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## Working time patterns for sustainable work

Dominique Anxo, Jean-Yves Boulin, Jorge Cabrita, Greet Vermeyleen

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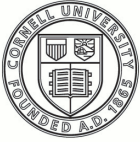
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# Working Time Patterns for Sustainable Work

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# Working Time Patterns for Sustainable Work

## **Abstract**

[Excerpt] Working time is a recurrent topic of study because the nature of work, its content, the conditions under which it is performed and the labour market itself keep changing. These changes have an impact on working time duration and the way working time is organised. One of the manifest results is the erosion of a clear demarcation between working time and non-working time – the work and private sphere.

The European Working Conditions Survey (EWCS) is among the sources that have clearly established the link between working time patterns and the health and wellbeing of workers. Eurofound's research on job quality shows that working time quality is one of the crucial contributing elements.

]This report examines working time patterns in more detail. It provides an overview of the recent evolution of working time duration and organisation in the EU and highlights the most important trends and differences between Member States. Through an in-depth analysis of data from the sixth EWCS (2015), it also examines, from a gender and life course perspective, the links between working time patterns, work–life balance and working time preferences on the one hand and workers' health and well-being, on the other. Finally, it explores the implications of working time patterns for the longterm sustainability of work.

## **Keywords**

European Union, working time, sustainable work, work-life balance

## **Comments**

### **Suggested Citation**

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# Working time patterns for sustainable work





# Working time patterns for sustainable work



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## Country codes

AT	Austria	FI	Finland	NL	Netherlands
BE	Belgium	FR	France	PL	Poland
BG	Bulgaria	HR	Croatia	PT	Portugal
CY	Cyprus	HU	Hungary	RO	Romania
CZ	Czech Republic	IE	Ireland	SE	Sweden
DE	Germany	IT	Italy	SI	Slovenia
DK	Denmark	LU	Luxembourg	SK	Slovakia
EE	Estonia	LT	Lithuania	UK	United Kingdom
EL	Greece	LV	Latvia		
ES	Spain	MT	Malta		

## Abbreviations used in the report

CHD	chronic heart disease
EU-LFS	European Union Labour Force Survey
EWCS	European Working Conditions Survey
ICT	information and communication technologies
OLS	ordinary least squares
WHO	World Health Organization

# Executive summary

## Introduction

Working time is a recurrent topic of study because the nature of work, its content, the conditions under which it is performed and the labour market itself keep changing. These changes have an impact on working time duration and the way working time is organised. One of the manifest results is the erosion of a clear demarcation between working time and non-working time – the work and private sphere.

The European Working Conditions Survey (EWCS) is among the sources that have clearly established the link between working time patterns and the health and well-being of workers. Eurofound's research on job quality shows that working time quality is one of the crucial contributing elements.

This report examines working time patterns in more detail. It provides an overview of the recent evolution of working time duration and organisation in the EU and highlights the most important trends and differences between Member States. Through an in-depth analysis of data from the sixth EWCS (2015), it also examines, from a gender and life course perspective, the links between working time patterns, work–life balance and working time preferences on the one hand and workers' health and well-being, on the other. Finally, it explores the implications of working time patterns for the long-term sustainability of work.

## Policy context

New methods of production and new forms of work organisation have resulted in a much more flexible organisation of working time. At the same time, societal changes such as ageing, the growing diversity of life trajectories, varying employment paths and the trend towards a shorter working life have all created challenges for welfare states and social protection systems. It is therefore not surprising that one of the major objectives of the European Employment Strategy is to raise overall employment rates, in particular for women and older workers. However, for workers to be able to work and to continue to work, achieving a good fit between working time and non-working time through the adaptation of duration and organisation of working time is essential.

It is against this background that, as part of the European Pillar of Social Rights, the European Commission launched the Initiative to support work–life balance for working parents and carers. This seeks to enable parents and individuals with caring responsibilities to better balance their work and family lives, and to encourage the fair sharing of caring

responsibilities between women and men. It includes a legislative proposal to modernise the EU legal framework on family-related leaves and flexible working arrangements.

## Key findings

The analysis of EWCS data confirms that the gender gap in weekly working time remains important, with men in the EU28 working on average 39.2 hours and women 32.7 hours. The gender gap in paid working time is greatest in western Continental Europe, Ireland and the UK.

The vast majority of respondents to the sixth EWCS, independent of gender and employment status, stated that their working hours fit 'well' or 'very well' with their private life obligations. However, men appear to be less satisfied with their work–life balance than women. This can be attributed to the fact that men have longer working hours and therefore relatively more difficulties in adapting working time to family life or other social commitments. At the same time, it is assumed that many women have opted for occupations, sectors and working hours that make it easier to combine work with family commitments.

The duration of working time was found to have a negative impact on the extent of work–life balance, with both men and women indicating that long working hours reduced their possibility to combine work and other social commitments. Working time arrangements that favour fixed and regular working hours, good working conditions, high predictability of working time, the possibility to take time off and/or job autonomy all increase the likelihood of achieving a balanced work–life situation.

The negative impact of work on work–life balance tends to be concentrated during the early phase of parenting – when respondents have young pre-school children. Although this period coincides with a reduction in working time for employed mothers and an increase in working time for working fathers, both sexes express a preference for working shorter hours during the parenting phase.

While overall most individuals seem to be satisfied with their current working time, the majority of the 42% expressing a preference for a change in their working time say they would like to reduce their current working time. Working time preferences do not differ drastically between sexes: if anything, a slightly higher proportion of men reported a preference to reduce their working time while a slightly higher share of women would like to increase their working time.

While there are no differences between men and women regarding the necessity to work during their free time to meet work demands, women more often than men reported that their job prevented them from giving the time they wished to their family. In particular, both men and women working in education, as well as self-employed people, are more likely to report that they work during their leisure time.

In terms of the link between working time and health and well-being, the results show that having control over working time and fixed or regular working time have a positive impact on workers' well-being. Dissatisfaction with working conditions, atypical working hours, long working hours, high work intensity and working during free time were shown to be detrimental to a good work–life balance.

Sustainability of work – measured by the reported ability to work up to 60 or later – is shown to be negatively affected by a number of factors, such as low satisfaction with working conditions, exposure to physical risks, poor work–life balance and atypical working time patterns (shift, night or weekend work). Conversely, work sustainability can be positively influenced by adjustments in working time patterns available to workers which are aimed at enhancing employee-friendly flexibility or specifically designed for workers with care responsibilities.

## Policy pointers

- **Working time policies must adopt a life course perspective.** Individuals' needs and preferences in terms of working time vary throughout life. Working time policies should acknowledge this variation over the life course and provide more support and/or flexibility during those periods where tensions of work–life balance are highest.
  - **Policies should continue to promote a more equal distribution of paid and unpaid work between men and women.** The gender gap in weekly working hours is mirrored by differences in time spent on unpaid work and care responsibilities. A stronger involvement of men, and fathers in particular, in the domestic sphere could be encouraged through better incentives for men to take family-related leave or to be compensated for reduced working hours during the parenting phase of life.
- **Policies should be transformative.** Policy initiatives such as the recent one by the European Commission, which contain proposals to modernise the legal framework on family-related leaves and flexible working time arrangements, are in line with the needs expressed by men (particularly the preference to work fewer hours during the parenting phase of life). They therefore have great potential to be well received and are likely to be transformative by promoting a more equal distribution of paid and unpaid work between men and women.
- **Universal and individual rights should be complemented by collective agreements at sectoral, branch or company level.** Regulation of maximum weekly working hours, rest periods, leave, family-related leave and protection during atypical work should take into account the specificities of the sector or branch of activity, while supporting the adaptation of working time to individuals' changing needs and preferences across the various life stages.
- **Working time policies must address factors having a negative impact on the sustainability of work.** Good health, satisfaction with working conditions and flexible work–life balance arrangements are strong predictors for willingness and ability to stay in employment longer. Policies should therefore encourage working time patterns that prevent negative impacts on workers' health and well-being, for example, by deterring long working hours for extensive periods of time. They should promote greater job and working time autonomy, and favour better work–life balance.
- **Good practice examples need to be identified and promoted.** Differences between the country clusters examined in this report point to the fact that policymakers should look for guidance in those clusters performing better in terms of achieving a good work–life balance and greater sustainability of work.

# Introduction

Working time has been the subject of research at Eurofound since it was founded in 1975. It is a recurrent topic due to the fact that the nature of work, its content, the conditions under which it is performed and the labour market itself keep changing. While research has shown that over the past couple of decades in Europe work has become less physically demanding, there is no doubt that intellectual demands have increased. Technological developments are increasingly blurring the distinctions between objective and subjective work, and between the professional and the private or family sphere.

New methods of production as well as new forms of work organisation have resulted in the development of a much more flexible organisation of working time. Standardised work organisation and working time patterns have gradually given way to more complex and diversified structures. The intensification of competition has required organisations to restructure and to adapt their working time according to new needs and requirements. As a consequence, new working time arrangements – such as flexitime – have been developed and implemented.

These new forms of working time arrangements give workers some freedom to adjust their working time within certain limits and promote working time autonomy. As a consequence, the control of working hours has been replaced in many cases by performance monitoring. Individuals are required to achieve certain goals and certain objectives, independent of the time required and effectively taken to do so.

Other societal changes that are relevant to the ongoing debate on working time are:

- population ageing;
- diversity of life trajectories;
- uneven employment paths;
- general tendency towards a shorter working life.

These changes have all created challenges for the welfare state and social protection systems. It is therefore not surprising that one of the major objectives of the European Employment Strategy since the beginning of this century has been to raise overall employment rates across the European Union. The achievement of this goal is critically dependent on the further integration of women into employment in general – and full-time employment in particular – as well as raising the employment rate of older workers.

Some of the most important policy instruments to achieve higher employment rates have focused on enhancing the opportunities for both women and men to combine employment with other commitments over

the life course: through the introduction, for example, of paid flexible parental leave systems, reversible working time options (for example, transitions between part-time and full-time hours) and the right to training leave. These policy approaches can contribute to achieving a time and income allocation across the life course that is conducive to an increase in the overall employment rate. This, in turn, supports the long-term sustainability of work and the financial stability of social protection systems.

It is against this background that, as part of the European Pillar of Social Rights, the European Commission launched the Initiative to support work–life balance for working parents and carers in April 2017. The initiative's main objective is to enable parents and individuals with caring responsibilities to achieve a better balance between their work and family lives and to encourage more equal sharing of caring responsibilities between women and men. The initiative includes a legislative proposal to modernise the EU legal framework on family-related leaves and flexible working arrangements (European Commission, 2017).

Another common policy response to the challenge of stepping up employment rates has been to encourage the postponement of retirement, not only through financial incentives but also by introducing preventive measures, such as lifelong learning and adapting working conditions and working time at the end of the career (for example, progressive retirement).

Over the last half century, modern economies have experienced not only a shortening of working hours but also a marked trend towards a diversification and individualisation of working time patterns. In spite of these common trends, there are large differences across Europe regarding work organisation, working time duration and distribution, the extent of atypical work and work–life balance possibilities.

This report first provides an overview of the recent evolution of working time duration and organisation in the EU, highlighting the most important trends and pointing to differences between Member States. It then examines, in a life course perspective, the links between working time patterns, work–life balance, working time preferences, and health and well-being. It also looks at the implications of working time patterns for the long-term sustainability of work. The link between working time quality and workers' health and well-being was highlighted in the overview report presenting a first analysis of data from the sixth European Working Conditions Survey (Eurofound, 2016a). Working time quality is one of seven job quality indices which Eurofound has developed to capture the multidimensional nature of job quality.

Building on this research, the report is structured as follows. After presenting the data sources and the methodology used (Chapter 1), the report describes the evolution of working time duration and arrangements, including the prevalence of atypical work, in EU Member States from a life course and gender perspective (Chapter 2). Chapter 3 identifies the state of work–life balance in Europe, in particular the extent to which current working time arrangements and working conditions make it possible to combine paid work with other commitments and activities over the life course. Chapter 4 provides an analysis of working time preferences and examines whether workers are satisfied with their current working time or whether they would like to reduce or lengthen it. Chapters 5 and 6 analyse the relationships between prevailing working time

patterns, on the one hand, and well-being and health, on the other. Chapter 7 endeavours to assess the extent to which prevailing working conditions and working time patterns in EU Member States are sustainable in the long run. Do they favour the continuous labour force participation of men and women over the life course, enhance individuals' well-being and support the lengthening of working life? The chapter also includes a section presenting selected examples of measures and initiatives, carried out by governments and/or social partners, which contribute to improving the sustainability of work through changing the way working time is regulated and organised in practice. The final chapter provides concluding remarks and policy pointers.

# 1 Data and methodology

## Data sources

The two main data sources for this report are:

- European Union Labour Force Survey (EU-LFS) – a large sample survey of people aged 15 years and over living in private households that covers all the EU28 Member States;
- European Working Conditions Survey (EWCS) – a sample-based survey of workers covering a comprehensive spectrum of working conditions related themes and topics, carried out by Eurofound every five years, since 1990.

The EU-LFS data are mainly used in Chapter 3 as they provide a more comprehensive picture of the evolution of some of the main aspects of working time duration and organisation, including atypical working time arrangements, than the EWCS. The EWCS is the main data source for most of the remaining chapters, with the exception of the section in Chapter 7 on measures related to working time patterns for sustainable work, which is based on information submitted by the national members of Eurofound’s Network of European Correspondents in 2015–2016 through a common questionnaire.

## EWCS methodology and clustering of countries

The sixth EWCS provided data for 35 European countries in 2015: 28 EU Member States, the five EU candidate countries (Albania, Montenegro, the Former Yugoslav Republic of Macedonia, Serbia, and Turkey) plus Norway and Switzerland. In the present study, the analysis is

restricted to the 28 EU Member States. After the imposition of some restrictions such as the introduction of an upper limit on usual weekly working hours (maximum of 120 hours a week, corresponding to around 17 hours per day on a 7 day basis<sup>1</sup>), the sample contained 34,457 valid observations.

Although the number of observations at country level is at least 1,000, it was not possible – due to the very small sample size – to perform disaggregated regression analyses at country level. Against this background, it was decided to cluster countries (see Table 1) mainly according to broad geographical areas but also taking into account the type of industrial relations, the welfare state system, the regulation of working time and the prevailing gender contract (based on full-time equivalent female employment rates and incidence of dual-earner households; see Table B1, Table B2 and Figure B1 in the Annex).<sup>2</sup>

It should be emphasised that the main objective of the clustering approach is not to develop a new typology that could challenge established models of welfare state capitalism but to construct country groupings reflecting the issues at stake and serving the purposes of this study.

The Northern countries cluster represents a relatively homogeneous group of countries with generous and inclusive welfare state systems, high female employment rates, high incidence of dual-earner households, and a relatively centralised and coordinated industrial relation system – and where working time is mainly regulated through collective agreements.

**Table 1: Breakdown by country clusters in total sample**

Name of cluster	Member States in cluster	Share in sample (%)
Anglo-Saxon countries	Ireland, UK	7.5
Baltic countries	Estonia, Latvia, Lithuania	8.5
Central–Eastern countries	Bulgaria, Croatia, Czech Republic, Hungary, Poland, Romania, Slovenia, Slovakia	25.9
Continental countries	Austria, Belgium, France, Germany, Luxembourg, Netherlands	25.1
Northern countries	Denmark, Finland, Sweden	8.4
Southern countries	Cyprus, Greece, Italy, Malta, Portugal, Spain	24.7

Source: Authors’ classification

1 Less than 0.01% of the respondents in the sample reported that their usual weekly working time was equal to or exceeded 120 hours a week.

2 An annex to the present report containing supplemental statistical data is published separately at the webpage for this report: <https://www.eurofound.europa.eu/publications/report/2017/working-life-patterns-for-sustainable-work>

As a group on the opposite end of the spectrum, the Southern countries are characterised by relatively limited social protection systems, a traditional gender division of labour with relatively low female labour force participation (with the exception of Portugal whose female employment rate is above the EU average, see Tables B1 and B2a in the Annex) and a working time regime characterised by a relatively low incidence of female part-timers.

The Anglo-Saxon countries remain the archetype of a liberal market oriented regime with residual welfare state systems, a relatively decentralised regulation of working time (at the company level) and a gender polarised working time regime: a high incidence of long working hours for men and a high incidence of marginal part-time work for women.

Even though the Central–Eastern and Baltic countries clusters are less homogeneous along these dimensions compared with the other clusters, they share some common traits. They are all former communist countries, and have relatively high female employment rates with a relatively high share of dual-earner households and a prevalence of full-time jobs for both men and women.

The last cluster, Continental countries, encompasses the same set of countries as Esping-Andersen's classification of a continental type of welfare state capitalism (Esping-Andersen, 1990).

To test the robustness of this clustering, some sensitivity analyses were conducted by estimating separate equations for each of the country clusters. The results of the analysis show a relatively low heterogeneity in terms of working time duration and arrangements among employees within clusters, thus validating the clustering choice. The results of the estimations are available on request from Eurofound.

## Stylised household life course typology

There are sound reasons to believe that the time spent on paid work, the type and incidence of various forms of working time arrangements, as well as working time preferences and needs, vary across the life course. To reflect this lifecycle component of working time, this report uses a variant of the family lifecycle approach (Eurofound, 2006a, 2012a; Anxo et al, 2011).

While the traditional family lifecycle approach implies a uniform sequence of household formations, the sequencing of life stages appears to be more diversified in contemporary societies. This typology does not assume that everyone moves through a uniform sequence of household types across their life course. Rather a range of household types is selected, reflecting widely experienced transitions and phases over the life course, as a basis for comparative analysis (Table 2).

**Table 2: Stylised household life course typology and shares in EWCS 2015**

Household type		Share
<b>Single and childless young people</b>		
I.	Single people (18–35 years), living with their parents or relatives	2.0%
II.	Single people (under 46 years), living on their own, without children	9.1%
<b>Childless couple</b>		
III.	Younger cohabiting couples (woman under 46 years), without children	9.0%
<b>Couple with resident children</b>		
(The age of the youngest child is used to indicate the nature of parental responsibilities across the life course, from the time-intensive pre-school period through to the different needs and demands of children as they grow up and become more independent)		
IV.	Cohabiting couples with young children (age of children <7)	13.2%
V.	Cohabiting couples with young children (age of children 7–12)	7.2%
VI.	Cohabiting couples with teenage children (age of children 13–18)	16.2%
<b>Older couples without children living at home</b>		
VII.	Midlife 'empty nest' couples without resident children (woman aged 46–59)	9.6%
VIII.	Older cohabiting couples without resident children (woman aged 60 or older)	4.1%
<b>Older singles</b>		
IX.	Single people (aged 50 or older), without resident children	7.9%

**Note:** Households not classified (22.0%) includes single mothers and fathers, and other types of household categories such as couples with resident children older than 18 years, siblings living together and so on.

**Source:** Eurofound (2006a, 2013); EWCS 2015.

In order to also take into account contemporary family styles, no distinction is made between married or unmarried couples. For the purpose of this report, it is only relevant whether couples are cohabiting or not. One consequence of the choice regarding the stylised life course is that important – and in some countries growing – household categories are excluded (for example, lone parents). However, the typology covers 78% of all households found in the sample of EU Member States at a given point of time – 2015.

The stylised household typology makes it possible to perform a cross-country comparison of working time arrangements for women and men in different life stages as a means of illustrating the impact of the societal context on the prevailing gender division of paid labour over the life course for employees and self-employed.

Although the approach is not longitudinal, the analysis might serve as a device to identify country differences in the time devoted to work across different life stages in the EWCS sample. This approach also makes it possible to identify at which phases in the life course long working hours, atypical work (night, shift and weekend work), discrepancies between actual and preferred working time, and/or the possibility to combine paid work with other activities are more limited or prevalent. However, the usual drawbacks associated with cross-sectional analysis need to be borne in mind in the interpretation of the results: in particular, the difficulties of disentangling age, cohort and period effects or in identifying causal effects regarding the impacts, for example, of working time arrangements or atypical work on an individual's well-being and health.

To assess accurately the impact of working time arrangements on well-being or the impact of long working hours or night work on health requires longitudinal microdata covering a long period of time and including a rich set of socioeconomic variables. In addition, the cross-sectional nature of the data means it is not possible to identify potential causal effects and for these reasons the results of all the statistical analysis must be interpreted with care.

## Data limitations and estimation techniques

It is important to be aware that the EWCS is not a representative sample of the whole active population but rather of economically active individuals (employees and the self-employed at work). The EWCS sample is restricted to working men and women, and so disregards individuals outside the labour force such as housewives, early retirees, and individuals on long-term sickness or with work-impairing disabilities.

For some countries with, for instance, low employment rates (in particular for women but also for older workers), this may create some potential selection bias regarding both working time and the prevailing gender contract and the gender division of labour. That means that some cross-country and gender differences in, for example, the duration of working time can be ascribed, at least partly, to the sample selection processes. At the individual level, more labour market oriented women and men could, for example, be less inclined to have children or have a higher tendency to outsource some household activities, affecting in this way working time and the gender division of labour.<sup>3</sup> Obviously, these potential sample selection biases must be borne in mind when interpreting the results of the estimations.

Working hours and working time arrangements in the EWCS, but also work-life balance, health status and well-being are self-reported, a characteristic of most individual level surveys. To the extent that individuals may over- or under-estimate (for example, their actual working hours), this could produce measurement errors and bias in the estimation of the marginal effects. Such issues are also present when data are collected by other means, such as employer-level surveys or personnel records such as time use studies. Since there is no presumption as to the size or direction of the bias produced by self-reporting, it is difficult to assess the impact of this potential measurement error on the results. Again, the results of the statistical analysis must be handled with care.

As described above, a country clustering exercise was carried out to overcome the difficulty of running regressions at country level due to the small sample sizes. Although the robustness of the clustering was validated by some sensitivity tests, there are some differences between the countries within each cluster that it is important to bear in mind in the interpretation of the results. Whenever relevant and possible, these differences are highlighted in the report.

3 See Anxo et al (2007) for an analysis of the impact of having children on labour supply at the extensive and intensive margins.



In addition to a standard descriptive and comparative analysis of the core dependent variables (working time distribution, atypical work, working time preferences, work–life balance, well-being, job satisfaction, health and safety risks, work-related sickness absenteeism and working life expectancy), and in order to control for potential structural differences and compositional effects across countries, a set of regressions using standard econometric techniques have been estimated. Since the core dependent variables are either continuous (for example, index of atypical work) or dichotomous (work–life balance indicators) or multinomial, that is, including more than one discrete choice (working time preferences and working time distribution), standard econometric methods such as ordinary least squares (OLS), and standard and

multinomial logit have been used. Since the estimated coefficients have no natural interpretation in the logit and multinomial logit regressions, the marginal effects evaluated at sample means have been reported.

Finally, it is important to acknowledge that caring responsibilities for dependent relatives (parents or spouses) are an extremely important factor in individuals' choices, restrictions and preferences in terms of working time. However, these are difficult to include in the stylised household life course typology because, while the EWCS allows the different life stages in terms of parenting to be covered very well, it does not – by design – cover adequately the situation of those who need to take care of their parents, spouses or other relatives.

## 2 Evolution of working time in the EU

This chapter looks at the most important features of working time duration and organisation in the EU on the basis of EU-LFS and EWCS data. The EU-LFS data are mainly used to depict the main trends at EU level because the EU-LFS provides annual data. The EWCS data are used for those aspects that are not provided by the EU-LFS, such as days of work per week, how working time is set or rest periods between working days. The EWCS data are also used to go deeper into aspects such as working time distribution by household type.

### Working time length

#### Days of work per week

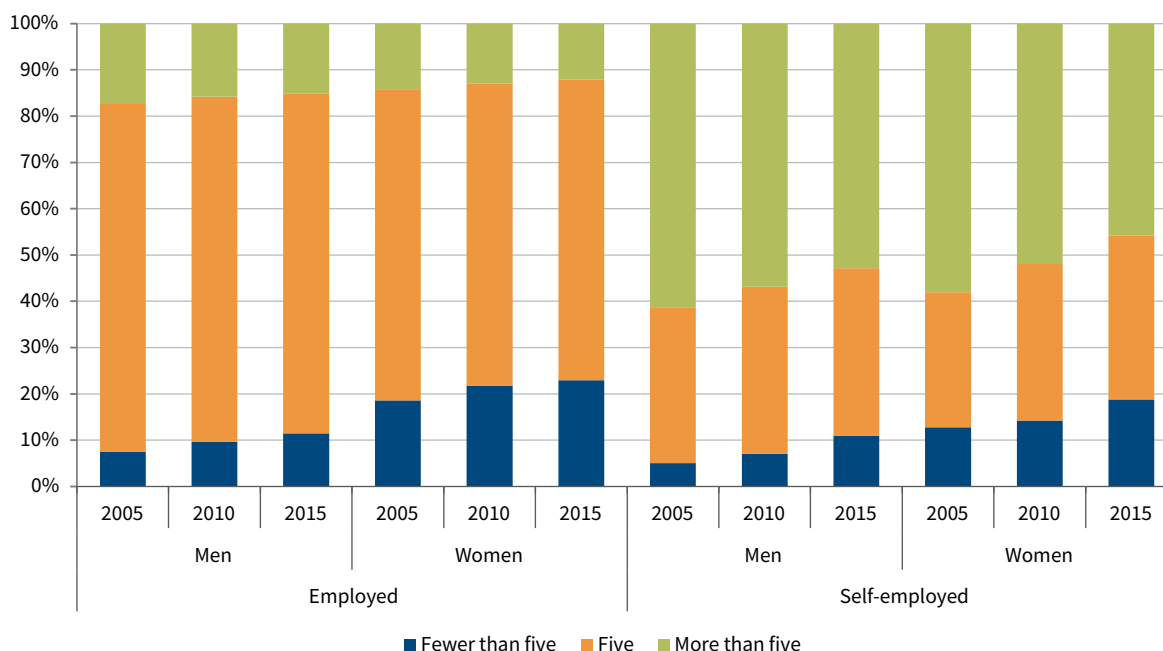
According to the EWCS, five days of work per week is the norm in the EU, being reported by nearly two-thirds of employees in 2015. The share of workers working fewer than five days has been increasing since 2005 (from 12%

in 2005 to 16% in 2015; 7% to 11% for men and 18% to 22% for women, respectively), whereas the share of those declaring that they work more than five days per week fell from 23% in 2005 to 20% in 2015 (26% to 22% for men and 20% to 16% for women).

There is a striking difference in this respect between employees and self-employed (Figure 1). The vast majority of employees in the EU (more than 70% of men and 65% of women) reported working five days a week in 2015, whereas over half of the self-employed worked more than five days per week.

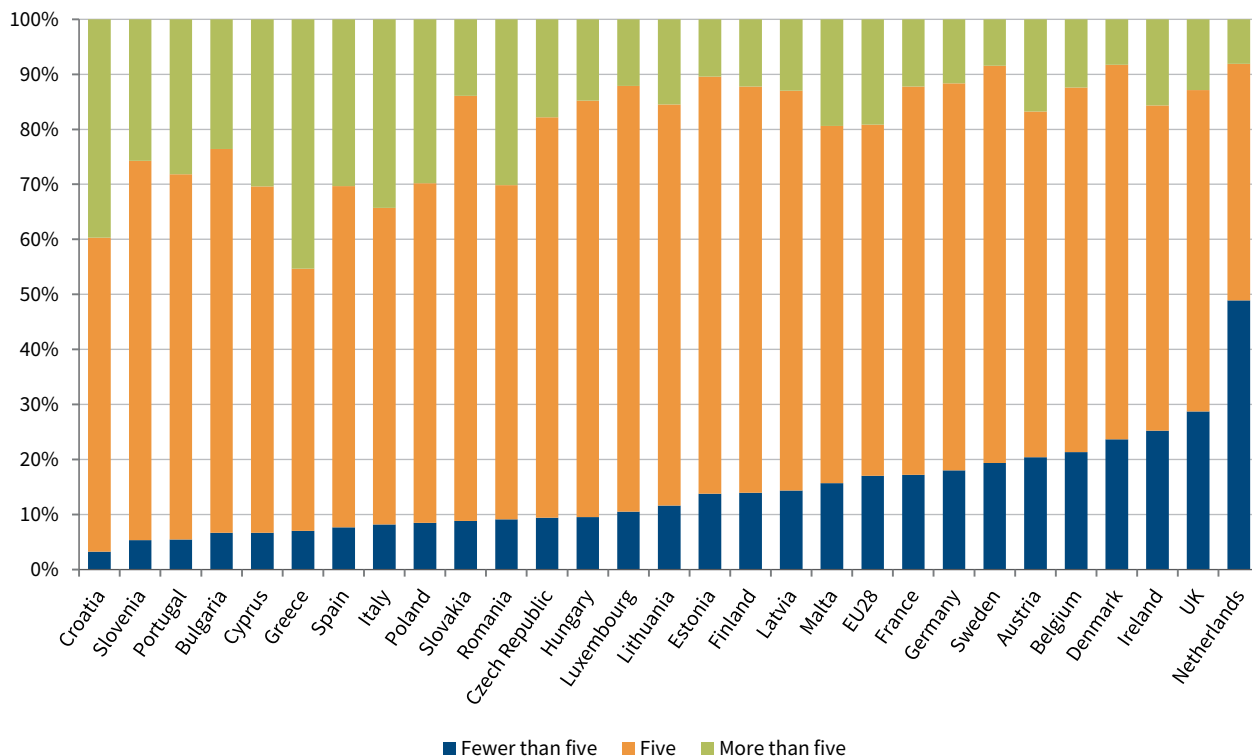
There are also important differences across the EU Member States (Figure 2). The largest shares of workers reporting working more than five days per week in 2015 were in Croatia and Greece, while the largest shares of workers reporting working fewer than five days per week were in Ireland, the Netherlands and the UK.

**Figure 1: Percentage of usual number of working days per week by sex and employment status, EU28, 2005–2015**



Source: EWCS 2015

Figure 2: Percentage of usual number of working days per week by country, 2015



Source: EWCS 2015

### Usual working hours according to the EU-LFS

The average usual weekly working hours in the EU have been decreasing for many years and this downward trend continued for the EU as a whole between 2005 and 2015. EU-LFS data depicts this decreasing trend for men and women, both employees and the self-employed. The decrease was steeper for male employees (0.8 hours less in 2015 than in 2005) than for female employees (0.1 hours less in 2015 than in 2005). Overall, the decline was greater among the self-employed (2.6 hours less in 2015 than 10 years earlier; 2.7 hours less for men and 1.7 hours less for women) than for employees (0.6 hours less in 2015 than in 2005).

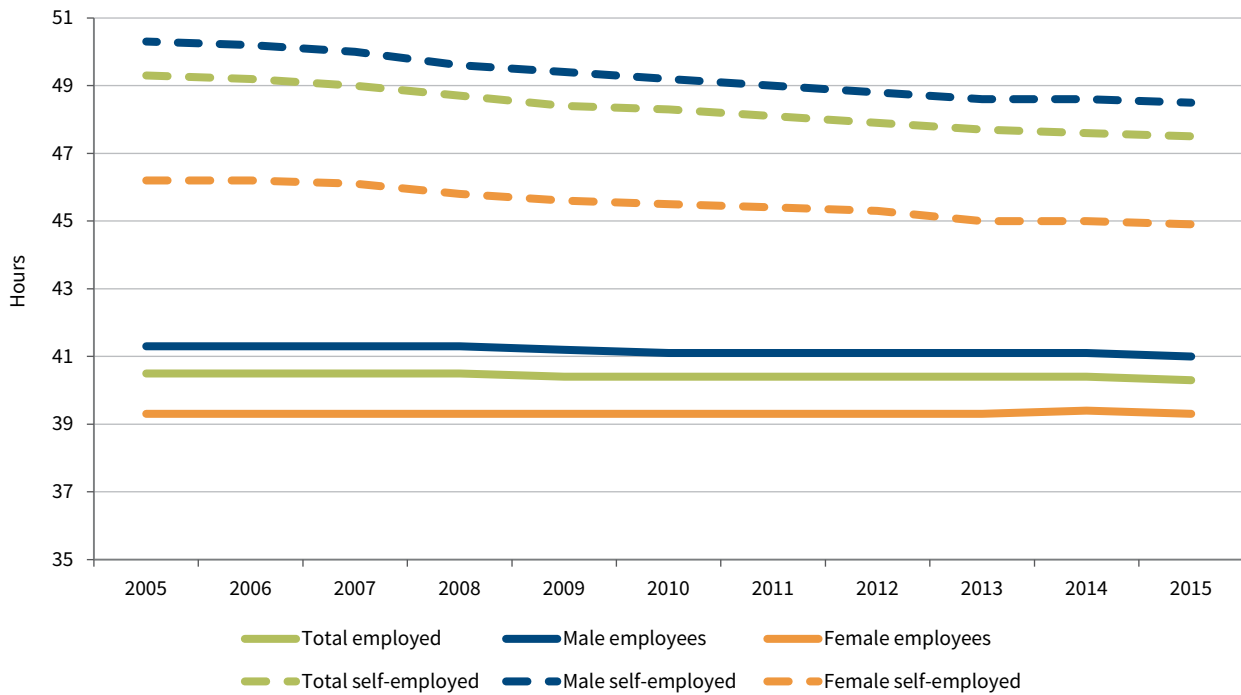
Although the tendency is towards a reduction in the gender gap, the differences between men and women

persist. In 2015, the usual weekly working hours for male employees (39.1 hours) was almost 6 hours longer than for their female counterparts. The self-employed continued to report much longer working weeks (42.5 hours) than employees (36.3 hours). The difference between men and women among the self-employed is much larger: the average figure of 45.1 hours for self-employed men corresponds to 36.9 hours for their female counterparts.

Figure 3 shows the evolution of usual weekly hours in their main job for full-time workers.<sup>4</sup> The decrease was minimal for male employees (from 41.3 hours in 2005 to 41.0 hours in 2015) and virtually none for female employees (39.3 hours in both 2005 and 2015). The downward trend is far more accentuated among the full-time self-employed who reported, on average, working 1.8 hours less in 2015 (47.5 hours) than in 2005 (49.3 hours).

<sup>4</sup> According to Eurostat, 'The distinction between full-time and part-time work is generally based on a spontaneous response by the respondent. The main exceptions are the Netherlands and Iceland where a 35 hour threshold is applied, Sweden where a threshold is applied to the self-employed, and Norway where people working between 32 and 36 hours are asked whether this is a full- or part-time position' (Eurostat, 2017).

**Figure 3: Full-time workers – average number of usual weekly hours of work in main job by sex and employment status, EU28, 2005–2015**

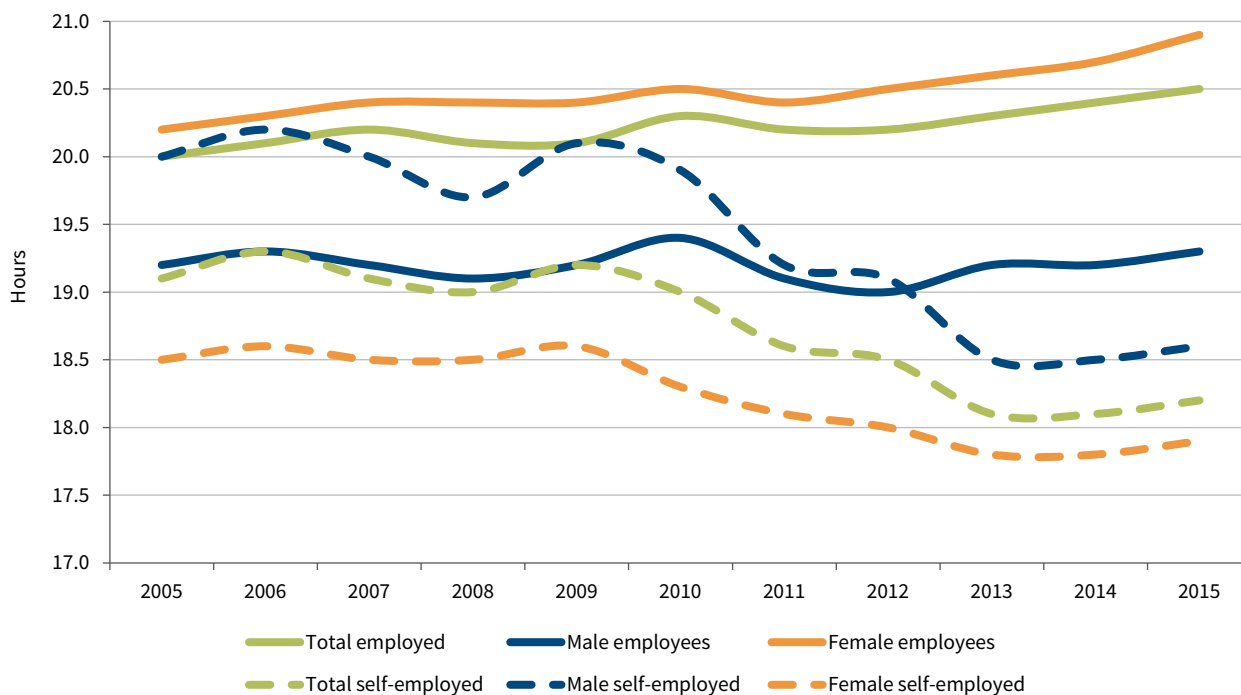


Source: EU-LFS

The main trend for part-time workers is different for employees and self-employed (Figure 4). While the latter registered a decrease in the average usual working hours between 2005 and 2015, the former

registered an increase, which was larger for women. Another particularity of part-time female employees is that they tend to work slightly longer than their male counterparts, whereas self-employed part-time workers

**Figure 4: Part-time workers – average number of usual weekly hours of work in main job by sex and professional status, EU28, 2005–2015**



Source: EU-LFS

have the classic pattern of men working longer than women (Figure 4). One noteworthy detail is the fact that, according to EU-LFS data, male part-time employees have, since 2013, worked on average more hours than their self-employed counterparts.

### Usual working hours according to EWCS data

According to EWCS data, the average weekly working time in the EU28 in 2015 amounted to 36 hours. Again, the gender gap in weekly working time remains important, with employed men in the EU28 working on average 39.2 hours and women 32.7 hours per week (Table 3).

**Table 3: Average weekly working hours by sex and employment status, EU28, 2015**

	Men	Women	All
Employees	38.8	32.5	35.6
Self-employed	42.4	35.8	39.9
All employed	39.2	32.7	36.0

Source: EWCS 2015 (authors' calculations)

The cross-country disparities in weekly working time are also large, with the average weekly working time ranging from 41.3 hours in Greece to 31.4 hours in the Netherlands (see Table B3 in the Annex). The disparity

by employment status is also significant: the average hourly gap between employees and self-employed people is 4.2 hours a week.

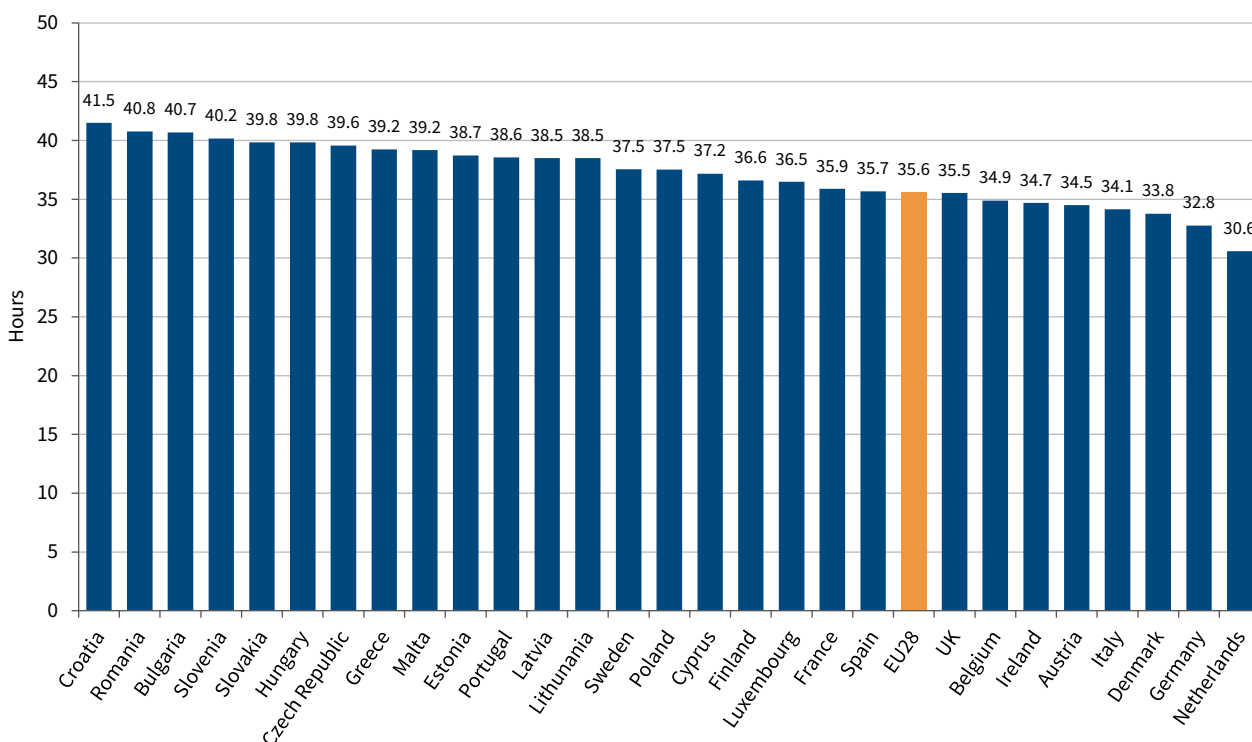
The average weekly working time at the aggregate level conceals large structural differences regarding sex, employment status and distribution of employment by sector of activity.

### Weekly working time among employees

According to EWCS data, the average weekly working time among employees varied considerably within the EU in 2015 (Figure 5). Indeed, the working hours gap between Member States amounts to almost 11 hours a week. The longest weekly working time is found in Central-Eastern Member States and the shortest in Denmark, Germany and the Netherlands. At the aggregate level, the average weekly working time conceals large compositional effects and large disparities by sex, employment status and sector.

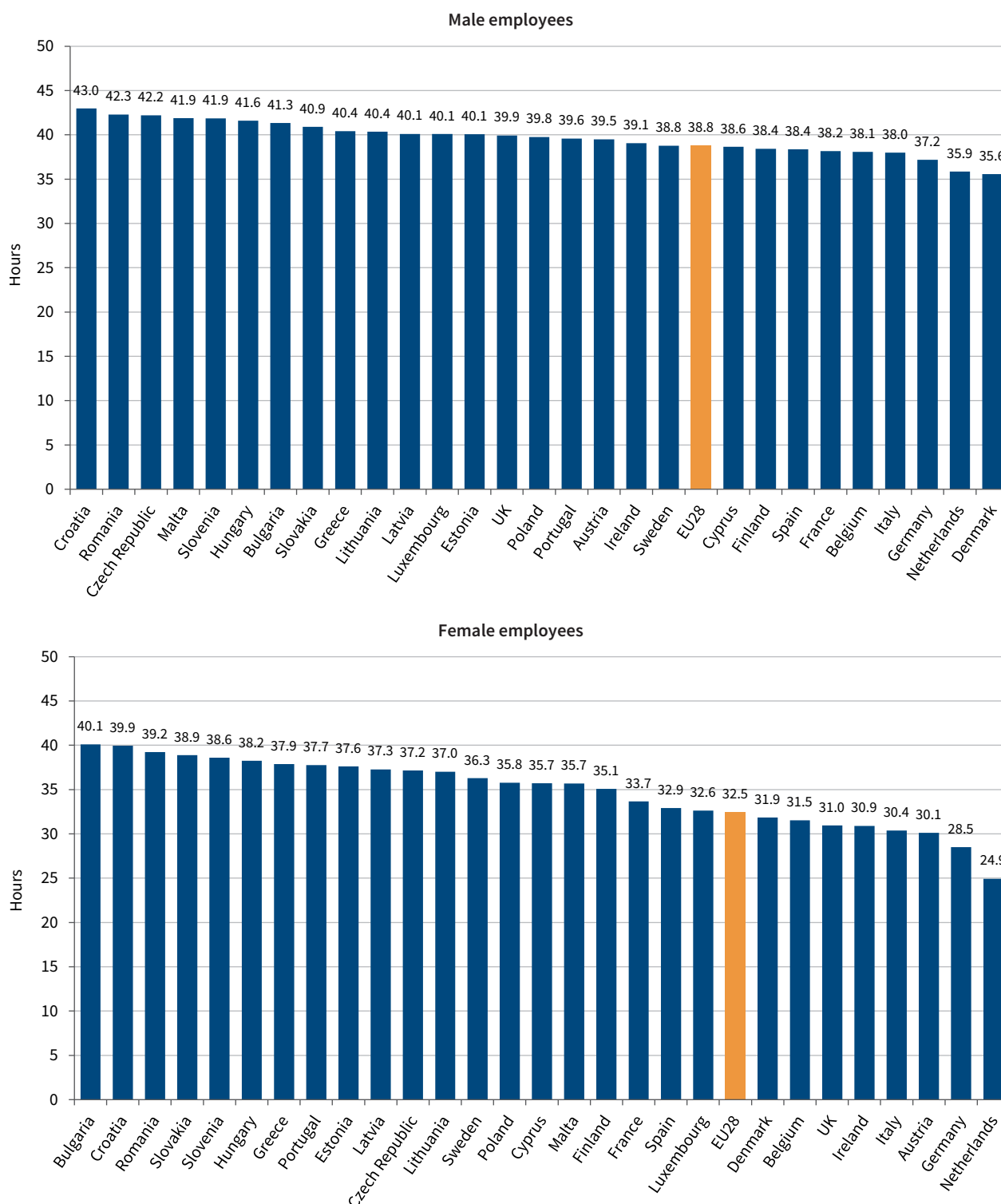
Figure 6 shows the average working time for women and men separately according to EWCS data. In all countries, male employees work on average longer hours than their female counterparts. However, the extent of the gender time gap differs across European countries, the highest gender gaps being found in the Netherlands (11 hours), the UK (8.9 hours), Austria (9.4 hours) and Germany (8.7 hours). The lowest gaps are found in Bulgaria (1.2 hours), Portugal (1.9 hours), Slovakia (2.0 hours) and Estonia (2.5 hours).

**Figure 5: Average usual weekly working hours for employees by country, 2015**



Source: EWCS 2015 (authors' calculations)

Figure 6: Average weekly working hours by sex and country, 2015



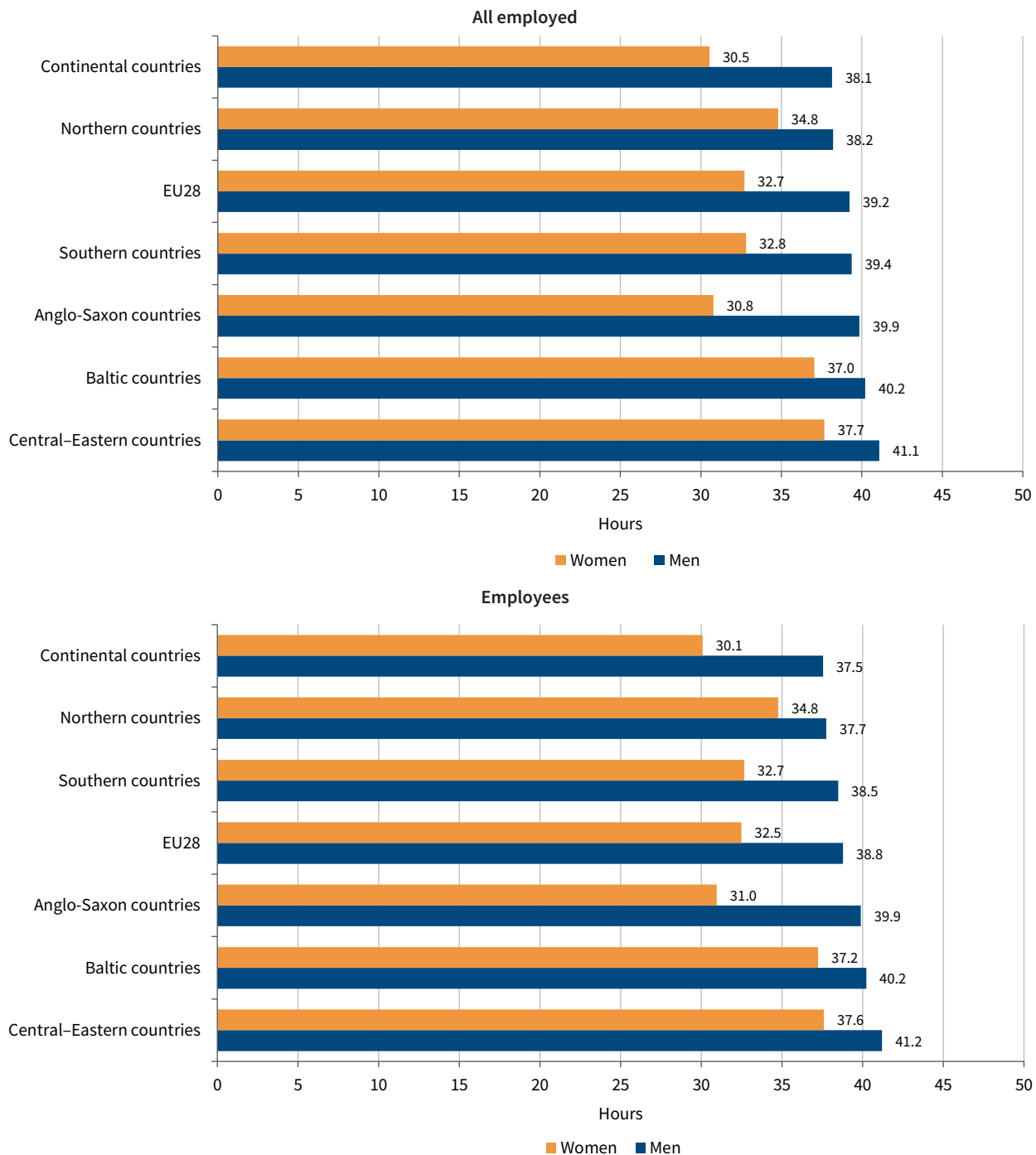
Source: EWCS 2015

Figure 7 shows the average usual weekly working time in the six country clusters. The longest average weekly working time is found in Central–Eastern countries, followed by the Baltic countries: these two country clusters display the longest weekly working hours independently of sex and employment status. It is also important to note that the Baltic countries show the

highest share of full-time dual-earner households, followed by the Northern countries and the Central–Eastern countries (see Figure B1 in the Annex).

While male employees in the Anglo-Saxon countries have a long average weekly working time, female employees have the shortest, reflecting a higher gender polarisation of working time. The gender polarisation of

Figure 7: Average weekly working hours of men and women by country cluster, 2015



Source: EWCS 2015 (authors' calculations)

working time is much less pronounced in the Central-Eastern, Baltic and Northern country clusters.

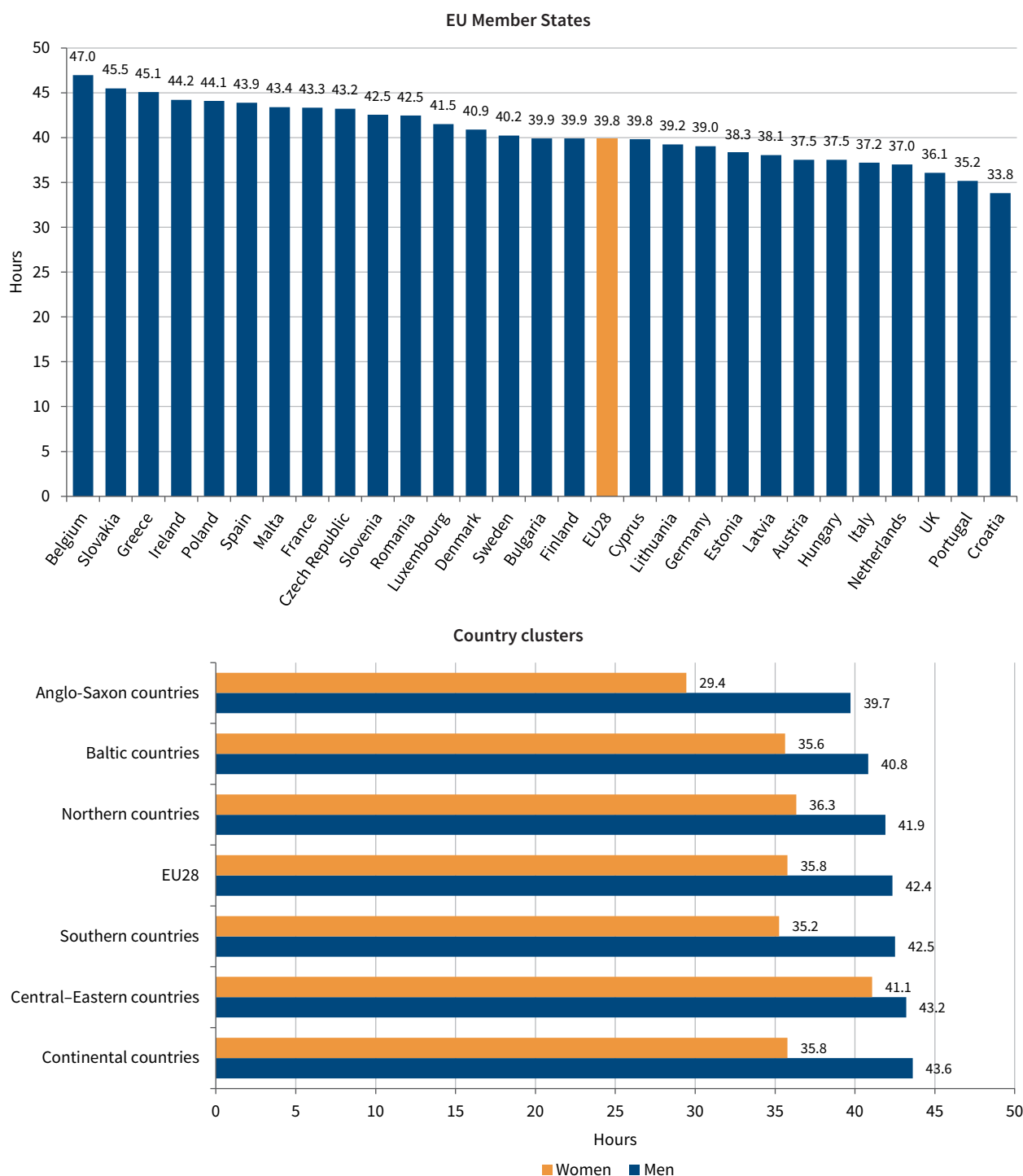
### Weekly working time among self-employed

Around 15% of the employed people in the EWCS sample are self-employed: the majority of these are male (61%) and have no employees (71%). With just a few exceptions (Bulgaria, Croatia, Hungary and Portugal), the average weekly working time of a self-employed person is significantly longer than that of

an employee. For the EU28 as a whole, the average hourly gap between employees and self-employed people amounts to around 4.3 hours. The highest hourly gap between employees and self-employed people is found in Belgium (12.1 hours), followed by Ireland (9.5 hours), Spain (8.2 hours) and France (7.5 hours).

Besides traditional factors such as market constraints and/or differences regarding work commitments and attitudes, as well as preferences in time allocation, the observed disparities in working time between employment status might be ascribed to the fact that

Figure 8: Average weekly working hours of the self-employed by country and country cluster, 2015



Source: EWCS 2015 (authors' calculations)

the self-employed are not subject to the provisions – either at country or at EU level – of the EU Working Time Directive.<sup>5</sup> Against this background, part of the observed difference in average weekly working time in Europe might be ascribed to cross-country differences in the extent of self-employment (varying from 5.7% and

7.3% in Denmark and Sweden, respectively, to 36.7% and 26.2% in Greece and Italy, respectively).

The average weekly working hours of the self-employed in 2015 varied markedly between EU Member States and between country clusters (Figure 8). The self-employed in the Central-Eastern cluster work the longest and

5 In the transport sector, there are statutory working time limits even for the self-employed (for example, pilots).



have the smallest gender gap. The gender gap in weekly working time among self-employed people is particularly pronounced in the Anglo-Saxon country cluster (around 10 hours), mirroring the situation for employees characterised by the strong gender polarisation of working time.<sup>6</sup>

The different types or groups within self-employed individuals might also be relevant to working time patterns. These different types of self-employment have been studied by Eurofound and are the theme of an extensive report similarly based on the EWCS 2015 (Eurofound, 2017).

## Working time distribution

### Incidence of part-time work

One of the most important developments in the EU at the end of the 20th century and the beginning of the 21st century has been the gradual increase in importance of part-time work. According to the Directive on part-time work (97/81/EC), a ‘part-time worker’ is:

*an employee whose normal hours of work, calculated on a weekly basis or on average over a period of employment of up to one year, are less than the normal hours of work of a comparable full-time worker.*

(Directive 97/81/EC)

The figures from EU-LFS show that part-time work as a percentage of total employment increased in the EU28 from 17.7% in 2005 to 20.5% in 2015.<sup>7</sup> While part-time work as a share of employment increased similarly for both women (from 31% in 2005 to 33% in 2015) and men (from 7% in 2005 to 10% in 2015), the average working hours of ‘part-timers’ increased in the same period for women (from 20.2 hours in 2005 to 20.9 hours in 2015), while for men they remained more or less the same (19.2 hours in 2005 and 19.3 hours in 2015).<sup>8</sup>

The trends and incidence of part-time work vary considerably across EU Member States. Average part-time hours are longer in Belgium, France, Luxembourg, Hungary, Poland, Romania and Sweden (all above 22 hours per week in 2015) and slightly shorter in Bulgaria, Denmark, Finland, Germany, Ireland, the Netherlands, Portugal, Slovakia, Spain and the UK (below 20 hours per week). Hungary, Latvia, Poland and Portugal seem to be taking a different direction in the sense that both the share of part-time work (in Latvia since 2010 and in Portugal since 2012) and the average working hours of part-timers are decreasing.

There are a variety of reasons why individuals take up part-time work. EU-LFS data list the following reasons:

- ‘could not find a full-time job’ (35% of men and 25% of women working part time in 2015);
- ‘own illness or disability’ (6% of men and 4% of women working part time in 2015);
- ‘other family or personal responsibilities’ (11% of men and 16% of women);
- ‘looking after children or incapacitated adults’ (4% of men and 26% of women);
- ‘in education or training’ (17% of men and 7% of women);
- ‘other’.

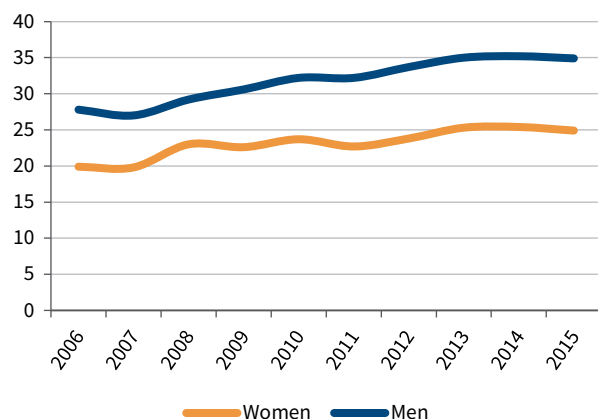
A distinctive element is the considerable difference between men and women: for women, ‘looking after children or incapacitated adults’ and ‘other family or personal responsibilities’ have most importance, whereas being ‘in education or training’ and ‘could not find a full-time job’ are more important for men. While working part time can be seen as a tool to improve an individual’s work–life balance, in fact the EU-LFS data show that the share of those working part time because they ‘could not find a full-time job’ (also designated as involuntary part-time) has increased in the past decade for both men and women in the EU28 (Figure 9). This may have important detrimental repercussions on an individual’s career progression and earnings – and therefore pension value.

6 Note that the duration of working time also differed among the self-employed in 2015. Female self-employed had a shorter working time than their male counterparts (35.8 hours for women compared with 42.4 hours for men) (Figure 8). The same is true for the usual working time for self-employed with employees (46.5 hours) versus the self-employed without employees (36.9 hours).

7 In the EU-LFS, the full-time/part-time distinction in the main job is made on the basis of a spontaneous answer given by the respondent in all countries, except for Iceland, the Netherlands and Norway, where part-time is determined on the basis of whether the usual hours worked are fewer than 35, while full-time on the basis of whether the usual hours worked are 35 or more, and in Sweden where this criterion is applied to self-employed people as well.

8 According to the EU-LFS, part-time as a percentage of total employment in the EU15 increased from 16% in 1995 to nearly 24% in 2015 (from 5% to 11% for men and from 31% to 38.5% for women).

**Figure 9: Involuntary part-time employment as share of total part-time employment (%)**



Source: EU-LFS 2006–2015

In addition, the EWCS data show that ‘short part-time’ (defined as up to 20 hours of work per week) is slowly becoming more important than ‘long part-time’ (between 21 and 34 hours of work per week). While short part-time could be an opportunity for some to re-enter the labour market or to adjust the balance between family responsibilities and work, working very short working hours is associated with lower earnings and with a reported preference for working longer hours. This suggests that this type of schedule might not necessarily be the preferred option for some of those practising it. Indeed, according to EWCS data, those working very short working hours are more likely to suffer from job insecurity and less likely to report good career prospects. On the other hand, they are more likely to report a better work–life balance, as well as finding it easier to take time off to attend to family and personal issues (Eurofound, 2016a, p. 56). According to EWCS data, the countries with the greatest growth in the share of short part-time work are:

- Germany (from 10% in 2005 to 22% in 2015);
- Austria (from 10% in 2005 to 18% in 2015);
- Spain (from 8% in 2005 to 16% in 2015);
- Poland (from 9% in 2005 to 14% in 2015);
- Denmark (from 12% in 2005 to 16% in 2015).

### Very long weekly and daily working hours

The reduction in the average usual working hours in the EU28 is also partially explained by the reduction in the share of individuals working beyond the weekly maximum of 48 hours stipulated in the Working Time Directive. This reduction, seen among both men and women according to EWCS data, is particularly noticeable for the self-employed, to whom the directive does not apply; the proportion of the self-employed

working 48 hours or more per week dropped from nearly 50% in 2005 to less than 40% in 2015.

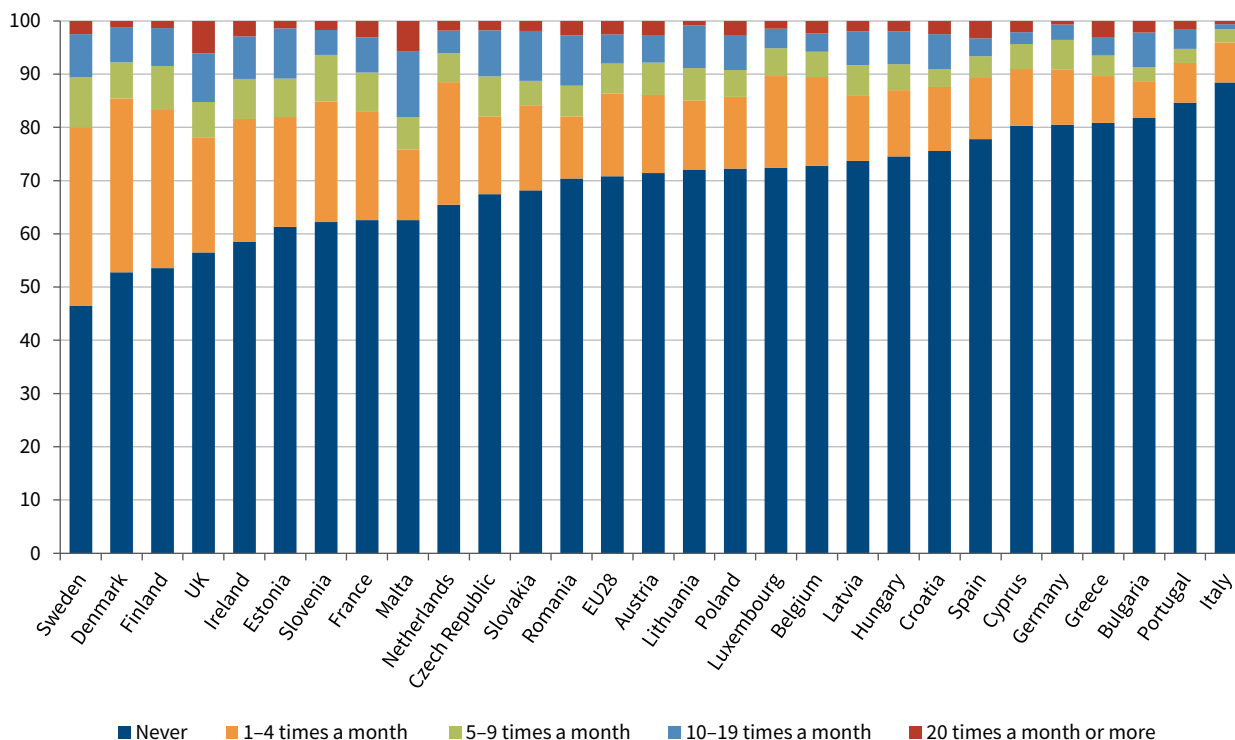
This development can be considered both significant and positive because not only are long hours associated with depression, anxiety, sleep disorders and coronary heart disease (see, for example, Bannai and Tamakoshi, 2014; Kivimäki et al, 2015), but they also make achieving a better work–life balance more difficult (see Chapters 4 and 7 for more details on this). The overview report of the sixth EWCS confirmed that ‘workers reporting long working hours are more likely to have problems with work–life balance and health than workers with standard working hours’ (Eurofound, 2016a, p. 56).

The EWCS also asks workers how many times a month they work 10 hours or more a day. The general trend for both self-employed and employees (men and women) is that the share of those reporting working long days is decreasing, as well as the frequency with which people work more than 10 hours a day. Men reported working 10 hours or more a day, on average, four times per month in 2005 (1.9 times for women), compared to 3.1 times in 2015 (1.5 times for women).

Overall, the majority of workers in 2015 (more than 70% of employees and 50% of self-employed) stated they never work 10 hours or more a day. About 16% of employees and 18% of self-employed stated they work 10 hours or more a day one to four times a month, while 14% of employees and 32% of the self-employed said they do it five or more times in a month. The proportion of those stating that they work 10 hours or more a day 20 times a month or more is very low among employees (3.8% among men and 1.4% among women) – in contrast, it is worryingly high among the self-employed: 10% of female self-employed and 18.5% of male self-employed.

Figure 10 shows the proportion of employees in each Member State according to the number of times they reported working 10 hours a day or more over the period of a month. There is a north–south gradient: the further north countries are, the more likely it is that people declare they normally work 10 hours a day at least once a month. The largest variation is among those reporting that they normally work 10 hours or more per day between one and four times a month: from 7% to 8% in Bulgaria, Italy and Portugal to 30% or more in the Nordic countries. One explanation for this variation is the possibility that some employees have to work more hours on certain days in order to obtain more continuous free time. A high proportion of those employees who replied that they worked 10 hours or more a day between one and four times per month in countries such as Sweden (56%), Finland (48%) and Denmark (44%) reported that they can adapt their

Figure 10: Employees working more than 10 hours a day by country, 2015 (%)



Source: EWCS 2015

working hours within certain limits (through, for example, flexitime).<sup>9</sup>

### Working time distribution among employees

Since the average weekly working time conceals large differences in the distribution of working time, working time was divided into five categories to take account of various forms of part-time work (short and part-time), various definitions of full-time work and very long working hours (48 hours a week<sup>10</sup> or more) – see Figure 11.

A significant proportion of male and female employees in the EU28 are concentrated around the 40 hours' norm (60% and 46%, respectively). As also expected, the

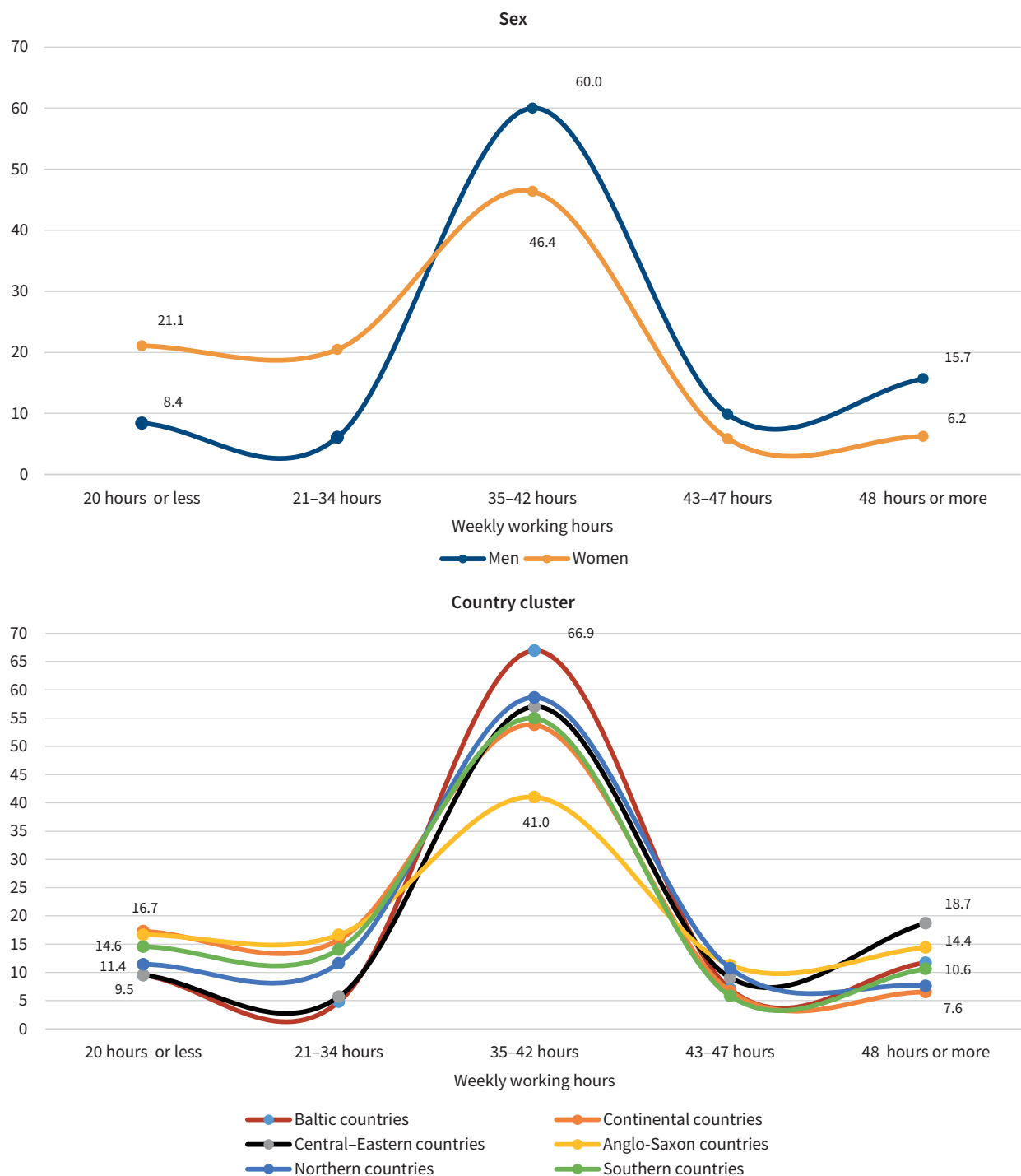
dispersion of working time is higher among women than among men. Around 21% of female employees work on average fewer than 21 hours per week compared with only 8.4% of male employees. The share of employees working very long hours (48 hours or more) is notably high, with a significantly higher incidence of long working hours among male employees (15.7% compared with 6.2% among female employees) (Figure 11, upper panel).

In terms of country clusters, the concentration around the 40 hours' norm (that is, 35–42 hours per week) is more pronounced in the Baltic countries and much less pronounced in the Anglo-Saxon countries, with a difference of about 26 percentage points between these two extremes (Figure 11, lower panel).

<sup>9</sup> Flexitime is defined as the organisation of working hours in which employees can choose their starting and finishing hours within certain limits.

<sup>10</sup> The choice of a 48 hours' upper limit is related to the Working Time Directive, which requires EU Member States to guarantee employees the right of a limit of weekly working hours, which must not exceed 48 hours on average including any overtime.

Figure 11: Working time distribution for employees by sex (EU28) and country cluster, 2015 (%)

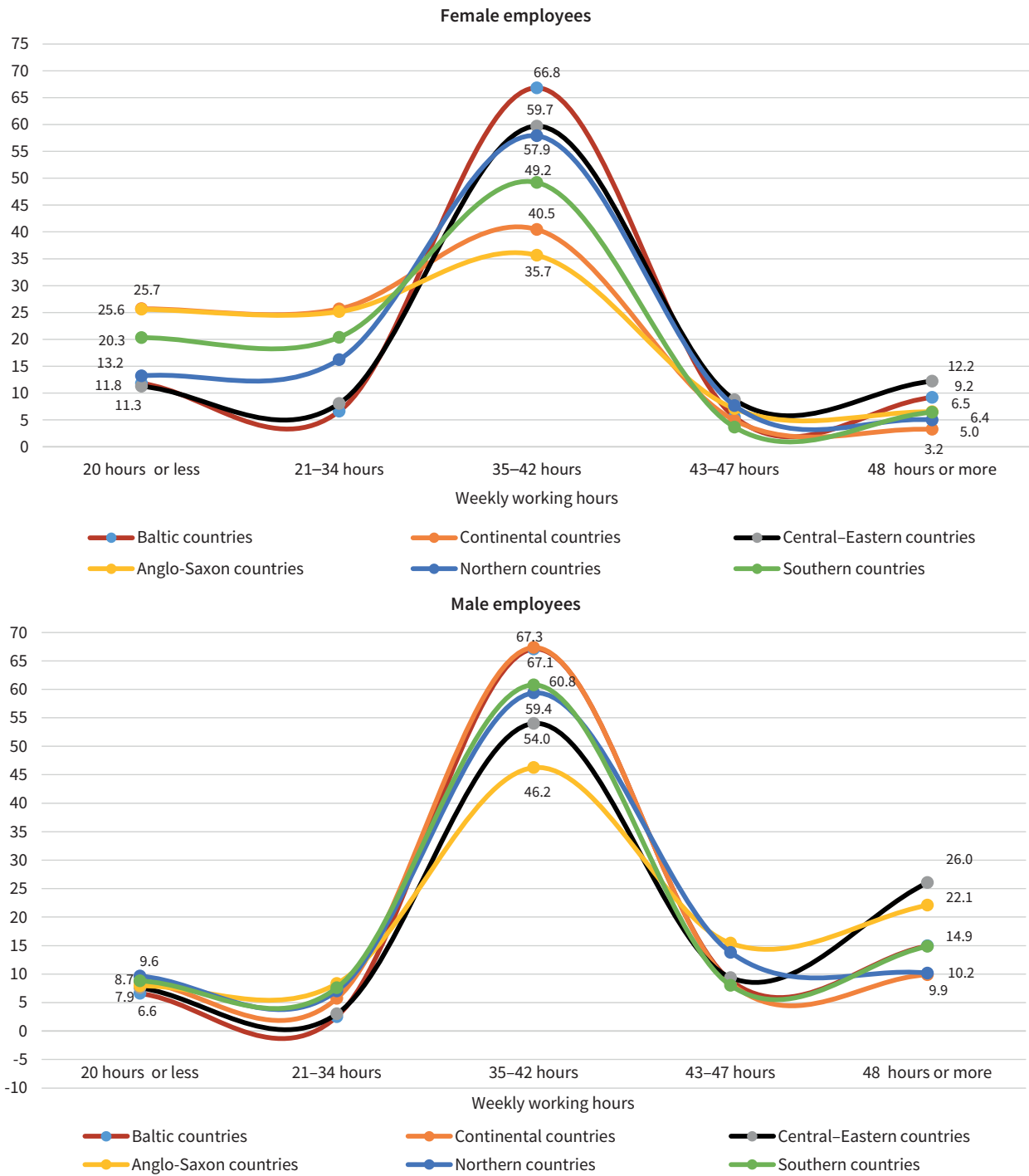


Source: EWCS 2015 (authors' calculations)

There are large differences in the distribution of working time for male and female employees in the six country clusters (Figure 12). In the Central-Eastern and Baltic countries, the working time distribution of dependent male and female employees is rather similar – probably due to the resilience of a full-time working culture and a legacy from the communist era – with a high concentration of men and women around the 40 hours’

norm (67% for both men and women in the Baltic countries, and 54% and 60% for men and women, respectively, in Central-Eastern countries). These clusters are different from the other clusters mainly in relation to the lower gender gap in weekly working time, the low incidence of female part-timers, and the relatively high share of both men and women working extremely long hours (48 hours or more).

Figure 12: Working time distribution for employees in the country clusters by sex, 2015 (%)



Source: EWCS 2015 (authors' calculations)

Around 26% of male employees and 12% of female employees work at least 48 hours per week in the Central-Eastern countries, the corresponding figures for the Baltic countries being around 15% and 9% (Figure 12). The finding that gender-specific differences in working hours are very small in both the Central-Eastern and the Baltic countries is remarkable, especially in view of the fact that the average female employment rate – particularly in the Baltic countries – is above 70% and given the relatively higher incidence of full-time dual-earner households (see Figure B1 in the Annex).

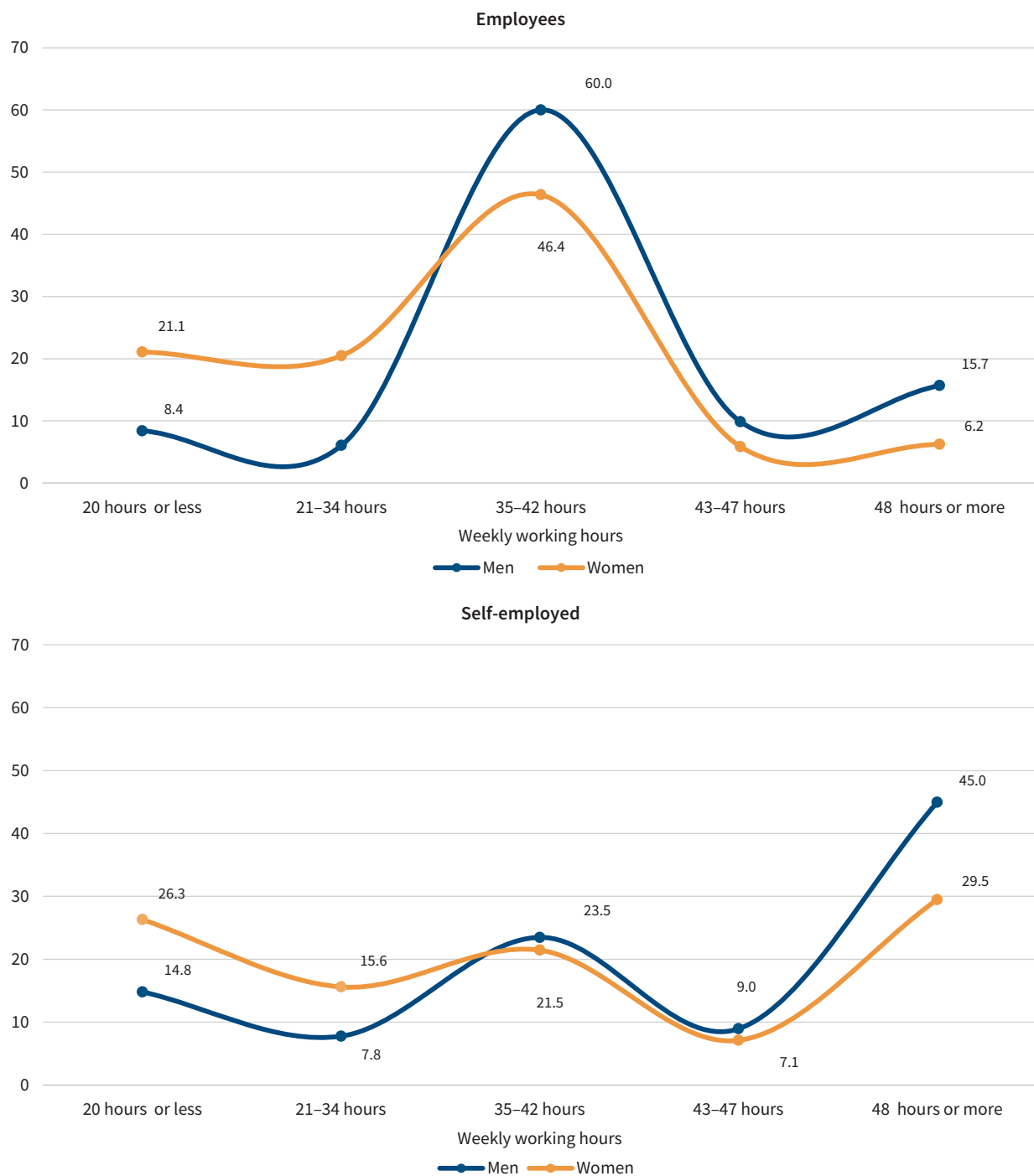
In the Northern countries cluster, the concentration of employees around the 40 hours' norm is less pronounced than in the Baltic countries: around 59% of men and 58% of women in the former compared with around 67% in the latter. Among female employees, the incidence of very long working hours is particularly low in the Continental and Northern countries, at 3.2% and 5%, respectively; the same is true for male employees with an incidence of 9.9% and 10.2% respectively (Figure 12, lower panel). The proportion of employees working long hours is highest in the Central-Eastern

countries (12.2% for female and 26.0% for male employees). Focusing now on the lower tail of the working time distribution, the share of women working short part-time is lowest in the Northern, Baltic and Central-Eastern clusters.

In the Anglo-Saxon countries cluster, the working time distribution appears to be less concentrated around the 40 hours' norm and displays, in a cross-country comparative perspective, a larger dispersion of working time. Furthermore, the gender disparities in working

time distribution and the gender polarisation of working time is clearly more pronounced, with nearly 26% of women working short part-time compared with 7.9% for men (Figure 12). The gender gap in the share of people working 35–42 hours is almost 11 percentage points (46.2% for men versus 35.7% for women). Also remarkable is the high incidence of men working very long hours (22.1%), which may in part be due to the weak and decentralised regulation of working time and the possibility for employees in the UK to partially opt out of the Working Time Directive.

Figure 13: Working time distribution of employees and self-employed, EU28, 2015 (%)



Source: EWCS 2015 (authors' calculations)

Gender disparities in working time distribution appear even more pronounced in the Continental and Southern clusters. Female and male employees exhibit different working time patterns, with women overrepresented in the lower tail of the working time distribution. In these two country clusters, between 40% and 50% of female employees work part time while more than two-thirds of male employees work full time. The gender pattern of these two clusters is quite similar to the Anglo-Saxon one, apart from the incidence of long working hours which is significantly lower than in the other country clusters.

### Working time distribution among the self-employed

The distribution of working time of self-employed people differs dramatically from that of employees, in particular at the two ends of the distribution (Figure 13).

While the working time of employees in the EU28 is clearly concentrated around the 40 hours' norm, this applies to less than a quarter of self-employed people. The share of short part-timers and long working hours among the self-employed is significantly larger than among employees, implying a larger dispersion and polarisation of working time among self-employed people.

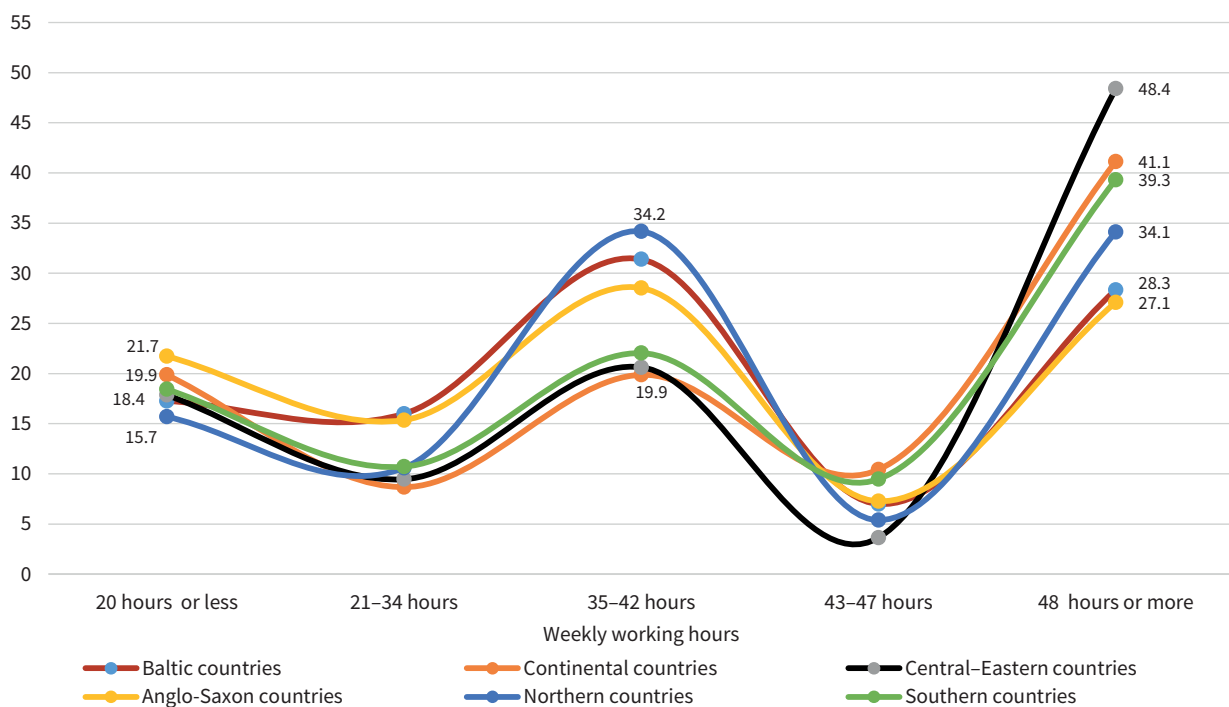
The incidence of long working hours is particularly high in the Central–Eastern country cluster, with almost half of self-employed people working at or above the 48

hours limit imposed by the Working Time Directive (Figure 14). The comparison between self-employed people and employees is a good illustration of the difference between regulation of working time by law or collective agreements and market-based regulation.

### Working time patterns across the life course

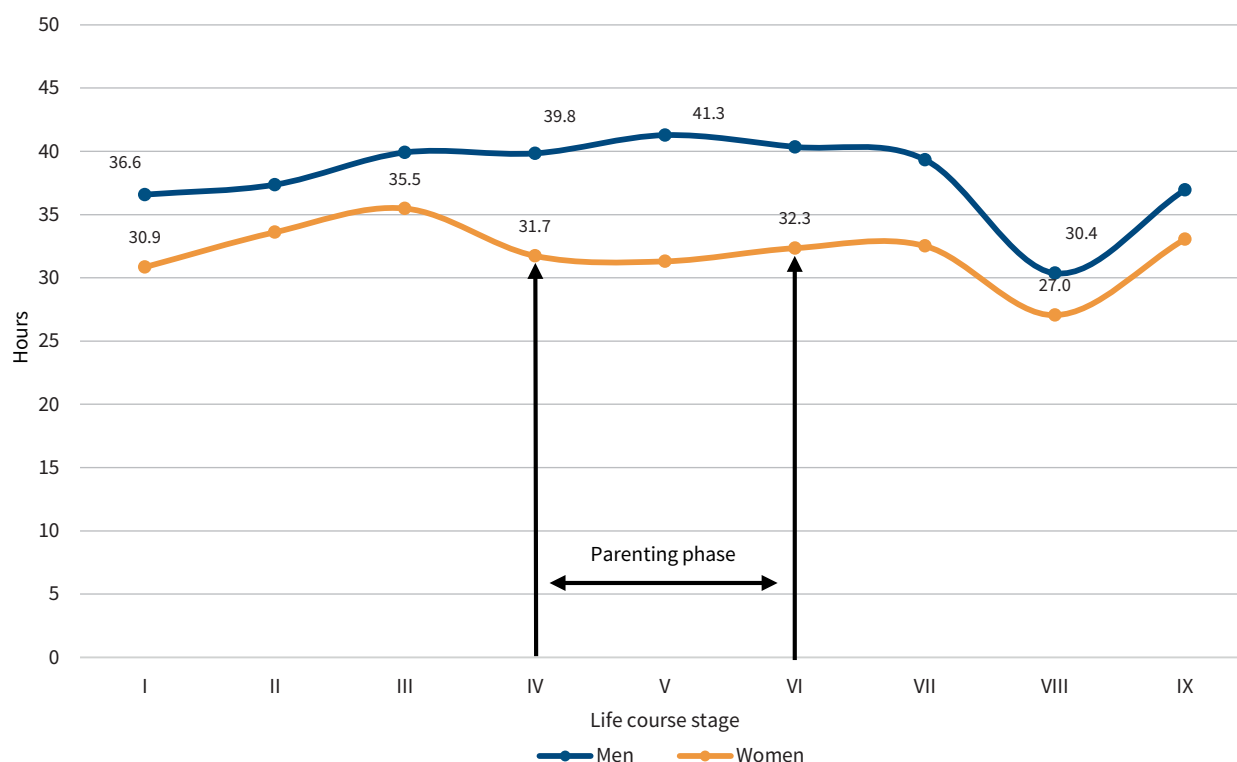
In general, the extent of labour market attachment varies significantly across the life course and in particular during the parenting phase. Previous empirical evidence has shown that the impact of young children living in the home, for example, on the supply of female labour varies significantly across countries (Anxo et al, 2007, 2011). In some countries, the presence of young children affects female labour force participation through a definitive or temporary withdrawal from the labour market; in other countries, the impact of having young children essentially takes the form of a permanent or a temporary reduction in working time. Furthermore, in some countries such as in Italy, it may also be the case that the decision to cohabit or to marry affects female labour supply negatively (Anxo et al, 2011). In other words, there is a risk that the impact of changes in household composition over the life course on labour supply is underestimated in the EWCS sample of employed individuals, since these impacts are only observed at the extensive margin or, put another way, on the working time of employed people.

Figure 14: Working time distribution of self-employed by country cluster, 2015 (%)



Source: EWCS 2015 (authors' calculations)

Figure 15: Average weekly working hours for employees across the life course, by sex, EU28, 2015



**Note:** I Single people (18–35 years), living with their parents or relatives; II Single people (under 46 years), without children; III Younger cohabiting couples (woman under 46 years), without children; IV Cohabiting couples with youngest children under 7 years; V Cohabiting couple with young children between 7 and 12 years; VI Cohabiting couple with teenage children between 13 and 18 years; VII Midlife ‘empty nest’ couples without resident children; VIII Older cohabiting couples without resident children; IX Single people (aged 50 years or older), without resident children.

**Source:** EWCS 2015 (authors’ calculations)

Bearing these caveats in mind, this section now examines the working time profiles across the stylised life course of male and female employees. Figures 15 to 18 show the average weekly working time in the EU28 and for the six country clusters across the nine life stages.

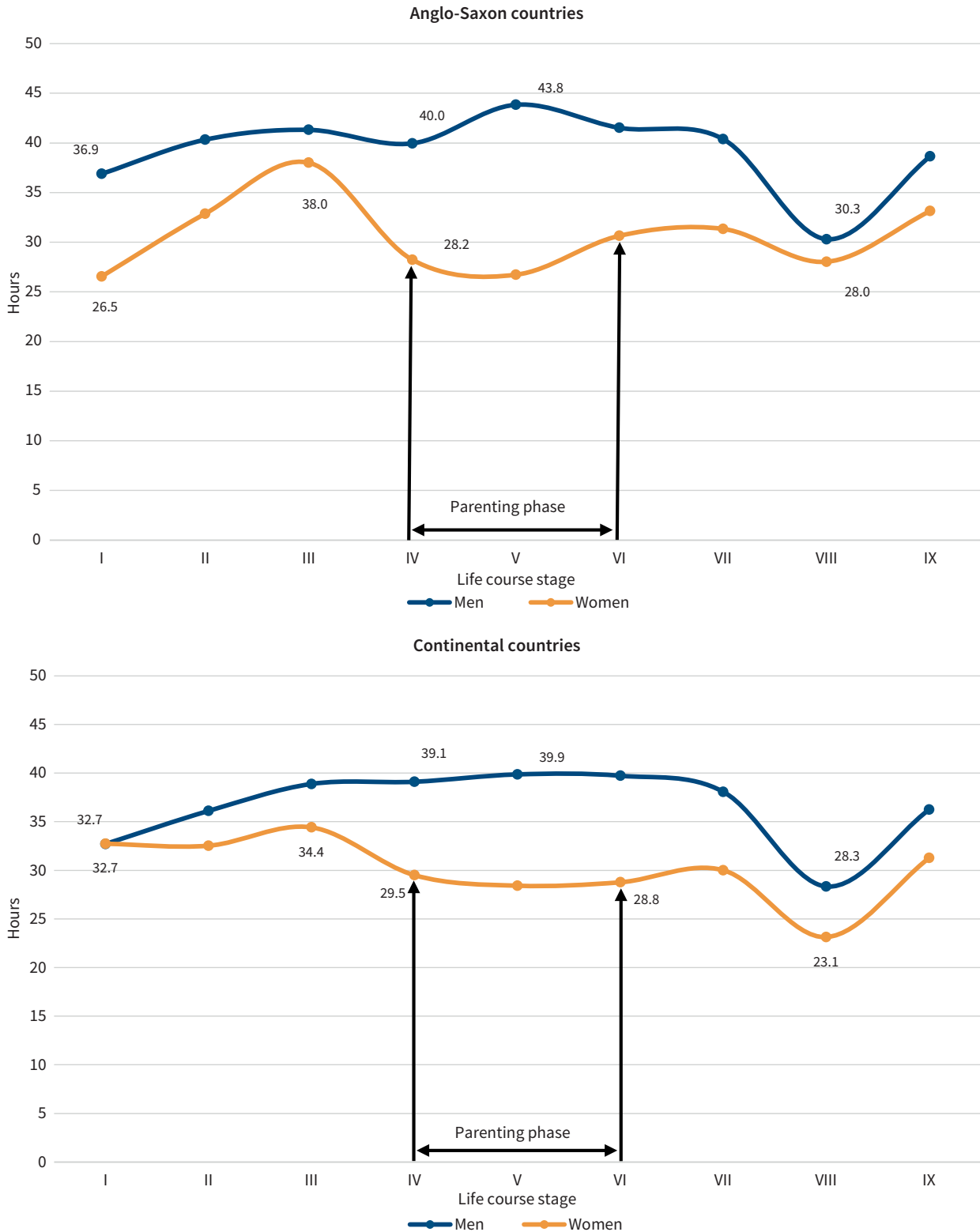
The gender gap in working time profiles is important for the EU as a whole, with women working fewer hours than their male counterparts in each life stage (Figure 15). Female employees also exhibit a higher degree of variability in working time across their life course. Men’s working time, in contrast, appears to be less affected by the respective life stages, although Figures 15 to 18 indicate a slight tendency towards longer working time during the parenting phase. However, in the early stage of the life course, when individuals have few family/caring commitments, the gender gap is surprisingly large, amounting to 5 hours for single people living with their parents and 3.5 hours for young single people living on their own.

For the EU as a whole, women’s working time attains a peak during the phase of union formation (young cohabiting women without children), with the corresponding peak for men happening later on – when they have children aged between 7 and 12. Not surprisingly, the largest gender gap in working hours occurs during the parenting phase. While on the whole, the reduction in working time for employed mothers is most important during the early phase of childhood, working time remains more or less consistently at a lower level as long as children are living in the household. In contrast, the parenting phase for fathers is marked by a slight but continuous increase in working time. Independently of gender, working time starts declining again during the ‘empty nest’ phase of life and reaches a minimum level among older cohabiting couples without children in the home.

The working time profiles of employees differ significantly across the six country clusters (Figures 16 to 18). Compared with cohabiting women without children, cohabiting women with pre-school children (under 7 years old) work 10 hours less per week in the Anglo-Saxon countries and 5 hours less per week in the Continental countries. With the exception of the Central–Eastern and Northern clusters, the gender gap in working time widens during this life stage.



Figure 16: Average weekly working hours across the life course for employees in the Anglo-Saxon and Continental clusters by sex, EU28, 2015



Note: For a guide to life course stages, see the note to Figure 15.  
 Source: EWCS 2015 (authors' calculations)

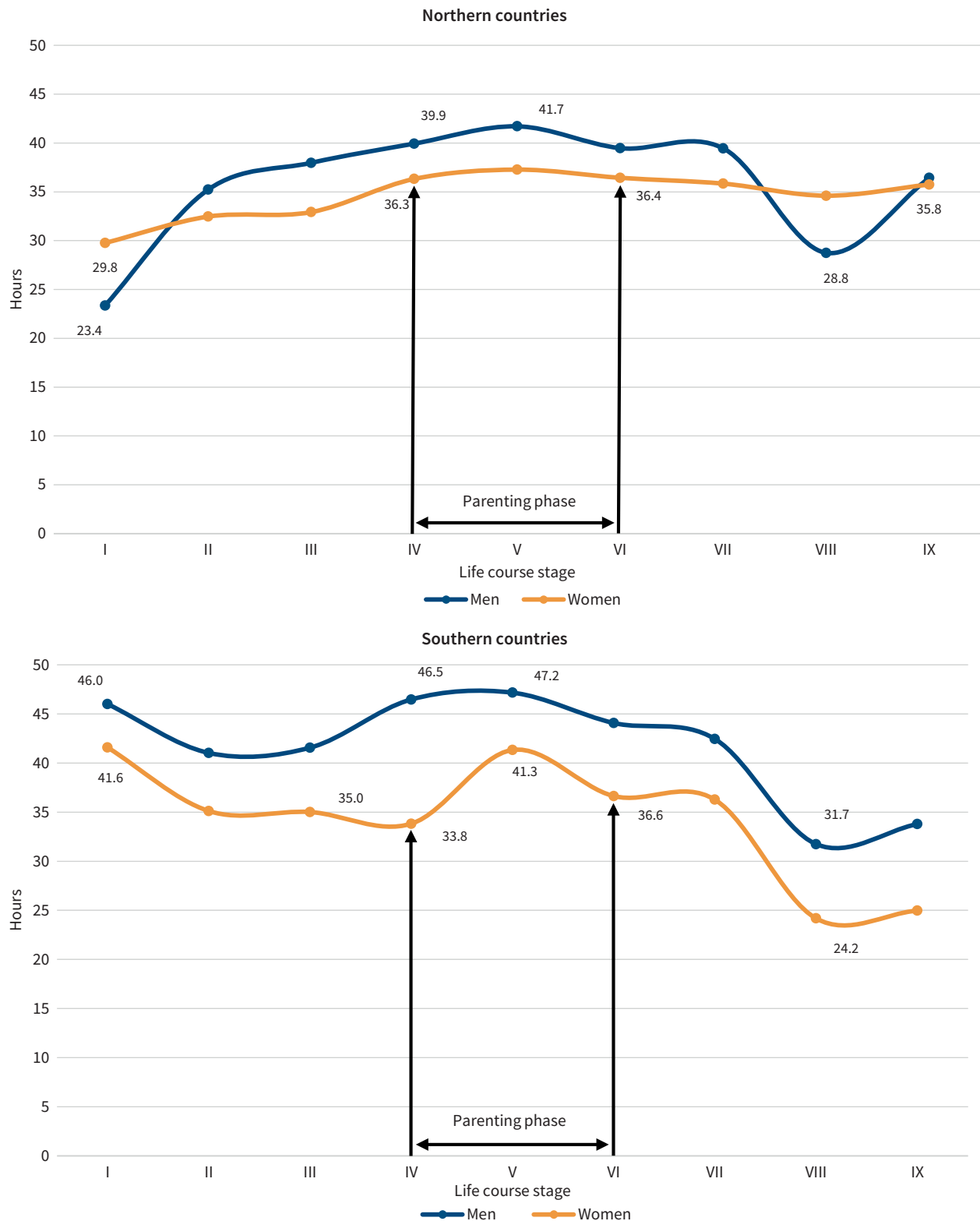
The reduction in working time among mothers of young children (that is, 7–12 years) compared with cohabitating women without children is significantly more marked in the Anglo-Saxon cluster (around 11

hours) and the Continental cluster (around 6 hours) (Figure 16), where part-time work among mothers tends to be more widespread.

The impact of having young pre-school children on the working time of female employees is much less pronounced in the Baltic countries (a reduction of 3.8 hours) (Figure 18) and is particularly small in the

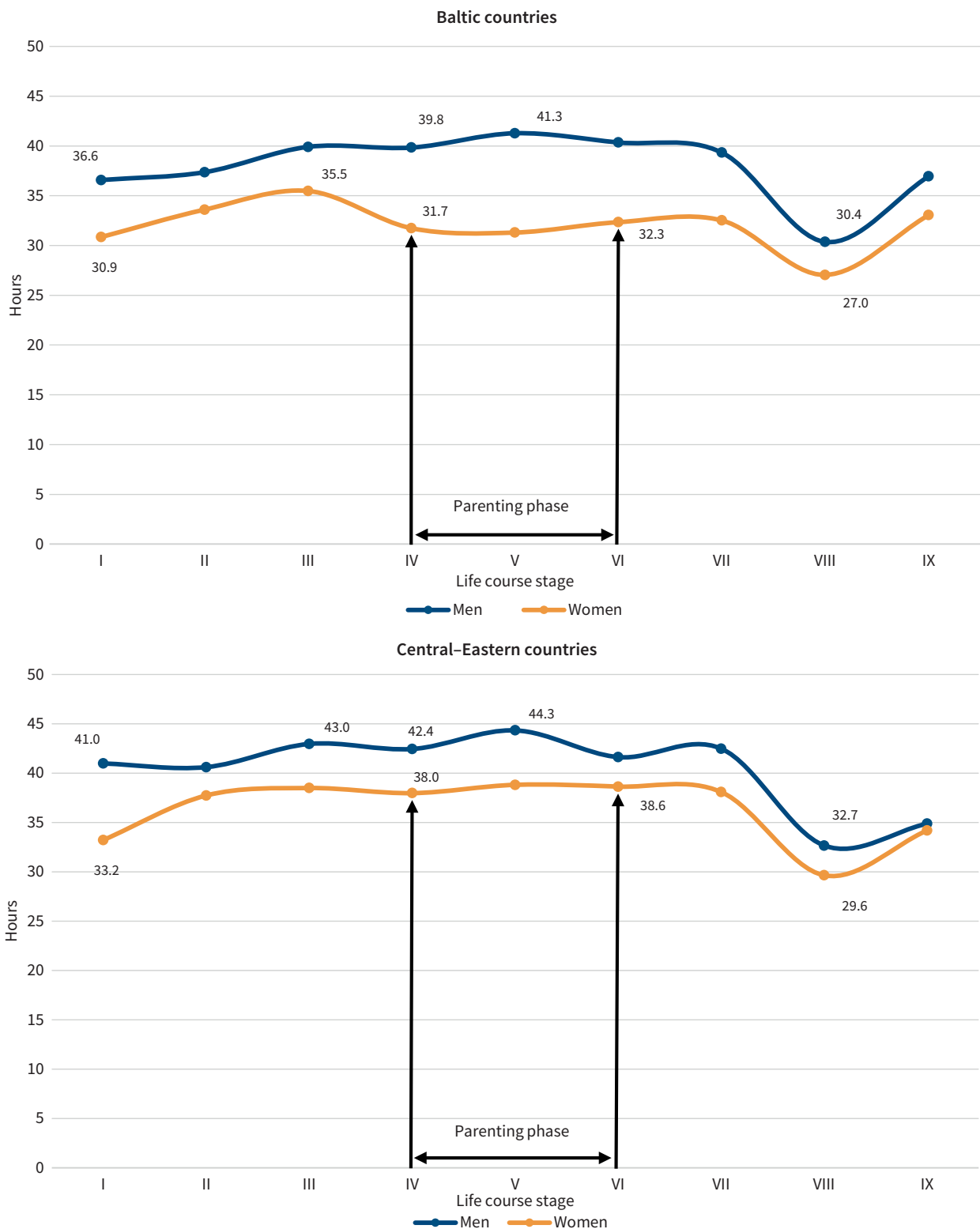
Central–Eastern countries (around half an hour) (Figure 18) and the Southern countries (around an hour) (Figure 17). There are strong reasons to believe, therefore, that the relatively large reduction in working

**Figure 17: Average weekly working hours across the life course for employees in the Northern and Southern clusters by sex, EU28, 2015**



**Note:** For a guide to life course stages, see the note to Figure 15.  
**Source:** EWCS 2015 (authors' calculations)

Figure 18: Average weekly working hours across the life course for employees in the Baltic and Central-Eastern clusters by sex, EU28, 2015



Note: For a guide to life course stages, see the note to Figure 15.  
 Source: EWCS 2015 (authors' calculations)

time in the Anglo-Saxon and Continental clusters is due to a significant increase in female part-time work during the parenting phase, which is not the case in the Central-Eastern and Southern countries where full-time work remains the norm for employed mothers.

A clear pattern can also be identified during the retirement phase: except for women in the Northern and Southern clusters, working time declines sharply for older cohabiting couples. This tendency is, however, reversed for singles in the same age group.

The cumulated gender gap in working time across the life course is lowest in the Northern cluster and largest among the Anglo-Saxon and Continental clusters. Even though some selection and sample bias may be occurring, the working time of female singles living with their parents is higher than their male counterparts in Northern countries.

Not surprisingly, the parenting phase also has contrasting gender effects among the selected country clusters. For fathers, this life stage involves a lengthening of working time while for the majority of Member States it involves a decline in the working time of mothers.

The most striking result is the increase of working time among mothers of young children in the Baltic countries. Once again, the hypothesis that this result is due to some sample selection bias cannot be excluded. Another possible explanation is that the Baltic sample covers, to a lesser extent, employees who are employed but temporarily absent from work on parental leave; this would mean that the impact of having children on female employees' working time might be underestimated in this cluster. As shown by previous studies (Anxo et al, 2007, 2011), the impact of having young children on female labour supply in the Baltic countries essentially takes the form of a temporary reduction in working time within the framework of the parental leave system and has very limited effects on female labour force participation. This is in contrast with the situation in the Southern countries, where the parenting phase for many mothers still implies a withdrawal from the labour market.

In sum, female employees across all life stages in the European Union work fewer hours than their male counterparts. The working hours of women are moreover much more sensitive to the different life stages. With the notable exception of Northern and Central-Eastern Member States, women's working time decreases during the parenting phase and the gender gap in working time significantly increases. The variation of women's working time across the life course is significantly larger in both the Anglo-Saxon and the Continental country clusters, as is the cumulative gender gap in working time. The impact of having young children on working time of employed people is much lower in the remaining country clusters.

However, the nature of the EWCS sample (that is, the working population at work) means it is not possible to assess the total impact of having children on female labour supply. Several empirical studies (Anxo et al, 2007, 2011) have clearly shown that the impact of

having young children on labour force participation in other EU Member States is much stronger, implying a temporary or definitive withdrawal from the labour market; however, these studies also found a lower effect of having children on working time of employed people. As already highlighted, the incidence of part-time work in both the Baltic and Central-Eastern country clusters is limited. Limited working time options and flexibility across the life course imply that employees have either to work full time or to drop out from the labour market.

### Working time distribution: A regression analysis

The cross-country differences in the distribution of working time and the differences in working time profiles over the life course described above could be attributed to both compositional effects and/or structural differences in, for example, a country's demographical structure or the distribution of employment across sectors. In order to take into account these structural effects and to identify the socioeconomic factors that impact on working time distribution, a set of multinomial regression analyses for men and women as well as for employees and the self-employed was estimated separately.<sup>11</sup>

In order to cover the whole working time distribution, the dependent variable – weekly working time in main job – was divided into four categories:

- short part-time (less or equal to 20 hours);
- long part-time (21–34 hours);
- normal full-time (35–42 hours);
- long hours (over 42 hours).

'Normal full-time' was chosen as the reference category.

This approach makes it possible to analyse and identify the factors that affect the likelihood of an individual being situated in one of the four working time categories. As in the case of previous studies (Eurofound, 2013), the regression analysis included a number of control variables. These are:

- sex (reference category: male);
- skills level (reference category: medium-skilled);
- life stage (reference category: young couples without children);
- country cluster (reference category: Central-Eastern country cluster);
- sector (reference category: manufacturing);
- institutional sector (reference category: private sector and male-dominated sector);

11 In a first step, a complete model with sex and employment status as independent variables was computed. Since statistically significant effects for sex and employment status were found, separate estimations for men and women as well as for wage earners and the self-employed were performed.

- establishment size (reference category: medium sized);
- employment status (reference category: employees);
- contract form (reference category: open-ended contract);
- working time organisation (limited working time flexibility, regularity and autonomy of working time inserted as dummy variables);
- job characteristics (job autonomy, supervision, seniority, work intensity);
- atypical work (night, shift and weekend work included as dummy variables).

These variables are detailed in the Annex.<sup>12</sup>

### All employed persons

As shown by the results of the estimations (see Table C2d in the Annex), the predicted probability that an employed person works short part-time, long part-time, normal hours and long hours is 10.4%, 11.5%, 59.5% and 18.6%, respectively.<sup>13</sup>

Not surprisingly, women have, all other things being equal, a significantly higher likelihood of working part-time (both short and long part-time) than their male counterparts. Conversely, women have a lower likelihood of working long hours.

The skills level of respondents also affects their place in the working time distribution. High-skilled workers have a lower probability of working short part-time and conversely a higher likelihood of working long hours.

Regarding the stylised life course, the incidence of short part-time is concentrated in the early stage of the life course (entry into the labour market) and at the end of the job career.

The parenting phase also has a significant effect on the position of the respondent in the working time distribution. Married/cohabiting workers with young pre-school children have a higher probability of working long part-time and a lower probability of working long hours compared with young married/cohabiting employees without children in the home.

The incidence of long hours also varies according to the sector and is more prevalent in agriculture, wholesale and retail, and transport than in manufacturing. Short and long part-time work is significantly more prevalent in the education and health sectors. The same is true for

female-dominated sectors – but not for the public sector.

The incidence of short and long part-time work is significantly higher in the Anglo-Saxon and Continental country clusters than in the Central–Eastern country cluster. Working in the Anglo-Saxon country cluster more than doubles the likelihood of working short part-time and more than triples the probability of working long part-time.

The size of the establishment also affects where the worker is located in the working time distribution: short part-time is more prevalent among small establishments, while standard normal hours dominate within large establishments.

The results of the estimation also show that employees on short-term contracts are more prone to working short part-time. Self-employed people are also more likely to work short part-time and long hours.

Looking at other job characteristics, respondents with higher job autonomy and supervisory tasks have a lower likelihood of working reduced hours and a higher probability of working long hours. The results also show a positive correlation between work intensity and long hours.

Regarding atypical work, workers working during weekends and at night have a higher probability of working long hours, while shift workers have a higher probability of working normal/standard hours and a lower probability of working long hours.

### Female employees

All other things being equal, female employees have a higher likelihood of working shorter hours and, conversely, a lower likelihood of working long hours compared with their male counterparts (see Table C3 in the Annex).

According to the results of the estimations (see Table C4 in the Annex), the predicted probability that a female wage earner works short part-time, long part-time, normal hours and long hours is 17.6%, 21.4%, 52.8% and 8.2%, respectively. Low-skilled female employees are more prone to work short part-time than medium-skilled female employees (this probability increases by 15.1 percentage points or 88%). Conversely, high-skilled female employees are more likely to work long part-time (an increase in the probability of 9.1 percentage points or 51%).

12 To assess the extent to which the estimations were prone to multicollinearity, a test of multicollinearity (variance inflation factor, Stata procedure, Collin) was performed. The results of the test show that the hypothesis of multicollinearity can be rejected (the results are available on request).

13 From now on, the impact of a specific control variable on the likelihood of being in one of the defined working time categories compared with the reference category (in this case to work normal full-time, 35–41 hours per week) is either expressed in percentage points (that is, the marginal effect estimated at sample means) or as the percentage variation in the predicted probability.

Female part-time work (both short and long part-time) is more prevalent in female-dominated sectors such as retail, health (long part-time) and education (both). Women working in the public sector have a higher probability of working standard hours and are less likely to work short hours.

Looking at job characteristics, female workers on short-term contracts and female employees with a shorter tenure are more likely to work part-time (short or long) than their male counterparts.

Regarding atypical work, night and weekend work is more frequent among female employees with long working hours, but not shift work which is more prevalent among women working normal/standard working hours.

The position of women in the working time distribution is strongly affected by their life stage. Compared with cohabiting women without children (the reference category), the propensity to work short part-time increases in all life stages except for young singles living on their own (see Table C4 in the Annex). The results of the estimations show that the probability of working short part-time is particularly high for young female singles living with their parents and also for older cohabiting women without children living in the home (that is, at the two extreme ends of the age distribution). To illustrate: the likelihood of a young woman living with her parents of working short part-time is 15.8 percentage points higher than the reference category; the corresponding figure for older cohabiting women was 32 percentage points (or an increase of more than 188% in this probability). For young women who are still living at home, working short part-time might be a strategy to combine work with education, while for older women, short part-time might be a means to progressively exit from the labour market at the end of the job career.<sup>14</sup>

Not surprisingly, the likelihood of working short and substantial part-time is also particularly high during the parenting phase. For example, the probability of working short part-time increases by 94.1% for mothers with pre-school children – the corresponding figure for long part-time is 63.8%. Globally, the propensity to work long hours is lower than for men and independently of the age of the children. The incidence of long working hours also decreases significantly among older cohabiting women without children living in the home.

The incidence of female part-timers also varies significantly among the country clusters. Compared with the Central–Eastern country cluster (reference

category), female short part-time is more prevalent within the Anglo-Saxon and Continental country clusters (an increase of 113.0% and 88.0%, respectively) and to a lesser extent in the Northern and Southern country clusters (an increase of 28.0% and 23.9%, respectively). Roughly the same country patterns exist for female long part-timers in the Anglo-Saxon and Continental country clusters, with female employees having a significantly higher likelihood of working long part-time. In the Baltic country cluster, female employees are less prone to work short and long part-time. Female employees living in the Central–Eastern countries, however, have a significantly higher probability of working long hours than in other country clusters (see Figure 12, upper panel).

### Male employees

The likelihood that male employees work part-time is, all other things being equal, significantly lower than for female employees. As also expected, the incidence of long working hours is higher for men than for women: the predicted probability of working short part-time is 3.3% for men and 17.6% for women; for long part-time, the corresponding figures are 4.3% for men and 21.3% for women. The predicted probability of working long hours is 21.3% for men and 8.2% for women (see Tables C4 and C5 in the Annex).

Men's working time is also affected by their life stage, but in different ways. Compared with the reference category (cohabiting men without resident children), male employees have a significant higher propensity to work short and long part-time at the beginning and particularly at the end of their working life. By way of illustration, young singles living with their parents have an 85% higher probability of working short part-time (the corresponding figures for older cohabiting or single males are extraordinarily high, over 700% and nearly 200%, respectively). Even though cohabiting fathers with young children also have a high probability of working long part-time (an increase of 2.2 percentage points or 66.6%), overall similar results were found compared with the case of short part-time. In other words, male part-time is more prevalent at the phase of entry into the labour market (a combination of work and education) and during the exit phase (progressive retirement). The likelihood of male employees working long hours increases significantly when their children are attending formal school (between 7 and 18 years). Like their female counterparts, the incidence of long working hours decreases significantly among older cohabiting men without children living in the home.

<sup>14</sup> This result for older cohabiting women may simply be the result of a cohort effect, but as mentioned previously, the cross-sectional nature of the EWCS does not make it possible to distinguish between the life course effect (age) and the cohort effect (that is, these female cohorts have a low labour market attachment).

The decision to opt for part-time work depends strongly on men's country of residence. Men's propensity to work part-time (both short and long) is significantly higher in the Continental countries than in Central–Eastern countries. With the exception of the Baltic countries where there is no difference from the reference category, the likelihood of working long part-time is higher in all the remaining country clusters, with the highest probability being found in the Anglo-Saxon countries. In all country clusters, the likelihood of men working long hours is significantly lower than in the Central–Eastern countries.

In summary, the results of the multinomial regression confirm the previous descriptive findings. Irrespective of the life stage and country women live in, they are more likely to work fewer hours per week than their male counterparts. This is particularly true for low-skilled women. This gender working time gap is likely to have long-term detrimental consequences in terms of women's promotion and career prospects, as well as on the possibility of achieving independent earnings and the long-term financial sustainability of pensions.

### Self-employed

The same set of independent variables was used for the self-employed. Instead of controlling for company size, information on whether the self-employed have employees or not was used. Due to the limited sample size, instead of separate equations being estimated for men and women, the regressions controlled for the gender of the respondents.

Not surprisingly, the incidence of long working hours is, all other things being equal, much higher among the self-employed than employees. The predicted probability of working long hours amounts to 47.4% among the self-employed compared with 14.4% for employees (see Tables C3 and C6 in the Annex).

The propensity to work short part-time is – in contrast to what the descriptive analysis suggests – higher among the self-employed than employees when structural differences are controlled for (14.2% versus 9.3%). As expected, self-employed women have a higher likelihood of working both short (an increase of 7.8 percentage points or 54.9%) and long part-time (an increase of 5.0 percentage points or 46.7%) than their male counterparts. The incidence of long hours among self-employed women is also significantly lower than among self-employed men (a decrease of 31.0% in the probability). As for employees, the probability of working short part-time is higher for low-skilled self-employed people and lower in terms of working long hours. The self-employed with employees are also more prone to working long hours.

The incidence of long working hours among the self-employed is significantly higher in the agriculture, wholesale and retail, and transport sectors and lower in education and other services. Conversely, part-time work among the self-employed is less frequent in wholesale and retail, and transport but more frequent in education.

A self-employed person has a higher probability than an employee of working during the weekends or at night (35.9%) and of working long hours (19.1%) (see Table C6 in the Annex). Compared with the Central–Eastern countries, the self-employed are less prone to working long hours in the Baltic and Northern country clusters (a decrease in probability of 38.8% and 29.3%, respectively). The likelihood of self-employed people working normal working hours is also significantly higher in the Baltic and Northern country clusters.

As far as life stages are concerned, the working time distribution of the self-employed appears to be stable, at least until the period approaching the end of the professional career, where the likelihood of self-employed people working part-time increases significantly. However, the probability among self-employed people of working long hours decreases notably for older cohabiting couples (61.2%) and older single self-employed people (43.7%).

This indicates that working time patterns across the life course in the EU differ more for employees than for the self-employed. Arguably, the most obvious reason for the similarities of working times of the self-employed across countries is the fact that the self-employed are not subject to labour law and labour market regulations, in particular working time regulation. The working hours of the self-employed are mainly affected by market regulations such as shop opening hours, which may result in much longer working hours compared with those of employees. Basically, and beyond any regulation, the working time of the self-employed, in contrast to employees, is primarily subject to self-management and, above all, to market constraints, individual economic needs and/or individual preferences.

## Atypical working hours

Not only the duration of working time but also its organisation and scheduling are known to affect workers' work–life balance, health and well-being. Atypical working hours, such as night, shift and weekend work, are known to be a double-edged sword (Eurofound, 2013). While evening/night or weekend work may be a way to, for example, combine care activities and work and hence could be a preferred option among some groups of workers (in some cases, they may give rise to extra remuneration), several studies have shown that they can be associated with adverse health outcomes (see Chapter 6).

## Shift work

According to the Working Time Directive:

*‘Shift work’ means any method of organising work in shifts whereby workers succeed each other at the same work stations according to a certain pattern, including a rotating pattern, and which may be continuous or discontinuous, entailing the need for workers to work at different times over a given period of days or weeks.*

(Directive 2003/88/EC)

Shift work has been widely studied in terms of its impact on workers’ health and well-being, as well as on work–life balance. EWCS 2015 data show that:

*... shift workers find work–life balance more difficult, feel their health and safety is at risk because of work, and that work affects their health negatively. They are more likely to feel exhausted at the end of the day and to report that they are not appropriately paid and are less likely to feel they can work until 60 years of age.*

(Eurofound, 2016a, p. 63)

The EU-LFS data show that there was a decrease in the proportion of employees working shifts in the EU up to 2009, followed by a slow growth, with the proportions ultimately returning to the same levels in 2015 as in 2005: 18% in total, nearly 20% for men and 17% for women.

Figure 19 displays the incidence of shift work per Member State. In most countries, the proportion of employees working shifts is either similar between men and women or slightly higher for men. The exceptions are Estonia, Finland and Sweden, where the share is slightly higher for women.

According to the EWCS, working shifts is more prevalent among service and sales workers and plant and machine operators, and in the health, transport, industry, and commerce and hospitality sectors.

## Night work

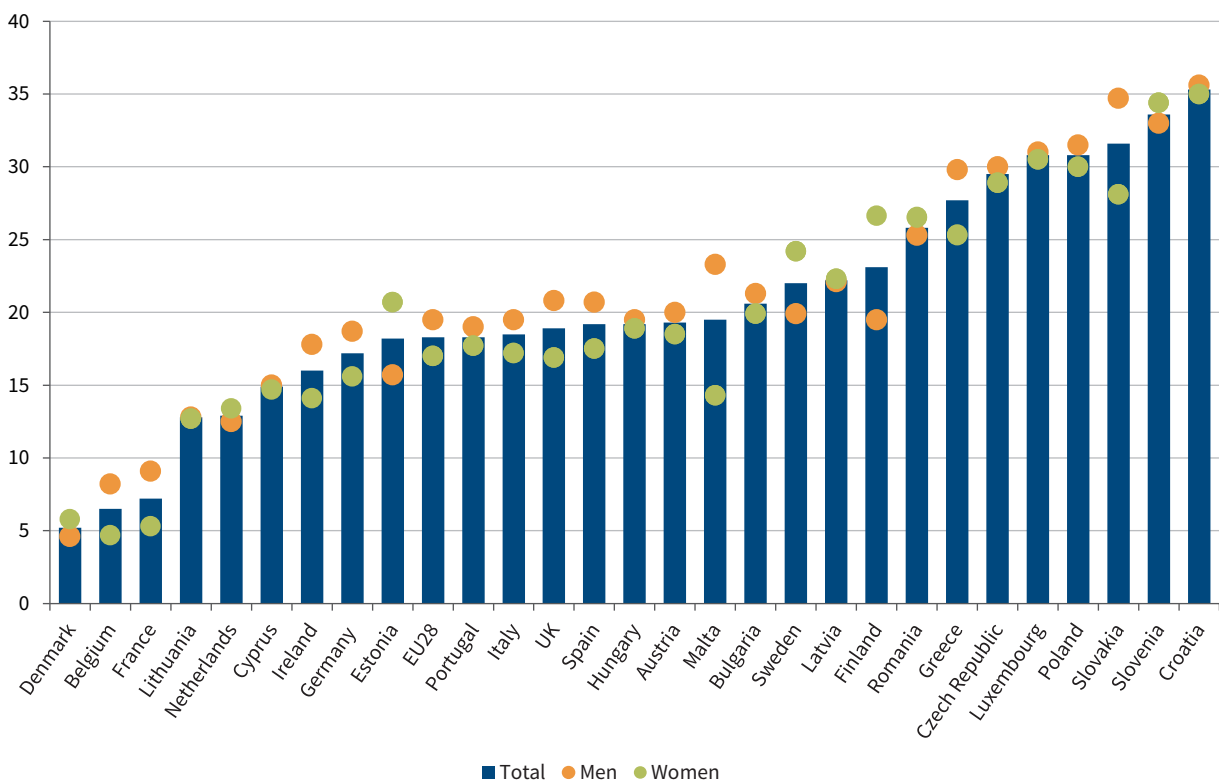
Night work is generally considered to be work performed during the usual sleeping hours (Eurostat, 2016). According to the Working Time Directive:

*‘Night time’ means any period of not less than seven hours, as defined by national law, and which must include, in any case, the period between midnight and 5:00.*

(Directive 2003/88/EC)

It defines ‘night worker’ as someone (a) ‘who, during night time, works at least three hours of his daily working time as a normal course’ and (b) ‘who is likely during night time to work a certain proportion of his annual working time, as defined at the choice of the Member State concerned’ by legislation or collective agreements.

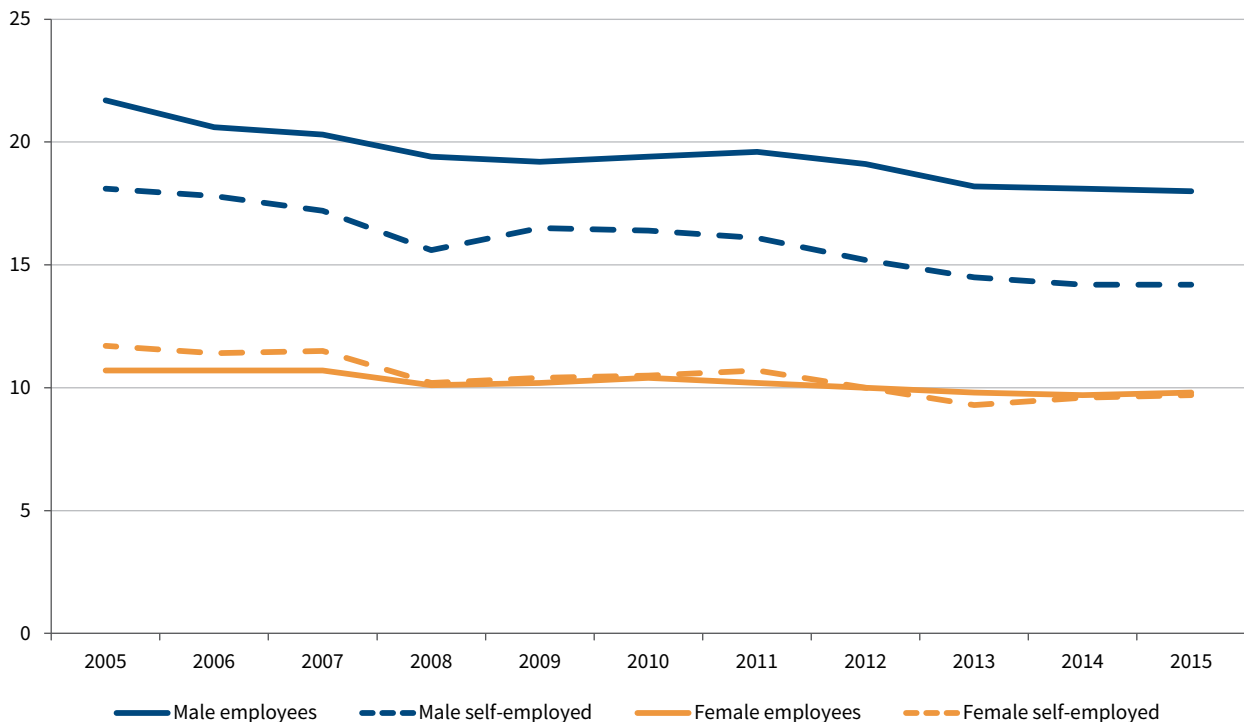
Figure 19: Percentage of employees working shifts by country and sex, 2015 (%)



Source: EU-LFS



**Figure 20: Employed people working at night as a share of total employment by employment status and sex, EU28, 2005–2015 (%)**



**Notes:** Includes 'sometimes' and 'usually' responses. According to Eurostat, the 2008 values have low reliability.

**Source:** EU-LFS

As with shift work, night work has been widely studied because of its possible negative impact on the health and well-being of workers. Research has shown that night work can cause the following negative effects (Costa, 1996):

- disturbance of sleep patterns (that is, the normal circadian rhythms of the psychophysiological functions);
- difficulties with work performance;
- accidents;
- difficulties with work–life balance, marital relationships and social life;
- deterioration of health, gastrointestinal problems, neuropsychological problems and cardiovascular problems.

The percentage of employed people working nights in the EU fell between 2005 and 2015 (Figure 20). The share of night work is larger (18% in 2015) among male employees, and smaller among female employees and the self-employed (both approximately 10%).

As the data from Eurostat for each Member State have a number of breaks in the series, this makes a strict assessment of the trends at national level very difficult. Nevertheless, it is possible to say with some certainty that the national trends in terms of night work broadly follow the same pattern as the EU aggregate.

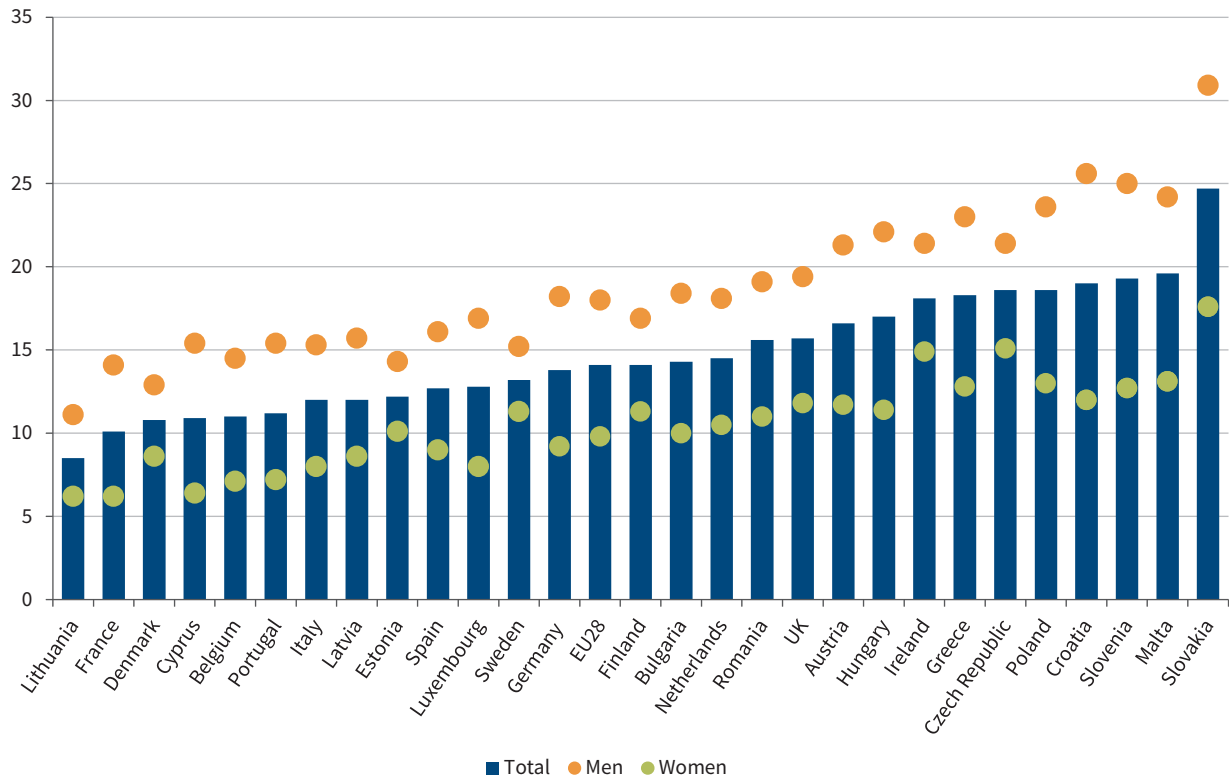
Figure 21 depicts the shares of night work among male and female employees in 2015 across the EU Member States. The share is always higher for men and the smallest gender gaps are found in Estonia, Denmark and Sweden.

### Weekend working

EU-LFS data show a slight reduction in the shares of individuals reporting that they work on Saturdays and Sundays between the years 2005 and 2015.<sup>15</sup> There are no significant differences between men and women, independently from their professional status, but working at the weekend is much more common among the self-employed than among employees (Figures 22 and 23). In 2015, some 39% of employees and 67% of the self-employed worked on Saturdays, while 23% of employees and 36% of the self-employed worked on Sundays.

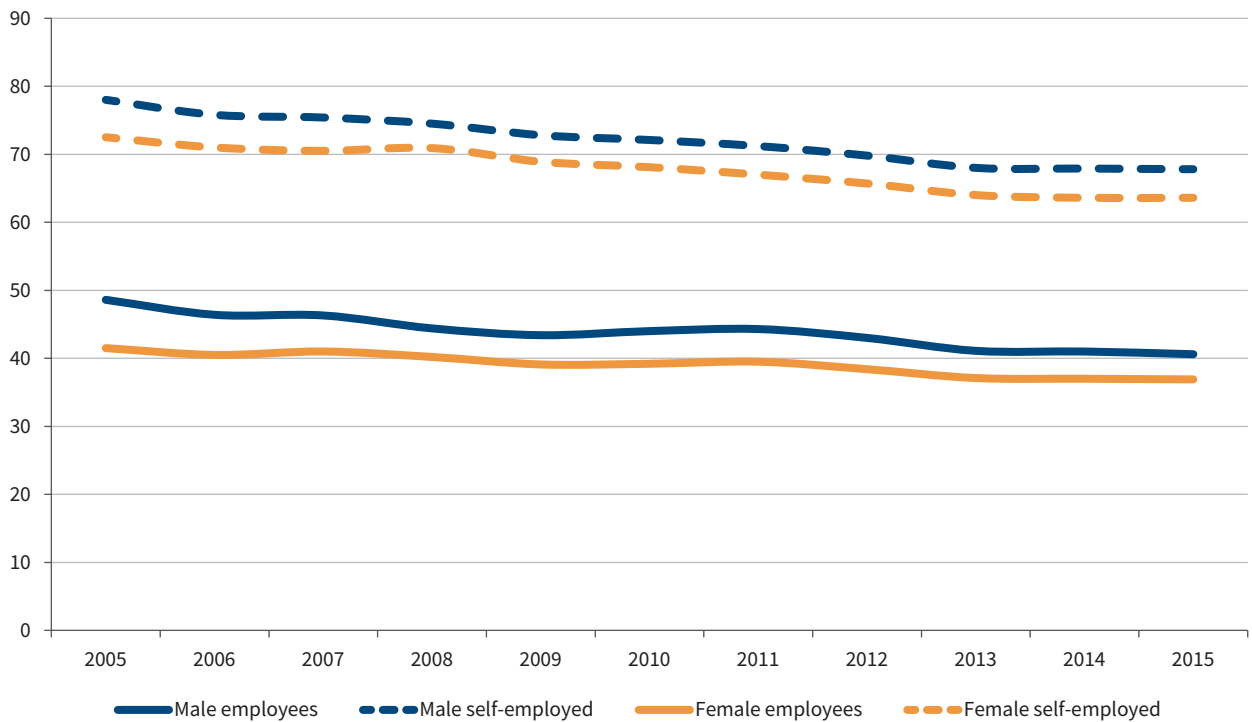
<sup>15</sup> According to the EWCS data, however, the share of workers reporting that they normally work at least one Sunday per month increased slightly: from 28% in 2005 and 2010 to 30% in 2015. The EU-LFS has a narrower reference period, restricting the responses to the period of four weeks preceding the reference week, whereas the EWCS asks about how many times per month individuals 'normally' work on Saturdays and Sundays.

Figure 21: Employees working at night by country and sex, 2015 (%)



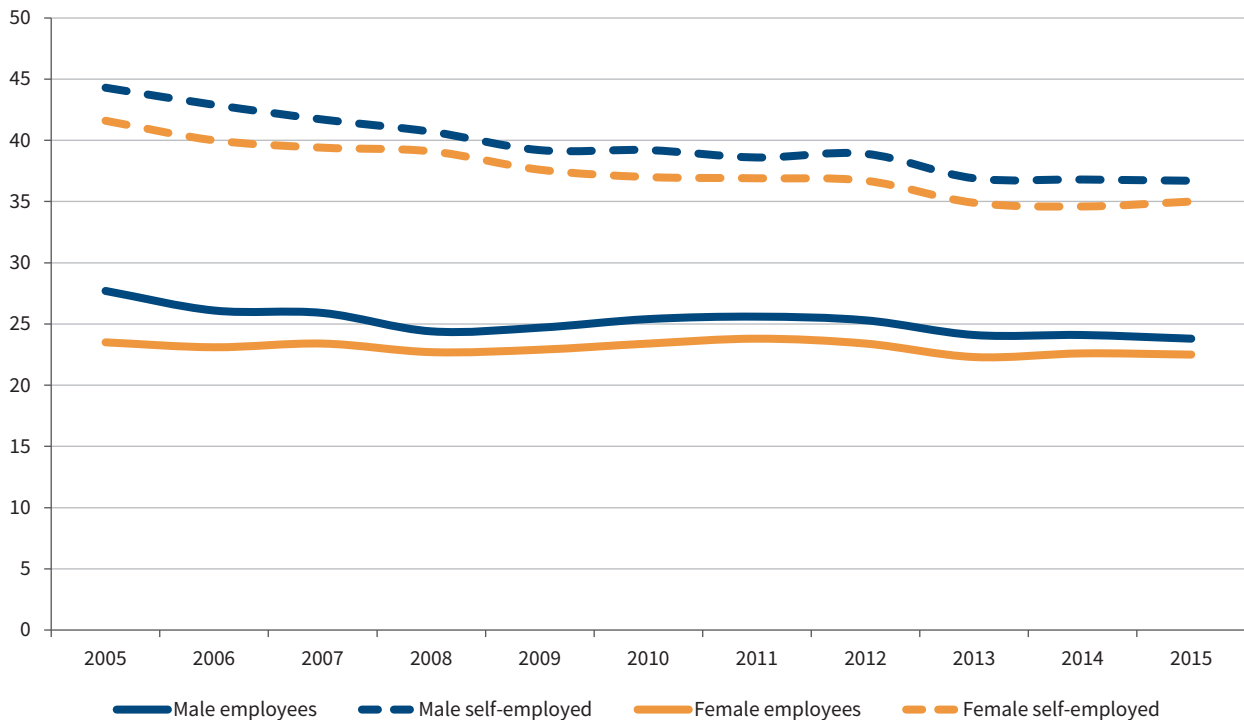
Source: EU-LFS

Figure 22: Working on Saturdays by employment status and sex, EU28, 2005-2015 (%)



Note: Includes the responses 'sometimes' (that is, working one Saturday/Sunday (at least one hour) in a reference period of four weeks) and 'usually' (that is, working at least two of the Saturdays/Sundays in a reference period of four weeks).

Source: EU-LFS

**Figure 23: Working on Sundays by employment status and sex, EU 28, 2005-2015 (%)**

**Note:** Includes the responses 'sometimes' (that is, working one Saturday/Sunday (at least one hour) in a reference period of four weeks) and 'usually' (that is, working at least two of the Saturdays/Sundays in a reference period of four weeks).

**Source:** EU-LFS

### Atypical working hours: Regression analysis

At the aggregate level, the cross-country disparities in the incidence of atypical work can be ascribed to structural factors, in particular cross-country differences in the distribution of employment by sectors and in the share of self-employed people. In addition, the variation in the incidence of atypical work among EU Member States could be explained by institutional factors, such as statutory regulation limiting the use of atypical work and legislation regarding opening hours (in particular regarding weekend work).

To further analyse the extent of atypical work, a synthetic index was generated (0–100) composed of night work, weekend work (working both Saturday and Sunday) and shift work. The interpretation is simple: the higher the index value, the higher the prevalence of atypical work.

The extent of atypical work is higher among men, the index value being 18.2 for men and 15.7 for women (see Tables C16a to C16c in the Annex). Looking at the differences in employment status, the incidence of atypical work is significantly higher among the self-employed; the index values are 24.9 for the self-employed and 15.6 for employees.

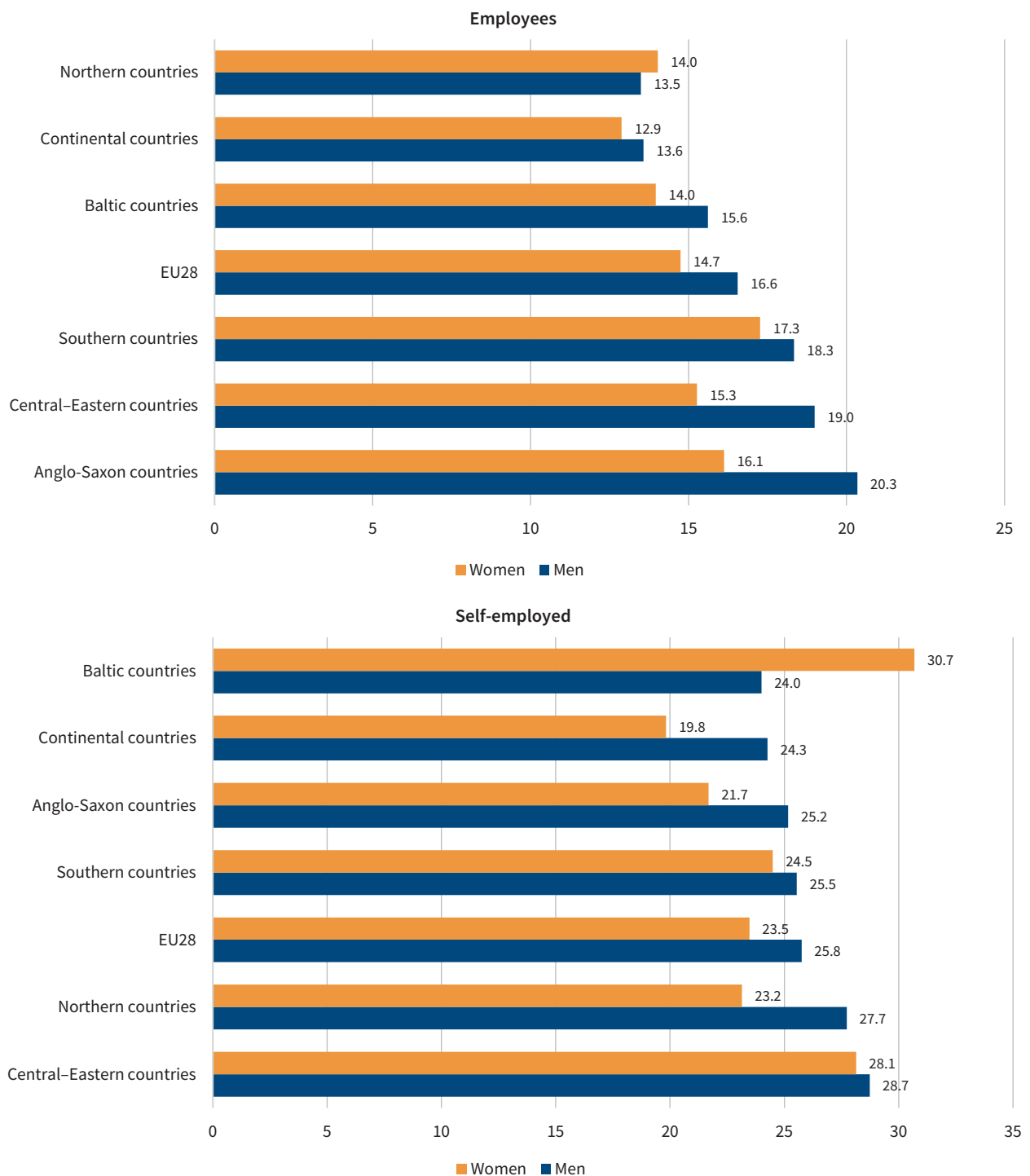
The prevalence of atypical work among employees is higher in the Anglo-Saxon countries, followed by the Central–Eastern countries. The gender gap in the incidence of atypical work is also larger in these two clusters (Figure 24).

To analyse the factors affecting the incidence of atypical working time arrangements, a set of ordinary least squares (OLS) estimations were performed using the same set of independent variables as for the estimations for the distribution of working time. Since one of the main objectives of this study is to analyse the relationship between working time duration/distribution and atypical working time, the previously defined four working time categories are also controlled for (reference category: standard working time of 35–41 hours).

Starting with the results of the estimation for the sample as a whole (see Table C17 in the Annex) and all other things being equal, the incidence of atypical working time arrangements is lower for women than their male counterparts (a reduction of almost 9% in the index).

Looking at the variation in atypical working time arrangements across the stylised life course, the prevalence of atypical work is significantly higher in the earliest stage of the life course (the index value for young singles living with their parents increases by almost 27% compared with young couples with no children living in the home) and lower towards the end of the working life.

Figure 24: Incidence of atypical work by sex and country cluster (index 0–100)



Source: EWCS 2015 (authors' calculations)

Compared with the manufacturing sector, the incidence of atypical working time arrangements is notably higher in the agriculture, wholesale and retail, transport and health sectors but lower in the construction, financial services and education sectors. Atypical work is also slightly more prevalent in the public sector.

Even though women are less likely to be engaged in atypical work, the incidence of atypical work is higher in female-dominated occupations (that is, occupations

with 60% of female workers or more, such as clerks and service and sales workers).

The incidence of atypical work is more prevalent in the Anglo-Saxon, Central-Eastern and Southern country clusters.

In terms of employment status, the results of the estimations confirm that the prevalence of atypical work is higher among self-employed people. The size of the establishment also has a positive correlation with

the incidence of atypical work – but only among male employees (see Table C18 in the Annex).

Male employees on fixed-term contracts are more likely than their female counterparts to be engaged in atypical work. High-skilled employees are less likely than low-skilled ones to be doing atypical work (see Table C18 in the Annex).

In contrast with their employed counterparts, the low-skilled self-employed are less likely to be engaged in atypical work (see Table C19 in the Annex).

No statistically significant differences on the prevalence of atypical work between self-employed with and without employees were found. Among employees, atypical work has a negative correlation with job autonomy, work intensity, fixed working time and a regular work schedule. Poor work–life balance also has a strong positive correlation with atypical working time arrangements: to report poor work–life balance increases the atypical work index by 7.5 percentage points or 44%.<sup>16</sup>

Last but not least, working long hours has a strong and positive correlation with the incidence of atypical work. Working long hours increases the index by 32.0% for employees and by 34.0% for self-employed people. Conversely, working short part-time reduces the index of atypical work by 12.8% for employees and by 15.0% among self-employed people.

To sum up, the result of the estimations show that atypical working time arrangements such as night, weekend and shift work are more prevalent among men and low-skilled workers, and are concentrated in specific sectors such as agriculture, retail, transport and health as well as in female-dominated sectors. Atypical work appears also to be more prevalent in the Anglo-Saxon, Central–Eastern and Southern country clusters. Prevalent in the early stage of the life course

(entry into the labour market), atypical working time arrangements are also more frequent among the self-employed as well as among employees with short-term contracts. Independent of employment status, atypical work also has a positive correlation with exposure to physical risks, long working hours, shorter rest periods and a poor work–life balance, indicating an accumulation of disadvantages.

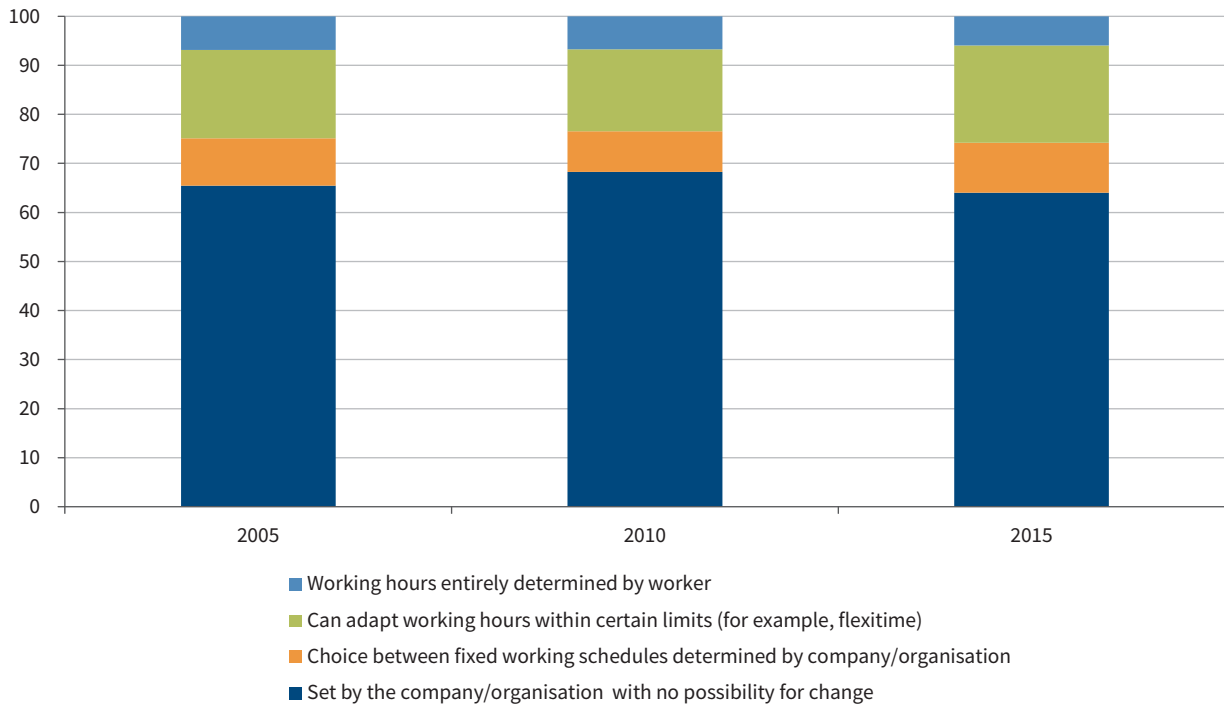
## Working time setting

Workers' working time arrangements may lead to different degrees of autonomy. Although the vast majority of self-employed people (nearly 75% in 2015) determine their own working hours, most employees have their working hours set by their employer with no possibility for changes (64% in 2015, down from 68% in 2010) (Figure 25). Only relatively few employees have the autonomy to determine working hours by themselves with no significant differences between men and women. However, the shares of employees with some flexibility in the determination of their working hours, which appeared to fall between 2005 and 2010, increased again to reach 30% of the total in 2015, with 20% of respondents to the EWCS declaring they could adapt working hours within certain limits (flexitime), while 10% reported that they had a choice between fixed schedules determined by the organisation they work for.

Autonomy over working hours appears less accessible to employees with fixed-term contracts (25%) and 'other or no contract' (27%) than to employees with indefinite contracts (31%). Indeed, 70% of employees with fixed-term contracts in 2015 said that their working hours were determined by the organisation they worked for without possibility of change.

<sup>16</sup> According to the EWCS data, however, the share of workers reporting that they normally work at least one Sunday per month increased slightly: from 28% in 2005 and 2010 to 30% in 2015. The EU-LFS has a narrower reference period, restricting the responses to the period of four weeks preceding the reference week, whereas the EWCS asks about how many times per month individuals 'normally' work on Saturdays and Sundays.

Figure 25: Working time setting for employees, EU28 (%)

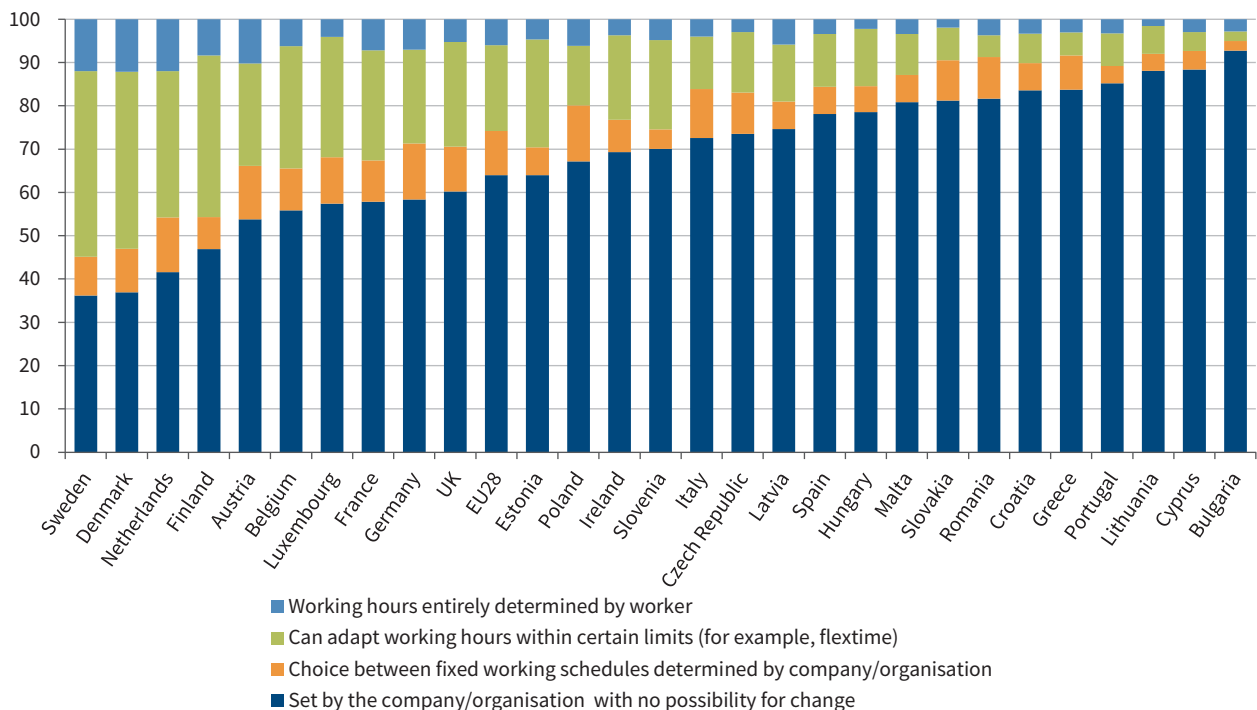


Source: EWCS 2015

Figure 26 shows the breakdown for employees in different Member States according to how their working time is set. Employees in central and northern European countries are more likely to report flexible working time arrangements than employees in southern and eastern

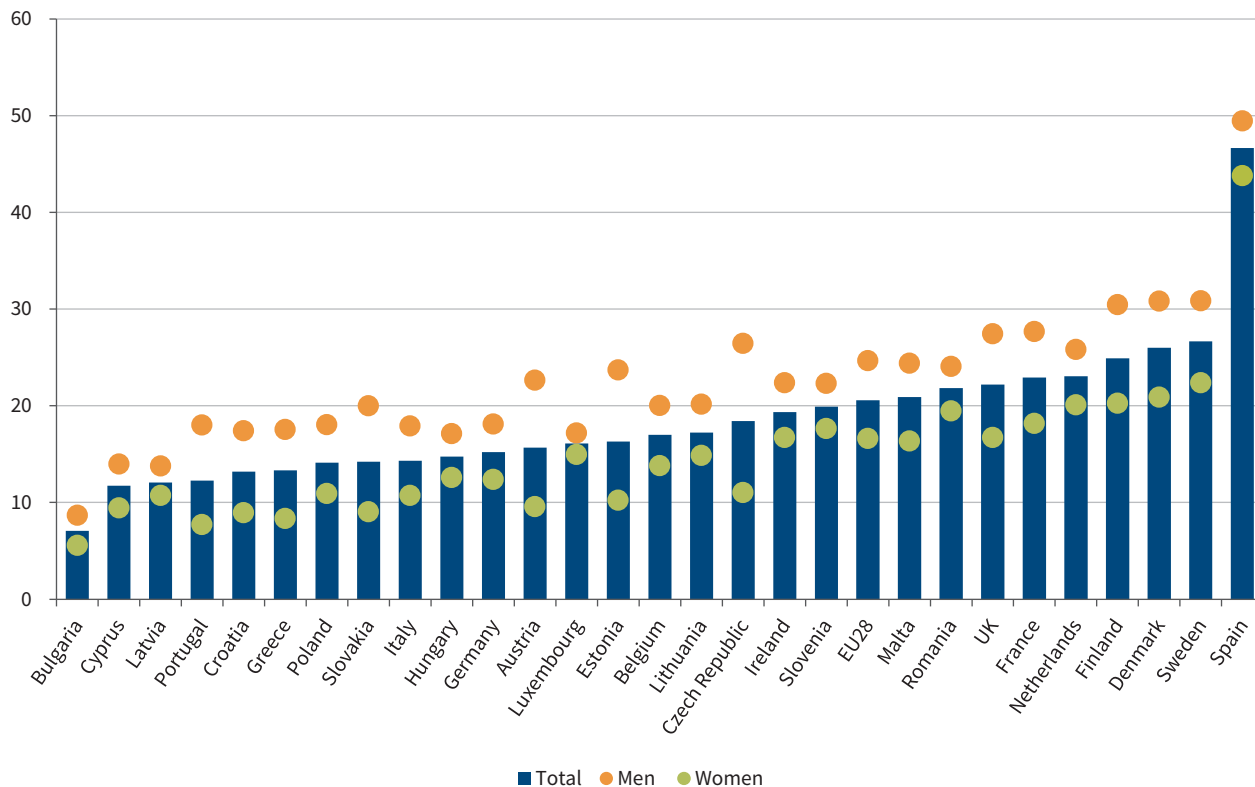
European countries – in the latter countries, a large majority of employees have no autonomy over their working time and report that their working times are set by their organisation.

Figure 26: Working time setting for employees by country, 2015 (%)



Source: EWCS 2015

Figure 27: Share of employees reporting having less than 11 hours between two working days by country and sex, 2015 (%)



Source: EWCS 2015

## Right to a daily rest period

Despite all workers being entitled to a ‘minimum daily rest period of 11 consecutive hours per 24-hour period’ according to the Working Time Directive, not all of them seem to enjoy that right. The sixth EWCS found that in the EU as a whole, a quarter of all workers (26%) – both employees and self-employed – reported having less than the minimum rest period: 23% of employees (35% of male and 17% of female employees), 36% of self-employed workers without employees and 46% of self-employed with employees. The latter two groups, however, are not necessarily covered by the directive as they have ‘autonomous decision-making powers’.

The largest proportions of workers reporting having fewer than 11 hours between two days of work are found in the health, transport, construction and agriculture sectors, and among managers and agricultural workers. Proportions per country for employees range from 7% in Bulgaria to 26% in Sweden

and 31% in Norway (Figure 27). In all countries, the proportion is considerably higher for men than for women. The reasons for Spain’s exceptionally high level – 49% of employees reporting such an occurrence – are, as yet, unknown.

The proportion of workers in 2015 reporting having a period of less than 11 hours between two days of work increased with the level of income and with the number of hours worked. Workers who had multiple workplaces also more frequently reported not having enough rest between two working days.

One group that is particularly at risk of not getting enough rest are those working 48 hours or more. Workers with long working weeks are not only twice as likely to feel exhausted at the end of the working day, but also twice as likely to have insufficient rest between days of work, making recovery from work more difficult (Eurofound, 2016a).

# 3 Work–life balance across the life course

The importance of achieving a better balance between paid work and private life is widely acknowledged and has taken an increasingly prominent place on the EU's political agenda. In order to achieve the employment objective of the Lisbon and EU2020 strategies of more and better jobs, Member States are being encouraged to implement policies aimed at achieving a better balance between work and family life. International institutions such as the ILO and the Organisation for Economic Co-operation and Development (OECD) also promote such policies. Recently, the European Commission launched the Initiative to support work–life balance for working parents and carers which, as part of the European Pillar of Social Rights, promotes gender-balanced take-up of family-related leaves and flexible working arrangements (European Commission, 2017).

The literature shows that employees whose work commitments are better adapted to their private life report less sickness absence, display higher work motivation and are in general more loyal to their employers. Conversely, poor work–life balance has negative effects on work performance and disruptive effects in the family and social spheres. Poor work–life balance may also have detrimental effects on workers' health, well-being and social relationships, and can lead individuals to drop out of the labour market or to reduce their working hours. Ultimately, poor work–life balance may lead to situations of poverty and therefore have a negative impact on social cohesion. Indeed, work–life balance issues go beyond the problem of reconciling work and family commitments, and encompass the whole life course in its various dimensions.

This chapter first presents a brief contextualisation based on existing knowledge about the links between working time patterns and work–life balance. It then explores the wealth of data provided by the EWCS 2015 in this regard.

## Crucial role of working time patterns

Work–life balance has become an important issue due to at least three major societal transformations. The first is the feminisation of the labour force, changing attitudes and norms regarding female work and the gender division of labour. The second is the tendency towards greater work intensity and the growing incidence of atypical working hours. The third is the increasingly blurred frontier between time devoted to

paid work and other individual, family and social activities such as leisure and domestic activities, triggered by, among other things, technological changes (Eurofound, 2005a, 2006a; Fagan et al, 2012). Other closely related dimensions, such as gender equal opportunities, higher fertility rates, improvements in job quality and company competitiveness, the prevention of psychosocial risks and, more widely, the improvement of citizens' well-being have been used to encourage the development of work–life balance policies.

Research has shown that long working hours have a detrimental impact on workers' work–life balance (Harrington, 2001; White et al, 2003; Fagan et al, 2012; Eurofound, 2013). Mandatory overtime and long working hours exacerbate work–family conflicts (Golden, 2015). If the length of working time matters, non-standard working time arrangements and atypical work are also a good predictor of work–life balance conflicts: working during nights or at weekends or on rotating shifts is associated with work–life balance difficulties that might generate health problems and reduce the well-being of workers (Fagan et al, 2012; Anses, 2016). The recent report by the French National Agency for Public Health, Food, the Environment and Work (Anses), which is based on a large literature review, clearly shows that the social costs of night work exceed its health costs. This atypical form of work has been shown to have disruptive effects and serious repercussions on family life and relationships within the couple, between parents and children and with friends. Other strands of research have identified similar impacts of weekend work, with a particularly disruptive impact on family life and sociability (Meurs and Charpentier, 1987; Garhammer, 1995; Fagan et al, 2012; Boulin and Lesnard, 2016).

If working part-time is associated with better work–life balance, it is also necessary to take into account the potential detrimental impact of long periods of part-time working on subsequent earnings and career prospects (mainly for women who are significantly overrepresented among part-timers) and also on future pension income. While it is true that some atypical forms of work such as night, weekend or shift work might be used by households to temporarily reconcile problems with work–life balance, previous research has shown that atypical work is related more to job requirements and employers' demands rather than the outcome of a deliberate choice on the part of employees seeking to resolve the problems of juggling paid work and domestic activities (Fagan et al, 2012).



Another outcome highlighted by previous research is that employees' control of working time and job autonomy could help to mitigate work–life balance conflicts (Fagan et al, 2012; Golden, 2015). Work–life balance difficulties cannot be resolved only through working time policy measures and/or working time arrangements at the company level (such as compressed working week, flexitime, staggered hours, time off in lieu, self-rostering, job-sharing and telework). They also need to be addressed through, for example, investment in quality, affordable and accessible care infrastructure (childcare, elderly care and other public and community services), a remunerated and flexible family-related leave system, and reversible time options (Eurofound, 2005a).

All in all, as shown by the data from the EWCS 2015, working time quality – one of the job quality indices developed as part of the survey – is strongly and positively associated with good work–life balance (Eurofound, 2016a).

## Evidence from the sixth EWCS

Although work–life balance can be interpreted in a broader fashion (see, for example, MacDermid et al, 2000), four indicators/questions from the sixth EWCS have been used to assess the extent of work–life balance in the EU:

- '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?' (Q44).
- 'How often in the last 12 months, have you found that your job prevented you from giving the time you wanted to your family?' (Q45c).
- 'Over the last 12 months, how often have you worked in your free time to meet work demands?' (Q46).
- 'How often in the last 12 months have you found that your family responsibilities prevented you from giving the time you should to your job?' (Q45e).

Starting with the first indicator of work–life balance (Q44), the vast majority (82%) of employed people reported that their working time fitted 'very well' or 'well' with their family or other social commitments. Figure 28 shows the share of male and female employees who reported being satisfied with their working time arrangements and work–life balance. Across all country clusters, at least three-quarters of the respondents indicated that their work demands fitted 'well' or 'very well' with their private life commitments.

The extent of work–life balance satisfaction is higher in the Northern countries, followed by the Central–Eastern countries, with shares of around 85% of respondents indicating that their working time fitted 'well' or 'very well' with their other social commitments.

Women in all country clusters were more likely to be satisfied with their work–life balance than their male counterparts. A tentative explanation can be found in the prevailing gender segregation in the labour market. By anticipating their role as both workers and main service providers in the domestic sphere, many women still select occupations and sectors as well as working time arrangements that make it possible to better combine work and family commitments.<sup>17</sup>

The gender gap is particularly large in the Baltic and Southern country clusters (difference of over 5 percentage points). These findings are in line with those found based on data from the fifth wave of the EWCS (Eurofound, 2013).

Around 11% of the respondents to the sixth EWCS declared that their job prevented them from giving time they wanted to their family 'always' or 'most of the time'. No significant differences were found between men and women, with around 24% of male respondents and around 21% of female respondents reporting that they often were obliged to work during their free time. This form of work–life balance problem seems to be more prevalent in the Anglo-Saxon, Continental and Southern country clusters.

## Work–life balance: A logistic approach

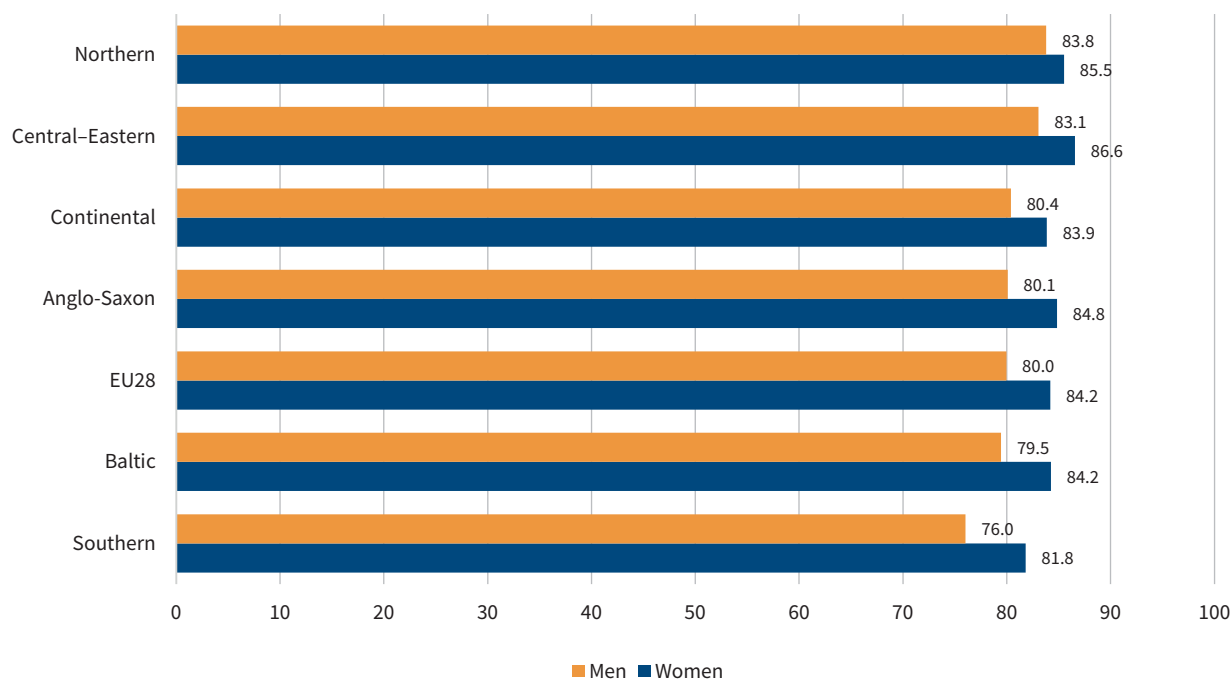
To identify what factors influence the perception of work–life balance among workers, a set of logistic regressions were estimated separately for men and women. The first dependent variable, poor work–life balance, is a binary variable with the value 1 if the respondent answered that their working hours did not fit 'well' or 'not at all well' with their family or other social commitments.

As for previous regressions, the control variables included gender, skills level, employment status, life stage and country cluster. Additional controls were added for:

- sector of activity;
- establishment size;
- type of employment contract;
- own working time;

<sup>17</sup> This phenomenon is generally referred to as 'adaptive preferences' and corresponds to situations in which the preferences of individuals in deprived circumstances are formed in response to their restricted options; see, for example, Nussbaum (2001).

**Figure 28: Share of employed women and men reporting their working hours fitted ‘well’ or ‘very well’ with their private life demands by country cluster (%)**



Source: EWCS 2015 (authors' calculations)

- working time organisation (limited flexibility, regularity and autonomy);
- atypical working hours (night, weekend, frequent on-call and shift work).

It is important to bear in mind that just a minority of employed people (18%) reported being dissatisfied with their work-life balance on average for the EU as a whole. Female workers seem to be more satisfied than their male counterparts with their working time arrangements and work-life balance; the predicted probability that the respondent reported a poor work-life balance was 8.9% for women and 13.6% for men (see Table C8 in the Annex). Looking at the influence of life stages, fathers and mothers with young pre-school children were more prone to report a poor work-life balance than the reference category (an increase in the probability of 24.1% and 100%, respectively). For both men and women, the impact of having children on their work-life balance was limited to young, pre-school children and did not extend to the whole parenting period. Older men in cohabiting couples and older single men without resident children reported a higher degree of poor work-life balance than the average for men.

Compared with the Central-Eastern country cluster, respondents living in the Anglo-Saxon, Continental and Southern clusters reported greater difficulties in achieving a good work-life balance. The likelihood of reporting a poor work-life balance in these three clusters increased by 38.5%, 39.7% and 73.3%, respectively. Men in all the country clusters, except for the Baltic and Northern countries, reported greater difficulties in achieving a good work-life balance. The likelihood of reporting a poor fit between working hours and other social commitments was increased by 4.8 percentage points for men living in the Anglo-Saxon country cluster, by 4.9 percentage points for men living in the Continental country cluster and by 11.8 percentage points for men living in the Southern country cluster. The same country pattern is found for women, but the impact appears to be smaller than for their male counterparts.

The duration of working time was found to have a negative impact on the extent of work-life balance, with both men and women indicating that long working hours reduced their possibility to combine work and other social commitments. Working long hours significantly increases the likelihood of reporting a poor

fit between working hours and other social commitments, with the probability increasing by almost 85% for both men and women. As seen in relation to part-time work (both short and long part-time), the possibility of taking time off significantly reduces the probability of reporting a poor work–life balance.<sup>18</sup> The same is true if the respondent works on a fixed and regular work schedule.

The scheduling of working time is important for individual assessment of work–life balance. Women and men working atypical hours appear to be less satisfied with their possibilities to combine work and other family or social commitments. For example, working weekends or nights increases the likelihood of reporting a poor work–life balance by more than 50%. Frequent on-call work also significantly increases the probability of reporting a poor work–life balance (an increase in the probability of 50%).<sup>19</sup> Working shifts also has a detrimental effect on work–life balance, although the impact is less than for weekend and night work (an increase in the probability of less than 15%).

Finally, reporting lower satisfaction with working conditions increases the likelihood of reporting a poor work–life balance by more than 120% (an increase in the probability of 119% for men and 126% for women). A strong positive correlation between work intensity, the extent of physical risk and poor work–life balance was found.

The analysis did not find any statistically significant differences between the self-employed and employees regarding work–life balance. Men employed in the public sector are more prone to report a better fit between their working time and other social commitments than average. Surprisingly, no significant correlation between work–life balance and sector of activity was found, except for people employed in agriculture, health and public administration, who, on average, reported better work–life balance possibilities. Longer commuting time also has a negative impact on the ability to combine work and family or other social commitments.

In relation to the two other indicators of work–life balance in the EWCS – less time for family (Q45c) and the necessity to work during free time to meet work demands (Q46) – three separate logistic regressions were estimated. As shown in Tables C9 and C10 in the Annex, a relatively similar impact of the independent

variables on the two other indicators of work–life balance was found. While there are no differences between men and women over the need to work during their free time to meet work demands, women more often than men reported that their job prevented them from giving the time they wanted to their family. Fathers and mothers of young pre-school children were also more likely to report work–life balance difficulties and said they were often constrained to work during their leisure time.

Statistically significant differences between sectors of activity were not found, except for those employed in the transport sector who were more likely to report less time for family. Men and women working in education and men in financial services were more prone to report that they often worked during their free time. Self-employed people did not report more time conflict with family responsibilities than their employee counterparts, but were more likely to declare that they often worked during their leisure time. It is interesting to note a somewhat different impact of atypical work on leisure time: shift workers were less likely to report that they were obliged to work during their free time. Otherwise there were no large differences regarding the first indicator of work–life balance in terms of working time duration, work and job characteristics.

Finally, the factors affecting the probability that respondents indicated that their family responsibilities prevented them from giving the time they need to their paid work (Q45e) were also analysed. Only a minority of respondents (around 3%, see Table C7 in the Annex) reported that this was the case. A logistic regression similar to the previous one found that female workers were more likely than male workers to find that their family responsibilities prevented them from giving the time they should to their job (an increase in the probability of 51.5% (see Table C9a in the Annex). Not surprisingly, married/cohabiting female workers with young pre-school children had a much higher probability of reporting that their family prevented them from giving the time needed to their job. Compared with the other country clusters, female workers in the Northern countries were less likely to report that their family commitments affected their job negatively. Although the extent of work intensity increased the likelihood of reporting family–work conflicts, atypical working time arrangements or working hours did not affect this probability.

18 Taking time off is a dummy variable with the value 1 if the respondent answered positively to the question: 'Would you say that for you arranging to take an hour or two off during working hours to take care of personal or family matters is not difficult at all?' (Q47).

19 On-call work is a dummy variable with the value 1 if the respondent answered 'daily' or 'several times a week' to the question: 'Over the last 12 months, how often have you been requested to come into work at short notice?' (Q40).

## Summary

A large majority of respondents to the sixth EWCS, independent of sex and employment status, stated that their working hours fit well or very well with their private life obligations. In addition, work-life balance opportunities seem to be more prevalent in the Northern and Baltic countries. However, men appear to be less satisfied with their work-life balance than women. This somewhat counterintuitive finding is consistent with that of the fourth and fifth EWCS, which ascribed this to the fact that men have longer working hours and relatively more difficulties adapting working time to family life or other social commitments whereas women have already adapted their working time to their – mainly family – needs. However, this assumption can only partly explain the described results, since working time has been controlled for. Another probable explanation is related to the prevailing gender labour market segregation and gender division of unpaid work.<sup>20</sup> Many women, anticipating their role as the main care providers in the domestic sphere, may chose occupations, sectors and branches of activity that are known to make it easier to combine work with family commitments. In contrast to the results found in the fifth EWCS (Eurofound, 2013), the life course impact is quite similar for men and women, the negative impact being concentrated during the early phase of parenting – when the respondents have young pre-school children.

The results also confirm that long working hours are negatively associated with work-life balance and that specific working time arrangements – in particular those that favour fixed and regular working hours – can improve work-life balance. Good working conditions, high predictability of working time and/or job autonomy also increase the likelihood of achieving a balanced work-life situation.

<sup>20</sup> Unpaid work (housework, childcare, elderly care and so on) was not included in the analysis due to the substantial number of missing values in the EWCS data.



## 4 Working time preferences of employees

Working time preferences are naturally subjective and are shaped by many different factors, which tend to reflect the individual's context and circumstances at a given moment in time. Aspects such as level of income, financial situation, job security, working time flexibility, and childcare/elderly care availability and accessibility are all factors that could be part of the equation.

In the EWCS, working time preferences are captured by the question: 'Provided that you could make a free choice regarding your working hours and taking into account the need to earn a living: how many hours per week would you prefer to work at present?'

Respondents are asked to indicate their preferred working time, taking into account the possible impact on earnings of a reduction or increase in working time.

This chapter analyses individuals' working time preferences in relation to their actual working hours from a gender and a life course perspective, and analyses the main determinants of those preferences. Finally, it offers evidence on 'where' the major tensions between actual and preferred working time are, and what these tensions mean in terms of working time patterns.

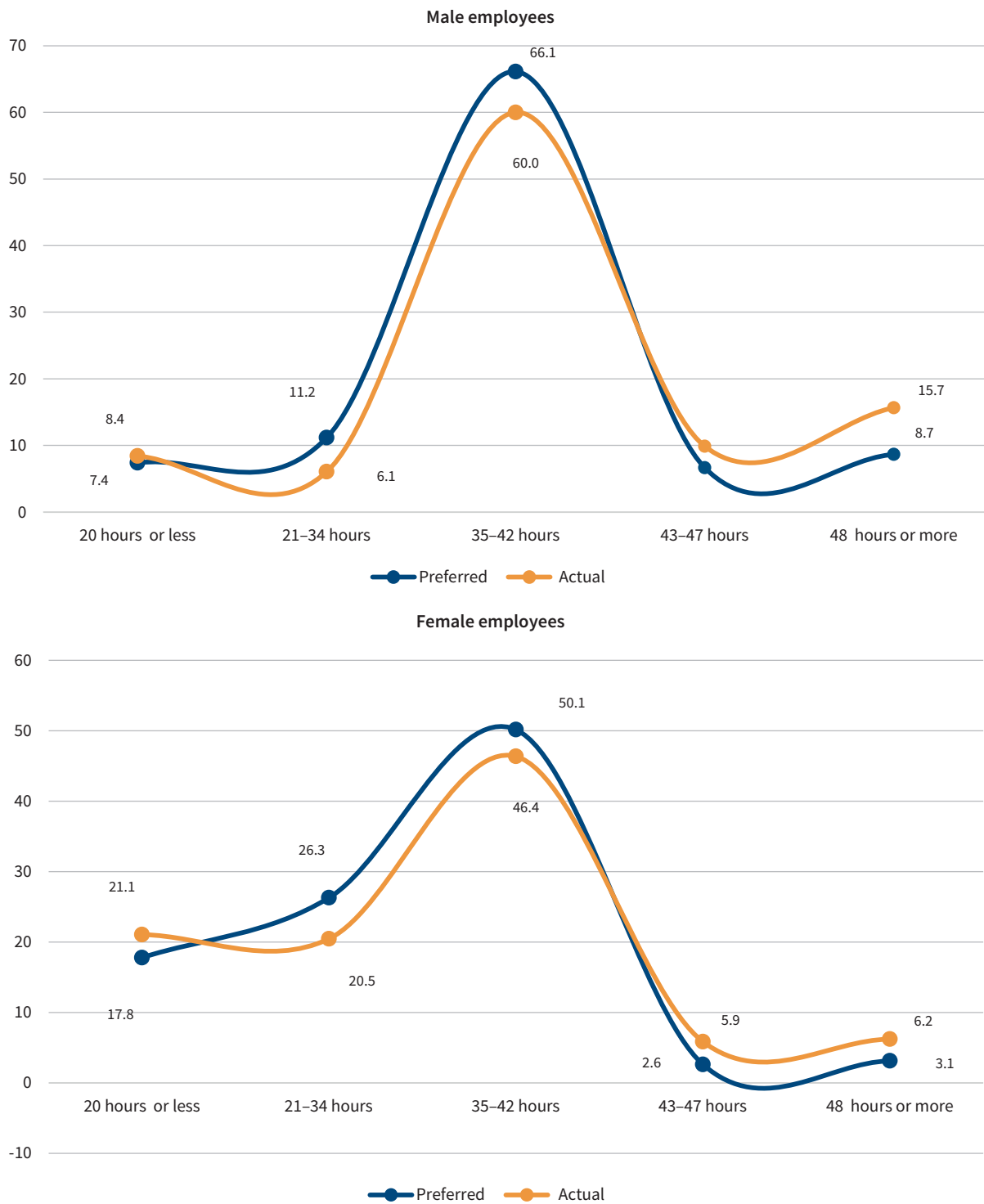
### Actual versus preferred usual working time

Given that the status of self-employed implies autonomy regarding the duration and organisation of working time, this chapter considers only those replies given by employees. Figure 29 contrasts employees' actual and preferred distribution of usual working time in the EU as a whole.

Both male and female employees appear to favour a reduction in long working hours (right tail of the distribution in Figure 29) and a transition from long working hours to standard normal working hours. A larger share of women seem to prefer an increase in working time, and a transition from short part-time to long part-time and from long part-time to standard hours. Men, however, seem to be more in favour of a transition from long hours towards standard hours.

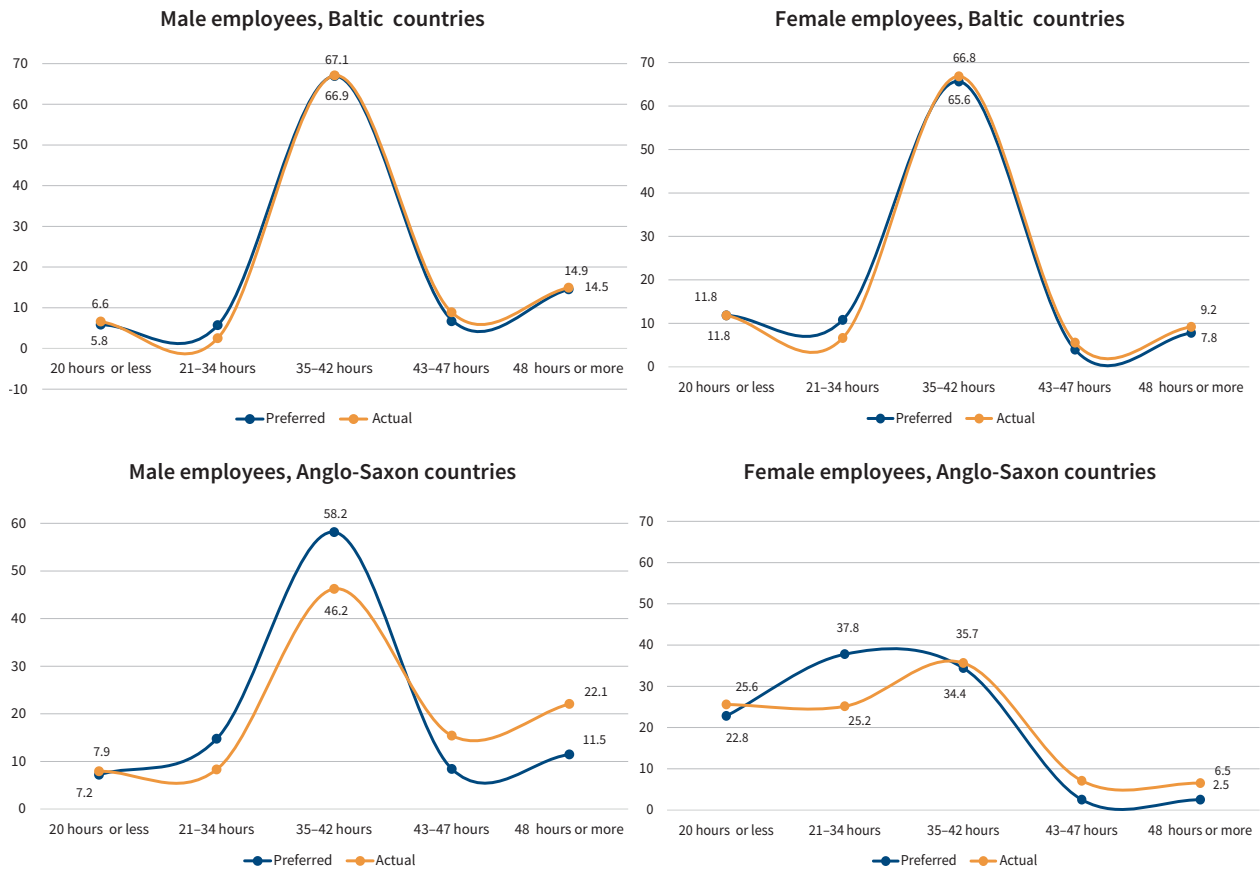
Large disparities were also found between the country clusters, with some clusters not exhibiting much difference between preferred and actual working time – such as the Baltic and Central–Eastern countries – and others exhibiting large differences – the Anglo-Saxon and Southern countries. Figure 30 illustrates two polar cases. The top panel shows the Baltic countries, where preferred and actual working times are similar for both sexes, and the lower panel shows the Anglo-Saxon countries, where there are considerable disparities between the two sexes.

Figure 29: Distribution of actual and preferred usual weekly working time by sex, EU28, 2015 (%)



Source: EWCS 2015 (authors' calculations)

Figure 30: Distribution of actual and preferred usual weekly working time by sex in two country clusters, 2015 (%)



Source: EWCS 2015 (authors' calculations)

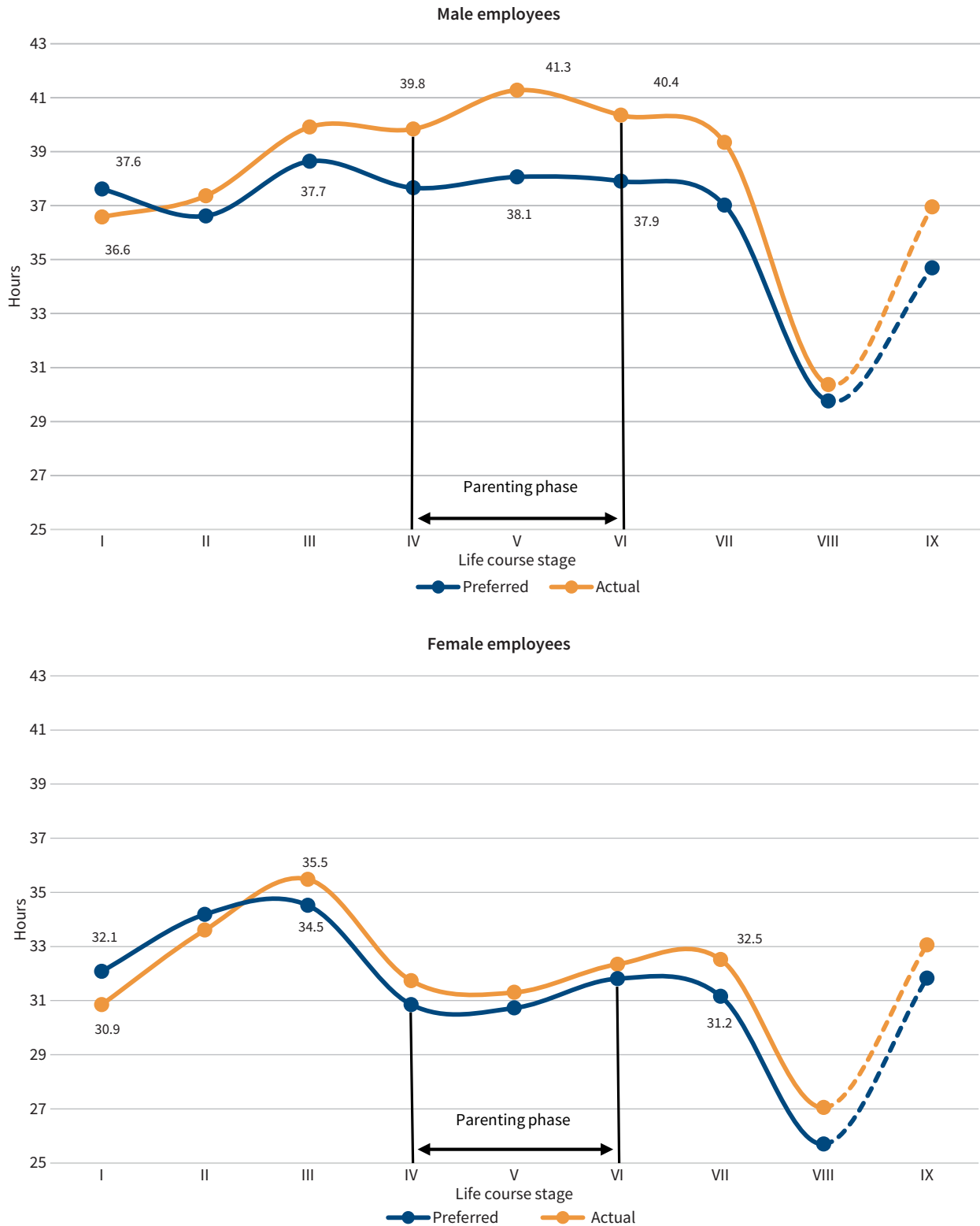
It is tempting to think that the gap – or tension – between actual and preferred working time is related to the actual dispersion of working time. As mentioned previously, the actual distribution of working time in the Anglo-Saxon countries is characterised by a large dispersion of working time, a high incidence of short part-time and long working hours, and an extreme gender polarisation of working time. The Baltic countries are characterised by a limited dispersion and a low gender polarisation of working time, with both male and female employees concentrated around the standard/normal working hours. Against this background, it is not surprising that the discrepancy between actual and preferred working time is higher in the Anglo-Saxon countries than in the Baltic countries. From a working time policy perspective, the results underline the fact that the different interventions must take into account the differing needs of men and

women as well as the different situations in Member States. Focusing on the various life stages, the highest proportion of employees expressing a wish to reduce their working time is found during the parenting phase (see Figure C5 in the Annex). The largest share of employees indicating that they would prefer a lengthening of their working time is found during the early stages of working life.

With the exception of the earliest phase in the lifecycle (young singles living with their parents), the desired weekly working time is lower than the actual weekly working time in all life stages (Figure 31). The tension between actual and desired working hours is larger for men than for women. This is particularly true for fathers (Stages IV, V and VI), where the difference between actual and desired working time amounts to 2–3 hours a week depending on the age of the children.



Figure 31: Actual and preferred weekly working hours across the life course, by sex, EU28, 2015



Note: For a guide to life course stages, see the note to Figure 15.  
 Source: EWCS 2015 (authors' calculations)

## Working time preferences of employees: An econometric approach

This section uses a standard multinomial logistic regression to identify the major determinants of working time preferences among employees. The objective is to analyse the extent to which working time preferences (that is, a preference for increasing or reducing working time) differ according to gender, life stage, country, sector and job characteristics.

To define the dependent variables, the first step was to compute the differences between respondents' preferred working hours and actual working time. The results were allocated to three categories:

- preference for increasing working time;
- preference for reducing working time;
- preference for no change.

The category 'preference for no change' was used as the reference category in the regression analysis. As previously, the control variables included gender, skills level, life stage, sector, country cluster, employment and job characteristics, atypical work and weekly working time pattern – short part-time (20 hours or less), long part-time (21–34 hours) or long (42 hours or more).

The majority of respondents reported being satisfied with their current working time, with around 58% of all employees not wanting any change in their current working time (Table 4).

**Table 4: Working time preferences among employees (%)**

	All	Women	Men
Reduction in working time	28.1	25.4	30.6
No change	58.2	58.3	58.1
Increase in working time	13.7	16.3	11.3
All	100.0	100.0	100.0

Source: EWCS 2015 (authors' calculations)

A significantly larger share of employees reported that they would prefer to reduce their working time (the predicted probability to opt for a reduction in working time is 24.6%) than to extend it (the predicted probability to opt for an increase in working time is 7.7%) – see Table C12 in the Annex. Employment status did not seem to affect working time preferences.

Female employees were, on average, slightly less satisfied with their current working time than their male counterparts (see Table C12 in the Annex), but the gender gap in working time preferences is relatively small.<sup>21</sup>

### Female employees

While a large majority of female employees (70%) declared that they did not want to change their working time, more than twice as many would prefer to have a reduction (20.8%) rather than an increase in working time (9.2%) (see Table C13 in the Annex). High-skilled female employees have a significant higher likelihood of expressing a preference for a reduction in working time.

Cohabiting mothers of pre-school children and cohabiting mothers of pre-adolescent children (7–12 years) are, all other things being equal, more likely to prefer a reduction in working time than cohabiting women without resident children. This is also true for elderly single or married/cohabiting employees.

Female employees living in the Anglo-Saxon and in the Northern country clusters are significantly more likely to prefer a reduction in working time than women living in all the other country clusters (an increase in probability of 156% and 127%, respectively). The same is also true for female employees living in the Continental and Southern country clusters, but to a lesser extent.

As expected, working time preferences are strongly dependent on current working time arrangements. Women with a short working time, in particular short part-timers, have a significantly lower likelihood of wishing to shorten their working time and conversely a higher probability of wishing to lengthen their working time (the likelihood increases by 38.9 percentage points or 423%).

Female employees reporting a poor work–life balance and low satisfaction with working conditions would prefer to work fewer hours (an increase in the likelihood of 63.9% and 38.9%, respectively). Atypical work, such as shift work or weekend work, has a positive correlation with no change in working time; working during the night has no statistically significant impact on working time preferences for female employees.

The sector of activity did not seem to affect women's working time preferences, although women working in public administration and health seemed to be more satisfied with their current working time insofar as they did not express a wish to change their working time.

<sup>21</sup> According to the estimations, female employees had, all other things being equal, a 6.8 percentage points higher likelihood of wanting to reduce their working time compared with their male counterparts.

Women on fixed-term contracts were more likely to express a wish to lengthen their working time. Having a regular work schedule and a fixed working time schedule – as well as working time and job autonomy – all decreased the likelihood of female employees wishing to reduce their working time. However, female respondents with supervisory tasks, high work intensity and exposed to physical risks were more likely to express a wish to reduce their working time.

## Male employees

Although a large majority of male employees declared that they did not want to change their working time, almost five times as many would prefer a reduction rather than an increase in their working time (the predicted probability for opting for a reduction in working time is 28.3% compared with 6.5% for an increase in working time).

The higher the skills level, the lower the likelihood of men expressing a preference for an increase in working time. High work intensity significantly increases the likelihood of preferring a reduction in working time: the probability increases by almost 8.7 percentage points or 30.7% (see Table C14 in the Annex).

During the parenting phase and independently of the age of the children, cohabiting fathers seem to want a reduction in their working time. The same is also true for older singles without resident children, as well as for cohabiting male employees in the empty nest stage – although to a lesser extent.

In contrast to their female counterparts, men working in the private sector are more likely to prefer a lengthening of working time; the same is true for men working in the

construction and education sectors. Male employees working in the agriculture sector are less prone to want a decrease in working time.

Male employees living in the Northern country cluster are significantly more likely to prefer a reduction in working time than men in all the other country clusters. The same is also true for male employees living in the Anglo-Saxon, Continental and Southern country clusters, but to a lesser extent.

Like their female counterparts, men working during weekends or working shifts are less inclined to prefer a change in working time. Surprisingly, men working shifts or during weekends have a lower likelihood of opting for a reduction in working time.

As with women, men's working time preferences are negatively correlated with their current actual working time, with men working long hours having a strong preference for a reduction in working time and conversely for those working both short and long part-time.

Regular work schedules and fixed working time schedules, as well as working time and job autonomy, decrease the likelihood of male employees wanting a reduction in their working time. However, respondents with greater seniority or supervisory tasks were more prone to express a preference for a reduction in their working time.

Poor work-life balance and lower satisfaction with working conditions, as in the case of female employees, significantly increase the probability of a male employee expressing a preference for a reduction in their working time (an increase of 48.7% and 49.8%, respectively).

## Summary

According to the EWCS data, a significant majority of economically active individuals seem overall to be satisfied with their current working time. Most of those indicating a preference for a change in working time said they would like to reduce their current working time. Working time preferences do not differ drastically between men and women.

The estimations tend also to show that a preference for a reduction in working time has a positive correlation with skills level and also with work intensity.

Irrespective of gender, working time preferences are also strongly related to employees' current working time. Short part-timers have a significantly higher likelihood of preferring an increase in working time. Conversely, employees with long working hours express a particularly strong preference for working shorter hours, confirming the results of a previous analysis (Eurofound, 2013).

Against this background, the fact that a significantly higher proportion of women work short part-time while a significantly higher proportion of men work long hours tends to indicate that male and female employees aspire to some sort of convergence of working time, confirming the findings of the fifth EWCS in 2010 (Eurofound, 2013).

Working time preferences also vary across the life course, in particular during the parenting phase. Cohabiting mothers of pre-school or pre-adolescent children are more inclined to want to reduce their working time, while

for fathers it is across the whole parenting phase. Both male and female older employees also seem more likely to prefer a reduction in their working time.

For both sexes, a poor work-life balance and lower satisfaction with working conditions significantly increase the probability of preferring a reduction in working time.

Both men and women in the Northern countries seem to have a stronger preference for a reduction in working time. This is also true in the Anglo-Saxon, Continental and Southern countries, but to a lesser extent.



# 5 Working time patterns and workers' well-being

This chapter uses data from the EWCS to analyse two indicators of workers' well-being in more detail. The first indicator measures subjective well-being in a broad sense and is based on the questions used by the World Health Organization (WHO) to compile its Well-Being Index (WHO-5) – see notes to Table 5 below. The second indicator focuses on well-being at work and assesses how workers (employees only) feel about their jobs in terms of energy, dedication, engagement and perceived competence.<sup>22</sup>

## Subjective well-being

Table 5 shows the level of subjective well-being for the EWCS sample as a whole. The average score amounts to 68.1 on a scale of 0–100 and is slightly higher for men (69.2) than for women (66.9). This result is consistent with most of those from other similar studies (see, for example, OECD, 2013; Winther Topp et al, 2015).

**Table 5: Level of subjective well-being based on WHO-5 index (0–100)**

	Average	Standard deviation
All	68.1	20.00
Men	69.2	19.45
Women	66.9	20.49

**Notes:** EWCS sample as a whole. Based on Q87. Please indicate for each of the five statements which is the closest to how you have been feeling over the last two weeks. The statements are: A. I have felt cheerful and in good spirits; B. I have felt calm and relaxed; C. I have felt active and vigorous; D. I woke up feeling fresh and rested; E. My daily life has been filled with things that interest me. A scale of frequency for each answer was at the disposal of respondents: all the time; most of the time; more than half of the time; less than half of the time; some of the time; at no time. **Source:** EWCS 2015 (authors' calculations)

To identify which factors influence subjective well-being, OLS estimates were computed for the sample as a whole and for women and men separately; Table C22b in the Annex displays the results of the estimations.

The results confirm that, all other things being equal, women display relatively lower well-being (3.4 points less or 5% less than the average well-being index). Self-reported health status constitutes a crucial and

strong determinant of individual well-being. Those reporting poor health exhibit a significantly lower well-being index (a decrease of 18.2 points of the index or a decrease of 26.7%). This is particularly true for men (20.7 percentage points less or 29.9%).

Exposure to physical risks also has a negative correlation with subjective well-being, although to a smaller extent. Other variables that positively influence subjective well-being are fixed and regular working hours as well as autonomy at work.<sup>23</sup> Conversely, long working hours are negatively correlated with subjective well-being, although only to a small extent.

Surprisingly, shift workers – mainly women, and men working weekends – display higher well-being (+1.8 points for female shift workers and +1.6 points for male weekend workers). A tentative explanation is that these workers have found ways of arranging their lives around these forms of atypical work or chose such atypical working schedules. According to Hochschild (1997), men working weekends may prefer to be at work rather than at home where other tasks need to be done. Under certain circumstances, shift work (as well as working nights and/or weekends) could also be a way to solve work–life balance problems. Moreover, this kind of atypical work is often scheduled in advance and on a regular basis, avoiding changes at short notice.

Work–life balance is also a good predictor of subjective well-being. Those reporting a poor work–life balance (see Chapter 3) display a below-average level of well-being (6.7 percentage points less). However, the different life stages have no significant impact on the reported well-being, apart from the empty nest phase (particularly true for women) which has a negative correlation with well-being, while older married/cohabiting males report higher well-being.

Anglo-Saxon countries display a lower subjective well-being index (a reduction of 4 percentage points), while all other country clusters report higher subjective well-being than the Baltic countries and the Central–Eastern countries. As suggested by the OECD (2013), such country differences might be ascribed to cultural and lifestyle factors, as well as the resilience of a generous and encompassing welfare state as, for instance, in the Northern countries.

22 EWCS Q90: 'The following statements are about how you feel about your job. For each statement, please tell me how often you feel this way.' Of the six statements, the four positive ones have been selected: A. At my work I feel full of energy, B. I am enthusiastic about my job, C. Time flies when I am working, F. In my opinion I am good in my job.

23 Fixed working time is derived from the following two questions: Q43 Do changes to your working time arrangements occur regularly? (those who answered 'no'); and Q42 How are your working time arrangements set? (those who answered that their working time schedules are set by the company).

Looking at specific sectors, people working in agriculture, as well as those working in construction and transport, report a higher level of well-being. Those working in health and other services also report higher levels of subjective well-being, possibly linked to the feeling of social usefulness and the importance of social contacts (in healthcare, for instance).

## Well-being at work

The OLS estimates confirm that women report a higher level of well-being at work than men (see Table C21b in the Annex). Similarly to subjective well-being, employees reporting poor health display a lower score for well-being at work (a reduction of 4.1 points in the WHO-5 Well-Being Index or a decrease of 5.5%). As the issue at stake is well-being at work, working conditions play a determinant role. Indeed, employees reporting low satisfaction with working conditions display a much lower level of well-being (a decrease of 11.5 points or a decrease in the index of 15.4%). This result is consistent with the fact that low-skilled employees report lower well-being at work while, in contrast, those having supervisory tasks display a higher score (an increase of points for employees as a whole and 3.2 points for female employees). As expected, job autonomy is also positively related with well-being at work.

Employees working nights or weekends report higher well-being at work, but this is not the case for men working shifts. Employees reporting a poor work–life balance also display lower well-being at work (a decrease of 2.7 points or 3.6% of the index). There are therefore reasons to think that employees working nights and during weekends have found ways to

reconcile paid work with other social activities. Such atypical working hours may perhaps provide them with some advantages, such as less control over their work by third parties and, hence, a more relaxed working atmosphere. Respondents with long working hours also display a higher score of well-being at work (this is strongly significant for men); working long hours is seen by certain categories of employees as a ‘badge of honour’ (Gershuny and Fisher, 2014). As expected, those able to control their working time also report higher well-being at work (an increase of 2.3 points for all employees and 2.5 points for female employees).

Almost all sectors display higher well-being scores than manufacturing. Particularly significant – and higher for women – are those in the education and health sectors (an increase of 5.5 points and 4.2 points, respectively). This is also true for women working in agriculture (an increase of 5.8 points). One possible explanation for the figures in education and health is the nature of work, with caring for children and the sick being viewed as rewarding work. But for sectors like construction or wholesale and retail (where women report a higher well-being of 3.2 points more), these results are somewhat counterintuitive, as it is known that these sectors are generally characterised by relatively poorer working conditions.

Another interesting result, not found in the estimations for subjective well-being, is the fact that couples with children report higher well-being at work and this is true for the parenting period as a whole, and particularly significant for female employees.<sup>24</sup> Does having children make people at work happier, or does having a job increase self-esteem through having children (the impact is stronger for those with children aged 7–12)?

## Summary

Although self-reported health status constitutes a strong determinant of an individual’s subjective well-being, as measured by the EWCS, fixed and regular working hours as well as autonomy at work have an important positive influence. Work–life balance is also a good predictor of well-being, no matter what phase of life the individuals are in. While long hours seem to be detrimental to individuals’ well-being, shift workers – somewhat surprisingly – display a relatively higher level of subjective well-being. This is likely to be the result of their adaptation to this situation, arranging their lives around these schedules.

Good health, high skills levels, good working conditions and a good work–life balance are major determinants of well-being at work. Overall, low-skilled workers display lower well-being. A fixed working time pattern (as determined by the employer) and regular working time schedules, as well as autonomy at work and autonomy in determining working hours, are indicators for greater well-being. The results indicate some tension between freedom of choice/autonomy and constraint: autonomy enhances well-being, but the predictability and regularity of working hours have a positive effect on well-being, even when determined by employers.

When all other things are equal, atypical working time patterns such as shift, night or weekend work do not themselves have a negative impact on well-being. As work–life balance and working conditions are controlled for, one might suppose that those working atypical work have chosen this mode even if this is a choice under constraints.

<sup>24</sup> Couples with pre-school children, couples with children aged 7–12 and couples with children aged 13–18.

# 6 Working time patterns and workers' health

As far back as the 18th century, Italian physician Bernardino Ramazzini pointed to the detrimental effects of shift work, particularly at night (Costa, 1996).<sup>25</sup> Since the 18th century, shift work (whether or not at night), irregular working time and long working hours have become widespread in all industrial and service activities. While the first social laws adopted in the 19th century in industrial countries sought to protect the health and safety of employees (mainly children and women), the impact on health, well-being and work-life balance of irregular working time schedules, particularly shift work and night work, was increasingly documented in the last three decades of the 20th century. The EU Working Time Directive (Directive 93/104/EC was updated in 2003 as Directive 2003/88/EC) was explicitly issued to protect the safety and health of employees. The 2003 directive acknowledges that night work and shift work may be detrimental to employees' health and safety.

## Brief review of the literature

Research on the effects of working hours on individuals' health is prolific and, in general terms, shows that while certain patterns of working time may contribute to the enhancement of individuals' quality of life, others may have negative impacts on workers' health. For example, a study for the ILO highlighted that:

*While excessively long and irregular hours may produce fatigue, consequent ill-health, poor performance and adverse effects on home life, certain other working patterns, may significantly facilitate domestic and leisure activities and thus enhance general quality of life.*

(Spurgeon, 2003)

In a general context characterised by the increased prevalence of irregular and atypical working hours during the past 30 years (Sautory and Zilloniz, 2015), most empirical studies analysing the health impacts of atypical work have focused on shift and night work. As a common trait, all research work links shift and night work to several health risks (see Harrington, 2001; Wisetborisut et al, 2014; Anses, 2016), including:

- sleep disorders and a reduction in alertness;
- gastrointestinal pathologies (colitis, duodenitis, peptic ulcer);

- greater exposure to accidents at work;
- neuropsychological pathologies (chronic fatigue, anxiety, depression);
- cardiovascular disorders (hypertension, ischaemic heart diseases);
- metabolic disorders conducive to obesity, type 2 diabetes and so on;
- greater exposure to cancer, particularly for women (breast cancer);
- anxiety, depression and increased neuroticism;
- specific problems encountered by women in relation to their hormonal and reproductive functions;
- increased risk of spontaneous abortion, low birth weight and prematurity;
- general fatigue.

The Anses report (2016) is based on a large survey of international literature devoted to the health impacts of shift and night work. Other studies confirm these results, while adding further potentially detrimental impacts, such as psychological health (psychosocial risks) and a reduction in cognitive performance leading to an increase in injuries and accidents at work. This is particularly the case for night workers, as has been highlighted in several studies, showing, for instance, that the nuclear accidents at Three Mile Island (1979) and Chernobyl (1986), as well as the Bhopal disaster (1984), happened at night (Costa, 1996).

The relationship between long hours and health has been studied extensively for decades and for that reason research reviews on the subject are widely available. For example, one review triggered by the implementation of the Working Time Directive in 1996 recognised that:

*It is difficult to escape the conclusion that schedules of this nature [working time beyond 50 hours a week] are detrimental to health and wellbeing. It is also difficult to find evidence that long working hours are beneficial, either to employees or the efficiency of the organisation as a whole.*

(Spurgeon et al, 1997)

<sup>25</sup> Ramazzini's study of the diseases of workers, *De morbis artificum diatriba*, published in 1700, was the first comprehensive treatise on occupational medicine, covering pneumoconiosis and other diseases of miners, lead poisoning in potters, silicosis in stonemasons, and various diseases among metal workers, printers and athletes. Ramazzini's work was translated into English as *A treatise on the diseases of tradesmen* (London, 1705).



Since then, many other reviews of empirical studies on the associations between long hours and health have been conducted. In one such study, van der Hulst (2003) concluded that ‘long workhours are associated with adverse health as measured by several indicators (cardiovascular disease, diabetes, disability retirement, subjectively reported physical health, subjective fatigue)’. The author also found evidence of ‘an association between long workhours and physiological changes (cardiovascular and immunologic parameters) and changes in health-related behaviour (reduced sleep hours)’.

Virtanen et al (2012) suggested that there is an increased probability of coronary heart disease (CHD) associated with long hours but concluded that it was not yet clear ‘whether long hours at work are a causal risk factor or only a marker of increased CHD risk’. Bannai and Tamakoshi (2014) also concluded that ‘working long hours is associated with depressive state, anxiety, sleep condition, and coronary heart disease’. More recently, Kivimäki et al (2015), in a systematic review and meta-analysis covering over 600,000 individuals, concluded that:

*Employees who work long hours [defined as working 55 hours or more per week] have a higher risk of stroke than those working standard hours; [but that] the association with coronary heart disease is weaker.*  
(Kivimäki et al, 2015)

In a paper analysing the causes and consequences of occupational fatigue, Techera et al (2016) pointed to overtime and long working hours as well as extended (night) shifts as important causes of occupational fatigue. They list the most significant health outcomes of fatigue: short-term cognitive and physical degradation, mood changes, lower attention and concentration, and an increase in reaction time conducive to errors, injuries, illness and so on.

However, the relationship between working hours and health is not straightforward and is certainly not a direct one, as many variables may have a moderating effect. Sparks et al (1997), for example, refer to the type of job because the impact of long hours may be greater for jobs that require more attention (such as driving) or repetitive work. The amount of physical activity might have a role as well: for example, farmers are relatively more protected from CHD than workers in sedentary occupations. The working environment is another moderating factor: the ergonomics of the workstation or other factors such as noise level, high/low temperatures, vibration, poor ventilation and inadequate lighting can play an important role. The equipment used for work can also play a role, for example, working long hours with computer video screens. Sparks et al (1997) also identified age as a potential mediator, with the negative effects of long hours on health tending to increase with age. The review refers to a number of studies showing that an

individual’s choice over their working hours is also an important moderator:

- An individual’s control over their hours of work influenced perceived stress levels (Hall and Savery, 1986) and tolerance of work schedule (Barton et al, 1993).
- There were significant correlations between health symptoms and ability to refuse overtime, and inflexibility of work programmes (Schmitt et al, 1980).
- The freedom to choose particular hours of work was found to have implications for the degree to which shift workers experienced subsequent problems (Barton and Folkard, 1991).

However, Artazcoz et al (2013) concluded that the association of working long hours with poor health outcomes takes place in a gradient that is modulated by gender roles in different welfare state regimes. They suggested that ‘family responsibilities and breadwinner models can help explain the relationship between long working hours and health status’. Subsequently, Artazcoz et al (2016) stated that long working hours should be considered as a social determinant of health and not only as a job hazard.

Also of relevance is the fact that, according to Strazdins et al (2016), it is crucial to examine the relationship between long working hours and health status through conceptual frameworks that take into account their forced or voluntary nature – determined to a great extent by both individual and contextual factors.

## Evidence from the sixth EWCS

As shown above, empirical studies confirm the negative impact on health of long exposure to atypical working time arrangements (night and shift work) and long working hours. About one out of five respondents in the EWCS sample worked nights (19%), shifts (21%) and/or long hours (21%) in 2015, while around 28% worked weekends (see Table C1a in the Annex).

Three indicators were used to explore the relationship between working time arrangements and health (Table 6). The first one, ‘poor health’, is based on the question aimed at eliciting workers’ assessment of their overall health situation (Q75 ‘How is your health in general?’). The majority of respondents (78.5%, with no large gender disparity) stated that they are in good health (answering ‘very good’ and ‘good’). Only 2.7% of the sample (2.8% of women and 2.6% of men) reported poor health (answering ‘bad’ and ‘very bad’) (Table 6).

The second health indicator, ‘serious sleep problems’, is based on the question asking workers if over the last 12 months they ‘had difficulty falling asleep’ or ‘woke up repeatedly during sleep’ (Q79a, Q79b). It is known from the literature that workers with sleep problems are most exposed to fatigue conducive to physical and

psychological disorders (Techera et al, 2016). As shown in Table 6, 6.1% of the sample reported 'serious sleep problems', with a higher incidence among women (7.5%) than men (4.8%).

The third indicator is based on the question: 'Do you think your health and safety is at risk because of your work?' (Q73). A significant proportion of workers (22.5%) reported that they felt their health and safety was at risk because of their work: 18.9% of women and 26.1% of men (Table 6).

**Table 6: Self-reported health status by indicator, EU28, 2015 (%)**

	All	Women	Men
Poor health	2.7	2.8	2.6
Serious sleep problems	6.1	7.5	4.8
Health and safety risk	22.5	18.9	26.1

Note: EWCS sample as a whole.

Source: EWCS 2015 (authors' calculations)

### Factors influencing self-reported health status

Using a standard logit regression, the factors that affect the indicator of health (self-reported poor health) were estimated – focusing on job characteristics, working conditions, working time patterns, atypical working hours and work–life balance.<sup>26</sup>

The predicted probability of reporting poor health is 1.2% for the sample as a whole (1% for women and 1.3% for men – see Table C23b in the Annex). These low probabilities reflect the fact that the sample consists of individuals currently at work and hence, on average, in better health.

As expected, workers reporting low satisfaction with working conditions (and, to a lesser extent, those more exposed to physical risks) have a higher probability of reporting poor health: an increase of 1.9 percentage points or an increased probability of 160% compared with those satisfied with their working conditions. Women who are less satisfied with their working conditions have a higher probability of reporting poor health (an increase of 2.2 percentage points), which seems consistent with the fact that low-skilled women are more likely to report poor health (an increase with 100% of this probability) than their medium-skilled

counterparts. A positive correlation between self-reported poor health and poor work–life balance was also found; reporting a poor work–life balance increased the probability of reporting poor health by almost 75%. Male workers reporting a poor work–life balance have a 1.3 percentage point higher probability of reporting poor health (or a 133% higher probability).

The self-employed have a higher probability (+1.9 percentage points) of reporting poor health than employees (see Table C23b in the Annex). It is unclear whether this is because their working hours are longer or because they are more likely to continue working during periods of illness due to their responsibilities and obligations to the 'market' or other similar constraints. The second hypothesis seems more likely, as those working long hours have a significantly lower probability of reporting poor health. The results show that, all other things being equal, if long working hours decrease, the probability of reporting poor health compared with those with standard working time patterns also decreases (by 0.5 percentage points or 54% of the probability to report poor health).

However, this positive relationship between working hours and health is not in accordance with the results found in the literature based on longitudinal data. As mentioned previously, this counterintuitive result is related to the specificity of the sample that includes only employed people currently at work and is a typical example of reverse causation. The EWCS is not a longitudinal survey and is not well suited to the analysis of the long-term impact of long working hours or atypical work on health (see Dembe et al, 2005).<sup>27</sup> Longitudinal studies suggest that those currently working long hours (but also shifts and nights) have better health, while those who earlier worked long hours or an atypical work schedule for a long period have either left the workforce due to illness or have reduced their working hours.

The estimates show that part-time workers are more likely to report poor health than those working standard working time. This is particularly true for men working part-time (an increase of 2.3 percentage points or 230%). These results are also consistent with the fact that workers reporting poor health have a higher probability (an increase of 6.5 percentage points or 63.6%) of working short part-time (up to 20 hours a week) and a lower probability of working long hours (a decrease of 4.3 percentage points or 22.4%).<sup>28</sup>

<sup>26</sup> Those who are currently absent from work due to sickness are not included in the EWCS.

<sup>27</sup> Dembe et al (2005) studied the impact of overtime and extended working hours on the risk of occupational injuries and illnesses among a nationally representative sample of working adults in the USA. The study spanned 13 years and drew on information from 110,236 job records.

<sup>28</sup> The results of the multinomial logit estimates (working time distribution), including respondents' health status, are available on request from Eurofound.

In their literature review, White and Beswick (2003) highlighted the lack of empirical evidence regarding the impact of commuting time on health and safety. The result of the estimations based on data from the sixth EWCS show that commuting time increases the probability of reporting poor health.

One surprising result concerns the link between working conditions and health: work intensity seems to have no impact on self-reported health status. However, this might be due to the ‘healthy worker’ effect: that is, only healthy workers are at work. Conversely, women with working time autonomy are less likely to report poor health status (a decrease of 0.6 percentage points or a 43% lower probability).

### Serious sleep problems

It is known from the literature that individuals with sleep problems have a higher probability of reporting poor health. As highlighted by Techera et al (2016): ‘in addition to fatigue, sleep disruption causes impaired physical performance, decreased work satisfaction, increased stress and interrupted future sleep patterns’ – all elements potentially putting health at risk.

The dependent variable, ‘serious sleep problems’, does not directly refer to the quantity of sleep but rather to its quality (difficulties in falling asleep and/or waking up repeatedly). Moreover, on the basis of the EWCS, it is not possible to know whether these sleep problems are linked to the respondents’ work and working conditions or to other aspects of their life. As concluded by Van Laethem et al (2013), more research is needed to examine the relationship between job control and job demands and other psychosocial work characteristics with sleep quality.

Looking at the results of the logistic regression for the whole sample (Table C23c in the Annex), the predicted probability of a worker reporting serious sleep problems is 3.6% for male workers and 5.0% for female workers. The focus was again on the relationship between working conditions and sleeping, as was the case with poor health. Indeed, those reporting lower satisfaction with their working conditions have a higher probability of reporting serious sleep problems: 4.3 percentage points more or a 99% higher probability (an increase of 87% for men and 110% for women). However, although to a lesser extent, exposure to physical risks and a high level of work intensity are also highly statistically significant and positively correlated with sleep problems. Similarly, poor work–life balance is a good predictor of sleep problems (3.4 percentage points more for the whole sample, with women more affected than their male counterparts: 3.5 and 3.0 percentage points more, respectively). Commuting time is also related to workers’ assessment of their sleep quality, particularly for women (1.2 percentage points more or 24% higher probability) – and the longer the commuting

time, the more likely it is for the workers to report sleeping problems.

Turning to working time patterns, night workers have – as might be expected – a higher probability of reporting serious sleep problems (1.2 percentage points more or a 28% higher probability). Part-time workers also report a 45% higher probability of serious sleep problems. As stressed previously, some of those working part time do so for health reasons and this may be related to their ability to sleep as well.

Life stages also seem to play a role, with older singles reporting a higher probability of having sleep problems: 4 percentage points more for all and 5.5 percentage points for older single women, compared with young married/cohabiting workers without children at home.

What is more difficult to interpret is the finding that workers in all the country clusters, except for the Baltic country cluster, have a higher probability of reporting sleep problems. The higher probability of reporting sleep problems (between 3 and 3.5 percentage points depending on the cluster) might be explained by more intense work rhythms and/or a larger diffusion of atypical working hours and part-time employment. The most striking case is the Anglo-Saxon cluster, where the probability of reporting sleep problems is 6.5 percentage points higher (or an increase of 148%) than in the Central–Eastern cluster. Does this have to do with working conditions? Since the analysis controls for skills level, sector, life stage, working time, satisfaction with working conditions, work intensity, and job and employment characteristics, other individual or societal aspects not controlled for might explain these cross-cluster disparities. Further research is needed to explain these differences.

### Health and safety at risk due to work

The statistical estimates show that, all other things being equal, the predicted probability of a worker reporting that their health and safety is at risk due to work is 21.8% for male workers and 13.1% for female workers (see Table C23d in the Annex). Not surprisingly, lower satisfaction with working conditions (or being exposed to physical risks, although to a lesser extent) increases the likelihood of reporting health and safety risks due to work (an increase of 19 percentage points or 100%). Those with a relatively poorer work–life balance also have a higher probability of reporting health and safety risks due to their work (9.5 percentage points more or 54% higher). In the same vein, long commuting time also has a positive correlation with health and safety risks due to work (2.1 percentage points more, rising to 3.7 percentage points for women).

Working nights also increases the probability of reporting higher health and safety risks (5 percentage points more or an increase of 29.4% of the probability), as do long working hours, but only for men: 3.8 percentage points more or an increase of 18% of the

probability. Work intensity is also positively related to higher health and safety risks, while those with regular work schedules report a lower probability of reporting higher health and safety risks (a decrease of 3.8 percentage points).

Workers in the construction, public administration, defence, health and education sectors have an increased likelihood of reporting that their health and safety is at risk due to their work than those working in manufacturing.

Finally, one interesting result is related to the disparities among the country clusters. With the notable exception of workers in the Anglo-Saxon cluster, all workers in the remaining clusters have a higher probability than those

in the Central–Eastern countries of reporting health and safety at risk because of work:

- 14.3 percentage points more in the Northern countries;
- 13.0 percentage points more in the Baltic countries;
- 4.0 percentage points more in the Continental countries;
- 3.2 percentage points more in the Southern countries.

As they are relatively counterintuitive, these results may possibly be explained by the greater knowledge and awareness of the potential incidence of psychosocial risks related to working conditions and environmental factors (in particular in the Northern countries and increasingly in the Continental countries).

## Summary

Owing to the specificity of the sample used for the sixth EWCS, a relatively low share of respondents reported either poor health or serious sleep problems. However, nearly one-fifth of the workers claimed that their health and safety was at risk due to their work.

Dissatisfaction with working conditions constitutes overall a strong predictor of poor health and/or sleep problems. When respondents reported work–life balance difficulties, they also tended to report health and sleep problems and were more likely to report health and safety risks due to their current work. Long commuting time also tends to have detrimental impacts on self-reported health status.

The relationship between working time patterns and workers' health is more ambiguous to interpret, since there is an overrepresentation of individuals with good health at work. Hence, long working hours as well as long exposure to atypical work, which have been found to be detrimental to health, have a positive correlation with health in the EWCS sample. Working nights or shifts, and/or being exposed to high work intensity increases the likelihood of reporting serious sleep problems and has a positive correlation with reporting health and safety at risk due to work. On the other hand, working time autonomy and regular work schedules seem to have a positive 'impact' on these two dimensions.



## 7 Working time patterns for sustainable work

The notion of sustainable work is gaining more and more attention in a context of an ageing population and the long-term financial stability of social protection systems, particularly pay-as-you-go pension systems. Many countries have already implemented policies aimed at postponing retirement. As a consequence, policies and practices are needed to ensure that workers are able and willing to work longer. This means that working conditions in a broad sense (including working time patterns, work organisation, work environment and exposure to physical and psychosocial risks) need to be adapted to enable a better balance between paid work and other social activities, as well as to enhance well-being and promote good health (Eurofound, 2015). Moreover, postponing retirement implies the implementation of policies favouring smooth and integrative transitions across the life course through, among other things, reversible working time options, generous and flexible parental and educational leave, and lifelong learning facilities (Anxo et al, 2011). As highlighted by Eurofound (2015), these policies should aim ‘to enable individuals to meet their needs through work in the present without compromising their ability to meet their needs through work in the future’.

Particular attention should be paid to how the ageing process affects the capacity to work. This encompasses physical and mental capacities such as, for instance, being able to carry out a fast sequence of physical and cognitive micro-tasks (Volkoff and Gaudard, 2015). As also stressed by these authors, quantitative and qualitative research indicate a twofold negative orientation in this respect, with trends in the organisation of work and production processes mainly oriented towards intensifying work, while few efforts are being made to adapt working conditions for older workers. As a result, workers are reluctant to continue working to the detriment of their health and well-being, while employers prefer to substitute older workers with more educated and skilled younger ones.

Other strands of research have developed a more systemic approach to sustainable work, taking into account its environmental impact. For instance, Docherty et al (2009) define sustainable work systems as those using human, social, economic and ecological resources responsibly, to allow for the regeneration of

human and natural resources. This kind of approach, inspired by the ecological debate over the type of society that the current generations will leave to their children, implies that a sustainable work system should take account of the fact that the way people work today and the ability to influence this, will have an impact on the way people will work in the future.

Results from the 2005 French working conditions survey show that one in three of 35–55 year-old employees feel they would not be able to do the same job or a similar one up to the age of 60. The group most concerned were those exposed to physical or psychosocial risks (tensions with colleagues, line managers or customers), together with those having unpredictable and excessive working hours. Moreover, those who considered that their work did not allow them to learn things or who were not in a situation to deliver high-quality work were more likely to report that they would not be able to work up to the age of 60 (Coutrot, 2008).

There is overwhelming empirical evidence regarding the negative correlation between long and/or atypical working hours and well-being and health. Long exposure to these types of working time arrangements could have long-term detrimental effects on health, have a negative effect on well-being, and not favour a decent and sustainable working life. Previous research has shown that the total duration of night work, for example, should not in practice exceed 15 years (Molinié, 1999).

The results of ergonomic research, however, are not always mirrored in workers’ attitudes, as large numbers of those with long and/or atypical working hours may find that the compensations (wages, career prospects, rest days, work environment and so on) might make such schedules, in their opinion, sustainable (Volkoff and Gaudard, 2015). Current trends in the intensification of production processes are imposing various time constraints on workers – such as production standards, short lead times and urgent customer requests – that are not sustainable in the long run. Although many workers manage to cope with tight schedules (as documented in the case of home carers, for instance), these strategies are not sufficient to render the current process of working time intensification sustainable in the long run (Volkoff and Gaudard, 2015).

## Working time patterns and able-to-work life expectancy

The relationships between working time patterns and sustainability of work have been explored by analysing the factors influencing the expected and preferred age of retirement reported in the EWCS. Three questions from the sixth EWCS have been analysed. The first asks: ‘Until what age do you want to work?’ (Q92).<sup>29</sup> The second distinguishes between two age brackets. Those aged 55 or younger are asked: ‘Do you think you will be able to do your current job or a similar one until you are 60 years old?’ Those aged 56 or more are asked: ‘Do you think you will be able to do your current job or a similar one in five years’ time?’ (Q93). Only those who answered ‘yes’ to this question are asked a further question: ‘Until what age do you think you will be able to do your current job or a similar one?’ (Q94).

The results show that workers’ preferred age of retirement is around 63 years (62.6 years for women and 63.3 years for men) (Table 7). The proportion of workers reporting that they feel able to work until the age of 60 or more (or 5 years ahead for those older than 60) is nearly 73%, with a gender gap that amounts to around 4 percentage points. The age at which an individual is able to work is, according to the EWCS, around 64 years, with a relatively lower gender gap (around 1 year).

The factors influencing a worker’s choice of retirement age were analysed using a standard OLS estimation. The dependent variable was the self-reported preferred age of retirement, with the same set of covariates as before being controlled for. All other things being equal, women have a lower preferred age of retirement (1.0 year less) than their male counterparts (see Table C26b in the Annex). Workers who are satisfied with their working conditions have a higher preferred age of retirement (2.1 years more for women and 1.1 years more for men).

Workers reporting that their health and safety is at risk due to their work display a lower desired retirement age (1.2 years less), as do those who feel tired after work (nearly 1 year lower). Current weekly working time patterns have a relatively weak influence on preferred retirement age, with only shift workers indicating a lower preferred age of retirement (0.4 years less). Employees benefiting from working time autonomy report a higher preferred retirement age (0.7 years more, with nearly 1 year for men), as do those working part-time (0.8 years more for those working short part-time and 1.2 years more for men). Workers reporting a poor work–life balance express the desire to leave earlier (more than half a year for female workers). Workers in wholesale and retail, health and other services sectors report a higher preferred retirement age compared with those working in manufacturing. In contrast, public sector workers express a preference to retire earlier (around half a year).

Establishment size also plays a role, with workers in large organisations preferring to retire somewhat earlier than their counterparts in medium-size (and small) ones. An influential factor here may be that large establishments tend to offer better retirement conditions, such as supplementary pension schemes and early retirement schemes.

Employed people working in the Northern and Baltic country clusters have a 1.6 years (2 years more for women) and a 1.5 years higher preferred age of retirement, respectively, than those working in Central–Eastern countries. Workers in Anglo-Saxon countries report a lower preferred age of retirement (more than a half year, mainly male workers). As expected, the self-employed report a higher preferred retirement age (about half a year, but nearly one year for female self-employed).

Turning now to factors influencing the age until which the respondent feels they will be able to work in the

**Table 7: Expected age of retirement and ability to work until 60, EU28, 2015**

	Average			Minimum			Maximum		
	All	Women	Men	All	Women	Men	All	Women	Men
Preferred age of retirement	62.9 (5.97)	62.6 (6.01)	63.3 (5.90)	41	42	41	99	99	99
Age at which an individual is able to work	64.2 (4.73)	63.6 (4.50)	64.7 (4.87)	60	60	60	100	100	100
Share of individuals reporting they are able to work until 60 or 5 years ahead	72.7%	70.6%	74.7%	-	-	-	-	-	-

Notes: EWCS sample as a whole; standard deviation in parentheses.

Source: EWCS 2015 (authors’ calculations)

<sup>29</sup> The sample includes individuals aged from 15 to 89.

same or a similar job<sup>30</sup> (see Table C26c in the Annex), it can be seen that those satisfied with their working conditions report a longer able-to-work life expectancy (1 year more; 1.5 years more for women). Conversely, those reporting that their health and safety is at risk due to their work (as well as those who are tired after work or who are exposed to physical risks) display a shorter able-to-work life expectancy (0.5 years less). Low-skilled workers also consistently have a shorter able-to-work life expectancy (1 year less) than medium-skilled workers. This is also true for those with supervisory tasks (0.4 years less).

Shift workers exhibit a shorter able-to-work life expectancy (0.5 years less), while night workers report a longer able-to-work life expectancy (0.5 years more). Those working short part-time and those with working time autonomy report a longer able-to-work life expectancy.

Compared with workers in manufacturing, respondents from almost all other sectors exhibit a shorter able-to-work life expectancy.

As with preferred retirement age, working life expectancy varies strongly according to the country clusters. Compared with workers from Central–Eastern countries, workers in all the other country clusters report a higher working life expectancy, ranging from around 1 year more in the Southern, Baltic and Continental clusters to about 2 years more in the Anglo-Saxon cluster and 3.6 years more in the Northern cluster. Since a wide range of country-specific factors are controlled for, there are strong reasons to believe that national variation in societal norms regarding retirement age explains most of these cross-country disparities.

To complete the analysis, a logistic regression to identify the factors influencing the probability to be able to work in their current or a similar job until 60 (for those aged 55 or less) or 5 years ahead (for those aged 56 or older) was also performed.<sup>31</sup> As shown by the results of the logit estimates (see Table C26d in the Annex), the predicted probability of being able to work until 60 or 5 years ahead is 77%, with a 5 percentage point gap between men (nearly 80%) and women (75%). As expected, health status has the strongest negative influence: those reporting poor health have a 21.1 percentage point lower probability of reporting they will be able to work in the same job until 60 or later (or a reduction of the probability of 27.4%). The following factors were all found to contribute to reducing the

probability that workers would be able to work up to 60 years of age or later:

- lower satisfaction with working conditions (5 percentage points lower or a reduction in the probability of 6.5%);
- reporting health and safety is at risk because of work (12 percentage points lower or a reduction of 15.5%);
- being tired after work (8 percentage points lower or a reduction of 10.4%);
- reporting a poor work–life balance (4.5 percentage points lower or a reduction of 6%).

In contrast, those satisfied with their working conditions reported a higher probability of being able to do the same job up to the age of 60 or later (19 percentage points more – or an increase of 24.7% of the probability).

Female shift workers have a 6 percentage point lower probability of indicating that they would be able to continue to work up to the age of 60 or later. The same is true for women working during weekends, with a 5 percentage point lower probability of being able to work up to the age of 60 or later (night work does not seem to influence this probability). While shift and weekend work have a negative correlation with the likelihood of doing the same job until the age of 60 or later, this is not the case for long working hours.

The self-employed have a higher probability compared with their employee counterparts of reporting that they would be able to work until the age of 60 or later (4.3 percentage points more or an increase of 5.6%).

Workers in the wholesale and retail sector have a lower probability than those in the manufacturing sector of reporting they would be able to work in the same or a similar job until they are 60 or later; this is especially true for men in this sector, who have a 9% lower probability. Construction workers also reported a lower probability as did those working in education, suggesting that both physical and psychosocial factors surrounding these activities could be at play.

Compared with workers in the Central–Eastern countries, respondents in all the other country clusters have a higher probability of reporting they would be able to perform the same job until the age of 60 or 5 years ahead. For instance, women in the Northern countries have a 16 percentage point (or 21% more) higher probability of declaring that they would be able to work up to the age of 60 or 5 years ahead.

30 In this case, only those who answered ‘yes’ to Q93 are considered (able to work until 60 for those aged 55 or less; able to work 5 years ahead for those aged 56 or more). This is why the sample is composed of 16,360 observations (Table C26c in the Annex).

31 The dependent variable was based on the question: ‘Do you think you will be able to do your current job or a similar one until you are 60 years old?’ (Q93). The dependent variable takes the value 1 if the answer is ‘yes’ and ‘0’ if the answer is ‘no’.



## Summary

The preferred age of retirement and the ability to work longer are strongly associated with current health status and working conditions. Those satisfied with their working conditions report a higher preferred retirement age and have a higher probability of saying they would be able to work until the age of 60 or later. However, those reporting that their health and safety is at risk because of their work or who report being tired after work have a lower preferred retirement age and are less likely to feel they would be able to continue to perform the same job for a longer period.

Looking at working time patterns, shift work has a negative correlation with preferred retirement age as well as with the ability to perform the same job until the age of 60 or more. While working nights or weekends does not significantly affect the preferred retirement age, it does have an impact on the probability of being able to perform the same or a similar job longer. This is also the case for part-timers who would prefer to work longer, but who have a lower probability of being able to perform the same part-time job until the age of 60 or later. Those with the possibility to choose or adapt their working hours tend to report a higher preferred retirement age and to think they will be able to perform the same or a similar job until they reach the age of 60 or later.

There are important differences between the country clusters, in particular regarding preferred retirement age. This is lower in the Anglo-Saxon and Southern countries and higher in the Northern and Baltic ones compared with the Central–Eastern countries. Still compared with the Central–Eastern countries, workers in all other clusters also report a higher likelihood of being able to perform the same or a similar job until the age of 60 or later. These differences in preferred retirement age and working life expectancy can be partly ascribed to cross-country disparities in the design of social protection systems, in particular the pension system, the industrial relations systems and the societal norms regarding pension age.

## Working time measures conducive to sustainable work

Working time patterns are an important element of sustainable work. Sustainable work over the life course means that:

*...working and living conditions are such that they support people in engaging and remaining in work throughout an extended working life. These conditions enable a fit between work and the characteristics or circumstances of the individual throughout their changing life, and must be developed through policies and practices at work and outside of work.*

(Eurofound, 2015, p. 2)

Two crucial elements are included:

- job quality;
- the interaction between individuals and their circumstances and situation at work.

Working conditions, such as particular working time patterns, can have a negative impact on health and on the ability of workers to continue working until retirement age. As seen above, epidemiological studies have shown, for instance, a negative impact of long working hours, night work and shift work (particularly backwards rotating shifts). Throughout the life course, however, the needs of workers to devote time to private issues may become more intense at particular times of their life course. This can be related to care and health issues, for themselves, their children, grandchildren and other dependents. Whether these time needs are catered for influences the chance for workers to engage and keep on being engaged in work.

As these time needs can change throughout a worker's life, transitions are an important tool. All Member States have implemented policies and measures for sustainable work, under various labels (Eurofound, 2016b). Some Member States such as the Netherlands and Sweden – and to some degree Belgium – have developed a life course policy around sustainable work. In France and Germany, quality of work is the entry point for measures around working time and sustainable work. In other countries, such as Greece and Poland, the measures are more separate and not necessarily grouped under a bigger umbrella.

The depth and width of the measures also varies. For instance, most Member States have some form of parental leave, but its duration, remuneration replacement level, flexibility in the organisation and sharing among partners vary considerably from country to country. In addition, not all measures at country level go in the same direction of making work more sustainable. Particularly under the umbrella of measures to combat the effects of the recession, some countries have produced policy measures which potentially impact the sustainability of work for some workers with particular needs. Furthermore, measures are developed by all actors, including governments, companies and social partners.

This section describes some of the policies and legislative measures introduced by governments and under collective agreements. It also highlights a few company practices, as company level is a crucial place for the sustainability of work over the life course for workers. Based on contributions from Eurofound's Network of European Correspondents, the measures are grouped under four headings:

- working time measures in the context of workers' health protection;
- working time measures to enhance employee-friendly flexibility;

- working time measures for workers with care responsibilities;
- working time measures to ease the end of the working career.

### Working time measures to enhance health protection

The working time regulation reform in **Estonia** in 2009 focused on placing more emphasis on preventing negative work-related health outcomes, as well as providing more clarity about working time duration and rest periods. In 2013, the **Finnish** government introduced an amendment to the Occupational Health and Safety Act (738/2002), which obliges employers to investigate harm caused to employees by working hours and other aspects of working life. In addition, overtime work should be compensated for mainly by time off rather than through additional pay. In **Latvia**, the regular working time of workers subject to specified risks must not exceed seven days a week and 35 hours per week if they are engaged 50% or more of their time in their work. In some dangerous jobs, workers also get extra leave.

In December 2016, the social partners in the public healthcare sector in **Sweden** signed a new working time agreement for nurses (and other healthcare workers including midwives and physiotherapists). Over the past few years, many nurses have chosen to go from full-time to part-time employment, often due to the lack of recovery time after doing shifts and/or night work. To combat this problem, the new agreement shortens the working time according to the number of night shifts performed. For example, a nurse who only works nights had their weekly working time reduced by two hours.

Equally, in **Ireland**, in 2012, a collective agreement focused on rosters in the Garda service (Irish police force), with a new work cycle consisting of six days on and four days off, with most shifts being 10 hours long.<sup>32</sup> The new system moved from morning shifts to afternoon shifts to evening shifts, rather than the other way around as in the past – to be more in tune with the body's circadian rhythm. The time between shifts was also increased, as eight hours between shifts was not considered sufficient for recuperation. Also a shift that ended at 6.00 was considered a rest day, while in reality it was sleep time. The agreement was also more in line with the Working Time Directive stipulation of 11 consecutive hours' rest between two working days. Nevertheless, Garda work is unpredictable by nature and several possible exceptions were included in the agreement.

In **France**, the *forfait jour* ('day allowance') – part of the Aubry law of 1998 – was introduced to:

- limit the amount of working time, through collective agreements, for workers for whom it is difficult to calculate their actual working hours (for example, managers and autonomous workers);
- place limits on the amount of working days that the workers can work;
- specify the periods of daily and weekly rest.

These provisions need to be reviewed annually between the employee and the employer to assess the workload and its distribution throughout the year. Better results can be found when the measure is linked to a working time savings account, which allows workers to take extra leave or to finance professional retraining.

### Working time measures to enhance employee-friendly flexibility

In 2014, the **UK** introduced the right to request flexible working for all employees who had worked for their employer for 26 weeks and not just those with care responsibilities, as was previously the case. Employees are required to make an application in which they explain how they want to work flexibly and how this can be incorporated in the business – for instance, through job-sharing, working from home, part-time working, compressed hours, flexitime, annualised hours, staggered hours and/or phased retirement.

Similarly, in the **Netherlands**, a wide range of working time arrangements are available to workers to allow them to find the best arrangement for them in terms of number of hours (part-time work, often long part-time, is very prevalent) and also in the organisation of their work through self-scheduling schemes. Similarly in **Portugal**, the new labour code introduced in 2009 opened the way to flexible working time arrangements through working time accounts, concentrated work schedules, intermittent work (but including the provision of basic pay to workers during periods of inactivity) and more generous parental leave.

In **Cyprus**, a subsidy scheme to encourage employment participation through flexible arrangements, available since 2006, aims to make employment more attractive and feasible for workers with specific care responsibilities as well as for the unemployed who want to work under flexible working time arrangements. The scheme is seen as a way of getting into work people who otherwise would stay away from full-time employment in the labour market by giving them more flexible working time arrangements.

<sup>32</sup> The literature on the length of shifts is not unanimous, with some arguing that longer shifts could be dangerous for health and increase the risk of accidents. Also, the police force unions in different countries tend to have different preferences. The crucial element, however, is the recuperation time between shifts.

In **Austria**, a free time option (*Freizeitoption*), introduced in 2014, allows workers to opt for more free time instead of a pay increase. This measure is included in sectoral collective agreements, for instance, in the electro and electronics sector (2013), mining and steel industry (2013), automotive industry (2014) and paper industry (2015). The free time option, based on a works agreement which the works council and employer need to negotiate, allows individual workers to choose between receiving the annual pay increase (negotiated by social partners in collective bargaining rounds) or receiving its equivalent in free time. It can be used to reduce the duration of the working week or accrued, even over several years, to take days or longer periods off.

In **Finland**, amendments to the Employment Contracts Act in 2011 facilitated absences related to parenting or other family obligations. With these amendments,

employers became obliged to try to arrange work so that an employee could take a fixed period leave of absence to care for a sick family member.

In **Greece**, some interesting company examples can be found concerning both work–life balance and the health and well-being of workers, and more sustainable work environment. At Coca Cola Hellas, for example, flexitime is available for all workers, and employees have the right to work one day per week from home. In addition, working hours can be compressed in the summer to allow workers to finish at 13.00 on Fridays and to allow the working week to be reduced by one day for mothers. Similarly in **Malta**, KPMG Malta has a wide range of different working time arrangements available for workers with care responsibilities.

## New way of working: the right to disconnect and sustainable work

Joint research by Eurofound and the ILO has shown that work is no longer primarily linked to one place because ICT allows workers to work from any place and at any time (Eurofound and ILO, 2017).

Work–life balance is one of the drivers for companies to introduce telework as a flexible form of work organisation. Workers are usually in favour of being able to decide where they can work, not only as a way of reconciling work with private life, but also in order to be able to work without being constantly interrupted by colleagues. There are large differences within the EU in terms of telework, ranging from less than 10% of telework/ICT mobile workers in Italy and Greece to 30% or more of workers in Denmark, the Netherlands and Sweden.

The effect on work–life balance, however, is mixed: not all telework/ICT mobile workers report better results in terms of a good fit between work and private life. This is because such workers tend to work very long hours, often in their private time, thus blurring the frontiers between work and private life. The effect is strongest for those who do supplemental telework (on top of the work done in the office) rather than substitutional telework (for instance, one or two days at home instead of in the office). Notwithstanding this, the effect is still positive for those who can achieve working time autonomy, that is, they have some say over when they work (Eurofound and ILO, 2017).

In 2002, the European Framework Agreement on Telework laid down some ground rules for the implementation of telework at company level. For example, telework should be voluntary, with the employer being responsible for health and safety, including measures to prevent isolation of the teleworker. Legislation in many countries has implemented these rules. Some governments, such as the Dutch government, encourage this way of working to allow workers to have more working time autonomy, as well as temporal and spatial flexibility.

Although telework is often carried out at the request of workers, usually to allow them to be able to organise their work and private life better, many of those working ‘anywhere’ work very long hours. This could have unintended negative health consequences. Some companies have started to limit the ability to send emails to colleagues or bosses via the work network out of normal working hours. This restriction has also been taken up in a series of collective agreements at company level and is included in the new French labour law as the right to disconnect (*droit à la déconnexion*). Similar actions have been taken by German companies and in collective agreements. The German government is investigating the best way for legislation. Such a measure highlights the importance given to recovery and proper rest periods for the health and well-being of workers, as well as the implications of telework for the sustainability of work.

For more details, see Eurofound and ILO (2017).

## Working time measures for workers with care responsibilities

In 2016, legislation was introduced in **France** to give workers the right to work part time for six months to allow them to take care of a dependent person. Since 2015, in **Italy**, parental leave can be taken in the form of part-time work rather than being taken all at the same time, a measure which exists also in other countries. In **Germany**, the amendment of the parental leave (*ElterngeldPlus*) and care leave legislation (*Pflegezeitgesetz*) in 2015 made it easier to take leave more flexibly. Equally, in **Latvia**, specific measures have been taken for work–life balance, such as allowing parents to have a leave day on the day their child starts school or graduates and entitlement to supplementary leave when they have children, up to the age of 14 or 16 years, depending on the number of children.

In **Slovenia**, a European Social Fund project to develop a model of support for better working environment, conducted by a tripartite group of social partners and a university, aims to develop a model for small and medium-sized companies to reflect on better working conditions for vulnerable workers and work–life balance. The Health Insurance Institute Maribor, for instance, introduced work sharing as well as a gradual extension of working hours on return from parental and other leaves. Also, a project called Fathers and Employers in Action maps good practice examples to support active fatherhood, for example, through leave on the first school day, working from home and flexible working time.

## Working time measures to ease the end of working life

In **Austria**, a reduction in working time can be requested towards the end of the working career without a reduction in pension (*Teilpension*). It is available from the age of 62 onwards. The employer agrees with the employee on a reduction of the working time of 40%–60%, but their wage is reduced by only half that percentage with the state funding the remainder. Furthermore, the partial pension has no impact on the

subsequent retirement benefits, as social security contributions continue to be paid in full.

In **Germany**, sectoral ‘demography agreements’ focus on working conditions and the introduction of specific measures to ensure workers’ work sustainability. Examples include the possibility of reducing working hours towards the end of the working life, and, in cases in the chemical sector where workers have time saved in their working time account, with payment of 100% of the salary. In **Luxembourg**, working time accounts can be used to reduce working time at the end of the working life.

In **Belgium**, collective agreement no. 104, introduced with the aim of developing measures to keep workers longer in the workforce, obliges employers to draw up an annual company plan for recruiting and retaining workers aged 45 or more. While the range of measures that can be listed are quite wide and the provisions are deliberately ‘soft’, it does address the issue of ageing workers at company level. Trade unions have developed a catalogue of possible measures that can be used in this context. One example is the Kraft company, where the social partners are involved in the development of more flexible part-time work, whereby employees aged 48+ are allowed to work three days with two days off, without disturbing production at the factory.

In the **Czech Republic**, a joint initiative of social partners, funded by the European Social Fund, has drawn up a list of measures related to working conditions which seek to make work more sustainable in the context of extending the working age. The aim is to go beyond suggestions and develop legislation in this field.

In **Denmark**, ‘senior days’ have been introduced in collective agreements. Depending on the sector, a different number can be agreed, with a more generous amount – up to 12 – granted in the public sector. The aims are to keep older workers in the labour market in light of demographic change and to reduce their working time to better reconcile it with private needs such as care responsibilities for grandchildren and other dependents, or other activities.

## Summary

The measures and initiatives that deal with working time adjustments mentioned here constitute just a very small sample of many more available across the EU with a potential impact on the sustainability of work. However, they illustrate well the type of measures that can be introduced to tackle the challenge of adapting work to individuals’ needs throughout the life course. Some have a more preventive role and envisage protecting workers’ health (and well-being) and are measures that can be applied to all the workers at any stage of their lives: for example, rearrangement of shifts or reduction of working hours. Others have more to do with the

flexibility necessary to cater for the varying needs of men and women at work at different stages of their lives, including flexibilisation of leaves to allow workers to deal with their private and family commitments (care of family members, for example) during different periods. Finally, there are tried and tested measures that somehow help to ease transitions at the end of professional careers according to people's needs and preferences.<sup>33</sup>

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<sup>33</sup> See Eurofound (2016c) for more on flexible retirement schemes.

## 8 | Conclusions and policy pointers

The main aim of this report was twofold: first, to identify and explain through a gender perspective the main working time patterns in terms of duration, distribution and organisation across the EU; second, to explore the relationships between working time patterns and workers' work-life balance, and health and well-being in Europe. Analysis of the data from the sixth European Working Conditions Survey (EWCS) conducted in 2015 showed the extent to which current working conditions and working time arrangements make it possible to combine paid work with family and other social activities over the life course. While systemically taking into account a gender perspective, a life course perspective was also adopted. The research examined the extent to which crucial life stages affect the working time preferences of employed men and women, and looked at the likelihood of workers having specific working time arrangements or possibilities to balance work and other social commitments. The most challenging part of the research was to explore, on the basis of the EWCS data, the intricate relationship between, on the one hand, prevailing working time patterns, and workers' well-being and health on the other. Lastly, the study explored the extent to which prevailing working conditions and working time patterns in EU Member States are sustainable in the long run.

### Duration and distribution of working time arrangements

On average, employed people in the EU28 work 36 hours per week. The average weekly working time varies considerably across the Member States and the selected country clusters (see Table 3 and Figure 7 in Chapter 2). The longest average weekly working time was found in the Central-Eastern countries followed by the Baltic countries, and the shortest in the Northern and Continental countries. The longer working time in both the Baltic and Central-Eastern countries is primarily because the incidence of part-time work in these clusters remains limited.

The difference between employment statuses is also important: self-employed individuals have significantly longer usual weekly working hours (39.9 hours) than employees (35.6 hours). Apart from traditional factors such as economic constraints and/or working time preferences, the observed disparities in working time between employment statuses can be ascribed, at least partly, to the fact that the self-employed are not subject to working time legislation, neither at country nor at EU level (although there are working time limits in the

transport sector even for the self-employed, with pilots as an example).

On the whole, the gender gap in weekly working time remains important, with men in the EU28 working on average 39.2 hours and women on average 32.7 hours per week. The gender gap in working time varies significantly across the six country clusters, with a greater gender polarisation in the Anglo-Saxon and Continental countries. In almost all life stages, female employees work fewer hours than their male counterparts. Female working hours are also much more sensitive to life stages. With the notable exception of the Northern and Central-Eastern countries, women's working time decreases during the parenting phase and the gender gap in working time increases significantly. The variation in women's working time across the life course is significantly higher in both the Anglo-Saxon and the Continental country clusters (where the gender gap in part-time is larger), as is the cumulative gender gap in working time across the life course. The impact of young children on working time is much lower in the remaining country clusters. Given the nature of the EWCS sample (working population, at work), there are strong reasons to believe that the total impact of children on female labour supply is underestimated.

Regarding the gender distribution of working time, a large proportion of female and male employees in the EU28 are concentrated around the 40-hours per week norm. Even though the dispersion of working time is significantly greater among women than men, there is a relatively high gender polarisation of working time, with a significantly higher share of women working part time and conversely a higher proportion of men working long hours.

Standard econometric techniques were used to analyse the factors influencing the positioning of workers in the working time distribution. The results confirmed that women are, everything else being equal, significantly more likely to work part time and less likely to work normal/standard working hours than their male counterparts. Conversely, male workers are more likely to work long hours.

Where an individual is located in the working time distribution is dependent on their skills level: the higher the skills level, the lower the probability of working short part-time and vice versa. Working time arrangements vary across sectors of activity, with part-time work being much more prevalent in sectors such as wholesale and retail, education and health than in manufacturing.

As far as long working hours are concerned, a significantly lower incidence of long hours in female-dominated, service-oriented sectors was found, while male employees with long working hours are overrepresented in traditional male-dominated sectors such as construction and transport.

Short part-time work is much more prevalent among employees working on short-term contracts. The results also show a positive correlation between work intensity and long hours. Workers working weekends and nights have a higher probability of working long hours while shift workers have a higher probability of working normal/standard hours (in terms of duration) and a lower probability of working long hours. Another interesting result concerns employment status: self-employed people are more prone to work both short part-time (mainly women) and long hours (mainly men but even self-employed with employees) than their employee counterparts.

Regarding the stylised life course, the incidence of short part-time is concentrated in the two tails of the age distribution, that is, in the early phase of the life course (entry into the labour market) and at the end of the career. The parenting phase also significantly affects the positioning of the respondent in the working time distribution: married/cohabiting workers with young pre-school children have a significantly higher probability of working long part-time and a lower probability of working long hours. The incidence of long hours also varies according to the industry and is more prevalent in the agriculture, wholesale and retail, and transport sectors than in manufacturing. Part-time is significantly more prevalent in female-dominated sectors such as in education and health.

The incidence of short and long part-time is significantly higher in the Anglo-Saxon and Continental country clusters than in the Central-Eastern country cluster. By way of illustration, working in the Anglo-Saxon country cluster more than doubles the likelihood of working short part-time and more than triples the probability of working long part-time.

Last but not least, atypical working type arrangements such as night, weekend and shift work are more prevalent among men and low-skilled workers, and are concentrated in specific sectors such as agriculture, wholesale and retail, transport and health, as well as in female-dominated sectors. Atypical working hours appear also to be more prevalent in the Anglo-Saxon, Central-Eastern and Southern country clusters. Predominant in the early life stage of the life course (entry into the labour market), atypical working time arrangements are also more frequent among the self-employed as well as among employees with fixed-term contracts. Independent of employment

status, atypical work also has a positive correlation with exposure to physical risks, long working hours, shorter rest periods and a poor work-life balance, indicating a certain accumulation of disadvantages.

## Work-life balance

The importance of achieving a good balance between paid work and private life is nowadays broadly acknowledged and this issue occupies an increasingly prominent place on the political agenda of the European Union. According to data from the sixth EWCS, a large majority of respondents (82%), independent of sex and employment status, state that their working hours fit well or very well with their private life obligations. However, as shown by the results of the estimations for this study, men appear to be less satisfied with their work-life balance than women. This somewhat counterintuitive finding is consistent with the fact that men have longer working hours and fewer possibilities to adapt working time to family life or other social commitments, while women have often already adapted their working time to their (mainly family) needs. Contrasting with the results found in the fifth EWCS (Eurofound, 2013), the 'impact' of the various life stages does not seem to vary according to sex. In effect, negative impacts on work-life balance are concentrated during the early phase of parenting, that is, when respondents have young pre-school children. This result seems to indicate some gender convergence regarding the main causes associated with poor work-life balance (that is, family commitments). The results also confirm that longer working hours have a positive correlation with poor work-life balance. Weekend, night work and frequent on-call work strongly increase the likelihood of reporting a poor work-life balance. Shift work also has a detrimental effect on work-life balance, but the impact is less than with other forms of atypical work.

Satisfaction with working conditions, high predictability of working time and job autonomy increase the likelihood of a more balanced reconciliation of paid work and other social obligations. A better fit between working hours and family and social responsibilities seems also to be more prevalent in the Northern and Baltic countries. Men in all country clusters, except for the Baltic and Northern ones, report greater difficulties in achieving a good work-life balance.

Two other indicators to evaluate potential difficulties with work-life balance were also used:

- being obliged to work during free time to meet work demands;
- having less time for family life due to work commitments.

Overall, a similar impact on these two alternative indicators of work–life balance was found. Although there are no gender differences in terms of having to work during free time, women often report that their job prevents them from spending the time they want with their family. Fathers and mothers of young pre-school children are also more prone to report work–life balance difficulties and often report having to work during their leisure time. Statistically significant differences between sectors were not found other than in the transport sector where employees report having significant less time for the family. Men and women working in education and men in financial services are more likely to report working often during their free time. Self-employed people do not report having more time conflicts with family responsibilities than their employee counterparts, but they are more prone to declare that they work during their leisure time.

### Working time preferences

The majority of workers report that they are satisfied with their current working time. Among the 42% expressing a preference for a change in their working time, a majority express a preference to reduce their current working time. Working time preferences do not differ drastically between sexes: if anything, a slightly higher proportion of men reported a preference to reduce their working time while a slightly higher share of women would like to increase their working time. Large disparities across the country clusters were found: some clusters exhibited no large differences between desired and actual working time, such as the Baltic and Central–Eastern countries, while in others, such as the Anglo-Saxon and Southern countries, the distribution of actual and preferred working time differed significantly. There are strong reasons to believe that the discrepancies between actual and preferred working time are related to the shape of the working time distribution.

In general, the analysis shows that countries characterised by a limited dispersion and a smaller gender polarisation of working time also display smaller differences between actual and preferred working time. For example, in the Anglo-Saxon countries, which are characterised by a larger dispersion of working time, a high incidence of short part-time and long working hours and an extreme gender polarisation of working time, the differences between actual and preferred working time are larger than in other country clusters. In a policy perspective, these results point therefore to the idea that the creation of conditions to reduce the differences between actual and preferred working hours would be conducive to a smaller difference between men and women and therefore potentially contribute to higher employment levels.

The econometric estimations tend also to show that a preference for a reduction in working time is positively correlated with skills levels and also to work intensity. Working time preferences are also strongly related to employees' current working time. Short part-timers have a significantly higher likelihood of preferring an increase in working time. Conversely, employees with long working hours express a particularly strong preference for working shorter hours.

Working time preferences also vary across the life course, in particular during the parenting phase. Cohabiting mothers with pre-school and pre-adolescent children are more inclined to desire a reduction in working time while this is true for fathers during the whole parenting phase. Older male and female employees both seem also significantly more likely to opt for a reduction in working time. For both sexes, poor work–life balance and lower satisfaction with working conditions significantly increase the probability of opting for a reduction in working time. In terms of country differences, both men and women in the Northern countries seem to have, all other things being equal, a stronger preference for a reduction in working time; this is also true to a lesser extent in the Anglo-Saxon, Continental and Southern countries.

### Working time patterns, health and well-being

A core objective of this study was to explore the relationship between working time patterns on the one hand, and well-being and health on the other. Lower satisfaction with working conditions, atypical working hours, long working hours, high work intensity and working during free time are all detrimental to a good work–life balance. Conversely, short part-time work and the possibilities to take time off for personal or family care are positively correlated with a good work–life balance. In the same vein, poor health, lower satisfaction with working conditions and a poor work–life balance are associated with reduced well-being, particularly well-being at work and being satisfied with working conditions. Lower satisfaction with working conditions, being exposed to physical risks as well as reporting a poor work–life balance also affect self-reported health negatively. In contrast, working time autonomy and having a fixed or regular working time have a positive impact on well-being, and are associated with a smaller likelihood of reporting sleep problems or reporting health and safety at risk because of work.

These findings illustrate the tension between choice and constraints: autonomy implies the ability to decide one's own work organisation and/or working time, while regular or fixed working hour schedules favour predictability. But this is true only when working time patterns are not subject to changes at short notice.



On-call work increases the probability to report poor work–life balance, for example. The findings also reveal potential inequalities between, for instance, low-skilled workers, who have generally more limited choice in the organisation of their working hours, and high-skilled workers or those with supervisory tasks, who can organise their working life more freely.

Even though long working hours and/or atypical work as well as high work intensity have a negative correlation with work–life balance and well-being, a negative relationship between long working hours, on the one hand, and poor health, on the other, was not found with the EWCS data. However, this result should not be interpreted as an indication that working long hours over a long period has no detrimental effect on health, as has been consistently shown in the literature. Rather, this counterintuitive result is related to the cross-sectional nature of the EWCS and the fact that it is a survey of employed people actually at work. The result is also a good illustration of a reverse causation problem. A prerequisite of working long hours is to be in good health and the fact that a positive relationship between short working hours and ill-health is also found is because people with poor health are more likely to work short hours. To accurately assess a causal relationship between long working hours or atypical working time arrangements, on the one hand, and health and well-being, on the other, requires the use of longitudinal data which should also include employed people not currently at work and previously employed people who are no longer in work.

## Working time patterns and sustainable work

Post-industrial societies are ageing due to the combination of lower levels of fertility and increased longevity. The long-term tendency for shorter working lives combined with an ageing population has created serious challenges for the long-term financial sustainability of social protection systems, requiring an increase of labour supply and longer working life.

As shown by the estimations carried out for this study, poor health, lower satisfaction with working conditions, exposure to physical and/or health and safety risks, a poor work–life balance and, to some extent, atypical working time patterns all have a detrimental effect on the ability to work up to the age of 60 or later. A prerequisite for lengthening the working life and postponing the age of retirement is to make work and employment conditions sustainable across the life course. The long-term sustainability of work demands also a constant adaptation of skills and competencies through, among other measures, lifelong learning schemes.

The analysis of the sixth EWCS data shows large cross-country disparities in the self-reported preferred age of retirement and in the ability of employees to work up to the age of 60 or longer. Workers from the Northern countries report a higher preferred retirement age as well as a higher age until which they think they would be able to do the same job or a similar one. However, it should be noted that these countries have, on average, a significantly higher employment rate among older and senior workers and actual age of exit than other EU Member States. While historical and cultural aspects may play an important role, this is partly due to a low incidence of long working hours, extensive possibilities to adapt working time across the life course through reversible time options and flexible and generous family leave systems, as well as numerous opportunities for skills upgrading across the life course.

Through the presentation in this report of a small sample of measures and initiatives dealing with working time adjustments from different Member States, it was possible to demonstrate that sustainability of work can be positively influenced by adjustments in the working time patterns available to workers and organisations. These measures and initiatives can assume different forms, from measures aiming at protecting workers' health to measures enhancing employee-friendly flexibility or specifically designed for workers with care responsibilities, to measures aimed at smoothing the end of professional careers. What they all have in common is their potential to positively influence work sustainability.

## Policy pointers

All in all, the results of the analysis constitute a plea for working time policies that acknowledge the life course perspective. The differences between preferred and actual working time are the largest during the parenting phase and towards the end of working life. At the same time, the lack of work–life balance during these two periods is most pronounced. This demonstrates clearly that the needs of workers vary over their life course and that the tools available to them to achieve a good balance between paid work and personal and family responsibilities are not always sufficient. Parents with pre-school children, for example, are more likely to report a poor work–life balance, not having enough time for their family and that their family responsibilities interact negatively with their job. Working time policies should acknowledge this variation of needs over an individual's life course and provide more support and/or flexibility for those periods where tensions in the work–life balance are highest.

Workers in the EU do not favour a culture of long working hours. Except for the period of labour market entry, preferred weekly working hours tend to be shorter than actual weekly working time. This discrepancy between actual and preferred weekly hours is largest for male workers, particularly fathers. However, the results also show that working time preferences tend to be strongly related to employees' current weekly working time: workers on short part-time have a significantly higher likelihood of preferring an increase in working time (probably related to the proportional level of income). Conversely, employees with long working hours express a stronger preference for a reduction in working time. Since a significantly higher proportion of women work short part-time and a significantly higher proportion of men work long hours, it can be concluded that male and female employees aspire to some convergence of working time. This aspiration was already noted in the analysis of the fifth EWCS (Eurofound, 2013). Compared with the 2010 survey, fathers expressed to a larger extent a wish to reduce and adapt their working hours in the 2015 survey. Policies should therefore continue to promote a more equalitarian gender distribution of paid and unpaid work (domestic and caring activities). A stronger involvement of men, and fathers in particular, in the domestic sphere could be favoured through better incentives for men to take family-related leave or to be compensated for reduced working hours during the parenting phase of life.

The results of the analysis show also large disparities across the country clusters. Workers from the Anglo-Saxon, Continental and Southern clusters have a higher probability of reporting a poor work–life balance. Workers from Southern countries, and to a lesser extent those from Anglo-Saxon and Continental ones, have a higher probability of reporting that their job prevents them fulfilling their family commitments. Conversely, women, particularly in the Northern countries, are less likely to report that their family commitments negatively affect their job. These countries, with their flexible and relatively generous leave systems and reversible time options across the life course, giving workers the possibility to better adapt their working time to various social commitments, appear to constitute a case of best practice. It is not by chance that workers from the Northern countries report a higher preferred retirement age as well as the longer self-reported working life expectancy. In summary, and as shown above, there are good examples of measures put in place to improve work–life balance available across the EU, so those countries, sectors or companies interested in improving work–life balance can certainly learn from existing practices.

To address the disparities of working time patterns across the EU, it is important to acknowledge the different extent, scope and take-up of universal and

individualised rights, and to promote them where they are more limited. Universal and individualised rights – such as maximum weekly working hours, rest periods, leave, family-related leave and protection in shift or night work – should be complemented by collective agreements at sectoral, branch or company levels. These agreements should contain provisions that take into account the specificities of the sector or branch of activity, while supporting the adaptation of working time to individuals' changing needs and preferences across the various life stages. Reversible working time options, such as temporary working time reduction or leave of absence with complete employment guarantee and adequate income compensation level for taking care of children or relatives, appear to be good instruments for favouring the continuity of labour market attachment of men and women across the life course. Coupled with accessible and affordable care services of quality, these instruments would favour the long-term sustainability of work and help to prolong working lives.

Working hours and working time arrangements are key elements of working conditions. The results show that good health and satisfaction with working conditions, as well as flexible work–life balance arrangements, are strong predictors for the existence of a decent and long working life. Work organisation, particularly greater job autonomy and the ability to determine working hours and work content, also seem to be important factors influencing the willingness of individuals to stay longer in the workforce. If good work–life balance opportunities across the life course are essential elements for motivating older workers to stay longer in the labour market and postpone retirement, long working hours at the end of the working life seem to be a deterrent to postponing retirement. This means that, in order to promote sustainability of work, policies should foster the conditions that allow the implementation of working time patterns which not only prevent negative impacts on workers' health and well-being (for example, by deterring long working hours for extensive periods of time), but also promote greater job and working time autonomy as well as favouring better work–life balance.

It has also been shown that highly educated and high-skilled workers are more prone to stay longer in the labour market. Consequently, one additional policy consideration should be to continue to invest in the overall educational level of the population and to promote skill-enhancing measures that enable people with low education and routine jobs to invest in training through, for example, lifelong learning facilities in the form of on-the-job training and/or formal education. Working time policies should also be tailored to make it easier to satisfy individuals' needs in terms of education and training.

In summary, job and working time autonomy as well as working time flexibility have a positive impact on work–life balance and workers’ well-being. In that perspective, universal and individualised rights ought to be complemented by agreements aimed at adapting working time patterns to local and individual conditions

and circumstances. Negotiated and flexible working time arrangements or innovative working time systems – such as portable working time accounts or working time banks – could be suitable instruments for adapting working time across the life course, as they favour workers’ autonomy regarding the choice of working time.

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Working time is a recurrent topic of study because the nature of work, its content, the conditions under which it is performed and the labour market itself keep changing. This report provides an overview of the recent evolution of working time duration and organisation in the EU and highlights the most important trends and differences between Member States. Through an in-depth analysis of data from the sixth European Working Conditions Survey carried out in 2015, it examines – from a gender and life course perspective – the links between working time patterns, work–life balance and working time preferences, on the one hand, and workers’ health and well-being on the other. Finally, the report explores the extent to which prevailing working conditions and working time patterns in EU Member States are sustainable in the long term.

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