rest must be taken. If it is not	The weekly rest period has a minimum of 24 consecutive hours plus the consecutive hours of daily rest in a seven-day period. The law forbids a worker to work more than six days per week ¹⁸⁶ .

¹⁷⁹ Section 90(2) of the Czech Labour Code

¹⁸⁰ Section 92 of the Czech Labour Code

¹⁸¹ ArbZG

¹⁸² Article L3131-1 of the French Labour Code

¹⁸³ Article D3131-1 of the French Labour Code

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Country	Minimum daily rest	Possibility of interrupting/reducing minimum daily rest	Time during which missed rest periods must be taken (after a period of on-call/stand-by time)	Reference period for the weekly rest
		surveillance, activities involving periods of work split up over the day etc.... Derogations by collective agreement are also possible if there is an increase in activity ¹⁸⁴ . However, collective agreements cannot provide for a period of minimum daily rest less than 9 hours per day.	possible to grant this rest to workers, an equivalent counterpart will have to be provided by collective agreement ¹⁸⁵ . No delay mentioned in the law concerning missed minimum daily rest after a period of on-call/stand-by time.	
HU	11 hours of uninterrupted rest after the end of daily work and before the beginning of the next day's work ¹⁸⁷ .	Eight hours of daily rest must be granted to workers working in split shifts; continuous shifts; multiple shifts; seasonal jobs and in in stand-by jobs.	After an inactive stand-by period the worker shall not be entitled to any rest period ¹⁸⁸ . No delay mentioned in the law concerning missed minimum daily rest after a period of on-call/stand-by time.	Workers must be granted at least 48 hours of uninterrupted weekly rest every week ¹⁸⁹ . In the case of an irregular work schedule, in lieu of the 48-hour weekly rest period workers may be allocated the uninterrupted weekly rest period comprising at least 40 hours in a week and covering one calendar day. Workers must be provided at least 48 hours of weekly rest as an average in the reference period.
IT	11 hours of daily rest per 24 hour	Daily rest must be uninterrupted except in the	Following the jurisprudence of the CJEU, it is assumed that compensatory rest periods	The worker is entitled to a rest period of at least 24 consecutive hours every seven

¹⁸⁶ Article L3132-3 of the Labour Code

¹⁸⁴ Article D3131-2 of the Labour Code

¹⁸⁵ Article D3131-6 of the Labour Code

¹⁸⁷ Section 104 of the Hungarian Labour Code

¹⁸⁸ Section 104(3) of the Hungarian Labour Code

¹⁸⁹ Section 106 of the Hungarian Labour Code

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Country	Minimum daily rest	Possibility of interrupting/reducing minimum daily rest	Time during which missed rest periods must be taken (after a period of on-call/stand-by time)	Reference period for the weekly rest
	period ¹⁹⁰	case of work provided in separate periods during the working day or in case of stand-by work.	should be enjoyed following the reduction in the minimum rest period and before the start of the next work period.	days, usually on Sundays, which must be cumulated with the daily rest period. Such rest period are calculated as the average over a reference period not exceeding 14 days.
NL	11 hours uninterrupted rest in any consecutive 24h period ¹⁹¹	In a 7 day/24h period rest can be shorted to 8 hours once should work organisation or type of work make it necessary.	No delay mentioned in the law concerning missed minimum daily rest after a period of on-call/stand-by time.	Regarding the weekly rest periods the employer has the choice of two patterns: either 36 hours in every 7 day/24 hour period; or 72 hours in every 14 day/ 24 hour period – the rest period may be divided into two periods of 32 hours rest each ¹⁹² .
PL	11 hours of consecutive rest per day ¹⁹³	There are exceptions from the 11 hours daily rest rule. Daily rest can be shortened if there was a reasonable cause. In addition, the minimum 11-hour rest rule does not apply to the managers and the situations of: rescue actions, security and safety work actions, protection of property and rectification of defects.	If minimum daily rest cannot be taken, it must be compensated immediately the next working day and extended to the working hours that worker actually worked that day. For example, if worker worked 16 hours, he should be resting for 16 hours.	The minimum weekly rest must be 35 hours per week. There is a possibility to derogate from the 35-hour weekly rest. In the special situation, like life saving actions, change of shifts, protection of property, the 35-hour weekly period can be shortened to 24 hours. However, there is no mention on whether the employer has an obligation to compensate worker for their shortened weekly period.

¹⁹⁰ Decree 66/2003

¹⁹¹ Art. 5:3.2 of the ATW

¹⁹² Article 5:5.2 of the ATW

¹⁹³ Polish Labour Code

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Country	Minimum daily rest	Possibility of interrupting/reducing minimum daily rest	Time during which missed rest periods must be taken (after a period of on-call/stand-by time)	Reference period for the weekly rest
ES	12 hours after a day of work ¹⁹⁴	Special rules ¹⁹⁵ exist for certain sectors. In the transport, work at sea, mining, agriculture, construction etc... sectors workers may be subject to lower rest period. Most of the time this is reduced to ten hours, this can also be reduced to nine ¹⁹⁶ , eight ¹⁹⁷ or even six ¹⁹⁸ hours providing that they have been approved in a specific collective agreement ¹⁹⁹ .	Missed minimum daily rest must be compensated with alternative rest periods within a four-week period.	Workers have a weekly rest of a day and a half but this minimum can be accumulated for periods of two weeks ²⁰⁰ .
SE	11 consecutive hours in any 24-hour period ²⁰¹	Derogations to minimum daily rest may be made on a temporary basis if this is caused by a special circumstance that the employer could not have foreseen ²⁰² .	In case of missed minimum daily rest, the worker must be given a corresponding compensatory rest period ²⁰³ . However, there is no mention on time during which this must be taken.	Workers are entitled to a minimum uninterrupted rest period of 36 hours per every seven day period ²⁰⁴ . Notably, the weekly rest period does not include on-call time or stand-by time. Derogations may be made on a temporary basis if this is caused

¹⁹⁴ Art.34 of the Statute of Workers

¹⁹⁵ RD 1561/1995

¹⁹⁶ Transport activities (art.11.4) and in special conditions (during three days and should always be compensated during the subsequent week).

¹⁹⁷ Merchant navy (art.17.1).

¹⁹⁸ Fishing activities (art.17.1).

¹⁹⁹ According to the experts consulted, the minimum rest periods are not always fulfilled in sectors not covered by the RD 1561/1995, especially in security services.

²⁰⁰ Article 37 of the SW

²⁰¹ Section 13 of the Working Hours Act

²⁰² Working Hours Act, Section 13

²⁰³ Working Hours Act, Section 13

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Country	Minimum daily rest	Possibility of interrupting/reducing minimum daily rest	Time during which missed rest periods must be taken (after a period of on-call/stand-by time)	Reference period for the weekly rest
	The general principle is that minimum daily rest must include the hours between midnight and 5:00.	Derogations from the principle of taking the minimum daily rest between midnight and 5:00 am exist in activities performed for the needs of the general public or other special circumstances (see examples in the SE summary below).		by a special circumstance that the employer could not have foreseen. A derogation of this kind may only be made provided that the worker is granted a corresponding compensatory rest period. The Working Hours Act also stipulates that the weekly rest must, as far as possible, be scheduled for weekends.
UK	11 consecutive hours in each 24-hour period ²⁰⁵	<p>If the employer so determines, derogations can be made and workers can be entitled to either:</p> <ul style="list-style-type: none"> - two uninterrupted rest periods each of at least 24 hours in each 14-day period; or, - one uninterrupted rest period of at least 48 hours in each such 14-day period, instead of the two uninterrupted 24-hour rest period over 14 days²⁰⁶. <p>Collective agreements or a workforce agreement may</p>	Compensatory rest is regulated by national legislation. The Working Time Regulations provide that when a worker is required by their employer to work during a period which would otherwise be a rest period or rest break, the employer must allow the worker to take an equivalent period of compensatory rest wherever possible ²⁰⁷ .	<p>Workers entitled to an uninterrupted rest period of not less than 24 hours in each seven-day period.</p> <p>If the employer so determines, derogations can be made and workers can be entitled to either:</p> <ul style="list-style-type: none"> - two uninterrupted rest periods each of not least 24 hours in each 14-day period; or, - one uninterrupted rest period of at least 48 hours in each such 14-day period, instead of the two uninterrupted 24-hour rest period over 14 days²⁰⁸.

²⁰⁴ Section 14 of the Working Hours Act

²⁰⁵ Working Time Regulations, Article 10 (1)

²⁰⁶ Working Time Regulations, Article 11 (2)

²⁰⁷ Section 24 of the Working Time Regulations

²⁰⁸ Working Time Regulations, Article 11 (2)

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Country	Minimum daily rest	Possibility of interrupting/reducing minimum daily rest	Time during which missed rest periods must be taken (after a period of on-call/stand-by time)	Reference period for the weekly rest
		modify or exclude the application of regulations of a minimum 11 consecutive hours rest period in each 24-hour in relation to particular workers or groups of workers.		

4.2.3 Level of changes for Member States' legislation to comply with the possible changes

- Delay within which minimum compensatory rest must be taken

The impact of possible changes in relation to the timeframe within which compensatory rest must be taken depends on the extent to which the CJEU ruling is implemented even if no changes to legislation have been made. Under an assumption of full compliance with the legal acquis, possible changes providing that compensatory rest must be taken within 48 or 96 hours could result in introducing more flexibility if this were transposed. Where no legislation stipulating such limits currently exists and compliance is not assumed, the assessment of potential impact of the changes could differ somewhat (see 0 below),

- Reference period for taking of weekly rest to three weeks for all workers

None of the 10 in-depth countries have a reference period equal or superior to the possible change of three weeks. The longest reference period for taking of weekly rest applicable in some of the 10 study countries is two weeks. As a result, all Member States considered could amend their legislation to introduce this new possible change. If transposed, this would result in introducing more flexibility. It is clear that the impact could be greater in Germany, France, Poland and Sweden which calculate weekly rest over one week at present. The Czech Republic and Hungary would also be impacted quite significantly but this depends on the extent of the current use of the derogation allowing the use a two-week reference period. If this derogation is used widely, the impact of a change would be less significant. This also applies to the UK and the Netherlands as the possibility to introduce a two-week reference period is currently up to the employer. Finally, the impact will be less important in Italy and Spain as these Member States provide a two-week reference period as a general rule in their legislation. The possible change of calculating weekly rest over a three-week reference period could nonetheless introduce more flexibility.

Table 4.9 Level of changes required in national legislation as a result of potential changes to the WTD in relation to compensatory rest and minimum weekly rest (assuming full compliance)

Possible changes to Directive	Impact of possible changes									
	CZ	DE	FR	HU	IT	NL	PL	ES	SE	UK
Rest periods and compensatory rest	-	-	-	-	-	-	-	-	-	-
Compensatory rest to be taken within a period not exceeding 48 hours										
Compensatory rest to be taken within a period not exceeding 96 hours	--	--	--	--	--	--	--	--	-	-
Possibility to increase the reference period for the taking of weekly rest to 3 weeks for all workers	-	--	--	-	-	-	--	-	--	-

Note: ++ indicates significantly stricter provisions required; + somewhat stricter provisions required; 0 indicates no change needed; - somewhat more flexibility compared to current provisions; -- significantly greater flexibility compared to current provisions.

Table 4.10 Level of changes required in national legislation as a result of potential changes to the WTD in relation to compensatory rest and minimum weekly rest ('alternative baseline' a: current legal situation)

Possible changes to Directive	Impact of possible changes									
	CZ	DE	FR	HU	IT	NL	PL	ES	SE	UK
Rest periods and compensatory rest	-	-	-	-	-	-	-	-	-	-
Compensatory rest to be taken within a period not exceeding 48 hours										
Compensatory rest to be taken within a period not exceeding 96 hours	--	--	--	--	--	--	--	--	-	-
Possibility to increase the reference period for the taking of weekly rest to 3 weeks for all workers	-	--	--	-	-	-	--	-	--	-

Note: ++ indicates significantly stricter provisions required; + somewhat stricter provisions required; 0 indicates no change needed; - somewhat more flexibility compared to current provisions; -- significantly greater flexibility compared to current provisions.

Table 4.11 Level of importance of collective agreements in relation to rest periods and compensatory rest

Possible changes to Directive	Role of collective agreements									
	CZ	DE	FR	HU	IT	NL	PL	ES	SE	UK
Rest periods and compensatory rest	0	0	+	0	+	+	0	0	0	0
Compensatory rest to be taken within a period not exceeding 48 hours										
Compensatory rest to be taken within a period not exceeding 96 hours	0	0	+	0	+	+	0	0	0	0
Possibility to increase the reference period for the taking of weekly rest to 3 weeks for all workers	0	0	0	0	0	0	0	0	0	0

Note: ++ indicates that collective agreements play a significantly important role + somewhat important role; 0 indicates no role played by the collective agreements.

4.2.4 Affected population

This section discusses the approach to and results of identifying the population expected to be affected by the analysed possible changes in relation to compensatory rest (change 2) and the reference periods for minimum weekly rest (change 3).

Missed minimum daily rest can in practice occur for workers working very long hours during a single day (likely to be linked to on-call work) and/or cases of alternating/rotating shift work (e.g. when an 8:00-16:00 shift is followed by 0:00-8:00 shift).

The target population for the change in compensatory rest following a missed period of minimum daily rest (change 2) consists of all workers acquiring the right to compensatory rest (after missing minimum daily rest) and their employers. The affected population consists of workers acquiring right to compensatory rest and their employers for whom the current requirement is driven by the WTD and is binding (limits their behaviour).

It has not been possible to identify a reliable data source on the distribution of on-call work spells over time and this factor is crucial for whether any given worker will miss a daily minimum rest period. As an approximation an estimate is constructed where the starting point is the total population of on-call workers as assessed in possible change 1A. It is then limited by removing the share of workers who report (from the BIS survey) having regular on-call patterns but staying on-call for less than 20 hours per month, on average. These workers represent 49% of the 65% of on-call workers with regular but not daily on-call schedules. This leaves 68.15% of all on-call workers as estimated in possible change 1A, translating to 12.6% of all workers.

To this share of workers who work on-call regularly, but not daily and work more than 20 hours per month, we add workers working on alternating shifts. The source of data is the EWCS survey (Q37F "Do you work shifts?" and Q38 "Do you work alternating / rotating shifts?"). This group is limited by excluding those who report a usual working week of at least 5 days and those who usually work less than 40 hours per week (as they would be unlikely to miss minimum daily rest periods). The proportion of people who work both on-call and on alternating shifts is the removed to prevent double counting.

The resulting estimate of the affected population is 18.4% of all workers (33.39 million individuals). Details are provided in Table 4.12. This is likely to be an upper bound estimate given that especially in the case of shift work there are likely to be collective agreements or other legislative solutions not driven by the WTD that regulate the timing of compensatory rest; in such cases the considered scenario may not lead to any meaningful changes to the situation of such workers and enterprises.

Table 4.12 Estimates of affected population for possible change 2 "lengthening of the period when compensatory rest can be taken following a period of missed minimum daily rest" (thousands of workers and % of all workers)

	SMEs (<=250)		Large companies (> 250)		Total	
	Thousand	% of all workers	Thousand	% of all workers	Thousand	% of all workers
AT	366	12%	151	24%	516	14%
BE	508	16%	179	25%	688	18%
BG	514	22%	20	10%	534	21%
CY	54	19%	2	23%	56	19%
CZ	771	21%	35	8%	806	20%
DE	5,451	18%	1,215	26%	6,666	19%

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	SMEs (<=250)		Large companies (> 250)		Total	
	Thousand	% of all workers	Thousand	% of all workers	Thousand	% of all workers
DK	299	14%	37	11%	336	14%
EE	125	24%	10	29%	135	24%
EL	665	33%	70	41%	735	33%
ES	1,263	10%	328	38%	1,591	11%
FI	351	19%	14	5%	365	17%
FR	3,959	21%	1,058	28%	5,018	22%
HR	393	35%	24	21%	417	33%
HU	317	11%	13	2%	330	9%
IE	193	16%	67	20%	260	17%
IT	1,745	12%	320	14%	2,065	12%
LT	105	10%	6	12%	112	10%
LU	28	17%	14	28%	42	20%
LV	148	20%	13	27%	161	20%
MT	10	8%	4	20%	14	9%
NL	867	15%	153	13%	1,019	15%
PL	2,824	28%	205	11%	3,029	25%
PT	608	19%	48	17%	656	19%
RO	1,549	30%	879	84%	2,428	39%
SE	472	13%	138	20%	610	15%
SI	155	24%	20	17%	175	23%
SK	469	26%	65	40%	535	27%
UK	3,057	16%	1,042	19%	4,098	16%
EU28	27,267	17.7%	6,129	23.0%	33,396	18.4%

Source: Own elaboration

Regarding the situations of missed minimum weekly rest this can in practice occur only for workers working 7 days in any given week (when assessed over the 2-week period currently available for taking minimum weekly rest). The target population for the extension of the reference period for minimum weekly rest (change 3), is represented by workers acquiring right to compensatory rest after missed minimum weekly rest and their employers. The affected population consists of workers and employers included in the target population for whom the current requirement is driven by the WTD and is binding (limits their behaviour).

The size of this group is estimated on the basis of the question Q20 from the EWCS survey "How many days per week do you usually work in your main paid job?" 1.9% of EU28 workers indicated they usually work 7 days per week. We further remove those among them who report never working on Saturdays or never working on Sundays in a month (Q32 in EWCS).

To account for the possibility of occasional cases of missed weekly minimum rest we also add workers reporting usual week of 6 working days and long usual working hours (in excess of 48 hours).

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This leads to an estimate of 4.9% of EU28 workers, i.e. 8.88 million individuals. Details are provided in Table 4.13.

Table 4.13 Estimates of affected population for possible change 3 “increase of the reference period for the taking of weekly rest” (thousands of workers and% of all workers)

	SMEs (<=250)		Large companies (> 250)		Total	
	Thousand	% of all workers	Thousand	% of all workers	Thousand	% of all workers
AT	111	4%	25	4%	137	4%
BE	81	3%	32	4%	113	3%
BG	196	8%	8	4%	204	8%
CY	10	3%	0	2%	10	3%
CZ	180	5%	27	6%	207	5%
DE	962	3%	125	3%	1,087	3%
DK	63	3%	23	7%	86	4%
EE	22	4%	1	2%	23	4%
EL	265	13%	11	7%	276	13%
ES	937	7%	71	8%	1,008	7%
FI	21	1%	6	2%	27	1%
FR	535	3%	74	2%	609	3%
HR	141	12%	8	7%	148	12%
HU	151	5%	3	1%	154	4%
IE	35	3%	15	5%	50	3%
IT	681	5%	52	2%	733	4%
LT	44	4%	1	3%	45	4%
LU	5	3%	1	2%	6	3%
LV	41	6%	4	8%	45	6%
MT	9	7%	1	7%	10	7%
NL	67	1%	26	2%	92	1%
PL	1,060	10%	144	7%	1,204	10%
PT	201	6%	2	1%	204	6%
RO	646	12%	128	12%	774	12%
SE	84	2%	21	3%	106	3%
SI	44	7%	6	5%	50	7%
SK	132	7%	6	4%	138	7%
UK	1,181	6%	162	3%	1,343	5%
EU28	7,905	5.1%	982	3.7%	8,888	4.9%

Source: Own elaboration

4.2.5 Assessment of Administrative Burdens

Estimates for possible changes relating to “compensatory rest” and “weekly rest” show that lengthening the period over which daily compensatory rest can be taken (instead of immediately after the missed minimum daily rest period) is likely to add significant administrative burdens for enterprises; while allowing for a slightly longer reference period over which the weekly rest period can be take will not add any administrative burdens.

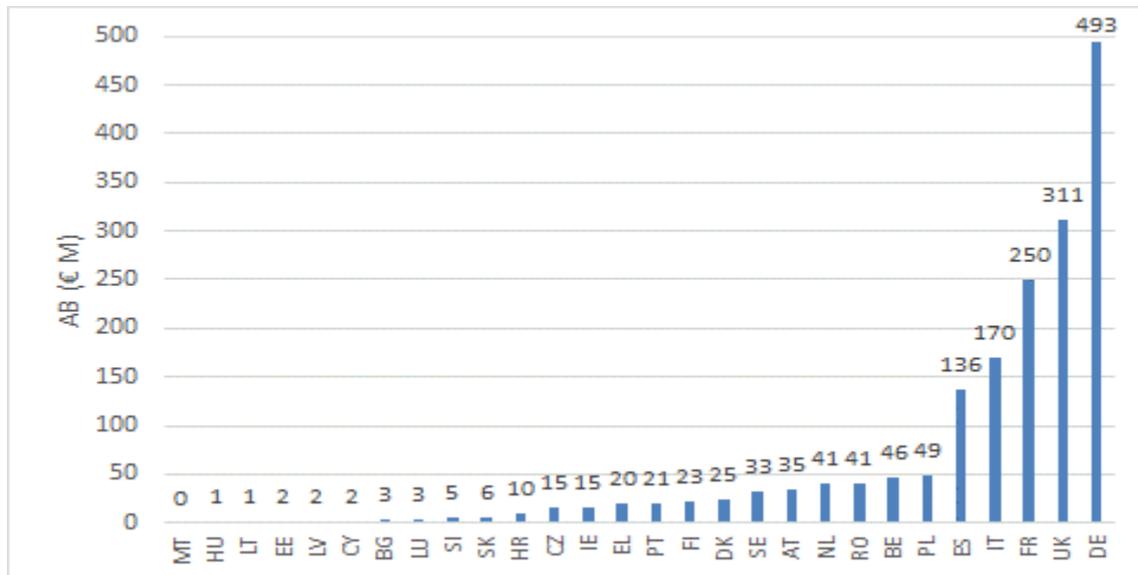
The estimates for possible change regarding “compensatory rest” show that the total AB approximates to € 1.7 million (€ 1.4 million borne by SMEs).

Germany, UK, France, Italy and Spain account for 77% (Figure 4.8) of the total AB. These results are not surprising considering that these countries are the biggest economies in Europe. The affected population for this possible change includes all workers that work on-call and have long working hours; and, workers with regular shift work and long working hours.

The estimates for the “compensatory rest” change show that the AB amounts to approximately the 91% of the total AC at EU level. This means that this policy change would lead to 91% of additional administrative burdens compared to the assessed baseline. The UK, Poland, Italy, Spain, Germany and the Czech Republic have the highest share of AB of total AC.

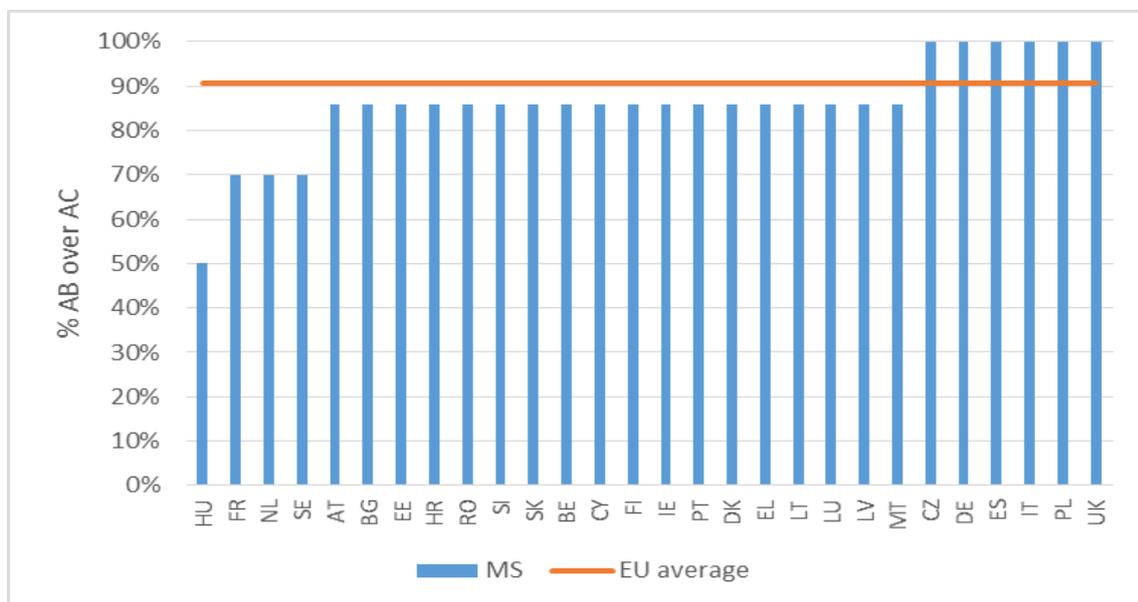
It is worth noting that although France will bear a share around 15% of the overall EU AB, the relative share of the added AB compared to its baseline is amongst the lowest i.e. 70%.

Figure 4.8 Estimates of administrative burdens for maintaining records of when daily rest is taken (AA2.1) according to possible change 2 "lengthening of the period when compensatory rest can be taken following a period of missed minimum daily rest"



Source: Own elaboration

Figure 4.9 Estimates of administrative burdens as a share of administrative costs for maintaining records of when daily rest is taken (AA2.1) according to possible change 2 "lengthening of the period when compensatory rest can be taken following a period of missed minimum daily rest"



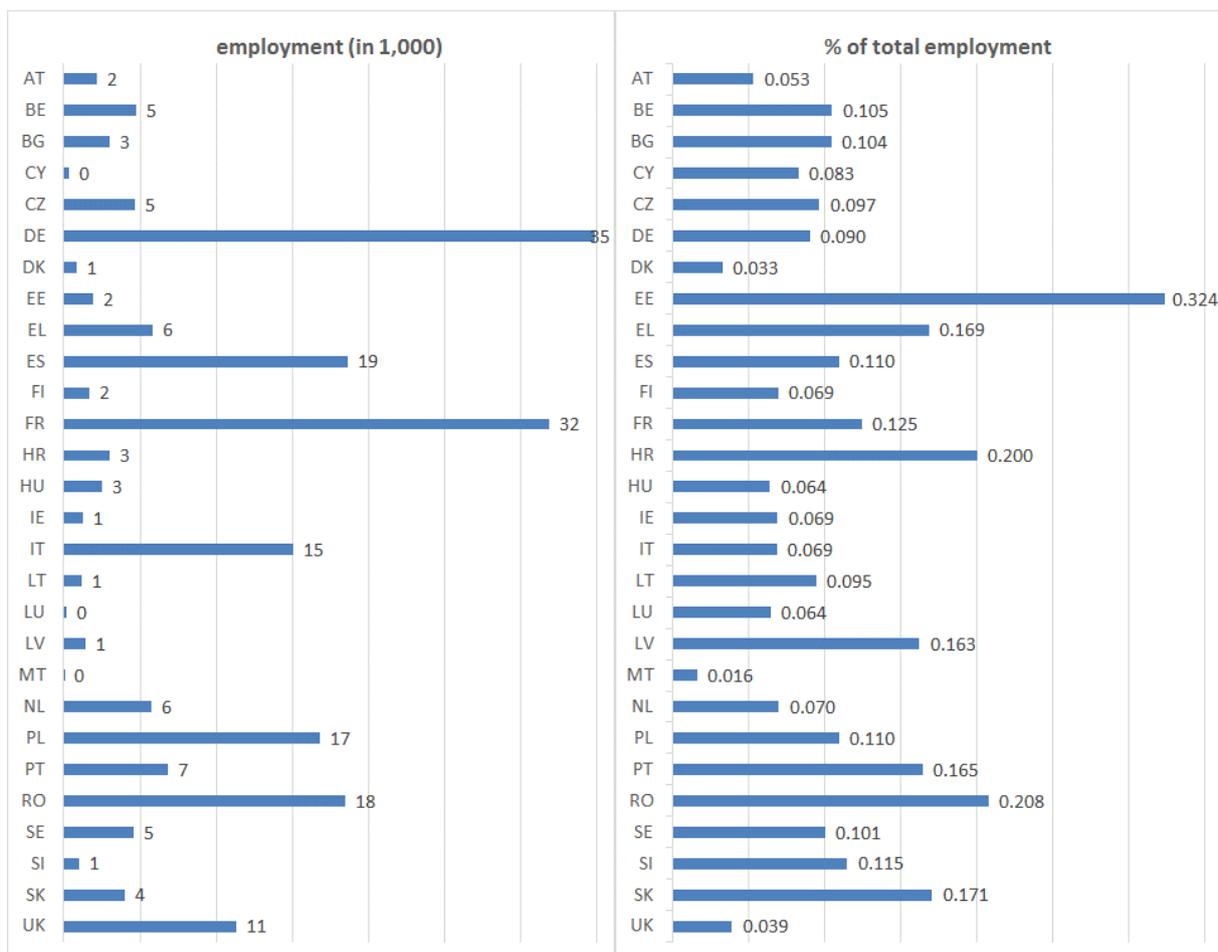
Source: Own elaboration

4.2.6 Socio-economic impact

The simulations regarding the possibility of having greater flexibility for employers in relation to when workers take minimum daily rest show a modest positive impact. Again, as in relation to the possible change of the calculation of on-call time, it is important to distinguish here between micro-level and macro-level effects. Greater flexibility for employers in allowing for the taking of compensatory rest or minimum weekly rest would potentially allow a given enterprise to deliver the same amount of work/service with fewer workers. Hence, one could expect lower labour demand. However, as in essence this translates into lower per unit labour costs, it would allow enterprises to use the factor labour more cheaply. This could lead, on the macro level, to more firms hiring workers. Similar to the positive effects simulated for the on-call scenario, changes to compensatory rest rules are most likely to affect certain sectors where on-call time is prevalent, thus likely limiting positive employment impacts.

While the affected population is not necessarily large, all economies could be affected if this change is implemented. The cumulated effect, especially among the larger economies, Germany, France, Italy and United Kingdom, but also Poland and Romania will lead to the total effect. The largest relative impact as a share of the total employment would be in countries like Estonia, Romania, Greece and Croatia where a larger share of the population is affected, but which also have economies with larger price elasticities of labour (i.e. these national labour markets are more sensitive to cost changes or changes in regulation).

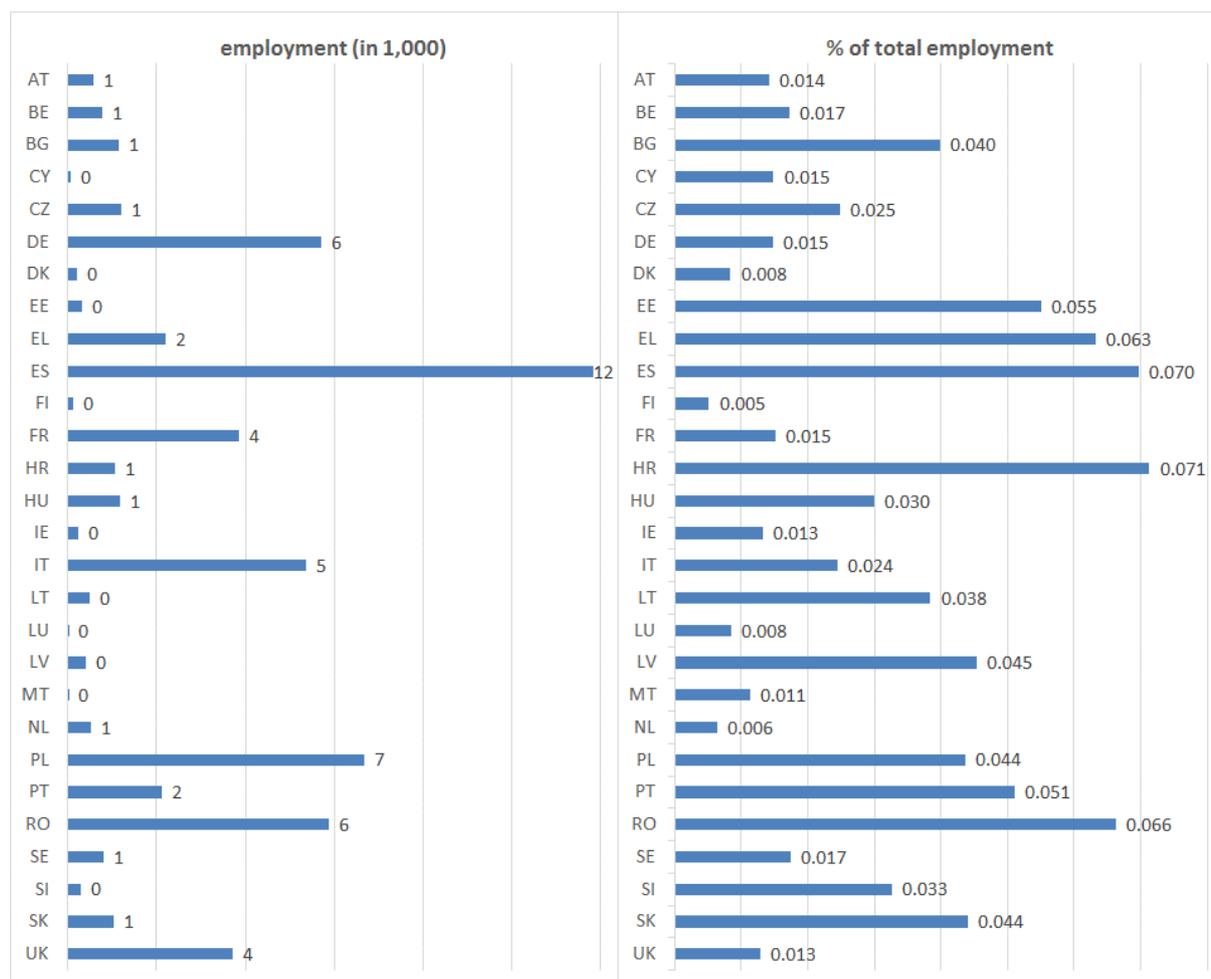
Figure 4.10 Employment change due to change in the compensatory rest following a missed period for minimum daily rest, by Member State



Source: Own elaboration. Note: The first panel shows employment impacts in thousand, while the second panel shows the employment impacts as a share of the total employment by country.

A change in the reference period in which weekly rest has to be taken has a more modest effect. Again countries like Greece, Romania, Croatia and Spain are more strongly affected. The extension of the reference period for the minimum weekly rest is predicted to lead to cost savings that imply a slight increase in the labour demand.

Figure 4.11 Employment change due to extension of reference period for minimum weekly rest, by Member State



Source: Own elaboration. Note: The first panel shows employment impacts in thousand, while the second panel shows the employment impacts as a share of the total employment by country.

4.3 Possible change to the weekly working time and reference period: extension of the reference period over which average weekly working time is calculated

Summary of findings on possible change 4

The possible change proposed

- The proposed change being assessed relates to the possibility of extending the current 4 month reference period for the calculation of working time to either 6 or 12 months by law (with such possibilities

current only available by derogation or collective agreement).

Changes required to the baseline situation

- A 6 or 12 month reference period available for all would therefore potentially increase flexibility in all countries studied with the exception of Spain, with the latter (12 months) clearly offering more flexibility. The impact may be somewhat smaller in the Netherlands and Sweden where collective agreements already make more extensive use of the 12 month reference period. Hungary provides a 6 month reference period for certain categories of workers.

Administrative burden

- The EU wide administrative burden linked to this change amounts to an estimated €300 million of which 93% will be borne by SMEs.

Socio-economic impact

- In contrast to other possible changes, a more mixed picture emerges regarding the potential impact of this change, largely as a result of the extent to which derogations / collective agreements are already used to extend the 4 months current reference period. Overall, the calculated effect is that this change could increase employment across the EU, with some countries having greater effects than others (resulting partly from the impact of the current use of this option through collective bargaining and therefore limited additional effects). In practice, effects are conditioned by a complex set of factors, making actual employment outcomes difficult to predict. The impact on SMEs is conditioned by the assessment of the affected populations and therefore varies from country to country.
- As proposed changes tend towards greater flexibility, individual's working hours could be increased with a potentially negative impact on health and safety and productivity.

4.3.1 The current position and proposed changes being assessed

Under the current legal *acquis*, a maximum four-month reference period is set for the calculation of the 48-hour weekly working time limit (Art 16). Member States can derogate from this for certain sectors (Art 17.3) up to a period not exceeding 6 months. Collective agreements can extend the reference period to a duration not exceeding 12 months in any sector (Art 19).

In order to evaluate the effect of any changes to the reference period, it is suggested to assess the impact of the possibility of setting a six-month reference period in law, and the possibility to extend this reference period to 12 months in law.

Such extensions to the reference period have the potential to offer greater flexibility to employers in the distribution of working hours, particularly in sectors with strong seasonal (or other) fluctuations in demand, making it possible to exceed weekly limits over longer periods of time. For workers, while this could potentially also allow the flexibility to work more during certain periods of the year and less during others, this only provides an added value in terms of work-life balance if the worker has the right/possibility to avail themselves of this option when required. If flexibility is not in line with workers' requirements, extensions to the reference have the potential of requiring workers to work longer hours over sustained periods of time with a potentially negative impact on their health and safety, and associated possible cost to the employer and the wider economy. The impact of such potential changes will also depend on the use of available derogations in the baseline and the combination of such changes with

amendments to opt-out provisions. The national legislation and the derogations used in the 10 Member States are presented in this section.

4.3.2 Comparative overview of Member States provisions

Apart from Spain, all study countries have a basic reference period of less than (and including) six months set in legislation. Spain is the only exception as the standard legal reference period is one year. Hungary, Italy, Poland, Sweden and the UK have a four-month reference period set in law. Hungary has set a six-month legal reference period for certain types of workers explicitly mentioned in the Labour Code such as workers working shifts and in stand-by jobs. France has a shorter legal reference period of three months and Czech Republic set a seven days-reference period in law. All Member States except Spain use the possibility to derogate from the legal reference period by collective agreement. In all cases, collective agreements can set a reference period up to 12 months. In some Member States additional criteria need to be respected to be able to derogate from the legal reference period. In Hungary, Italy, Poland and the UK derogations to the legal reference period must be justified by objective or technical reasons or reasons related to the organisation of work. German law identifies specific sectors and situations where the derogation can be used to extend the reference period to 12 months.

Collective agreements play a very important role in relation to setting reference periods for the calculation of maximum weekly working time in most of the ten in-depth countries. In Germany, France, Hungary and Sweden collective agreements in the three sectors studied often provide derogations from the legal reference period. In Germany, the use of this derogation extends the reference period to 12 months. In France, a 12-month reference period to calculate maximum weekly working time is also often used in the chemical industry. In the utilities sector which used to be publicly owned, this topic is more likely to be discussed at company level and it seems that most of company agreements also have this type of provision. The national collective agreement in the HORECA sector in France provides for a reference period of 12 weeks but it is also indicated that another reference period of up to 12 months may be set at company-level. In Sweden, national collective agreements in the sectors of utilities/energy, manufacturing and HORECA all mention a longer reference period than that foreseen in legislation. In the utilities sector a reference period up to six months can be introduced. In the HORECA sector, company collective agreements can set a reference of period of six months and in the manufacturing sector, the reference period is set to 12 months by collective agreement.

In the Czech Republic, collective agreements are the only tool to derogate from the seven-day reference period. Their role is therefore particularly important in establishing more flexibility for the calculation of the maximum weekly working time. However, in the sectors studied, no such relevant collective agreements were found.

In Poland, the use of the derogation in collective agreement is not widespread and where it is used, this is done at company level (rather than in national / sectoral collective agreements).

In Hungary, the derogation to the reference period is used in the manufacturing industry where reference periods are usually six months or 12 months, depending on the specific occupations covered.

In Italy, the national collective agreements of the three sectors all provide for the use of the derogation, generally setting a 12 month reference period.

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Table 4.14 Current regulation on maximum weekly working time and the reference period

Country	Reference Basic law working time regulation (exact reference)	Legal Maximum weekly working time	Use of the derogation on the reference period	
			Yes/No	Specific rules in the three sectors (utilities, hotels and catering and manufacturing sectors)
CZ	Section 86 of the Labour Code	40 hours a week.	Yes	The reference may be extended to 6 months The reference may be extended to 12 months but only by collective agreement.
DE	Arbeitszeitgesetz	40 hours per week over 24 weeks	Yes	12 months in specific sectors and circumstances (§ 7 ArbZG, referring to agriculture, care, public sector, or with a specific authorisation in the context of specific business needs, offshore work) and 12 months by collective agreement
FR	Title II of Book I of the Third Part of the Labour Code	The maximum weekly working time is 44 hours consecutive calculated over a period of 12 weeks (3 months). The maximum weekly working time cannot exceed 48 hours in one single week	Yes	Collective agreements (company, sectoral...) can set a reference period from one week up to one year. HORECA: Article 6 of the Amendment No. 2 provides that the maximum weekly working time is of 46 hours over any period of 12 weeks. The absolute maximum weekly working time limit is set at 48 hours. However, the sector collective agreement also stipulates that another reference period up to 12 months may be set at company-level.
HU	Section 94 and 99 of the Labour Code	48 hours a week. Basic reference period the calculation of average weekly working time: 4 months	Yes	The reference period is 6 months in some specific professions. Collective agreements can set a reference period up to 12 months (or 52 weeks) if this is justified by technical reasons or reasons related to work organisation .

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Country	Reference Basic law working time regulation (exact reference)	Legal Maximum weekly working time	Use of the derogation on the reference period	
			Yes/No	Specific rules in the three sectors (utilities, hotels and catering and manufacturing sectors)
NL	Article 5:7 of the ATW (Working Hours Act)	The maximum weekly working time is set at 48 hours calculated on a 16-week reference period. The absolute maximum weekly working time is 60 hours. The employer needs to make sure that average working time of 55 hours over a 4 week period is respected.	Yes	Collective agreements can derogate from the 16-week reference period in cases where unforeseen circumstances have increased the workload and that the 48-hour average cannot be respected.
PL	Article 129 of the Polish Labour Code	The maximum weekly working time is set at 48 hours calculated on a 4-month reference period.	Yes	There is a possibility to establish references periods up to 12 months by collective agreements. This must be justified by objective or technical reasons, or reasons concerning working time organisation or another collective agreement (i.e., ad hoc agreements on working time).
ES	Article 34 of the Statute of Workers' Rights (<i>Estatuto de los Trabajadores</i>) of 1994	The maximum length of the normal working week is 40 hours, averaged over one year. The maximum weekly working time (including overtime) shall not exceed 42 hours per week, when averaged over the year	No	

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Country	Reference Basic law working time regulation (exact reference)	Legal Maximum weekly working time	Use of the derogation on the reference period	
			Yes/No	Specific rules in the three sectors (utilities, hotels and catering and manufacturing sectors)
SE	Section 3 and 10b of the 1982 Working Hours Act (as amended in 2005, SFS 2005:165)	The maximum weekly working time is set at 48 hours during a reference period of up to 4 months.	Yes	<p>Collective agreements can derogate from the four-month reference period to set a reference period up to 12 months.</p> <p>Paper industry: The reference period is of 12 months as stipulated in the national collective agreement for workers and employers in the paper industry.</p> <p>Metal industry: The reference period may be extended locally to 12 months.</p> <p>HORECA: The reference period in local collective agreements may be extended to 6 months as stipulated by the national collective agreement in this sector.</p>
UK	Section 4 of the 1998 Working Time Regulation	The average working time, including overtime, shall not exceed 48 hours calculated on a 17-week reference period.	Yes	<p>The maximum 17-week reference period can be extended to a reference period not exceeding 52 weeks in relation to particular workers or groups of workers, if objective or technical reasons or reasons concerning the organisation of work justify it.</p> <p>In the health sector average weekly working time of doctors in training is averaged over a 26-week reference period) and those related to night and mobile workers.</p>

4.3.3 Level of changes for Member States' legislation to comply with the possible changes

In all 10 Member States except Spain, the possible changes regarding the reference period for the calculation of the maximum weekly working time could give rise to more flexibility compared to current provisions if transposed. Spain is the only exception as its legislation already sets the reference period at one year.

Hungary is the only Member State of the countries covered by the in-depth review currently allowing a derogation setting a six-month reference period for certain specific professions. As a result the possible change of introducing a six-month reference period in law could have less impact in Hungary than in other Member States covered by the in-depth review (except Spain) as Hungary already allows it for some work patterns and jobs.

For both possible changes, namely the setting of a six-month or twelve month reference period for all workers and sectors in legislation, all Member States covered (except Spain) could in principle introduce more flexible provisions. However, a distinction needs to be made between Member States allowing derogations up to twelve months without any conditions and those requiring the derogation to be justified by objective or technical reasons, or reasons related to work organisation. In the first category of Member States, namely the Czech Republic, France and Sweden, the possible change of introducing a legal reference period of 12 months would be more flexible than current provisions allow. However, this impact will be less than for those Member States which require objective or technical reasons or reasons related to work organisation for derogating to the legal reference period. In these countries, the impact of the possible change will be greater as the derogation from the legal reference is more restricted than in Member States which do not have such requirements.

Another important factor independent of legislation is the extent to which this derogation is currently used in collective agreements. Indeed, the reasoning above may be nuanced if for instance in countries allowing collective agreements to derogate without justification, only limited use is made of this. It must also be borne in mind that industrial relations systems are different in Member States. As a result of these differences it is more likely in some countries for collective agreements to be negotiated than in others. This should also be taken into account to measure the impact of possible changes on legislation. This is particularly relevant for SMEs who are less likely to be covered by collective agreements.

Table 4.15 Level of changes required in national legislation as a result of potential changes to the WTD in relation to reference period for calculation of working time (assuming full compliance)

Possible changes to Directive	Impact of possible changes									
	CZ ²⁰⁹	DE	FR ²¹⁰	HU ²¹¹	IT ²¹²	NL	PL ²¹³	ES ²¹⁴	SE ²¹⁵	UK ²¹⁶
Reference periods										
<ul style="list-style-type: none"> • Possibility of setting 6 month reference period in all cases 	--	-	--	-	-	-	-	0	-	-
<ul style="list-style-type: none"> • Derogation making it possible to set a 12 month reference period by legislation 	--	--	--	--	--	-	--	0	-	--

Note: ++ indicates significantly stricter provisions required; + somewhat stricter provisions required; 0 indicates no change needed; - somewhat more flexibility compared to current provisions; -- significantly greater flexibility compared to current provisions.

²⁰⁹ CZ - Basic reference period: 7 days. Both derogations are currently only possible if contained in a collective agreement

²¹⁰ FR - Basic reference period: 3 months. Derogation up to 12 months by collective agreement.

²¹¹ HU - Basic reference period: 4 months. Derogation up to 12 months by collective agreement and justified by technical reasons or reasons related to work organisation.

²¹² IT - Basic reference period: 4 months. Derogations up to 12 months must be contained in a collective agreement and must be justified by objective or technical reasons, or reasons related to the work organisation.

²¹³ PL - Basic reference period: 4 months. Derogations up to 12 months must be contained in a collective agreement and must be justified objective or technical reasons, or reasons related to work organisation.

²¹⁴ ES -The standard legal reference period is one year.

²¹⁵ SE - Basic reference period: 4 months. Derogations up to 12 months by collective agreement.

²¹⁶ UK - Basic reference period: 4 months. Derogations up to 12 by collective agreement and must be justified objective or technical reasons, or reasons related to the organisation of work.

Table 4.16 Level of changes required in national legislation as a result of potential changes to the WTD in relation to reference period for calculation of working time (‘alternative baseline scenario a: current legal situation)

Possible changes to Directive	Impact of possible changes									
	CZ ²¹⁷	DE	FR ²¹⁸	HU ²¹⁹	IT ²²⁰	NL	PL ²²¹	ES ²²²	SE ²²³	UK ²²⁴
Reference periods										
Possibility of setting 6 month reference period in all cases	--	-	--	-	-	-	-	0	-	-
Derogation making it possible to set a 12 month reference period by legislation	--	--	--	--	--	-	--	0	-	--

Note: ++ indicates significantly stricter provisions required; + somewhat stricter provisions required; 0 indicates no change needed; - somewhat more flexibility compared to current provisions; -- significantly greater flexibility compared to current provisions.

²¹⁷ CZ - Basic reference period: 7 days. Both derogations are currently only possible if contained in a collective agreement

²¹⁸ FR - Basic reference period: 3 months. Derogation up to 12 months by collective agreement.

²¹⁹ HU - Basic reference period: 4 months. Derogation up to 12 months by collective agreement and justified by technical reasons or reasons related to work organisation.

²²⁰ IT - Basic reference period: 4 months. Derogations up to 12 months must be contained in a collective agreement and must be justified by objective or technical reasons, or reasons related to the work organisation.

²²¹ PL - Basic reference period: 4 months. Derogations up to 12 months must be contained in a collective agreement and must be justified objective or technical reasons, or reasons related to work organisation.

²²² ES -The standard legal reference period is one year.

²²³ SE - Basic reference period: 4 months. Derogations up to 12 months by collective agreement.

²²⁴ UK - Basic reference period: 4 months. Derogations up to 12 by collective agreement and must be justified objective or technical reasons, or reasons related to the organisation of work.

Table 4.17 Level of importance of collective agreements in relation to the reference period to calculate maximum weekly working time

Possible changes to Directive	Role of collective agreements									
	CZ ²²⁵	DE	FR ²²⁶	HU ²²⁷	IT ²²⁸	NL	PL ²²⁹	ES ²³⁰	SE ²³¹	UK ²³²
Reference periods										
• Possibility of setting 6 month reference period in all cases	++	++	++	++	++	++	++	++	++	0
• Derogation making it possible to set a 12 month reference period by legislation	++	++	++	++	++	+	++	++	++	0

Note: ++ indicates that collective agreements play a significantly important role + somewhat important role; 0 indicates no role played by the collective agreements.

²²⁵ CZ - Basic reference period: 7 days. Both derogations are currently only possible if contained in a collective agreement

²²⁶ FR - Basic reference period: 3 months. Derogation up to 12 months by collective agreement.

²²⁷ HU - Basic reference period: 4 months. Derogation up to 12 months by collective agreement and justified by technical reasons or reasons related to work organisation.

²²⁸ IT - Basic reference period: 4 months. Derogations up to 12 months must be contained in a collective agreement and must be justified by objective or technical reasons, or reasons related to the work organisation.

²²⁹ PL - Basic reference period: 4 months. Derogations up to 12 months must be contained in a collective agreement and must be justified objective or technical reasons, or reasons related to work organisation.

²³⁰ ES -The standard legal reference period is one year.

²³¹ SE - Basic reference period: 4 months. Derogations up to 12 months by collective agreement.

²³² UK - Basic reference period: 4 months. Derogations up to 12 by collective agreement and must be justified objective or technical reasons, or reasons related to the organisation of work.

4.3.4 Affected population

This section discusses the approach to and results of identifying the population expected to be affected by the analysed possible change in the reference period for calculating the maximum weekly working time (change 4). The target population consists of workers who work longer than 48 hours per week for prolonged periods and their employers. The affected population consists of those workers and employers included in the target population who work in companies that would extend their reference period following any such change in the WTD.

The EWCS provides information on hours worked per week on the basis of the question Q18 "How many hours do you usually work per week in your main paid job? There is no information on the distribution of long hours' weeks during the year. Therefore the estimate of the affected population is constructed by selecting those workers whose 'usual' working week is around 48 hours long. Specifically, workers are considered whose reported usual weekly working hours fall in the interval of 44-52 hours apart from those who declare fixed number of working hours every week that is lower than 48 hours. The rationale is that:

- For workers reporting a usual working week of below 48 hours and a fixed number of hours every week it is unlikely that they exceed the 48 hours limit. Hence, the reference period (and possible changes) are irrelevant for them.
- For workers reporting a usual working week of above 52 hours no change in the reference period is likely to change their situation (i.e. they would be highly unlikely to fall below average 48 hours week even if averaged over one year)
- For workers usually working up to 44 hours per week, the current reference period should be fully sufficient and not be a binding constraint (i.e. they would be highly unlikely to average above 48 hours week even under the current reference period).

The affected population is further restricted by excluding countries that currently legislate shorter reference periods than the maximum allowed by the WTD, i.e. the Czech Republic (1 week reference period) and France (3 month reference period) as such legislation reveals policymakers' preference for shorter reference period and hence it can be assumed that the legislation would not change following the possible change in the WTD.

The affected population for this scenario is 8.1% of all workers or 14.7 million individuals. This is clearly an upper bound estimate of the affected population. Details are provided in Table 4.18. The distribution of usual weekly working hours is such that reasonable modifications of the brackets defined above (44-52 hours) would not significantly change the estimate.

Table 4.18 Estimates of affected population for possible change 4 "extension of reference period for calculating the maximum weekly working time" (thousands of workers and% of all workers)

	SMEs (<=250)		Large companies (> 250)		Total	
	Thousand	% of all workers	Thousand	% of all workers	Thousand	% of all workers
AT	190	6%	34	5%	224	6%
BE	172	6%	60	8%	232	6%
BG	318	13%	4	2%	323	13%

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	SMEs (<=250)		Large companies (> 250)		Total	
	Thousand	% of all workers	Thousand	% of all workers	Thousand	% of all workers
CY	18	6%	1	13%	20	7%
CZ	0	0%	0	0%	0	0%
DE	2,372	8%	456	10%	2,828	8%
DK	155	7%	49	15%	204	8%
EE	33	6%	0	1%	33	6%
EL	329	16%	19	11%	348	16%
ES	1,041	8%	55	6%	1,096	8%
FI	68	4%	19	7%	87	4%
FR	0	0%	0	0%	0	0%
HR	157	14%	18	16%	175	14%
HU	261	9%	95	17%	356	10%
IE	54	4%	50	15%	105	7%
IT	1,494	10%	122	6%	1,617	10%
LT	84	8%	1	1%	85	8%
LU	12	7%	4	8%	16	7%
LV	82	11%	5	12%	88	11%
MT	8	6%	3	16%	11	8%
NL	285	5%	114	10%	400	6%
PL	1,442	14%	212	11%	1,655	14%
PT	261	8%	26	9%	287	8%
RO	949	18%	153	15%	1,102	18%
SE	264	8%	91	13%	355	8%
SI	83	13%	18	15%	100	13%
SK	308	17%	45	28%	353	18%
UK	1,954	10%	621	11%	2,575	10%
EU28	12,398	8.0%	2,276	8.5%	14,674	8.1%

Source: Own elaboration

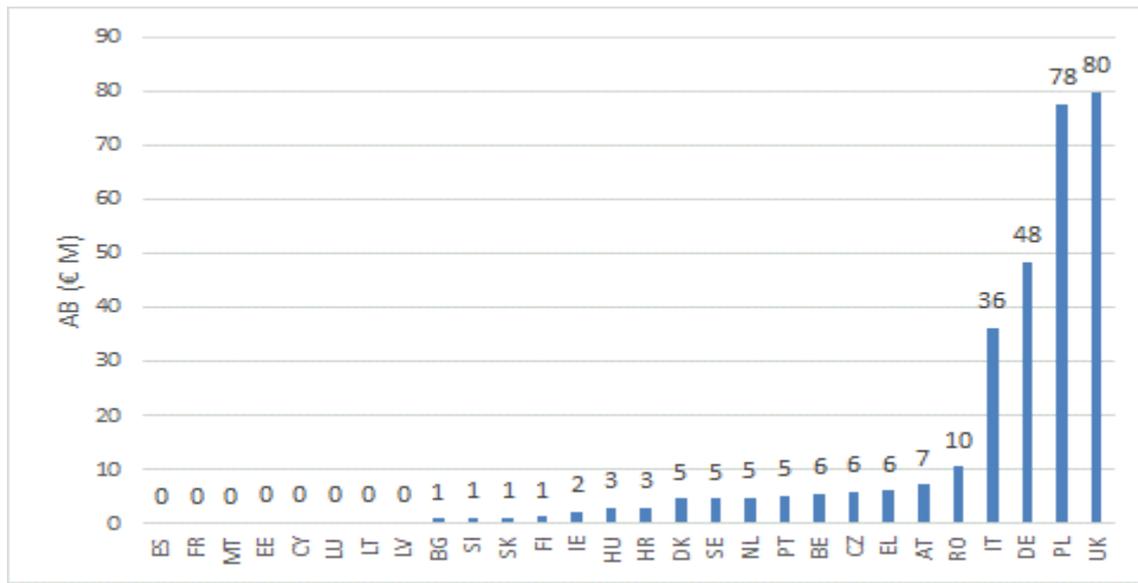
4.3.5 Assessment of Administrative Burdens

The total AB for the “reference period” policy change (extension of reference period for calculating the maximum weekly working time) is estimated at approximately €300 million and 93% of this will be borne by SMEs.

The UK, Poland, Germany and Italy (Figure 4.12) make up for 78% of the total AB. These results reflect the size of the economies as well as the national context for the reference period in the calculation of the weekly working time.

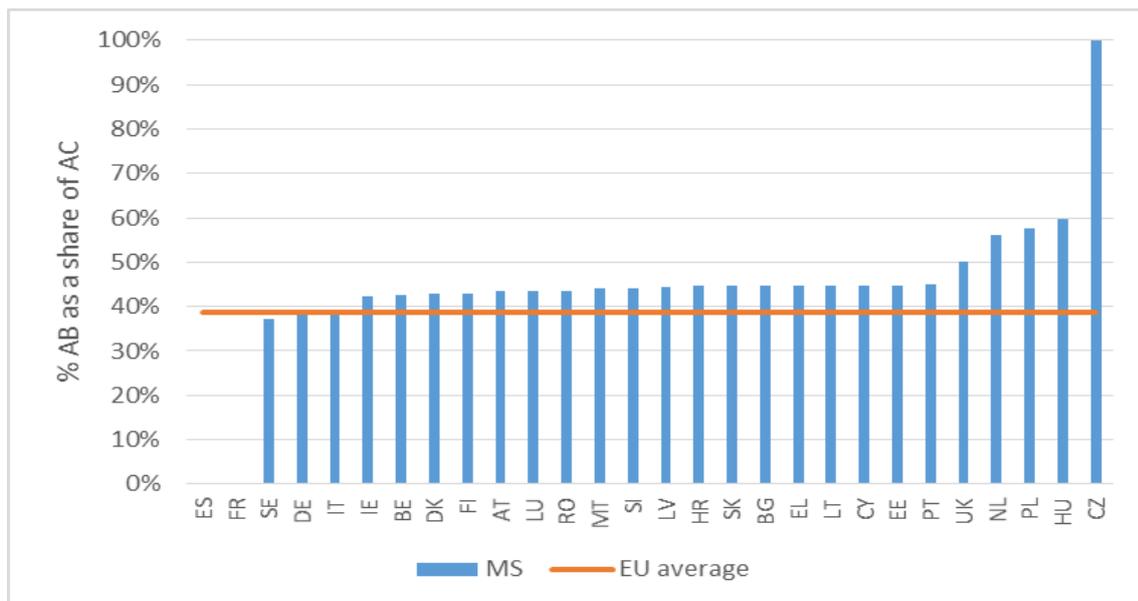
The estimates for the policy change “reference period” show that at EU level the AB amounts to approximately the 39% of the total AC. This means that this policy change would lead an additional administrative burdens compared to the assessed baseline of 39%. The Czech Republic has the highest share of AB of the total of AC.

Figure 4.12 Estimates of administrative burdens for maintaining a record of hours worked per week over the reference period (AA4.1) according to possible change 4 “extension of reference period for calculating the maximum weekly working time”



Source: Own elaboration.

Figure 4.13 Estimates of administrative burdens as a share of administrative costs for maintaining a record of hours worked per week over the reference period (AA4.1) according to possible change 4 “extension of reference period for calculating the maximum weekly working time”

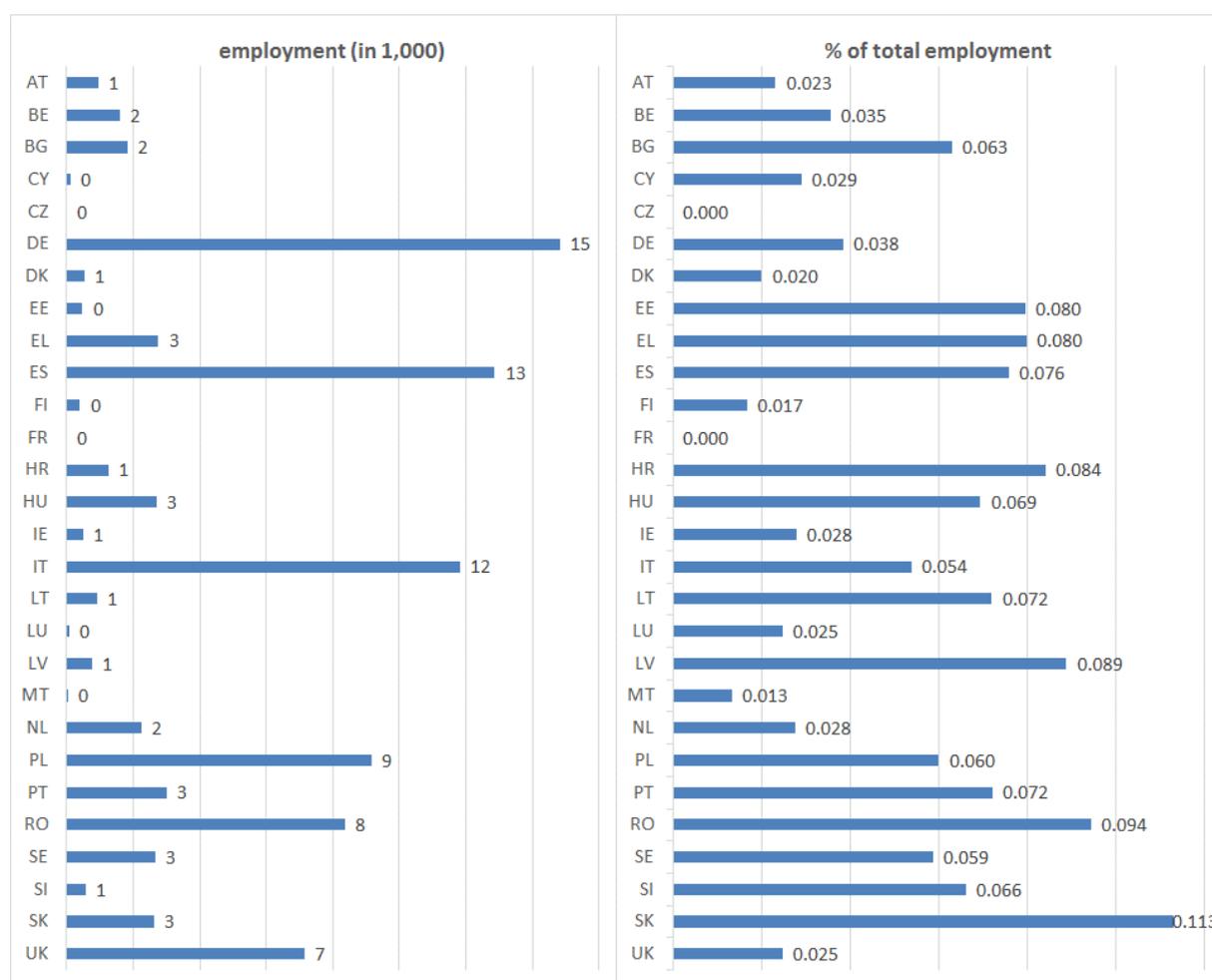


Source: Own elaboration

4.3.6 Socio-economic impact

A rather mixed picture emerges in the evaluation of the economic impact of extending the reference period over which average weekly working time may be calculated. While in some countries there is no effect of such greater flexibility to be expected, e.g. in France and the Czech Republic; it has a stronger effect in countries such as Romania, Slovakia, Latvia, Estonia and Greece. Overall the effect is calculated to slightly increase employment through the cost savings on the factor labour. As in the policy change on stand-by time, the impact at the micro-level could, on the other hand, be negative in terms of employment.

Figure 4.14 Employment change due to change of the maximum weekly working time and the reference period, by Member State



Source: Own elaboration. Note: The first panel shows employment impacts in thousand, while the second panel shows the employment impacts as a share of the total employment by country.

4.4 Possible change in the definition of 'autonomous workers' derogation to the WTD

Summary of findings on possible change 5

The possible change proposed

- The proposed change being assessed relates to the implementation of an elaborated definition for what constitutes an autonomous worker, aimed at bringing practice more closely in line with the original intentions of the WTD. This could include the reinforcement of the material criteria to be met, e.g. an autonomous worker has to be able to control the volume and organisation of their working hours.

Changes required to the baseline situation

- The Czech Republic is the only country in the sample currently not availing itself of the autonomous worker derogation. Relatively clear definitions (close to the original intentions of the WTD) currently apply in Germany, Hungary and Poland, with the Netherlands having a somewhat looser definition. France, Spain, Sweden and the UK apply definitions which are rather looser and not strictly limited to managerial staff with control over their own time. In Italy the legal definition is close to that of the WTD, but in practice question marks have been raised over interpretation, such as the classification of all hospital doctors as autonomous workers, which is subject to challenge.
- A more elaborated definition focussing on workers with genuine control over their own time would require stricter regulation in France, Italy, the Netherlands, Spain, Sweden and the UK.

Administrative burden

- The AB linked to the requirement for companies to familiarise themselves with changes in legislation is estimated at €815 million (€811 will be borne by SMEs). The AB resulting from another IO linked to the potential need to adjust worker data files is estimated at €340. In both cases the BAU is 0%, so AC and AB are the same. Both are one off costs.

Socio-economic impact

- Because of the difficulty in clearly describing the affected population, even greater caution has to be applied to an estimate of the simulated employment impact of changes in this area. Calculations show a comparatively modest negative effect of job losses EU wide. There are few differences in terms of impact between larger companies and SMEs.

4.4.1 The current position and proposed changes being assessed

The WTD contains a number of important derogations which Member States can choose to avail themselves of in relation to all the core provisions of the WTD, except the right to paid annual leave under Article 7 and the right to a free health assessment for night workers under Article 9.

A derogation is available to Member States when, on account of the specific characteristics of the activity concerned, the duration of the working time is not measured and/or predetermined or can be determined by the workers themselves. This includes inter alia 'managing executives or other persons with autonomous decision making power, family workers and individuals officiating at religious ceremonies.'

Member States can determine that Articles 3 to 6, 8 and 16, do not apply (Article 17(1) of the Directive) to such workers, also sometimes referred to as 'autonomous workers'.

The administrative cost and burden as well as the economic impact associated with a tighter definition is assessed, which will ensure the correct application of the Directive. This would mean that the derogation can only be applied to autonomous workers who have full / genuine control over their own working time. For this, it could be envisaged to reinforce the material criteria in such a way that the derogation can only where a worker is able to control the volume of their working hours, the organisation of their working time (i.e. how much and when they work).

4.4.2 Comparative overview of Member States provisions

The Czech Republic is the only Member State not using the derogation available in relation to autonomous workers. In the Member States assessed for this study where the derogation is used (Germany, France, Hungary, Italy, the Netherlands, Poland, Spain, Sweden and the UK), several definitions can be identified. Two trends are emerging from this legal mapping on the question of autonomous workers. Germany, Hungary, Poland which restrict the definition to managers, and France, Sweden and the UK which include both autonomous workers (who can be workers other than managers) and managers in the derogation foreseen in their legislation.

Hungary and Germany have restricted the derogation to 'executive workers' and Poland to 'managers'. The common feature in these three countries is that the definition provided in their legislation implies that only the top management of a company can be concerned by the derogation provided for in Article 17. In Hungary, an executive worker is understood as the director or any other person under their direct supervision and authorised in part or entirely to act as deputy director. An executive worker can also be a worker whose position is of considerable importance from the point of view of the employer's operations, or fulfils a position of trust. Salary is also used as an additional criterion meaning that in addition to all the requirements, the executive worker also needs to have a salary of seven times the legal minimum wage.

This definition seems to restrict the application of the derogation to a small proportion of workers. In Poland, managers are workers who manage the workplace in the name of employers. Even though this seems broad at first glance, the original intent of the definition has been clarified in case-law. The Polish Supreme Court ruled that to fall within the scope of 'managers' as defined by the Labour Code, such individuals must be managers represented at the board level, be branch managers, be directors of state enterprises, and CEOs who single-handedly manage the company, without being member of the board. As a result, similar to Hungary, only the top management are concerned by this definition and can be excluded from some working time rules.

Under German law, only executive managers are concerned by the derogation. The definition establishes the following criteria: executive managers have the power to hire workers; have a general power or mandate within the company and also carries out regularly tasks relating to the development of the business and has managerial freedoms²³³. Other criteria may also enter into the equation such as participation on the executive committee of a company or the salary. As a result of these explicit criteria, only few managers fall into the scope of this derogation which represents a minority of the workforce in Germany²³⁴.

²³³ Paragraph 5 of the Works Council Constitution Act (*Betriebsverfassungsgesetz*)

²³⁴ Information collected through stakeholders interviews in Germany.

Dutch legislation provides that managers are excluded from the scope of provisions on information and registration of working time²³⁵ and from the rules regarding rest and working time of the law²³⁶. The law determines that for managers the reference period is 48 hours within 52 weeks. Managers (*leidinggevende en hoger personeel*) are defined in legislation as those that earn annually 3 times the fixed amount set under Art. 2.1:13 and those that give directions to other workers (determined by the employer) in the mining sector. The amount is set as twelve times the monthly minimum wage as fixed every year (including vacation allowance).

In Spain there is a special labour regulation for senior management. The employer and such senior managers can agree on a contract which provides for average working time and rest time with only one limit: that it cannot exceed "significantly" the general rules on working time in the relevant professional field (RD 1382/1985). Although this therefore provides for greater working time flexibility for senior managers in line with the derogation made possible by Article 17, in reality, it could be considered that is not clear to what extent such workers enjoy real decision making autonomy, as their work and work organisation are subject to board level decisions. Collective agreement can set down more detailed characteristics which such workers must possess.

France, Sweden and the UK are the three Member States which use a broader definition. They include both autonomous workers and managers. In France, the following workers can be excluded from some working time provisions: managers whose functions lead them not to follow the hours applicable in the workshop, department or team to which they belong and workers who have a real autonomy in organising their time. In Sweden, autonomous workers are workers who perform work under such conditions that supervision of how the work is organised cannot be deemed to be the employer's responsibility. In addition, the Swedish legislation defines managerial positions as work performed by workers who, considering their duties and employment conditions hold managerial or comparable positions, or by workers who, considering their duties, are entrusted with organising their own working time. In the UK, the derogation of Article 17 of the Working Time Directive has been transposed almost word for word. In these Member States, no further details are provided to define more clearly autonomous workers and managers exempted from some working time rules.

Italy in principle uses the wording of the WTD to use the derogation for workers, for whom, due to the specific features of the activities performed, the duration of working time is not measured and/or predetermined or can be determined by the workers themselves, and particularly in the case of: (a) managing executives or other persons with autonomous decision-taking powers; (b) family workers; (c) workers officiating at religious ceremonies in churches and religious communities; (d) in the case of homeworkers or teleworkers. This is interpreted to include all doctors in the health care sector which is subject to challenge by the European Commission.

In most of the ten in-depth countries, collective agreements do not play an important role in relation to the derogation of Article 17 of WTD on autonomous workers. This is the case in Germany, Spain, Hungary, the Netherlands, Poland and Sweden, where only the category of executive managers are excluded from provisions on maximum weekly working time. In these countries, general provisions regulating working time of executive managers are contained in the legislation and not seen to require the conclusion of a collective agreement to put such a derogation in place. This is why specific provisions are more likely to depend on the private employment relationship and be contained in the work contract of such workers.

²³⁵ Articles 4:2 and 4:3 of the ATB

²³⁶ Article 2.1:1 of the ATB

In France and Italy, collective agreements contain provisions on autonomous workers and managers and play a more important role. In Italy, in the private sector, intersectoral collective agreements covering top managers (*dirigenti*) can be found while middle management (*quadri*) are covered by sectoral agreements. Such collective agreements usually only include provisions on annual leave. However, in the HORECA sector in Italy, the national collective agreement states that the limits to the normal maximum weekly hours do not apply to a number of managing positions²³⁷. In France, the role of collective agreements is essential for putting in place the derogation on autonomous workers from Article 17 of the WTD. The Labour Code requires a collective agreement to be concluded so that the derogation can be applied by companies. Thus, such agreements exist in the chemical sector, the utilities sector and the HORECA sector. Each agreement must stipulate which category of worker is concerned but also need to include legal requirements such as the protection of health and safety. In case of failure to do so, the national court can cancel the use of the contracts relating to these workers in the sector²³⁸.

²³⁷ Art. 108.3 of the National Industry-Wide Collective Agreement for the Tourism sector.

²³⁸ Cass. Soc. 24 avril 2013, n°11 - 28.398

Table 4.19 Autonomous workers

Country	Use of the derogation of Article 17 Yes/No	Definition Autonomous worker	Relevant case law	Issues arising from the definition applied
CZ	No			
DE	Yes – For managers	<p>The Works Council Constitution Act (<i>Betriebsverfassungsgesetz</i>) under paragraph 5 defines 'leitende Angestellte' as follows:</p> <ul style="list-style-type: none"> – Someone who has the power within a company or a company section to hire workers; – Has a general power or mandate within the company and significantly important compared to the employer; – Regularly carries out tasks relating to the development of the business and has managerial freedoms – Other criteria may also be taken into account to determine whether a particular manager may be concerned by the derogation. This can be based on criteria such as participation in the representative committee of executives (<i>Sprecherausschuss</i>) in a company, whether the manager works at a level of the company where generally only executive managers work. Another criterion is the remuneration and the fact that the manager receives a wage that is typical for an executive manager in that company. If this criterion is not sufficient, it can be checked whether the manager receives three times the reference wage stated under paragraph 18 of the fourth Social Law book. 	BUNDESARBEITSGERICHT Beschluss vom 29.6.2011, 7 ABR 5/10 on the definition of autonomous workers	

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Country	Use of the derogation of Article 17 Yes/No	Definition Autonomous worker	Relevant case law	Issues arising from the definition applied
FR	Yes - For both autonomous workers and managers	<p>Certain workers can be subject to the application of a <i>convention de forfait en heures sur l'année</i> (flat-rate pay agreement covering days worked) within the limits of the annual working time applicable to these <i>conventions de forfait</i> set by collective agreement. When the nature of the functions exercised by the managers does not lead them to follow the hours applicable in the workshop, department or team to which they belong.</p> <p>In French law, senior executive managers are excluded from the scope of some parts of the working time legislation. This concerns mainly the calculation of the working time period, standby time, overtime and rest periods.</p> <p>Are considered to have the quality of senior executive managers, managers that:</p> <ul style="list-style-type: none"> Are assigned responsibilities which a significant level of autonomy in organising their time, Are empowered to make decisions in a largely autonomous receive compensation lying in the highest remuneration systems in their company or institution levels. <p>These criteria are cumulative. (Cass. Soc. 13 janvier 2009)</p>		<p>The notion of autonomy is not required for managers. Managers in France (<i>cadres</i>) do not necessarily manage people. As a result the regime of conventions de forfait is widely applied to workers who are considered managers but are not at all autonomous.</p>

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HU	Yes - Executive employee	<p>An executive employee is a director, and any other person under their direct supervision and authorised (in part or in whole) to act as deputy director.</p> <p>Employment contracts may invoke the provisions on executive workers if the worker is in a position considered to be of considerable importance from the point of view of the employer's operations, or fills a post of trust, and his salary reaches seven times the mandatory minimum wage.</p>		
Country	Use of the derogation of Article 17	Definition Autonomous worker	Relevant case law	Issues arising from the definition applied
	Yes/No			
IT	Yes - managers	In principle, the definitions of the WTD are used, but these are interpreted broadly	Inclusion of all hospital doctors under the definition of autonomous workers being challenged by the Commission.	
NL	Yes - Managers	<i>Leidinggevende (gives directions to other workers and has a salary two times higher than the legal minimum wage) en hogere personeel (salary three times higher than the legal minimum salary) – managerial staff (autonomous workers)</i> This type of staff is exempted from the legal maximum working time rules and minimum legal rest periods. Collective agreements can however derogate from this exemption.		

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PL	Yes - Managers	Managers are workers who manage the workplace in the name of employers.	The Polish Supreme Court repeatedly ruled to clarify which workers could be included in category of 'management'. The Court found out that to fall under this definition, managers should be included in the first row of the board members in companies, be branch managers of domestic and foreign entrepreneurs, be directors of state enterprises, and in some cases directors, called "CEO" who single-handedly manage the company, without being member of the board.	
Country	Use of the derogation of Article 17	Definition Autonomous worker	Relevant case law	Issues arising from the definition applied
	Yes/No			
ES	Yes	There is a special labour regulation which exists for senior management. The employer and such senior managers can agree on a contract which provides for average working time and rest time with only one limit: that it cannot exceed "significantly" from the general rules on working time in the relevant professional field (RD 1382/1985). Although this therefore provides for greater working time flexibility for senior managers in line with the derogation made possible by Article 17, in reality, it could be considered that is not clear to what extent such workers enjoy real decision making autonomy, as their work and work organisation is subject to board level decisions.		Collective agreements can set down more detailed characteristics which such workers must possess.

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SE	Yes	<p>Autonomous workers are defined as workers:</p> <ul style="list-style-type: none"> - <i>who perform work 'under such conditions that supervision of how the work is organised cannot be deemed to be the employer's responsibility' or;</i> - <i>[whose] 'work performed by workers who, considering their duties and employment conditions, hold managerial or comparable positions, or by workers who, considering their duties, are entrusted with organising their own working time'.</i> 	No existing case-law on this subject.	There is a tradition of long working hours in the UK. As a result issues have not really arisen on the question of 'autonomous workers'.
UK	Yes	<p>A worker who, on account of the specific characteristics of the activity in which he is engaged, the duration of his working time is not measured or predetermined or can be determined by the worker himself, as may be the case for—</p> <ul style="list-style-type: none"> (a) managing executives or other persons with autonomous decision-taking powers; (b) family workers; or (c) workers officiating at religious ceremonies in churches and religious communities. 	No existing case-law on this subject.	There is a tradition of long working hours in the UK. As a result issues have not really arisen on the question of 'autonomous workers'.

4.4.3 Level of changes for Member States' legislation to comply with the possible changes

A tighter definition of autonomous workers will normally have no impact on the Czech legislation as this country does not currently use the derogation of Article 17 of the WTD. It can also be considered that this narrower definition will not lead to significant changes in Germany, Hungary and Poland. In the case of these three Member States, the definition they currently have only includes the executive management and clear criteria are used to determine which managers fall into the scope of the definitions. For instance, the following criteria are taken into account: remuneration, the participation in the committee of executives or a function in the company which relates to the function of a director or a deputy director.

Some impact is also likely in Spain and the Netherlands, where full autonomy over setting working hours is not the main strict criterion to define autonomous workers or this is interpreted more broadly.

The most important impact on legislation would most likely be observed in the UK and in France. In both countries the definition of autonomous workers is rather broad. In case of the introduction of a tighter definition in the WTD, these Member States would have to modify their legislation and narrow their current definition.

The situation in Italy is more complex. Under the assumption of full compliance, the Italian legal text is in line with the provisions of the WTD.

Table 4.20 Level of changes required in national legislation as a result of potential changes to the Working Time Directive (assuming full compliance)

Possible changes to Directive	Impact of possible changes									
	CZ ²³⁹	DE	FR	HU	IT	NL	PL	ES	SE	UK
Autonomous workers										
• Tighter definition	0	0	++	0	++	+	0	+	+	++

Note: ++ indicates significantly stricter provisions required; + somewhat stricter provisions required; 0 indicates no change needed; - somewhat more flexibility compared to current provisions; -- significantly greater flexibility compared to current provisions.

Table 4.21 Level of changes required in national legislation as a result of potential changes to the Working Time Directive ('alternative baseline scenario' a: current legal situation)

Possible changes to Directive	Impact of possible changes									
	CZ ²⁴⁰	DE	FR	HU	IT	NL	PL	ES	SE	UK
Autonomous workers										
• Tighter definition	0	0	++	0	0	+	0	+	+	++

Note: ++ indicates significantly stricter provisions required; + somewhat stricter provisions required; 0 indicates no change needed; - somewhat more flexibility compared to current provisions; -- significantly greater flexibility compared to current provisions.

²³⁹ Czech Republic does not use the derogation of autonomous workers provided by Article 17.

²⁴⁰ Czech Republic does not use the derogation of autonomous workers provided by Article 17.

Table 4.22 Level of importance of collective agreements in relation to the derogation in Article 17 of the WTD on autonomous workers

Possible changes to Directive	Role of collective agreements									
	CZ ²⁴¹	DE	FR	HU	IT	NL	PL	ES	SE	UK
Autonomous workers	0	0	++	0	+	0	0	0	0	0

Note: ++ indicates that collective agreements play a significantly important role + somewhat important role; 0 indicates no role played by the collective agreements.

²⁴¹ Czech Republic does not use the derogation of autonomous workers provided by Article 17.

4.4.4 Affected population

This section discusses the approach to, and results of identifying the population expected to be affected by the possible change in the definition of 'autonomous workers' (change 5). Target and affected populations in possible change 5 are measured in different units: number of enterprises for AA5.1 and number of workers for AA5.2.

Both the target and the affected populations for possible change 5 related to AA5.1 (familiarisation with the new definition of 'autonomous workers') consist of all enterprises with workers as it is plausible to assume they are not a priori aware whether they have any 'autonomous' workers or not and would have to check what this new definition entails. Hence, all enterprises with workers will have to delegate someone to look at and analyse the change in legislation to understand what this is about and what the implications for the enterprise are.

Affected enterprises are calculated as follows. For the private sector the number of enterprises by business size is provided in the 2011 "Structural Business Statistics" (SBS) data²⁴². As values were missing for some countries (DK, DE, IT, CY and EL) they have been replaced by using the 2011 "Business Demography Statistics" (BDS) data²⁴³, which cover the so-called "business economy" similar to the SBS data. However, since BDS data were not available for SMEs and large enterprises (as they have been defined in the present study), some elaborations were necessary. Specifically, the EU28 shares of SMEs and large enterprises as suggested by SBS data have been applied to the total number of enterprises as provided by the BDS in DK, DE, IT, CY and EL. Numbers of SMEs in the private sector have been corrected by removing those employers without workers. This has been done by using 2011 BDS data²⁴⁴. In order to estimate the number of enterprises in the public sector, the ratio between numbers of enterprises by business size in the private sector over number of workers by business size in the private sector (as provided by EWCS data) has been applied to the public sector. Finally, numbers of private and public enterprises by business size as been summed up. Overall, the affected population for possible change 5 related to AA5.1 is all enterprises with workers, around 15 million. Details are provided in Table 4.23.

Table 4.23 Estimates of affected population for possible change 5 "definition of autonomous workers" (thousands of workers and % of all workers)

	SMEs (<=250)		Large companies (> 250)		Total	
	Thousand	% of all workers	Thousand	% of all workers	Thousand	% of all workers
AT	47	2%	24	4%	71	2%
BE	203	7%	65	9%	269	7%
BG	102	4%	9	4%	111	4%
CY	7	2%	0	3%	7	2%

²⁴² The variable used is annual enterprise statistics by size class for special aggregates of activities ("sbs_sc_sca_r2") which is available in the Eurostat database.

²⁴³ The variable used is business demography by size class from 2004 onwards ("bd_9bd_sz_cl_r2") which is available in the Eurostat database.

²⁴⁴ Variable "bd_9bd_sz_cl_r2" described above. Please note that for HR 2012 data have been used as value was missing for 2011. Similarly for EL the EU27 average has been applied.

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	SMEs (<=250)		Large companies (> 250)		Total	
	Thousand	% of all workers	Thousand	% of all workers	Thousand	% of all workers
CZ	0	0%	0	0%	0	0%
DE	0	0%	0	0%	0	0%
DK	47	2%	9	3%	56	2%
EE	39	8%	6	18%	46	8%
EL	36	2%	34	20%	70	3%
ES	0	0%	0	0%	0	0%
FI	67	4%	20	7%	87	4%
FR	508	3%	124	3%	633	3%
HR	27	2%	2	2%	29	2%
HU	0	0%	0	0%	0	0%
IE	123	10%	66	20%	189	12%
IT	204	1%	97	4%	300	2%
LT	98	9%	2	4%	100	9%
LU	3	2%	2	5%	6	3%
LV	48	6%	2	4%	50	6%
MT	7	5%	2	12%	9	6%
NL	220	4%	68	6%	288	4%
PL	0	0%	0	0%	0	0%
PT	45	1%	6	2%	51	2%
RO	114	2%	31	3%	145	2%
SE	158	5%	45	7%	204	5%
SI	17	3%	4	3%	21	3%
SK	54	3%	4	2%	58	3%
UK	633	3%	198	4%	831	3%
EU28	2,808	1.8%	822	3.1%	3,630	2.0%

Source: Own elaboration

The target population for possible change 5 related to AA5.2 (adjusting the worker data file) consists of workers currently considered as autonomous when this leads to them not being covered by the WTD and their employers. The affected population is equal to the target population in this case.

For the 10 in-depth countries covered by legal mapping the estimates for affected populations are constructed individually. Specifically, this is done as follows.

- Czech Republic: the estimate is zero as derogations to Art 17 of WTD are not used.

- France: the estimate is constructed by taking 50% of the population defined as white collar workers (ISCO 1-5) who indicate that their working hours are entirely determined by themselves (based on question Q39 of EWCS). The rationale for such a choice is that our analysis suggests that currently in France the type of contracts leading to a derogation from the WTD on the basis of Art 17 (*convention de forfait en heures sur l'année*) appears to be used extensively for different groups of white collar workers and furthermore not all 'managers' (*cadres*) really manage other workers. Hence, a relatively large group of workers would be directly affected by the possible change to the WTD.
- Germany: the estimate is zero as current application of the definition is quite strict leading to a limited number of workers exempted from WTD provision on this basis.
- Hungary: the estimate is zero as current application of the definition is quite strict.
- Italy: the estimate is constructed by considering all managers (ISCO 1) who indicate that their working hours are not entirely determined by themselves (based on question Q39 of EWCS). The rationale for such a choice is that those currently identified as 'managers' is de jure closely followed in Italian legislation.
- Netherlands: the estimate is constructed by taking 50% of the population defined as highly skilled white collar workers who are not managers (ISCO 2-3) who indicate that their working hours are entirely determined by themselves (based on question Q39 of EWCS). The rationale for such a choice is that in the Netherlands the currently applied rule for determining being 'autonomous' is based on salary exceeding certain threshold.
- Poland: the estimate is zero as current application of the definition is quite strict.
- Spain: the estimate is zero as current application of the definition is quite strict.
- Sweden: all high skilled white collar workers who are not managers (ISCO 2-3) who indicate that their working hours are entirely determined by themselves (based on question Q39 of EWCS). The rationale for such a choice is that in Sweden the currently applied definition applies both to those holding a managerial position and those 'entrusted with organising their own working time'.
- United Kingdom: the estimate is constructed by considering 25% of all managers (ISCO 1) who indicate that their working hours are not entirely determined by themselves (based on question Q39 of EWCS). The rationale for this choice is that those currently identified as 'managers' and are covered by the derogation is closely followed in UK legislation. The estimate considers just 25% of these managers given that qualitative information suggests a much wider use of opt-out clause than of the autonomous workers derogation.

For the remaining 18 European Member States given the lack of more precise data the estimate is constructed by considering all managers (ISCO 1) who indicate that their working hours are not entirely determined by themselves (based on question Q39 of EWCS).

Overall, the affected population for possible change 5 related to AA5.2 is 2.0% of all workers or 3.6 million individuals. Details are provided in Table 4.24. This could be interpreted as an upper bound for the size of the affected population.

Table 4.24 Estimates of affected population for possible change 5 “definition of autonomous workers” (thousands of workers and percentage of all workers)

	SMEs (<=250)		Large companies (> 250)		Total	
	Thousand	% of all workers	Thousand	% of all workers	Thousand	% of all workers
AT	47	1.6%	24	3.8%	71	2.0%
BE	203	6.5%	65	9.0%	269	7.0%
BG	102	4.3%	9	4.3%	111	4.3%
CY	7	2.3%	0	2.8%	7	2.3%
CZ	0	0.0%	0	0.0%	0	0.0%
DE	0	0.0%	0	0.0%	0	0.0%
DK	47	2.2%	9	2.6%	56	2.3%
EE	39	7.5%	6	18.3%	46	8.1%
EL	36	1.8%	34	19.9%	70	3.2%
ES	0	0.0%	0	0.0%	0	0.0%
FI	67	3.6%	20	6.9%	87	4.1%
FR	508	2.7%	124	3.3%	633	2.8%
HR	27	2.4%	2	1.7%	29	2.3%
HU	0	0.0%	0	0.0%	0	0.0%
IE	123	10.0%	66	20.1%	189	12.2%
IT	204	1.4%	97	4.4%	300	1.8%
LT	98	9.0%	2	4.4%	100	8.8%
LU	3	1.9%	2	4.7%	6	2.6%
LV	48	6.4%	2	4.1%	50	6.3%
MT	7	4.9%	2	11.8%	9	5.8%
NL	220	3.8%	68	5.8%	288	4.1%
PL	0	0.0%	0	0.0%	0	0.0%
PT	45	1.4%	6	2.2%	51	1.5%
RO	114	2.2%	31	2.9%	145	2.3%
SE	158	4.5%	45	6.7%	204	4.8%
SI	17	2.7%	4	3.2%	21	2.8%
SK	54	3.0%	4	2.4%	58	2.9%
UK	633	3.2%	198	3.5%	831	3.3%
EU28	2,808	1.8%	822	3.1%	3,630	2.0%

Source: Own elaboration

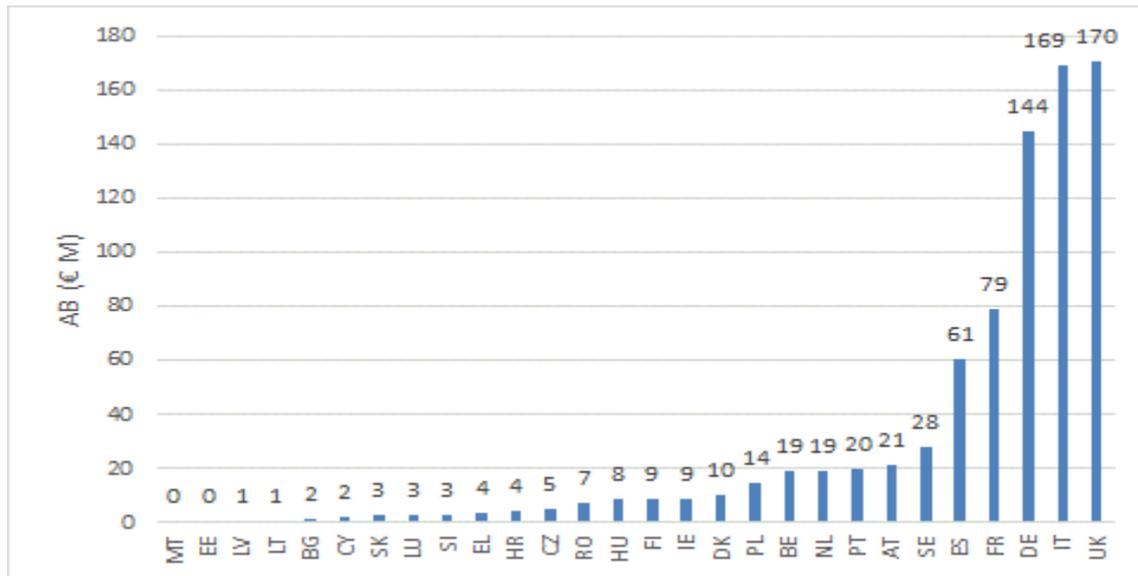
4.4.5 Assessment of Administrative Burdens

The possible change regarding “autonomous workers” in relation to the administrative action of familiarising with the new obligation will pose a new AB since such a clear

definition is not currently in existence; therefore the BAU for this change is 0%, as no costs exist according to the assessed baseline.

Five countries: the UK, Italy, Germany, France and Spain (Figure 4.15) account for 76% of the total AB. These results are driven by the size of the population affected which has been calculated mainly on the basis of the national legal definition of the 'autonomous workers'. This will be a one-off cost mainly borne in the first year post implementation.

Figure 4.15 Estimates of administrative burdens for familiarising with the new obligation and a new definition (AA5.1) according to possible change 5 "definition of autonomous workers"

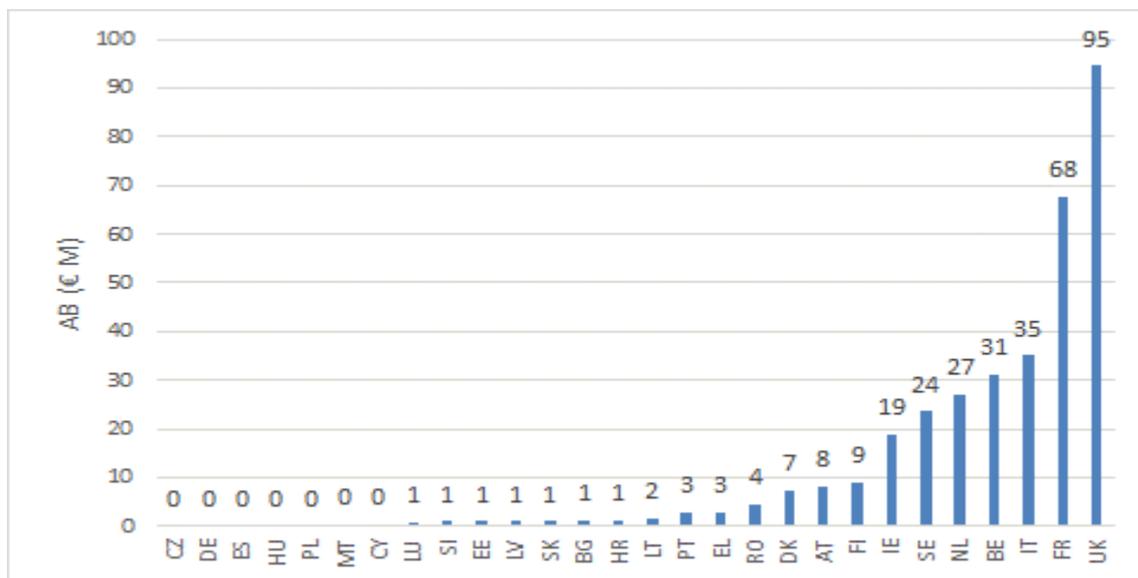


Source: Own elaboration.

The possible change on "autonomous workers" in relation to the administrative action of adjusting the worker data file will pose a new AB since the new definition is not currently in existence; therefore the BAU in relation to this change is 0% as no costs exist according to the assessed baseline. This will be also be a one-off cost mainly borne in the first year post implementation.

Six countries, Belgium, France, Italy, the Netherlands, Sweden and the UK account for 81% of the total AB.

Figure 4.16 Estimates of administrative burdens for adjusting worker data file (AA5.2) according to possible change 5 “definition of autonomous workers”



Source: Own elaboration.

4.4.6 Socio-economic impact

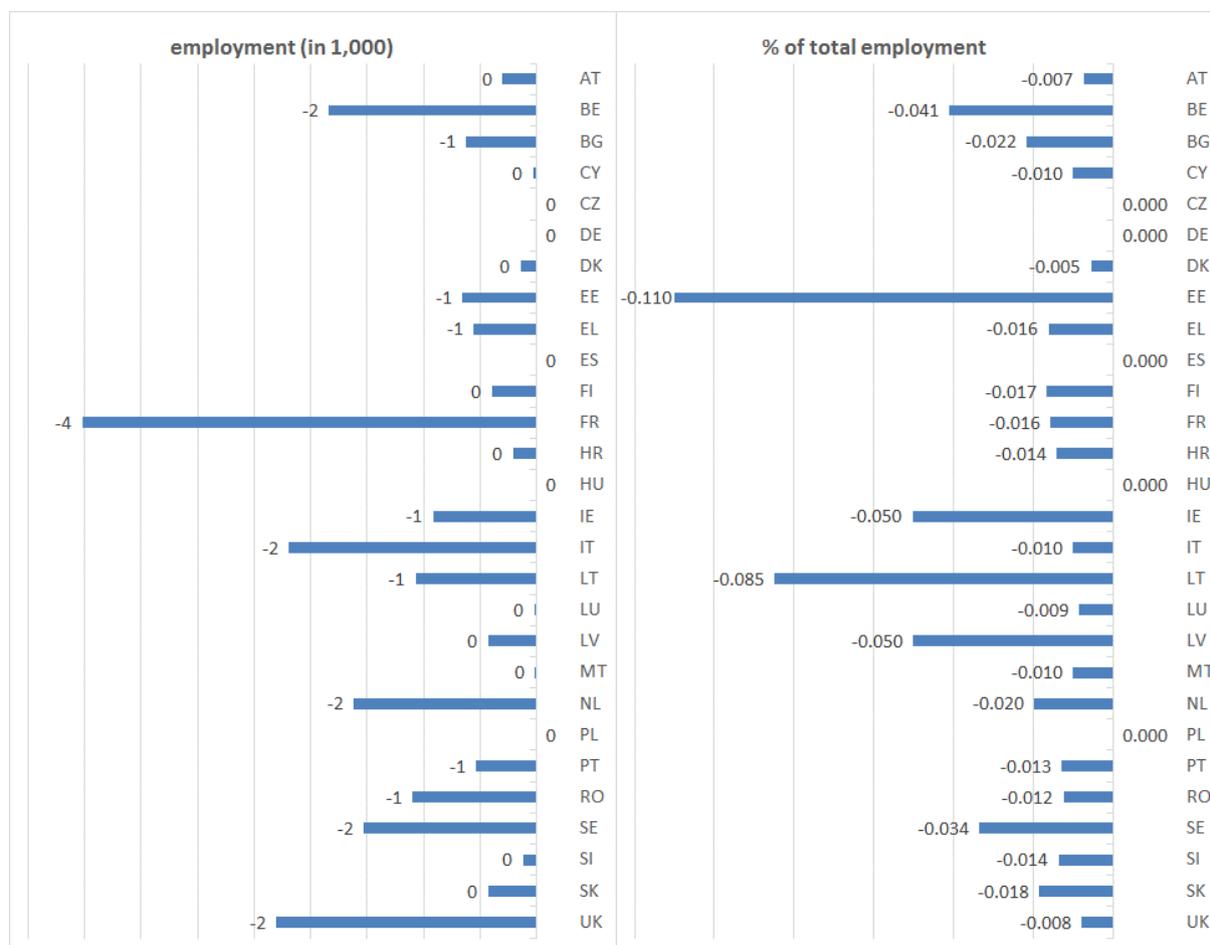
Autonomous workers can be exempt from the provision of the WTD. In order to investigate the economic impact of changing the clarity of the scope of the definition of the concept of autonomous workers, it was necessary to assess (1) the incidence of autonomous workers; and (2) what value does this exemption have for the employer. Or put differently, what kinds of restrictions are lifted, that would have been in place before and which additional groups of workers might fall under the scope of the WTD under a tighter (or more clearly defined) interpretation?

The legal mapping has shown that precise definitions of what constitutes ‘autonomous workers’ differ from country to country, with some incorporating significantly more workers than others.

As outlined above, the problem in the evaluation lies in the fact that it can be difficult to quantify how many workers are currently classified as being autonomous. As autonomous workers are exempted from many of the provisions of the WTD, the value of the exemption has to be identified and determined. This is however, not possible from the available statistical data, but has to be assessed on the basis of scant national information.

The more stringent definition of autonomous workers will have modest employment effects overall. Unaffected are countries that already have a strict definition of autonomous workers in line with the original intentions of the Directive (e.g. Germany, Hungary, Poland). Detailed results can be found in the Figure below. The overall employment impact is considered likely to be moderately negative.

Figure 4.17 Employment change due to change in definition of autonomous worker, by Member State



Source: Own elaboration. Note: The first panel shows employment impacts in thousand, while the second panel shows the employment impacts as a share of the total employment by country. In CZ, DE, ES, HU and PL the impact is nil.

4.5 Possible change in the rules on allowing the opt-out

Summary of findings on possible change 6

The possible change proposed

The opt-out provisions are among the most controversially discussed elements of the WTD. In terms of any potential revision, three types of scenarios have been taken into account, some of which are linked to the application of other possible changes:

- Reinforced conditions for using the opt-out (possible changes already considered by the 2012 study)
- Limitations to the opt-out when linked to other possible changes such as greater flexibility in the counting of on-call time or compensatory rest.
- Suppression of the opt-out (phasing out over a period of time).

Changes required to the baseline situation

The opt-out is currently available for all workers in the UK and Hungary and is

restricted to workers in certain sectors (mainly healthcare and other emergency services) in Germany, France, Poland, the Netherlands and Spain. It is not used in Italy and since 2014 is no longer used in the Czech Republic.

- A full phasing out of the opt-out or its suppression when combined with other possible changes would have the greatest impact in the UK and a lesser impact in Germany, France, Poland, the Netherlands and Spain.
- With regard to provisions tightening up the use of the opt-out, a number of countries have requirements to monitor and record working hours, but requirements to report and assess its impact on workers are poorly developed and would therefore require enhanced provisions in many countries.

Administrative burden

This study did not assess the administrative burden linked to the possible changes to opt-out provisions (in relation to greater control of opt-out provisions) as these were already considered in the 2012 study.

Socio-economic impact

An attempt was made to assess the socio-economic impact of changes in opt-out provisions based on the data on affected populations used in the 2012 study. However, this leads to significant missing values, which do not allow an EU-wide assessment. Employment effects in the countries where data are available are moderately negative.

Should changes to the opt-out rules bring more individuals under the remit of the Directive, the impact is a potential reduction in their working hours with a potentially positive health and safety and productivity impact.

4.5.1 The current position and proposed changes being assessed

The opt-out, regulated under Article 22 of the WTD, provides Member States with the possibility to allow employers to ask workers to work beyond the 48-hour limit to the average weekly working time laid down in Article 6, as long as the worker freely and individually agrees and can revoke this agreement without suffering prejudice. Three types of scenarios can be envisaged with regard to the amendment of the opt-out clause, some of which are also linked to the application of other possible changes:

- Reinforced conditions for using the opt-out

These potential changes are in line with the options assessed by the 2012 study, i.e.

- Requiring employers who use the opt-out to keep records of all working hours of workers who have agreed to it (and not just of the workers names as is currently the case);
- Providing that a worker may not validly be asked to opt-out prior to or at the occasion of negotiating/signing an employment contract, during a probationary period, or within one month after the conclusion of an employment contract;
- Requiring the employer to keep written proof of the workers' prior consent to opt-out and to include in the consent form information to the worker about their rights under article 22.1 of the Directive;
- Requiring national authorities to compile information about the use of the opt-out, to evaluate the health and safety effects of such use for the workers' concerned, and to report their findings to the European Commission.

In addition, a number of further possibilities are to be considered, linked to the possible on-call time, compensatory rest and reference period changes.

- Limitations to the use of the opt-out

In a situation where other changes to the WTD foresee the use of certain derogations such as a longer reference periods, the partial consideration of on-call time as working time or a more flexible approach to compensatory rest, it could be stipulated that these can only be used if for the workers concerned the possibility to opt-out is not utilised.

- Suppression of the opt-out

The most far reaching scenario here would be the suppression of the opt-out, envisaging a phasing out over time.

4.5.2 Comparative overview of Member States provisions

The UK, Germany, Hungary and France are the only Member States in the sample of 10 countries studied in detail allowing the use of the opt-out. However, it must be noted that they do not do so under the same conditions. In France and Hungary, the opt-out is only used in the healthcare sector where there is an important share of on-call work²⁴⁵. As a result, this only applies in the public sector and is not authorised under labour law applying to the private sector. In Germany, a collective agreement must authorise the use of the opt-out to make it legal (this is only applied in sectors which regularly use on-call work, such as the health care sector). The Czech Republic used the opt-out primarily for doctors in the hospital sector until January 2014, but for the time being, this has been phased out.²⁴⁶ Finally, the UK is the Member State making the widest use of the opt-out. It is not restricted to any sector and because of the tradition of long-working hours in this country, many workers are concerned by this exception of the Working Time Directive. The Working Hours Act requires the employer to keep up-to-date records on the workers concerned by this derogation, a written proof that the worker agreed and the number of hours worked since the agreement came into effect. The other Member States in our sample - Italy, Poland and Sweden - do not make use of the opt-out.

²⁴⁵ Commission Staff Working Document (2010)

²⁴⁶ See <http://www.eurofound.europa.eu/eiro/2014/02/articles/cz1402069i.htm>

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Table 4.25 Current regulation of on-call and stand-by time

Country	Use of the opt-out		Are data/records collected (as required by the WTD). If yes, what kind?
	Yes/No	Sectors	
CZ	No	Health care sector (until 2014)	Requirement to record working hours; evidence to be stored for 5 years
DE	Yes	The opt-out can be used if allowed by a collective agreement.	
FR	Yes	Only in the healthcare sector	
HU	Yes	Only in the healthcare sector	
IT	No		
NL	Yes	Health care sector	Requirement to record working hours; must be stored for 52 weeks
PL	Yes	Health care sector	
ES	Yes	Health care sector	
SE	No		
UK	Yes	All – Individual opt-out	<p>The employer must:</p> <ul style="list-style-type: none"> - maintain up-to-date records which identify each of the workers whom he employs who has agreed that the limit specified in regulation 4(1) should not apply in his case; - set out any terms on which the worker agreed that the limit should not apply; and - specify the number of hours worked by him for the employer during each reference period since the agreement came into effect (excluding any period which ended more than two years before the

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Country	Use of the opt-out		Are data/records collected (as required by the WTD). If yes, what kind?
	Yes/No	Sectors	
			most recent entry in the records); - permits any inspector appointed by the Health and Safety Executive or any other authority which is responsible under regulation 28 for the enforcement of these Regulations to inspect those records on request; and - provides any such inspector with such information as he may request regarding any case in which a worker has agreed that the 48 working hours for each seven days should not apply in his case.

4.5.3 Level of changes for Member States' legislation to comply with the possible changes

The suppression of the opt-out and limitations of the use of the opt-out (in the context of other changes in the Directive) would have the most significant impact in the UK where its use is most widespread. In Germany, the Netherlands and Hungary, its use also extends beyond the healthcare sector (in principle), whereas in France, Poland and Spain, the impact would be limited to the health care sector. In general, it is worth bearing in mind that in all questions linked to the opt-out, the extent to which it is used in practice is also important to consider. Indeed, some Member States may allow the use of the opt-out but in practice, it is possible that only few workers agree to it.

With regard to the re-enforced conditions on the use of the opt-out – according to the Economisti Associati report - the Netherlands, Germany, Hungary and Spain already require employers to keep written proof of agreement of workers' consent to opt-out. In countries where the requirement to maintain such records is clear, it can also be considered easier to supply information on the use of the opt-out to the relevant authorities. No Member States in our sample currently make provisions regarding when the opt-out can be signed, stipulating that this cannot be requested immediately upon signing of an employment contract. New provisions would therefore be required in all countries.

A requirement to record working hours of opted out workers is specifically provided in Germany and Poland. In the Netherlands such a requirement to record hours arises from more general provisions.

The 2012 report by Economisti Associati indicates that there is no evidence that any Member State covered in their study gathers information monitoring the impact of the opt-out.

Table 4.26 Level of changes required in national legislation as a result of potential changes to the WTD relating to opt-out provisions (assuming full compliance)

Possible changes to Directive	Impact of possible changes									
	CZ ²⁴⁷	DE	FR ²⁴⁸	HU	IT ²⁴⁹	NL ²⁵⁰	PL ²⁵¹	ES ²⁵²	SE ²⁵³	UK
Opt-out										
Reinforced conditions for use of opt-out										
• Requirement to keep records of hours worked for opted out workers	n/a	0	+	0	n/a	0	+	+	n/a	0
• Restrictions on when worker can be asked to sign opt-out	n/a	+	+	+	n/a	+	+	+	n/a	+
• Requirement to keep written proof										
• Requirement for national authorities to evaluate health and safety impact of use of opt-out	n/a	0	+	0	n/a	0	+	+	n/a	0
Restrictions on use of opt-out (when combined with other possible changes)	n/a	+	+	+	n/a	+	+	+	n/a	+
Suppression of opt-out										

²⁴⁷ Czech Republic no longer uses the opt-out since 2014.

²⁴⁸ Use of opt-out only in health care sector

²⁴⁹ No use of opt-out

²⁵⁰ Use of opt-out in in health care sector and among fire fighters

²⁵¹ Use of opt-out only in health care sector

²⁵² Use of opt-out only in health care sector

²⁵³ Sweden does not use the opt-out

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Possible changes to Directive	Impact of possible changes									
	n/a	+	+	+	n/a	+	+	+	n/a	++
	n/a	+	+	++	n/a	+	+	+	n/a	++

Note: ++ indicates significantly stricter provisions required; + somewhat stricter provisions required; 0 indicates no change needed; - somewhat more flexibility compared to current provisions; -- significantly greater flexibility compared to current provisions.

Table 4.27 Level of changes required in national legislation as a result of potential changes to the WTD relating to opt-out provisions ('alternative baseline scenario' a: current legal situation)

Possible changes to Directive	Impact of possible changes									
	CZ ²⁵⁴	DE	FR ²⁵⁵	HU	IT ²⁵⁶	NL ²⁵⁷	PL ²⁵⁸	ES ²⁵⁹	SE ²⁶⁰	UK
Opt-out										
Reinforced conditions for use of opt-out										
<ul style="list-style-type: none"> Requirement to keep records of hours worked for opted out workers 	n/a	0	+	0	n/a	0	+	+	n/a	0
<ul style="list-style-type: none"> Restrictions on when worker 										

²⁵⁴ Czech Republic no longer uses the opt-out since 2014.

²⁵⁵ Use of opt-out only in health care sector

²⁵⁶ No use of opt-out

²⁵⁷ Use of opt-out in in health care sector and among fire fighters

²⁵⁸ Use of opt-out only in health care sector

²⁵⁹ Use of opt-out only in health care sector

²⁶⁰ Sweden does not use the opt-out

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Possible changes to Directive	Impact of possible changes									
can be asked to sign opt-out	n/a	+	+	+	n/a	+	+	+	n/a	+
• Requirement to keep written proof										
• Requirement for national authorities to evaluate health and safety impact of use of opt-out	n/a	0	+	0	n/a	0	+	+	n/a	0
Restrictions on use of opt-out (when combined with other possible changes)	n/a	+	+	+	n/a	+	+	+	n/a	+
Suppression of opt-out	n/a	+	+	+	n/a	+	+	+	n/a	++
	n/a	+	+	++	n/a	+	+	+	n/a	++

Note: ++ indicates significantly stricter provisions required; + somewhat stricter provisions required; 0 indicates no change needed; - somewhat more flexibility compared to current provisions; -- significantly greater flexibility compared to current provisions.

Table4.28 Level of importance of collective agreements in relation to the possibility to opt-out

Possible changes to Directive	Role of collective agreements									
	CZ ²⁶¹	DE	FR ²⁶²	HU	IT ²⁶³	NL ²⁶⁴	PL ²⁶⁵	ES ²⁶⁶	SE ²⁶⁷	UK

²⁶¹ Czech Republic no longer uses the opt-out since 2014.

²⁶² Use of opt-out only in health care sector

²⁶³ No use of opt-out

²⁶⁴ Use of opt-out in in health care sector and among fire fighters

²⁶⁵ Use of opt-out only in health care sector

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Possible changes to Directive	Role of collective agreements										
Possibility to opt-out	0	+	0	0	0	0	0	0	0	0	0

Note: ++ indicates that collective agreements play a significantly important role + somewhat important role; 0 indicates no role played by the collective agreements.

²⁶⁶ Use of opt-out only in health care sector

²⁶⁷ Sweden does not use the opt-out

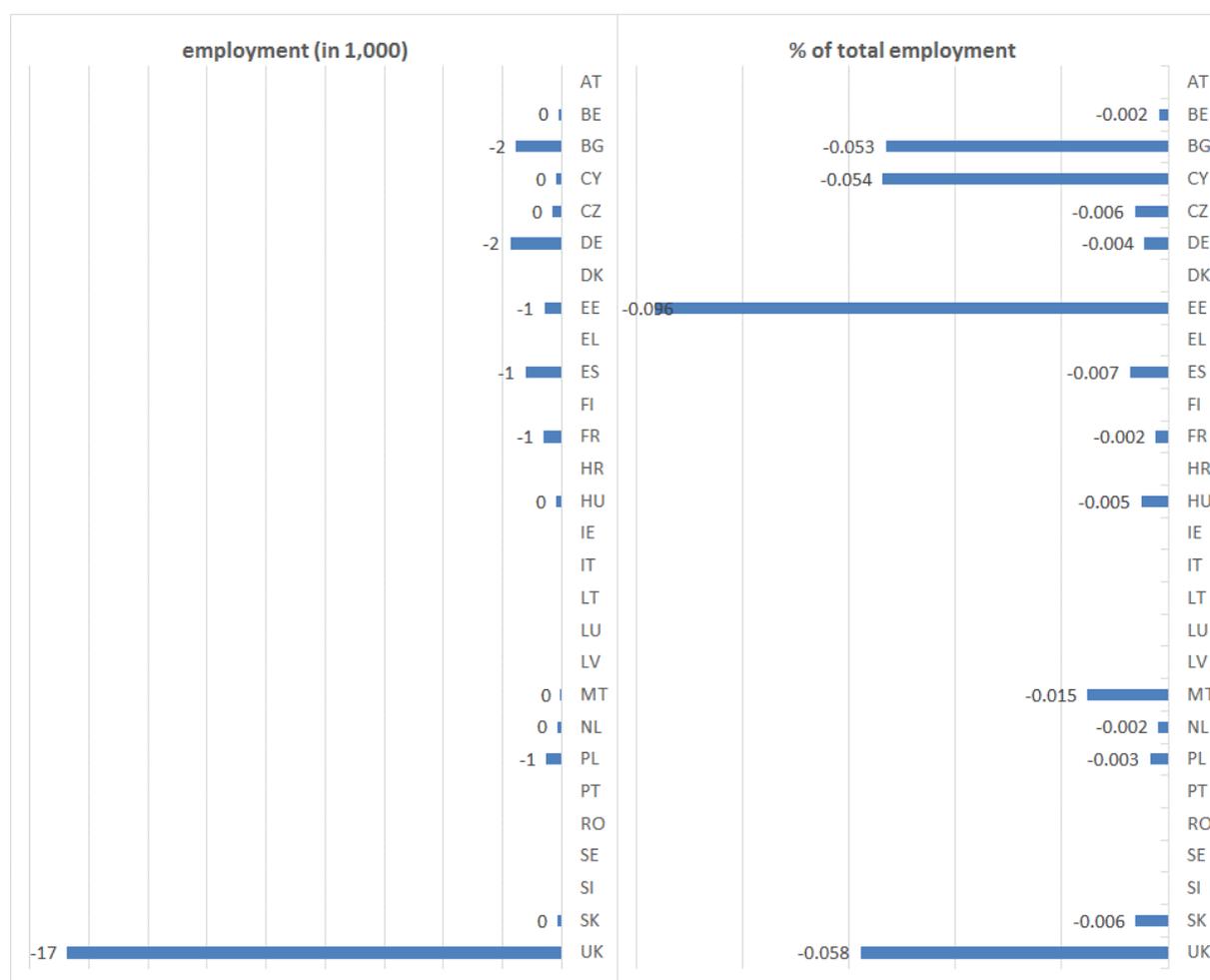
4.5.4 Socio-economic impact

The use of the opt-out raises an issue which is similar to the one raised with regard to autonomous workers. According to the relevant WTD provision, a specified group (those opting out) can be exempted from adhering to core working time regulation.

Again the problem in evaluating the impact of any change lies in the correct identification of the incidence of the use of the opt-out. This is however, not possible from the available statistical data. The approaches and distributions used by the 2012 study to assess the administrative burden linked to opt-out were used to calculate possible employment effects here. This implies missing values for almost half of the countries. Based on this limited data, the employment impact of these possible changes is considered to be moderately negative.

The lack of data meant that it has not been possible to calculate the impact of any interaction between the implementation of possible changes to rules on on-call and compensatory rest and the suppression of the opt-out.

Figure 4.18 Employment changes due to change in opt-out, by Member State



Source: own calculation. The first panel shows employment impacts in thousand, while the second panel shows the employment impacts as a share of the total employment by country. In AT, DK, EL, FI, HR, IE, IT, LT, LU, LV, PT, RO, SE and SI the impact is nil.

4.6 Possible change of the rules on working time in the event of concurrent contracts with the same employer

Summary of findings on possible change 7

The possible change proposed

This proposed change would clarify that in situations where workers hold concurrent contracts with the same employer, the WTD would apply per individual and not per contract.

Changes required to the baseline situation

No evidence is available on the scale of this phenomenon and none of the 10 countries has any provisions in law clearly stipulating whether in such situations the WTD applies per worker or per contract. In the UK, case law provides for application per worker.

It is therefore considered that all countries would need to apply stricter regulations should this potential change enter into force.

Administrative burden

AB linked to this possible change were considered in the 2012 report. The report assessed on the basis of Eurostat data that the scale of this phenomenon affected around 2% of workers and that 1% of workers with multiple contracts work more than 48 hours per week. This data does not distinguish between individuals with multiple employment relationships with the same or several different employers. The AB was anticipated to be around €60 million in the first year and €14 million in the following years.

Socio-economic impact

The simulation of the socio-economic impact of this possible change shows almost no effect on employment.

4.6.1 The current position and proposed changes being assessed

The WTD is currently silent on the question of whether the rules on maximum working hours should apply per contract or per individual. The potential administrative burden resulting from a clarification that this rule applies per individual should the individual hold concurrent contracts with the same employer was already assessed by the 2012 study. For this study, the regulatory impact on SMEs of the application of this option was assessed.

The impact of such a legislative change on employers and workers is very much dependent on the scale of the phenomenon of multiple contract holding with the same employer²⁶⁸ and the number of hours for which such contracts are concluded. No data could be found at national level on this issue. In principle, the impact of an application of the Directive per individual could be significant, particularly for workers on several part-time contracts, which is often the case in low paid sectors. For an employer such a restriction could bring with it the need to recruit additional staff, whereas for the worker it could have a substantial economic impact. In such a situation, it can be assumed that this would lead to worker seeking second employment with a different employer in order to make up the hours needed for what is considered a living wage. This could have implications for travel time and work-life balance among other things, but would not necessarily improve the position in relation to potentially excessive working hours.

²⁶⁸ It also depends on how widely the concept of the 'same employer' is defined.

The impact of potential changes also depends on the legal situation in the baseline.

4.6.2 Comparative overview of Member States provisions

None of the 10 Member States' legislation contains clear and explicit provisions regarding the application of working time regulation in the case of concurrent contracts with the same employer. This may be due to the fact that this situation is relatively rare in the countries studied also because of the fact that tax and social security rules make concurrent contracts (even part-time or limited hour contracts) unattractive as they are often considered to be one contract. Czech and Spanish legislation mentions the situation where a worker could have two contracts with the same employer. In Spain, an individual may hold, at the same time, two different employment contracts with two firms belonging to the same group of companies. Part-time workers may hold two employment contracts with different employers. In both cases, working time legislation applies per contract, which makes the application of minimum labour standards, including in relation to working hours more difficult to control. In the Czech Republic, the Labour Code states that in the event of a worker having two contracts with the same employer, the worker cannot perform the same type of work for both contracts²⁶⁹. However, the Labour Code does not provide for explicit rules for such cases. If an employer concludes a contract of employment or an agreement to perform work (this allows the worker to perform a specific type of work for 300 hours per 52 calendar weeks and it is a type of mixed contract outside the typical employment relationship, but it is still an employment contract and social security contributions is paid by the employer above a specific wage ceiling per year) with the same employer the worker would still fall under the rule that a working shift should not exceed 12 hours within 24 hours and average of work to be performed should not exceed one-half of standard weekly working hours (40 hours/week). Some Members States such as Germany, France and Italy regulate the situation of a worker having several contracts with different employers. In this case, working time legislation applies per individual. In Germany, tax and social security rules prevent employers from having two contracts with the same worker even in cases where this concerns a so called "mini-job" (on the basis of 450 Euro/month) where the employer does not pay social security contributions (apart from health insurance and pensions). On the other hand, Swedish legislation states in the event of concurrent contracts with different employers, working time rules apply per contract and not by individual. However, it is not stipulated in the law how legislation would apply if these concurrent contracts were concluded with the same employer. Poland and Hungary make no mention of the application of working time legislation in the case of concurrent contracts even with different employers. The UK is the only country among those studied where, according a legal expert interviewed, provisions apply per individual in situations of concurrent contracts with the same employer.

Collective agreements do not play an important role in this area.

²⁶⁹ Section 34b of the Czech Labour Code

Table 4.29 Concurrent contracts

	Relevant legal provisions	Rules in national legislation specifying whether provisions from the WTD apply per individual or per contract
CZ	Section 34b of the Labour Code	There is no explicit rule on the application of working time in the case of concurrent contracts. A worker can have two concurrent contracts with the same employer but that the worker cannot perform work of the same type for both contracts. Legal literature considers that the employer is responsible for ensuring that working time rules of both contracts respect the minimum standards enshrined in the Labour Code.
DE	Section 2 of the ArbZG	German legislation is not explicit of working time legislation to concurrent contracts with the same employer. However, German law mentions that rules on working time apply per individual in case of several employers.
FR	Article L8261-1 and L8261-2 of the French Labour Code	In France, an employer cannot conclude two part-time contracts with the same worker and this situation will give rise to a permanent contract. In addition, employers cannot conclude a contract with a worker if this would imply that this worker works more than the maximum legal working time.
HU	No provisions	There is no legislation ensuring that working time legislation applies per individual in the case of workers having concluded several contracts with the same employer or even with different employers. However, according to Hungarian general labour law, the employer is expected to comply with working time legislation.
IT	No provisions	There is no explicit legal mention of how working time legislation applies in the case of concurrent contracts with the same employer. However, when a worker has several contracts with several employers, employers must comply with existing regulations by considering the overall working time in all concurrent contracts.
NL	No provisions	

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Relevant legal provisions		Rules in national legislation specifying whether provisions from the WTD apply per individual or per contract
PL	No provisions	The application of working time rules in the case of concurrent contracts with the same employer is not expressly regulated by the law.
ES	No provisions	<p>The Spanish regulation does not regulate the situation where workers hold more than one employment contract with the same employer at the same time. Additionally, this situation is extremely rare. However, Spanish legislation provide that working time regulation applies per contract in the two following cases:</p> <ul style="list-style-type: none"> -An individual may hold, at the same time, two different employment contracts (both part-time or one part-time and one full-time) with two firms belonging to the same group of companies. -Part-time workers may hold two contemporary employment contracts with different employers.
SE	No provisions	<p>The situation in which a worker has concurrent contracts with the same employer is not provided for in the legislation. This is, however, very unlikely to occur in Sweden. If such a situation would occur it is assumed that working time rules would apply by worker and not by contract.</p> <p>However, working time legislation applies per contract when a worker has several contracts with several employers.</p>
UK	Working hour limits apply per individual	In case of concurrent contracts with the same employer, the working time provisions apply per individual ²⁷⁰ .

²⁷⁰ Information collected through stakeholder interview (Labour law expert).

4.6.3 Level of changes for Member States' legislation to comply with the possible changes

All Member States studied with the exception of the UK would need to insert a clear legal provision stating that working time legislation applies per individual in the case of concurrent contracts with the same employer. The possible change could be particularly significant in Spain where some provisions could be interpreted as meaning that a worker could currently work for the same companies (not necessarily the same employer) with working time rules applying per contract and not by individual.

As the current WTD is silent on this issue, there is no situation of non-compliance and as collective agreements do not contain regulations on this issue to our knowledge, no separate tables presenting potential changes required at national level are presented below for this item.

Table 4.30 Level of changes required in national legislation as a result of potential changes to the Working Time Directive

Possible changes to Directive	Impact of possible changes									
	CZ	DE	FR	HU	IT	NL	PL	ES	SE	UK
Concurrent employment contracts	+	+	+	+	+	+	+	+	+	0
<ul style="list-style-type: none"> Application per individual in case of multiple contracts with same employer 										

Note: ++ indicates significantly stricter provisions required; + somewhat stricter provisions required; 0 indicates no change needed; - somewhat more flexibility compared to current provisions; -- significantly greater flexibility compared to current provisions.

Tale 4.31 Level of importance of collective agreements in relation to concurrent contracts

Possible changes to Directive	Role of collective agreements									
	CZ	DE	FR	HU	IT	NL	PL	ES	SE	UK
Concurrent employment contracts	0	0	0	0	0	0	0	0	0	0
<ul style="list-style-type: none"> Application per individual in case of multiple contracts with same employer 										

Note: ++ indicates that collective agreements play a significantly important role + somewhat important role; 0 indicates no role played by the collective agreements.

4.6.4 Socio-economic impact

Calculating the socio-economic impact of a scenario in which multiple-contracts of a worker have to be taken into account in the calculation of the overall working time show (almost) no impact on employment. The affected population is so small that even higher than assumed cost increases would not have lifted this scenario into an economically relevant outcome. Employment outcomes are therefore not reported in this case.

4.7 Reconciliation

Summary of findings on possible changes 8a-c

The possible change proposed

Changes being considered here include the requirement for employers to inform workers well in advance of any substantial changes to their usual working hours and patterns (change 8a); a right to request flexible working (and for employers to provide reasons for refusal; change 8b); and the possibility to interrupt minimum daily rest of 11 hours and to take this within 14 hours (change 8c).

Changes required to the baseline situation

Germany, France, Poland and the UK provide the right to request flexible working to all workers, but in Germany and France this is restricted to the right to request particular arrangements (e.g. part-time work). In Poland, the employer is not required to consider or provide a reason for not granting such a request. The UK is the only country requiring an employer to consider and provide business reasons for not granting such requests.

The introduction of a right to request flexible working would therefore require significant changes in legislation in the Czech Republic, Hungary, Italy, Spain and Sweden (although in Sweden such rights are generally provide in collective agreements). More limited amendments may be necessary in Germany, France and Poland. The UK would be the only unaffected country.

Notice periods prior to changes in working patterns are unlikely to have an impact on the 10 study countries; however, there are currently no provisions that would allow workers flexibility in taking minimum daily rest as a work life balance measure.

Administrative burden

AB linked to possible changes 8a and 8b were considered in the 2012 report. Among all the options considered by this study, the AB associated with these options were the 2nd and 3rd highest and estimated at between €50 million and €130 million per year for 8a and between €220 million and €370 million per year for 8b. This estimated the cost of possible change 8c was €144 million per year (€130 million of this for SMEs).

Socio-economic impact

The socio-economic impact of these possible changes is considered to be comparatively modest but slightly negative.

4.7.1 The current position and proposed changes being assessed

Potential changes to enhance the reconciliation of work and family life include the introduction of an obligation for employers to inform workers well in advance of any substantial changes to their work patterns and the right for workers to request changes to their working hours and patterns (the employer must consider such requests and give reasons for any refusal). The impact of such changes on administrative burdens was already considered by the 2012 study and was assessed in this study in terms of the

regulatory burden they impose on SMEs and their economic impact. In addition, the administrative and regulatory burden of a further option will be considered: the possibility for a worker to agree (but only on their own demand, not of the employer) that he or she will not take an uninterrupted 11 hours of daily rest, but instead to take 11 hours within a 14 hour timeframe, giving the worker the possibility to interrupt their rest for a maximum of 3 hours and work again during this period, most notably from home but possibly also going back to the workplace. This would for example provide workers with greater flexibility to finish early and work additional hours later at home.

The administrative burden associated with informing workers in advance of changes to working patterns and of the right to request flexible working has been assessed as part of the 2012 study and was considered negligible, particularly in relation to the former change. Depending on the grounds upon which an employer can refuse a request to work flexibly, the impact for work organisation and the potential cost of additional recruitment could be significant, particularly if more workers should select to work part-time. At the same time, it has been demonstrated that offering additional flexibility in working patterns and working hours can increase staff satisfaction and retention, as well as having a potential impact on productivity. For workers, it will increase the ability to reconcile work and family life.

4.7.2 Comparative overview of Member States provisions

- Right to request flexible working time arrangements for all workers

The majority of Member States considered by the study, namely the Czech Republic, Hungary, Italy, Spain and Sweden do not have a right to request flexible working time arrangements in their legislation. Sweden differs from the others as in practice, even if this right is not enshrined in the legislation, most collective agreements give workers the right to request to work flexibly, obliging the workers to provide good business reasons for refusing such a request. French and German legislation contains a right for all workers to flexible arrangements but this does not concern all forms of flexible working time arrangements. In Germany this only applies if the worker asks for a reduction of working time (part-time work)²⁷¹ and an employer has to provide good business reasons for refusing. According to case law, an employer would have to prove that there is a working time concept which does not allow for the working hours as required by the worker. In France there is also a right to request to work part-time. This right is for all workers and a procedure is described in the Labour Code. The worker needs make this request six months in advance and the employer has three months to make a decision. Furthermore, this decision needs to be based on business grounds as defined in the Labour Code²⁷². In practice, the worker will have varying working hours but will need to be available during core hours. For both France and Germany, these provisions cannot be considered as a universal right even though all workers can make the request, as it does not include all the different forms of flexible working time arrangements such as telework or job-sharing for instance. Poland has a right to request flexible working in their legislation²⁷³. However, this is not fully in line with the possible change as the employer does not have an obligation to justify the refusal. Finally, the UK represents the only Member State having a right for all workers to request flexible working in its legislation. There is an obligation for the employer to justify the refusal by business reasons²⁷⁴. The Advisory, Conciliation and Arbitration Service (ACAS) has published some guidance for

²⁷¹ The Act on Part-Time Work and Fixed-Term Employment (*Teilzeit-und Befristungsgesetz*)

²⁷² Article L3122-23 of the French Labour Code

²⁷³ Article 152 of the Polish Labour Code

²⁷⁴ Flexible Working Regulations

employers to follow a some criteria and be sure that their refusal is indeed based on business reasons as stated in the legislation²⁷⁵.

The absence of legislative entitlements does not necessarily imply that flexible working arrangements are not possible, but simply that they are negotiated on a case-by-case basis between the employer and the worker.

- Requirement for employers to inform early regarding changes in working patterns

All 10 Member States provide for an obligation for the employer to inform workers early regarding changes in working patterns. Two notice periods could be identified in national legislation. In the Czech Republic, Germany, Spain and Sweden, employers are required to give workers two weeks' notice regarding changes in working patterns (in Spain this is a reduction from 30 days prior to 2012). In France, Hungary and Poland, the minimum period to notify workers of changes in working patterns is set at one week.

In the French HORECA sector, the national collective agreement states that workers must be informed at least seven working days in advance of the modification of their working time schedule/timetable. However, in order to take into account the variations in activity and seasonal fluctuations specific to the hotel industry, workers may be notified at least 48 hours in advance in the event of exceptional circumstances²⁷⁶. An attempt has been made to define the main features of such situations. The following are considered as exceptional circumstances: important unexpected arrivals or departures of customers, delays or gaps in arrivals and departures, weather conditions, the increased activity to compensate unexpected staff absences and in general, any other circumstance where there is a need for a rapid, unpredictable intervention which cannot be postponed. In the metal sector and in the HORECA sector in Italy, workers must be informed of the introduction of multi-period working time at least 15 days in advance. This can be reduced to five days in cases of emergency. Stand-by schedules must be communicated in writing at least seven days in advance. Finally, overtime can be required with at least a 24-hour notice. In the bakery sector in the Netherlands, the employer must communicate to workers their roster containing working hours and rest periods at least four weeks in advance. This roster may only be changed by the employer if there are unforeseen circumstances.

- Flexibility in taking uninterrupted minimum daily rest

None of the 10 Member States of study allow workers to take their minimum daily rest flexibly. This is due to the fact that Article 3 of the Working Time Directive states that every worker is entitled to a minimum daily rest period of 11 consecutive hours per 24-hour period.

²⁷⁵ <http://www.acas.org.uk/index.aspx?articleid=1616>

²⁷⁶ Article 19.3 of the Amendment No. 2 of 5 February 2007 on the organisation of working time

Table 4.32 Current regulation of reconciliation

	Right to request flexible working time for all workers		Existing requirements regarding provision of information on changes to working patterns	Possibility of flexibility in taking uninterrupted minimum daily rest
	Yes/ No	Under what conditions		
CZ	No		Yes, two-week notice.	Tbc
DE	Yes	For workers who have been working in the company for more than six months. This right only concerns a reduction in working time (part-time work)	Yes, two-week notice.	Not possible
FR	Yes	Yes for all workers but only to derogate to the general working hours set in the company.	Yes, one-week notice.	Not possible
HU	No		Yes, one-week notice.	Not possible
IT	No	Only for parents	Tbc	Not possible
NL	No	Only for parents	Tbc	Tbc
PL	Yes	Yes, the worker needs to fill in a written form. The employer does not need to justify the refusal.	Yes, one-week notice.	Not possible
ES	No	Only for carers.	Yes, two weeks' notice (15 days)	Not possible

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	Right to request flexible working time for all workers		Existing requirements regarding provision of information on changes to working patterns	Possibility of flexibility in taking uninterrupted minimum daily rest
	Yes/No	Under what conditions		
SE	No	No right in the legislation but this right is very often provided by collective agreements.	Yes, two-week notice. A shorter notice can be given by the employer to the worker if this is justified by the nature of the activity or unforeseeable events.	Not possible
UK	Yes	There is a universal right for all workers to ask for flexible working time arrangements. This concerns all forms of flexible working time arrangements. The employer's refusal must be justified on business grounds and the worker has a right to appeal the decision.	Tbc	Not possible

4.7.3 Level of changes for Member States' legislation to comply with the possible changes

4.7.3.1 Reconciliation

- Right to request flexible working time arrangements for all workers

The Czech Republic, Hungary, Italy, Spain represent the Member States in the sample which would have to change their legislation most significantly to comply with the possible change of having a right to request flexible working arrangements for all workers. Indeed, as there is currently no provision in place in these countries in this regard, new provisions will likely need to be introduced. Germany and France may have to extend their right to benefit from flexible arrangements to other concepts of flexible work such as teleworking, job-sharing, compressed hours etc. Although it does not fully comply with the content of the possible change, Sweden would have fewer changes to bring to their legislation in line. Sweden does not have a right explicitly written in legislation but this right is contained in collective agreements and is very widespread in practice. The Polish Labour Code contains the right for workers to request flexible working arrangements, but further clauses would be required to require employers to consider such requests and to provide sound business reasons for refusing. Finally, the UK is the only Member State where no change would be required.

- Requirement to inform early regarding changes in working patterns

It can be considered that the 10 Member States already fully comply with the possible change and that no change in their legislation would be required.

- Flexibility in taking uninterrupted minimum daily rest

All 10 Member States would have to change their national legislation to comply with the possible change.

As there is no current requirement regarding these issues in the Directive and therefore no situation of non-compliance and a limited importance of collective agreements on this issue (mainly in Sweden) no separate baseline assessments are presented on this issue below.

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Table 4.33 Level of changes required in national legislation as a result of potential changes to the Working Time Directive

Possible changes to Directive	Impact of possible changes									
	CZ	DE	FR	HU	IT	NL	PL	ES	SE	UK
Reconciliation										
Requirement to inform early regarding changes in working patterns	0	0	0	0	0	0	0	0	0	0
Right to request to work flexibly	++	+	+	++	++	++	+	++	+ ²⁷⁷	0
Greater flexibility regarding uninterrupted taking of minimum daily rest	++	++		++	++	Tbc	++	++	++	++

Note: ++ indicates significantly stricter provisions required; + somewhat stricter provisions required; 0 indicates no change needed; - somewhat more flexibility compared to current provisions; -- significantly greater flexibility compared to current provisions.

²⁷⁷ It is worth noting that this right is very often provided in collective agreements even though it is not clearly stipulated in legislation.

Table 4.34 Level of importance of collective agreements in relation to reconciliation of private and professional life

Possible changes to Directive	Role of collective agreements									
	CZ	DE	FR	HU	IT	NL	PL	ES	SE	UK
Reconciliation										
Requirement to inform early regarding changes in working patterns	0	0	+	+	+	0	0	0	0	0
Right to request to work flexibly	+ ²⁷⁹	+ ²⁸⁰	+ ²⁸¹	+ ²⁸²	++	+ ²⁸³	+ ²⁸⁴	++	+ ²⁸⁵	0
Greater flexibility regarding uninterrupted taking of minimum daily rest ²⁷⁸	0	0	0	0	0	0	0	0	0	0

Note: ++ indicates that collective agreements play a significantly important role + somewhat important role; 0 indicates no role played by the collective agreements.

²⁷⁸ Such provision is unlikely to exist in collective agreements as it would breach national legislation in the ten in-depth countries.

²⁷⁹ Caps have not been identified in the collective agreements reviewed for this study. However, such caps are more likely to be found in company-level agreements. This is why the role of collective agreements has been identified as somewhat important.

²⁸⁰ Idem

²⁸¹ Idem

²⁸² Idem

²⁸³ Idem

²⁸⁴ Idem

²⁸⁵ Idem

4.7.4 Affected population

This section discusses the approach to and results of identifying the population expected to be affected by the analysed possible change regarding flexibility in minimum daily rest (change 8C). The target population consists of all workers whose job characteristics may allow this, whilst the affected population includes those workers who may be interested in having further working time flexibility beyond those who represent the target population.

The share of affected population is proxied by the following variables from the 3rd European Quality of Life survey (EQLS 2011):

- The share of workers who have in their household anyone classified as either “unable to work due to long-term illness or disability” or “child under 14” (question HH3 of EQLS);
- The share of those in occupations (question Q4 of EQLS) potentially allowing working from home, i.e. “managers” and “professionals”. This is clearly a simplification as not all workers from these two groups can effectively work from home and there may be workers from other occupational groups who can work from home. Nevertheless, given the occupational classification in the survey this is assessed as the best approximation of those who can become part of the affected population.

EQLS data do not provide information regarding business size. Hence, the same shares of affected workers have been assumed both for SMEs and large enterprises. This approach leads to 5.2% of all workers and 9.48 million individuals. Details are provided in Table 4.35.

Table 4.35 Estimates of affected population for possible change 8C “flexibility in minimum daily rest” (thousands of workers and percentage of all workers)

	SMEs (<=250)	Large (> 250)	Total	
	Thousand	Thousand	Thousand	% of workers
AT	93	20	113	3%
BE	164	38	202	5%
BG	144	12	157	6%
CY	18	1	19	6%
CZ	122	15	136	3%
DE	485	73	558	2%
DK	233	36	269	11%
EE	34	2	36	6%
EL	104	9	113	5%
ES	477	31	508	4%
FI	127	20	147	7%
FR	1,389	279	1,668	7%
HR	82	8	90	7%
HU	92	18	109	3%
IE	115	31	146	9%
IT	405	61	467	3%

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LT	79	4	83	7%
LU	7	2	8	4%
LV	45	3	48	6%
MT	7	1	8	5%
NL	522	104	626	9%
PL	562	108	670	6%
PT	130	11	142	4%
RO	217	43	260	4%
SE	379	73	452	11%
SI	38	7	45	6%
SK	63	6	69	4%
UK	1,820	520	2,340	9%
EU28	7,952	1,536	9,488	5.2%

Source: Own elaboration

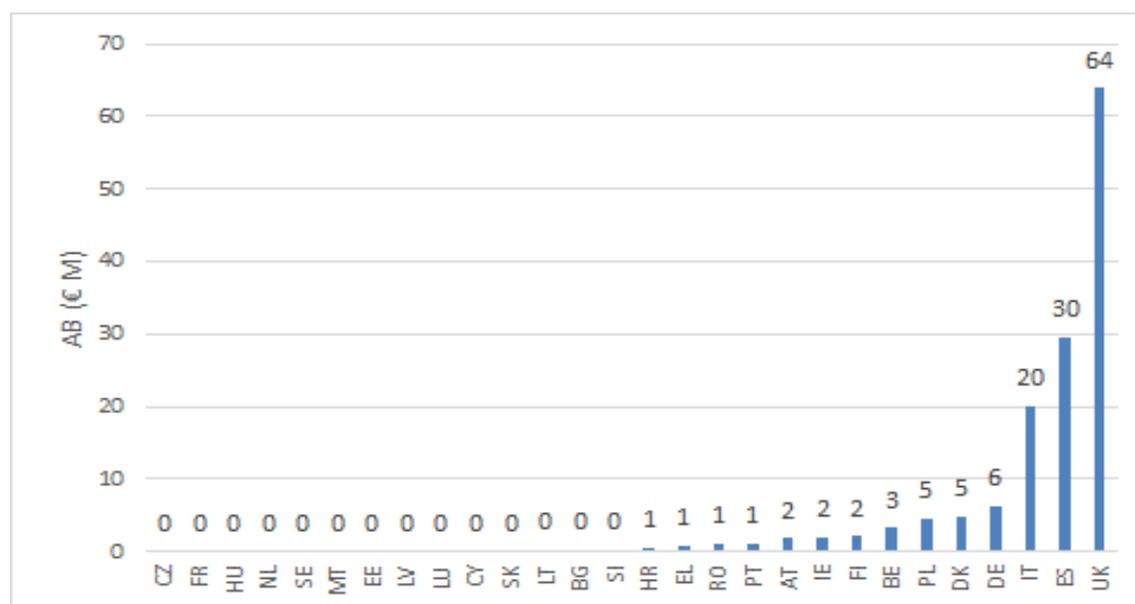
4.7.5 Assessment of Administrative Burdens

The estimates for the policy change “minimum daily rest” leads to a total AB of € 144 million of which approximately € 130 will be borne by SMEs.

Three countries, Spain, Italy and the UK (Figure 4.19) account for 79% of the total AB.

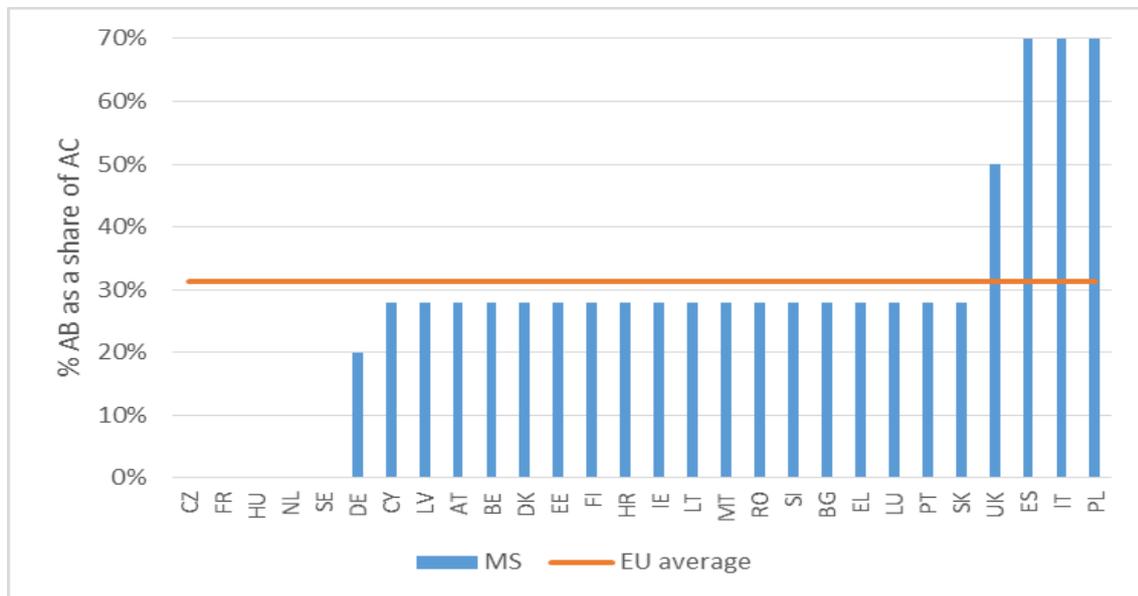
The estimates for the “minimum daily rest” show that at EU level the AB amount to approximately 31% of the total AC. Therefore, this policy change would lead to some 31% additional administrative burdens compared to the assessed baseline. Poland, Italy, Spain and the UK have the highest share of AB of their total AC.

Figure 4.19 Estimates of administrative burdens for introduction of a new monitoring process (AA8.1) according to possible change 8C “flexibility in minimum daily rest”



Source: Own elaboration.

Figure 4.20 Estimates of administrative burdens as a share of administrative costs for introduction of a new monitoring process (AA8.1) according to possible change 8C "flexibility in minimum daily rest"



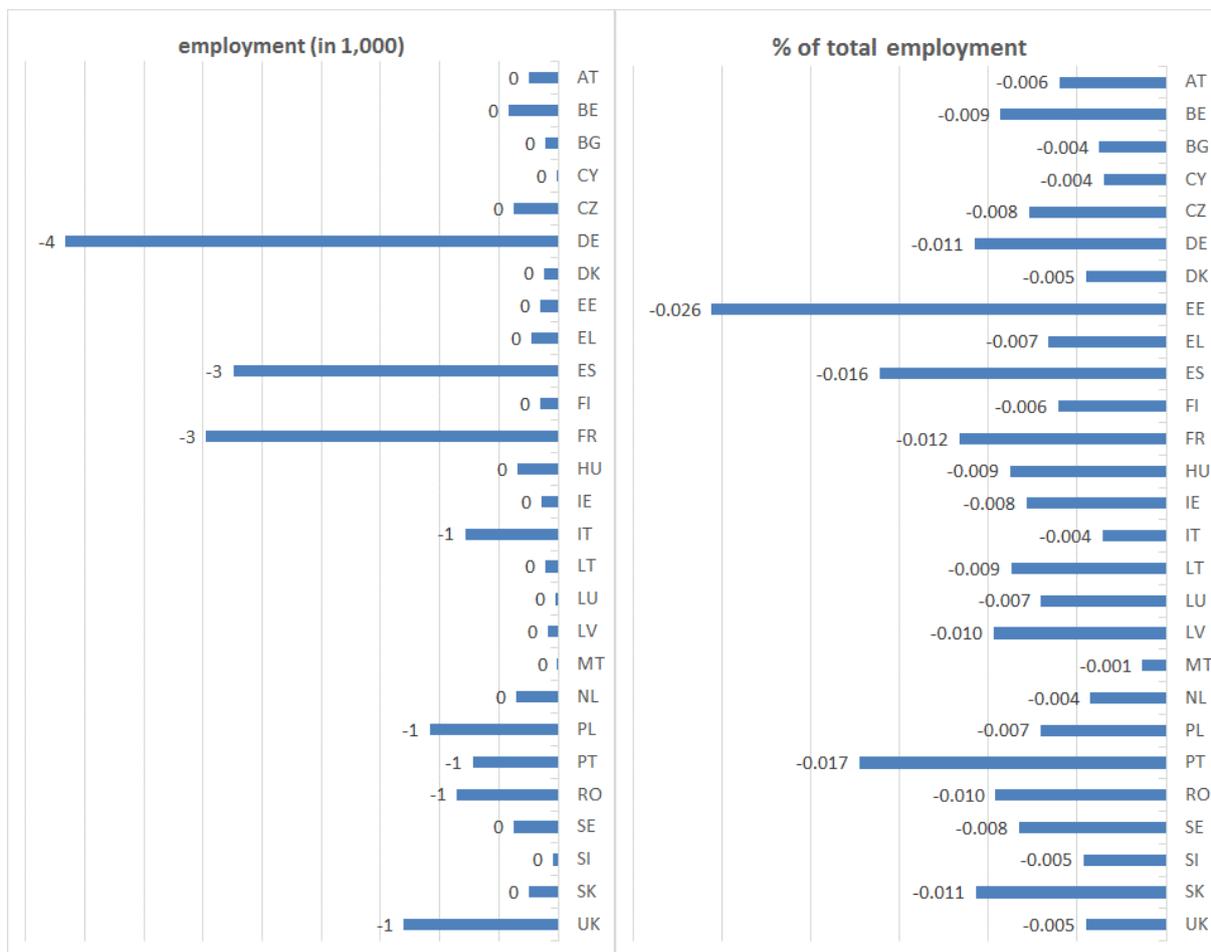
Source: Own elaboration

4.7.6 Socio-economic impact

Possible legislative changes 8a and 8b deal with the right of the worker to be informed well in advance of any changes in working time (8a) and the right of the worker to request working time changes (8b) which the employer will have to take into consideration. Both will have modest impacts on costs if at all. They were simulated with a cost increase of 1% of labour cost. Both would impose a potential cost that would reduce employment at the EU28 level. All Member States are more or less equally affected. Potential change 8c on the other hand, shows a modest positive impact on employment.

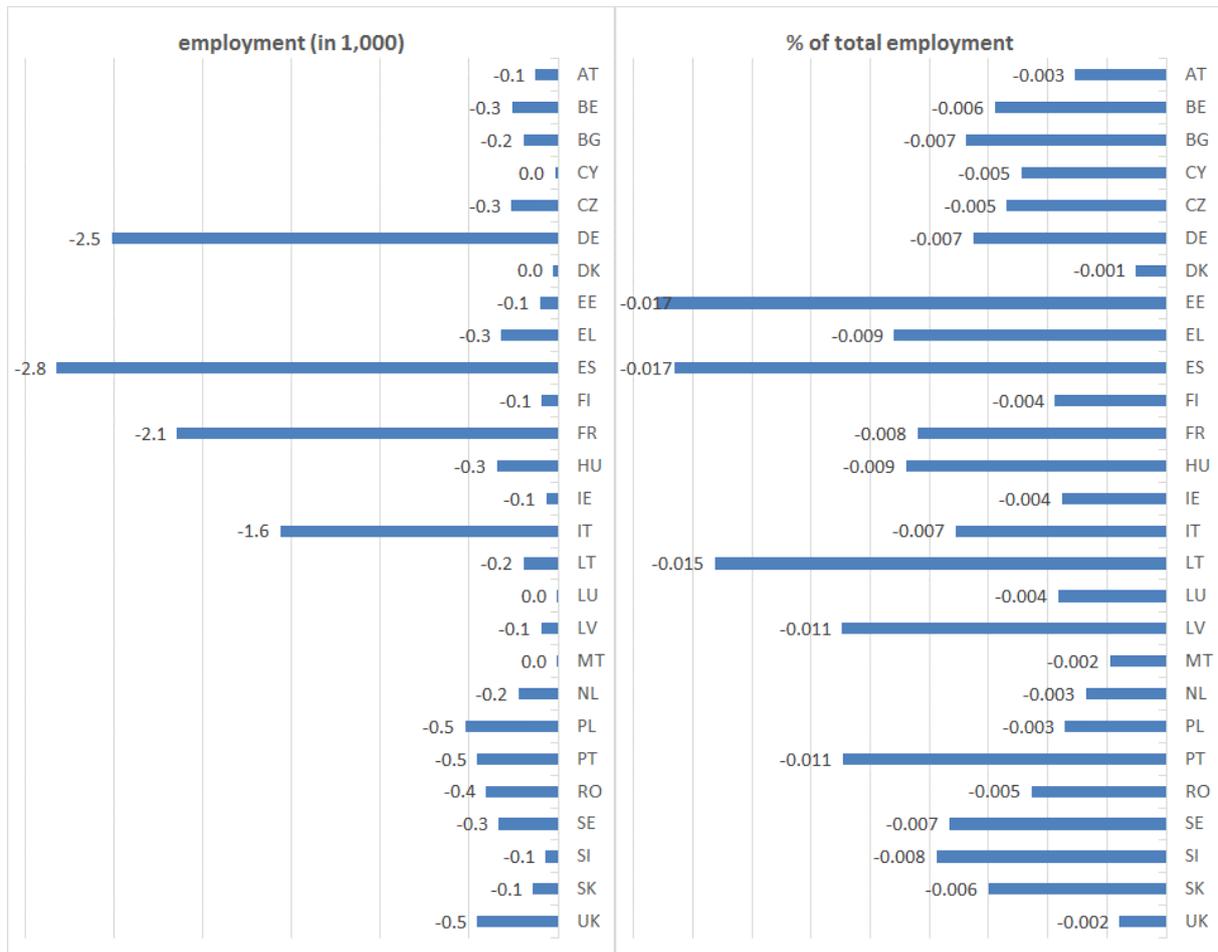
No quantitative estimate could be made of the potentially positive impact of such changes on work-life balance and therefore worker motivation.

Figure 4.21 Employment change as a result of employers having to inform workers of any changes in working time well in advance, by Member State



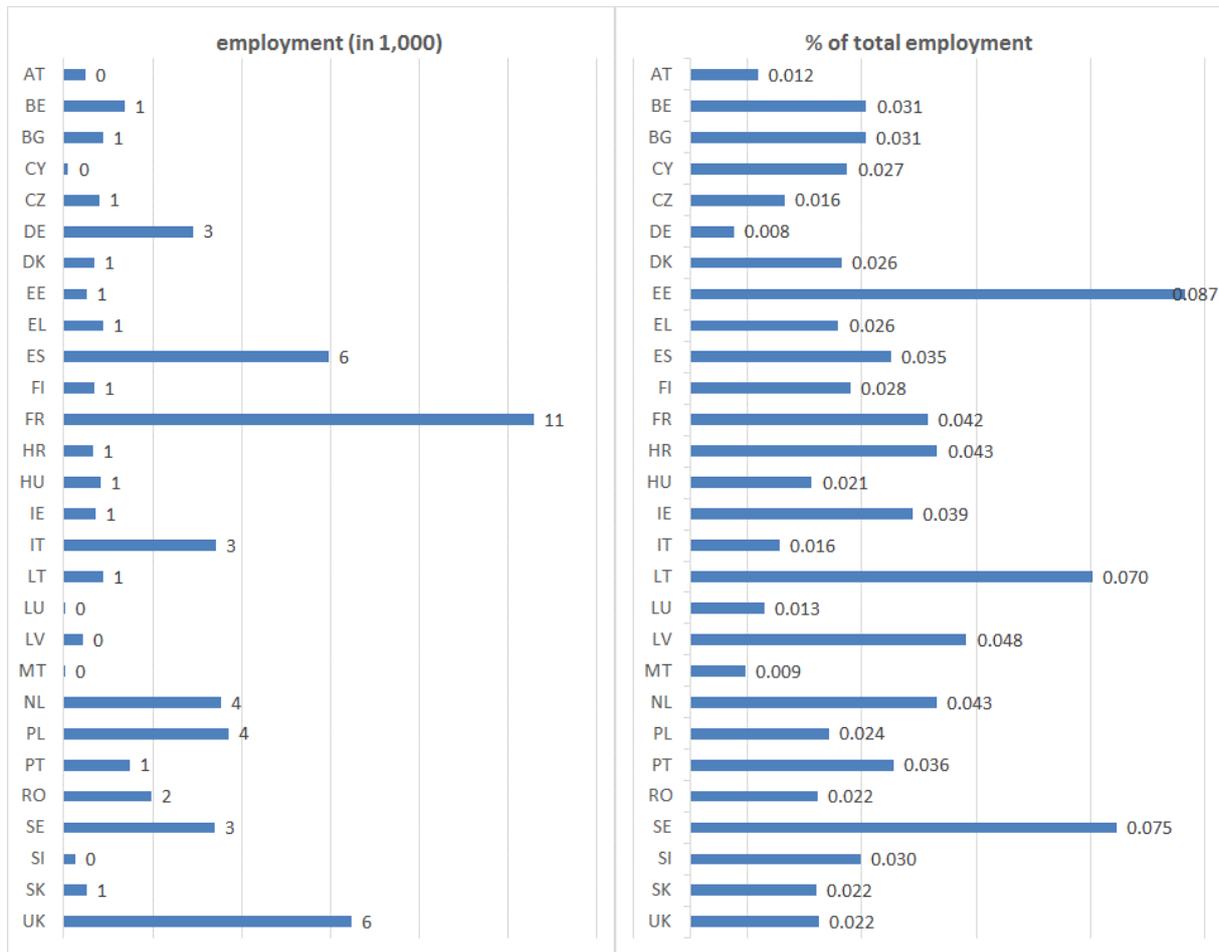
Source: Own elaboration. Note: The first panel shows employment impacts in thousands, while the second panel shows the employment impacts as a share of the total employment by country.

Figure 4.22 Employment change due to the right for workers to request changes to their working hours and patterns, by Member State



Source: Own elaboration. Note: The first panel shows employment impacts in thousands, while the second panel shows the employment impacts as a share of the total employment by country.

Figure 4.23 Employment change due to flexibility in minimum daily rest, by Member State



Source: Own elaboration. Note: The first panel shows employment impacts in thousands, while the second panel shows the employment impacts as a share of the total employment by country.

5 Analysis of regulatory impact on SMEs

As a result of the specific needs of the better regulation agenda, this section discusses separately the impact of possible changes to the WTD on SMEs. It looks at whether SMEs might be particularly affected by such changes. It subsequently seeks to draw conclusions on the extent to which such changes imply increased administrative burdens and socio-economic impacts for SMEs.

The former was achieved by analysing the specific responses for small and medium size businesses interviewed for this study and the latter is drawn from a specific assessment of employment impact for SMEs within the simulation.

Regulatory impact assessment of proposed changes for SMEs and the baseline situation

Art 153 of the TFEU states that European legislation 'shall avoid imposing administrative, financial and legal constraints in a way which would hold back the creation and development of small and medium-sized undertakings'.

Data from the EWCS shows that longer working hours are mainly found in larger companies (over 250 workers) rather than in SMEs. From the SME Panel on the Working Time Directive it appears that SMEs are less likely to keep records of working time and SMEs are also less likely to calculate worker's average weekly time. Therefore, this is a factor which could affect the ability of small enterprises to precisely estimate the working time of their workers, as well as to correctly assess the impact of potential changes to legislation.

Trends between 2005 and 2010 suggest that this situation has been exacerbated by the global economic crisis with a greater increase in the amount of hours worked in large businesses than in SMEs. This points to a disproportionate impact of the crisis on small businesses, which are more likely to leave the market, whereas larger companies are more likely to implement structural reorganisations of internal resources. The SME Panel on the Working Time Directive shows that ensuring competitiveness was the main reason for SMEs to ask workers to work overtime, therefore the growing pressure on SMEs could have a detrimental impact on individuals' workload and their health and well-being.

According to micro data of the SME Panel on the Working Time Directive, larger companies are more likely to financially compensate overtime hours while SMEs are more likely to compensate the overtime with time-off. The fact that on-call and stand-by time are counted as overtime in official statistics as well as in the SME Panel on the Working Time Directive suggests that changes to rules towards counting stand-by time as working time will greatly affect those companies which compensate overtime with time-off.

EWCS data show that SMEs have a higher share of workers who work on-call, however these data are not confirmed by the SME Panel on the Working Time Directive where on-call time is more likely to be used in large companies. Furthermore, SMEs report greater difficulties in maintaining records over a longer period of time.

The specificities of SMEs in relation to patterns of working hours and health and safety risks were taken into account in setting the parameters for the assessment of administrative burdens imposed by potential changes to the WTD and any specific socio-economic impact arising.

Interviewees in SMEs in all in depth study countries reported that changes in relation to stand-by time, the extension of the reference period and flexibility in

minimum daily rest would introduce significant administrative burdens for them.

The economic impact of possible changes on SMEs is likely to be different from the impact on bigger companies. First of all, smaller companies will tend to have a larger proportion of per unit overhead costs. Second, bigger companies tend to keep track of most working time related issues that might be affected by any proposed changes. In the specific case of on-call and stand-by time, it is likely that companies with fewer workers will be less able to divide on-call or stand-by time across more shoulders to spread any effect that it might have. They will therefore face the situation in which they will have to recruit additional workers if the regulation becomes stricter, while the opposite is true in case of a loosening of provisions. Simulation outcomes for different company size classes show a varied picture between countries but overall, the differential impact on small and large companies is greater for the on-call than the stand-by scenario.

The timing of compensatory rest and the reference period for minimum weekly rest both relate to the flexibility enterprises have to schedule work organisation, which can be more significant for small organisations than larger ones because of lower staffing levels. Greater flexibility which allows for lower staffing also impacts SMEs differently because they tend to carry a higher share of overhead costs in employing workers. Simulation results show a more significant differential in impact by company size class for the legislative change relating to compensatory rest, with different effects between countries resulting from the calculation of the size of the affected population.

Changes in the definition of autonomous workers affect companies first as a result of the requirement to check and document the status of their workers. This could lead to a relatively higher cost for smaller companies.

Art 153 of the TFEU specifically states that European legislation *'shall avoid imposing administrative, financial and legal constraints in a way which would hold back the creation and development of small and medium-sized undertakings'*²⁸⁶. To this end a number of initiatives have recently been taken in accordance with the objectives of the 'Better Regulation' strategy²⁸⁷. Among others, in 2013 the Commission adopted a Communication²⁸⁸ to address the Top 10 most burdensome pieces of EU legislation; and a staff working document was published containing the results of a public consultation which asked to identify the "TOP 10 most burdensome legislative acts for SMEs"²⁸⁹ (of which the WTD was considered to be one, although the results of this public consultation have to be treated with some caution due to methodological constraints inherent to these exercises). A new annual scoreboard was introduced to monitor the legislative cycle of proposals where a significant impact on SMEs can be expected.

The goal of this section of the report is to:

- Assess the administrative burden of the WTD with reference to
 - The baseline situation

²⁸⁶ http://ec.europa.eu/smart-regulation/better_regulation/documents/brochure/brochure_en.pdf;
<http://eur-lex.europa.eu/legal-content/en/TXT/HTML/?uri=CELEX:12012E/TXT&from=EN>

²⁸⁷ http://ec.europa.eu/smart-regulation/better_regulation/key_docs_en.htm

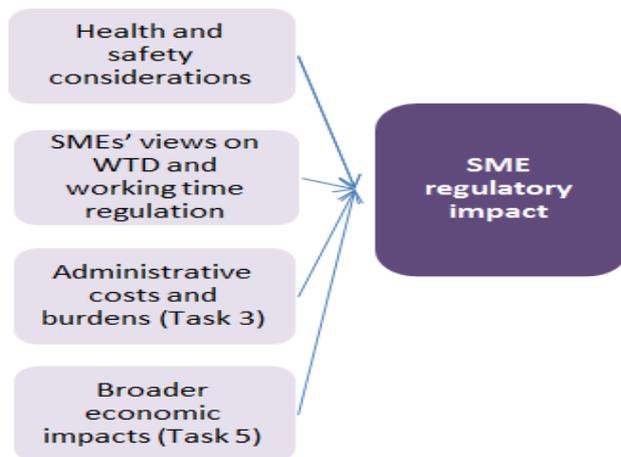
²⁸⁸ COM(2013)

²⁸⁹ SWD(2013)60

- The proposed changes to the Directive, both the changes identified for this study and the changes identified in the 2012 study²⁹⁰.
- Assess the broader economic impact of the possible changes to the WTD for SMEs;
- Explore the link between working time organisation and health and safety implications. Particularly, to draw conclusions on the importance of the WTD in contributing to health and safety of workers in SMEs (taking into account dimensions such as healthy work life balance and gender).

In order to set the impact of the WTD (and possible changes to the Directive) on SMEs into context, it is important to begin by presenting available data on the extent to which SMEs are affected by some of the situations to be addressed in revisions to working time legislation. This assists in determining the current situation and challenges resulting from the status quo, prior to assessing the information arising from the tasks which assess the administrative burden and socio-economic impact of possible changes to the WTD with specific reference to SMEs.

Figure 5.1 SME-test approach used for this study



5.1 Baseline assessment of working time and work organisations in SMEs

This section presents the main trends in working time and work organisation for workers of the private sector. The overview emphasises existing differences across European Member States and among micro companies, SMEs and large enterprises. Data from the EWCS are used and include own calculations of the EU-28 weighted average, the SME panel on the Working Time Directive and the results of the European Business Test Panel (EBTP). The SME Panel on the Working Time Directive and the EBTP survey are not representative of the distribution of EU business population, therefore caution needs to be taken in drawing any conclusion due to samples being skewed. Additionally, although the two surveys focus on the same questions, the differences in the methodological approach do not allow for direct comparisons between them.

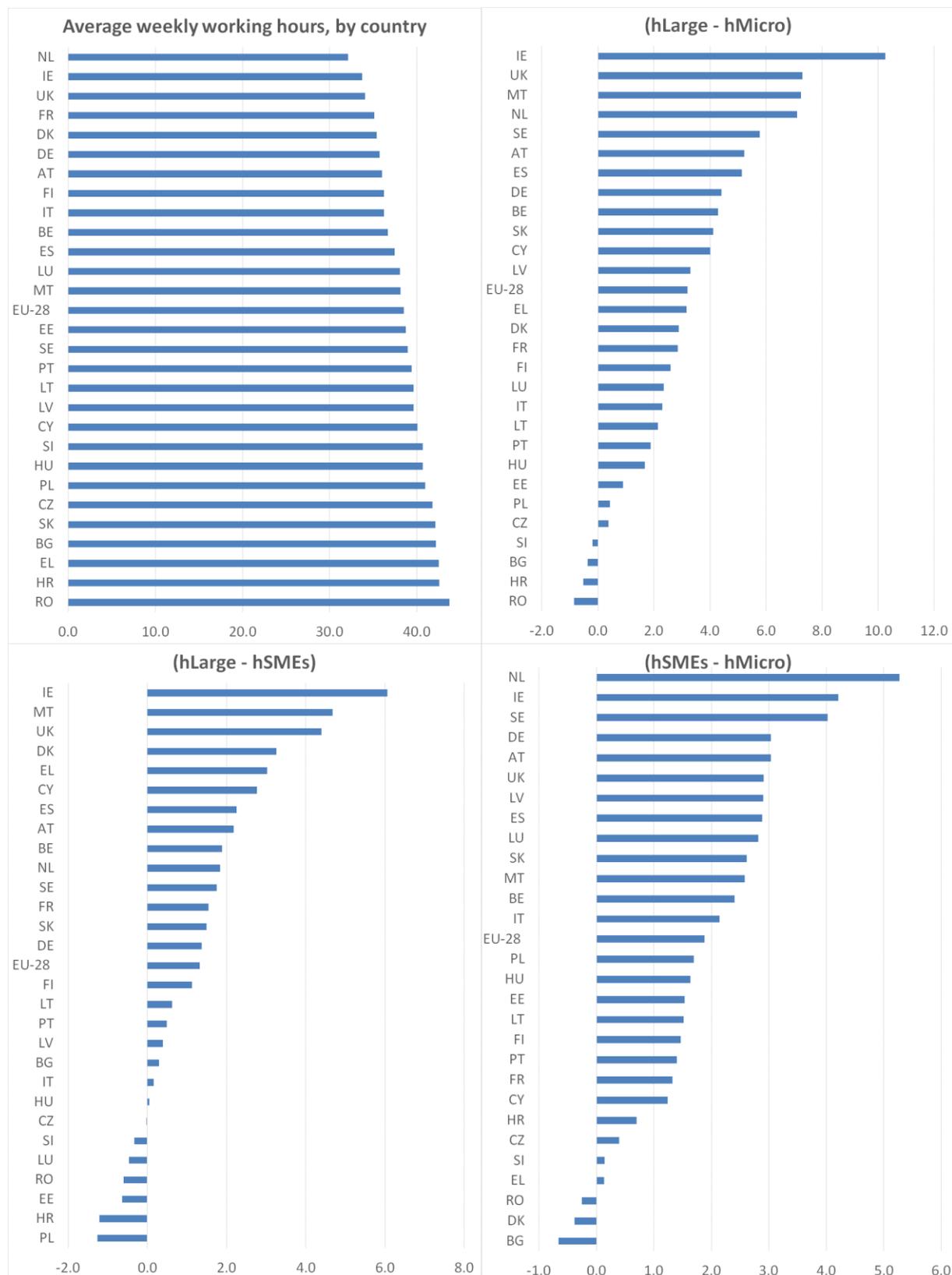
²⁹⁰ Economisti Associati (2012), Review of the Working Time Directive 2003/88/EC: measuring administrative costs and burdens of various possible options, unpublished report for the European Commission, prepared under the FRAMEWORK CONTRACT ENTR/2008/006

5.1.1 The European Working Condition Survey

As the first panel in Figure 5.2 shows, average working hours differ considerably among European countries in private sector companies (only these companies are covered by the EWCS). In 2010, Romania was the country featuring the longest average working hours (43.7), followed by Croatia and Greece. On the other end of the spectrum, the Netherlands had the lowest average of weekly hours worked (33.3), followed by Ireland and the United Kingdom). Nonetheless, this evidence has to be interpreted together with the share of workers working part-time, which is highest (above 25%) in the Netherlands, United Kingdom and Ireland, while it is lowest (below 5%) in Croatia and Slovakia. Weekly working hours are above the EU-28 average in all Eastern European countries, but also in Cyprus, Portugal and Sweden.

Across Europe, people employed in large enterprises (250 or more workers) spent on average more hours at work than workers in SMEs (more than 9 and less than 250 workers) and micro enterprises (less than 10 workers) in 2010 as shown in Figure 5.2 (second panel). Among the 10 study countries, the average amount of weekly working hours in large enterprises is above the EU-28 average (40.4) in Czech Republic, Sweden, Spain, Hungary and Poland, while it is well below the average in the United Kingdom, Germany, Italy, France and the Netherlands.

Figure 5.2 Average weekly working hours by country and differences in average weekly working hours by business size and country (2010)



Source: Own elaborations on EWCS 2010 microdata. Note: Only private sector workers are included in the sample.

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Between 2005 and 2010, the amount of hours worked per week in large enterprises compared to micro companies and SMEs, increased across European Member States. This evidence may be interpreted in light of the 2008 economic crisis, which had a disproportionate impact on micro companies and SMEs due to the drop in the demand for goods and services and a tightening in credit terms²⁹¹. As a consequence of the crisis, micro companies and SMEs were more likely to fail than in the past, whilst large enterprises intensified internal reorganizations in working time arrangements leading to a relative increase of their weekly working hours compared to smaller enterprises.

In 2010, Romania was the country with the highest share of workers working more than 48 hours per week (23.7%). On the other hand, Finland is the country with lowest share of workers working very long hours per week (4.6%). Among the 10 in-depth countries, only the Czech Republic, Poland and the United Kingdom have a share of workers working more than 48 hours per week above the EU-28 average (12.8%). The United Kingdom appears as a country likely to have a high working time inequality as the average amount of weekly working hours is below the EU-28 average (due to the consistent presence of people working part-time), while the share of workers working long hours is well above average. By contrast, Hungary and Sweden have an above EU-28 average amount of weekly working hours and a below average share of workers working very long hours per week. Thus, they are more likely to have a low working time inequality²⁹².

The share of people who work a variable amount of hours every week is taken as a proxy for working time fluctuations. Table 5.1 shows that in 2010 fluctuations in weekly hours are higher in micro companies and in SMEs compared to large enterprises. This is particularly true in Estonia, Slovenia and Czech Republic where the share of workers in micro companies who work a variable amount of hours every week is high (above 40%). By contrast, in Cyprus, Malta and in Greece weekly working time fluctuations are very rare. Among the 10 in-depth countries, the Czech Republic, Poland, Sweden, the Netherlands and France report above EU-28 average fluctuations in weekly working time for micro companies and SMEs.

Table 5.1 Percentage of workers who work a variable amount of hours every week, by size of business and country (2010)

	All companies	Micro (1-9)	SMEs (10-249)	Large (>=250)
EE	40.9	45.5	39.1	30.9
CZ	39.7	43.0	38.3	35.1
DK	39.3	38.2	39.9	38.1
SI	39.0	43.3	40.0	24.7
SE	38.8	32.0	40.3	43.6
HR	35.9	34.3	37.0	34.4
FI	34.8	35.1	39.0	20.1

²⁹¹ OECD, Gert Wehinger, 2013, "SMEs and the credit crunch: Current financing difficulties, policy measures and a review of literature". Available at: <http://www.oecd.org/finance/SMEs-Credit-Crunch-Financing-Difficulties.pdf>

²⁹² Working time inequality has a great importance in terms of workers' well-being since it may be an important redistributive tool (Brandolini, 2013, http://improve-research.eu/?page_id=1301) which exacerbates or improves social inequalities due to its considerable impact on the work-life balance.

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	All companies	Micro (1-9)	SMEs (10-249)	Large (>=250)
SK	33.6	33.0	35.4	28.3
AT	33.5	27.1	37.0	34.0
LV	33.2	36.8	31.9	8.1
NL	31.5	31.1	33.3	23.8
FR	30.6	30.2	29.6	35.1
PL	30.0	35.5	28.0	19.8
LT	28.4	31.4	25.4	32.1
EU-28	28.0	27.9	27.9	25.8
DE	28.0	27.5	27.7	30.1
BE	26.8	24.6	26.9	33.9
LU	26.4	22.6	25.6	33.7
RO	25.1	27.2	25.0	23.8
BG	23.8	24.1	23.3	8.4
UK	22.9	19.6	23.9	24.5
HU	22.1	27.7	17.3	27.6
IE	20.1	17.6	18.2	30.4
ES	19.9	18.3	20.7	20.3
MT	18.7	12.9	18.5	32.2
PT	18.7	18.9	18.0	20.5
EL	16.4	17.2	16.8	3.7
IT	16.3	14.5	16.7	15.2
CY	9.7	10.9	8.7	11.4

Source: Own elaborations on EWCS 2010 microdata. Note: 2005 data not available for this variable. Only private sector workers are included in the sample.

Working time arrangements are characterised by different levels of working time discretion. In order to take account of possible working time arrangements, answers to the following question provided by the EWCS 2010 have been used: “How are your working time arrangements set?” To this question four possible options were available for individual’s choice:

- They are set by the company/organisation with no possibilities for changes;
- You can choose between several fixed working schedules determined by the company/organisation;
- You can adapt your working hours within certain limits (e.g. flexitime);
- Your working hours are entirely determined by yourself.

In most European Member States the majority of workers have working time arrangements set by the company with no possibilities for changes. By contrast, less frequently reported, working time arrangements include fixed working schedules

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determined by the company and working hours entirely determined by the worker. This is termed as "complete working time discretion".

Table 5.2 shows that complete working time discretion is more widespread in micro enterprises than in SMEs and in large companies (for large companies the share of workers with complete working time discretion is nil in 12 Member States out of 28). This also applies to the 10 in-depth countries with the exception of Italy where complete working time discretion regards a higher share of workers in SMEs rather than in micro companies, and in Germany, where workers of large enterprises have more possibilities to decide their own working time arrangements compared to their counterparts in micro companies.

Table 5.2 Difference (in percentage points) in shares of workers with complete working time discretion, by size of business and country (2010)

	(Micro) - (Large)	(Micro) - (SMEs)	(SMEs) - (Large)
SI	12.7	6.9	5.9
LV	9.5	9.0	0.5
CZ	8.3	5.0	3.3
IE	7.0	4.4	2.6
RO	6.9	6.0	1.0
PL	6.7	4.4	2.3
EE	6.6	6.9	-0.3
ES	6.5	3.2	3.3
FI	6.0	-1.3	7.3
BG	5.7	5.7	0.0
HR	5.6	2.6	3.0
LT	4.6	3.4	1.1
UK	4.4	4.6	-0.3
EL	3.6	1.5	2.1
LU	3.4	6.0	-2.6
EU-28	3.3	3.0	0.3
NL	3.1	1.6	1.5
HU	1.7	0.5	1.1
SK	1.5	-0.3	1.8
IT	1.2	-0.6	1.8
FR	1.1	3.7	-2.6
SE	0.9	3.4	-2.5
BE	0.7	1.0	-0.3
PT	-0.3	0.2	-0.5
DE	-2.3	3.4	-5.6

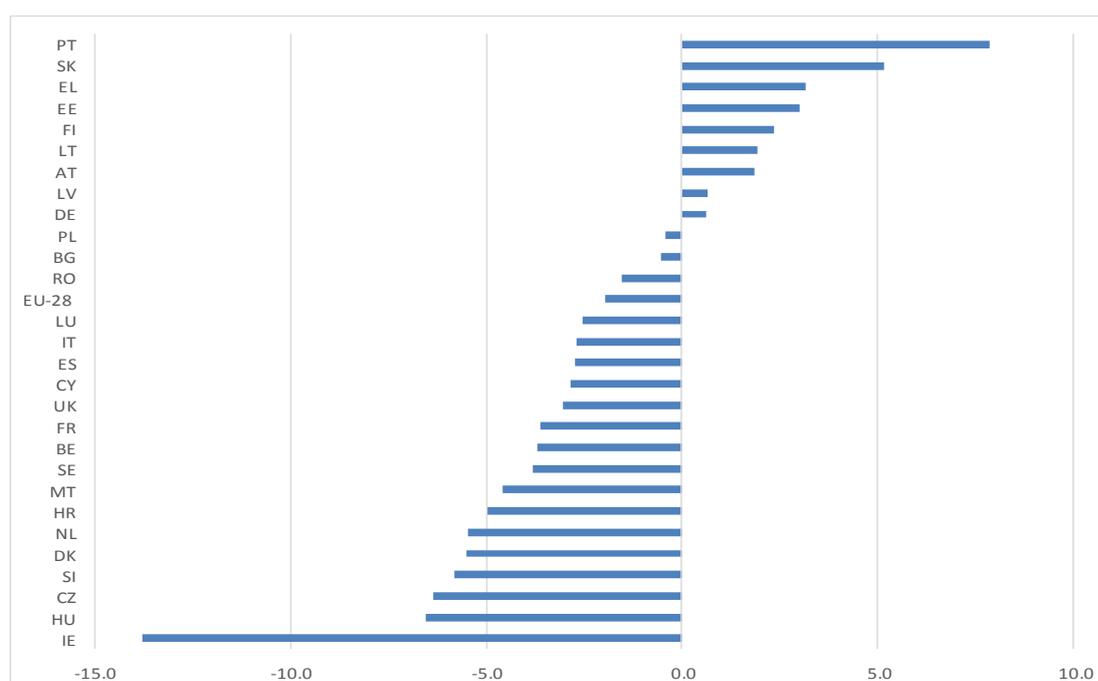
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	(Micro) - (Large)	(Micro) - (SMEs)	(SMEs) - (Large)
CY	-2.3	1.3	-3.7
AT	-2.3	-3.6	1.2
DK	-3.6	2.1	-5.7
MT	-4.1	3.6	-7.7

Source: Own elaborations on EWCS 2010 microdata. Note: Only private sector workers are included in the sample.

As Figure 5.3 shows, having complete discretion over working time arrangements does not systematically translate into shorter working time. Indeed, in 19 out of 28 Member States workers with complete time discretion work a higher average number of weekly hours compared to all workers. Among the 10 in-depth countries only in Germany do workers with complete working time discretion work fewer hours than all workers as a whole.

Figure 5.3 Difference in average weekly working hours of all workers and those with complete working time discretion (2010)



Source: Own elaborations on EWCS 2010 microdata. Note: Only private sector workers are included in the sample.

It is particularly in SMEs where workers with complete working time discretion work on average more than all other workers.

On-call work is quite widespread across European Member States. As Table 5.3 demonstrates, its share is particularly high in Greece (50.0%) and also above 40% in Romania and in Croatia. By contrast, the percentage of workers working on-call in 2010 is below 8% in Spain, Hungary and in Finland. Compared to the EU-28 average, among the 10 in-depth countries only the Czech Republic, Poland and France have an above average share of workers working on-call. In the Czech Republic and in Poland on-call work is more frequent the smaller the business size is, the opposite is true for France. Overall, the EU-28 average share of on-call work in micro companies (21.1%) is higher

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than that of SMEs (20.1%) and large enterprises (18.5%). Specifically, the highest share of on-call workers is registered in Romania for micro companies (59.5%), in Greece for SMEs (53.6%) and in Luxembourg for large companies (38.6%). This is influenced by the regulation of such employment relationships. On the other hand, the lowest share of on-call work is registered in Spain both for micro companies and SMEs (respectively with 4.7% and 5.3%), and in Finland for large enterprises (1.3%).

Table 5.3 Percentage of workers working on-call, by size of business and country (2010)

	All companies	Micro (1-9)	SMEs (10-249)	Large (>=250)
EL	50.0	47.7	53.6	30.4
RO	45.9	59.5	41.2	36.6
HR	43.9	45.8	44.0	33.2
CZ	32.3	41.4	27.8	9.4
CY	26.5	25.0	29.2	15.8
PL	25.5	26.8	25.3	21.3
FR	25.2	23.9	24.5	28.8
LU	25.2	17.0	24.7	38.6
PT	24.5	24.9	24.4	21.6
LV	22.3	24.0	21.4	17.3
SK	22.1	15.3	27.3	16.5
DK	20.9	27.8	19.5	15.9
BG	20.8	17.5	22.7	25.6
EE	20.5	25.8	17.7	15.7
EU-28	20.5	21.1	20.1	18.5
MT	18.9	11.2	20.4	29.4
BE	18.6	17.2	19.3	21.0
IE	16.6	15.7	15.8	20.0
DE	14.9	15.5	14.1	18.6
UK	13.1	10.7	12.7	16.1
AT	12.2	13.4	10.4	15.5
LT	11.7	11.6	10.2	25.7
SI	11.5	11.4	10.8	11.4
SE	11.0	13.3	10.3	10.4
IT	9.9	12.4	8.2	4.0
NL	9.3	16.0	6.8	1.5
FI	7.7	7.8	9.4	1.3
HU	6.8	6.1	6.9	8.3

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	All companies	Micro (1-9)	SMEs (10-249)	Large (>=250)
ES	5.3	4.7	5.3	9.2

Source: Own elaborations on EWCS 2010 microdata. Note: 2005 data not available for this variable. Only private sector workers are included in the sample.

5.1.2 The SME Panel on the Working Time Directive

The SME Panel on the Working Time Directive was carried out by the European Commission in 2010 and gathers responses from 1,579 companies across Europe, with the involvement of the European Enterprise Network. In the achieved collection of responses, some countries are overrepresented, such as Austria (152), Germany (317) Poland (249) and Estonia (107), while there are no responses from Cyprus, Latvia and the Netherlands. One company responded for Finland and Malta. Responses mainly came from micro and small companies up to 49 workers followed by medium size companies (the size of businesses has been defined as follows: micro 0-9 workers, small 10-49 workers, medium 50-249 workers, large more than 250 workers). For the purpose of this study, data of the SME Panel on the Working Time Directive have been weighted to make the set of respondents more representative of the underlying EU business population (the methodological paper on the weighting approach is provided in an Annex to this report). In the weighted sample micro businesses account for 26% of the overall respondents and small businesses for 32%, followed by medium (26%) and large enterprises (16%). The findings presented below are own calculation on the weighted set of respondents.

The majority of companies keep records of weekly working time (86%), 11% of companies keep records to some extent or for some workers.

Table 5.4 Percentage of companies keeping records of working time

Business size	Yes	To some extent, or for some workers only	No
Micro (0-9)	80	14	6
Small (10-49)	85	12	3
Medium (50-249)	90	8	2
Large (>=250)	87	13	0
Total	86	11	3

Source: Own elaborations on microdata of the SME Panel on the Working Time Directive

Micro and small companies are less likely to calculate their workers' average weekly time. Respectively, 49% and 47% of micro and small companies said they do not calculate average working time compared to 28% and 26% of medium and large businesses. In companies that calculate average weekly working time, a four month reference period is used mainly by medium businesses (28%) compared with the other size groups, while a period between six and twelve month is more likely to be used by large businesses (29%).

Table 5.5 Percentage of companies by period for calculating weekly working time

Business size	Not calculate	Up to 4 months	4-6 months	6-12 months	Longer than 12 months
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Business size	Not calculate	Up to 4 months	4-6 months	6-12 months	Longer than 12 months
Micro (0-9)	49	17	9	13	13
Small (10-49)	47	26	6	10	12
Medium (50-249)	39	28	7	16	10
Large (>=250)	34	26	4	29	7
Total	43	25	6	16	11

Source: Own elaborations on microdata of the SME Panel on the Working Time Directive

To estimate the use of overtime, the SME Panel on the Working Time Directive asked whether any workers in the company worked more than 40 hours per week. Overall, 51% of employers declared having workers that work overtime. This survey confirms findings from the EWCS that long working hours seem to be mainly a problem for large companies with more than 250 workers and medium companies between 50 and 249 workers; in these two groups respectively 81% and 63% stated that they have workers that work more than 40 hours per week. On the other hand, 44% of small companies and 31% of micro companies stated that they have workers who work more than 40 hours per week.

Table 5.6 Percentage of companies with workers working more than 40 hours per week

Business size	Yes
Micro (0-9)	31
Small (10-49)	44
Medium (50-249)	63
Large (>=250)	81
Total	51

Source: Own elaborations on microdata of the SME Panel on the Working Time Directive

The average working hours for workers who work overtime ranges between 40 and 48 hours, this particularly in medium businesses (77%) and small businesses (71%). Less than one third of companies have workers with average working time between 48 and 55 hours; such long working hours are more likely to be found in large companies (31%).

Table 5.7 Percentage of employers by hours worked per week

Business size	40-48 hours/week	48-55 hours/week	55-60 hours/week	Over 60 hours/week
Micro (0-9)	65	25	8	3
Small (10-49)	71	22	5	2
Medium (50-249)	77	17	3	2
Large (>=250)	60	31	7	1
Total	69	23	6	2

Source: Own elaborations on microdata of the SME Panel on the Working Time Directive

The two main reasons for asking workers to work more than 48 hours per week are to ensure competitiveness and respond to seasonal fluctuations. Ensuring competitiveness is the main reason for micro (36%) and small businesses (33%), while respond to seasonal fluctuation was mainly reported by large companies (40%) as reasons for overtime working. It is also interesting to notice that medium (20%) and large (25%) businesses were more likely than smaller businesses to report the need of providing continuous service outside working hours as a reason for long working hours.

Table 5.8 Percentage of companies by reasons for working more than 48 hours per week

Business size	To ensure competitiveness of your company	To respond to seasonal fluctuations	Due to shortage of skilled labour	To provide continuous service outside normal working hours	Tradition or culture of working long hours in this activity	Free choice of workers: workers want to earn extra income, or achieve more rapid career progression
Micro (0-9)	36	19	9	15	13	7
Small (10-49)	33	31	8	14	4	10
Medium (50-249)	29	26	5	20	8	11
Large (>=250)	23	40	4	25	3	5
Total	30	30	6	19	7	8

Source: Own elaborations on microdata of the SME Panel on the Working Time Directive

In line with the reasons provided for overtime working, one third of companies stated that their business is subject to largely predictable seasonal fluctuations, this mainly in large (41%) and micro (32%) companies. However, around 40% of all companies stated they did not have seasonal fluctuation.

Table 5.9 Percentage of companies by seasonal fluctuations

Business size	Yes, largely predictable seasonal fluctuations	Yes, frequently unpredictable fluctuations	No
Micro (0-9)	32	26	43
Small (10-49)	30	29	41
Medium (50-249)	30	29	41
Large (>=250)	41	19	40

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Business size	Yes, largely predictable seasonal fluctuations	Yes, frequently unpredictable fluctuations	No
Total	33	26	41

Source: Own elaborations on microdata of the SME Panel on the Working Time Directive

The majority of companies have a share of workers working overtime which does not exceed 10%, this is particularly true for medium size companies (44%). However, micro companies (30%) are more likely to have over 40% of their workers who work over time compared to the other groups.

Table 5.10 Percentage of companies by share of workers who work overtime

Business size	Up to 10%	10-20%	20-40%	More than 40%	I don't know
Micro (0-9)	30	24	13	30	3
Small (10-49)	32	26	23	18	1
Medium (50-249)	44	23	14	13	7
Large (>=250)	33	25	17	19	7
Total	36	24	17	18	5

Source: Own elaborations on microdata of the SME Panel on the Working Time Directive

Overall more than one third of companies declared that overtime can be either paid or compensated by time-off, and a third declared that it is paid at higher rates than regular working time. The comparison between the size groups shows that larger companies are more likely to either pay the overtime or compensate it as time-off, respectively 46% and 43% of large and medium companies, compared to 29% of both micro and small companies. Similarly, larger companies are more likely to pay overtime at a regular rate, whereas, smaller companies are more likely to compensate overtime with time off rather than pay, respectively 26% and 30% of micro and medium companies, compared to 12% and 14% of medium and large companies.

Table 5.11 Percentage of companies by method of compensation of overtime

Business size	Paid at higher rates than regular working time	Paid at rates equal to regular working time	Paid at rates lower than regular working time	Not paid, but is compensated by time off	Overtime can be both paid and compensated by time off
Micro (0-9)	30	13	2	26	29
Small (10-49)	34	7	0	30	29
Medium (50-249)	36	9	0	12	43
Large (>=250)	35	4	0	14	46
Total	35	8	0	20	37

Source: Own elaborations on microdata of the SME Panel on the Working Time Directive

Overall, 70% of companies do not use on-call work and the use of on-call work increases with the size of the business. Respectively 15% and 18% of micro and small companies use the on-call time compared to 36% and 68% of medium and large companies.

Table 5.12 Percentage of companies by whether on-call time is used and place of on-call for workers.

Business size	No	Yes	(Yes: during on-call time they must remain at the workplace or a place chosen by the company)	(Yes: during on-call time they can remain at home or at another place of their choice, but must be contactable to work if needed)	(Yes, both on-call at the workplace and on-call at home)
Micro (0-9)	85	15	3	7	5
Small (10-49)	82	18	3	12	3
Medium (50-249)	64	36	2	29	5
Large (>=250)	32	68	7	49	13
Total	70	30	3	21	6

Source: Own elaborations on microdata of the SME Panel on the Working Time Directive

5.1.3 The European Business Test Panel (EBTP)

The EBTP collected the answers of a number of businesses across all EU Member States on the experiences and views regarding the impact of the WTD. The panel focused on the use of collective bargaining to decide on working time organisation, practical arrangements to calculate weekly working time, on-call time, application of limits to average weekly working time, provision of minimum daily and weekly rest periods, and experience with rules regarding paid annual leave and night work²⁹³. The most represented countries in the survey are Germany (18.1%) and the Czech Republic (8.3%), while the least represented countries are Slovakia, Slovenia, Norway and Malta with less than 1% of responses. Businesses with less than 49 workers account for 57.8%

²⁹³ European Business Test Panel (EBTP) Reviewing the Working Time Directive (2003/88/EC), http://ec.europa.eu/yourvoice/ebtp/consultations/2010/working-time-directive/index_en.htm. The sample survey comprises 493 business responses, 58% are business with fewer than 50 workers and 19% between 50 and 249.

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of the respondents, followed by companies between 50 and 249 workers (19.2%) and companies with more than 250 workers (23%).

For almost half of the businesses (46.7%), the organisation of working time is not decided by collective agreements, for 19.7% it is decided by collective agreement at sectoral level, for 14.4% by collective agreement at enterprise level, for 12.8% by national collective agreements and finally, 6.5% of cases responded to have agreements at more than one level.

The majority of companies (64.9%) keep records of working time. The calculation of average weekly working time is done within a 4 month period in 50.6% of the businesses and 29.7% of businesses use between 6 and 12 months.

Slightly less than half of the respondents (48.8%) declared that the business is subject to strong fluctuation and in 41.7% of these cases the fluctuation is both largely predictable and frequently unpredictable. These responses can be interpreted in the sense that part of the seasonal fluctuation is foreseeable; however there is still some part of the yearly fluctuation that is variable. Almost one in three businesses (30.1%) faces serious difficulties or occasional difficulties (28.2) in recruiting temporary staff during peaks of demand.

A revision to the WTD extending the reference period for calculating the 48 hour weekly working time limit to 12 months would affect three quarters of the businesses among the respondents. Particularly, in the view of respondents this change would allow for a better match with customer demand (21.6%), a better match between labour supply and labour demand (19.4%), and allow for significant savings in labour costs (14.1%). In some cases the change would not be useful for business (19.4%). However, 25.6% of the businesses said the company already used the 12 month average and 23.4% were not sure how the change would impact the business. The responses to this question (probably a multiple response question) sum up to over 100%. This points to the fact that businesses are likely to be affected in different ways by this change.

With reference to the use of on-call time, 31% of businesses make use of this working pattern. In the majority of businesses (67.3%) workers can either spend this on-call time at home or at another place of their choice, but must be contactable; in 23.5% of companies workers spend this time both at the workplace and at home, while in 9.2% of companies the employer decides where to spend this time. In line with the fact that on-call time is not spent at the workplace, 46.4% of businesses' workers who are on-call are rarely called to intervene.

In 68.1% of companies the average working week is made up of between 40 and 48 hours and in 26.8% of between 48 and 55. Seasonal fluctuations are the main reason for having weekly working times longer than 48 hours in 42.1% of companies, ensuring competitiveness was reported as a reason by 26.4%. Providing continuous service outside normal working hours was reported as a reason by 25.2% of businesses among the respondents, while the free will of the worker either to earn extra money or to work longer for career advancement was mentioned by 24.8% of companies.

Slightly more than half of the respondents (51.5%) reported that they have workers who work more than 40 hours per week. In 53.5% of the companies the overtime is either paid or compensated by time-off, 40.9% of businesses pay a higher rate for overtime than for regular working time, in 11.4% of companies it is paid the same as regular working time, while in 22% of businesses it is compensated by time off.

The majority of businesses (78.7%) do not ask their workers to give an individual written consent to opt-out i.e. to work more than 48 hours per week.

According to businesses, changes to the 48 hours limit would cause problems mainly in the following areas: meeting core customer demands (22.2%), recruitment of new staff which is not available in labour market (14.8%), cause loss in competitiveness (11.1%),

and recruitment of additional staff (9.3%). 16.7% of businesses report this change would not have a significant effect.

The daily and weekly minimum rest period can always be taken by workers in 85.2% of the businesses; however, this is a problem in 14.8% of companies. The minimum daily rest period needs to be regularly delayed in 9.6% of the companies and the weekly minimum rest period in 8.2%.

Finally, other EU working time rules which are deemed as impacting on the company include: entitlement to at least four weeks' paid annual leave (25.2%), cap of 8 hours on night work (8.5%), transfer to day shifts workers who suffer from health problems due to their night work (6.9%).

5.2 Baseline assessment of health and safety key performance indicators among SMEs

Good health and safety at work is a crucial factor in individuals' quality of life. In addition, both may lead to important social and economic benefits. Health and safety performance can be influenced by a variety of factors. This section focuses on the existence of possible health and safety at work challenges – particularly affecting SMEs – which may be influenced by long working hours. Data from the European Working Conditions Survey (EWCS), the Eurostat's Labour Force Survey (LFS) ad hoc module 2007, and the European Agency for Safety and Health at Work (EU-OSHA) are used in this analysis.

Existing evidence suggests that SMEs are not able to manage health and safety as effectively as large companies²⁹⁴. This is because large companies often have the financial means and structure to effectively implement a good occupational safety and health at work system, which in some cases is lacking in SMEs. Indeed, there is evidence showing that the size of the firm is negatively correlated with compliance with legislative demands²⁹⁵.

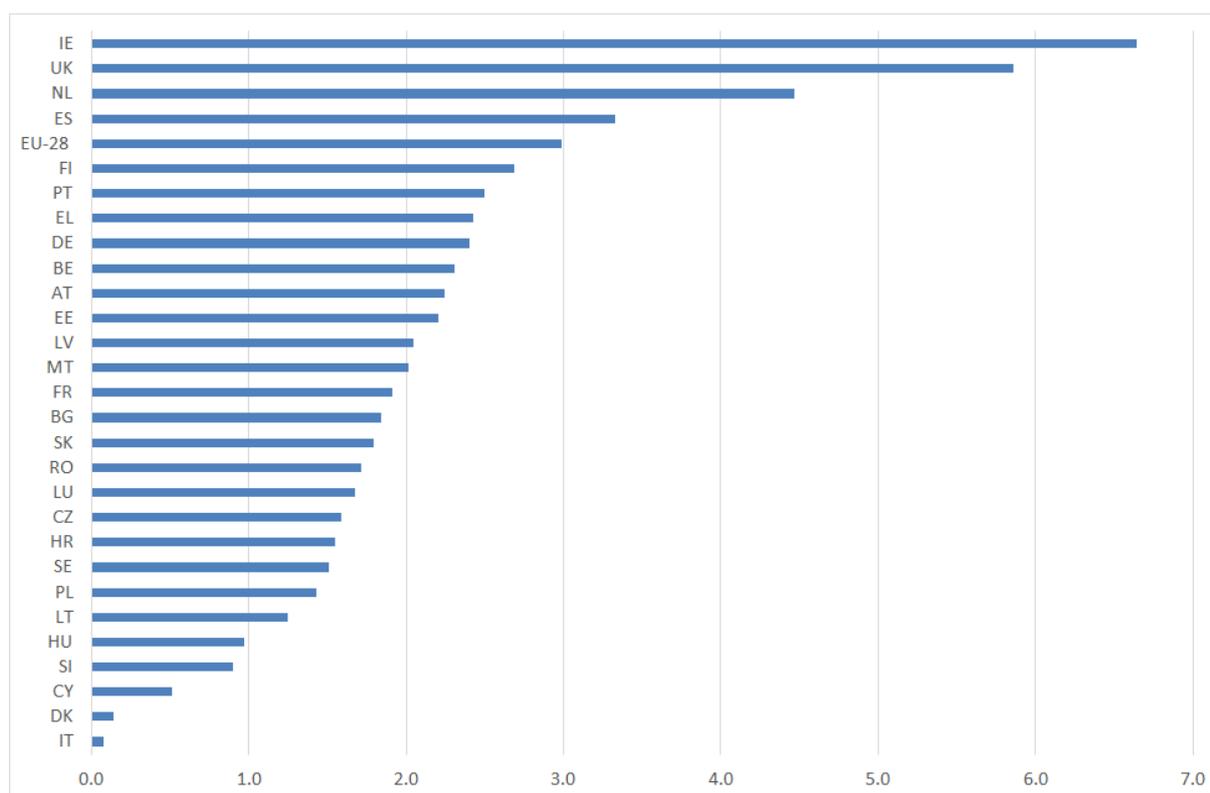
As Figure 5.4 shows, in all 28 Member States, workers who report that the job affects their health condition negatively, work on average more hours per week than the average for all workers as a whole. Overall, long hours working is more widespread in larger companies.

Figure 5.4 Difference in average weekly working hours of employees whose work affects their health condition negatively and all workers(2010)

²⁹⁴ EU-OSHA, 2012, "Drivers and barriers for psychological risk management". Available at: [file:///C:/Users/32128/Downloads/esener-drivers-barriers%20\(1\).pdf](file:///C:/Users/32128/Downloads/esener-drivers-barriers%20(1).pdf)

²⁹⁵ Jensen, P. L., Alstrup, L. and Thoft, E., 2001, "Workplace assessment: A tool for occupational health and safety management in small firms?"

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Source: Own elaborations on EWCS 2010 microdata. Note: 2005 data not available for this variable. Only private sector workers are included in the sample.

Long or irregular hours are more likely to be considered as a concern in terms of psychological risk in large companies rather than in smaller enterprises.

In the LFS ad hoc module 2007, the share of people reporting an accident at work in the past 12 months was assessed. Table 5.13 shows Finland as the country with the highest percentage of workers who reported accidents at work (6.8%). Among the 10 in-depth countries, France, Sweden and Spain are above the EU-28 average. The lowest number of accidents is reported in Bulgaria with 0.6%. However, existing differences among countries are very likely to depend on the data collection which is country-specific and highly influenced by national regulations and insurance systems pertaining to accidents at work. For this reason comparisons within countries seem more reliable than comparisons between countries. For example, when looking at the business size, most Member States are characterised by a higher share of people who report accidents at work in SMEs and large companies compared to micro enterprises. As regards atypical working hours²⁹⁶, accidents are more likely to happen to those people who usually work during atypical working times compared to those workers who do not do any work during atypical times.

Table 5.13 Percentage of people reporting an accident at work in the past 12 months, by size of business, atypical working times and country (2007)

Total	Business size	Atypical working times
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²⁹⁶ In the LFS ad hoc module 2007 atypical working times are defined as shift work and work on evening, night, Saturday and Sunday.

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		Micro (1-9)	SMEs & Large (>=10)	Usually	Never
FI	6.8	6.4	6.6	9.2	5.6
FR	5.4	5.0	5.9	8.0	5.5
SE	5.2	4.8	5.3	8.2	4.2
AT	5.1	4.5	5.3	7.6	4.5
DK	5.0	4.4	5.1	11.0	4.7
ES	4.0	3.1	4.8	6.0	3.9
SI	3.8	3.8	3.8	4.8	3.3
LU	3.5	3.0	3.8	5.4	3.4
MT	3.3	2.6	3.2	5.5	2.7
BE	3.2	2.7	3.4	4.6	2.8
PT	3.1	2.9	3.2	3.3	3.0
CY	3.0	3.2	2.7	3.2	2.8
EU-27	3.0	2.8	3.2	4.2	3.0
UK	2.9	2.7	3.0	:	:
IT	2.8	2.6	2.9	4.6	2.4
CZ	2.7	2.5	2.6	3.2	2.3
NL	2.5	2.4	2.6	4.8	2.4
DE	2.4	2.1	2.6	4.0	2.2
EE	2.4	2.1	2.3	3.6	1.9
RO	2.3	1.9	1.7	2.2	1.5
LV	2.0	1.6	2.0	1.1	2.2
HR	2.0	1.4	2.1	1.3	2.1
EL	1.9	2.1	1.5	1.7	1.9
SK	1.7	1.2	1.6	2.1	1.2
IE	1.5	:	:	:	:
HU	1.1	0.8	1.1	0.9	1.0
PL	1.1	0.6	1.1	1.6	0.8
LT	1.0	1.0	1.0	0.6	1.0
BG	0.6	0.4	0.7	0.7	0.6

Source: LFS ad-hoc 2007(downloaded from http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database, table hsw_ac9, hsw_ac11) .Note: The sample includes all employed, both in the private and in the public sector. Data by atypical working times are missing for UK and IE, and data by business size are missing for IE.

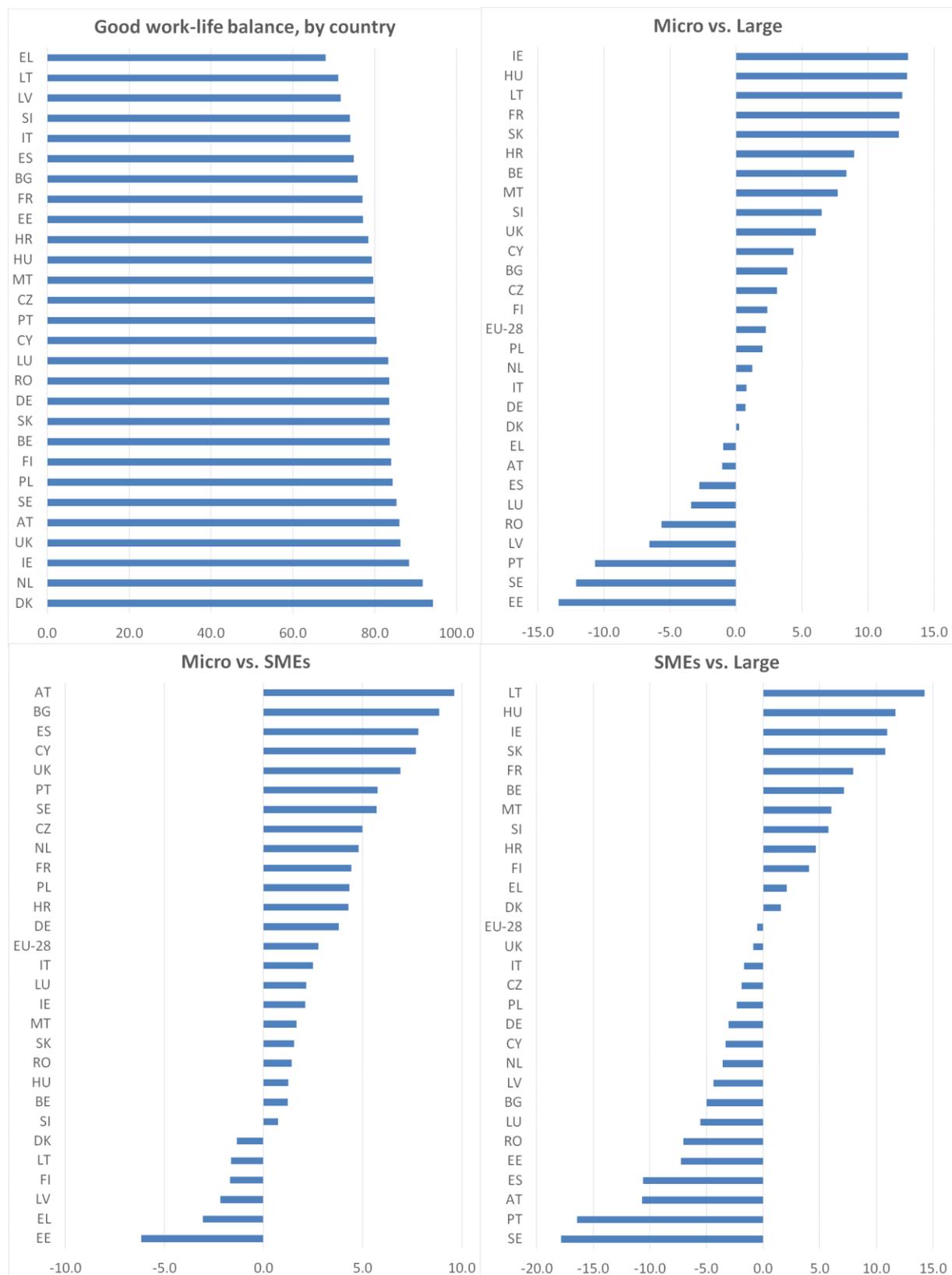
5.3 Baseline assessment of indicators relating to work-life balance among SMEs

Working time and the organisation of time spent at work has an important impact on individual's ability to reconcile work, family and private life. This in turn may have a

considerable impact on workers' well-being. In this section the focus is on the extent to which a good balance between work, family and private life is related to the business size. This question is investigated with the use of data from the European Working Conditions Survey (EWCS). The following question of the survey has been exploited: "In general, do your working hours fit in with your family or social commitments outside work very well, well, not very well or not at all well"? For the sake of simplicity the four-category work-life balance variable has been reshaped in a two-category variable, stating good or bad work-life balance.

As the first panel in Figure 5.5 shows, the share of workers who consider having a good work-life balance is generally high for all Member States. In most Member States, the way working hours fit in with family or social commitments outside work is better in micro companies rather than in larger enterprises. This is likely to be related to the share of long hours working which is more prevalent in large companies. Specifically, in 22 of 28 Member States work-life balance is greater in micro enterprises than in SMEs. Similarly, in 19 of 28 countries, work-life balance is better in micro enterprises than in large companies (second panel in Figure 5.5).

Figure 5.5 Good work-life balance and differences in shares of people who have a good work-life balance among companies with different business size (2010)



Source: Own elaborations on EWCS 2010 microdata. Note: Only private sector workers are included in the sample.

Overall, the following patterns on working time and work organisation, health and safety key performance, and work-life balance have been found across micro companies, SMEs and large enterprises in Europe:

- People employed in large enterprises work on average longer than workers in SMEs and micro enterprises. In addition, between 2005 and 2010, there was a relative increase of weekly working hours in large companies compared to smaller enterprises;
- Fluctuations in weekly hours are higher in micro companies and in SMEs compared to large enterprises;
- Regarding working time arrangements, complete working time discretion is more widespread in micro enterprises rather than in SMEs and in large companies;
- The share of on-call and stand-by workers in micro companies and SMEs is lower than that of SMEs and large enterprises;
- The higher business size, the more workers are aware of any psychological risks related to long or irregular hours. Generally, large companies manage health and safety more effectively than smaller enterprises. The number of accidents at work is higher in SMEs and large companies compared to micro enterprises;
- Last but not the least, in most Member States the way working hours fit in with family or social commitments outside work is better in micro companies than in larger enterprises, where average working hours are longer.

The specificities of SMEs in relation to patterns of working hours and health and safety risks were taken into account in setting the parameters for the assessment of administrative burden imposed by potential changes to the WTD and any specific socio-economic impacts arising. The following two sections summarise the results of both analyses to complete the picture of the regulatory impact of working time regulation and the WTD on SMEs.

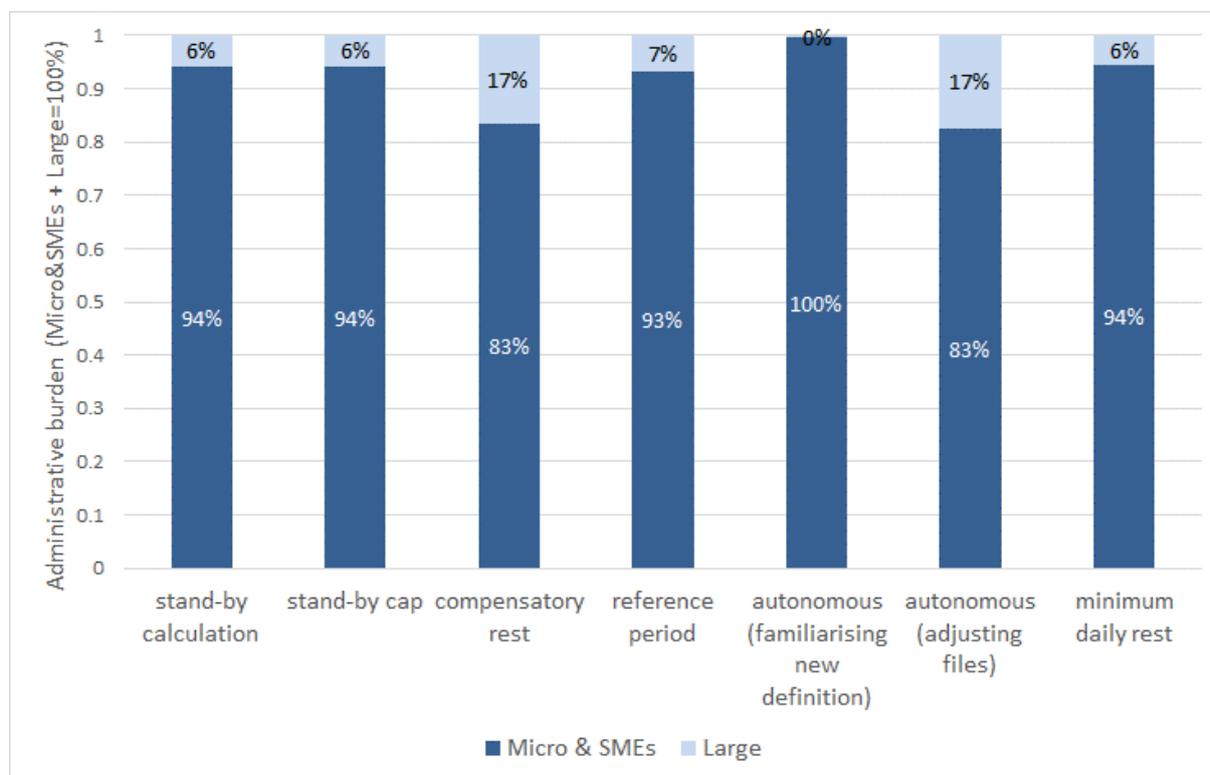
5.4 Results of the assessment regarding the administrative burdens arising for SMEs from proposed possible changes to the WTD

Figure 5.6 below shows the distribution of AB between SMEs and large companies. Possible changes are likely to affect SMEs more due to their overrepresentation. There are some patterns of working time organisations which are more common among SMEs (see above) which also has some limited impact. The share of the estimated AB for SMEs is likely to be between 99% and 82%. The highest relative share of SMEs in total AB are found in the case of possible changes 5 for AA 5.1, 8c, 1B and 1C, followed by change 4. Notably, the AB related to change 5 refers to the AA 5.1 which is the administrative action of familiarising with new obligation and a new definition of the 'autonomous workers'. This is a one-off cost.

These results are also in line with what has been directly reported by enterprises. Interviewees in small companies reported that changes in relation to the stand-by time, extension of the reference period and flexibility in minimum daily rest would introduce significant administrative burdens for them. There was also a significant concern expressed about changes to the autonomous worker derogation.

It is important to note that the categorisation of employment by size classes is presented based on survey data related to site level (and not company level) leading to higher estimated proportion of workers in small companies relative to estimates drawing from company-level data. Therefore, the estimates on AC and AB can be expected to be overestimated for SMEs and underestimated for large companies.

Figure 5.6 Distribution of AB of the proposed changes to the WTD (for those change where AB is not zero) between SMEs and large companies



Source: Own elaboration

According to the study by Economisti Associati (2012), the highest relative share of SMEs in total AB were found in relation to Option 5 in their report, requiring the employer to keep written proof of the worker’s prior consent to opt-out and to include in the consent form information to the worker about their rights and option 7 on multiple contracts: clarifying that if a worker works under concurrent employment contracts with the same employer, Member States should ensure that the 48-hour limit to average weekly working time is applied per-worker and not per contract.

5.5 Results from the assessment on socio-economic impact of the proposed changes for SMEs

The economic impact of legislative changes to the WTD on SMEs might be different from the impact on larger companies for a number of reasons: First of all, smaller companies will tend to have a larger proportion of per unit overhead costs. In addition, larger companies are more likely to have an electronic infrastructure in place to record working time.

5.5.1 Impact on SMEs of possible changes on regulations of on-call and stand-by time

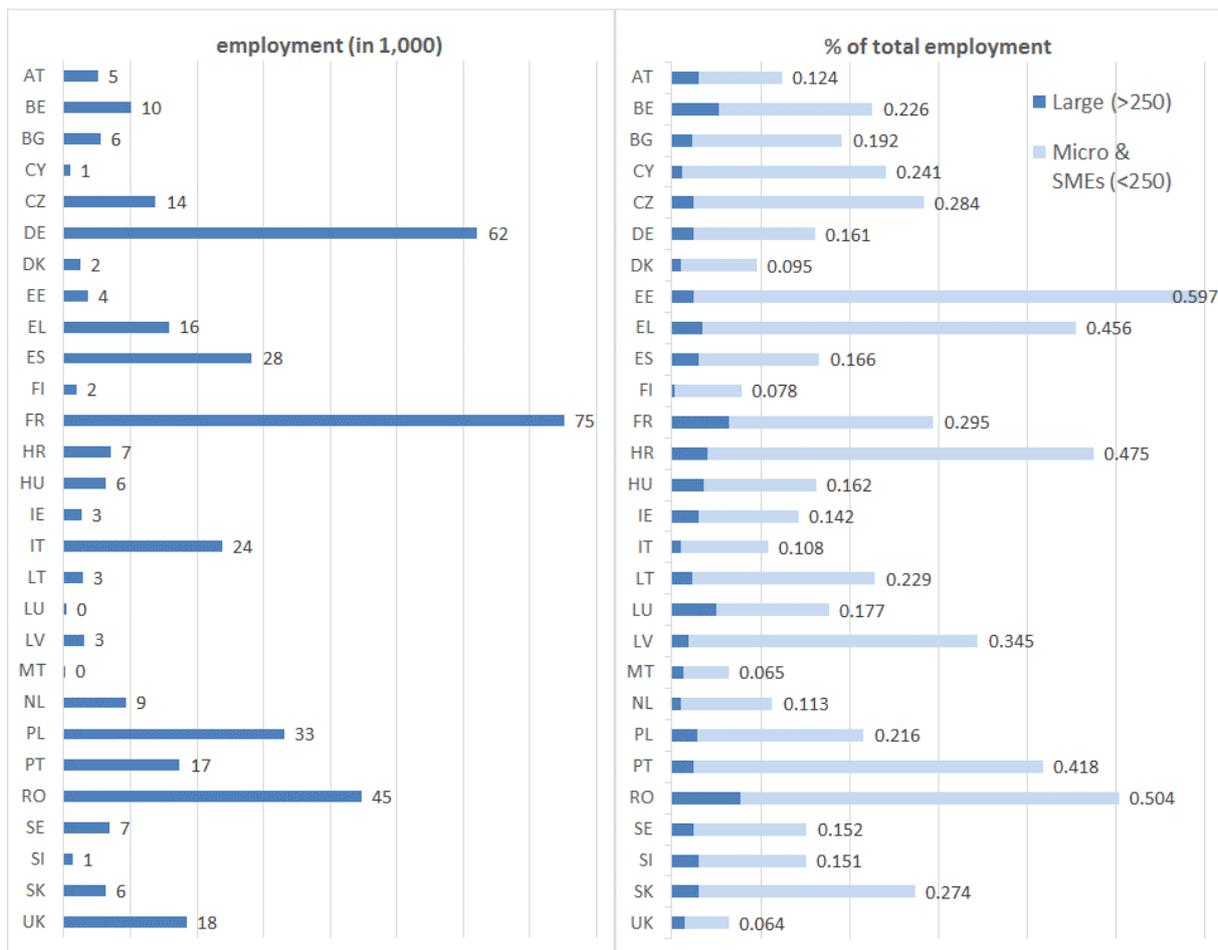
On-call and stand-by time are used in businesses of all sizes, but these forms of work are more widespread in larger organisations. It can be assumed that companies with fewer workers will be less able to divide on-call or stand-by time – if necessary for the production process – across more shoulders to absorb any effect that it might have. They will therefore face the situation in which they will have to recruit additional workers if regulations becomes stricter, while the opposite is true in case of increased flexibility.

Figure 5.7 shows the differential impact of changes in on-call regulations for enterprises of different sizes. This demonstrates that the impact of such changes is rather varied by

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business size across Member States. Although a greater proportion of the employment change relates to micro enterprises and SMEs, there is a variation across countries. In some Member States a greater proportion of the change will affect mainly SMEs (e.g. Estonia, Romania and Croatia).

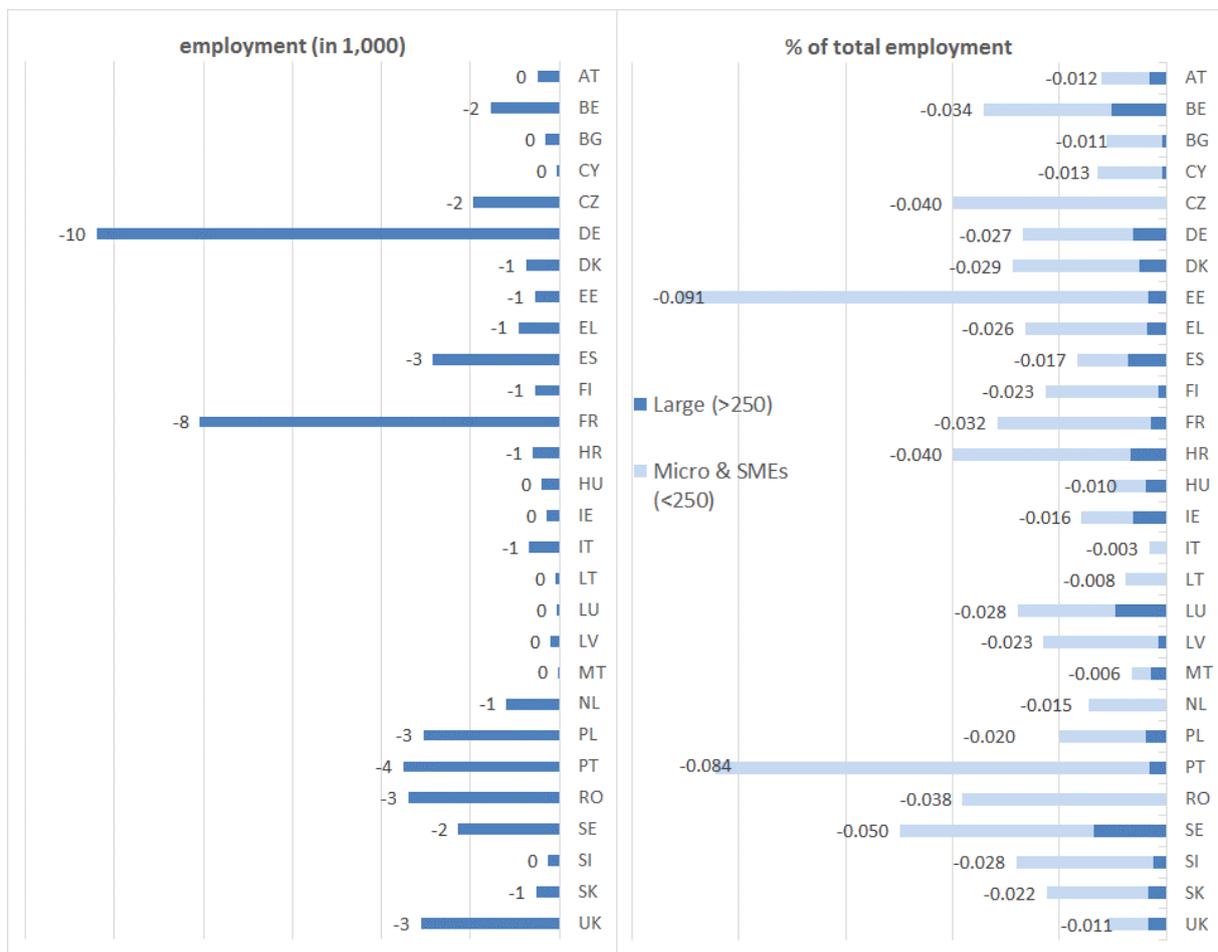
Figure 5.7 Employment effects of possible changes in on-call time by company size and Member State



Source: own elaboration.

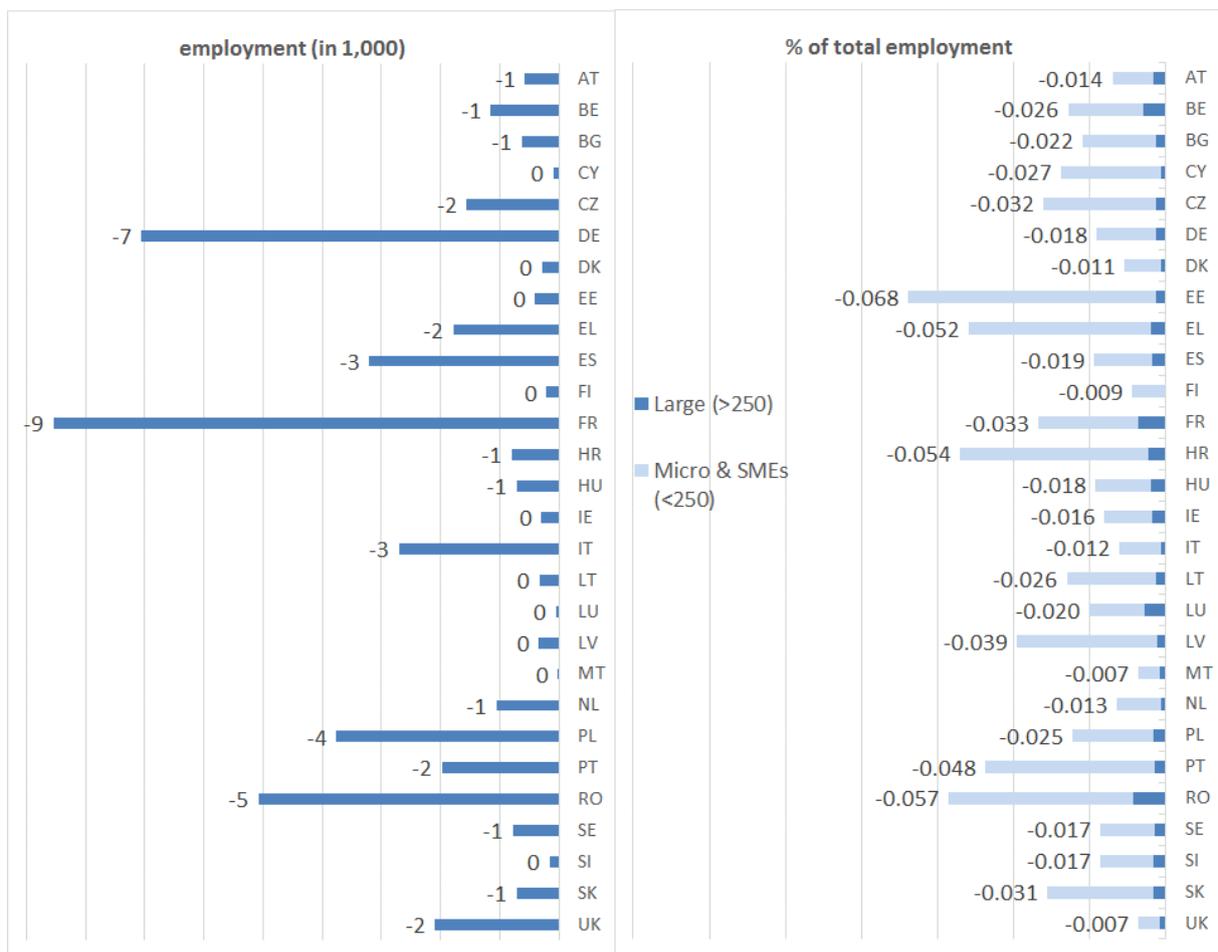
The two policy changes impacting the regulation of stand-by time have a much smaller and less differentiated impact on the two size classes.

Figure 5.8 Employment effects of possible changes in stand-by time by company size and Member State



Source: own elaboration.

Figure 5.9 Employment effects of possible changes through cap on stand-by time by company size and Member State



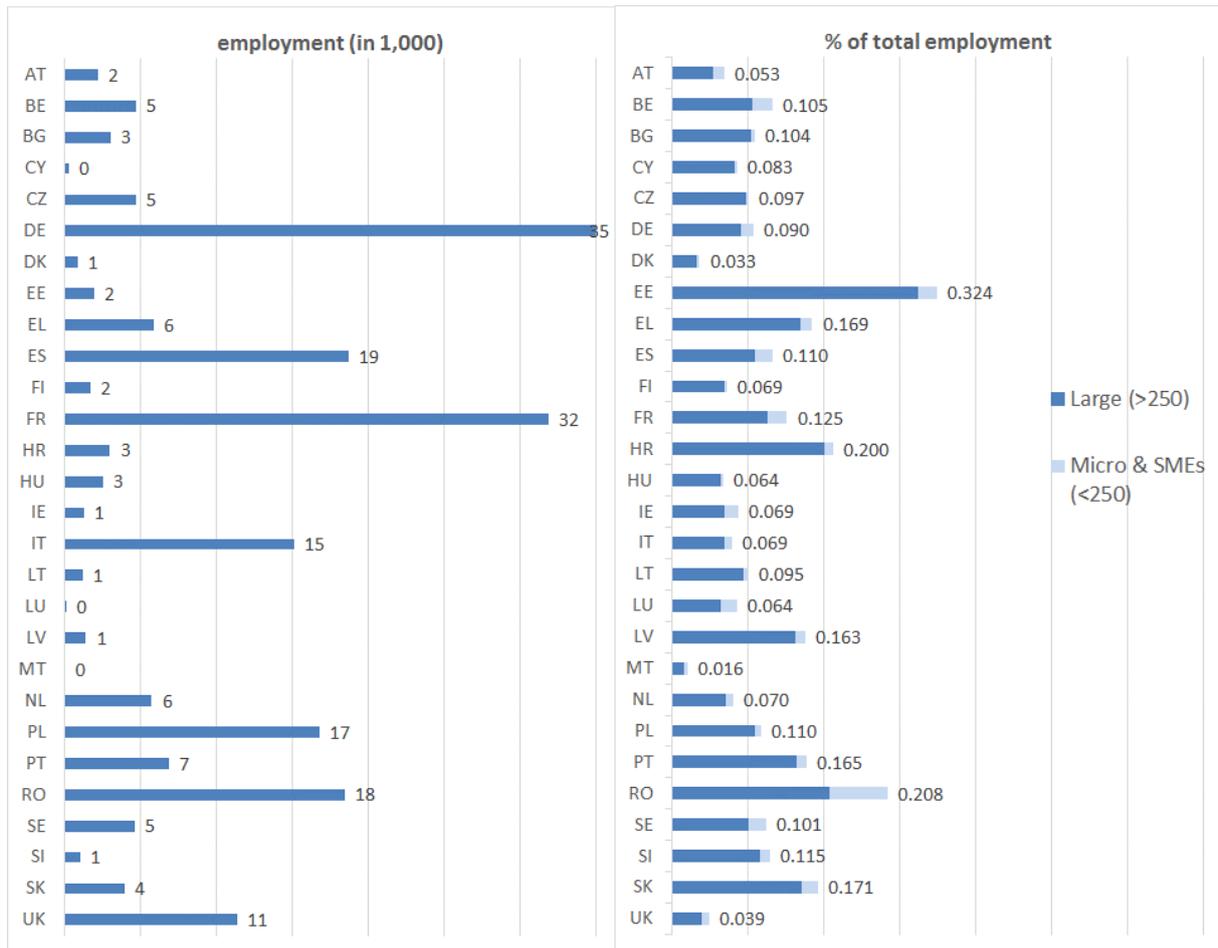
Source: own elaboration.

5.5.2 Impact on SMEs of possible changes regarding the timing of compensatory rest and reference periods for minimum weekly rest

Increases in the timespan in which compensatory rest period can be taken would allow for more flexibility in scheduling, which might be more important for smaller organisations than for larger ones. However, it also depends on how often these peaks in working time occur, and how many workers are potentially affected. This also holds true for the reference period for the calculation of average weekly working. Especially in occupations and sectors in which peak periods can be expected, longer reference periods could allow working with a smaller staff base. This should affect SMEs slightly more, given their higher share of overhead costs of employing workers.

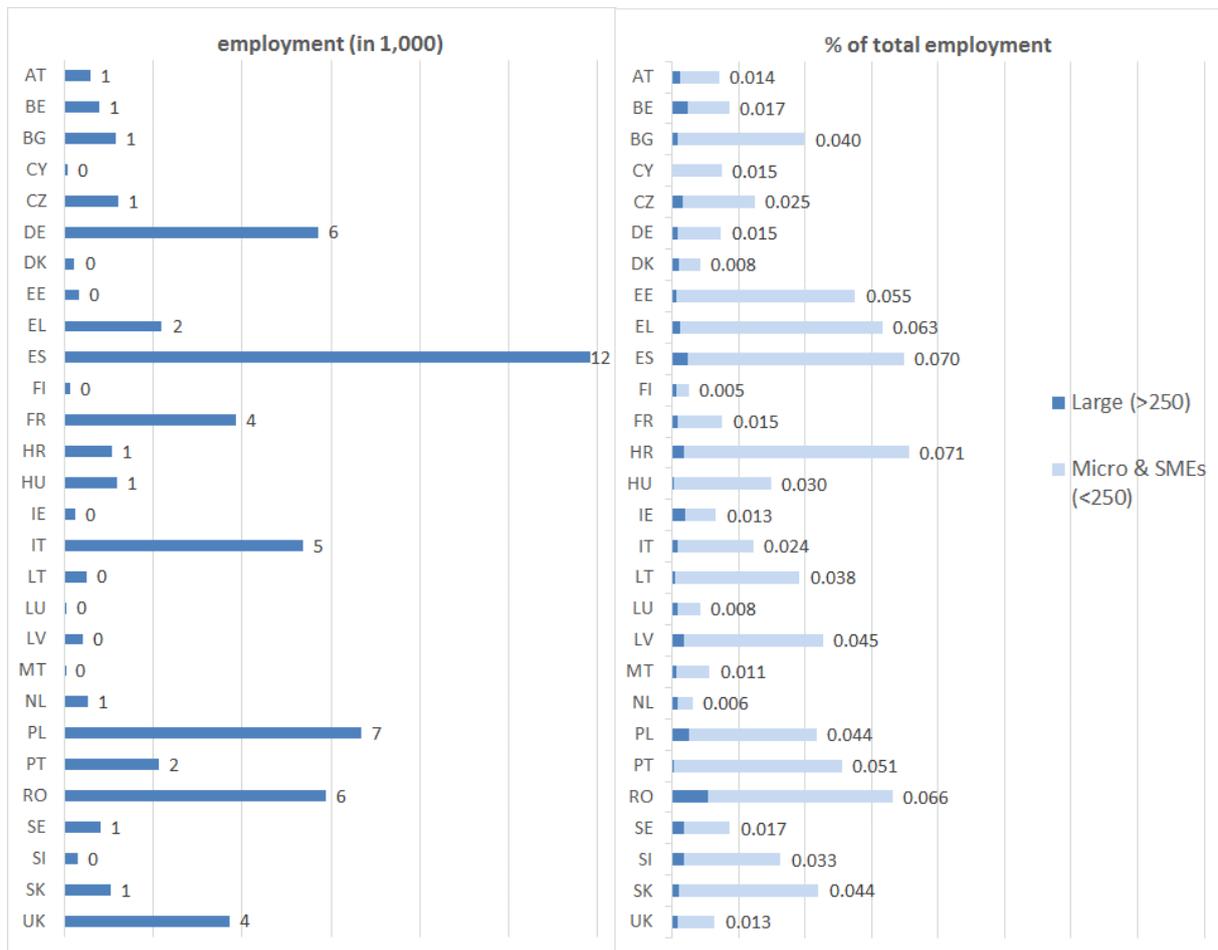
Overall, the socio-economic impact of changes to regulations on compensatory rest for missing minimum daily rest and reference periods for missing minimum weekly rest is relatively modest. SMEs are impacted more by the latter than the former (partly because on-call working is more widespread among larger companies).

Figure 5.10 Employment effects of possible changes due to change in the compensatory rest following a missed period for minimum daily rest by company size and Member State



Source: own elaboration.

Figure 5.11 Employment effects of possible changes due to extension of reference period for minimum weekly rest for SMEs by company size and Member State

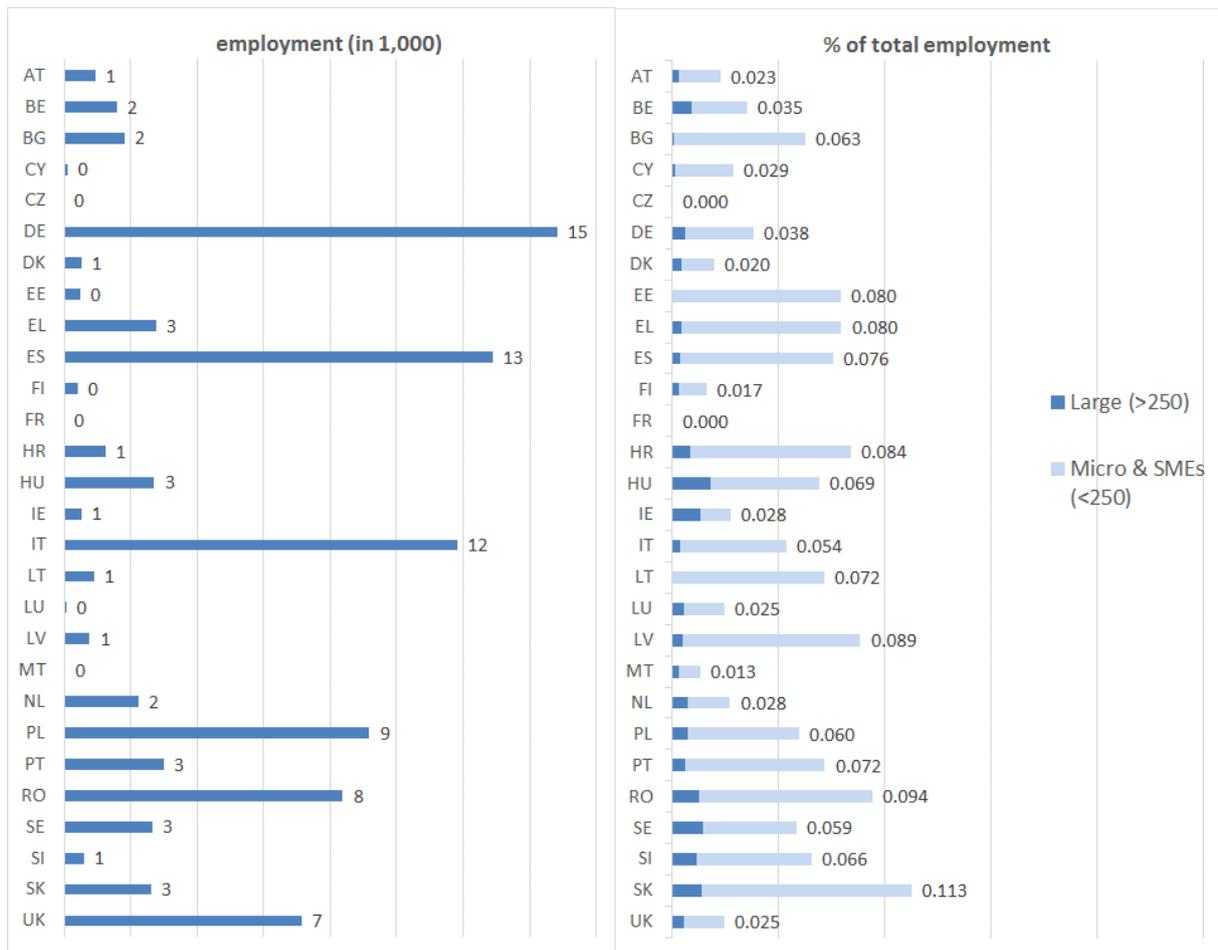


Source: own elaboration.

5.5.3 Impact on SMEs of possible changes to the reference period for calculating working time

A rather mixed picture emerges from the modelling of the economic impact of extending the reference period over which average weekly working time may be calculated. Firms that deal with seasonal peaks might benefit most from greater flexibility in this area. Both larger enterprises and SMEs should potentially benefit from this. Due to the size of the affected population, the employment change pertains mainly to SMEs, with Member States impacted according to their share of larger and smaller companies (as well as their current legislative situation).

Figure 5.12 Relative and positive employment effects of possible changes due to extension of reference period for calculating maximum weekly working time by company size and Member State

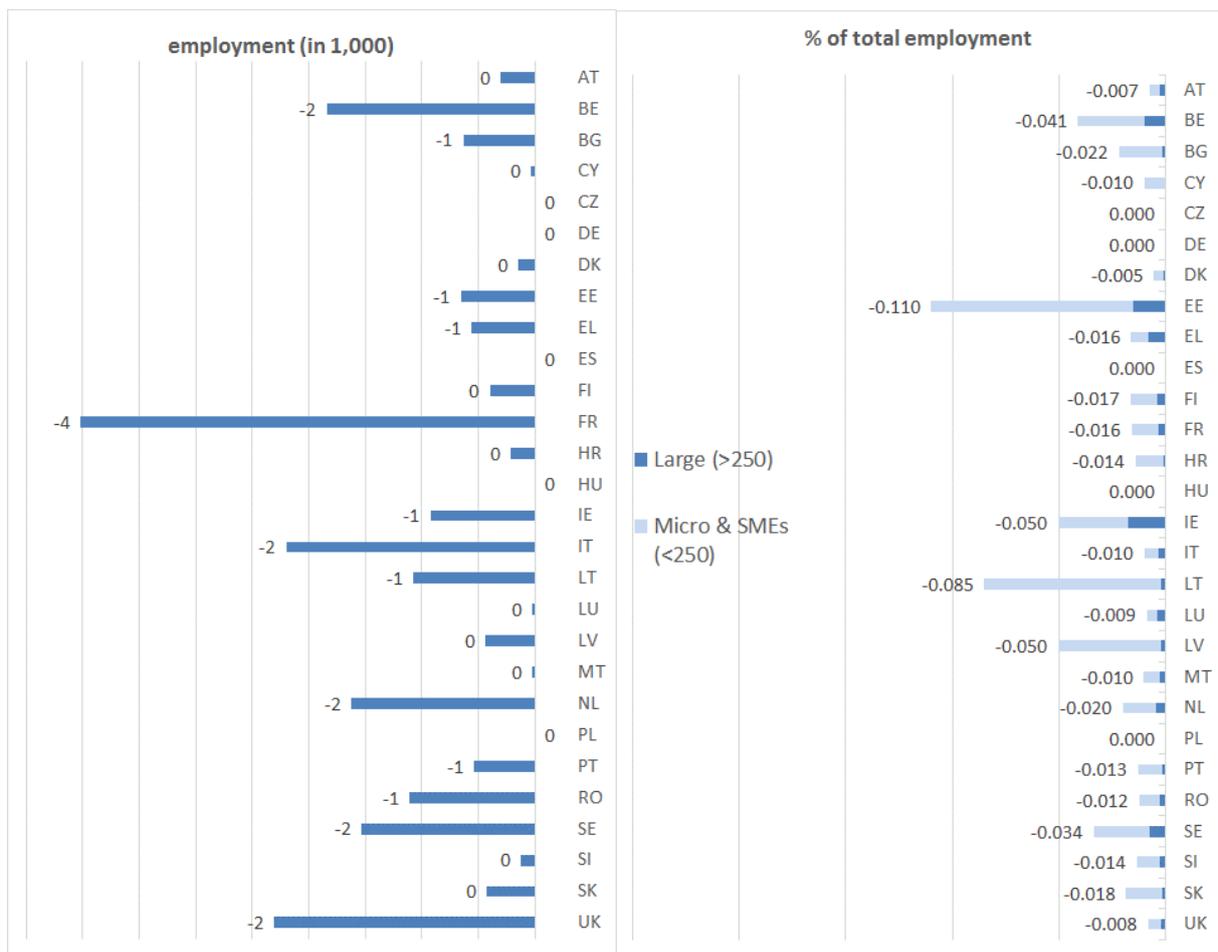


Source: own elaboration.

5.5.4 Impact on SMEs of possible changes relating to the definition of autonomous workers

Changes in the definition of autonomous workers are likely to affect companies first as a result of the requirement to check and document the status of their workers, followed by the need to adjust employee data files (both on-off costs). This might lead to a relatively higher cost for smaller companies than for larger companies. In general, the differences that drive any impact of the scenario arise from the affected population, with SMEs being more affected because of their representation in the economy, but also because the overall share of autonomous workers is proportionately higher in such companies.

Figure 5.13 Relative and negative employment effects due to change in definition of autonomous worker for SMEs and big companies, by Member State



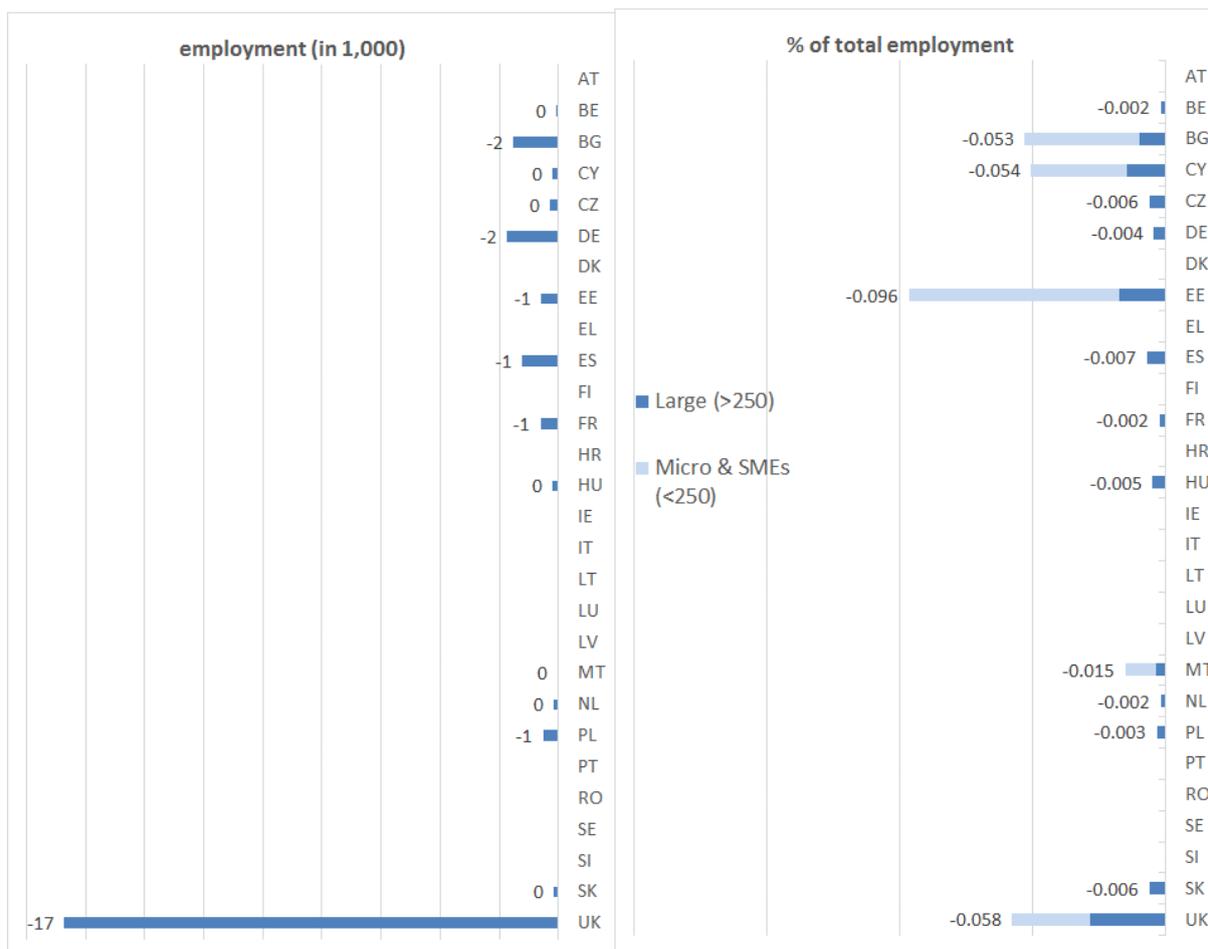
Source: own elaboration.

5.5.5 Impact on SMEs of possible changes linked to the opt-out provisions

Given that only partial information is available on the use of opt-out, the simulation effects are not broken down by size class across the Member States but only for the countries where data are available from the 2012 study. Particularly in countries in which the opt-out is linked to collective agreements, it is more likely that larger companies can make use of such provisions.

Figure 5.14 Relative and negative employment effects due to change in opt-out for SMEs and big companies, by Member State

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Source: own elaboration.

5.5.6 Impact on SME of changes in regulations regarding the application of the WTD (multiple contracts with the same employer)

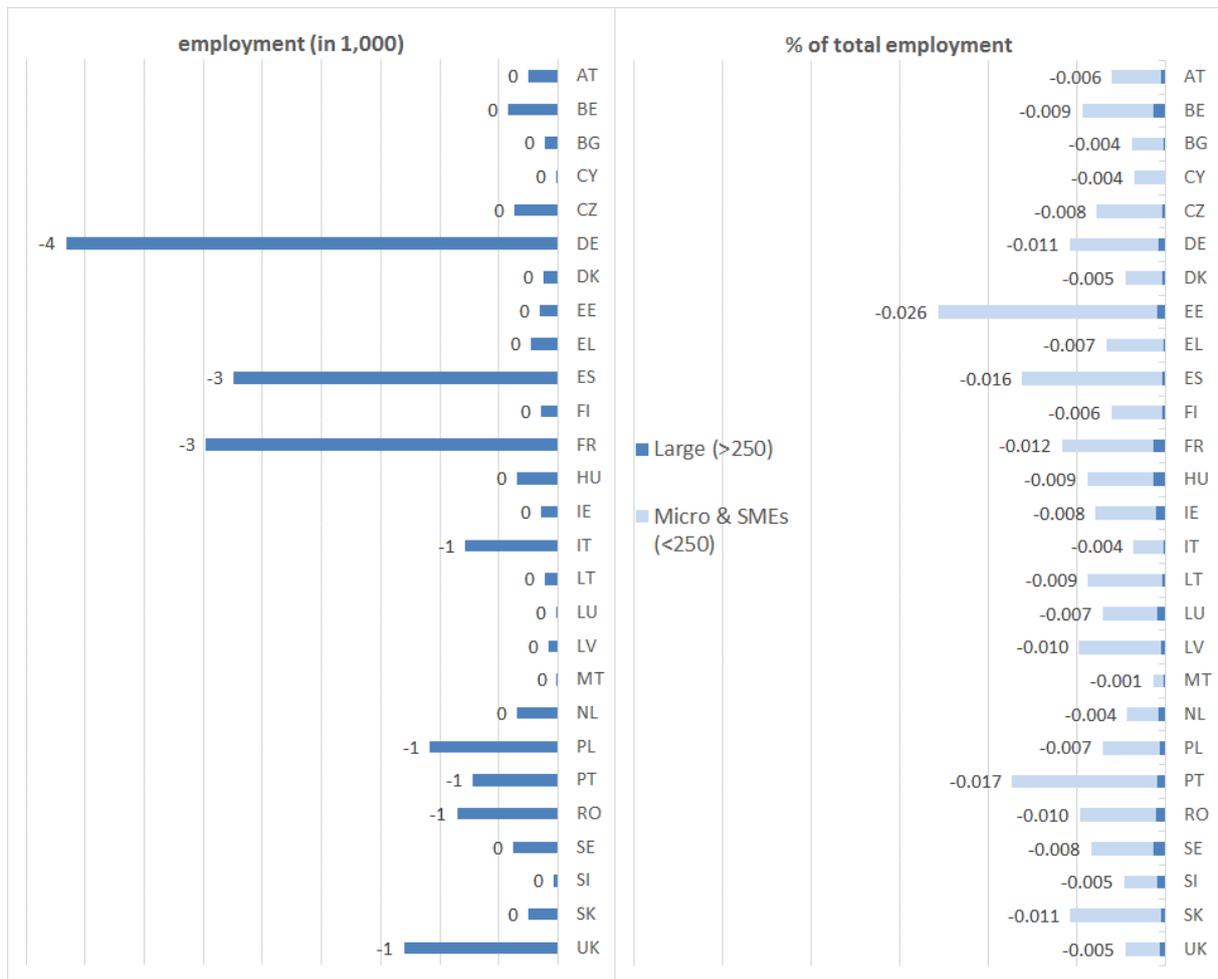
Given the partial information on the use of multiple contracts with the same employer, the simulation effects were not broken down by business size class.

5.5.7 Impact on SMEs of changes linked to the reconciliation of work and family life

Having to give early information regarding changes in working patterns is estimated to affect SMEs somewhat more than larger companies across all countries - because of more limited inherent staffing flexibility in smaller businesses.

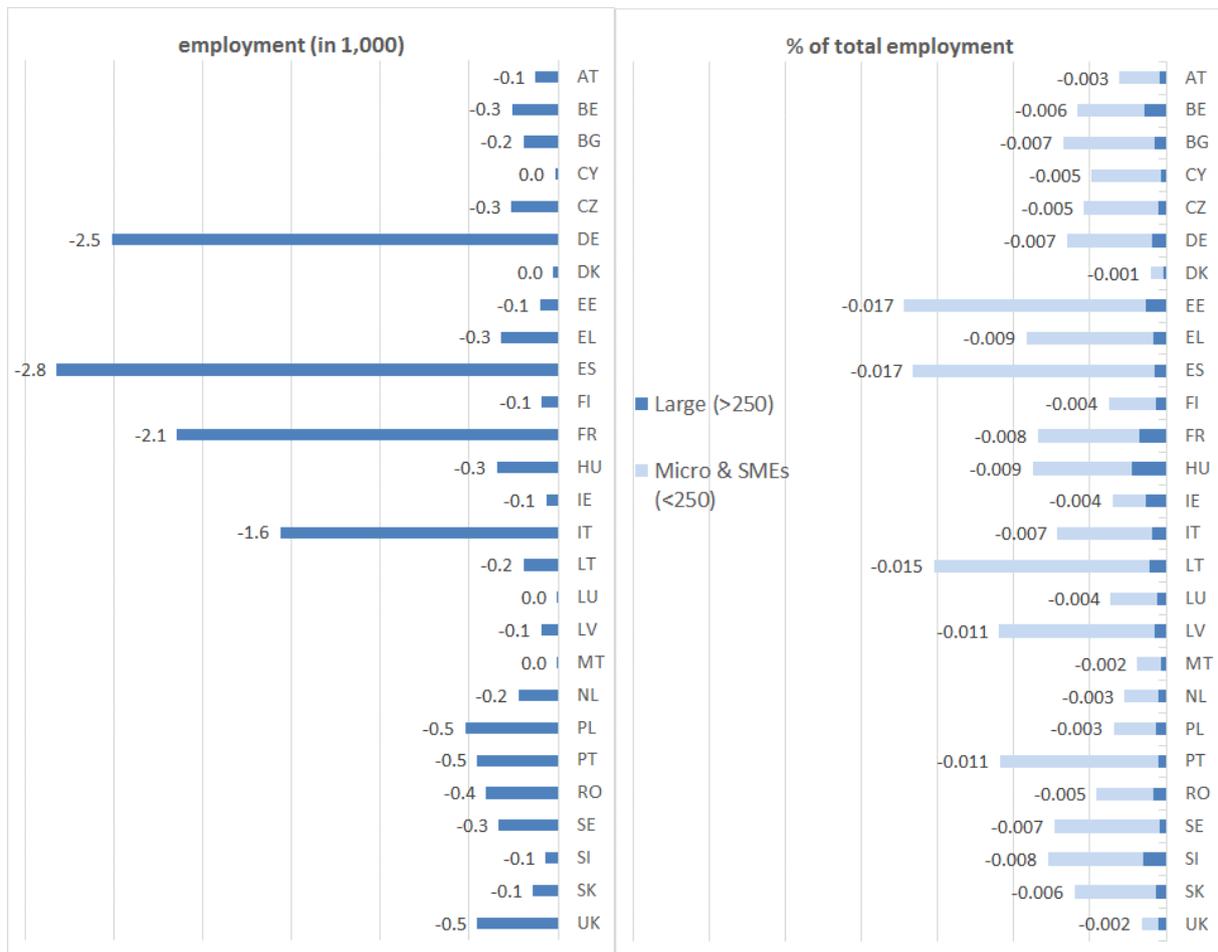
For the same reason, the right of the worker to request flexible working may also be more difficult to accommodate in smaller than in larger companies. The possible policy change relating to greater flexibility on when to take minimum daily rest is likely to have a more limited impact as such options are only open to certain groups of workers (e.g. office workers who can work from home) and was generally considered by companies interviewed for this study not to be useful or workable. It is therefore no surprise that, while the overall outcome differs by size classes, it mainly shows minor impacts.

Figure 5.16 Relative and negative employment effects as a result of employers having to inform workers of any changes in working time well in advance (8a) by company size and Member State



Source: own elaboration.

Figure 5.17 Relative and negative employment effects due to the right for workers to request changes to their working hours and patterns (8b) by company size and Member State



Source: own elaboration.

6 Stakeholders' view on possible changes

In addition to assessing the AB and socio-economic impact linked to possible changes to the WTD, it was also considered important to take stock of the views expressed by stakeholders on the potential impact and desirability of these changes, not only because of their knowledge of the implications of such rules on the ground, but also because of the highly political nature of the debate at EU and national level.

6.1 Possible change in rules in the calculation of on-call time and stand-by time

Overall, many employers and employers' organisations interviewed were favourable towards the idea of introducing greater flexibility in relation to the counting of on-call time towards working time limits/minimum rest periods. In the UK, the potentially positive effect of greater flexibility in this area for training provision (particularly in the health care sector) was mentioned by employer and government representatives. However, even among those favouring such a change, some concerns were raised as to the impact on worker health and safety. Among employers and employer representatives opposing such a change, the potential costs of detrimental health impacts were a key consideration.

Some representatives from labour ministries also opposed changes regarding the regulation of on-call work, arguing that (where necessary) employers had now accommodated themselves to the requirements of the SIMAP/Jaeger rulings. A renewed change in this area was therefore considered likely to impose further burdens. In other countries, greater flexibility in this area was welcomed, although in some Member States this was qualified when considering a possible link with the suppression of the opt-out. Some ministerial representatives (and most employers) were keen to see access to both possibilities, or were more favourable towards retaining the opt-out in an either/or scenario. Only one labour ministry representative specifically mentioned that greater flexibility in relation to on-call working could reduce the use of the opt-out.

Trade unions universally opposed such a potential change in the WTD, also pointing to adverse health and safety effects, as well as reduced worker motivation and productivity linked to prolonged working hours.

A potential increase in the number of stand-by hours being counted towards working time limits, or a cap on stand-by hours was universally opposed by employers and their representatives. Employers argued that such provisions could lead to additional administrative costs, as well as the need to recruit more workers. This concern was greater in countries with strict limits on overtime hours which could easily be reached in the context of such changes. Specific concerns were expressed regarding the possibility of recruiting what were often highly skilled workers in tight labour markets. Where additional workers would be needed to deliver tasks, reference was also made to the possibility for employers to fall back on more temporary or agency work to limit any costs arising, which could have a detrimental impact by increasing labour market segmentation. Trade unions tended to be more favourable to the proposed stand-by changes, with a preference being expressed (on balance) for a cap on stand-by hours. However, this was not universally the case, with at least one trade union considering the proposed cap to be too low, as workers were considered to favour more regular and predictable stand-by patterns (e.g. one week on-one week off).

As mentioned above, although this does not lie within the remit of the WTD, many stakeholders argued that it was difficult to consider these issues without taking account of the indirect impact of possible changes on remuneration. In rejecting a greater part of stand-by time being counted as working time, some employers argued that the 'inconvenience' of being on stand-by was generally already compensated for (e.g. through the payment of a flat rate wage increment). Some trade unions were concerned

that if fewer on-call hours were to count as effective working time, this would affect not also the number of hours an individual has to work, but also (potentially) their remuneration, increasing the need to work longer hours.

Overall, stakeholders considered the likely administrative burden imposed by such changes to be relatively minimal, as they were mainly linked to the recording of working hours, which generally takes places as a matter of course. Somewhat more concern was expressed on the part of the SME representatives.

Socio-economic impacts were therefore considered to be potentially more significant, particularly in relation to the possible changes linked to stand-by time, where the greatest potential costs were perceived to lie for employers. For workers, the most detrimental socio-economic effects were considered to arise from reducing the amount of on-call time to be counted as effective working time. It is notable that most stakeholders agreed on the potentially negative health and safety impact of provisions potentially extending individuals' working hours.

6.2 Possible change in the rules allowing compensatory rest following a missed period of minimum daily rest and weekly rest

While trade unions are not in favour of extending the period during which compensatory rest can be taken, a differentiated picture emerged in the views of employers, employer representative organisations and ministerial officials. In around half of the 10 countries assessed, these stakeholders were not in favour of extending this reference period for different reasons. Some argued that not allowing workers to take compensatory rest immediately would increase administrative burdens as more records would have to be kept as to when missed daily rest is taken. Others objected to an extension of the timeframe for health and safety reasons, while in one country the ministry argued that following the court cases significant changes had been made to shift patterns and further amendments in this regard would potentially require renewed changes, thus increasing organisational pressures and administrative burdens. In the remaining countries, at least some employer and governmental stakeholders favoured such a change, as it was seen to increase flexibility in time scheduling for employers. This view was particularly strongly expressed by employer side stakeholders in the hotel and restaurant sector where the requirement to take compensatory rest immediately often causes difficulties in staff rostering during peak periods. In some cases the current legal situation was seen to lead to compliance issues in the sector, whereas in other countries collective agreements already exempt the sector from the 11 hours minimum daily rest rules.

Stakeholders across all 10 countries showed little appetite for an across the board increase in the reference period for weekly rest, with most arguing that current provisions offered sufficient flexibility. There was a widely expressed concern over the health and safety impact of longer reference periods. As an exception, in some countries, representatives of the hotels and restaurant sector favoured an extension of this period to 4 weeks, but argued that the health and safety impact of such provisions would have to be monitored. A survey carried out by the Engineering Employers' Federation in the UK showed that 57% of respondents were in favour of an increase in the reference period for weekly rest.

6.3 Possible change to the weekly working time and reference period: extension of the reference period over which average weekly working time is be calculated

Stakeholder views on this possible change were significantly influenced by the extent to which derogations are currently used and the role of collective agreements in setting longer reference periods. In general, in countries where the use of a 6 or 12 month reference period is already rather common, the possible change tended to be considered to be irrelevant. In countries where collective agreements play a significant role in

extending the reference period, it was argued that allowing a 12 month reference period in legislation could undermine the role of the social partners. On the other hand, in countries where the role the social partners is relatively weak, some employers argued that a legislative extension would allow those employers with no counterpart for collective bargaining (or a counterpart reluctant to agree to such extensions) to apply these rules. This was seen to be particularly relevant for SMEs.

Trade unions were not in favour of an extension in the reference period. In a number of countries employers and their representatives were also not in favour, arguing that administrative burdens could be increased as a result of having to keep working time records for longer. This is also true for countries using working time accounts. Having said that, the majority of employers (in countries where such extensions are not currently commonplace) would welcome greater flexibility with regard to the reference period. This view was most commonly found among employer representatives in the hotels and restaurant sector and among some SME representatives.

Again, health and safety concerns were expressed, as longer reference periods could lead to prolonged periods of long hours working.

Overall, it is fair to say that support for such extensions appeared to be less evident than for some of the other possible changes providing greater flexibility for employers.

6.4 Possible change in the definition of the 'autonomous workers' derogation to the WTD

Stakeholder views on this possible change were significantly influenced by the legal baseline position at Member State level. However, even in countries where the current interpretation of the Directive could be considered to be relatively tight, there was some degree of nervousness about a possible tightening of the definition at EU level. Depending on the precise nature of the formulation, such changes were considered by some employers and ministries to have potentially significant cost effects, bringing additional groups of workers under the full remit of the WTD's provisions.

A clear assessment is hampered by the fact that there is no data available on the size of the group defined as autonomous workers in each country. In at least one country the combination of the requirement of being able to control the volume and organisation of working hours was considered to be unhelpful, as it was argued that both criteria are met by few workers. In countries where there are perceived to be less hierarchically organised workplaces, such definitions were also considered to pose potential issues for their application on the ground.

SME representatives in particular considered the existing provisions allowing for exemptions from the provisions of the WTD to be crucial, particularly for managers of SMEs (their situation is unlikely to change under the proposals).

Although this is not among the possible changes being explored, a number of trade unions spoke out in favour of the suppression of the autonomous worker derogation.

Overall, there was a degree of confusion as to the impact of a proposed change in this area, which is partly conditioned by a lack of clarity in definitions of this concept both at the EU and at the national level, as well as the lack of a clear picture of the number of workers affected.

6.5 Possible change in the rules on allowing the opt-out

Responses of different national stakeholders with regard to possible changes reinforcing conditions for the use of the opt-out, its restriction or phasing out were clearly influenced by the extent to which the opt-out is presently used.

In all countries under study where the opt-out is used, trade unions favoured its phasing out, arguing that the use of the opt-out contributed to a long hours culture with negative

health and safety and productivity implications, also resulting from increased staff turnover and sickness absence.

Where the opt-out is used, ministries and employer representatives favoured its retention. In most countries, its retention was preferred (where necessary) to other options introducing greater flexibility for employers. Restrictions on the opt-out were considered to have differential impacts on different sectors. This is clear in countries where the provisions are only used for certain sectors (i.e. the healthcare sector). However, even in countries where the use of the opt-out is rather widespread, different sectors assess the impact of its removal differently. The most significant impacts are perceived in the manufacturing, energy, transport (covered by different regulations) and in the public sector.

In countries where the opt-out is only possible by collective agreement, representatives of SMEs favoured the introduction of a general opt-out rule for SMEs as an opt-out by collective agreement was not considered to be workable for them.

Overall, it is therefore notable that despite the fact the more widespread use of the opt-out could be seen to have resulted from the implications of the SIMAP / Jaeger rulings, it does not appear that stakeholders among governments and employers view greater flexibility in on-call provisions and compensatory rest as a panacea for allowing the phase out of the opt-out provisions.

6.6 Possible change of the rules on working time in the event of concurrent contracts with the same employer

The scale of this phenomenon was unknown, but considered by stakeholders to be limited. Even where not stipulated in legislation, in nearly half the countries under study, current practice was considered to be that working time regulations apply per individual. In at least one country, several employment contracts with one employer were considered as one employment relationship and in principle, working time on both contracts is therefore aggregated.

The impact of such a change was therefore considered to be difficult to assess, but on the whole considered to be likely to be minor.

6.7 Reconciliation

Stakeholder consultations overwhelmingly demonstrated the view that proposals on greater flexibility in the taking of minimum daily rest (over 14 instead of 11 hours) would not be welcome or workable. Assessments of the impact of an EU wide introduction of a right to request flexible working differed depending on the type of stakeholder responding and the nature of existing national provisions. Trade unions supported the introduction of such an entitlement at the EU level, but also pointed to existing shortcomings in the application of such rights on the ground where they already exist for different groups of workers. Employers' representatives tended to favour such agreements being made at company level and generally did not support the introduction of EU wide entitlements in this regard. On the whole, SME representatives argued that it would be more difficult for small businesses to accommodate requests for flexible working, although on the ground that there was an endeavour to accommodate such requests where possible.

7 Conclusions

7.1 Introduction

The purpose of this section is to summarise the key findings of this study as well as to draw conclusions regarding their relevance for the various draft policy options and possible legislative changes assessed here.

Despite the relative limitations of the existing literature on the socio-economic impact of the WTD or wider working time regulations, it is possible to conclude that there is sufficient evidence to indicate a negative health and safety impact of long hours working. Long and inflexible working hours also have a negative impact on work-life balance which could affect worker motivation, retention and productivity.

Although Eurofound data show that collectively agreed as well as actual working hours have been declining in recent years, there is also evidence that in some countries, sectors and occupations long hours working persist²⁹⁷. New working patterns and types of contracts also mean that a number of workers combine several jobs which can result in cumulating long working hours.

Legislative mapping carried out for this study, as well as stakeholder interviews demonstrate that significant differences exist in the implementation of the current legal acquis, with a number of countries maintaining arrangements which could be considered in contravention of the acquis. Some countries take a minimalist approach to the implementation of the WTD while yet others more than comply with the requirements of the Directive. Collective bargaining adds further nuance to these provisions, although in relation to the assessment of the possible changes, the impact of the status quo with regard to bargaining outcomes is limited. Issues of enforcement were not considered in detail by this study, but as is the case in many areas of legislation, it is clear that more stringent enforcement could play some role in addressing the concerns identified by Commission services in relation to the current WTD (see section 1.1.3 of this report).

7.2 Methodological challenges

The goal of this study was to assess the impact of a number of possible legislative changes on administrative costs and burdens, as well as their socio-economic impact. A number of methodological challenges for this study must be acknowledged from the outset:

- The dearth of national assessments of the administrative burdens linked to working time regulation and the WTD in particular.
- The limited availability of studies measuring the size of the economic impact of working time regulation.
- The diversity of legal definitions at national level and the lack of European and national data on groups of workers affected by different potential changes in working time regulation. This limited the possibility to precisely estimate the affected population (e.g. different definition of on-call and stand time and lack of data on workers on-call and stand at national level, by sectors and occupations; lack of comparable data on the size of the population of workers affected by rules on compensatory rest etc.). Data shortcomings in this field led to a likely over-estimation of affected populations and therefore administrative and socio-economic impacts. Lack of data also meant that impacts could not be disaggregated by sector or skill level, which is significant as some of the working

²⁹⁷ Eurofound (2014), Developments in collectively agreed working time; <http://eurofound.europa.eu/observatories/eurwork/comparative-information/developments-in-collectively-agreed-working-time-2013#hd3>

arrangements being targeted are concentrated in particular sectors and occupations.

- Price and time calculations (to help assess administrative burdens) were drawn from interviews and from preparatory desk research. The main challenge related to the fact that employers found it difficult to quantify and/or estimate the price and time required for each administrative action linked to a possible change in the WTD.
- It is challenging to model the socio-economic impact of the proposed changes to working time legislation as this is likely to be small. The lack of reliable comparable data and the inability to deliver a sectoral breakdown means that it is not possible to model labour elasticities in different sectors, although some are significantly more affected by some of the potential changes than others (e.g. in relation on-call and stand-by time). This posed difficulties in disentangling the micro- and macro level effects of possible legislative changes.
- It is not possible to provide a quantitative estimation of the potential benefits of changes in working time regulation (e.g. in terms of improvements to health and safety), meaning that it is not possible to balance any administrative or socio-economic costs modelled against any potential benefits in a quantitative way. Only qualitative assessments are therefore provided here.

The findings presented below should be viewed against this background.

Table 7.1 Methodological challenges

Literature review	Mapping of implementation of WTD	Definition of affected population	Economic impact	Implication for this study
<p>Lack of studies assessing administrative burdens and socio-economic impact of working time</p>	<p>Inconsistency and/or lack of legal definition at national level (e.g. definition of on-call/stand-by time, definition of autonomous workers)</p>	<p>Lack of European and national level data on employees and companies on:</p> <ul style="list-style-type: none"> -on-call/stand-by work -right to compensatory rest after missed minimum daily/weekly rest -frequency of over-time (longer than 48 hours) -autonomous workers under WTD -workers interested in more working flexibility 	<p>Lack of data on direct effect of working time regulation on economic outcomes</p>	<p>EU level data (EWCS/EQLS) triangulated with national level data were used as proxy to estimate affected</p>
<p>Studies of impact of legislations focus on assessment of status quo rather than possible changes</p>	<p>Plethora of implementation strategies across EU (legislation, regulations, collective agreements, workplace practices)</p>		<p>Lack of robust evidence on magnitude and direction of cost assumptions</p>	<p>Overestimation of affected population of employees (particularly for SMEs)</p> <p>Overestimation of impact (particularly for SMEs)</p> <p>Challenges in assessing impact at macro level</p>
<p>Lack of studies on impact of changes to working time regulations across sectors/groups of employees</p>				<p>Lack of robust evidence to support estimates on sectors and groups of employees</p>

7.3 Key findings on administrative burdens and socio-economic impact

7.3.1 Impact on administrative burdens

The estimated administrative costs (AC) and burdens (AB) resulting from the various proposed changes are presented in the figure below. Summing up the estimates for all scenarios one arrives at the figure of €3,588 million for the whole of the EU in the first year and €2,431 million in subsequent years²⁹⁸. However, it should be noted that AB / AC effects generally cannot be summed up this way, as this does not take into account interactions between possible scenarios. Nevertheless it provides an overall indication of the magnitude of the administrative burdens associated with the potential new information obligations arising from the possible changes considered (see Table 2.1 in the main body of the report). Only in the case of possible changes 2 (rules on compensatory rest) and 5 (rules on autonomous workers) do the estimated figures exceed €1 billion for the EU28 in the first year.

One of the few available examples of comparable assessments at the national level, a UK study in 2008, estimated the overall administrative burden of the WTD (three information obligations were costed in the study) at €55.2 million in recurring costs per year²⁹⁹. When relatively similar costs relating to the requirement for record keeping on working or rest hours are compared, the present study estimates the resulting AB to be at an average of around €168 million³⁰⁰ for one such obligation for the whole of the EU.

Overall, it should be noted that comparisons with other studies, or indeed the presentation of total figures for all possible changes being considered are of limited value (and are only presented for illustrative purposes here), because of the specific underlying circumstances (and study methods) which need to be taken into account, as well as interactions between policy options.

The comparison figure below shows that the AB imposed by the possible changes are in many cases lower than the AC. In some cases, such as the possible changes in relation to on-call time and weekly rest, the administrative burden imposed will be nil, as the administrative actions needed in these two areas are already fulfilled by employers under the status quo. The only changes discussed which would impose an additional burden equal to total administrative costs are the changes in relation to the definition of autonomous workers. In this case all employers would first have to familiarise themselves with the new definition, regardless of whether they have autonomous workers or not. Subsequently, employers that have autonomous workers will have to adjust their files. These are therefore a one-off cost, whereas the AB arising in relation to other possible changes are of an ongoing nature.

In terms of relative magnitude (considering changes where burdens are of an ongoing nature), burdens linked to changes to regulations on compensatory rest are most significant, followed by changes to the regulation on the reference period, minimum daily rest and the calculation of stand-by time.

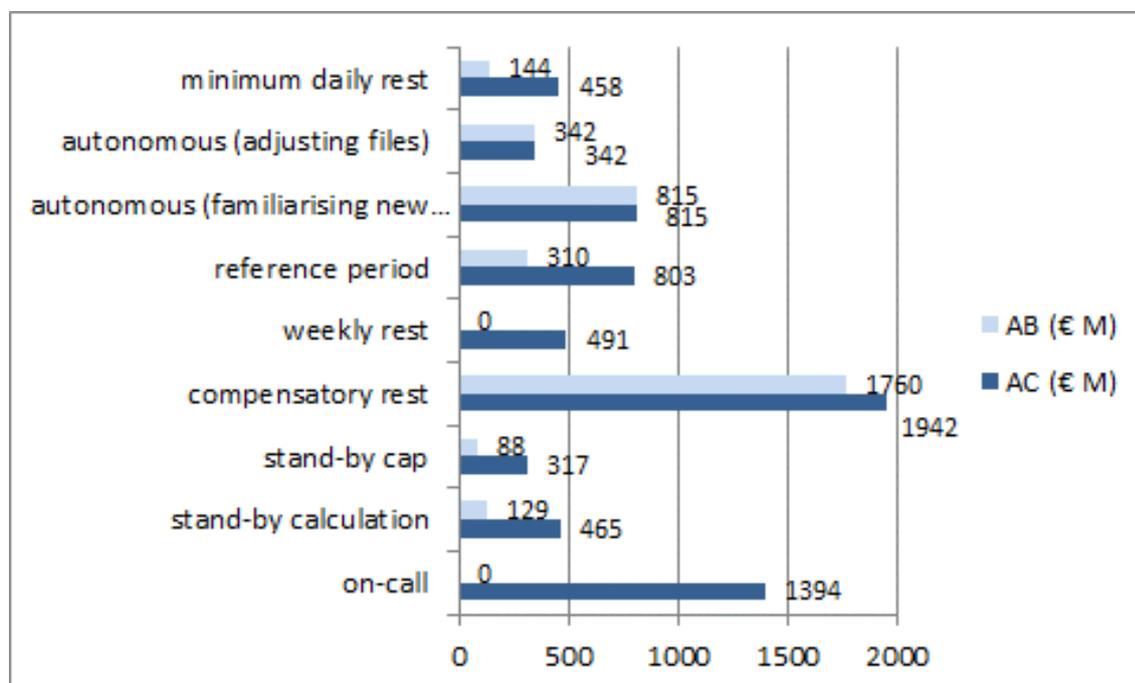
Between 90-95% of these AB are borne by SMEs.

²⁹⁸ Costs linked to the potential elaboration of the definition of autonomous workers are one-off costs. Total AC amounts to approximately 7 billion Euros.

²⁹⁹ BERR (2008), Employment Law Admin Burdens Survey 2008: Final Report, December 2008, pg4

³⁰⁰ Calculated as the average of the AB arising from the information obligations linked to the possible changes relating to minimum daily rest period, overall reference periods and the two options relation to stand-by working (see Figure 1 below).

Figure 7.2 Comparison between the average administrative burdens and administrative costs for each possible change (€M)



Source: own elaboration

The AB linked to changes relating to the opt-out provisions, as well as regarding concurrent contracts and the potential measures linked to improving work-life balance (possible changes 8a-c) were already considered in the 2012 report³⁰¹. Among these, the opt-out provisions and work-life balance measures (particularly in relation to the right to request flexible working) were linked to the most significant AB. When the AB assessed by both reports are considered, the burdens linked to the possible changes considered by the 2012 study were second (work-life balance provisions and the right to request flexible working in particular) and third (opt-out provisions) to the potential AB arising for businesses in relation to any change to compensatory rest provisions.

7.3.2 Socio-economic impact

As indicated above, it is extremely challenging to estimate the socio-economic impact of the proposed changes to the WTD, as these are likely to be limited, particularly at the macro level. The simulation carried out was designed to highlight any potential employment effects, which are likely to be over-estimated, not least because of the limitations associated with the comparable data sources available. All employment effects are forecast to occur over a timeframe of approximately two or three years³⁰².

The simulation carried out for this study shows that a positive employment impact could be associated to the possible legislative changes related to on-call work, compensatory rest, weekly rest and the reference period for the calculation of the 48 hour working time limit. However, it is crucial to highlight the modest relative impact when compared to the

³⁰¹ Economisti Associati; Review of the Working Time Directive 2003/88/EC measuring administrative costs and burdens of various position options (2012, unpublished).

³⁰² It is particularly difficult to estimate the timeframe of the impact due to the fact that changes to the WTD lead to indirect changes to the labour costs rather than direct changes. Additionally laws and directives affect the labour costs before (anticipation) as well as after their implementation once firms adjust to the new regulation. From U.S. literature it emerges that adjustments to new regulations occur approximately within 1-2 quarters, therefore it could be assumed that in an European environment the timescale is likely to be approximately 2-3 years.

level of total employment in Europe. For example, the potential change to the regulation of on-call work, which demonstrates the greatest potential impact, has a possible employment creation effect equivalent to 0.193% of total EU employment.

It is important to interpret these possible employment creation effects with caution as actual impacts on the ground hinge on the assumption of the estimated labour elasticity for a given production relationship, and that more of the factor labour would be used if it became cheaper. They are also dependent on estimations regarding the affected populations which are higher bound estimates and rely on limited data sources. Furthermore, it is critical to distinguish between the micro- and macro-level effects of potential changes. For example, the introduction of the possibility to count inactive parts of on-call time differently from active parts of on-call time for the purposes of the calculation of maximum working hours and compensatory rest would potentially allow a given organisation to deliver the work or service with fewer workers. Hence, one could expect lower labour demand to result. However, as such a change essentially translates into lower per unit labour costs, economic theory predicts that this would lead, on the macro level, to more firms hiring workers.³⁰³ In reality, the decision whether lower per unit lower labour costs lead to additional recruitment depends on a number of complex factors which are difficult to predict. For instance, in sectors which are not part of a more competitive market or where other considerations limit recruitment decisions³⁰⁴, this potential may not in effect lead to additional employment creation. This could, for instance, be considered to be the case in the health care sector where either budgetary considerations or skill shortages may lead employers to decide to perform the same service with fewer workers (working longer hours). In such a situation, any positive employment effects modelled are less likely to (fully) materialise in practice.

It should further be noted that the simulation did not take into account possible links with the opt-out scenario and assumes that Member States would avail themselves of the possibility to introduce greater flexibility in their regulation, which is not a foregone conclusion.

The second largest positive employment effect was predicted in relation to revisions to compensatory rest rules, again resulting from reductions in the cost factor labour. As in relation to the change in on-call time, it must be borne in mind that at the micro level, the proposed changes could lead to a reduced demand for labour as individual workers can be asked to work longer and macro-level effects are dependent on the sectoral, occupational and economic environment in which they occur. Given that changes to compensatory rest are most likely to impact similar sectors as on-call changes, the same provisos as mentioned above are likely to temper expectations on positive employment effects.

The simulation predicted negative employment effects for possible changes relating to stand-by work, autonomous workers, the opt-out, early information about working patterns and the right to request flexible working. These effects hinge on the assumption of increases in the cost factor labour and may again differ between the micro and macro

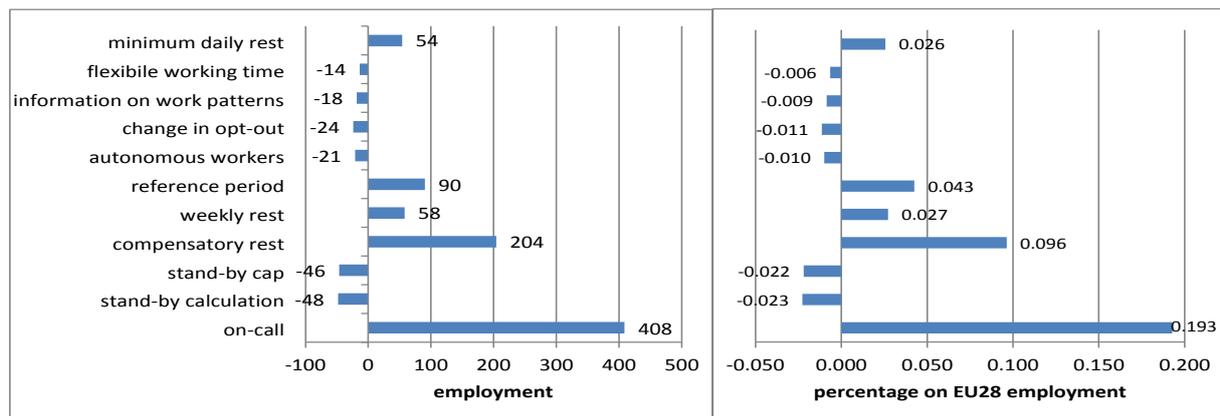
³⁰³ A decrease in labour cost will result in general into more employment as the cost of recruitment is reduced. This is the result of using the labour elasticities. A cheaper input will, according to economic theory, be used more intensively. While this economic outcome is the most efficient one, there are -- of course -- also circumstances under which one could assume that such a liberalisation with savings in employment would not lead to more employment in that sector: those sectors were not all parts of the market are competitive. E.g. in (semi) public sector organisations where specific tasks have to be performed, a liberalisation in WTD might not necessarily lead to more employment as the tasks to be performed can be done with less personnel. Uncertainty about future (employment) prospects can also lead to low increases of employment just as adjustment costs might prohibit firms from expanding employment (see for the seminal overview on labour adjustment costs: Hamermesh, D. S., & Pfann, G. A. (1996). Adjustment costs in factor demand. *Journal of Economic Literature*, 1264-1292.)

³⁰⁴ Such as overarching budgetary considerations, for instance in the public sector; decisions to prioritise the increase in shareholder value in the short-term; or overall skill shortages.

level, thus being subject to the complex interaction of various factors with regard to whether they will ultimately materialise.

When considering these results, it must also be borne in mind that the potential benefits of reduced working hours or improved work-life balance could not be simulated and are therefore not taken into account here. This is important because the literature referred to above clearly points to negative health and safety impacts of increased working hours, which can lead to higher costs to employers resulting from increased staff absences and staff turnover and can potentially damage productivity and competitiveness.

Figure 7.3 Employment impact (in thousands) for each possible changes and percentage on total EU28 employment



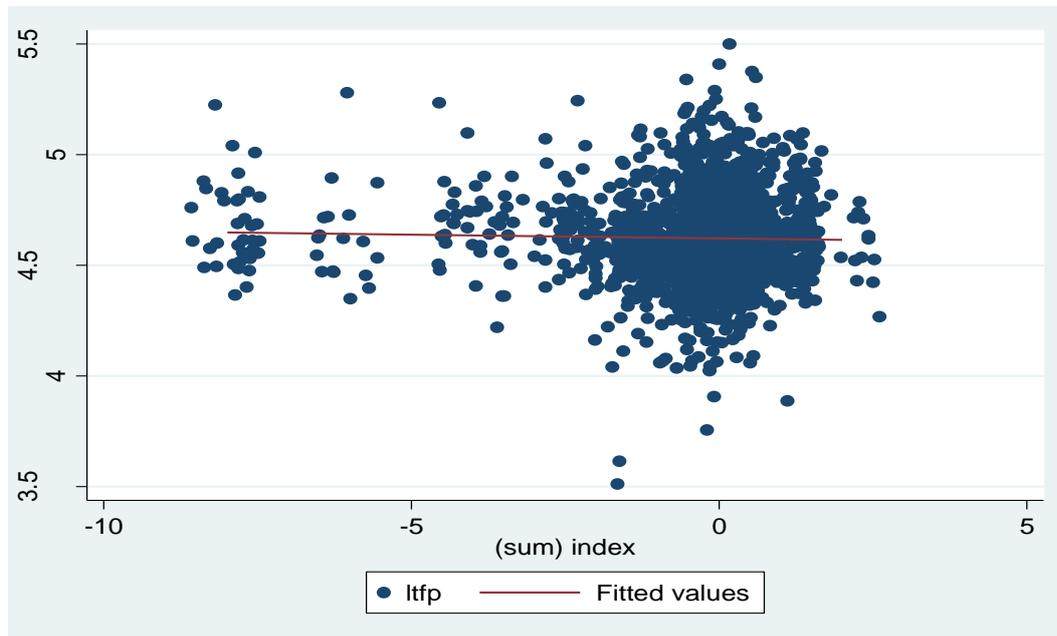
Source: own elaboration

Another aspect of the economic impact assessment deals with the question how the changes in the working time directive might affect other secondary variables, such as productivity, the profitability of firms, the availability of training, innovation and competitiveness. Given that the effect on employment of possible changes is predicted to be limited, it is unlikely that these other variables would be significantly affected. However, an attempt has been made to include a formal test of the impact of working time regulations on (some of these) variables.

Following the approach of the Deloitte (2010) study, the impact of an index of changes to working time regulation on the TFP was estimated using sectoral data of the EU Member States as they were represented in the EU KLEMS data. In contrast to the Deloitte study, the assessment of legislative changes concentrated only on working time regulation rather than including a broader index of employment protection legislation. Using panel fixed-effects estimates for the time from for which information was available through the LABREF database (2000 onwards)³⁰⁵, TFP is related to the relative strictness of working time regulation.

³⁰⁵ Although it must be borne in mind that case law also plays a role in making regulation more or less strict, as manifested in the SIMAP/Jaeger judgements. This is not captured in this database.

Figure 4. TFP vs strictness of working time legislation



Note: The index gives the (accumulated) changes of working time regulation in a country from 2000 onwards. Liberalizations are indicated with negative numbers more stringent regulations with positive numbers. Ltfp is the ln TFP (index) measured along the vertical axis, while the index is measured along the horizontal axis.

The coefficient for the working time regulation index is estimated to be -0.0047 (0.0013) which implies a slightly negative relationship between strictness of working time regulation and TFP. While the coefficient is statistically significant – even if corrected for the cluster around the country variable – one should be extremely cautious in interpreting the coefficient at face value. Having said that, less stringent working time regulation (negative values of the index) - if anything - seems to increase TFP.

The index was also included in the estimates of the labour demand relationship that was used to identify the labour demand elasticities. Including the index of strictness with regard to other relationships does not yield any statistically significant values. In addition, explaining hours worked or value added also do not seem to be correlated with changes in the index.

Overall, it can be concluded that the strictness of working time regulation, in itself, does not show a strong statistical influence on macroeconomic outcomes. However, this does not imply that specific changes in working time regulation could not have real economic effects as shown in the simulation exercise using labour demand and (assumed) cost increases above.

Long working hours can have detrimental effects on health and well-being of the worker. While studies show the negative impact of long working hours on workers' productivity and health, it is beyond the scope of this study to simulate such results.

EWCS data shows that those workers reporting long working hours more frequently state that the work has a negative impact on their health, and less frequently report a positive health status. Workers with long working hours are also generally less satisfied with their job. Having flexible work schedules (as selected by the worker) is correlated with better self-reported health status. Those with flexible work schedules have a higher likelihood of reporting a good or very good health status. Flexible work schedules also lead to reduced sickness absence, but a higher tendency to work while sick. In general, flexible work schedules were also associated with greater work satisfaction.

However, translating these findings into predictions which would make it possible to estimate the secondary effects changes to the WTD is problematic. These effects are also likely to be affected by the exact circumstances of the production setting, the individual worker, the production process, the actual number of hours worked, to mention just a few. It is not possible to produce generalised models based on the few existing (case) studies.

7.4 Regulatory impact for SMEs

In line with requirements to assess the specific impact of potential new regulation on SMEs, the study looked at the regulatory impact of existing legislation, as well as potential legislative amendments on small businesses.

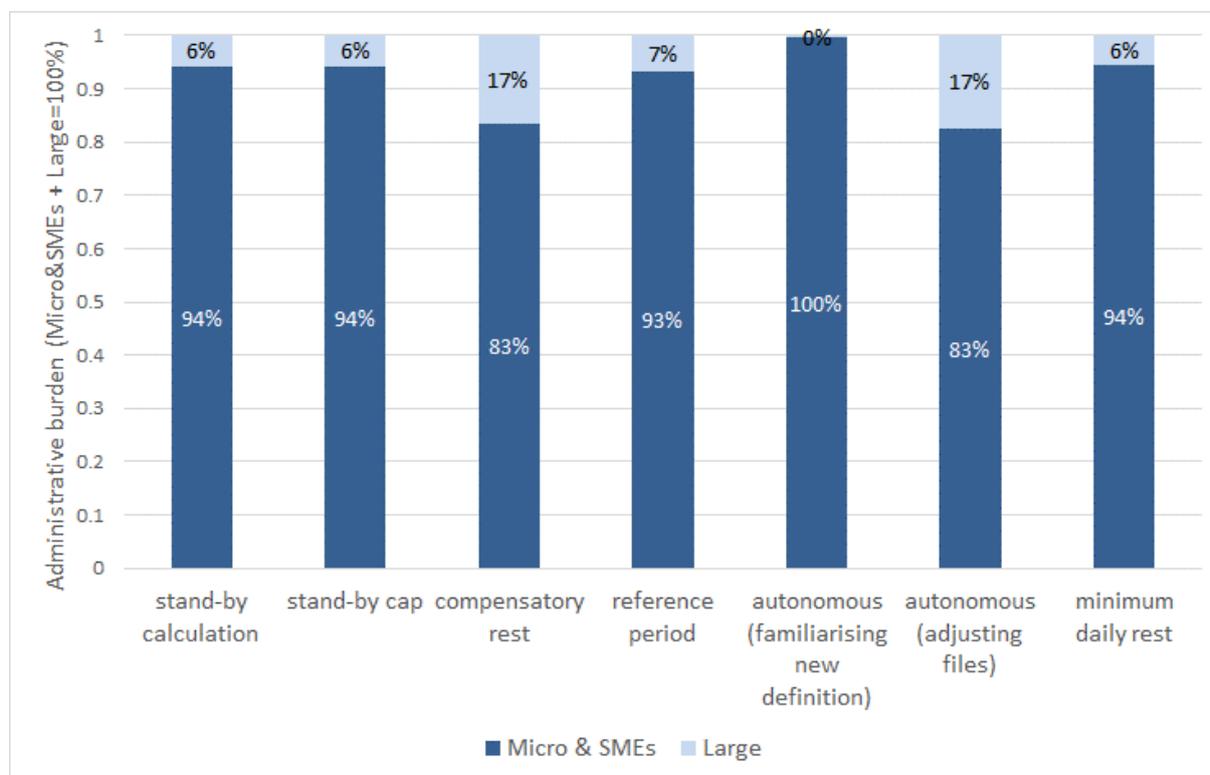
When interpreting the comparative results between SMEs and large companies it is important to remember that in Europe the number of workers in SMEs is significantly larger than the number of workers in large companies³⁰⁶. Therefore, any change can be expected to have larger aggregate effects on SMEs than on large companies. Additionally, the categorisation of employment by size classes is presented based on survey data related to site level (and not company level) leading to a higher estimated proportion of workers in SMEs relative to estimates drawing from company-level data. Therefore, the estimates on AB can be expected to be overestimated for SMEs and underestimated for large enterprises.

Overall it appears that changes in the WTD are likely to impact SMEs relatively more than large companies. The share of the estimated AB for SMEs is likely to be between 83% and 99%, depending on the specific change being assessed, while the overall contribution of SMEs to total EU-27 value added was more than 57% (€3.4 trillion) in 2012.

The highest relative share of SMEs in total AB is found in the case of possible change 5 (and specifically the familiarisation with a new definition of 'autonomous worker'), followed by changes relating to the reference period for weekly rest. Furthermore, the proportion of autonomous workers is likely to be greater in SMEs.

³⁰⁶http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/performance-review/files/supporting-documents/2013/annual-report-smes-2013_en.pdf According to the Annual Report on European SMEs 2012/2013 the European Commission, in 2012 SMEs accounted for around 66.5% of all European jobs (in the private sector). Facing data availability problems this study relies on SME/large split based on data reported in the European Working Conditions Survey (EWCS) that focuses on the size of the site at which a person is employed rather than company as a whole. Resulting proportion of workers in SMEs is around 85% and hence the reported figures likely overestimate the total administrative burden falling on SMEs relative to large enterprises.

Figure 7.4 Distribution of AB of the proposed changes to the WTD (for those change where AB is not zero) between SMEs and large companies



Source: Own elaboration

Furthermore, the economic impact of changes in working time regulation on SMEs might be different from the impact on larger companies, as changes in overhead costs affect them more significantly. They are also less likely to be able to invest in infrastructure supporting the measurement of working time, the existence of which would reduce any additional costs incurred as a result of some of the potential changes.

7.5 Overall assessment of options and proposed changes

As indicated above, the focus of this study has been on a range of possible legislative changes, some of which have previously been discussed in the ongoing process of the review of the WTD, while others are new. It was not intended to comment on detail in the different policy options preliminarily envisaged by the Commission services (e.g. non change, sectoral approach etc.). However, from the research carried out it can be stated that with regard to Option 1 (the drafting of an interpretive Communication by the Commission), this could certainly clarify some legal uncertainty that still exists in the eyes of some stakeholders. Some areas of the Working Time Directive were left open which led to some clarification by the CJEU via its case-law. This has led to a situation where national legislation has not been adapted to take account of this legal reality, which could – in principle - lead to further case law.

Compliance also remains an issue on the ground and when looking at infringement proceedings which have been launched against some Member States. In France, Ireland, Italy or Greece, the situation of doctors and doctors in training has being highlighted by the Commission as preoccupying, as these countries fail to ensure that doctors work no more than 48 hours per week on average.

Furthermore, uncertainties remain in other areas where the CJEU has not yet been called upon to clarify the situation through case-law. For instance, regarding concurrent

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contracts, the WTD does not mention whether these rules apply per individual or per contract. As a result national legislation in this area remains unclear.

In the case of autonomous workers, uncertainties exist in relation to the scope of this derogation as the WTD provides for a rather broad definition. As a result, a variety of interpretations are used in legislation and by national courts which give rise to very different application of the rules at Member State level.

The preparation of an interpretive Communication would present an opportunity to provide clarification to Member States and stakeholders by becoming a single reference on the current legal acquis with regard to the WTD.

With regard to the detailed possible legislative changes being considered by this study, some of the impacts discussed above appear to indicate that some may be more suitable than others when considered from the perspective of estimated employment and wider socio-economic impact and associated administrative burden. The table below summarises the findings of this study from the perspective of the estimated employment impact, while taking into account legislative, AB and wider socio-economic impact. It should be noted that the core goal of the Directive – the protection of the health and safety of workers – is only considered qualitatively here, as it was not possible to quantify the impact of possible changes to the Directive in this area.

This overview shows that possible changes relating to the calculation of on-call time and the reference period for weekly and minimum daily rest have potential positive employment effects at macro level, while being linked to limited administrative burdens and offering significant additional flexibility to employers. The other possible change with a positive employment impact, the change in compensatory rest rules, is associated with the highest administrative burden. As indicated above, administrative burdens and employment effects are likely to be over-estimated due to the methodological challenges outlined above. They also hinge on the assumption that any potential reductions in the cost factor labour will lead to employment creation, which in practice depends on a complex set of interlinked factors and may not materialise in practice (e.g. in situations where budgetary restrictions or labour shortages prevail).

At the other end of the spectrum, the possible changes which were associated with likely negative employment impacts, the stand-by scenarios, are linked to limited administrative burdens. The introduction of a right to request flexible working was assessed to have a slightly negative employment effect as well as being associated to high administrative burdens. However, these options could improve health and safety as well as work-life balance, as employment outcomes on the ground are difficult to predict.

The column on comments in the table below considers other socio-economic impacts arising from possible changes in the legislation, as well as the views of stakeholders, providing a qualitative perspective on the quantitative assessments of administrative burden and economic impact.

To sum up, as indicated above, summing up the estimates for all scenarios one arrives at the figure of €3,588 million for the whole of the EU in the first year and €2,431 million in subsequent years³⁰⁷. However, it should be noted that AB / AC effects generally cannot be summed up this way as this does not take into account interactions between possible scenarios. Approximately €3,265 million of this will be borne by SMEs in the first year (€2,212 million in subsequent years). The potential change with the most significant possible impact on employment (relating to the regulation of on-call work), has a possible employment creation effect equivalent to 0.193% of total EU employment. However, potential employment effects have to be assessed within the framework of the

³⁰⁷ Costs linked to the potential elaboration of the definition of autonomous workers are one-off costs.

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sectoral and economic environment within which possible changes are most likely to occur and likely effects on health and safety performance also have to be borne in mind.

Table 7.4 Overall impact of the possible changes to the WTD

	Impact on employment (light grey denotes positive employment impact, dark grey negative employment impact)	Impact on administrative burden (light grey denotes positive employment impact, dark grey negative employment impact; ranking from 1-11 with 1 being highest burden)	Impact on changes required to national legislation (light grey denotes positive employment impact, dark grey negative employment impact ; ranking from 1-12 with 1 being most additional flexibility and 12 greatest additional change)	Socio-economic impact	Stakeholder views
On-call (1a)	10	3		Potentially negative health and safety and productivity impact	Most employers and many ministries in favour, trade unions opposed.
Compensatory rest (2)	1	1	1	Possible negative health and safety and productivity impact	Some employers and ministries in favour, but also concerns, trade unions opposed

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	(EI) Impact on employment (from most positive to most negative; green denotes positive employment impact, red negative employment impact)	(AB) Impact on administrative burden (in ranking from 1-11 with 1 being highest burden)	(L) Impact on changes required to national legislation (in ranking from 1-12 with 1 being most additional flexibility and 12 greatest additional change; green denotes more flexibility, red less flexibility)	Socio-economic impact)	Stakeholder views
Reference period (4)	6	2		Possible negative health and safety and associated impacts	Most employers and ministries in countries not yet significantly using derogation in favour, trade unions opposed
Weekly rest (3)	11	4		Possible negative health and safety and associated impacts	Limited interest, trade unions opposed
Right to request flexible working (8b)	2	8		Positive work life balance effect	Trade unions in favour, most employers and ministries opposed
Early information on changes in working patterns (8a)	n/a	n/a		Limited impact	Limited interest
Autonomous worker (5)	4	6		Could improve health and safety for many workers newly under Directive	Concerns over impact; trade union want suppression of derogation

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	(EI) Impact on employment (from most positive to most negative; green denotes positive employment impact, red negative employment impact)	(AB) Impact on administrative burden (in ranking from 1-11 with 1 being highest burden)	(L) Impact on changes required to national legislation (in ranking from 1-12 with 1 being most additional flexibility and 12 greatest additional change; green denotes more flexibility, red less flexibility)	Comments (stakeholder views and wider socio-economic impacts)
Opt-out (6)		3	5	Possible positive health and safety and associated impact Employers and ministries opposing phase out/suppression; trade unions want to abolish
Stand-by cap (1c)		9	9	Possible positive health and safety and associated impact Employers and most ministries opposed; some trade unions in favour
Stand-by calculation (1b)		8	11	Possible positive health and safety and associated impact Employers and most ministries opposed; some trade unions in favour
Concurrent contract (7)	n/a	n/a	7	Limited impact Limited interest
Flexibility in minimum daily rest (8c)			10	Potentially significant impact as not considered workable No interest; not considered workable

Note: - Light grey indicates: employment creation, more flexibility, low administrative burdens; dark grey indicates employment reduction, less flexibility, high administrative burdens

Annexes

Annex 1 - Transnational and national literature reviewed

1.1 Transnational literature review

- **European institutions documents**

European Business Test Panel, Reviewing the Working Time directive (2003/88/EC), http://ec.europa.eu/yourvoice/ebtp/consultations/2010/working-time-directive/report_en.pdf

European Commission (2006), Study on the Impact of Working Time: Final Report (VT/2005/052)

European Parliament Policy Department: Economic and Scientific Policy (2007), Impact Assessment of Certain Aspects of the Working Time Directive

European Commission (2010), Short time working arrangements as response to cyclical fluctuations

European Commission (2010), Study to support an Impact Assessment on further action at European level regarding Directive 2003/88/EC and the evolution of working time organisation

European Commission COM (2010), Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, Reviewing the Working Time Directive, Second-phase consultation of the social partners at European level under Article 154 TFEU

European Commission (2012); Review of the Working Time Directive 2003/88/EC measuring administrative costs and burdens of various position options (2012), unpublished

European Commission (2013) Growth potential of EU human resources and policy implications for future economic growth

- **International organisations documents**

ILO (2012), Golden, L., The effects of working time on productivity and firm performance: a research synthesis paper <http://goo.gl/AOslkh>

ILO (2012) Fagan C., Lyonette C., Smith M., Saldana-Tejeda A., The influence of working time arrangements on work-life integration or 'balance': A review of the international evidence <http://goo.gl/zJi6c5>

ILO (2013), Can better working conditions improve the performance of SMEs? An international literature review. Geneva, Available at: http://www.ilo.org/wcmsp5/groups/public/---ed_emp/---emp_ent/documents/publication/wcms_227760.pdf

Bassanini, A., & Venn, D. (2007). Assessing the impact of labour market policies on productivity: a difference-in-differences approach (No. 54). OECD Publishing

Causa, O. (2008), "Explaining Differences in Hours Worked among OECD Countries: An empirical analysis", OECD Economics Department Working Papers, No. 596, OECD Publishing.

Kümmerling, A and Lehdorff, S (2014) The use of working time-related crisis response measures during the Great Recession; ILO; Conditions of Work and Employment Series, No 44

Lee, S., & McCann, D. (2007). Measuring working time laws: texts, observance and effective regulation. Labour institutions in the developing world: cultivating justice

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through labour law and policies, Janine Berg and David Kucera, eds., ILO and Palgrave MacMillan

Nicoletti, Giuseppe, and Stefano Scarpetta (2003): "Regulation, productivity and growth: OECD evidence." *Economic policy* 18, no. 36, 9-72

Tucker, P and Folkhard, S (2012) *Working Time, Health and Safety: a Research Synthesis Paper*, ILO; *Conditions of Work and Employment Series*, No 31

- **Eurofound documents**

Eurofound (2007), Anxo et al, *Part-time work in European companies* <http://goo.gl/QqU41v>

Eurofound (2007) *Working time flexibility in European companies: Establishment Survey on Working Time 2004–2005*, 2007.

Eurofound (2010), *Comparative analysis of working time in the European Union*

Eurofound (2010) *Flexible working time arrangements and gender equality, A comparative review of 30 European countries*, Eurofound, Dublin

Eurofound (2012), *Overview Report of the 5th European Working Conditions Survey* <http://goo.gl/KWXC0>

Eurofound (2012) *Working time and work-life balance in a life course perspective, A report based on the 5th European working conditions Survey*, Eurofound, Dublin

Eurofound (2013) *Women, men and working conditions in Europe, A report based on the 5th European working conditions Survey*, Eurofound, Dublin

- **Studies**

Bentley MacLeod, W. (2010), *Great Expectations: Law, Employment Contracts, and Labor Market Performance*

Besley, T., & Burgess, R. (2004). Can labor regulation hinder economic performance? Evidence from India. *The Quarterly Journal of Economics*, 119(1), 91-134

Blyton, P (2011) 'Working Time, Work-Life Balance, and the Persistence of Inequality' *International Journal of Comparative Labour Law and Industrial Relations*, Issue 2, pp. 129–138

Bosch, G. (2009), *Working time and working time policy in Germany* <http://goo.gl/c30vhv>

Botero, J. C., Djankov, S., La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (2004). The regulation of labor. *The Quarterly Journal of Economics*, 119(4), 1339-1382

Cette, G.; Chang, S.; Konte, M. (2011) *The decreasing returns on working time: an empirical analysis on panel country data*", in *Applied Economics Letters*, Vol. 18, No. 17, pp. 1677-1682. Cited in ILO (2012), Golden, L., *The effects of working time on productivity and firm performance: a research synthesis paper*

Deakin, S. (2009), *The Evidence-Based Case for Labour Regulation*

Deloitte (2010) *Study to support an impact assessment on further action at European level regarding Directive 2003/88/EC and the evolution of working time organisation*

Dembe, A. E. (2011) *Factors shaping the development of working time regulation in the United States and Europe*; *International Labour Review*; Volume 150, Issue 3-4, pages 419–429, December 2011

Economisti Associati (2012), *Review of the Working Time Directive 2003/88/EC: measuring administrative costs and burdens of various possible options*, unpublished report for the European Commission (Order form No. VC/2011 /0614)

Glassner, Vera and Keune, Maarten (2012), The crisis and social policy: The role of collective agreements. *International Labour Review*, 2012, 151: 351–375

Gratz, Linda and Kurt Vogler-Ludwig (2003) Study on the impact of working time - Germany, Contribution to EU research project VC/2005/0327 coordinated by PLS Rambøll and Warwick Institute for Employment Research, Report Economix Research & Consulting

Ilsøe, A (2012) Safety nets or straitjackets? Regulating working time in the Danish, German and American metal industries; *European Journal of Industrial Relations*; March 2012 vol. 18 no. 1 37-51

Kramarz, F et al, Labour Market Effects of Work-Sharing Arrangements in Europe

Lehndorff, S (2014); It's a long way from normality: The 35-Hour Week in France; *Industrial & Labor Relations Review* July 2014 67: 838-863

PwC (2007) Administrative Burden Reduction for Citizens, A European Overview

Timmer, M.P (ed) (2012), The World Input-Output Database (WIOD): Contents, Sources and Methods, WIOD Working Paper Number 10, Available at: <http://www.wiod.org/publications/papers/wiod10.pdf>

Van Houten, C., Cabrita, J., and Vargas, O. (2014) Working conditions and job quality: Comparing sectors in Europe <http://goo.gl/AFkvCz>

1.2 National literature review

- **Germany**

Ahlers, E. (2011): Belastungen am Arbeitsplatz und betrieblicher Gesundheitsschutz vor dem Hintergrund des demografischen Wandels. Ergebnisse der PARGEMA/WSI Betriebsrätebefragung 2008/09. Hg. v. Hans-Böckler-Stiftung. Wirtschafts- und Sozialwissenschaftliches Institut. Düsseldorf (WSI-Diskussionspapier, 175)

Badura, B. et al (Hrsg) (2102), Fehlzeiten-Report 2012, Berlin

Bamberg, Eva; Dettmers, Jan; Funck, Hannah; Krähe, Birgit; Vahle-Hinz, Tim (2012): Effects of On-Call Work on Well-Being: Results of a Daily Survey 1. In: *Applied Psychology: Health and Well-Being* 4 (3), S. 299–320. DOI: 10.1111/j.1758-0854.2012.01075.x.

Bauer, F. u.a. (2004) Arbeitszeit 2003, Köln – u.a. zu gesundheitlichen Beschwerden in Abhängigkeit von der Wochenarbeitszeit

Beermann, B. (2004) Leitfaden zur Einführung und Gestaltung von Nacht- und Schichtarbeit, Auflage 1, Bremerhaven

Böker, Karl-Hermann (2010) Rufbereitschaft. Hans-Böckler-Stiftung. Kurzauswertungen.

Böker, Karl-Hermann (2010) Zeitwirtschaftssysteme, Betriebs- und Dienstvereinbarungen. Analyse und Handlungsempfehlungen, Hans-Böckler Stiftung, Bund-Verlag

Bornwasser, Manfred und Gert Zülch (ed.) (2013) Arbeitszeit – Zeitarbeit Flexibilisierung der Arbeit als Antwort auf die Globalisierung

Brautzsch, H. U.; Drechsel, K.; Schultz, B. (2012): Unbezahlte Überstunden in Deutschland. In: *Wirtschaft im Wandel* 18 (10), S. 308–315

Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (Hrsg) (2012): Stressreport Deutschland 2012. Psychische Anforderungen, Ressourcen und Befinden, Dortmund/Berlin/Dresden

http://www.baua.de/de/Publikationen/Fachbeitraege/Gd68.pdf?__blob=publicationFile

***Study measuring economic impacts of various possible changes to EU working time rules in the context of the review of Directive 2003/88/EC - VC/2013/119
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Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (2009): Lange Arbeitszeiten und Gesundheit,

<http://www.baua.de/cae/servlet/contentblob/668716/publicationFile/47148/artikel20.pdf>

Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (2006), Rufdienstse - eine Handlungshilfe zur positiven Gestaltung

"Bundesarbeitgeberverband Chemie e.V. (2013) Revision der EU-Arbeitszeitrichtlinie Flexibilität erhalten – Bereitschaftsdienste besser regulieren

"Bundesministerium für Arbeit und Soziales (2013) Arbeitsqualität und wirtschaftlicher Erfolg:

Längsschnittstudie in deutschen Betrieben – Erster Zwischenbericht

"Bundesministerium für Arbeit und Soziales (2013) Arbeitsschutz. Verordnung zur arbeitsmedizinischen Vorsorge (ArbMedVV)

Bundesministerium für Arbeit und Soziales (2013) Das Arbeitszeitgesetz

Bundesministerium für Arbeit und Soziales (2011): Forschungsbericht Arbeitsmarkt. Evaluation des Gesetzes zur Verbesserung der Rahmenbedingungen für die Absicherung flexibler Arbeitszeitregelungen ('Flexi II'-Gesetz). Berlin (418).

Bundesministerium der Justiz und für Verbraucherschutz (2000): Gesetz über Teilzeitarbeit und befristete Arbeitsverträge (Teilzeit- und Befristungsgesetz). TzBfG, S. 1–6.

Cabrita, J. (2014) Developments in collectively agreed working time 2013. Hg. v. European Foundation for the Improvement of Living and Working Conditions. Dublin.

Deloitte (2010) European Commission. DG for Employment, Social Affairs and Equal Opportunities. Study to support an Impact Assessment on further action at European level regarding Directive 2003/88/EC and the evolution of working time organisation. Final report. Hg. v. Deloitte. Centre for Strategy & Evaluation Services. Diegem (Belgien).

DGB-Index Gute Arbeit GmbH (2012) Arbeitshetze, Arbeitsintensivierung, Entgrenzung. So beurteilen die Beschäftigten die Lage. Ergebnisse der Repräsentativumfrage 2011 der DGB-Index Gute Arbeit GmbH zum Thema 'Arbeitshetze-Arbeitsintensivierung-Entgrenzung'

Europäische Kommission (2010): Mitteilung der Kommission an das Europäische Parlament, den Rat, den Europäischen Wirtschaftsausschuss und den Ausschuss der Regionen.

Ellguth, P. H.-D. Gerner and I. Zapf (2013); Vielfalt und Dynamik bei den Arbeitszeitkonten. Flexibilität für Betriebe und Beschäftigte; IAB-Kurzbericht 3/2013

Europäisches Parlament und der Rat der Europäischen Union (2003): RICHTLINIE 2003/88/EG DES EUROPÄISCHEN PARLAMENTS UND DES RATES, S. 9–19.

Fietze, S.; Keller, M. ; Friedrich, N. ; Detterms, J (2014) Rufbereitschaft, Wenn die Arbeit in der Freizeit ruft. München, Mering, Hampp

Fietze, S., Matiaske W., Schult M., Tobsch V. (2014), Flexibilität durch Verfügbarkeit. Abrufarbeit in Deutschland; Berichte der Werkstatt Organisations- und Personalforschung e.V., Bericht Nr. 27, Berlin

Fietze, Simon (2011) Arbeitszufriedenheit und Persönlichkeit, Wer schaffen will, muss fröhlich sein, SOEPpapers on Multidisciplinary Panel Data Research 388, Deutsches Institut für Wirtschaftsforschung"

Fietze, Simon, und Wenzel Matiaske, Mandy Schult und Verena Tobsch (2014) Flexibilität durch Verfügbarkeit Abrufarbeit in Deutschland, Berichte der Werkstatt für Organisations- und Personalforschung e.V

**Study measuring economic impacts of various possible changes to EU working time rules in the context of the review of Directive 2003/88/EC - VC/2013/119
- Final Report**

- Franz, C. Lehdorff, S. (2010) Arbeitszeitentwicklung und Krise - eine Zwischenbilanz. IAQ-Arbeitszeitmonitor 2010, IAQ-Report 2010-07
- Franz, Christine, und Steffen Lehndorff (2010) Arbeitszeitentwicklung und Krise – eine Zwischenbilanz, IAQ-Arbeitszeit-Monitor 2010.
- Gratz, Linda and Kurt Vogler-Ludwig (2006) Study on the impact of working time - Germany, Contribution to EU research project VC/2005/0327 coordinated by PLS Rambøll and Warwick Institute for Employment Research, Report Economix Research & Consulting.
- Groß, Hermann, Hartmut Seifert and Georg Sieglén (2007) Formen und Ausmaß verstärkter Arbeitszeitflexibilisierung. WSI Mitteilungen 4/2007
- Grzech-Sukalo, H., Hänecke, K (2008) Entwicklung einer Gefährdungsbeurteilung im Hinblick auf die Arbeitszeit, Bundesanstalt für Arbeitsschutz und Arbeitsmedizin
- Grzech-Sukalo, H., und K. Hänecke (2008) Entwicklung einer Gefährdungsbeurteilung (*Developing an instrument for risk estimation referring to working time*) Abschlussbericht zum Projekt, Entwicklung einer Gefährdungsbeurteilung im Hinblick auf die Arbeitszeit“, Projekt F 2236, im Auftrag der Bundesanstalt für Arbeitsschutz und Arbeitsmedizin, im Hinblick auf die Arbeitszeit“
- Haller, P., Jahn, E. J. (2014) Zeitarbeit in Deutschland, Hohe Dynamik und kurze Beschäftigungsdauern. Hg. v. Institut für Arbeitsmarkt- und Berufsforschung der Bundesagentur für Arbeit, Nürnberg (IAB-Kurzbericht Nr. 13).
- Hammermann, Andrea Oliver Stettes (2013) Qualität der Arbeit – zum Einfluss der Arbeitsplatzmerkmale auf die Arbeitszufriedenheit im europäischen Vergleich, IW Trends (Vierteljahresschrift zur empirischen Wirtschaftsforschung)
- Heinlein, Ingrid (2012) Überstunden, Mehrarbeit ohne Entgelt oder Freizeitausgleich, Hans-Böckler-Stiftung. Mitbestimmungsförderung, Arbeitsrecht - Gutachten
- Holst, E., Seifert, H. (2012), Arbeitszeitpolitische Kontroversen im Spiegel der Arbeitszeitwünsche. Hg. v. Hans Böckler Stiftung. Wirtschafts- und Sozialwissenschaftliches Institut. Düsseldorf (WSI Mitteilungen, 2)
- Institut für Arbeitsmarkt- und Berufsforschung (2014) Arbeitszeitwünsche von Frauen und Männern 2012. Aktuelle Daten und Indikatoren. Hg. v. Institut für Arbeitsmarkt- und Berufsforschung. Nürnberg.
- Institut für Arbeitsmarkt- und Berufsforschung: Betriebsspann 2013, Hg. v. Institut für Arbeitsmarkt- und Berufsforschung. Nürnberg. (Z)
- Kleinknecht, Alfred u.a. (2013): Schadet die Flexibilisierung des Arbeitsmarkts der Innovation?, in WSI-Mitteilungen 4/2013, http://www.boeckler.de/41907_44368.htm
- Knauth, P., Karl, D., Elmerich, K. (2009), Lebensarbeitszeitmodell. Chancen und Risiken für das Unternehmen und die Mitarbeiter. Forschungsbericht zum Teilprojekt KRONOS des Schwerpunktprogramms, Altersdifferenzierte Arbeitssysteme (SPP 1184) der Deutschen Forschungsgemeinschaft durchgeführt am Institut für Industriebetriebslehre und Industrielle Produktion Abteilung Arbeitswissenschaft Universität Karlsruhe (TH)
- KPMG (2013), Abschlussbericht der Studie Entwicklung von attraktiven und konkurrenzfähigen Dienstzeiten und Dienstausgleichsmodellen für Soldatinnen und Soldaten, im Auftrag BMVg, Berlin
- Kubis, A.; Müller, A. (2014) Belastungen am Arbeitsplatz. Welche Arbeitsbedingungen gehen mit Problemen bei der Stellenbesetzung einher? Hg. v. Institut für Arbeitsmarkt- und Berufsforschung der Bundesagentur für Arbeit, Nürnberg, AB-Kurzbericht Nr. 10
- Langhoff, Thomas, und Cordula Sczesny, Sascha Wingen, Daniela Marino, Marco Knelangen (2006) Rufdienste. Eine Handlungshilfe zur positiven Gestaltung.

**Study measuring economic impacts of various possible changes to EU working time rules in the context of the review of Directive 2003/88/EC - VC/2013/119
– Final Report**

- Lehndorff, Steffen (2004) Wirksamkeit und Krise der tarifvertraglichen Arbeitszeitregulierung in Deutschland, ISWT/SITT Conference, Paris
- Lindecke, Christiane (2008), Flexible Arbeitszeiten im Betrieb. Betriebs- und Dienstvereinbarungen. Fallstudien, Hans-Böckler Stiftung, Bund-Verlag
- Lohmann-Haislach, A. (2012), Stressreport Deutschland 2012. Psychische Anforderungen, Ressourcen und Befinden, Bundesanstalt für Arbeitsschutz und Arbeitsmedizin
- Österreichisches Institut für Wirtschaftsforschung (2011): Folgekosten langer Arbeitszeiten, Wien
- Schult, M., & Tobsch, V. (2012). Freizeitstress: wenn die Arbeit ständig ruft (*Leisure stress – constantly on-call for work*); SOEPpapers on Multidisciplinary Panel Data Research.
- Nachreiner, F. (2011). Arbeitszeit als Risikofaktor für Sicherheit, Gesundheit und soziale Teilhabe, in: GfA (Hrsg.): Neue Konzepte zur Arbeitszeit und Arbeitsorganisation. Tagungsband zur Herbstkonferenz 2011 der Gesellschaft für Arbeitswissenschaft. A+A Düsseldorf, 19. und 20. Oktober 2011 (S. 15-32), Dortmund
- Nicol, A. M.; Botterill, J. S. (2004): On-call work and health: a review. Hg. v. Environmental Health: A Global Access Science Source. London (3:15)
- Österreichisches Insitut für Wirtschaftsforschung (2011): Folgekosten langer Arbeitszeiten. Eigenverlag
- Schult, Mandy, und Verena Tobsch (2012) Freizeitstress – wenn die Arbeit ständig ruft, SOEPpapers on Multidisciplinary Panel Data Research 485, Deutsches Institut für Wirtschaftsforschung
- Schlottfeldt, C. (2004) Das novellierte Arbeitszeitgesetz nach der Jaeger- Entscheidung des EuGH, Hg. v. Herrmann, Kutscher, Weidinger Berlin, Arbeitszeitberatung 3, Online verfügbar unter http://www.arbeitszeitberatung.de/10_arbeitszeitrecht/pdf_Texte/ZESAR_ArbZG-Novellierung_2004_Schlottfeldt.pdf
- Seifert, H.; Kümmerling, A.; Riedmann, A. (2013): Langzeitkonten – überschätzte Erwartungen einer biografieorientierten Zeitpolitik? Hg. v. Hans Böckler Stiftung. Wirtschafts- und Sozialwissenschaftliches Institut. Düsseldorf (WSI Mitteilungen, 2).
- Seifert, H. (2006), Konfliktfeld Arbeitszeitpolitik. Entwicklungslinien, Gestaltungsanforderungen und Perspektiven der Arbeitszeit; Friedrich-Ebert-Stiftung (Ed)
- Seifert, Hartmut (2006) Konfliktfeld Arbeitszeitpolitik Entwicklungslinien, Gestaltungsanforderungen und Perspektiven der Arbeitszeit. Friedrich-Ebert-Stiftung, Abteilung Wirtschafts- und Sozialpolitik. Bonn
- Struck, O. Dütsch, M., Liebig, V., Springer, A. (2012), Arbeit zur falschen Zeit am falschen Platz? Eine Matching-Analyse zu gesundheitlichen Beanspruchung bei Schicht- und Nachtarbeit; Universität Bamberg, Arbeitswissenschaft, Working Paper Nr. 6, Otto-Friedrich-Universität Bamberg
- Struck, Olaf, Matthias Dütsch, Verena Liebig und Angelina Springer (2012) Arbeit zur falschen Zeit am falschen Platz? Eine Matching-Analyse zu gesundheitlichen Beanspruchungen bei Schicht- und Nachtarbeit. WORKING PAPER – No. 6. Universität Bamberg, gefördert durch die Hans-Böckler-Stiftung.
- Tobsch, V., Matiaske, W., Fietze, S. (2012) Abrufarbeit: Vor- und Nachteilsbetrachtung, In: PERSONALquarterly 2012 (1), S. 26–29.
- Tobsch, V., Schult, M., Matiaske, W., Fietze, S. (2014) Rufbereitschaft aus betrieblicher Sicht. Bedeutung, Ausgestaltung und Erfahrungen. In: Fietze, S.; Keller, M.; Niklas, F.;

Wirtschafts- und Sozialwissenschaftliches Institut in der Hans-Böckler-Stiftung (2014) WSI-Tarifarchiv 2014 Statistisches Taschenbuch Tarifpolitik"

Wirtschafts- und Sozialwissenschaftliches Institut in der Hans-Böckler-Stiftung (WSI) (2005) Elemente qualitativer Tarifpolitik Nr. 60. Wie flexibel sind Tarifverträge? Eine Untersuchung von Tarifverträgen in über 20 Wirtschaftszweigen und Tarifbereichen"

Wirtschafts- und Sozialwissenschaftliches Institut in der Hans-Böckler-Stiftung (WSI) (2008) Elemente qualitativer Tarifpolitik Nr. 65. Arbeitszeitkalender 2008, Daten aus 25 Wirtschaftszweigen

Wirtschafts- und Sozialwissenschaftliches, Institut in der Hans-Böckler-Stiftung (WSI) (2009) Elemente qualitativer Tarifpolitik Nr. 67. Tarifliche Regelungen zur befristeten Arbeitszeitverkürzung, Eine Untersuchung von Tarifverträgen in 26 Wirtschaftszweigen und Tarifbereichen

Wirtschafts- und Sozialwissenschaftliches Institut in der Hans-Böckler-Stiftung (WSI) (2010) Elemente qualitativer Tarifpolitik Nr. 66. Tarifliche Regelungen zur befristeten Arbeitszeitverkürzung, Eine Untersuchung von Tarifverträgen in 26 Wirtschaftszweigen und Tarifbereichen. Tarifliche Regelungen zur Kurzarbeit, - Übersicht über 18 Wirtschaftszweige

Wirtz, A., F. Nachreiner, B. Beermann, F. Brenscheidt und A. Siefer (2009) Lange Arbeitszeiten und Gesundheit. Bundesanstalt für Arbeitsschutz und Arbeitsmedizin

Wirtz, A. et al. (2011) Sonntagsarbeit - Auswirkungen auf Sicherheit, Gesundheit und Work-Life-Balance der Beschäftigten. Zeitschrift für Arbeitswissenschaft, 65(2), 136-146

Wirtz, A. & Nachreiner, F. (2010) Effekte der Arbeitszeitgestaltung auf die Work-Life-Balance und psychovegetative Beeinträchtigungen, in GfA (Hrsg.) Neue Arbeits- und Lebenswelten gestalten, 56. Kongress der GfA, 24.-26. März 2010 (S. 417-420), Dortmund

Wirtz, A., Nachreiner, F., Beermann, B., Brenscheidt, F., Siefer, A., Bundesanstalt für Arbeitsschutz und Arbeitsmedizin, Lange Arbeitszeiten und Gesundheit

Zapf, I. , Herzog-Stein, A. (2011), Betriebliche Einsatzmuster von Arbeitszeitkonten während der großen Rezession., in WSI-Mitteilungen, Jg. 64, H. 2, S.60-68

Zapf, I. Zapf, I. (2012) Flexibilität am Arbeitsmarkt durch Überstunden und Arbeitszeitkonten. Messkonzepte, Datenquellen und Ergebnisse im Kontext der IAB-Zeitrechnung, IAB Forschungsbericht

Zapf, Ines (2012) Flexibilität am Arbeitsmarkt durch Überstunden und Arbeitszeitkonten Messkonzepte, Datenquellen und Ergebnisse im Kontext der IAB-Arbeitszeitrechnung. IAB Forschungsbericht

- **France**

Askenazy P. (2013), Working time regulation in France from 1996 to 2012, Camb. J. Econ. (2013) 37 (2): 323-347. doi: 10.1093/cje/bes084 DREES (2013), Segrestin B., Tonneau D, La réduction du temps de travail dans les hôpitaux publics: des difficultés liées à l'organisation <http://www.drees.sante.gouv.fr/la-reduction-du-temps-de-travail-dans-les-hopitaux-publics-des-difficultes-liees-a-l-organisation,5215.html>

Commissariat General du Plan (2001), Réduction du temps de travail : les enseignements de l'observation, Rapport de la commission présidée par Henri Rouilleault <http://www.ladocumentationfrancaise.fr/var/storage/rapports-publics/014000572/0000.pdf>

Centre d'études de l'emploi (2004), Boisard P., Working Time Policy in France http://hal.archives-ouvertes.fr/docs/00/40/07/03/PDF/working_time_policy.pdf

**Study measuring economic impacts of various possible changes to EU working time rules in the context of the review of Directive 2003/88/EC - VC/2013/119
– Final Report**

Crépon B., Leclair M. and Roux S. (2004), RTT, productivité et emploi : nouvelles estimations sur données d'entreprises, Economie et Statistique n° 376-377 http://www.insee.fr/fr/ffc/docs_ffc/es376377c.pdf

Dares, De Oliveira V., Modalités de passage à 35 heures des TPE, Document d'études N° 94, Février 2005 http://www.cdr-copdl.fr/doc_num.php?explnum_id=21601

Dares, Oliveira A and Ulrich V, L'effet des 35 heures sur la durée du travail des salariés à temps partiel, Document d'études, n° 61

DARES, Segrestin B., Tonneau D., La réduction du temps de travail dans les établissements privés sanitaires, médico-sociaux et sociaux : les 35 heures à l'épreuve du passage, Série Etude n° 20 – octobre 2001 <https://www.epsilon.insee.fr/jspui/bitstream/1/13508/1/serieetud20.pdf>

Dimitrakopoulos, Dionyssi G. (2012) Between the Party and the European Union? The Regulation of Working Time in France, French Politics, Culture and Society, Volume 30, Number 1, Spring 2012, pp. 88-110(23)

Gubian A., Jugnot S., Lerais F. and Passeron V., (2004) Les effets de la RTT sur l'emploi : des simulations ex ante aux évaluations ex post, Economie et Statistique n° 376-377 http://www.insee.fr/fr/ffc/docs_ffc/es376377b.pdf

Heyer. E, (2012) La suppression de la défiscalisation des heures supplémentaires va-t-elle créer des emplois?, Revue de l'OFCE

Logeay, Camille, and Sven Schreiber. 2006. Testing the effectiveness of the French worksharing reform: A forecasting approach. *Applied Economics* 36: 2053–68.

Septembre 2002 <http://travail-emploi.gouv.fr/etudes-recherche-statistiques-de,76/etudes-et-recherche,77/publications-dares,98/les-documents-d-etudes,327/2002-061-l-effet-des-35-heures-sur,3593.html>

Observatoire Temps et Travail en Ile-de-France (2010) Giraudon C., Le temps de travail des cadres : Retour d'expériences sur le forfait en jours http://www.aractidf.org/sites/default/files/files/Rapport_forfait_jour_ARACT.pdf

- **Hungary**

Kollonay-Lehoczky, Csilla (2012) Une 'Troisième Voie' en Droit du travail? Un Panorama du Nouveau Code du Travail Hongrois: entre un Libéralisme Extrême et des Réminiscences de l'économie planifiée centralisée

Lehoczkyné Kollonay Csilla: Génmanipulált újszülött (2013) Új munkatörvény az autoriter és neoliberalis munkajogi rendszerek határán, In: Az új munka törvénykönyve dilemmái (szerk.: Kun Attila), KRE ÁJK, Budapest, p. 53.

Laki, Mihály, Beáta Nacsa, and László Neumann (2013) The Impacts of the New Hungarian Labor Code on the Employee-Employed Employer Relationships. Final Report. Working Papers. Budapest: Institute of Economics, Research Centre for Economic and Regional Studies, Hungarian Academy of Sciences, 2013. <http://mek.oszk.hu/11400/11439/11439.pdf>

Reszkető, Petra, Ágota Scharle, and Balázs Váradi (2011) Administrative Burden of Employment in Hungary, Final Report of the Research Programme 'The Focal Points of Hungarian Employment Policy For the Future Workplaces (SROP 2.5.2)

Szabó, Imre (2013) Between Polarization and Statism—effects of the Crisis on Collective Bargaining Processes and Outcomes in Hungary, Transfer: European Review of Labour and Research 19, no. 2 (2013): 205–15.

Report by the Ombudsman's Office (2013) A Munka Méltósága Projekt, AJB Projektfüzetek

***Study measuring economic impacts of various possible changes to EU working time rules in the context of the review of Directive 2003/88/EC - VC/2013/119
– Final Report***

Tóth, András (2012) The New Hungarian Labour Code - Background, Conflicts, Compromises, Working Paper Friedrich Ebert Stiftung, Budapest

- **Netherlands**

FNV (2011), Werken in de randen van de nacht Een onderzoeksrapport over de ervaringen van werknemers.
http://www.wageindicator.org/documents/publicationslist/publications-2011/1100-FNV%20BG%20rapport_randen_van_nacht.pdf

Labour inspectorates (2010), Arbeidstijdenwet [Working time act],
http://www.inspectieszw.nl/images/brochure-de-arbeidstijdenwet_tcm335-312381.pdf

Regioplan (2011), Veranderde arbeidstijden? Evaluatie van de Arbeidstijdenwet 2007. Amsterdam: Regioplan. <http://www.rijksoverheid.nl/documenten-en-publicaties/rapporten/2012/03/30/onderzoeksrapport-veranderende-arbeidstijden.html>

Ramos N., Sol E. (2013), Governance of EU Labour Law EU's Working time directive and its implementation in the Netherlands http://www.uva-aias.net/uploaded_files/publications/AIASWP137-1.pdf

Rayer, C.W.G. (2014), Wetgeving en beleid voor flexibele arbeid [Law and policy regarding flexible labour] Dissertation University of Amsterdam.
http://shop.kluwer.nl/boeken_products/wetgeving-en-beleid-voor-flexibele-arbeid/prod10306724.html

SER advies wijziging arbeidstijdenwet Publicatienummer 3, 25 april 2003 m.n. om combi privé arbeid te verbeteren. <http://www.ser.nl/nl/publicaties/adviezen/2000-2007/2003/b21341.aspx> na adviesaanvraag

Staatsblad (Official publication of new or changed Acts) 25 October 2007, number 396.
<https://zoek.officielebekendmakingen.nl/stb-2007-396.html>

SPC (2012), Vraag naar arbeid 2011 [Labour demand 2011], The Hague: SCP

TNO-CBS (2014), Nationale Enquête Arbeidsomstandigheden (national survey health and safety labour), Hoofddorp: TNO.
http://www.monitorarbeid.tno.nl/dynamics/modules/SFIL0100/view.php?fil_Id=77

TNO (2013), Werkgevers Enquete Arbeid (Employer survey labour), Hoofddorp: TNO.
http://www.monitorarbeid.tno.nl/dynamics/modules/SFIL0100/view.php?fil_Id=64

VNG (2003), VNG wijst op Jaeger arrest arbeidstijden (Foundation of Dutch Municipalities points at Jaeger ruling), <http://www.recht.nl/proxycache.html?cid=27089>

- **Poland**

Bożena K., (2013) Working time in Poland and other EU member states, Studia BAS Nr 4(36) 2013, s. 57-96
[http://orka.sejm.gov.pl/wydbas.nsf/0/838BB23CC0D0E291C1257C4700457B75/\\$File/Klows.pdf](http://orka.sejm.gov.pl/wydbas.nsf/0/838BB23CC0D0E291C1257C4700457B75/$File/Klows.pdf)

Czapiński J., Panek T., (2013) Social Diagnosis – Objective and Subjective Quality of Life in Poland

The Ministry of Economy (2010) Measurement of administrative burdens
http://www.mg.gov.pl/files/upload/8581/Raport_z_wykonania.pdf

Central Institute of Labour Protection (2009) Opportunities to optimize working conditions and improve mental health of workers with the use of flexible working time
http://www.zus.pl/files/dpir/20091210_badanie_mozliwosci_optymalizacji.pdf

National Labour Inspectorate (2014) Chief Inspector Reports on the activities of NLI
http://www.pip.gov.pl/html/pl/sprawozd/13/spraw_13.htm

***Study measuring economic impacts of various possible changes to EU working time rules in the context of the review of Directive 2003/88/EC - VC/2013/119
– Final Report***

Kamiński W (2014) Arłukowicz saves on radiologists, *Gazeta Polska Codziennie* no.2014/04/03, p.5

Lisowska B. (2014) Radiologists: more work for the same payment *Gazeta Prawna*, no.2014/04/16 p. B10

Lewandowski Piotr (red.) (2013) Polish flexicurity. Impact Assesment <http://www.polskieflexicurity.pl/pl/a/Polskie-flexicurity---Ocena-skutkow-regulacji>

Lewiatan (2013) Employer on flexible work patterns, chances of woman and men on the labour market and competences http://konfederacjalewiatan.pl/opinie/aktualnosci/2013/1/_files/2013_12/prezentacja_su_perwoman_wynikib_badan_KW_13grudnia2013_Tylko_do_odczytu_tryb_zgodno_ci_.pdf

Lewiatan (2011) Flexible labour market: knowledge and application of solutions

Lewiatan, Work-time schedules are burden for the employers http://konfederacjalewiatan.pl/opinie/stosunki_pracy/7/harmonogramy_czasu_pracy_utrudnia_zycie_przedsiębiorcom

Lewiatan, Why should we give up 24 h work day? http://konfederacjalewiatan.pl/opinie/stosunki_pracy/8/zrezygnujmy_z_doby_pracowniczej

Lewiatan, Flexible work time will allow us to fight with the unemployment http://konfederacjalewiatan.pl/opinie/stosunki_pracy/10/elastyczny_czas_pracy_ulatwi_walke_z_bezrobociem

Dr. Żołnierczyk., Zreda. B (2010) Long work-time and healthy of workers, Central Institute for Labour Protection <http://www.ciop.pl/32005>

Dr. Żołnierczyk., Zreda. B (2010) Long work-time, mental illness and life style, Central Institute for Labour Protection <http://www.ciop.pl/35103>

- **Spain**

Fernández-Kranz and Rodríguez-Plans (2011): "Unintended effects of a family-friendly law in a segmented labour market" <http://ftp.iza.org/dp5709.pdf>

Meil, G. et alia (2009): "El desafío de la conciliación de la vida privada y laboral en las grandes empresas", ["The challenge of work-life balance at large companies"] Dirección General de Igualdad de Oportunidades, Comunidad de Madrid; Universidad Autónoma de Madrid <http://dialnet.unirioja.es/download/libro/490888.pdf>

Amuedo-Dorantes and De La Rica (2009): "The timing of work and work-family conflicts in Spain: who has a split work schedule and why?", IZA DP n° 4542, Bonn, Germany <http://ftp.iza.org/dp4542.pdf>

López-Ibor et alia (2010): "Las políticas de conciliación de la vida familiar y laboral desde la perspectiva del empleador. Problemas y ventajas para la empresa", ["Work-life balance policies from the employer's perspective"], Cuaderno de Trabajo 02/2010, Universidad Complutense de Madrid. https://www.ucm.es/data/cont/docs/85-2013-11-29-ct02_2010_polit_concil.pdf

Fundación para la Prevención de Riesgos Laborales et alia (2009): "Los tiempos de la organización del trabajo: incidencia de los riesgos psicosociales en los sistemas de trabajo a turnos", [Working time organization: the incidence of psycho-social risks of night working], Secretaría de Salud Laboral UGT CEC <https://w110.bcn.cat/UsosDelTemps/Continguts/Noticies/2012/octubre12/libro%20turnos%20UGT.pdf>

Montañes Bernal (2011): "Tipos de jornada y productividad del trabajo", ["Working time modalities and labour productivity"], Universidad de Zaragoza, Consejo Económico y Social de Aragón.

**Study measuring economic impacts of various possible changes to EU working time rules in the context of the review of Directive 2003/88/EC - VC/2013/119
– Final Report**

http://www.aragon.es/estaticos/GobiernoAragon/OrganosConsultivos/ConsejoEconomicoSocialAragon/Areas/Publicaciones/PRODUCTIVIDAD_2.pdf

Clemente López (2011): "Organización del trabajo, conciliación y absentismo" ["Labour organization, work-life balance and absenteeism"], Universidad de Zaragoza, Consejo Económico y Social de Aragón
<http://w110.bcn.cat/UsosDelTemps/Continguts/Noticies/abril/Organizacion%20del%20trabajo,%20conciliacion%20y%20absentismo.pdf>

Centro de Estudios Económicos Tomillo (2012): "Las nuevas formas de organización del tiempo y el espacio de trabajo en las empresas catalanas", ["New forms of working time and space organization and the Catalanian companies"], Department d'Empresa i Ocupació, Generalitat de Catalunya.

- **Sweden**

Government proposition 2003/04:180 Tydligare genomförande av EG:s arbetstidsdirektiv, Clearer implementation of the EU Working Time Directive
<http://www.regeringen.se/content/1/c6/02/92/61/11b29b05.pdf>

Kecklund, G., Ingre, M. and Åkerstedt, T., 2010, Work hours, health and safety – an update of recent research. Stress Research Reports No 322, Stockholm. ISBN 978-91-978746-0-1
http://www.stressforskning.su.se/polopoly_fs/1.51631.1321968484!/Stressforskningsrapport_322.pdf

Nordström Skans, O. (2001) The effects of working time reductions on wages, actual hours and equilibrium unemployment <http://www.ifau.se/Upload/pdf/se/2001/wp01-8.pdf>

- **United Kingdom**

Open Europe (2013), Briefing Note – Top 100 EU regulations cost the UK economy £27.4bn a year
<http://www.openeurope.org.uk/Content/Documents/Pdfs/131021Top100Regulations.pdf>

Dimitrakopoulos, Dionyssi G. (2012) The regulation of working time in the UK: at the crossroads of national policy changes and the influence of the European Union. *Labor and Employment Review* 128, pp. 55-68

Morrow, G. et al. (2012) The Impact of the Working Time Regulations on the Medical Education and Training: Literature Review, Durham University http://www.gmc-uk.org/The_Impact_of_the_Working_Time_Regulations_on_Medical_Education_and_Training___Literature_Review.pdf_51155615.pdf

H. F. McIntyre et al (2010), Implementation of the European Working Time Directive in an NHS trust: impact on patient care and junior doctor welfare
<http://www.clinmed.rcpjournal.org/content/10/2/134.full.pdf>

J. Hollum, J. Harrop, M. Stokes and D. Kendall. (2010) Patient safety and quality of care continue to improve in NHS North West following early implementation of the European Working Time Directive. *QJM* (2010) 103 (12): 929-940
<http://qjmed.oxfordjournals.org/content/103/12/929.full.pdf+html>

A. J. Maxwell (2010), Implementation of the European Working Directive in neurosurgery reduces continuity of care and training opportunities

Department for Business, Enterprise, and Regulatory Reform (2007), The third work-life balance employer survey: Main findings.

Department for Trade and Industry, 2006, Administrative Burdens Measurement Exercise, Final Report

**Study measuring economic impacts of various possible changes to EU working time rules in the context of the review of Directive 2003/88/EC - VC/2013/119
– Final Report**

Employment Relations Research Series No. 86
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/193626/bis-07-1656-the-third-work-life_balance-employer-survey-main-findings.pdf

H. Cairns & B. Hendry, Outcomes of the European Working Time Directive (2008) *BMJ* 2008;337:a942 <http://www.bmj.com/content/337/bmj.39541.443611.80>

D. West, M. Codispoti, and T. Graham (2007), The European Working Time Directive and training in the cardiothoracic surgery in the United Kingdom

V. Benes (2006), The European Working Time Directive and the Effects on Training of Surgical Specialists (Doctors in Training) <http://www.ncbi.nlm.nih.gov/pubmed/17102927>

G. J. Morris et al (2005), The European Working Time Directive: One for all and all for one?, *Surgery*, Volume 137, Issue 3, March 2005, Pages 293–297, *Clin Med.* 2010 Apr;10(2):134-7

M. L. White et al (2005), Impact of the European Working Time Directive on the training of paediatric anaesthetists <http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2044.2005.04286.x/pdf>

D. J. Sim, S. R. Wrigley, and S. Harris (2004), Effects of European Working Time Directive on anaesthetic training in the United Kingdom, *Anaesthesia*, 2004, 59, pages 781-784 <http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2044.2004.03808.x/pdf>

R. MacDonald (2004) How protective is the working time directive? The aim of improving workers' safety and protection has got lost in the confusion. *BMJ.* Aug 7, 2004; 329(7461): 301–302 <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC506838/>

T. Pickersgill (2001) The European Working Time Directive for Doctors in Training, *BMJ.* 2001; 323(7324):1266 <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1121739/>

Department of Trade and Industry (2000) Regulatory Impact Assessment: Working Time (Amendment) Regulations 2002 <http://webarchive.nationalarchives.gov.uk/+http://www.dti.gov.uk/access/ria/pdf/workingtontime.pdf>

Lambourne et al, 2008, Employment Law Administrative Burdens Survey, Final Report, Department for Business, Enterprise and Regulatory Reform (BERR), London <http://webarchive.nationalarchives.gov.uk/20090609003228/http://www.berr.gov.uk/files/file49199.pdf>

Report of the Independent Working Time Regulations Taskforce to the Department of Health (2014) The implementation of the Working Time Directive and its Impact on the NHS and Health Professionals; <https://www.rcseng.ac.uk/policy/documents/wtd-taskforce-report-2014>

- **Japan**

Ogura, K (2009) "Long Working Time and Flexibility of Working Time: Management and Workplace in Japan", in JILPT Report, Working Time – In Search of New Research: Territories beyond Flexibility Debates- (2009) No.7 <http://www.jil.go.jp/english/reports/documents/jilpt-reports/no.7.pdf>

University of Tokyo, Research of Social Science (2013) Review of 2012 Model Project 'Short Working Time System' http://wlb.iss.u-tokyo.ac.jp/material/pdf/Survey_report_2013.pdf

Cabinet Office (2014) A Report on Work-Life Balance http://www.cao.go.jp/wlb/research/wlb_h2511/follow-up.pdf

Japan Productivity Centre (2009) A Report on Measures for the Prevention of Overwork and Related Mental Health Problems http://consul.jpc-net.jp/mental/houkoku06_2.html

***Study measuring economic impacts of various possible changes to EU working time rules in the context of the review of Directive 2003/88/EC - VC/2013/119
- Final Report***

Cabinet Office (2009) A Comparative Study on Work-life Balance and Productivity between Japan and European countries
http://www.esri.go.jp/jp/prj/hou/hou042/hou42_gairyaku.pdf

Kawaguchi, D., Naito, H. and Yokoyama, I. (2008) 'Labour Market Responses to Legal Work Hour Reduction: Evidence from Japan' in Economic and Social Research Institute Discussion Paper Series No.202
http://www.esri.go.jp/jp/archive/e_dis/e_dis202/e_dis202a.pdf

Tokyo Kaijyo Nichido Risk Consulting Ltd. (2011) A Research on relations between Work-life Balance and Productivity
<http://www.esri.go.jp/jp/prj/hou/hou054/hou54.pdf>

Anesaki, T. (2010) 'A Survey on relations between work-life balance and company performance', in Economic and Social Research Institute (ESRI) Research Note, no. 10
http://www.esri.go.jp/jp/archive/e_rnote/e_rnote010/e_rnote010.pdf

Kuroda, S. and Yamamoto, T. (2014) Working Time and Employees' Mental Health', Research Institute of Economy, Trade and Industry (RIETI) Discussion Paper Series 14-J-020
<http://www.rieti.go.jp/jp/publications/dp/14j020.pdf>

Kuroda, S. and Yamamoto, T (2014), 'Mental Health and Company Performance: Verification of Employees panel data', Research Institute of Economy, Trade and Industry (RIETI) discussion paper series 14-J-021
<http://www.rieti.go.jp/jp/publications/dp/14j021.pdf>

- **United States**

Lagarde, M., (2013) One Size Does Not Fit All: Investigating Doctors' Stated Preference Heterogeneity for Job Incentives to Inform Policy in Thailand

Zeytinoglu, I.U., (2013) Job Satisfaction, Flexible Employment and Job Security among Turkish Service Sector Workers

Cheng, T. C., (2012) What Factors Influence the Earnings of General Practitioners and Medical Specialists? Evidence from the Medicine in Australia: Balancing Employment and Life Survey

De Graaf-Zijl, M. (2012) Job Satisfaction and Contingent Employment

Addison, J. T., (2009) Does Atypical Work Help the Jobless? Evidence from a CAEAS/CPS Cohort Analysis

Zeytinoglu, I. U., (2009) Visiting and Office Home Care Workers' Occupational Health: An Analysis of Workplace Flexibility and Worker Insecurity Measures Associated with Emotional and Physical Health

Williams, C., (2008) Work-Life Balance of Shift Workers

Yoon, J. (2008) Three Essays on Family Care, Time Allocation, and Economic Well-Being

Burgess, J., (2005) The Temporary Agency Work Sector in Australia and Ireland: Modest, Growing and Under-recorded

De Graaf-Zijl, M. (2005) The Anatomy of Job Satisfaction and the Role of Contingent Employment Contracts

De Graaf-Zijl, M. (2005) Compensation of On-call and Fixed-term Employment: the Role of Uncertainty

DiNatale, M. (2001) Characteristics of and Performance for Alternative Work Arrangements, 1999

Houseman, S. N., (2000) Why Employers Use Flexible Staffing Arrangements: Evidence from an Establishment Survey

***Study measuring economic impacts of various possible changes to EU working time rules in the context of the review of Directive 2003/88/EC - VC/2013/119
- Final Report***

- Farber, H. S., (1999) Alternative and Part-Time Employment Arrangements as a Response to Job Loss
- Houseman, S. N., (1999) The Implications of Flexible Staffing Arrangements for Job Stability
- Cohany, S. R., (1998) Workers in Alternative Employment Arrangements: A Second Look
- Cohany, S. R., (1997) Workers in Alternative Employment Arrangements
- Kauhanen, M. (2008) Part-Time Work and Involuntary Part-Time Work in the Private Service Sector in Finland
- Surfield, C. J., (2014) Government Mandates and Atypical Work: An Investigation of Right-to-Work States
- Hamersma, S., (2014) Temporary Help Work: Earnings, Wages, and Multiple Job Holding
- Hanel, B., (2014) Nurses' Labour Supply Elasticities: The Importance of Accounting for Extensive Margins
- Trinkoff, A. M., Le, R., Geiger-Brown, J. and others (2006) Longitudinal relationship of work hours, mandatory overtime, and on-call to musculoskeletal problems in nurses
- Bamberg E., Dettmers J., Funck H. and others (2012) Effects of On-Call Work on Well-Being: Results of a Daily Survey
- Fletcher K. E., Visotcky A. M., Slagle J.M. and others (2012) The composition of intern work while on-call
- Nicol A., Botterill J.S., (2004) On-call work and health: a review

Annex 2 Detailed legal analysis at national level

A2.1 On-call time and stand-by time

A2.1.1 Czech Republic

There is no definition of **on-call time** as this work pattern is not known in Czech Republic. However, **stand-by time** (*pracovní pohotovost*) is allowed and defined in the Labour Code as *a period during which a worker is on-call to perform work, as covered by his employment contract, and which in case of urgent need must be done in addition to his schedule of shifts*³⁰⁸. The definition also adds that stand-by time may only take place at a place agreed with the worker and that this cannot be the employer's workplace³⁰⁹. In addition, the employer can only require the worker to work on stand-by if the worker agreed to this.

On the **calculation of stand-by time**, such time during which no work is performed is not counted as working time. When workers have to perform work during their stand-by time period, they are entitled to receive their normal salary. If they perform work above standard weekly working hours, this will be counted as overtime³¹⁰. Section 140 of the Labour Code provides that a worker is entitled to remuneration amounting to at least 10% of his average earnings for a period of stand-by (when the worker is waiting to be called). Collective agreements can provide for amount greater than 10% and conventionally state that the worker is entitled to 20% of his average earnings for a period of stand-by (during inactive periods).³¹¹

A2.1.2 France

In **France**, according to the Labour Code, a worker who has to remain at home or at any other place close to their usual workplace is considered to be on **stand-by** (*astreinte*)³¹². Stand-by time is clearly defined in national legislation. Article L3121-5 of the Labour Code provides that stand-by time refers to *'any period during which the worker, without being at the permanent and immediate disposal of the employer has to remain at home or close to home, to be able to intervene to perform work for the company'*. Only the time actually performing duties at the request of the employer is counted as working time, whereas periods spent waiting on stand-by are counted as rest time³¹³. Furthermore, the duration of the intervention of the worker who is called upon to work will start from the moment the worker answered the phone call. Travel time to reach the location of the intervention is also considered as effective working time³¹⁴.

There is no effective definition of **on-call time**. Instead, all time spent on the employers' premises (effectively on-call), where any worker has to be ready to work is considered to be effective working time. Indeed, French labour law states that working time is *'time during which the worker is at the disposal of the employer and must follow the latter's instructions so that s/he cannot attend freely to personal activities'*³¹⁵.

In some professions where there is so-called inactive working time, a regime of **'equivalence hours' (heures d'équivalence)** is provided for in French labour

³⁰⁸ Section 78(1)h of the Czech Labour Code

³⁰⁹ Section 78(1)h of the Czech Labour Code

³¹⁰ Section 95 of the Labour Code

³¹¹ Section 95 (b) of the Labour Code

³¹² Article L3121-5 of the French Labour Code

³¹³ Article L3121-6 of the French Labour Code

³¹⁴ Cass. Soc. 31 October 2007, n°06-43834.

³¹⁵ Article L212-4 of the Labour Code

law³¹⁶. This consists in having a legal duration of working time which is inferior to the time during which the worker is actively doing work. For instance, a worker may be present at the workplace for 38 hours which will be counted as 35 hours of effective working time because there are some inactive periods of working time. In this case, overtime hours will only start to be counted once the equivalent duration of the legal working time has been exceeded. The regime of equivalence hours can only be introduced by a decree giving effect to a collective agreement or by a decree adopted by the Council of State (*décret en Conseil d'Etat*). Modalities regarding equivalence hours (i.e. remuneration) are set in collective agreements. However, it is worth noting that equivalence hours do not apply in the sectors being assessed in detail by this study.

A2.1.3 Germany

There are three concepts of on-call and stand-by time in Germany:

Arbeitsbereitschaft is a type of on-call time during which the worker remains at the workplace and decides her/himself when s/he has to return to work/continue to carry out work. The German Federal labour court (*Bundesarbeitsgericht*) has defined this type of on-call as 'a period of being alert in a state of relaxation'.

Rufbereitschaft is a type of stand-by time where the worker can choose the place to carry out this type of shift, in general *at home* or at a distance where s/he can intervene at work within a reasonable period of time should it be required by the employer. It is worth noting that *Rufbereitschaft* is only used in exceptional circumstances and is not used if a form of on-call is generally required due to the work organisation. There have been cases where courts re-qualified the type of on-call carried out by examining the work organisation much closer. Only time performed during the intervention is counted as effective working time. German legislation requires limits to be set on the use of *Rufbereitschaft* either in the individual contract or in collective agreements.

Bereitschaftsdienst is a type of on-call work where the worker can choose the place to carry out this type of shift, in general at the work place or close to the workplace, in reasonable distance so that he can quickly intervene at work should it be required by the employer.

In principle, all working time spent on-call is counted as working time (following the rulings of the CJEU). However, opening clauses existing in collective agreements which allow company agreements to determine more specific conditions on how these shifts have to be carried out as well as the calculation with regard to working time and pay. It is, for example, possible to use a percentage factor for the calculation of on-call work: e.g., 50% is counted as working time and thus 50% is paid at the standard rate of pay. Only hours spent actually working are counted as working time whilst on stand-by (*Rufbereitschaft*). As indicated above, limits to the number of hours which can be spent on stand-by can be set in collective agreements or individual contracts.

A2.1.4 Hungary

In **Hungary**, there are no detailed definitions of on-call time and stand-by time. However, these two work patterns are distinguished in the Labour Code by the fact that for on-call time, the employer is entitled to designate the place where the worker is required to be available. For stand-by time, the worker can choose the place where s/he is to remain as long as s/he is able to report for work without delay when so instructed by the employer³¹⁷.

³¹⁶ Article L3121-9 of the Labour Code

³¹⁷ Section 110(4) of the Hungarian Labour Code

The Hungarian Labour Code provides **limits to the use of on-call time**. The limit of the duration of on-call time is set at 24 hours also covering the duration of scheduled daily working time and overtime work on the first day of on-call duty³¹⁸. Hungarian legislation also provides for **limits to the use of stand-by time**³¹⁹. Stand-by time periods must not exceed 168 hours per month, which shall be taken as the average in the event that a reference period for the determination of maximum working hours is used. The worker cannot be ordered to be on stand-by time more than four times a month if it covers the weekly rest day (weekly rest period). Furthermore, if a worker working in a stand-by job is scheduled to work on a Sunday within the framework of regular working time, s/he may not be scheduled to work on the preceding Saturday³²⁰. Based on an agreement between the employer and the worker, the daily working time in full-time jobs may be increased to not more than twelve hours per day for workers working in stand-by jobs.

Section 110 of the Hungarian Labour Code states that a worker may be required to be on stand-by and remain available beyond the regular daily working hours scheduled. When being on stand-by duty, the worker must remain in a condition suitable for work and perform work as instructed by the employer.

Stand-by time for a period of over four hours may be ordered in the following situations: a) in the interest of the uninterrupted provision of essential services for the general public; b) in the interest of the prevention or mitigation of any imminent danger of accident, natural disaster or serious damage or of any danger to health or the environment; and c) for the proper maintenance and safe operation of technical equipment.

On the **calculation of on-call time**, Section 99 of the Hungarian Labour Code states that scheduled daily working time of workers must include the entire duration of on-call duty, if the duration of work cannot be measured. As a result, on-call time is considered as effective working time. The whole duration of on-call time (at the workplace or on work premises) is considered to be working time for the purposes of working time regulations. However, for the calculation of wage supplements companies have to keep a more detailed record of the hours actually worked. If the worker does not perform any effective work while being on-call, they will receive a 40 % wage supplement. If the totality of the period of on-call time is actually worked, the worker will receive their full wage. In other cases, when the worker only performs work for a certain period of time which does not represent the entire on-call time period, companies' internal regulations are likely to provide guidance on this. The principle which must be respected to in these situations is that the pay received must be proportionate to the work performed. In the case of stand-by time at a place of the worker's choosing, only the hours actually worked are considered working time for the purposes of both working time regulations and the calculation of wage supplements.

A2.1.4 Italy

In **Italy**, **on-call time** is considered as effective working time. However, on-call time in so-called 'discontinuous work' is not covered by provisions on 'normal working time' and therefore it is excluded from rules on overtime work. **Stand-by time** is not considered to be effective working time unless work is actually performed. An

³¹⁸ Section 111 of the Hungarian Labour Code

³¹⁹ Section 112 of the Hungarian Labour Code

³²⁰ Section 101(3) of the Hungarian Labour Code

'availability allowance' is paid in compensation for the inconvenience of having to be ready to start working on demand.

A2.1.5 Netherlands

In the Netherlands, **on-call time** is defined in the Arbeidstijdenbesluit (ATB)³²¹ as a continuous period of 24 hours during which the worker, if necessary, in addition to the agreed shift is required to remain at the workplace to be called to quickly perform work. To make use of on-call time, the employer has to provide for a reason that working time cannot be organised differently and on-call work has to be regularly performed.

A sector level collective agreement has to implement it. Some rules apply to the use of on-call time. Indeed, a worker cannot be working on-call more than 52 times in a reference period of 26 consecutive weeks.

The definition of stand-by time (*consignatie*) is also provided in the legislation. It states that stand-by time is an interval between two consecutive shifts or during a break, in which the worker is only required to be able to perform in the event of unforeseen circumstances on-call as soon as possible to carry out the stipulated work. Stand-by time can only be used under exceptional circumstances. Thus, the employer cannot regularly rely on this work pattern. An employer can require from the worker to remain close to a workplace or it can be performed as a form of stand-by.

Article 5:9 of the ATB provides more specific rules on the shift patterns. This includes that within a period of 28 times 24 hours a worker shall have at least 14 times/ 24 hours no stand-by period and have 2 times for 48 hours of uninterrupted rest. In addition, stand-by time cannot follow 11 hours before a night shift and 14 hours after a night shift. Stand-by cannot be longer than 13 hours in every 24 hour period.

In case of stand-by time (*consignatie*) should the person be called to work than it does not count as an interruption of rest-time. If the call occurs overnight than the time is not counted as night work.

A2.1.6 Poland

In **Poland**, Article 151⁵ §1 of the Labour Code provides the possibility to use both on-call and stand-by time and states that: the employer may require the worker to remain ready to perform work in the workplace or another place designated by the employer outside normal working hours (*dyżur*). There is no distinction in the treatment on-call and stand-by time. Time spent on-call or on stand-by (thus waiting at the workplace or in the place indicated by the employer) is not counted as working time if the worker does not perform effective work³²². The worker who worked while being on-call or on stand-by duty must receive a financial compensation. The worker will receive their normal wages for the hours worked plus a 50% or even a 100% financial compensation as working hours in on-call/ stand-by time are treated like overtime hours.

A2.1.7 Spain

On-call time (*tiempo de presencia*) is not specifically treated in the Spanish general labour legislation³²³ or other legal texts with relevance to the whole workforce) except for a few sectoral regulations.

³²¹ http://wetten.overheid.nl/BWBR0007687/geldigheidsdatum_27-06-2014/afdrukken

³²² Article 151² of the Polish Labour Code

³²³ Statute for Workers (*Estatuto de los Trabajadores*)

Stand-by time (*tiempo de localización* or *guardia localizada*) is only considered as working time when work is actually performed. Some sectors and economic activities such as nuclear power and hydroelectric stations, public services and repair work include dispositions on stand-by time. However, the Spanish Supreme Court does not consider stand-by time as effective working time³²⁴. In general, collective agreements establish availability premiums ("*pluses de disponibilidad*") which are paid per day or per week.

A2.1.8 Sweden

The Working Hours Act provides definitions and rules regarding on-call and stand-by time. Section 6 of the Working Hours Act defines **on-call time** (*jourtid*) as the situation when *'...due to the nature of the activity, it is necessary that a worker be at the disposal of the employer at the place of work to carry out work activities as needed'*. Section 14 of the Working Hours Act provides a definition of **stand-by time** (*beredskap* or *beredskapstid* or *bakjour*) which is the situation *'when a worker is permitted to stay away from the workplace but must remain at the employer's disposal in order to carry out work when the need arises.'*

Swedish legislation provides for **limitations in the use of on-call time**. Section 6 specifies that on-call time can be used by the employer for up to 48 hours per four week period or 50 hours per calendar month. It also stipulates that a fixed schedule should apply for each four week period.

Regarding the **calculation of on-call time**, Swedish labour law does not specifically state that on-call time at the workplace is considered as working time. However, Sweden is bound by the EU Working Time Directive and EU case law. As such, on-call time is included in the calculation of total working hours (including regular working hours, overtime, emergency overtime and on-call time). The Working Hours Act also stipulates that *'[t]he time during which a worker performs work on behalf of the employer is not considered on-call time'*. As a result, any hours worked while being on-call time will be counted as effective working time and as overtime, if the 40 hour regular working time limit has been exceeded.

Stand-by time is not counted as working time unless work is actually performed. Similarly, the time spent travelling between the place of residence and the place of work is not counted as working time either. There are no specific provisions in the Working Hours Act providing for the way stand-by time must be calculated and limitation to its use. The only reference to stand-by time in the Working Hours Act is that the weekly rest period does not include periods spent on stand-by³²⁵. Stand-by time may, however, be included in the calculation of the daily rest period as it is not considered as working time. Financial compensation for stand-by time is often specified in collective agreements.

A2.1.9 United Kingdom

There is no definition of **on-call time** in the Working Time Regulations. There is also no mention on whether on-call time is to be considered as effective working time.

Concerning the calculation of on-call time, UK Courts have applied the CJEU interpretation recognising both active and inactive on-call time spent at the workplace as effective working time.

In the *Gallagher v Alpha Catering* case, the Court considered that inactive on-call time could not be treated as a rest break³²⁶. In the *MacCartney v Oversley House*

³²⁴ See the following rulings: RJ/9713 of 1994, RJ/6385 of 1995, RJ/9505 of 1999

³²⁵ Section 14 of the Working Hours Act

³²⁶ *Gallagher v Alpha Catering*, EAT, [2004] EWCA Civ 1559

Management where a resident manager of sheltered accommodation on-call for 24-hour periods four times a week, the Court rules that the entirety of this on-call time must be considered as effective working time. Finally, in the *Anderson v Jarvis Hotels*, requiring from a hotel guest manager 'sleep-overs' at hotel several times a week was recognised as working time³²⁷.

A2.2 Compensatory rest following a period of missed minimum rest

A2.2.1 Czech Republic

A2.2.1.1 Reference period for taking minimum daily rest

The Czech Labour Code states that the minimum daily rest must be of at least 11 hours every 24 hours³²⁸. It also provides that a minimum rest period of 11 hours may be reduced to a minimum period of 8 hours within 24 consecutive hours provided that the worker's subsequent rest period is extended by the time for which their preceding rest period was reduced. This only applies to the following workers, as mentioned in the Labour Code:

- working in continuous operations, and to workers with unevenly distributed working
- hours and to workers on overtime work;
- in agriculture;
- on the provision of services to the population, in particular
- in public catering;
- in cultural establishments;
- in telecommunications and postal services;
- in health care (medical) establishments;
- in establishments providing social services;
- working on urgent repairs if such repairs are required to avert some danger to workers' life or health;
- on occurrence of natural disasters and similar emergency situations.

A2.2.1.2 Reference period for taking minimum weekly rest

Czech legislation states that the minimum weekly rest period is of minimum 35 hours during the week (seven-day period)³²⁹. Derogations exist in the same cases as for the minimum daily rest (see exception in the list above). An additional exception concerns technological processes that cannot be interrupted. In all these cases, the period of uninterrupted rest can be reduced to 24 hours provided that these workers are granted an uninterrupted rest period of at least 70 hours within two weeks³³⁰.

Finally, when operations allow it, the employer should set an uninterrupted rest period during the week for all workers to fall on the same day and in such a manner that it includes Sunday.

³²⁷ *Anderson v Jarvis Hotels*, EAT/0062/05

³²⁸ Section 90(2) of the Czech Labour Code

³²⁹ Section 92 of the Czech Labour Code

³³⁰ Section 92 of the Czech Labour Code

A2.2.2 France

A2.2.2.1 Reference period for taking minimum daily rest

The French Labour Code states that every worker must get a minimum daily rest period of at least 11 consecutive hours³³¹.

French legislation also provides the possible cases when it is possible to derogate from the minimum daily rest of 11 hours³³². This can be done by collective agreements for the following cases: 1) Activities when there is a significant distance between home and the workplace of the worker or between different places of work of the worker; 2) Activities of watch, surveillance and duty where there is a need to ensure the protection of properties and individuals; 3) Activities involving the need for continuity of service or production, particularly for businesses or parts of businesses using shift work, each time the worker changes team or position and thus cannot benefit from, a daily rest of 11 consecutive hours between the end of one shift and the beginning of the next one. 4) Handling activities and *activités d'exploitation* that contribute to the performance of transport services; 5) Activities involving periods of work split up over the day,

Derogations by collective agreements are also possible if there is an increase in activity³³³. However, collective agreements cannot provide for a period of minimum daily rest less than nine hours per day. In case of increased activity in the absence of collective agreement, the employer can put in place a period of daily rest inferior to 11 hours³³⁴. The employer will have to request this derogation to the labour inspectorate, provide the necessary documents and the decision from the works council or the workers' representatives if they are some in the companies. The labour inspectorate will give their decision within 15 days upon reception of the employer's request. In case of emergency, the employer can derogate to the 11-hour minimum daily rest under their own responsibility in the event when there is an increase in activity due to: 1) Work having to be performed within a specified period because of its nature; 2) Seasonal work; 3) Work involving an increase in activity during certain days of the week, month or year.

All derogations to the 11-hour daily rest mentioned above, are subject to the allocation of periods of rest at least equivalent to the workers concerned. However, French labour law is silent on the timing during which this equivalent rest must be taken. If it is not possible to grant this rest to workers, an equivalent counterpart will have to be provided by collective agreement³³⁵.

A2.2.2.2 Reference period of minimum weekly rest

The French Labour Code states that the weekly rest period has a minimum of 24 consecutive hours plus the consecutive hours of daily rest mentioned in the section above (usually 11 consecutive hours)³³⁶.

The law forbids a worker to work more than six days per week. It also provides that in the interests of workers, the weekly rest is given on Sunday³³⁷.

³³¹ Article L3131-1 of the French Labour Code

³³² Article D3131-1 of the French Labour Code

³³³ Article D3131-2 of the Labour Code

³³⁴ Article D3131-4 of the Labour Code

³³⁵ Article D3131-6 of the Labour Code

³³⁶ Article L3132-1 of the Labour Code

³³⁷ Article L3132-3 of the Labour Code

Derogations exist and the weekly rest period can be suspended in some specific cases stated in the law such as for urgent work; work in industries dealing with perishable goods or having to respond to an extraordinary increase in activity³³⁸; work of loading and unloading in ports, docks and stations³³⁹ or work of guardians and caretakers of industrial and commercial establishments³⁴⁰

The weekly rest time can be deferred/postponed in the case of seasonal activities; in industrial undertakings operating continuously or in the case of work involving national defense³⁴¹. The weekly rest time can also be reduced in the case of work relating to cleaning up or the maintenance of industrial infrastructures or ³⁴² in seasonal agriculture work.

A2.2.2.3 Compensatory rest

The Labour Code the principle of the right to compensatory rest or financial compensation after a period of working on stand-by³⁴³. However, this article leaves it open for the social partners to set more specific provisions relating to what would be applicable in their sector and under what conditions. In the case where a collective agreement has been concluded, the employer will determine the conditions relating to the organisation of stand-by time after consultation and information of the works council and after informing the labour inspector. In the absence of works council, the employer will have to consult workers' representatives if any, after having informed the labour inspector.

When workers work overtime, the employer has to pay the worker an extra allowance for overtime. This allowance may also be replaced by compensatory rest (*repos compensateur de remplacement*) if collective agreements provide for this. For instance, an additional hour paid to 150% may be replaced by a rest period of 1h30. Overtime giving rise to an equivalent compensatory rest cannot be counted on the annual overtime quota³⁴⁴. When there are no trade union representatives subject to the annual obligation to negotiate, the substitution of the extra allowance for compensatory rest can be set by the employer provided that the works council or the workers' representatives do not object to this³⁴⁵.

When workers work overtime above the maximum quota of overtime hours, this will give rise to compulsory compensatory rest (*contrepartie obligatoire en repos*) in addition to the extra allowance the worker will receive.

The general principle concerning compulsory compensatory rest in the Labour Code only applies if nothing is provided in collective agreement on this³⁴⁶. If a collective agreement does not provides for another period, compensatory rest must be taken by the worker within two months³⁴⁷. It may be taken by full-day or half-day at the convenience of the worker³⁴⁸. The employer can refuse the compensatory rest to be

³³⁸ Article L3132-5 of the Labour Code

³³⁹ Article L3132-6 of the Labour Code

³⁴⁰ Article L3132-7 of the Labour Code

³⁴¹ Article L3132-9 of the Labour Code

³⁴² Article L3132-8 of the Labour Code

³⁴³ Article L3121-7 of the French Labour Code

³⁴⁴ Article L3121-25 of the French Labour Code

³⁴⁵ See Article L2242-1 of the French Labour Code

³⁴⁶ Article D3121-7 of the French Labour Code

³⁴⁷ Article D3121-8 of the French Labour Code

See Article D3171-11 of the French Labour Code for more details

³⁴⁸ Article D3121-9 of the French Labour Code

taken on a certain date. In this case, the refusal must be based on the ground of imperative measures relating to the functioning of the company and workers' representatives must be consulted. The employer must also suggest another date to the worker in a period of time two months as s/he is allowed to postpone the period of time during the worker must take the compensatory rest up to two months³⁴⁹.

A2.2.3 Germany

A2.2.2.1 Minimum rest hours

The ArbZG states that every worker must get a minimum 11 hour uninterrupted daily rest after work shall be granted to each worker. There is a general interdiction to work on Sundays and public holidays. Also here the ArbZG fixes rules for derogation and it can be derogated by collective agreement. This means for rest periods after on-call work that the 11 hour rest period needs to be implemented if not derogated from in collective agreements just after having worked.

The ArbZG does not indeed mention as in the WTD that the 11 hours have to be calculated in a 24 hour timeframe of a workday. This would have to be taken into account by the employer developing shift plans and where on-call work follows a regular shift. Then one would need to foresee an additional period of rest-time. Derogation from this rule is possible by collective agreement.

According to a trade union representative of the chemical industry the reference period of 14 days is not always implemented. The minimum rest time can be reduced from 11 hours to 9 hours by collective agreements. There is no control of the implemented models.

A2.2.4 Hungary

A2.2.4.1 Minimum daily rest

Workers must get at least eleven hours of uninterrupted rest period after the end of daily work and before the beginning of the next day's work³⁵⁰. Eight hours of daily rest must be granted to workers working in split shifts; continuous shifts; multiple shifts; seasonal jobs and in in stand-by jobs. After an inactive stand-by period the worker shall not be entitled to any rest period³⁵¹.

A2.2.4.2 Minimum weekly rest

Concerning weekly rest period, workers must be given at least 48 hours of uninterrupted weekly rest every week³⁵². Workers must also be entitled to two rest days in a given week³⁵³. In the case of a worker working on an irregular work schedule, the weekly rest days should be scheduled irregularly as well³⁵⁴. The weekly rest period of workers must be allocated at least once in a given month on a Sunday. This provision does not apply to part-time workers working Saturdays and Sundays only³⁵⁵. In the case of an irregular work schedule, in lieu of the 48-hour weekly rest period workers may be allocated the uninterrupted weekly rest period comprising at least 40 hours in a week and covering one calendar day. Workers must be provided at

³⁴⁹ Article D3121-11 of the French Labour Code

³⁵⁰ Section 104 of the Hungarian Labour Code

³⁵¹ Section 104(3) of the Hungarian Labour Code

³⁵² Section 106 of the Hungarian Labour Code

³⁵³ Section 105 of the Hungarian Labour Code

³⁵⁴ Section 105(2) of the Hungarian Labour Code

³⁵⁵ Section 101(1) of the Hungarian Labour Code

least 48 hours of weekly rest period as an average of the reference period or the payroll period.

A2.2.5 Italy

A2.2.5.1 Weekly minimum rest

Italian legislation sets a reference period of 14 days for the calculation of the weekly rest period. The worker is entitled every seven days to a rest period of at least 24 consecutive hours, usually on Sundays, which must be cumulated with the daily rest period. Such rest period is calculated as the average over a reference period not exceeding 14 days.

Legislation envisages a number of derogations, including when workers changes shift on a roster and cannot benefit of their daily or weekly rest periods between the end of their old shift and the start of the new one; for activities with daily working hours distributed between different periods; for a number of railway activities; and if collective agreements introduce different rules, provided they ensure equivalent compensatory rest periods or, in exceptional circumstances, if the workers involved are granted adequate protections. Weekly rest periods can take place in day other than Sundays in certain cases.

A2.2.5.2 Missed minimum weekly rest

According to Legislative Decree 66/2003, workers have the right to a daily rest of 11 consecutive hours per 24-hour period³⁵⁶. Daily rest must be uninterrupted except in the case of work provided in separate periods during the working day or in the case of stand-by work.

Following the jurisprudence of the CJEU, it is assumed that in Italy, compensatory rest periods should be enjoyed following the reduction in the minimum rest period and before the start of the next work period.

A2.2.6 Netherlands

It seems that there is no compensatory rest in the case of on-call as the employer has to respect the rules on rest-times as defined under the law – they can only be regulated more specific in a collective agreement.

For stand-by time there should be compensatory rest however the rules are not clear in this regard and will rather be determined in collective agreements.

A2.2.6.1 Minimum daily rest

The ATW determines for daily periods of rest (Art. 5:3.2) that every worker has the right to 11 hours uninterrupted rest in any consecutive 24h period. In a 7 day/24h period the rest can be shorted to 8 hours once should the work organisation or type of work make it necessary.

Regarding the weekly rest periods (Article 5:5.2) the employer has the choice of two patterns: either 36 hours in every 7 day/24 hour period; or 72 hours in every 14 day/24 hours period – the rest period may be divided into two periods of 32 hours rest each.

A2.2.7 Poland

A2.2.7.1 Minimum daily rest

Provisions on daily rest periods and weekly rest periods are enshrined in the Labour Code. The latter provides that a worker must have 11 hours of consecutive rest per

³⁵⁶ Article 7 of the Italian Legislative Decree 66/2003,

day and 35 hours of rest per week. Time spent on-call is taken into account to calculate weekly rest periods.

There are exceptions from the 11 hours daily rest rule. In the equivalent working time system the daily rest can be shortened if there was a reasonable cause. If the daily rest was shortened it must be compensated immediately after working day and extended to the working hours that worker actually worked that day. For example, if the worker has worked 16 hours, he should be resting 16 hours.

In addition, the 11-hour rule does not apply to managers and the situations of rescue actions, security and safety work actions, protection of property and rectification of defects.

A2.2.7.2 Minimum weekly rest

There is also a possibility to derogate from the 35-hour weekly rest. In the specific situations such as live saving actions, change of shifts, protection of property, the 35 hours weekly period can be shortened to 24 hours. However, there is no mention on whether the worker has an obligation to compensate worker for their shortened weekly period.

A2.2.8 Spain

A2.2.8.1 Minimum daily rest

According to Spanish labour law, workers must get a minimum break of 12 hours after a day of work³⁵⁷. However, special rules³⁵⁸ exist for certain sectors. In the transport, work at sea, mining, agriculture, construction etc... sectors workers may be subject to lower rest period. Most of the time this is reduced to ten hours, this can also be reduced to nine³⁵⁹, eight³⁶⁰ or even six³⁶¹ hours providing that they have been approved in a specific collective agreement³⁶². In addition, these shorter rest periods must be compensated with alternative rest periods (including their addition to holiday periods) within a period of four weeks³⁶³. Collective agreements can establish other possibilities of accumulation and distribution. However, their role has not traditionally been significant.

A2.2.8.2 Minimum weekly rest

Workers have a weekly rest of a day and a half but this minimum can be accumulated for periods of two weeks³⁶⁴. As a result, workers may work eleven consecutive days (up to twelve hours or more in some economic activities) and then enjoy a three-day rest.

A2.2.9 Sweden

The Working Hours Act does not provide for provisions on compensatory rest following a period of on-call or other shift patterns. As a result, provisions for compensatory rest are specified in collective agreements.

³⁵⁷ Article 34 of the Statute of Workers

³⁵⁸ RD 1561/1995

³⁵⁹ Transport activities (art.11.4) and in special conditions (during three days and should always be compensated during the subsequent week).

³⁶⁰ Merchant navy (Article 17.1).

³⁶¹ Fishing activities (Article 17.1).

³⁶² According to the experts consulted, the minimum rest periods are not always fulfilled in sectors not covered by the RD 1561/1995, especially in security services.

³⁶³ RD 1561/1995).

³⁶⁴ Article 37 of the SW

Workers must get a minimum rest period of eleven consecutive hours in any 24-hour period³⁶⁵. Derogations may be made on a temporary basis if this is caused by a special circumstance that the employer could not have foreseen, provided that the worker is given a corresponding compensatory rest period³⁶⁶.

The daily rest period that all workers are entitled to must include the hours between midnight and 5:00am. Derogations exist if in view of the work that must be performed (e.g. paper industry)³⁶⁷, the needs of the general public (e.g. transport, post, telecommunications, hotels, restaurants, pharmacies, hospitals, utilities, newspaper printing and rescue services) or other special circumstances (e.g. animal care, security services and emergencies) must be carried out between midnight and 05.00³⁶⁸.

A2.2.9.1 Weekly minimum rest

Workers are entitled to a minimum uninterrupted rest period of 36 hours per every seven day period³⁶⁹. Notably, the weekly rest period does not include on-call time or stand-by time. Derogations may be made on a temporary basis if this is caused by a special circumstance that the employer could not have foreseen. A derogation of this kind may only be made provided that the worker is given a corresponding compensatory rest period. The Working Hours Act also stipulates that the weekly rest must, as far as possible, be scheduled for weekends.

The minimum daily and weekly rest period can be renegotiated through collective agreements or through dispensation from the Swedish Work Environment Authority. However, any derogation from the Working Hours Act cannot result in conditions that are less favourable than those set out in the EU Working Time Directive.

A2.2.10 United Kingdom

A2.2.10.1 Minimum daily rest

Workers are entitled to a rest period of at least 11 consecutive hours in each 24-hour period according to the Regulation³⁷⁰. If the employer so determines, derogations can be made and workers can be entitled to either:

- two uninterrupted rest periods each of not least 24 hours in each 14-day period; or,
- one uninterrupted rest period of at least 48 hours in each such 14-day period, instead of the two uninterrupted 24-hour rest period over 14 days³⁷¹.

Collective agreements or a workforce agreement may modify or exclude the application of regulations of a minimum 11 consecutive hours rest period in each 24-hour in relation to particular workers or groups of workers. No further details are provided in the law concerning the workers concerned or the limits to these derogations³⁷².

A2.2.10.2 Compensatory rest

³⁶⁵ Section 13 of the Working Hours Act

³⁶⁶ Working Hours Act, Section 13

³⁶⁷ Beslut J 2006/43135

³⁶⁸ Working Hours Act, Section 13

³⁶⁹ Section 14 of the Working Hours Act

³⁷⁰ Working Time Regulations, Article 10 (1)

³⁷¹ Working Time Regulations, Article 11 (2)

³⁷² Working Time Regulations, Article 23 (a)

Compensatory rest is regulated by national legislation. The Working Time Regulations provides that when a worker is required by their employer to work during a period which would otherwise be a rest period or rest break, the employer must allow the worker to take an equivalent period of compensatory rest wherever possible³⁷³. In exceptional cases in which it is not possible, for objective reasons, to grant such a period of rest, the employer must provide the worker appropriate protection in order to safeguard the worker's health and safety. However, no clarification has been brought on what 'appropriate protection' would stand for in practice.

These provisions on compensatory rest apply to the following list of workers and also when collective agreements have modified rules on rest breaks for some categories of workers:

- where the worker's activities are such that his place of work and place of residence are distant from one another or his different places of work are distant from one another;
- where the worker is engaged in security and surveillance activities requiring a permanent presence in order to protect property and persons, as may be the case for security guards and caretakers or security firms;
- where the worker's activities involve the need for continuity of service or production, as may be the case in relation to:
 - services relating to the reception, treatment or care provided by hospitals or similar establishments, residential institutions and prisons;
 - work at docks or airports;
 - press, radio, television, cinematographic production, postal and telecommunications services and civil protection services;
 - gas, water and electricity production, transmission and distribution, household refuse collection and incineration;
 - industries in which work cannot be interrupted on technical grounds;
 - research and development activities;
 - agriculture;
- where there is a foreseeable surge of activity, as may be the case in relation to—
 - (i) agriculture;
 - (ii) tourism; and
 - (iii) postal services;
- e) where the worker's activities are affected by—
 - (i) an occurrence due to unusual and unforeseeable circumstances, beyond the control of the worker's employer;
 - (ii) exceptional events, the consequences of which could not have been avoided despite the exercise of all due care by the employer; or
 - (iii) an accident or the imminent risk of an accident.
- f) Shift workers³⁷⁴

³⁷³ Section 24 of the Working Time Regulations

³⁷⁴ <https://www.gov.uk/rest-breaks-work/compensatory-rest>

- A worker may be entitled to compensatory rest if:
- they are a shift worker and can't take daily or weekly rest breaks between ending one shift and starting another
- Offshore workers are exempted from the Working Time Directive's provisions on daily rest, rest breaks, weekly rest and the limit on night work, provided compensatory rest is given
- their workplace is a long way from their home (e.g. an oil rig)
- they work in different places which are a reasonable distance from each other
- they're doing security and surveillance-based work
- they're working in an industry which is very busy at certain times of the year – e.g. tourism, seasonal trade – hotels / restaurants.
- they need to work because there's an exceptional event, an accident or a risk that an accident is about to happen
- the job needs round-the-clock staffing so there aren't interruptions to any services or production (e.g. hotel)
- they work in the rail industry on board trains or their job is linked to making sure trains run on time
- their working day is split up (e.g. they're a cleaner and work for part of the morning and the evening)
- there is an agreement between management, trade unions or the workforce (a 'collective' or 'workforce' agreement) that has changed or removed rights to these rest breaks for a group of workers.

A2.3 Maximum weekly working time and the reference period

A2.3.1 Czech Republic

The Czech Labour Code sets the length of standard weekly working hours at 40 hours per week (seven days)³⁷⁵. It also provides some exceptions for the following categories of workers:

- Workers who work underground in the extraction of coal, ores or non-metallic raw materials, or on construction of mine works or who are engaged in geological prospecting on mining sites, must work no more than 37.5 hours per week;
- Workers who are on a three-shift or continuous pattern (schedule) of work must work no more than 37.5 hours per week;
- Workers who are on a two-shift pattern of work shall work no more than 38.75 hours per week.

Czech legislation states that the employer can introduce a 'working hours account' (*konto pracovní doby*) which is a method of distributing working hours over a longer period of time³⁷⁶. In practice, such working hours accounts are another way to provide the possibility to derogate to the seven-day reference period. However, derogations to the seven-day reference period can only be made by collective agreements. If there is no trade union organisation operating in the employer's undertaking, this will be done on the basis of the internal regulations (internal rules).

³⁷⁵ Section 79 of the Czech Labour Code

³⁷⁶ Section 86 of the Labour Code

Where a 'working hours account' is used, the reference period may not exceed 26 consecutive weeks (six months). This reference period can be extended to 52 weeks (one year) but only by collective agreement. In practice, the 'working time account' is used in sectors with seasonal work and less on production sites³⁷⁷.

A2.3.2 France

The Labour Code sets the maximum weekly working time at 44 hours, calculated over a period of 12 weeks (three months)³⁷⁸. A Decree giving effect to a collective agreement can set the maximum average weekly working time at up to 46 hours calculated over a period of 12 consecutive weeks.

In some sectors, some regions or some undertakings, specific derogations can apply during specific periods of time to bring up the limit to 46 hours per week³⁷⁹. The works council or, the staff representatives give their opinion on these derogations. Their opinion/recommendation is sent to the labor inspector³⁸⁰.

Maximum weekly working time cannot exceed 48 hours in one single week. In very exceptional situations, working time within a particular company may be temporarily increased for a brief period to a maximum of 60 hours per week³⁸¹. The employer will have to request a derogation from the head of the regional Directorate for enterprises, completion, consumption, labour and Employment (*Dirrecte*) showing the exceptional circumstances justifying the derogation.

Collective agreements (company, sectoral...) can set a reference period from one week up to one year³⁸².

A2.3.3 Germany

The ArbZG determines under article 2.3 that the maximum daily working time is 8 hours, but individuals can work up to 10 hours per day if over a reference period of 24 weeks if an average of 8 working hours per day is respected. For exceptional reasons, where work cannot be postponed, e.g. in nursing and care, derogations from the 10 hours per day limit are possible. However, the 48 hour average work week over the 24 week reference period remains applicable. In cases where a shift pattern is longer than 10 hours, it is required for companies to seek authorisation from a competent authority. The reference period for calculating average weekly working time is usually 6 months but can be extended to 12 months in specific cases (§ 7 ArbZG, referring to agriculture, care, public sector, or with a specific authorisation in the context of specific business needs, offshore work). Many collective agreements foresee a 12 months reference period.

A2.3.4 Hungary

According to Section 99 of the Hungarian Labour Code, the weekly working time must not exceed 48 hours, or 72 hours in the case of stand-by jobs, if so agreed by the parties.

The Hungarian Labour Code provides for a four months (or 16 weeks) reference period for the calculation of average weekly working time³⁸³.

³⁷⁷ Section 86 of Czech the Labour Code

³⁷⁸ Article L3121-36 of the French Labour Code

³⁷⁹ Article L3121-36 of the French Labour Code

³⁸⁰ Article L3121-37 of the French Labour Code

³⁸¹ Articles L3121-35 of the Labour Code

³⁸² Article L3122-2 of the Labour Code

³⁸³ Section 94 of the Hungarian Labour Code

For the following cases, the maximum reference period is six months (or 26 weeks):

- a) working in continuous shifts;
- b) working in shifts;
- c) employed for seasonal work and
- d) working in stand-by jobs.

This six-month reference period may also apply to:

- Workers working as navigators, flight attendants and aviation engineers or engaged in providing ground handling services to passengers and aircraft, and participating in or providing direct support for navigation services;
- workers working in travel-intensive jobs in the domestic or international carriage of passengers and goods by road;
- carriers and traffic controllers working in a local public transportation system for the carriage of passengers or in a scheduled intercity transportation system inside a fifty-kilometer radius
- traveling workers and traffic controllers working in the carriage of passengers by rail and in the carriage of goods by rail;
- workers working in harbors;

Collective agreements can set a reference period of up to 12 months (or 52 weeks) if this is justified by technical reasons or reasons related to work organisation³⁸⁴.

It is not possible to individually opt-out from the four-month reference period in Hungary.

A2.3.5 Italy

Maximum weekly working hours are set by collective agreement, so there is no legal maximum threshold as used to be the case with the rules prior to Legislative Decree 66/2003).

A maximum threshold is set only for *average* working time which cannot exceed 48 hours over each seven-day period, including overtime. The reference period for calculating the average working time cannot exceed four months. Collective agreements can extend the reference period to six months without specific reasons or 12 months with objective technical reasons or related to the organisation of work which must be specified in the same collective agreement.

A2.3.6 Netherlands

The maximum average weekly working time is set at 48 hours over 16 weeks³⁸⁵. The maximum daily working time is 12 hours and the absolute maximum weekly working time is 60 hours per week. The employer has the obligation to make sure that average working time of 55 hours over a 4 week period is respected.

Collective agreements can derogate from the rule of 55 hours over a 4 week period but not so from the 48 hours over 16 weeks.

Collective agreements can derogate from the 16-week reference period in cases where unforeseen circumstances have increased the workload and that the 48-hour average cannot be respected³⁸⁶. In those cases the employer must organise working time in a

³⁸⁴ Section 94(3) of the Hungarian Labour Code

³⁸⁵ Article 5:7 of the ATW

³⁸⁶ Art. 4:9 of the ATB

way so that an average 48 hour work week over a reference period of 52 weeks can be kept. However, this exception needs to be implemented by sector level collective agreement. If night work is involved only 40 hours average over a period of 52 hours is possible. Here a company level agreement is sufficient.

A2.3.7 Poland

In Polish legislation, the maximum weekly working time is set at 48 hours calculated over a four-month reference period³⁸⁷.

However, following the 2013 Act on the Amendment to the Labour Code, there is now a possibility to establish reference periods up to 12 months by collective agreement. This must be justified by objective or technical reasons, or reasons concerning working time organisation or by another collective agreement (i.e., ad hoc agreements on working time).

There is also a possibility to put in place shorter reference periods but these can be no less than two months for individual working time schedules. In this case, the worker must be notified at least two weeks in advance. This is used where worker can work up to 12 hours a day when technical reasons, the organisation of work or the type of work justify it. In this case, a shorter reference period is used and this is usually calculated over a one-month reference period. This can be the case in undertakings of for example in the coal or steel industries.

Also, there is an exception in the system where weekly working hours can be extended up to 43 hours and one day in a week can be extended up to 12 hours in 4 weeks reference period. This system can be used only in companies where production processes cannot be stopped or those offering 'continuous' services to meet people's needs³⁸⁸.

A2.3.8 Spain

The limit of weekly working time in Spain is set at 40 hours on average over a reference period of one year (excluding overtime)³⁸⁹. This time may be distributed unevenly over the year by collective agreement, or – in the absence of a collective agreement – by an agreement between the company and workers' representatives, provided that the minimum daily and weekly rest periods required by the Statute are respected.

In addition, the last labour market reform³⁹⁰ has introduced a specific regulation of this 'irregular distribution of working hours' which, in the absence of any collective agreement, can amount up to 10% of the annual ordinary working time. This decision can be unilaterally imposed by the employer and does not need to be justified by any economic, organisational or productive reason. It only involves the obligation to inform workers five days in advance.

A2.3.9 Sweden

The law stipulates that the total weekly working time (including regular working hours, overtime and on-call time) may amount to an average of at most 48 hours over a reference period of up to four months³⁹¹. Stand-by time is not included in the calculation of total working time.

³⁸⁷ Article 129 of the Polish Labour Code

³⁸⁸ Article 138 of the Polish Labour Code

³⁸⁹ Article 34 of the the Statute of Workers (*Estatuto de los Trabajadores*)

³⁹⁰ L 3/2012

³⁹¹ Section 10b of the Working Hours Act

Derogation from the four month reference period is possible through collective agreements, although it is not possible to extend it beyond twelve months³⁹².

A2.3.10 United Kingdom

The reference period for the calculation of average weekly working time is set in legislation. Section 4 of the Working Time Regulations states that the standard reference period is 17 weeks³⁹³.

Derogations to the 17-week reference period can be made through collective agreements. The maximum 17-week reference period can be extended to a reference period not exceeding 52 weeks in relation to particular workers or groups of workers, if objective or technical reasons or reasons concerning the organisation of work justify it³⁹⁴.

In the health sector the average weekly working time of doctors in training is averaged over a 26-week reference period). The same is true for night and mobile workers.

A2.4 Derogation of Article 17 of the Directive on autonomous workers

A2.4.1 Czech Republic

The Czech Republic does not use the possibility to derogate from the provisions for the Directive for autonomous workers offered by Article 17 of the Working Time Directive.

A2.4.2 France

The derogation provided for in Article 17 of the Working time Directive is used by France by the means of the provisions on *conventions de forfait*³⁹⁵. These *conventions de forfait* are agreements by which a worker agrees to receive a lump-sum remuneration in exchange for working a fixed number of hours per week or per month or a certain number of hours or days per year. Thus, there are two types of flat-rate pay agreements that autonomous workers can conclude: the agreement in hours over a year (*convention de forfait en heures sur l'année*) and the agreement in days over a year (*convention de forfait en jours sur l'année*).

Some common principles apply for both the agreement in hours over a year and the agreement in days over a year. Indeed, due to case-law on the issue, new provisions were introduced by the law of 20 August 2008³⁹⁶, which states that the consent of the worker agreeing to a *convention de forfait* must be in writing otherwise it will be deemed not valid³⁹⁷. The works councils need to be consulted every year on the use of *conventions de forfait*³⁹⁸.

The Labour Code defines autonomous workers as workers who can conclude these type of agreements as follows:

- Managers whose functions do not lead them to follow the hours applicable in the workshop, department or team to which they belong

³⁹² Section 3 of the Working Hours Act

³⁹³ Working Time Regulations, Article 4 (1)

³⁹⁴ Working Time Regulations, Article 23 (b)

³⁹⁵ Article L3121-38 to Article L3121-48 of the French Labour Code

³⁹⁶ Loi du 20 août 2008 portant rénovation de la démocratie sociale et réforme du temps de travail

³⁹⁷ Article L3121-40 of the French Labour Code

³⁹⁸ Article L2323-29 of the French Labour Code

- Workers whose hours of work time cannot be determined and have a real autonomy in organising their schedule for carrying out the responsibilities entrusted to them.

In French labour law, senior executive managers are excluded from the scope of some parts of the working time legislation. This concerns mainly the calculation of the total number of hours worked, stand-by time, overtime and rest periods. The following are considered to meet the characteristics of managerial staff. They: a) Are assigned responsibilities which a significant level of autonomy in organising their time; b) *Are empowered to make decisions in a largely autonomous way*; c) *receive compensation lying in the highest remuneration systems in their company or institution levels*.

It is worth noting that the criterion of autonomy is not required for managers while it is necessary for the rest of the workers. It is also important to distinguish managers from senior executive managers. The senior executive managers are workers at the top level management while in France, a manager (*cadre*) is not necessarily someone who manages a team. Indeed, the *conventions de forfait* which has been nicknamed *forfait-cadres* are almost systematically proposed as the default contract to managers in France even they are not autonomous (as considered in the tighter definition).

A2.4.3 Germany

Germany uses the derogation offered by Article 17 relating to autonomous workers: The ArbZG excludes managers named '*leitende Angestellte*' who are a type of executive manager having similar managing powers as the employer. Other forms of managers are not included.

The Works Council Constitution Act (*Betriebsverfassungsgesetz*) under paragraph 5 defines '*leitende Angestellte*' as follows:

- Someone who has the power within a company or a company section to hire workers;
- Has a general power or mandate within the company and significantly important compared to the employer;
- Carries out regularly tasks relating to the development of the business and has managerial freedoms
- Other criteria may also enter into account to determine whether a particular manager may be concerned by the derogation. This can be based on criteria such as participation in the representative committee of executives (*Sprecherausschuss*) in a company, whether the manager works at a level of the company where generally only executive managers work. Another criterion relates to remuneration and the fact that the manager receives a wage that is typical for an executive manager in that company. If this criterion is not sufficient, it can be checked whether the manager receives three times the reference wage stated under paragraph 18 of the fourth Social Law book.

The German definition can be assessed as a tight definition as it only concerns the top management and many criteria may be used to determine whether a manager can derogate from working time rules. As a result, only few managers fall into the scope of this derogation which represents minority of the workforce in Germany³⁹⁹.

A2.4.4 Hungary

The legal status of so called 'autonomous worker' is regulated as 'flexible working arrangement' and 'executive worker' in the Labour Code. A worker might work in a

³⁹⁹ Information collected through stakeholders interviews in Germany.

'flexible working arrangement' but must give their consent to do so. Workers in a 'flexible working arrangement' are exempted from practically all working time regulations, i.e. working time banking, work schedule, rest breaks, daily and weekly rest periods, overtime hours and on-call and stand-by duties.

According to the Hungarian Labour Code an executive worker is defined thanks to the following criteria:⁴⁰⁰

- The executive worker' must be understood as the employer's director, and any other person under their direct supervision and authorised (in part or in whole) to act as deputy director.
- Employment contracts may invoke the provisions on executive workers if the worker is in a position considered to be of considerable importance from the point of view of the employer's operations, or fills a post of trust, and his salary reaches seven times the mandatory minimum wage.

On the autonomous character of the work, the Labour Code states that the employer may permit in writing the worker to schedule his working time in the interest of autonomous work organisation (flexible working arrangement). However, where the worker is permitted to perform certain functions of the job at a specific time or period in light of their unique characteristics, this must not have any consequences on the worker's flexible working arrangement⁴⁰¹.

A2.4.5 Italy

An almost general exemption from the rules on working time is then envisaged when, due to the specific features of the activities performed, the duration of working time is not measured and/or predetermined or can be determined by the workers themselves, and particularly in the case of: (a) managing executives or other persons with autonomous decision-taking powers;(b) family workers; (c) workers officiating at religious ceremonies in churches and religious communities; (d) in the case of homeworkers or teleworkers. In these cases, only the provisions on weekly rest periods and annual leave shall apply. Derogations must conform to the general principles of the protection of health and safety of workers (Article 17.5).

Mobile workers are excluded from the application of rules on daily rest, breaks, weekly rest periods and the duration of night work (Art. 17.6).

Finally, the rules on daily rest shall not apply to permanent workers in the National Health Service, who will be covered by the provisions set in collective agreements.

A2.4.6 Netherlands

Dutch legislation provides that managers" are excluded from the scope of provisions on information and registration of working time⁴⁰² and from the rules regarding rest and working time of the law⁴⁰³. The ATB determines that for managers the reference period is 48 hours within 52 weeks.

Managers (leidinggevende en hoger personeel) are defined in legislation as those that earn annually 3 times the fixed amount set under Art. 2.1:1 3 and those that give directions to other workers (determined by the employer) in the mining sector. The amount is set as twelve times the monthly minimum wage as fixed every year

⁴⁰⁰ Section 208 of the Hungarian Labour Code

⁴⁰¹ Subsection 2 of Section 96 of the Hungarian Labour Code

⁴⁰² Articles 4:2 and 4:3 of the ATB

⁴⁰³ Article 2.1:1 of the ATB

(including vacation allowance). This amount will be adjusted to part-time workers in the proportion of their part-time factor.

A2.4.7 Poland

Polish labour law uses the derogation in Article 17 of the Working Time Directive but this only concerns managers. The concept of autonomous workers as defined in the Directive does not exist in Polish law. The Labour Code defines managers as *Workers who manage the workplace in the name of employers*. In practice, this usually concerns directors, deputy directors or managers.

The Polish Supreme Court repeatedly ruled to clarify which workers could be included in the 'management'. The Court found out that to fall into the scope of managers as defined by the Labour Code, managers should be board members in companies, be branch managers, be directors of state enterprises, and in some cases directors, called "CEO" who single-handedly manage the company, without being member of the board.

There is nonetheless an exception concerning workers at the head of the organisational unit. Indeed, managers supervising the work of others, but whose duties are different from those of their subordinates. It is therefore important that the organisational structure is the head of the team, which is managed as part of a separate structure. Such an interpretation follows from the judgment of the Supreme Court dated 4 June 2008, Ref II PK 326/07.

According to settled case-law SN work being provided by management is that it does not perform the same functions as subject to its workers (judgment of 13 January 2005 Ref. II PK 114/04).

A2.4.8 Spain

There is a special labour regulation which exists for senior management. The employer and such senior managers can agree on a contract which provides for average working time and rest time with only one limit: that it cannot exceed "significantly" from the general rules on working time in the relevant professional field (RD 1382/1985). Although this therefore provides for greater working time flexibility for senior managers in line with the derogation made possible by Article 17, in reality, it could be considered that is not clear to what extent such workers enjoy real decision making autonomy, as their work and work organisation is subject to board level decisions. Collective agreement can set down more detailed characteristics which such workers must possess.

A2.4.9 Sweden

The possibility to derogate provided for in Article 17 of the Working Time Directive is used in Sweden. Section 2 of the Working Hours Act presents the categories of workers who are not covered by the scope of the Act. On this basis, autonomous workers can be defined as workers:

- who perform work 'under such conditions that supervision of how the work is organised cannot be deemed to be the employer's responsibility' or
- [whose] 'work performed by workers who, considering their duties and employment conditions, hold managerial or comparable positions, or by workers who, considering their duties, are entrusted with organising their own working time'.

There are a number of reasons why such autonomous workers are exempt from the Working Hours Act. For example, workers that have a managerial or comparable position are exempt from the Working Hours Act as they may be considered as employers. Equally, workers that undertake tasks where it is natural that they have a position of trust in terms of their working hours are exempt from the legislation as

they may, in principle, be able to take time off during regular working hours. Another criterion is having a position of trust (using working hours in a way which ensures that a task is completed on time). It should, however, be noted that the fact that a worker has a certain degree freedom to take time off during the workday does not automatically mean that he/ she has a position of trust. Whether a position of trust exists needs to be tested on a case to case basis⁴⁰⁴.

A2.4.10 United Kingdom

The UK has transposed the definition of the Working Time Directive almost word for word as follows:

'A worker where, on account of the specific characteristics of the activity in which he is engaged, the duration of his working time is not measured or predetermined or can be determined by the worker himself, as may be the case for:

- a. managing executives or other persons with autonomous decision-taking powers;*
- b. family workers; or*
- c. workers officiating at religious ceremonies in churches and religious communities.'*

As a result, the British legislation does not provide for any more detail or clarification on how to define autonomous workers.

The definition of autonomous workers has not been the subject of any case-law yet.

A2.5 Opt-out

A2.5.1 Czech Republic

Czech Republic uses the opt-out from Article 22(1) of the Working Time Directive. The Labour code states that the worker can work more than the overtime limit if the employer and worker agreed so⁴⁰⁵. The total scope of overtime work may not exceed on average 8 hours per week calculated over a period of no more than 26 consecutive weeks. Only the relevant collective agreement may extend such period to 52 consecutive weeks at the utmost⁴⁰⁶. Even if the opt-out is not restricted to any sector, in practice, managers constitute the main category of workers using the provisions of the opt-out.

A2.5.2 France

In France the opt-out is only available in the health care sector.

A2.5.3 Germany

The opt-out is possible if determined in a collective agreement that daily working time above 8 hours in sectors that regularly use on-call work can be worked without compensatory rest (does not refer to the daily obligatory rest). However in such a case the worker has to agree with the opt-out for a minimum period of 6 months.

A2.5.4 Hungary

Hungary only provides the opportunity to opt-out in the healthcare sector

A2.5.5 Italy

⁴⁰⁴ Arbetstidslagen [Working Hours Act] (2014) Arbetsmiljöverket [Swedish Work Environment Authority]

⁴⁰⁵ Section 93 of the Czech Labour Code

⁴⁰⁶ Section 93 (3) of the Czech Labour Code

The opt-out is not used in Italy.

A2.5.6 Poland

Poland does not use the opt-out.

A2.5.7 Sweden

Sweden does not use the opt-out.

A2.5.8 United Kingdom

The opt-out is widely used in the UK. It has been transposed in UK law through Section 5 of the Working Time Regulations. This Article states that the limit of 48 working hours for each seven days must not apply in relation to a worker who has agreed with his employer in writing that it should not apply in their case, provided that the employer complies with the following requirements:

- the employer must maintain up-to-date records which: a) identify each of the workers whom he employs who has agreed that the limit of 48 hours a week should not apply in his case; b) set out any terms on which the worker agreed that the limit should not apply and c) specify the number of hours worked by him for the employer during each reference period since the agreement came into effect (excluding any period which ended more than two years before the most recent entry in the records).
- permits any inspector appointed by the Health and Safety Executive or any other authority which is responsible under regulation 28 for the enforcement of these Regulations to inspect those records on request; and
- provides any such inspector with such information as he may request regarding any case in which a worker has agreed that the 48 working hours for each seven days should not apply in his case.

The opt-out can relate to a specified period or apply indefinitely. The worker can terminate the application of the opt-out by giving notifying the employer seven days in advance unless stipulated differently in the agreement. Where an agreement on the opt-out has been concluded and makes provision for the termination of the agreement after a period of notice, the notice period provided for shall not exceed three months.

A2.6 Concurrent contracts

A2.6.1 Czech Republic

The Czech Labour Code contains some rules on the situation of a worker having two contracts with the same employer. It states that a worker can have two concurrent contracts with the same employer but that the worker cannot perform work of the same type for both contracts⁴⁰⁷. This means that the type of work a worker must perform under contract X must be different from the type of work which is the object of contract Y with the same employer. Although the situation of concurrent contracts with the same employer is mentioned in the Labour Code, no specific provisions regulate the application of working time rules in such cases. However, legal literature discussed the subject and considers that the employer is responsible for ensuring that working time rules of both contracts respect the minimum standards enshrined in the Labour Code⁴⁰⁸.

A2.6.2 France

⁴⁰⁷ Section 34b of the Czech Labour Code

⁴⁰⁸ Information collected through stakeholders interviews (Labour law expert)

The situation where a worker has two contracts with the same employer is not specifically provided for in the Labour Code. It is worth noting that this situation would be very unlikely to arise in France⁴⁰⁹. The French Labour Code provides that workers cannot work beyond the maximum legal working time as it is defined for the relevant profession⁴¹⁰. In addition, employers cannot conclude a contract with a worker if this would imply that this worker works more than the maximum legal working time⁴¹¹. As a result, it is difficult to see how a worker could sign two contracts with the same employer for the same period of time. If this situation would nonetheless arise, the Article preventing an employer from hiring a worker who would work more than the maximum legal working time, would apply.

A2.6.3 Germany

German legislation is not very clear on the question of the application of working time legislation to concurrent contracts with the same employer. However, German legislation mentions that rules on working time apply per individual in case of several employers⁴¹².

A2.6.4 Hungary

There is no legislation ensuring that working time legislation applies per individual in the case of workers having concluded several contracts with the same employer or even with different employers. In the event of concurrent contracts with the same employer, the employer is expected to comply with the working time legislation but there is no explicit rule prescribing this, this could only be deducted from the general logic of the Labour Code.

A2.6.5 Italy

There is no explicit legal mention of how working time legislation applies in the case of concurrent contracts with the same employer. However, when a worker has several contracts with several employers, the employer must comply with existing regulations by considering the overall working time in all concurrent contracts.

A2.6.6 Poland

The application of working time rules in the case of concurrent contracts with the same employer is not expressly regulated by the law.

However, such a solution is admissible only if the mode is clearly different than agreed upon and executed in regular time work. Should not it be the employer of the claim would violate the provisions on working time, particularly those relating to overtime.

A2.6.7 Spain

The Spanish law does not explicitly regulate the situation where workers hold more than one employment contract with the same employer at the same time. Additionally, this situation is extremely rare. However, two different cases may occur partly related to this issue:

- On the one hand, an individual may hold, at the same time, two different employment contracts (both part-time or one part-time and one full-time) with two firms belonging to the same group of companies.

⁴⁰⁹ Information collected through stakeholders interviews (Labour Inspectorate)

⁴¹⁰ Article L8261-1 of the French Labour Code

⁴¹¹ Article L8261-2 of the French Labour Code

⁴¹² Section 2 of the ArbZG

- On the other hand, part-time workers may hold two contemporary employment contracts with different employers.

In both cases, Spanish labour law applies per contract. This means that workers with more than one contract may not be protected by working time regulations, unless the contrary is explicitly stated in the agreement between the employer and the worker.

A2.6.8 Sweden

The Working Hours Act applies to the work carried out for a single employer. If a worker has multiple employers, such as a full-time job with one employer and a part-time job with another, then working time rules would be assessed independently of each other. As such, a worker's total working time may exceed the limitations presented in the national legislation without it violating the Working Hours Act.

The situation in which a worker has concurrent contracts with the same employer is not provided for in the legislation. This is, however, very unlikely to occur in Sweden. If such a situation would occur it is assumed that working time rules would apply by worker and not by contract.

A2.6.9 United Kingdom

In case of concurrent contracts with the same employer, the contract applies per individual⁴¹³.

A2.7 Reconciliation of work and family life

A2.7.1 Czech Republic

There is no right to request flexible working for all workers but the Czech Labour Code provides for a flexible working hours scheme (*pružné rozvržení pracovní doby*) which consists of bands of core time and flexi-time⁴¹⁴. The employer determines the core working hours (*základní pracovní doba*) during which a worker has to be in the office. The worker can choose the start and the end of their working time within the flexible working hours known as flexi-time (*volitelná pracovní doba*). The total length of a shift cannot exceed 12 hours. Even though this flexible working hours scheme exists, the employer is the only one who decides whether a worker can benefit from this flexible working hours scheme or not. No provision requires from the employer to provide reasons for their refusal.

Section 84 of the Labour Code states that the employer has the obligation to draw up a written weekly work schedule and inform workers of their schedule and possible modifications at least two weeks in advance. When the modifications of schedule concerns a working hours account, the employer must inform the worker of the schedule at least one week before the period concerned unless the employer and the worker have agreed on another time-limit with regard to providing this information.

A2.7.2 France

There is a right to request flexible working arrangements in French labour law⁴¹⁵. However, the employer can refuse the worker's request without justifying the refusal. In other words, this article constitutes more a right to ask for the worker than a real right to get flexible working arrangements as the employer does not need to respect any procedure or criteria in providing their answer. In terms of procedure, the Labour Code states that the employer is allowed to derogate from collective working hours and put in place individualised working hours (*horaires individualisés*) if a worker

⁴¹³ Information collected through stakeholder interview (Labour law expert).

⁴¹⁴ Section 85 of the Czech Labour Code

⁴¹⁵ Article L3122-23 of the French Labour Code

requests so⁴¹⁶. Works councils must agree with this or workers' representatives in case there is no works council in the company. The labour inspectorate must also be informed of this. In addition, there is also a right for workers to ask to work part-time. In this case, the Labour Code provides for the procedure to follow. The worker will have to make the request six months in advance. The employer will have three months to give their decision to the worker⁴¹⁷. In case of refusal, the employer will have to justify that there is no available job or equivalent job for the worker to fulfil this position or that this change would have harmful consequences to the good functioning of the company.

In French labour law, collective agreements (plant, sectoral...) may provide for the conditions and delay that employers must respect when there is a changes in the duration or working time hours of the worker⁴¹⁸. If collective agreements do not state such information, the employer must notify the worker of the changes in their duration of working time or working time hours, at least seven days in advance⁴¹⁹. However, in the exercise of their management power (*pouvoir de direction*) employers have the right to unilaterally modify the way the working hours are organised. This is considered by the French Supreme Court as a simple modification of the modalities of execution of the contract and not as a modification to the work contract as such.

French labour law does not allow for flexibility in taking uninterrupted minimum daily rest.

A2.7.3 Germany

There is a general right for the workers who have worked for at least six months in the company to request a reduction in working hours according to the law on part-time work and fixed-term work (*Teilzeit- und Befristungsgesetz*). Employers who want to refuse the worker's request, will have to justify their decision showing that organisational or company reasons justify do not make it possible to allow the reduction in working hours. It seems that some case law in this regard exist by the German labour courts. The employer would have to prove that there is a working time concept which does not allow for the working hours as requested by the worker. In addition, German law provides that the employer has the right to determine the weekly working hours and their timing⁴²⁰. However, the employer has to consult the works council for the general planning as the works council has co-determination rights in this regard. If the worker's contract defines specific working hours it is difficult for the employer to change these. It is worth noting that in practice, as long as business requirements allow it, workers can decide on working flexibly. The consent of the line manager is often required.

When there is a change in working time organisation the works councils need to be informed⁴²¹.

A2.7.4 Hungary

There is no explicit right to request flexible working time for all workers. However, the employer has the obligation to cooperate according to the introductory provisions of the Labour Code. It follows from the obligation to cooperate that if the worker submits a request for flexible working hours the employer has to consider it. The Hungarian

⁴¹⁶ Article L3122-23 of the French Labour Code

⁴¹⁷ Article D3123-3 of the French Labour Code

⁴¹⁸ law Article L3122-2 of the French Labour Code

⁴¹⁹ Article L3122-2 of the French Labour Code

⁴²⁰ § 106 of Section 1 of the Trade Regulation Act (Gewerbeordnung)

⁴²¹ Section 81 and Section 90 of BetrVG

Labour Code provides for flexible working arrangements which are defined as the situation when the employer allows (in writing) the worker to schedule some part of their daily working time in light of the unique characteristics of the job. The employer is responsible for setting down the rules relating to work schedules⁴²².

The definition of flexible working arrangements was amended in 2013⁴²³. The new definition states that are considered as flexible working arrangements, only arrangements where the employer makes a written statement authorising the worker to take full control of scheduling their working hours, and the related administrative and other reliefs will be available in these cases only. The flexible nature of a worker's working arrangements is not affected by tasks which can only be performed at specific times or periods due to their nature. The possibility for a worker to do telework is also stipulated in the Labour Code. However no clear procedure is stated and it is not clear how the worker can benefit from this work pattern⁴²⁴.

Section 97 of the Labour Code states that the work schedule must be for at least one week and must be communicated to the worker at least seven days in advance in writing. If not provided, the last work schedule must remain in force⁴²⁵. The employer may modify the worker's work schedule for a given day upon the occurrence of unforeseen circumstances in its business or financial affairs, at least four days in advance

There is no provision in the Labour Code enabling workers to take their minimum daily rest flexibly.

A2.7.5 Italy

The issue of reconciliation is not specifically addressed in the regulation of working time through Legislative Decree 66/2003, while it is treated in legislation regarding maternity, parental leave and leave for caring purpose, and in other specific legislation.

Italian legislation does not allow the division of daily rest in different periods if work is performed in separate moments during the day, due to the characteristics of the activities to be carried out, or if the work entails 'stand-by' time.

A2.7.6 Poland

There is a right for every worker to request for flexible working arrangements⁴²⁶. This must be done by filling in a written form. However, the employer can refuse the worker's request without justifying the refusal. In addition, in 2013, some amendments were made to the labour legislation which enshrined the following flexible working time arrangements in the law⁴²⁷:

- the worker's working time schedule can provide for varying starting time of work;⁴²⁸
- the employer may set the time interval in which the workers can decide the starting time for their work;

⁴²² Section 96 of the Hungarian Labour Code

⁴²³ Amendment Act CIII of 2013

⁴²⁴ Section 196 of the Labour Code

⁴²⁵ Section 97 of the Hungarian Labour Code

⁴²⁶ Article 152 of the Labour Code

⁴²⁷ The 2013 Act on the Amendment to the Labour Code concerning working time

⁴²⁸ Article 140 of the Labour Code

- irregular working time can be introduced by collective labour agreement or another collective agreement.

These changes can be introduced by the employer or under collective labour agreements and in consultation with the company's trade unions. If there are no trade unions in the company, these flexible working time arrangements can be introduced under an agreement concluded with worker representatives selected under a specific procedure applicable at the given company. In addition, as mentioned above, the worker has the right to request for these changes in writing irrespective of whether or not such flexible working arrangements have been agreed by the abovementioned procedures.

Legislation also states that flexible working arrangements must not breach the right to daily and weekly rest periods.

The recent amendment to the Polish Labour Code introduced an obligation for employers to communicate the working time schedule to their workers at least one week prior to commencement of work in the period for which it is drawn up⁴²⁹. Furthermore, working time schedules will now have to be drawn up in written or electronic format, for a period shorter than the reference period, which however has to be a period of at least one month.

Polish legislation does not allow flexibility in taking uninterrupted minimum daily rest. Indeed, the latest amendment made in Polish law establishing more flexibility in working patterns makes it clear that the right of a worker to 11 hours of uninterrupted rest must not be breached.

A2.7.7 Spain

There is no general right to request flexible working time schemes under Spanish law even though there is a right for every worker to ask for improving their working conditions. In practice, collective agreements are the main source of regulation concerning work-life balance especially thanks to the strong boost given by the Law of effective equality between men and women⁴³⁰.

Some flexible working time arrangements are possible to request when there is a need for the worker to care for another person. For instance, there is a right to for workers to benefit from a reduction of working time if they are directly responsible for a child under 12 years of age, persons with disabilities or family members. This needs to be related to certain specific circumstances such as special diseases which involve long periods of hospitalisation⁴³¹.

Collective agreements usually regulate irregular distribution of working time in larger companies and in sector where flexibility is most needed. But the last labour market reform has introduced a specific provision on irregular distribution of working hours. Indeed, in the absence of any collective agreement disposition, can amount up to 10% of the annual ordinary working time⁴³². This decision can be unilaterally imposed by the employer and does not need to be justified by any economic, organisational or productive reason. It only involves the obligation to inform workers five days in advance.

In addition, employers are entitled to modify working time conditions through the so-called 'substantial change in working conditions' (*modificación substancial de las*

⁴²⁹ Act on the Amendment to the Labour Code 2013

⁴³⁰ Law of effective equality between men and women (L 3/2007)

⁴³¹ RD 16/2013

⁴³² Labour market reform (L 3/2012)

condiciones de trabajo)⁴³³. As a result, it is possible for the employer to unilaterally modify working conditions if this is justified by organisational, economic and productive reasons⁴³⁴. This modification of working conditions includes the regulation of working hours schedules, extending the working week, shift changes and other clauses which exceed the implementation of irregular distribution of working hours. Employers must inform 15 days in advance⁴³⁵ of any change relative to working time conditions. In practice, this period also depends on whether any collective agreement provides for a different notification period⁴³⁶.

There is also an obligation for the employer to inform the workers' representatives of changes in work organisation, and in particular on the reduction of working hours⁴³⁷. The employer may unilaterally modify the conditions on working time agreed with the worker or established by collective agreement in cases where there is no significant impact for the worker.

A2.7.8 Sweden

A right to request flexible working time for all workers is not legislated. However, this right is very often provided in collective agreements. For example, the national collective agreement for workers and employers in the paper industry sets out guidelines for local partners in respect of flexible working arrangements.

The Working Hours Act provides for the possibility for employers or social partners to authorise flexibility in the organisation of breaks. The term 'breaks' is defined as *interruptions in the daily working time during which workers are not obliged to remain at the workplace*. The employer is the one responsible for setting the duration and organisation of breaks in advance as precisely as the circumstances allow it. Breaks must be organised so that workers do not perform work for more than five consecutive hours. Furthermore, the number, duration and organisation of breaks must be satisfactory with regard to the working conditions. Similarly, the employer must organise work so that workers are able to take pauses from work as necessary, in addition to breaks. If the working conditions so require, special work pauses may instead be scheduled. If so, the employer must state the duration and organisation of the pauses in advance as precisely as the circumstances allow it. These breaks and pauses which are set by the employer do not seem to constitute flexible working arrangements as the employer is in charge of setting their organisation.

The Working Hours Act provides that the employer must give their workers at least two weeks' notice of changes concerning the organisation of regular working time and on-call time⁴³⁸. However, a shorter notice can be given by the employer to the worker if this is justified by the nature of the activity or unforeseeable events.

No provision in Swedish legislation provides for flexibility in taking uninterrupted minimum daily rest.

⁴³³ Article 41 of the Statute of Workers

⁴³⁴ Labour market reform (L 3/2012)

When the change has a collective nature (affects more of the 10% of the staff), the employer must open a period of consultation with workers' representatives (art. 41.2 SW). The overall terms and conditions set by collective agreement can only be modified by the process of "derogation" of the collective agreement, which requires agreement with the representatives of employees or, in case of disagreement, a favourable arbitration decision (art.82 SW)

⁴³⁵ It used to be 30 days

⁴³⁶ Article 41.4 of the Statute of workers

⁴³⁷ Article 64 of the Statute of workers

⁴³⁸ Section 12 of the Working Hours Act

A2.7.8 United Kingdom

From 30 June 2014, there is a right to request flexible working time for all workers who have been working for their employer for more than 26 weeks⁴³⁹. Prior to this date, this right was restricted to certain categories of workers such as those who had children under the age of 17 (or 18 if the child is disabled) and certain carers. The employer has a duty to consider all requests in a reasonable manner. However the employer will also have the flexibility to refuse requests on business grounds. There are a variety of flexible working time arrangements which are possible to request such as: job sharing, working from home, part time, compressed hours, flexitime, annualised hours, staggered hours and phased retirements.

The Flexible Working Regulations provide for the procedure to follow by the worker to make this request. The flexible working application must be in writing, state whether the worker has previously made any such application to the employer and, if so, when and be dated⁴⁴⁰.

In addition, guidance has been provided by ACAS to employers to make sure they handle the worker's request in a reasonable manner⁴⁴¹. Thus, if the employer rejects the request, it must be based on one of the following business reasons as set out in the legislation:

- the burden of additional costs;
- an inability to reorganise work amongst existing staff;
- an inability to recruit additional staff;
- a detrimental impact on quality;
- a detrimental impact on performance;
- detrimental effect on ability to meet customer demand;
- insufficient work for the periods the worker proposes to work and
- a planned structural change to your business.

The employer must answer to the worker's request for flexibility within three months from first receipt unless the employer agrees to extend this period with the worker. The worker also has a right to appeal the employer's decision and this three-month delay also applies to it.

⁴³⁹ See the Flexible Working Regulations for more information 2014

⁴⁴⁰ Flexible Working Regulations, Article 4

⁴⁴¹ <http://www.acas.org.uk/index.aspx?articleid=1616>

Annex 3 Methodological assessment of administrative burden studies

A3.1 Introduction: Relevant studies on administrative burdens identified at national level

National research carried out for this study established that national working time regulation, which may transpose the WTD, but may also cover national working time rules (which may be more stringent), has been subject to a number of (albeit few) national studies and analyses. Such studies have generally been undertaken to assess administrative costs (AC) and administrative burdens (AB) associated with information obligations (IO) linked to business regulations, employment protection, or working time regulation more broadly and are very rarely specific to the WTD⁴⁴². These studies are:

In **Sweden**, the Swedish Agency for Economic and Regional Growth has since 2006 calculated the administrative costs for employers with regard to over 4,000 information obligations across 17 different policy areas. Using a SCM approach, the administrative costs of the information obligations associated with working time regulation was estimated at €127.8 million (or 1,184 million SEK) in 2006. Since then, there have been no substantial changes to the legislation that have resulted in increased or reduced administrative costs. In 2012, the estimated administrative cost related to the working time legislation represented 1.3% of the total administrative cost to employers arising from regulatory information obligations.

In the **UK**, in 2008, the Department for Business, Enterprise and Regulatory Reform (since 2009 the Department for Business, Innovation and Skills) commissioned a study which estimated that the overall administrative cost a range of Information Obligations on businesses. With regards to the WTD, the estimated administrative burden was €55.2 million (£43.9 million), down from €237.4 million (£188.5 million) in 2005. The administrative burden for the WTD was broken down as follows:

- Maintaining records of workers' working time - €16.0 million (£12.7 million), representing a reduction of 76.9 per cent compared with 2005;
- Keeping records of workers covered by the maximum working week requirements and who opted out of the 48-hour per week limit - €7.5 million (£5.9 million), representing a reduction of 37.8 per cent;
- Obtaining workers written consent where you wished them to work more than 48 hours in seven days - €31.7 million (£25.2 million), representing a reduction of 79.7 per cent.
- The significant reduction in the administrative burden for maintaining records of working time can largely be a reduction in external goods (e.g. time keeping software).

A study has also been conducted in **Poland** on behalf of the Ministry of Economy. This study estimated that the annual administrative cost associated with the recording of working hours of workers is €122.8 (514 PLN) per employer. Compared with the other administrative burdens emerging from the Labour Code and the Ministry of Labour and Social Policy regulations for employers, the recording of working hours is ranked 53rd out of 390 regulatory requirements.

⁴⁴² The UK assessment is the only one focussing on IOs arising from the WTD. However, assessments of the administrative burden or working time regulation in other countries will also contain elements pertaining to the implementation of the WTD at national level.

In **Finland**, a 2010 study commissioned by the Ministry of Employment and the Economy estimated the total administrative cost for employers at €5.8 billion, with the administrative burden making up €906 million or 16% of the total administrative cost. The estimates were derived using the SCM approach and interviews with approaching 60 employers. The annual administrative costs for employers in terms of complying with information obligations related to national working time regulation was estimated at €11.5 million. The share of administrative burden from the administrative costs was estimated at 15% (or €1.7 million). The information obligation with the highest the administrative costs related to the systematic recording of completed working hours and associated remuneration for each worker, accounting for 82% of the administrative costs associated with working time regulation. The highest administrative burden related to the application for permission to derogate from regular working time/ hours, accounting for 75% of the administrative burden associated with working time regulation. In addition to the working time regulation, the study also estimated the administrative costs and burdens for employer in terms of complying with the information obligations related to annual leave. This was estimated at €43 million, with the share of administrative burden accounting for less than 1% of total administrative costs (€0.4 million).

Through a European Social Fund and Ministry of Internal Affairs-funded project, the Ministry of Economy in Lithuania commissioned a study that assessed the administrative burden across seven priority areas, including labour relations.

In Hungary, a study found that 47 per cent of the total administrative burden in the legislative areas covered by the study (608 billion HUF or 1.96 billion EUR) is related to employment. In monetary terms, the administrative burden of the employment legislation was estimated at €921.2 million (or 285.8 billion HUF).

Studies to estimate the administrative costs and burdens associated with the employment legislation have also been conducted in **Ireland**. For example, in 2009, the administrative cost of the 11 IOs relating to the employment legislation was estimated at €89.7 million – the administrative burden was estimated at €64.3 million). The majority of the administrative costs and burdens related to the organisation of working time linked to national legislation - €68.4 million and €61.5 million respectively.

A3.2 The Standard Cost Model (SCM) applied to empirical studies

A3.2.1 Focus of the studies

For the purpose of this assignment it was important to establish the extent to which the administrative costs calculated in the national studies relate to costs arising directly from the WTD or from national working time regulation which go beyond the requirements of the WTD.

A closer assessment of the above mentioned studies shows that these **assessments usually have a broader focus than the analysis of administrative burdens arising from the WTD and indeed solely national working time regulations.** The **Hungarian** study investigated five areas: burdens related to the administration of taxes and contributions, administration related to employment and the administrative burden linked to licenses and official controls, subsidies and reporting data. The **Swedish** Agency for Economic and Regional Government has calculated the administrative costs of information obligations in 17 different policy areas and information obligations related to working time regulation were part of this general assessment. The **Lithuanian** study⁴⁴³ assesses the administrative burdens and costs

⁴⁴³ Deloitte (2011) Nacionalinės administracinės naštos verslui prioritetinėse srityse vertinimo

resulting from a number of articles in the 2002 Labour Code⁴⁴⁴, amongst a number of legal acts. Within this assessment the following aspects of working time regulations were considered: (Article 147.3) the requirement for the employer to make the shift schedules publicly available in the companies no later than 2 weeks prior to the commencement of the shifts and (Article 147.6) the requirement to record the working time of workers in the official forms distributed by the government. The **Finnish** study included IOs arising from employment contracts and collective bargaining; working time and annual leave regulations; health and safety at work provisions; protection of privacy at work and gender equality; social insurance, social protection and pensions; worker representation; and, legislation pertaining to specific sectors / occupations. In **Ireland** the study attempted to measure the administrative burdens imposed on businesses in the areas of employment legislation, health and safety legislation and company law. The **UK** study evaluated the administrative burdens related to the employment law obligations across a total of 13 IOs. The other regulatory areas assessed in this study included written statements of employment particulars; redundancy payment calculations; National Minimum Wage payment record keeping; parental leave and pay; and flexible work regulations.

A3.2.2 SCM applied in ex-ante and ex-post evaluation

The SCM model can be applied in ex ante and / or ex post evaluation of the impact on businesses of regulations. Different types of SCM measurements exist to meet these diverse objectives. In ex-ante evaluation, the SCM attempts to anticipate the impact of possible changes to legislation, before these changes are implemented. The SCM approach, when carried out within the context of an ex-post evaluation, attempts to assess the factual impact of legislation implemented on the ground. Ex-post assessments are also used to regularly update the baseline measurements. The BRE (2005) manual specifies that in ex-ante evaluation it will be impossible to determine with precision the realised impact once changes to the regulation have occurred⁴⁴⁵.

All reports identified in this study related to the assessment of the status quo burden associated with existing legislation. It seems that the assessment of administrative burdens (in present national practice) is more likely to involve the evaluation of current regulations rather than the impact of possible changes in regulations. Thus, **in practice this method appears to be applied in assessing the status quo of national regulations rather than being employed in ex ante evaluations in the context of revisions of existing regulations** (also some Member States emphasised that practice was beginning to change in this regard).

In the case of the **Swedish** assessment, the administrative costs have been tracked from 2006 and 2012 thus providing baseline estimation as well as an assessment of the impact of changes in the legislation. However, these were past changes i.e. historic changes to the legislation, rather than possible future changes. Notably, the Swedish Agency for Economic and Regional Growth, together with the Swedish Better Regulation Council, is shifting its focus from measuring administrative costs ex-post. Instead, it has developed a method that measures the potential administrative costs in advance of legislative changes being introduced. As such, the onus has been placed on the legislators to establish and assess the administrative cost in ex-ante impact assessments. However, this is still a relatively new area.

The **Irish** study reports the 'status quo' regarding the ongoing cost of compliance with the Organisation of Working Time Act. The report submitted to the Department of

⁴⁴⁴No. IX-926 (2002-06-04 Lietuvos Respublikos darbo kodeksas Nr. IX-926 (Socialinės apsaugos ir darbo ministerija)

⁴⁴⁵BRE (2005) Measuring Administrative Costs: UK Standard Cost Model Manual http://www.funzionepubblica.gov.it/media/263902/standard_cost_model_uk.pdf

Enterprise, Trade and Employment is part of a government-wide effort to measure and reduce administrative burdens on business, deriving from domestic regulation. It should be noted that in Ireland, there have been no recent changes in the Organisation of Working Time Act.

The **UK** study updated the Administrative Burdens Measurement Exercise (ABME) conducted by PwC in 2005 and uses the UK Standard Cost Model (SCM) to establish changes that may have occurred in administrative burdens between 2005 and 2008. The study was designed to build on and augment the 2005 research and as such, the measurement method utilised a series of data from the PwC 2005 Administrative Burdens Measurement Exercise (ABME) dataset⁴⁴⁶.

A3.3 Difficulties in disentangling the effect of different regulations

From the published content of the reports **it was not always straightforward to precisely identify the aspects assessed in the studies. Additionally, in the studies there was often acknowledgement of the fact that it was not possible to disentangle the information obligation and administrative burdens stemming from the WTD and/or from national working time regulation.** Additionally, because of the timeline of the studies discussed (long after the implementation of the WTD), it becomes more challenging to determine which IO may already have been in place at national level prior to the transposition of the WTD, or indeed which result from more stringent national legislation.

The **Swedish** study clearly shows that it is not always possible to distinguish between the information obligations (IOs) and administrative activities (AAs) relating specifically to the WTD. For example, IOs or AAs may relate to the WTD as well as other provisions in the national legislation. The information obligation to control working hours applies to several sections of the Working Hours Act (e.g. section 7, 10, 10a, 10b, 11, 13a). Not all of these relate specifically to the WTD. Notwithstanding this, it is possible establish those IOs and AAs that are associated with the WTD to a greater or lesser extent. In the Swedish study a total 11 IOs were covered, although only three of these were, according to the national database, associated with an administrative cost: controlling working hours, informing about changes in work patterns and applying to the Work Environment Authority for an exemption from the Working Hours Act⁴⁴⁷. The national database also specifies the AA connected with the relevant IO:

- Controlling working hours, AA: calculation
- Informing about changes in the work pattern, AA: copying, filing
- Applying to the Work Environment Authority for exemption, AA: reporting; and inputting.

It is particularly controlling working hours and applying for exemptions that could be connected to the WTD.

The **Hungarian** study did not identify any IO arising from the WTD. Three of the identified IOs were linked to national working time regulation. These three IOs were: a) administrative requirements related to registering and keeping records of workers, calculating and paying contributions for workers; b) obligation to keep records of data about 'occasional workers'; c) recording data (including the start and end time of the

⁴⁴⁶ ONS (2006) Administrative Burdens Measurement Exercise, Final report

⁴⁴⁷ Derogations from the Working Hours Act should in the first instance be resolved through collective bargaining, but if that is not possible then employers can apply to the Work Environment Authority for exemption

working period signed by the employer) in the 'little notebook' for 'occasional workers' (the notebook was an official document to keep records of 'occasional workers' working spells).

The **Finnish** study did not attempt to separate the requirement related to the national legislation and those related to EU legislation. The administrative burdens of the following areas were investigated: systematic recording of completed working hours and associated remuneration for each worker; application for a permission to deviate from regular working time/hours; displaying documents related to Working Hours Act; dissemination of information to workers about rota (start and finish times as well as breaks) at least one week before the start of the period of the rota concerned; drafting of a written notice of emergency work. Within these areas a number of AAs were assessed including familiarisation with IO; familiarisation of workers with IO; extraction of necessary information from existing information/data sources; editing of existing information to the requirements of the IO; collection/production of new information/data; creation of new information material; filling in forms and tables; meetings, both in-house and external (for example, with accountants, lawyers and others); checks and inspections (including support provided for inspectors, if applicable); photocopying (i.e. of reports, leaflets); forwarding/sending appropriate information for authorities concerned; archiving; and other AAs.

The aim of the **Irish** study was to assess the burden of national legislation. No attempt was made to separate those stemming from European and more stringent national regulation. With reference to employment law, the study measures the administrative cost to business of complying with 11 IOs which refer to the information businesses have to provide to Government but also legal obligations on business to supply information to others such as shareholders and customers. The IOs that more closely related to the WTD concern the Organisation of Working Time Act, which transposed the WTD into national law. The IOs covered by the act largely pertain the keeping of records (e.g. sections 25(1)), but also their organisation and maintenance (e.g. sections 11-16, 19-23 and Regulation 3(a)). Organisation of Working Time Records Regulations, 2001 requires employers to keep records of start and finishing times, hours worked each day and each week and leave granted to workers. The employer must keep these records for three years. The legislation also requires employers who do not have a way of recording worker working hours electronically (i.e. using a clock-in system) to complete a special form OWT1 on a daily and weekly basis. The study identified the following administrative activities: familiarising with the information obligation; gathering / preparing data; holding (internal or external) meetings; calculate / correct / report; prepare / submit; and, settle / inspect.

Only the **UK** assessed the administrative burdens specifically posed by the WTD by explicitly stating that for the purpose of the research the IOs associated to the WTD were: maintaining records of workers' working time, kept records of workers covered by the max working week requirements and who opted out of the 48-hour per week limit; obtained workers written consent where you wished them to work more than 48 hours in seven days.

A3.4 Identification of affected populations

One of the challenges of the SCM approach is to correctly dimension the populations affected by a piece of regulation. For example, a requirement which means that all on-call time needs to be counted as working time will not affect all workers and employers, but only those making significant use of on-call working. A system therefore needs to be in place to assess how many workplaces make significant use of on-call work patterns. Different assumptions in relation to affected populations can lead to administrative costs being over or under-estimated.

All reports show that challenges emerged to clearly assess the affected population as well as identifying national data sources and strong assumptions had to be made. For example the **Hungarian** report did not provide a methodological explanation of the affected population and data had been reported in an unpublished Appendix.

The studies demonstrate that two key factors are linked to successful execution of robust studies. These are the availability of reliable data sources to calculate the affected population, as well as the presence of experts in several fields to support the methodological construction of the affected population and allow access to data sources.

The **Swedish** report clearly presented the methodology and stated the issues related to the exact definition of each the affected population for each IO:

- Controlling working hours. The population was calculated using the total number of workers in private sector organisations (based on official national statistics). The population figure has been corrected to account for those that were on leave for various reasons (maternity/ paternity leave, sick leave, etc.). However, it was not possible to adjust the total population to account for workers that are exempt from the Working Hours Act (e.g. autonomous workers). It is estimated that workers work 230 days a year and that a manager spends 30 seconds per worker checking their time inputs.
- Applying to the Work Environment Authority for exemption. Derogations from the Working Hours Act should in the first instance be resolved through collective bargaining, but if that is not possible then employers can apply to the Work Environment Authority for exemption. According to the Work Environment Authority, there were around 45 applications per annum from private employers.

The **Finnish** study group used data from the National Statistics Office and valuations of an ad hoc steering group of experts. Specifically the following affected populations were estimated for each IO:

- Systematic recording of completed working hours and associated remuneration for each worker. Number of affected workers: defined as all workers in the country based on statistically reliable data from the National Statistics Office.
- Application for a permission to deviate from regular working time/hours. Number of businesses affected by the obligation defined as all business with workers, temporary businesses excluded, based on statistically reliable data from the National Statistics Office and guidance from the study steering committee.
- Displaying documents related to Working Hours Act. Number of businesses affected by the obligation, defined as all business with workers, temporary businesses excluded. Based on statistically reliable data from the National Statistics office and guidance from the study steering committee.
- Dissemination of information to workers about rotas (start and finish times as well as breaks) at least one week before the start of the period of the rota concerned). The population was defined as the number of businesses which use rotas, based on the number of businesses in the manufacturing, restaurant and tourism sectors. However, these data were not regarded as statistically reliable.
- Drafting of a written notice of emergency work. The target population was the estimated number of such incidents in a year in the country, based on an estimation provided by one of the regional health and safety authorities assessed on the basis of estimates of experts in the field.

In the **Irish** study the selection process identified between three and five 'typical businesses' affected by each of the IOs. In many instances, more than one IO was covered with these businesses. The employment IOs (which include the Organisation of Working Time Act) tend to affect all businesses and therefore the entire sample of companies used were asked for feedback on several of the IOs that were relevant to their business. A range of different sources were used to provide population estimates. For some cases, published sources were used (e.g. numbers of companies from the Companies Registration Office (CRO)). In other instances, however, estimates of the relevant population were more difficult to establish and required a degree of 'guesstimation' based on an examination of limited published data; discussions with industry experts or representatives and feedback from companies participating in the interviews. It must also be noted that in respect to a number of IOs where the affected businesses were very specific, the study worked with the Department of Enterprise Trade and Employment and the appropriate agency to identify a sample of companies to be contacted.

The **UK** study was based on a representative sample of businesses. The sample was constructed to ensure statistical reliability between +/- 3% and provide robust estimates by size band. Population figures for the sampling frame were based on an Inter-Departmental Business Register (IDBR) maintained by the Office for National Statistics (ONS) which also contains data on PAYE and VAT data. The sampling approach was designed to obtain representative answers across businesses and Regions.

Data on affected population of firms need to be collected on an ad-hoc basis, the costs of performing a robust baseline assessment are remarkably high and increase with the level of desired. Although, when there is acceptance of the reduced reliability of results the SCM can also be implemented with relatively limited resources⁴⁴⁸.

A3.5 Determination of Business As Usual (BAU) costs

Another challenge for the SCM approach is to be clear about BAU costs which would have arisen to the business anyway, even in the absence of the (new) regulation. With regard to working time regulation, many of the IOs rely on the accurate recording of working hours, which in some countries is already a requirement. Such existing requirements particularly have to be borne in mind when assessing the cost of new regulations.

The studies found show that the BAU factor is not determined through a precise quantitative measurement, rather it is based on arbitrary assessment made on the basis of subjective assumptions. In Hungary the researchers first made estimations on the total amount of administrative costs related to the selected pieces of legislation and asked interviewees which percentage of the total costs was likely to reflect the costs. Subsequently, the average of the reported proportion was adjusted to estimate the BAU cost for each IOs.

The **Swedish** database contains only information on administrative costs without distinguishing between BAU and administrative burdens; i.e. companies were asked to provide only a general estimation of the administrative costs. Therefore there is no information on BAU.

In **Finland** employers were asked to estimate the total AC for each AA on their own estimates of price and time, they were then asked to estimate the share of administrative burdens on the administrative cost selecting one of the following

⁴⁴⁸ Assessing the costs and benefits of regulation, a CEPS-Economisti Assocaity study for the European Commission (2013) http://ec.europa.eu/smart-regulation/impact/commission_guidelines/docs/131210_cba_study_sg_final.pdf

percentages: 0, 25%, 50%, 75% and 100%. The share of administrative burden was deducted from total administrative costs to establish BAU.

In the **Irish** study, companies were asked what proportion of the administrative costs they would continue to incur if there was no legal obligation to do so. These findings have helped inform the BAU estimate for each of the IOs. The BAU responses were divided into broad percentage categories for the purpose of the analysis. Companies that stated they would continue all of the activities associated with the IO were placed in a 100% category. Similarly, those that stated they would, to a large extent, continue activities were given a BAU estimate of 90%. Where companies reported that they would continue to undertake the administrative activities to some extent, the BAU is estimated at 40%, and for companies that typically reported that they would not continue to undertake the administrative activities, the BAU is 0%.

A3.6 Determination of costs associated with AAs

Interviews with employers have demonstrated that employers find it very difficult to quantify the costs associated with different IOs and linked AAs. This applies both to existing obligations and potential new obligations. Such costs could relate to the purchase or updating of software or the use of staff time to record or pass on certain pieces of information etc. It is therefore of particular interest to us to know how these costs were determined as they have a significant impact on cost calculations.

The main source of information to estimate costs related to each IO and AA are interviews with stakeholders and companies.

The **Hungarian** report stated that costs associated with AA were assessed through face-to-face and telephone interviews and only repeat costs were assessed.

The **Swedish** study clarified that information about the costs (both one-off and repeat costs) linked to the AAs were derived using a combination of interviews with enterprises and stakeholders (legal experts, legislators, etc.), available benchmark costs and own assumptions. In particular the IOs and AAs relating to the Working Hours Act did not include one-off and/ or repeat costs due to the fact that by 2006 all companies had already a system in place for working hours account. In relation to informing about changes in the work pattern: due to the difficulties in arriving at an average time from the interviews, it was assumed that it takes six minutes to inform workers about changes in the work pattern (i.e. the equivalent of putting up a notice). Notably, the time needed to change the work schedules has not been included in the calculation of administrative costs. On average, it was estimated that employers inform workers of a change in work pattern 1.5 times a year. Similarly, it was assumed that this occurs for all private employers. The wage level used for the calculations represented the average wage for a manager in a small enterprise/ business unit.

In **Finland** employers were asked to provide an estimate of the time (minutes) required to undertake each AA and the salary level of the worker responsible for each activity. In addition, employers were asked to provide information on one off costs, fixed costs for machinery / device and consulting fees. 'Standard' costs were established on the basis of information provided by employers. No mean or average costs were calculated; instead three 'normal' employers in terms of their efficiency in undertaking the activity were identified on the basis of information from employers and experts assessments. The salaries were determined on the basis of salary levels from the National Statistics office and estimates of salary levels from employers. An additional multiplier (1.596) was then used to take into consideration overheads (25% is used as a standard figure in SCM measurements which includes overheads such as rent/mortgage, cleaning, management of work, etc.) and additional Finnish multiplier (34.6%) was then applied to take into account costs such as holiday pay, social security contributions. No information was provided on price developments. However,

in the final version of the study no overall breakdown of costs per administrative activity has been provided.

The **Irish** study used the company interviews as the starting point for measurement for all the IOs, by supplementing the information where necessary with industry experts. Further interviews were also carried out with accountants and company registration professionals to confirm the findings. The data collected during the interviews was used to calculate the standard amount of time and money incurred by businesses in complying with the IOs. The standardisation provides a representative figure of the costs incurred by a normally effective business, when complying with the specific information obligation. This study did not assess one-off costs since these costs are considered only in ex-ante evaluations.

In the **UK** study a total of 1,105 telephone interviews with employers were carried out, 24 online completed surveys, and 79 partly-completed, and 32 case studies of qualitative interviews with participants to the telephone interviews were used. In this study only responses with a sufficient amount of information for each specific IO were considered as valid. The analysis was conducted at the company size level to account for the disproportionate impact of the micro-level companies who completed the IOs. The total internal costs were assessed by multiplying the time estimated by employers and wage rate for each activity; also employers were asked about external costs for goods and services.

A3.7 Key challenges in the application of the SCM

The SCM does not attempt to make a statistically reliable assessment of administrative costs and burdens; it rather aims at providing indicative data on the size of burdens imposed by the legislation. The advantage of this method is that its use is widespread and allows for a comparative assessment across legislative areas⁴⁴⁹.

The main weaknesses related to this method include: low accuracy of results, low complementarity with other models, extreme methodological simplification, limited samples of business surveyed, possible sampling bias, biased/strategic responses from interviewees, and ambiguous treatment of time. The SCM is not meant to be considered a very accurate model and in some ex-ante evaluations major issues with the accuracy of estimates are mainly related to: the concept of 'normally efficient businesses'; classification of origin i.e. attribution of IO to EU or national legislation; various methodological decisions; the value of time; the assessment of the BAU factor; the reliance on data provided by the businesses themselves; assumptions on the compliance rate; impossibility of comparing results across countries and within the same country at different points in time⁴⁵⁰.

The **Hungarian** study generally followed the steps of the SCM methodology. However, the report did not contain a clear methodological section highlighting strengths, concerns and interpretation of results. Some issues in undertaking the interviews with companies and reliability of data were emphasised, this included the lack of information provided by companies i.e. enterprises provided information about only a few IOs leading to quite unreliable information about the sectorial distribution of the administrative burden. Because of the lack of financial resources to provide a thorough assessment, the administrative burden of only some IOs falling under the areas of the study have been assessed. Only the most relevant top 150 IOs linked to the majority

⁴⁴⁹ BRE (2005) Measuring Administrative Costs: UK Standard Cost Model Manual http://www.funzionepubblica.gov.it/media/263902/standard_cost_model_uk.pdf

⁴⁵⁰ Assessing the costs and benefits of regulation, a CEPS-Economisti Assocaity study for the European Commission (2013) http://ec.europa.eu/smart-regulation/impact/commission_guidelines/docs/131210_cba_study_sg_final.pdf

of administrative burdens were assessed on the basis of the Pareto principle i.e. it was assumed that 20% of the IOs entail roughly 80% of administrative burden. In order to select the most burdensome IOs an indicator was created (based on initial short interviews with enterprises) which included: the number of affected enterprises, the frequency of the IOs, the perceived severity of the IO and the proportion of enterprises that consider the IO very demanding. Due to the selection process some IOs were left out; therefore, there is a possibility that some important IOs were left out.

The main challenges identified by the **Swedish** report in the application of the SCM refer to the interviews with enterprises which often generated wide variations in terms of the time spent on various IOs/AAs, this made it difficult to estimate the average. It is worth reminding that normally only a handful of employers are interviewed for each legislation/ IO; therefore reducing the critical mass of sample on which to base the average calculations.

In **Finland** the report emphasised that the aim of the SCM is not to provide statistically relevant 'measurements' but rather indications of costs. In some cases large discrepancies were found in the estimates provided by employers and further interviews were conducted to identify at least three similar estimates per type of employer / IO. In terms of issues related to interviews with companies 400 companies were contacted but the study team managed to interview only 59.

The **Irish** study highlighted that the SCM is a simplified method for estimating the administrative costs imposed on businesses by regulations. The study emphasises that the approach of these method is pragmatic and aims at providing estimates that are consistent across areas rather than statistically reliable data.

The **UK** study acknowledged the difficulties in replicating the previous PwC exercise, for example it was no possible to clearly understand the number of interviews completed in the PwC study, which was particularly important when comparing the results by business size. Additionally, despite the adherence to the UK SCM divergent results between were found between the 2005 and 2008 studies. This was attributed to: different data gathering methods, different sample sizes and spread; changes in regulation; and changes in business behaviour and change in economic climate. In relation to the difficulties of achieving a representative sample of businesses, in this study an initial sample of approximately 23,500 companies was needed to complete more than 1,200 interviews.

Annex 4 Rationale beyond assumptions for the calculation of the BAU

This annex elaborates the assumptions underpinning the calculation of the BAU and the rationale behind these assumptions for each of the possible legislative changes assessed in this study.

Possible changes in the rules of the calculation of on-call and stand-by time

The administrative obligations and actions related to these possible changes are:

Information obligation: Keeping the record of on-call / stand-by time

Administrative action: AA1.1 maintaining the records of on-call / stand-by time for all workers with a certain share counted towards weekly working time limit

The possible changes related to the rules of on-call and stand-by time, compensatory and weekly rest period, have a common underlying administrative action which is 'keeping records of working time'. A complex picture emerges from the in-depth country research on the extent to which: a) employers keep records on working time; b) employers register on-call and stand-by time (both at work premises and outside of work premises); c) keep track of daily and weekly rest; d) the methods of recording and the consistency of practices. All these elements are interlinked and there are several factors impacting on the way in which employers keep records of working time, as well as the strictness of time recording and accuracy of records. These factors include:

National legislation on recording of working time; whether and how national regulations require employers to record the working time and maintain these records (and for how long);

National legislation on on-call and stand-by time, e.g. whether a definition of on-call and stand-by working exists at national level and a clear distinction can be made on these two types of work. A clear-cut distinction leads to more precise rules and clearer practices in the treatment of on-call and stand-by time, both in terms of counting as working time and for the purposes of compensation;

National legislation and practices on compensation of on-call and stand-by time impacts on whether and how employers keep records of this type of work. Although financial compensation is not part of this study, from in-depth country research it emerges that this aspect cannot be overlooked when analysing the practices of recording of on-call and stand-by time. Employers are much more likely to keep more precise records of on-call and stand-by when this time is financially compensated;

Whether on-call and stand-by time is taken into account in the calculation of the rest periods;

Workplace practices impact on the stringency and accuracy of time recording, in companies with badging systems and time tracking software records on working time, on-call and stand-by at work, compensatory and rest periods are generally documented more accurately than in companies with paper-based systems. These practices are often correlated with the size of the firm, and because of scale economies involved large companies are more likely to implement electronic systems than small firms. From the fieldwork it emerged that a systematic approach and culture towards record keeping in the workplace is also likely to impact the accuracy with which employers' record the time spent by workers working on-call outside the workplace. It seems a reasonable assumption that companies where badges and software are used to a certain extent are also more likely to implement a more systematic record keeping approach outside the work premises, therefore stand-by time is recorded more precisely than in other companies.

All these factors influence the practices of keeping records of working time in the workplace and consequently both total administrative costs of considered possible changes and the split into AB and the BAU costs. In countries where the national legislation requires companies to keep accurate records of working time both at work premises and outside the BAU related to on-call and stand-by time can be assumed to be 100%; in countries where the national rules clearly specify which part of on-call time and stand-by is counted as working time and / or rest time the BAU will be higher than in the countries where this is not specified; in companies where on-call time and stand-by time counts as working time and /or is compensated the BAU will be higher than in the companies where this not the case.

1A. change in rules in the calculation of on-call time

On-call time is the time spent on-call at work premises; therefore the relevant aspect of the AA1.1 is maintaining the records of on-call time for all workers (i.e.at work premises).

According to CJEU case law on-call time should be counted entirely as working time when workers are required to be physically present at the workplace/or at a place designated by their employer. Therefore, under the assumption of full compliance with EU case law it is expected that all employers currently keep records of on-call hours, and the BAU value is assumed as 100% for all countries, for both large companies and SMEs.

From interviews with stakeholders and companies it also emerged that all companies keep records of working time and on-call time at employers' premises for payment purposes, since the on-call time at work is considered working time in all countries. This is true for large companies and SMEs.

1B. change in rules in the calculation of stand-by time

Stand-by time is the time spent on-call at home or other place selected by a worker; therefore the relevant aspect of the AA1.1 is maintaining the records of stand-by time for all workers, i.e. outside work premises. Stand-by time only has to be counted as working time for the hours actually worked.

In countries where legislation imposes the recording of all stand-by hours the BAU is assumed at 100%. In countries where stand-by time is compensated in such a way that it does not necessarily require detailed recording of stand-by time (e.g. a lump sum or with time off), the BAU could still be assumed relatively high, proportional to the accuracy of the method of compensation. For instance companies where stand-by is paid by the hour will have BAU at 100%, whereas it will be lower in companies which pay a lump sum. In countries where there is no legislation on working time spent outside the employer's premises or stand-by not worked is not compensated, companies are less likely to keep records of stand-by time. The discussion below provides an overview of the situation in countries that were analysed in-depth.

In the **Czech Republic** there is no definition of on-call time and only stand-by time is defined in the national legislation as a period during which a worker is available to perform work and in case of urgent need work must be performed in addition to the shift schedule. The stand-by time can only take place at a place agreed with the worker but other than the employer's premises. The work performed during stand-by time is counted as working time (by default this is overtime, since this is on top of the normal shift schedules) and compensated at the normal salary rate; while the national legislation states that the inactive stand-by time has to be compensated at least at 10% of the rate corresponding to average earnings and collective agreements can set a higher threshold. The national legislation requires employers to precisely record all working hours as well as all the hours on stand-by. Therefore the BAU value is 100%.

In **France**, national legislation requires every company to record working time (rest, stand-by time etc.) and employers are expected to keep these records at work premises for one year in case inspections by the Labour Inspectorate take place. Stand-by time is clearly defined in national legislation and the labour code states that only the duration of the intervention is to be counted as effective working time. Additionally, stand-by time may be established and regulated by collective agreements and company level agreements which define how and whether the stand-by time is counted as working time and methods of compensation. Therefore this impacts on whether and how companies keep record of the stand-by time. The effective working time on stand-by starts when a worker is called for an intervention and travel time is counted as working time. From company interviews it emerged that large companies have more structured procedures to keep working time records and usually there is an electronic badge system, while SMEs and mostly micro companies are less structured and usually keep records through written time tables. Since the legislation requires companies to record all working time including stand-by time, the BAU value is assumed at 100%.

In **Germany** two concepts of on-call time exist: a) on-call during which the worker remains at the workplace and decides when to return/to continue work; b) on-call during which the worker has to be at the workplace or another place determined by the employer. Stand-by time is a type of work where the worker can chose the place to carry out this type of shift; in general at home or at a distance where he/she can intervene at work within a reasonable time should it be necessary. Only the hours effectively worked on stand-by are counted as working time, while the time on-call is entirely counted as effective working time. The rules on calculating the working time for on-call time follow the EU CJEU and German case law. From field work it emerged that the majority of large companies have introduced working time accounting systems, while a small proportion of SMEs has done so. Another widespread working time account system in Germany is the trust-based working time. In this system workers keep manual records of working time and manage working time more flexibly. About half of companies in the country have this working time model in place, and it is mainly used for high skilled workers and by SMEs. Overall, the practice of documenting and controlling working time differs between companies. From this picture it emerges that there is already relatively precise recording system of stand-by time in the majority of companies, and hence BAU can be assumed to be 80%.

In **Hungary**, national legislation requires employers to keep records of working time both at the employers' premises and outside the workplace, including stand-by time. Interviews with employers did not find particularly significant differences between SMEs and large companies in relation to practices of keeping records of working time. Therefore, the BAU is assumed at 100%.

In **Italy**, national regulations, collective agreements and business practice consider on-call time at the work premises as effective working time, whereas stand-by time not worked is not counted as working time. However, stand-by time is usually remunerated with an 'availability allowance'; therefore there is some calculation of this time but not in a precise manner. The type of record keeping varies greatly across the country and depends on company and workplace practices and methods (use of badge systems and specific software etc.). From this picture it emerges that there is a certain degree of recording of stand-by time, albeit relatively low, therefore the BAU value is assumed at 30%.

In the **Netherlands** there is a general information obligation for employers to provide information on the company's working time and rest patterns to the work councils. There are two concepts of on-call/stand-by in the country. National legislation defines on-call working as a 'continuous period of 24 hours during which the worker agrees to remain at the workplace available to quickly perform work'. Another concept of on-call is closer to the concept of stand-by (i.e. remaining on-call outside work premises) and

is the definition of on-call as an interval between two consecutive shifts or during a break, in which the worker is required to react immediately in cases of unforeseen circumstances. In this case the worker stays outside the work premises. According to national legislation all on-call time at work is counted as working time, while for stand-by time at home only the hours worked have to be counted as working time. However all on-call/stand-by, active/inactive time is remunerated albeit at different rates and records are kept for all work inside and outside the premises. If companies have computerised systems records are kept on the system for a long period of time, sometimes even years, although this varies significantly across companies, some keep the records for years, others for months or days. Since companies keep records of active and inactive stand-by time the BAU is assumed at 100%.

In **Poland** there is no definition in national legislation of on-call and stand-by time; on-call/stand-by time is simply defined as the time that the 'employer may require the worker to remain ready to perform work in the workplace or another place designated by the employer outside normal working hours'. Overall, working time rules are regulated in national legislation, however collective agreements, which are usually at workplace level, can derogate from national legislation and it is therefore not straightforward to provide a clear picture of practices for on-call and stand-by work. At company level a distinction is usually made between active and inactive working time for the purposes of remuneration. According to national legislation the inactive time spent on-call in the workplace is not counted as working time, however, this time is counted for calculations of the daily and weekly minimum rest periods. Hence, total working time and on-call time cannot exceed 13 hours during a single day. Also, on-call time is compensated either with compensatory rest or in cases where compensatory rest cannot be provided it is remunerated at the rate agreed in the employment contract or the rate corresponding to 60% of the standard rate. In contrast stand-by time (at home) does not need to be counted or remunerated. From fieldwork interviews it emerges that on-call and stand-by working is not widespread in Poland and this time is usually planned one week in advance, therefore it seems that there is some level of recording also for stand-by time spent at home, however this may not be thoroughly recorded since this is not counted as working time and is not remunerated. Therefore the BAU can be assumed at around 30%.

In **Spain**, on-call time is not generally defined and regulated in national legislation. For stand-by time only the hours actually worked are effectively considered as working time. This leads to a situation where it is difficult to clearly distinguish between regular working time and on-call or stand-by time. Overall, a clear distinction between on-call and stand-by time exists only for some sectors (e.g. the health sector, transport, maintenance, surveillance auxiliary services, accommodation, restaurant etc...) which can be regulated by national legislation or collective agreement. In general, on-call time is fully considered as effective working time and some caps on the time that workers can spend on-call exists. In sectors where there is a need for continuous services such as utilities, stand-by time is used to cover maintenance work in case of emergencies. In these firms inactive stand-by time is not considered as working time. Practices to keep records of the time spent on stand-by outside the work place include a rough approximation of all stand-by time and often the active time is not counted towards the total yearly working hours. This is more common among SMEs. For example, companies record the number of weekends that workers have to be contactable and usually there is a rotation between workers, however in employment contracts there is often a clause (sometimes not explicitly included in the contract but a tacit agreement between employers and workers) to cap the amount of this stand-by time. In relation to the compensation of the active and inactive stand-by time, it is not straightforward to identify clear patterns. In some instances when maintenance workers are required to stay on stand-by at home on a rotating roster, it seems that not even the hours worked are financially compensated, as this is considered simply part of the contracts. From the country analysis it seems that there is a very rough

estimation of stand-by time with very limited administrative work from company side to record this time, therefore the BAU value can be assumed at around 30%.

In **Sweden** national legislation makes a clear distinction between on-call and stand-by time. On-call is the time spent at the workplace at the employers' disposal, while stand-by is the time spent outside the workplace at employers' disposal. However, the scope and the calculation of on-call and stand-by time may change according to collective agreements. National legislation sets a cap on on-call time of 48 hours in every four weeks or 50 hours per calendar month. Swedish legislation does not specifically state that on-call time at the workplace is considered as working time, however it is bound by the Working Time Directive and EU case law. As such, on-call time is included in the calculation of total working hours and the hours worked during the on-call time are counted as regular working time (or overtime if the regular working time limit has been exceeded). Financial compensation is often provided for stand-by work either defined in collective agreement or by the employer. From interviews with companies it emerged that stand-by time is recorded on a weekly basis. From this national context it can be assumed that there are already well established procedures to record stand-by time in Sweden, therefore the BAU value is assumed at 100%.

In the **UK** there is no definition of on-call time or whether this is to be considered as working time. However, UK courts have applied the CJEU interpretation recognising both active and inactive on-call time spent at the workplace as effective working time. Where an employer states that a worker has to stay within a certain distance from work premises, the time that the worker is required to be on-call has to be counted as working time. Companies keep records of total hours spent on-call and total hours of active work while on-call. From this national context it is clear that there are well established procedures of recording on-call working time, however for stand-by time the stringency of time recording is less clear, therefore the BAU can be assumed at around 50%.

Given lack of detailed information on the situation in other EU countries BAU is assumed as the average value of BAU factors for the 10 countries covered by in-depth analysis, i.e. at 72%.

1C. cap on stand-by time

The BAU value for this possible change is identical as assumed under possible change 1B (change in rules in the calculation of stand-by time), since in both cases the underlying question concerns the extent to which employers currently keep records of stand-by time.

Possible changes in the rules on compensatory rest following a missed period of minimum daily rest and weekly rest

The administrative obligations and actions related to these possible changes are:

Information obligation: keeping a record on the timescale within which compensatory rest is taken

Administrative action: AA2.1 Maintaining records on the timescale within which daily/weekly rest is taken

2. Lengthening of the period when compensatory rest can be taken following a period of missed minimum daily rest

Assuming full compliance with CJEU case law, in all countries daily compensatory rest is taken immediately after a period of missed minimum daily rest and weekly rest is granted within a two week reference period (unless derogations are used). The administrative costs which may arise relate to the information obligation of recording the time when compensatory rest is taken.

At present there is no need to record information on the timing of compensatory rest following missed minimum daily rest (since it has to be granted immediately) and field work has confirmed that recording this information does not appear to be a common business practice. Therefore, the BAU value is assumed at 0% in those countries where there is no evidence of keeping records of rest time (i.e. Czech Republic, Germany, Hungary, Italy, Poland, Spain and the UK) and somewhat higher in those countries where there is evidence that companies keep some records of when compensatory rest is taken (i.e. France, Netherlands and Sweden); in these countries the BAU can be assumed at around 30%.

Given lack of detailed information on the situation in other EU countries BAU is assumed as the average value of BAU factors for the 10 countries covered by in-depth analysis, i.e. at 14%.

3. Possibility to increase the reference period for taking of weekly rest

The possible change envisaged extends this period from the current two weeks to three or four weeks. Given that the minimum weekly rest period is already at present to be granted not necessarily every week, but over the two week reference period, it can be assumed that employers who occasionally have workers missing minimum weekly rest in some seven-day periods must have some working / rest time recording systems to ensure they comply with this requirement. It can be argued that these systems would be equally well suited for a slightly extended reference periods. Hence BAU factor is assumed at 100%.

Possible extension of reference period for calculating the maximum weekly working time

The administrative obligations and actions related to this possible change are:

Information obligation: keeping a detailed record of hours worked per week over the reference period

Administrative action: AA 4.1 maintaining a record of hours worked per week over the reference period

The BAU for this possible change depends on current practices on keeping records of weekly hours worked and in particular the length these records are maintained by employers.

From in-depth research it seems that longer reference periods are associated with higher administrative costs due to the fact that companies need to plan working time, rosters, holiday periods, as well as maintaining working time records for longer periods. Therefore it can be assumed that the level of BAU is proportional to the length of the reference periods typically used at national level. In countries where the reference period is already 12 months (e.g. Spain) or countries where there is a requirement to maintain the records for 12 months (e.g. France) the BAU would be close to 100%. On the other hand in countries with very short reference period (e.g. the Czech Republic) BAU would be low, possibly close to 0%. However, since the reference period is only a maximum limit, it could be argued that the possible change would only lead to extending the reference periods in such companies where this is beneficial from a business perspective, i.e. where there is much fluctuation in labour demand over time leading to extended periods of intense workloads with workers exceeding the 48 hours weekly limit.

In relation to the reference period since this is an area where collective agreements can derogate from national legislation and increase the period to 12 months, it is more likely that sectors and companies with a high coverage of collective bargaining already use longer reference periods. Additionally, for this possible change a clear split between SMEs and large companies emerged from in-depth studies, since micro and SMEs are more likely to use shorter reference periods. All 10 Member States, with the

exception of Spain, make use of the possibility to derogate from the legal reference period by collective agreement in certain sectors.

The discussion below provides an overview of the situation in the 10 study countries.

In the **Czech Republic** the national legislation sets a 7 day reference period. Hence, it can be assumed that the BAU value is 0% for both SMEs and large companies.

France has a legally defined maximum reference period of 3 months. From fieldwork interviews with national stakeholders and companies it emerged that the extension to 12 months is often used, although to a lesser extent among micro companies and SMEs which find it more difficult to access the use of this derogation. However, in the case of France another legislative requirement is important in determining the BAU. Specifically, companies need to keep the records on working time for one year. Hence, it can be concluded that employers already need to perform AA5.1 for the period corresponding to the length of potentially extended reference period, so BAU can be assumed at 100%.

In **Germany** the reference period is 6 months; this is extended to 12 months by the labour code in specific sectors and circumstances (agriculture, care, public sector). Since legal reference periods already a relatively long, it can be assumed that the BAU value is relatively high, around 70% on average, somewhat lower among SMEs (BAU 60%) and somewhat higher among large companies (BAU 80%).

Hungary has a legal reference period of 4 months, however, in some cases the national legislation sets a reference period of 6 months (in the case of multiple or continuous shifts, seasonal jobs, stand-by jobs). In the collective agreement in the utilities and within enterprises in the sector, use is already made of the derogation to a 12 month reference period. Overall, the most used length of reference period is around 4 months. As a result, the BAU can be assumed around 50%: 40% among SMEs and 60% among large companies.

Italy has a legal reference period of 4 months. From the country study it seems that Italy has particularly high administrative costs related to the reference period linked to the fact that some national collective agreements have introduced flexible working hours on an annual basis without extending the reference period. It is probably because of this that some interviewees mentioned that a reference period from 1 of January to 31 of December would be much easier to implement from an administrative point of view than the currently applicable 4 month reference period. Therefore, it can be assumed that in Italy there is a high level of BAU, around 60% for SMEs and 80% among large companies.

In the **Netherlands** the legal reference period is 4 months. From field work interviews it emerged that 12 month period is rarely used and companies usually work with a 4 month reference period. As a result, the BAU can be assumed around 50%: 40% among SMEs and 60% among large companies.

Poland has a reference period of 4 months. Derogations to the legal reference period need to be justified by objective, technical reasons or reasons related to the organisation of work. From field work interviews it seems that longer reference periods are not widely used. As a result, the BAU can be assumed around 50%: 40% among SMEs and 60% among large companies.

In **Spain** the legal reference period is 1 year. Hence, it can be concluded that employers already need to perform AA5.1 for the period corresponding to the length of potentially extended reference period, so BAU can be assumed at 100%.

In **Sweden** the legal reference period is 4 months. However, collective agreements commonly extend the reference period to 6 or 12 months. Therefore, the plausible BAU value is relatively high, around 70% on average, and somewhat lower among SMEs (BAU 60%) and somewhat higher among large companies (BAU 80%).

In the **UK** the reference period is 17 weeks. Since the use and coverage of collective bargaining is quite low it can be assumed that this reference period prevails and the BAU value for this country can be assumed at 50% for both SMEs and large companies.

Given lack of detailed information on the situation in other EU countries BAU is assumed as the average value of BAU factors for the 10 countries covered by in-depth analysis, i.e. at 55% for SMEs and 67% for large companies.

Possible change in the definition of 'autonomous workers' derogation in the Working Time Directive

There is one administrative obligation and two administrative actions related to this possible change:

Information obligation: keeping information on whether a worker is autonomous

Administrative action: AA 5.1 familiarising with the new obligation and a new definition and AA 5.2 adjusting the worker data file

Administrative action: AA 5.2 Adjusting the worker data file

By definition, without a change in the WTD there is no need for employers to familiarise themselves with the changed definition of autonomous workers. BAU is therefore 0% for AA5.1. By the same logic, employers do not have to keep records of the hours worked by autonomous workers as defined by the current interpretation of the autonomous workers definition in the WTD, therefore the BAU is also 0% for AA5.2.

Possible changes to enhance reconciliation of work and family (flexibility in minimum daily rest)

The administrative obligations and actions related to this possible change are:

Information obligation: keeping information on working hours out of employers' premises

Administrative action: AA 8.1 Introduction of a new monitoring process

All 10 Member States comply with Article 3 of the WTD which states that every worker is entitled to a minimum daily rest period of 11 consecutive hours per 24-hour period.

A plausible proxy of the level of BAU for this possible change is the level of BAU related to the changes in rules in the calculation of stand-by time since both relate to keeping records of time when workers remain outside of work premises. For example, if in a country/company there is already a requirement to keep records of stand-by time outside work premises and / or companies have a good monitoring system of hours performed outside work premises this possible change will not impact the level of administrative costs for these country/companies. The BAU is assumed to be identical to that for possible changes 1B and 1C.

Annex 5 Note on WTD survey secondary analysis, weighting strategy applied to the SME Panel on the Working Time Directive

A4.1 The population

In the simplest approach, the relevant population for the Commission’s stakeholder survey on the revision of the Working Time Directive were all registered companies in the EU. Whereas national statistical offices - coming from administrative sources - generally disclose national figures on the number of registered businesses (although the sector coverage may differ slightly), usually broken down by size class measured on the number of workers, there is no complete harmonised database at the EU level. The only available source, the Structural Business Statistics database of Eurostat, provides data on the number of registered companies in mining and industry, construction, and the best part of the service sector⁴⁵¹, but data in the different sub-sectors may be missing for some worker number brackets and sometimes missing entirely for certain countries.

Available data was aggregated for 2011 for the NACE sectors B, C, D, E, F, G, H, I, J, L, M, N, S95. Missing data was either proxied by data from earlier years, calculated by subtracting the sum of available data from the total, or imputed. The resulting data table is an incomplete estimate of the number of registered companies by country, but is a very good approximation of the relative weight of individual countries in all size brackets. The sector breakdown (top-level NACE sectors) was also obtained through this exercise.

Table A4.1 Total (estimated) number of registered companies in NACE sectors B-S95

Country	From 0 to 9 persons employed	From 10 to 49 persons employed	From 50 to 249 persons employed	250 persons employed or more	Total
Austria	265,584	32,621	5,012	1,025	304,242
Belgium	517,760	27,876	4,236	905	550,777
Bulgaria	281,793	23,191	4,288	681	309,953
Cyprus	42,163	3,082	505	87	45,837
Czech Republic	963,753	32,767	6,633	1,412	1,004,565
Denmark	190,703	18,688	3,371	636	213,398
Estonia	49,075	4,716	996	146	54,933
Finland	207,362	15,422	2,520	609	225,913
France	2,451,286	125,331	20,470	4,409	2,601,487
Germany	1,764,993	327,392	55,169	10,541	2,158,094
Greece	758,456	24,843	2,869	479	786,649
Hungary	521,381	24,002	4,077	799	550,259
Ireland	130,630	13,878	2,487	461	147,457

⁴⁵¹ A separate database contains figures on agricultural holdings, but this was not included in the work.

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Italy	3,641,988	178,756	19,530	3,180	3,843,454
Latvia	70,401	7,284	1,368	192	79,242
Lithuania	114,721	10,387	2,119	290	127,517
Luxembourg	25,382	3,047	594	142	29,165
Malta	25,057	1,090	209	38	26,394
Netherlands	759,086	42,154	8,418	1,497	811,155
Poland	1,452,022	53,104	15,278	3,014	1,523,418
Portugal	789,947	35,681	5,226	801	831,655
Romania	356,008	43,241	8,161	1,541	408,951
Slovakia	398,309	13,765	2,301	530	414,905
Slovenia	110,343	5,739	1,174	225	117,481
Spain	2,285,379	125,520	15,832	2,898	2,429,627
Sweden	616,132	29,265	5,027	994	651,418
United Kingdom	1,518,211	147,024	25,495	5,858	1,696,588
Total	20,307,925	1,369,866	223,365	43,390	21,944,534

Note: Sector K (financial services) is excluded

The respondents

The business survey database received from the Commission contains 1,579 responses, of which 14 were in fact not companies but public authorities, interest groups or other civil sector actors, leaving 1,565 eligible respondents in the sample. No response was received from three countries: Cyprus, Latvia, and (surprisingly) the Netherlands.

Table A4.2 Eligible survey respondents, breakdown by country and size class

Country	From 0 to 9 persons employed	From 10 to 49 persons employed	From 50 to 249 persons employed	250 persons employed or more	Total
Austria	19	40	24	69	152
Belgium	6	12	12	7	37
Bulgaria	10	6	2	3	21
Cyprus					
Czech Republic	2	4	3	4	13
Denmark	21	19	6	4	50
Estonia	36	39	31	1	107
Finland		1			1
France	14	22	12	5	53

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Germany	26	123	119	49	317
Greece	3	1			4
Hungary	59	28	14	5	106
Ireland	19	19	7	17	62
Italy	34	33	14	2	83
Latvia					
Lithuania	3	4	9	2	18
Luxembourg			2		2
Malta	1				1
Netherlands					
Poland	82	79	62	21	244
Portugal	10	20	7	1	38
Romania	1		1		2
Slovakia	11	13	18	16	58
Slovenia	19	16	34	23	92
Spain	20	14	6	2	42
Sweden	1	5			6
United Kingdom	9	17	17	13	56
Total	406	515	400	244	1,565

Table A4.3 Eligible survey respondents, breakdown by NACE sector and size class

Row Labels	0-9 workers	10-49 workers	250 workers or more	50-249 workers	Total
Agriculture	3	4	2	3	12
Mining and Energy	5	15	16	14	50
Manufacturing	62	160	114	186	522
Construction	28	60	23	42	153
Retail and wholesale trade, repair of goods	79	62	12	34	187
Transport/storage services	11	11	14	11	47
Hotel and restaurant	17	29	3	13	62
Communication services	28	20	4	8	60
Financial intermediation	21	12	10	12	55
Real estate and business activities	75	66	10	27	178

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Education and research	26	19	6	13	64
Health and social work	12	20	15	12	59
Other community, social and personal services	30	26	13	16	85
Other	9	11	2	9	31
Total	412	518	245	404	1579

A4.2 Representativeness

The breakdown of the sample by size class evidently shows that it is not representative of the total EU business population. Large enterprises in specific are heavily overrepresented in the sample: whereas the proportion of large enterprises in the population is at around 0.2%, they gave 15.6% of survey responses. This bias is understandable in voluntary business surveys and also very beneficial, as it allows to collect a meaningful sample size for large enterprises. However, it means that all analysis should remain separate at size-class level.

In terms of country representativeness *per size class* and in total, the sample shows a heavy overrepresentation of Austrian (esp. large enterprises: Suspicion of duplication arises), Estonia, Germany (esp. medium-sized enterprises), Hungary, Poland and Slovenia.

Table A4.4 Percentage point difference of countries' share in the survey versus their share in population (by size class)

Country	0-9 workers	10-49 workers	50-249 workers	250 workers or more	Total
Austria	3.4%	5.4%	3.8%	25.9%	8.3%
Belgium	-1.1%	0.3%	1.1%	0.8%	-0.1%
Bulgaria	1.1%	-0.5%	-1.4%	-0.3%	-0.1%
Cyprus*	-0.2%	-0.2%	-0.2%	-0.2%	-0.2%
Czech Republic	-4.3%	-1.6%	-2.2%	-1.6%	-3.7%
Denmark	4.2%	2.3%	0.0%	0.2%	2.2%
Estonia	8.6%	7.2%	7.3%	0.1%	6.6%
Finland	-1.0%	-0.9%	-1.1%	-1.4%	-1.0%
France	-8.6%	-4.9%	-6.2%	-8.1%	-8.5%
Germany	-2.3%	0.0%	5.1%	-4.2%	10.4%
Greece	-3.0%	-1.6%	-1.3%	-1.1%	-3.3%
Hungary	12.0%	3.7%	1.7%	0.2%	4.3%
Ireland	4.0%	2.7%	0.6%	5.9%	3.3%
Italy	-9.6%	-6.6%	-5.2%	-6.5%	-12.2%
Latvia*	-0.3%	-0.5%	-0.6%	-0.4%	-0.4%
Lithuania	0.2%	0.0%	1.3%	0.2%	0.6%
Luxembourg	-0.1%	-0.2%	0.2%	-0.3%	0.0%

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Malta	0.1%	-0.1%	-0.1%	-0.1%	-0.1%
Netherlands*	-3.7%	-3.1%	-3.8%	-3.5%	-3.7%
Poland	13.0%	11.5%	8.7%	1.7%	8.6%
Portugal	-1.4%	1.3%	-0.6%	-1.4%	-1.4%
Romania	-1.5%	-3.2%	-3.4%	-3.6%	-1.7%
Slovakia	0.7%	1.5%	3.5%	5.3%	1.8%
Slovenia	4.1%	2.7%	8.0%	8.9%	5.3%
Spain	-6.3%	-6.4%	-5.6%	-5.9%	-8.4%
Sweden	-2.8%	-1.2%	-2.3%	-2.3%	-2.6%
United Kingdom	-5.3%	-7.4%	-7.2%	-8.2%	-4.2%

Note: * No response received

A4.3 Approach to weighting

The study will – as only *one* of the approaches dimensioning the extent of on-call work and other non-standard working time arrangements – use weights to make the sample more representative of the underlying population. It is recommended that the weights only consider the differences in the country breakdown of businesses, separately by size class. I.e. the weights in a specific size class will equal to the proportion of the given country in the population, divided by the proportion of the country in the sample. For countries with a limited number of responses (also implicitly including countries with no responses), regional clusters (of 3-5 countries) will be used.

Annex 5 Detail of time needed for each administrative action

Table A5.1 Time reported as needed to perform AA for various considered possible changes

AA1.1: Maintaining the records of on-call-stand-by time for all workers with certain share counted towards weekly working time limit				
Possible changes 1A, 1B, 1C				
Time variable	Average time needed to record of on-call / stand-by time			
Measurement unit	Minutes per on-call (stand-by) worker per year			
	SME		Large	
Member State	Senior	Clerical	Senior	Clerical
AT	32	73	15	10
BE	32	73	15	10
BG	32	73	15	10
CY	32	73	15	10
CZ	32	73	15	10
DE	32	73	15	10
DK	32	73	15	10
EE	32	73	15	10
EL	32	73	15	10
ES	120	0	60	0
FI	32	73	15	10
FR	32	73	15	10
HR	32	73	15	10

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HU	9	31	0	22
IE	32	73	15	10
IT	32	73	15	10
LT	32	73	15	10
LU	32	73	15	10
LV	32	73	15	10
MT	32	73	15	10
NL	0	156	0	20
PL	0	104	0	0
PT	32	73	15	10
RO	32	73	15	10

Data on time collected from country-level interviews - Unit: Minutes per worker in affected population group per year

Table A5.2 Time reported as needed to perform AA for various considered possible changes:

AA2.1: Maintaining records of when daily/weekly rest is taken				
Possible changes	2, 3			
Time variable	Average time needed to record when daily/weekly rest is taken			
Measurement unit	Minutes per worker who acquires right to compensatory rest following missed minimum daily (weekly) rest, per year			
	SME		Large	
Member State	Senior	Clerical	Senior	Clerical
AT	43	83	40	55
BE	43	83	40	55
BG	43	83	40	55
CY	43	83	40	55
CZ	43	83	40	55
DE	43	83	40	55
DK	43	83	40	55
EE	43	83	40	55
EL	43	83	40	55
ES	120	0	120	0
FI	43	83	40	55
FR	43	83	40	55
HR	43	83	40	55

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HU	9	31	0	22
IE	43	83	40	55
IT	43	83	40	55
LT	43	83	40	55
LU	43	83	40	55
LV	43	83	40	55
MT	43	83	40	55
NL	0	156	0	20
PL		144		180
PT	43	83	40	55
RO	43	83	40	55
SE	43	83	40	55
SI	43	83	40	55
SK	43	83	40	55
UK	43	83	40	55

Data on time collected from country-level interviews - Unit: Minutes per worker in affected population group per year

Table A5.3 Time reported as needed to perform Aas for various considered possible changes:

AA4.1: Maintaining a record of hours worked per week over the reference period				
Possible changes 4				
Time variable				
Average time needed to maintaining a record of weekly hours worked over the reference period				
Measurement unit				
Minutes per worker (who works >48 h/w in some weeks) per year				
SME			Large	
Member State	Senior	Clerical	Senior	Clerical
AT	60	144	60	48
BE	60	144	60	48
BG	60	144	60	48
CY	60	144	60	48
CZ	60	144	60	48
DE	60	144	60	48
DK	60	144	60	48

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EE	60	144	60	48
EL	60	144	60	48
ES	60	144	60	48
FI	60	144	60	48
FR	60	144	60	48
HR	60	144	60	48
HU	60	144	60	48
IE	60	144	60	48
IT	60	144	60	48
LT	60	144	60	48
LU	60	144	60	48
LV	60	144	60	48
MT	60	144	60	48
NL	60	144	60	48
PL	260	338	260	286
PT	60	144	60	48
RO	60	144	60	48
SE	60	144	60	48
SI	60	144	60	48
SK	60	144	60	48
UK	60	144	60	48

Data on time collected from country-level interviews - Unit: Minutes per worker in affected population group per year

Table A5.4 Time reported as needed to perform Aas for various considered possible changes:

AA5.1: Familiarizing with the new obligation and new definition				
Possible changes 5				
Time variable Average time needed to learn about the new definition of autonomous workers				
Measurement unit Minutes per enterprise (one-off)				
SME			Large	
Member State	Senior	Clerical	Senior	Clerical
AT	44	52	45	6
BE	44	52	45	6
BG	44	52	45	6
CY	44	52	45	6
CZ	44	52	45	6
DE	44	52	45	6
DK	44	52	45	6

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EE	44	52	45	6
EL	44	52	45	6
ES	44	52	45	6
FI	44	52	45	6
FR	44	52	45	6
HR	44	52	45	6
HU	44	52	45	6
IE	44	52	45	6
IT	44	52	45	6
LT	44	52	45	6
LU	44	52	45	6
LV	44	52	45	6
MT	44	52	45	6
NL	44	52	45	6
PL	44	52	45	6
PT	44	52	45	6
RO	44	52	45	6
SE	44	52	45	6
SI	44	52	45	6
SK	44	52	45	6
UK	44	52	45	6

Data on time collected from country-level interviews - Unit: Minutes per worker in affected population group per year

Table A5.5 Time reported as needed to perform Aas for various considered possible changes:

AA5.2: Adjusting worker data file				
Possible changes	5			
Time variable	Average time needed to adjust the worker file and maintain standard accounting of working time for a worker			
Measurement unit	Minutes per worker whose status changes to non-autonomous per year			
	SME		Large	
Member State	Senior	Clerical	Senior	Clerical
AT	60	144	60	48
BE	60	144	60	48
BG	60	144	60	48
CY	60	144	60	48
CZ	60	144	60	48
DE	60	144	60	48
DK	60	144	60	48
EE	60	144	60	48
EL	60	144	60	48

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ES	60	144	60	48
FI	60	144	60	48
FR	60	144	60	48
HR	60	144	60	48
HU	60	144	60	48
IE	60	144	60	48
IT	60	144	60	48
LT	60	144	60	48
LU	60	144	60	48
LV	60	144	60	48
MT	60	144	60	48
NL	60	144	60	48
PL	60	144	60	48
PT	60	144	60	48
RO	60	144	60	48
SE	60	144	60	48
SI	60	144	60	48
SK	60	144	60	48
UK	60	144	60	48

Table A5.6 Time reported as needed to perform Aas for various considered possible changes:

AA8.1: Introduction of a new monitoring process				
Possible changes	8C			
Time variable	Average time needed to record hours worked from home			
Measurement unit	Minutes per worker using additional working-time flexibility per year			
	SME		Large	
Member State	Senior	Clerical	Senior	Clerical
AT	32	73	15	10
BE	32	73	15	10
BG	32	73	15	10
CY	32	73	15	10
CZ	32	73	15	10
DE	32	73	15	10
DK	32	73	15	10
EE	32	73	15	10
EL	32	73	15	10
ES	120	0	60	0

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FI	32	73	15	10
FR	32	73	15	10
HR	32	73	15	10
HU	9	31	0	22
IE	32	73	15	10
IT	32	73	15	10
LT	32	73	15	10
LU	32	73	15	10
LV	32	73	15	10
MT	32	73	15	10
NL	0	156	0	20
PL	0	104	0	0
PT	32	73	15	10
RO	32	73	15	10
SE	32	73	15	10
SI	32	73	15	10
SK	32	73	15	10
UK	32	73	15	10

Data on time collected from country-level interviews - Unit: Minutes per worker in affected population group per year

Annex 6 Stakeholders and companies contacted in the detailed study countries

	Number of stakeholders contacted	Number of stakeholders interviewed
CZ	50	32
DE	43	28
FR	151	24
HU	193	23
IT	50	21
NL	46	17
PL	53	14
ES	39	22
SE	53	18
UK	42	16
Total	720	215

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