WORKING PAPER

Eurofound

Working conditions and sustainable work

Context of sustainable work: Analysing status quo and progress

Sustainable work over the life course: Concept paper

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1. What is sustainable work?

"Ageing of the population is likely to threaten the ability of states to finance welfare states and social protection systems in the future. A viable solution is to increase employment rates and to lengthen working life. To achieve this dual goal requires devising new solutions for working conditions and career paths that help workers to retain their physical and mental health, motivation and productivity over an extended working life. In other words, work must be made sustainable over the life course."

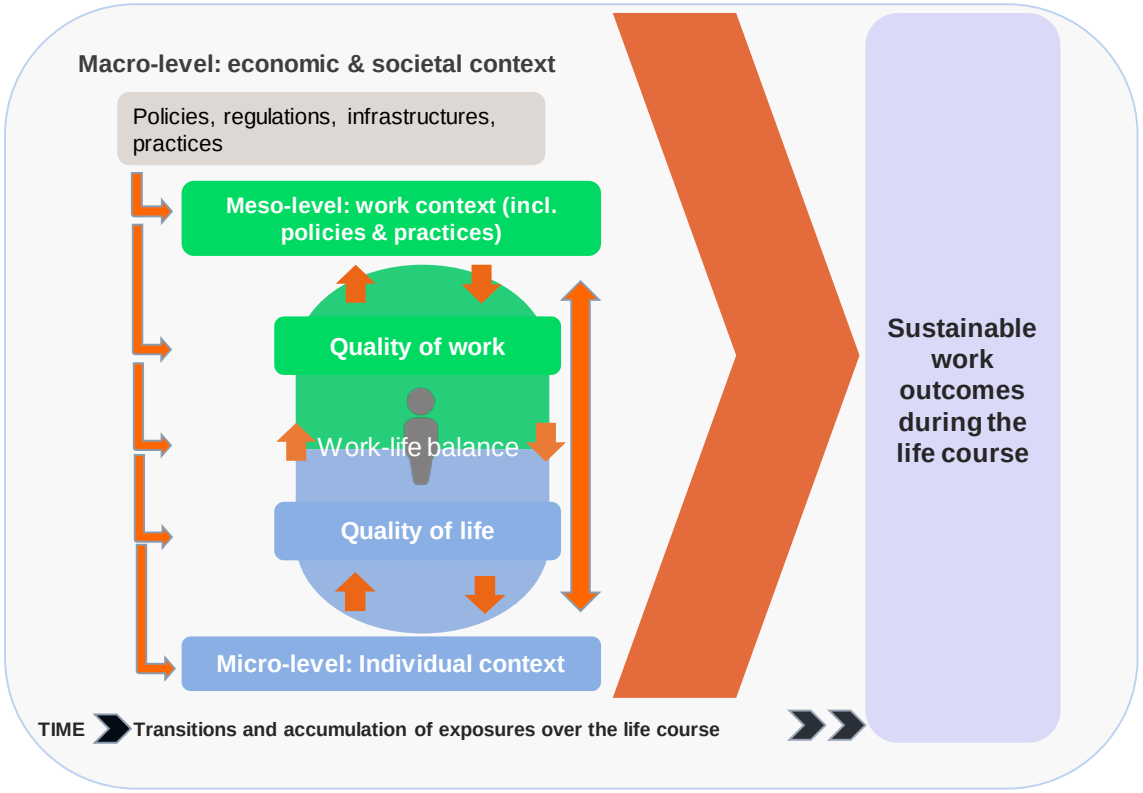
Eurofound 2015

The concept of sustainable work

Sustainable work is surely a complex concept. Difficult to define, difficult to bring the original notion of sustainability (avoidance of the depletion of natural resources in order to maintain an ecological balance) and work together under one heading. Nonetheless, Eurofound has taken this effort and first published a conceptual paper on Sustainable Work over the Life Course in 2015. There, Eurofound defines sustainable work as the interplay of working and living conditions being such "*that they support people in engaging and remaining in work throughout an extended working life*" (Eurofound, 2015, p.5). Eurofound takes hence the perspective of the working individual being in a concrete job situation (job quality) that interacts with its private life domain. Key features are around work-life balance, developing skills and employability, having sufficient earnings and also the issue of addressing critical life events and being supported through transitions. However, it also takes a societal standpoint by emphasising the **life-course perspective** and by highlighting the central role of policies, infrastructures, regulations and practices in shaping both the individual and work context to unfold within an institutional framework and economic and societal developments

With the objective to bring this concept a step further, Eurofound commissioned a feasibility study (Virtanen et al., 2018) with the guiding research question of how and to what extent the conceptual framework can be operationalised in order to **measure outcomes of sustainable work** and associated determinants. Based on extensive literature research and the consultation of leading experts in the field, the authors of this study together with Eurofound developed an analytical reference framework mapping out the main constituents of sustainable work and their interrelations as illustrated in Figure 1. Consequently, the single components of the reference framework were operationalised, and key indicators selected composing a **final dashboard of indicators**.

Figure 1: Eurofound Sustainable Work Framework



Source: Virtanen et al, 2017

Approach

This Working Paper explores how to make use of the dashboard. It scrutinises sustainable work and its interrelations with various factors at EU and Member State level and takes a closer look at two main groups of countries, namely those with favourable and those with less favourable outcomes.

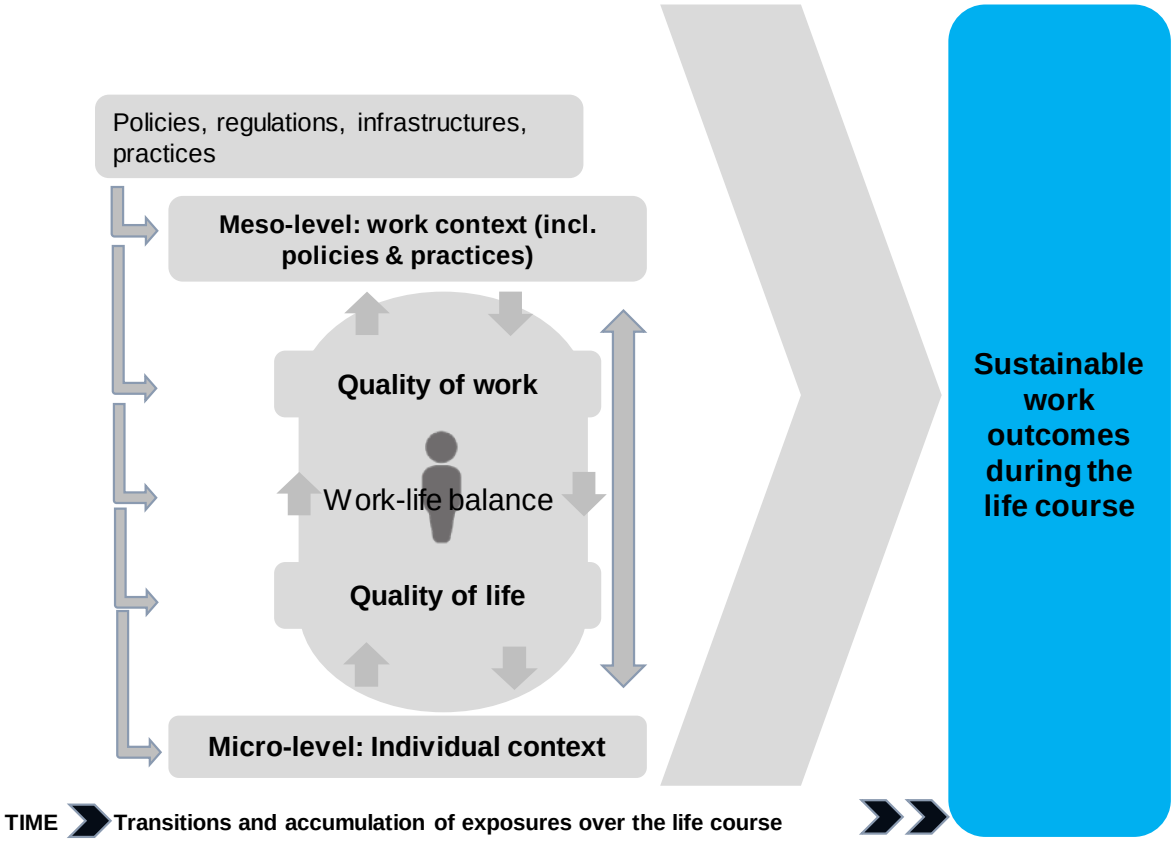
The underlying propositions of the Eurofound concept of sustainable work should become clearer and more explicit in this analysis. One of the main implicit assumptions of the framework is that **sustainable work can neither be measured nor evaluated with a single item or indicator** but that the simultaneous development of all its components over time (life-course perspective) need to be considered to make meaningful statements about the sustainability of work in one or the other Member State. Sustainable work has hence an inherently longitudinal notion. Other propositions include the following:

a) Work is to be understood as current work of a job holder and is hence an individual characteristic
b) Sustainability refers to a development of work over time (Fleuren 2019) where current work is considered as sustainable if both the job context and the individual context as well as the institutional context are interplaying such that they are not negatively affecting the likelihood of future work of that individual.

The Working Paper is structured as follows: First, sustainable work outcomes both on individual and societal level will be mapped and developments between 2005 and 2015 (or similar) are shown. On this basis, countries are clustered (such as favourable/non-favourable outcomes on societal level / favourable/non-favourable outcomes on individual level etc.). The paper then explores prevailing welfare state practices in these groups and discusses contextual macro-economic and socio-demographic developments. Chapter 4 looks into the work context and prevailing company practices in the identified country groups. Chapter 5 discusses job quality and work-life-balance issues as contributors. A statistical in-depth analyses follows in Chapter 6, where the household context and its associations with sustainable work outcomes are explored at the individual level. In this chapter, we make use of a matched data set of EU-SILC and EWCS which was created to the purpose of these specific analysis. The Working Paper closes with conclusions and policy recommendation.

2. Sustainable work outcomes

Every selection of indicators is, by definition, incomplete, and, to a certain extent, arbitrary. It is driven by normative positions, policy objectives, the experts involved in the selection procedure, data availability and the specific understanding of a concept and its purpose. This is also true for the selection of specific outcome indicators for sustainable work. These indicators seek to operationalise the Eurofound definition of sustainable work outcome as "*engaging and remaining in work throughout an extended working life* "



What are sustainable work outcomes?

While the Eurofound definition is based on individual methodologism in the sense that if focuses on the individual worker, it clearly addresses objectives on both individual and societal level. On the one hand, they refer to the individual worker and his/her labour market trajectory (fulfilling work; ability to work until/beyond retirement age). On the other side, they frame the societal and economic objective of keeping workers longer in the labour market due to population ageing, demographic change and financial constraints (e.g. as regards sustainable pension systems and public finance).

The definition of sustainability in the context of work implies simultaneous efforts towards achieving individual, social and economic work- and labour market-related goals that will enable the needs of the present worker to be met without compromising his/her ability of future work. This needs for one sustainable conditions at the current job (e.g. regarding effects on workers' health), the worker's ability, willingness and motivation to do this job (or a similar one) now and in the future (health, skills, work engagement) (see e.g. Eurofound 2018) and the institutional preconditions for workers to participate in the labour market (available jobs, employment levels, labour market services). The selected indicators shown in Table 1 can't obviously exhaustively capture these broad objectives. However, they serve as proxies by highlighting specific related phenomena. The list includes three macro-level (society) and four micro-level (based on individual responses to survey questions) indicators.

Table 1: Outline for Chapter 2: Sustainable Work outcome indicators

Domain	**Indicator**
Society	Senior employment rate (55+)
Society	Duration of working life (average number of years)
Society	Effective retirement age
Individual	Work engagement (overall)
Individual	Work engagement (55+)
Individual	Self-perceived health status (all workers)
Individual	Self-perceived health status (55-64)

Source: Eurofound 2017

Society level: Bird's-eye perspective on sustainable work

The selected societal level indicators address only one aspect of sustainable work, namely the question if people are remaining in the labour market and if people work longer than in the past. While there is a broad political consensus in many EU and OECD countries that people will have to work longer, Lain et al. (*forthcoming*) rightly questioned mere higher levels of employment as definition of success: "*Is it always a successful outcome if individuals remain in employment, or are there circumstances when we should not expect them to work if they feel this is the best option?*" This remark addresses the core of the Eurofound sustainable work concept which believes that sustainability of work can only be achieved when higher levels of senior employment and longer

working lives go hand in hand with better health outcomes, higher engagement and improved job quality.

Indicators

The **senior employment rate of workers aged 55+**: The employment rate of older workers is calculated by dividing the number of persons in employment aged 55 to 64 by the total population of the same age group. The indicator is based on the EU Labour Force Survey. The inclusion of this indicator in the final list has two main reasons: First, the employment rate of older workers (and especially its development over the years) gives a hint of which countries manage to keep their ageing labour force in the labour market. It doesn't say yet anything about the work experience of these workers (as pointed out above) but indicates that the mix of institutional and economic incentives (negative or positive) encourages a later transition from work to pension. The second reason is that senior employment levels also imply labour opportunities for this age group and available jobs. However, the indicator on its own would not allow a statement about the overall sustainability of work in a broader understanding.

The same holds for the **expected duration of working life**[1] which estimates how long a person who is currently 15 years old will be active on the labour market during his or her life. The indicator shows the average for a given country and year. It complements the employment rate of older workers by exploring how many years today's young people are expected to work throughout their life course and how this outlook has evolved over time. It hence adds the life course perspective to the mere level of employment.

The **average effective age at which older workers withdraw from the labour force** is the third macro-level indicator. It is an indicator of retirement behaviour that abstracts from more general factors affecting the level of participation rates. The indicator is of interest as it marks the average transition age of workers in real terms as distinguished from the statutory retirement age which often doesn't tell us much about realities.

To conclude, the macro indicators chosen to describe sustainable work outcomes at societal level shed light into various aspects on what the OECD (2006) once called *Live longer, Work longer*. While the outcome indicators deliver snapshots of the situation of Member States at a certain time, they also feed into policy debates of giving people better choices and incentives to continue working at an older age. Together with the micro-level and contextual indicators they allow for evaluating if work at its current state is sustainable for workers and countries. Such evaluation will be useful for policy makers and business to design policies encouraging greater labour market participation at an older age by "*fostering employability, job mobility and labour market demand*".

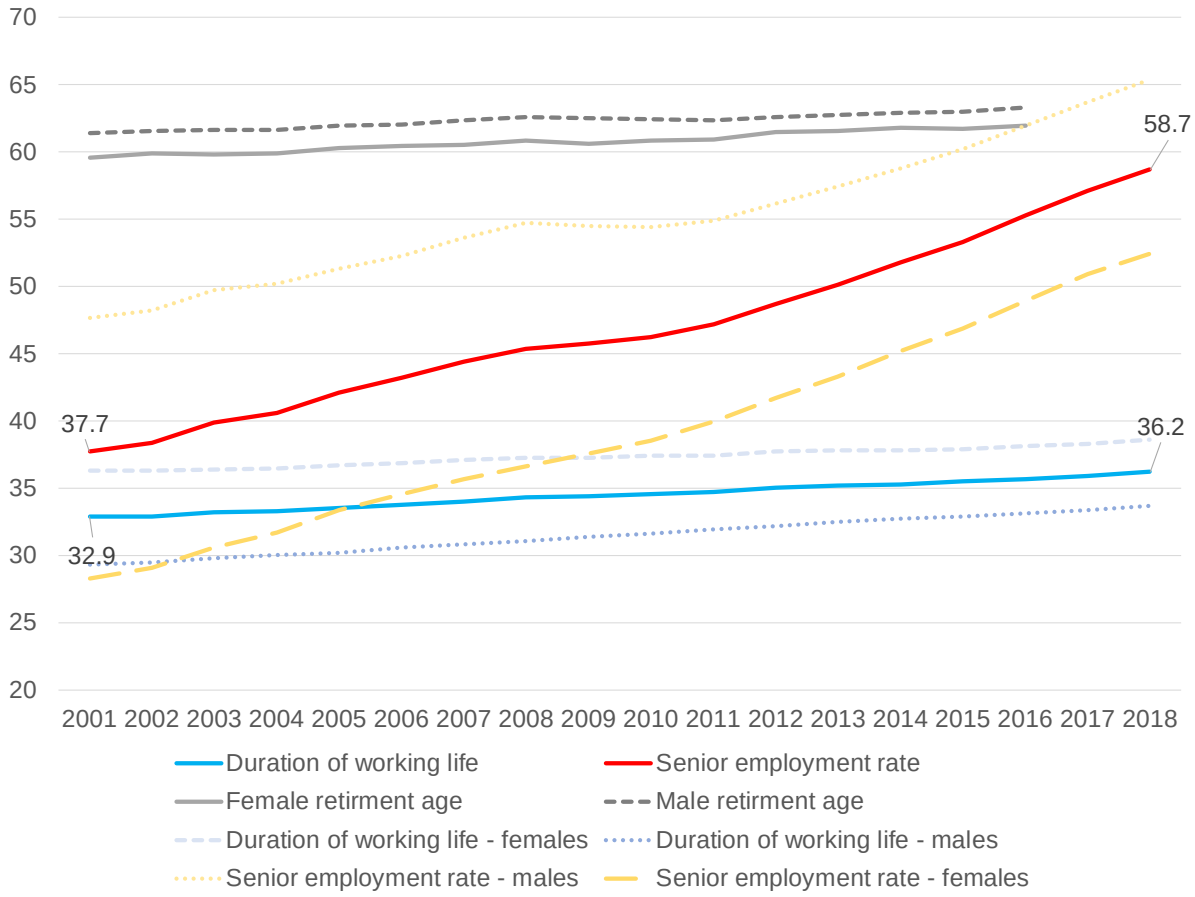
Mapping

Figure 1 shows developments in the three leading indicators for the EU28 overall from 2001 to 2018. The blue line shows the trajectory of the expected duration of working life. The average number of years has increased by 3.3 over the observed time span. Senior employment on the other hand went

[1] The duration of working life is calculated using the activity rates from the Labour Force Survey and life tables from demography statistics. Both the activity rates (in 5 year bands) as well as the complete (single year) life tables are published by Eurostat. https://ec.europa.eu/eurostat/statistics-explained/index.php/Duration_of_working_life_-_statistics#General_overview

up from 37.7% in 2001 to 58.7% in 2018. This increase is particularly astonishing against the backdrop that overall employment (of the population aged 20-64) only grew by 6.3%-points in this period. The effective age of exiting the labour market had a rather flat but continuous development. It increased by 1.9 years for men and 2.4 years for women.

Figure 2: Sustainable work outcome indicators (Societal level), 2001-2018



Source: Eurostat

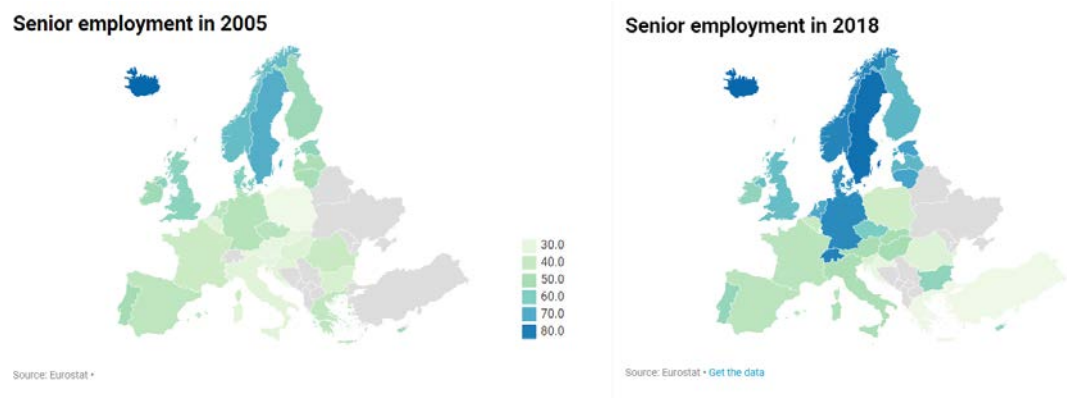
Overall, the indicators provide evidence that people work longer today and that many more men and women of the age group 55-64 are active labour market participants than 18 years back. The average duration of working life increases as does the average retirement age. However, we need to explore if this is the case for all Member States or if substantial differences across the countries can be spotted. Do we observe a convergence process as regards sustainable work outcomes or have all countries increased labour market performance to the same extent?

Figure 2 compares the senior employment rate of 2005 with 2018 across EU Member States (including Iceland, Norway, Switzerland and Turkey)[2]. In 2018 senior employment rates in the EU were highest in Sweden (77.9%), Germany (71.4%) and Denmark (70.7%). Employment rates were between 65 and 70% in the Baltics, Finland, the Netherlands, the U.K. and Czechia. The lowest rates

[2] For France the only data available in 2005 is for the Metropolitan areas which are supposed to be slightly higher than the overall senior employment rate

were recorded in Luxembourg (40.5%), Greece (41.1%) and Croatia (42.8%), but also Malta, Poland, Slovenia and Romania had rates below 50%.

Figure 3: Senior employment rates in Europe, 2005 and 2018, (% of active population aged 50+)

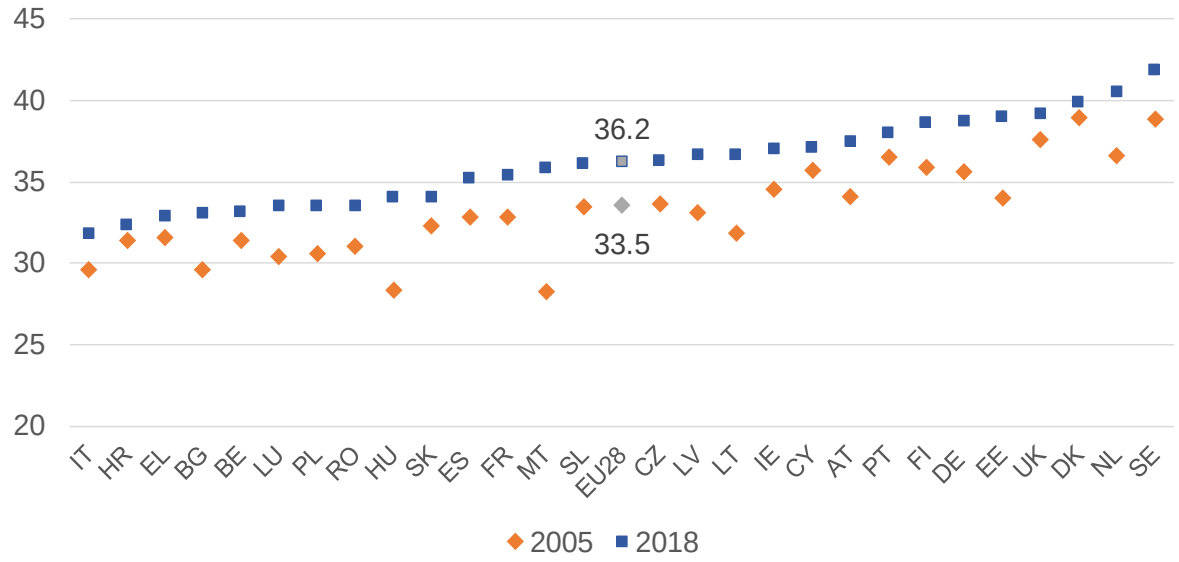


Source: Eurostat

Among all Member States Greece was the only one where senior employment slightly decreased between 2005 and 2018. However, this comparison hides developments in between: Greece's (senior) employment was at its bottom in 2014 (34%), since then it continuously increased. In nine Member States (BG, DE, NL, AT, SK, IT, Pl, HU, CZ) employment of workers aged 55+ grew by over 20%-points, while the EU28 average was at 16.6 points. In further seven countries, employment increased by less than 10 points (RO, SE, UK, IE, LU, PT, ES). The most interesting cases are probably Germany, which managed to catch up with the Nordic countries and Bulgaria, where senior employment increased most.

The average duration of working life in 2018 was on EU28 average 36.2 years. In six countries (SE; NL, DK, U.K. and EE) the average was above 38 years. In another ten countries (IT, HR, EL, BG, BE, L, PL, RO, HU, SK) the expected average number of years in work was below 35 with lowest values in Italy (31.8), Croatia (32.4) and Greece (32.9). Highest increases since 2005 are recorded in Malta (+7.6), Hungary (+5.7), Estonia (+5.0) and Latvia (+4.8). In five countries (DK, HR, EL, CY, PT) the average duration of working life increased by 1.5 years or less.

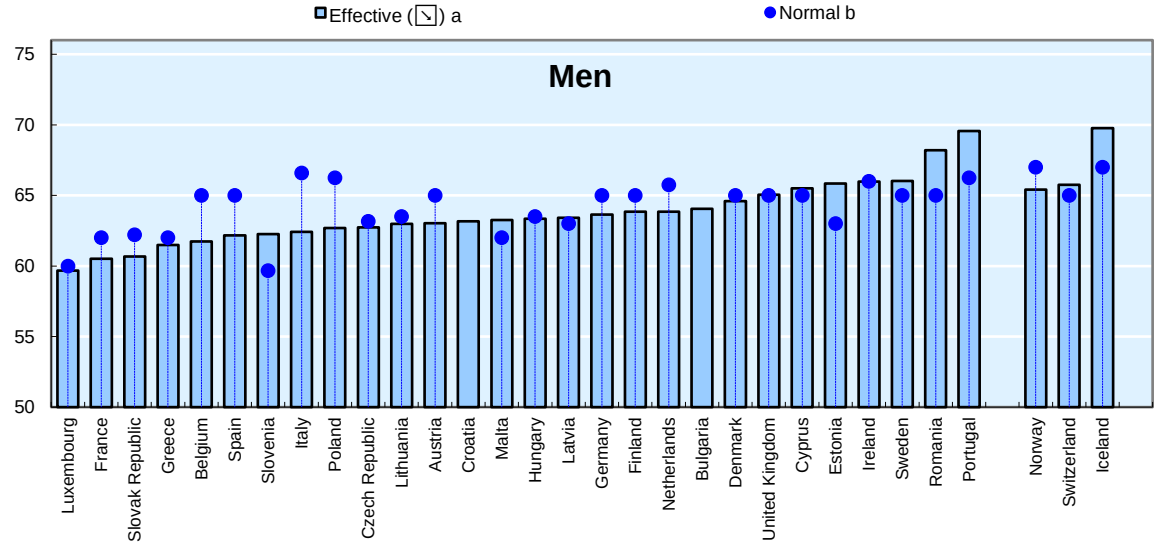
Figure 4: Average duration of working life, 2005 and 2018, (in years)

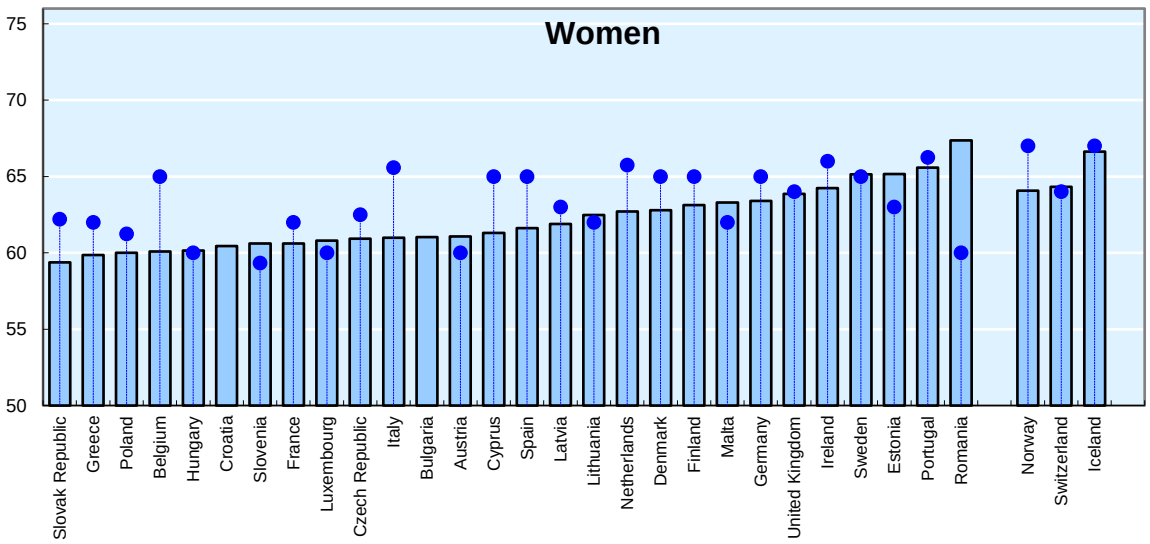


Source: Eurostat

Finally, Figure 3 shows the average effective age of retirement (sliding average 2012-2017) of men and women and contrasts it with the statutory retirement age in the Member State. In most countries, the effective age lies slightly below the statutory labour market exit. The gap is more substantial in Italy (-4.2) Poland (-3.6), Belgium (-3.3) and Spain (-2.8) for men and in Belgium (-4,9), Italy (-4.6), Cyprus (-3.7) and Spain (-3.4) for women. Predictors for early retirement can be attributed to individual (such as health, work ability, etc.) and institutional factors (e.g. pension reforms, incentive mix etc.). In a couple of Member States, however, the effective average pension age lies above the legal retirement age, especially so in Portugal, Romania, Estonia and Slovenia for men and in Romania and Estonia for women. The reasons can be many-fold and scholars distinguish between voluntary and involuntary retirement due to financial incentives (e.g. Ebbinghaus and Hofäcker 2013). However, reasons for remaining in employment can also be positive with a focus on work identity (see De Tavernier et al., 2019).

Figure 5: Average effective age or retirement, men (upper panel) / women (lower panel), 2012-2017

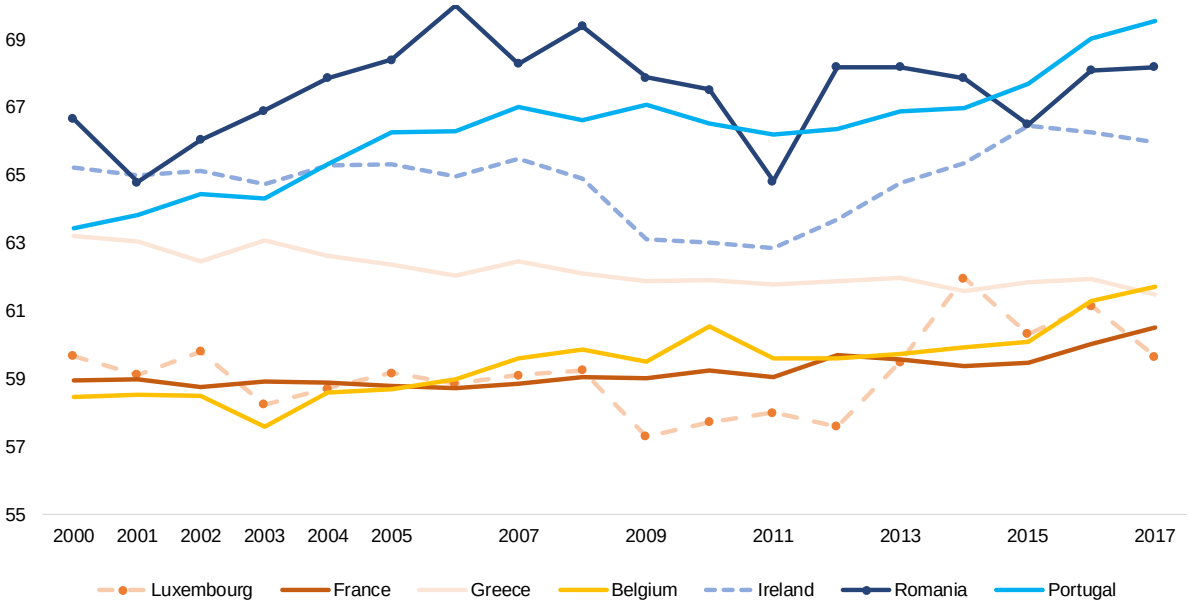




Source: OECD

Figure 6 looks at selected Member States were noteworthy developments in the averages of effective retirement age of men were spotted. Portugal, for instance, had a quite flat trajectory between 2005 and 2014 and since grew at a high pace. Ireland records a decrease until 2011 and then rapidly grows until 2015. In Greece, effective retirement continuously decreased since 2007 which can once more be attributed to the economic crisis. France and Belgium are at the bottom regarding effective retirement but have recently caught up. Luxembourg finally shows an erratic development with a drastic drop in 2009, staying at this level until 2012 and then jumping up to the highest level in 2014. Since then, effective retirement age decreased again.

Figure 6: Sliding averages of effective male retirement age by selected countries, 2005-2017

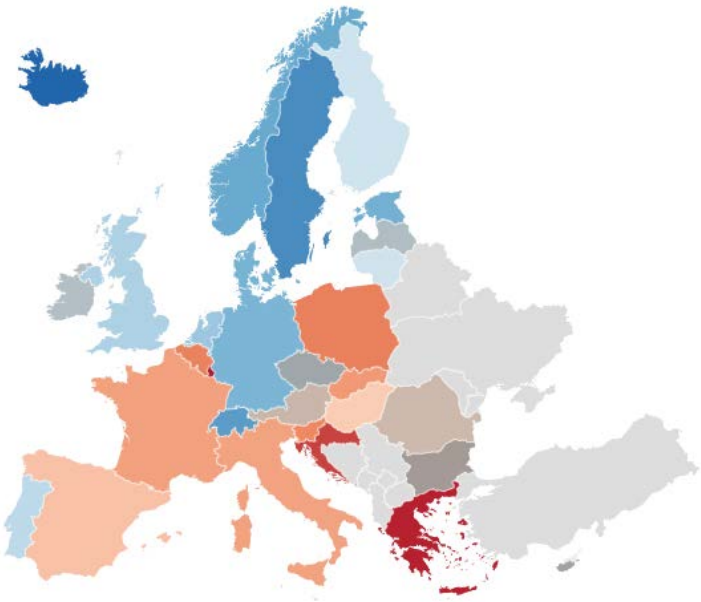


Source: OECD

As was explained above, all three societal level indicators contribute to understanding specific aspects of sustainable work. Senior employment rates inform about job availability and to a certain extent about the work ability in the older age group of workers, the duration of working life illustrates how long people are expected to stay in the labour market and hence adds the life course perspective. The effective retirement finally emphasis the efficiency of countries are (without evaluating the nature of this efficiency) in keeping their workforce in the labour market until retirement. These indicators are obviously correlated, but they are illustrating different phenomena.

A map clustering Member States (and associated countries) was created on the basis of a standardised measure for the macro level (for the year 2018) taking into account all macro-level indicators together. Countries in red are low performers with low rates in all three indicators compared to the other Member States. Blue countries are the "best performers" in terms of keeping people in the labour market during the life course although nothing is said about the conditions under which work is performed (see also Annex A.1).

Figure 7: Country map clustering macro-level outcomes, 2015



Source: Own computations based on Eurostat and OECD indicators. Colour key: **Dark red**: low levels in all indicators / **light red**: low-medium levels in all indicators / **dark grey**: medium levels in all indicators / **light blue**: medium to high levels in all indicators, **dark blue**: high levels in all indicators / **purple**: low and high levels mixed

The map shows no clear pattern. However, to a certain extent we can identify a North-South and a West-East divide, with the Nordic, the Baltic countries (apart from Latvia), Germany, the Netherlands, and the U.K. plus Portugal constituting the fifth and forth quantiles. The Mediterranean countries, France, Belgium, Luxembourg and couple of Central-eastern countries (Slovenia, Slovakia, Hungary), on the other hand, are forming the lower quintiles with low senior employment, short working life duration and early retirement. The centre quintile is habituated by a mixed bag of Austria, Cyprus, Czechia, Latvia and Ireland.. The Non-EU countries, Iceland, Norway and Switzerland are all part of the blue group. Romania, finally, is an outlier as the country has low levels of old age employment and levels of working life duration but a very high effective retirement age for men and

women. In the following chapter, this picture will be contrasted by the performance of the Member States in the individual outcome indicators of sustainable work. This will give some more insights about the conditions under wich people are carrying out their work.

Individual level: Ground-level perspective on sustainable work

The outcome indicators for sustainable work of the individual level zoom into the workplace and explore work engagement and health outcomes. This implies that sustainable work should result in workers being engaged at their work and not having negative effects on their health. These indicators are hence a crucial complement to the macro-level measures that don't touch upon the effects of work on workers. It will be interesting to see how the map in Figure 7 changes once these aspects are accounted for.

The indicators are based on survey data from the European Workings conditions survey (EWCS) and from EU-SILC. Some of the items (such as those composing the engagement indicator) are only available for one year. Hence, we cannot say much about the developments here. However, we will look at the overall situation for 2015 were data for all indicators are available, but also explore developments where possible.

Indicators

Work engagement has been defined as a "positive, fulfilling, work related state of mind that is charcaterised by vigor, dedication and absorption" (Schaufeli and Bakker, 2003). The concept describes the relationship of the worker with his or her work and the organisation as a whole (Green et al., 2017; Van Dam et al. 2017)[3]. Work engagement is shown for the overall working population as well as for workers aged 55 or above.

The second indicator is the self-perceived health status. The proportion of workers reporting very good or good health is based on EU-SILC and is available since 2008. It has been extensively tested in terms of validity and reliability. This indicator was preferred over self-assessed negative effects of work on health as item validity and data availability are worse. However, we will use the indicator in the in-depth analysis of Chapter 6.

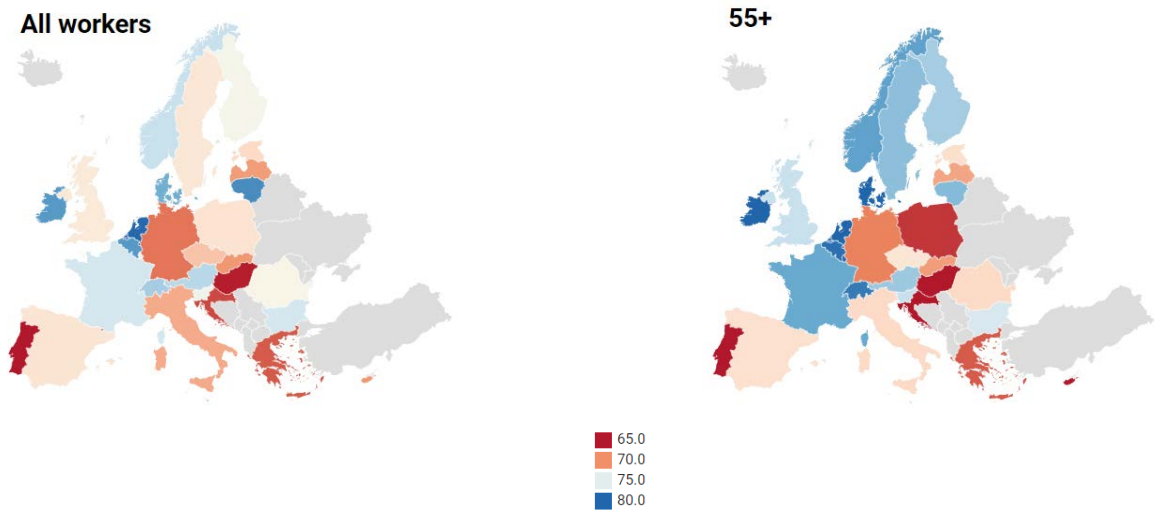
Another indicator originally proposed in the Feasibility Study (Eurofound 2017), is the percentage of workers without sickness absence days due to accidents / health problems. The indicator is relevant as outcome of sustainable work as recent research has shown that a high number of unplanned absences due to sickness is associated with negative work climate, high level of stress and with high costs for business (e.g. Kocakulah et al. 2016). However, valid data on the topic are scarce and survey-based items such as in the EWCS or the European Health Interview Survey are not reliable and show quite diverse results. We hence abstain from using the available data on sickness absences at this stage.

[3] Work engagement is measured on basis of three EWCS items available for 2015: Q90a At my work I feel full of energy (vigour) Q90b I am enthusiastic about my job (dedication) Q90c Time flies when I am working (absorption)

Mapping

Work engagement follows no specific geographical pattern. As is illustrated in the Figure below, work engagement is highest for both the whole population and workers aged 55 or older in the Netherlands, Ireland, Belgium, Denmark and Lithuania. Austria, France and Bulgaria are also showing good results, while work engagement is lowest in Portugal, Hungary, Croatia, Greece and Germany. There are no major differences between the total population and workers aged 55+. However, Sweden, Finland and the U.K. show comparably better results for the older age group of workers.

Figure 8: Work engagement levels, 2015



Source: Eurofound, EWCS 2015

Figure 10 displays the proportion of workers who perceived their health as very good or good in 2010 and 2015. High levels of good health among workers are observed both in the North and South (except for Portugal). Highest proportions of very good or good self-perceived health were reported in Ireland (92.9%), Greece (90.7%) and Cyprus (90) [followed by Romania, Malta, Belgium, the Netherlands, Spain, Bulgaria and Sweden – all above 85%]. On the lower end we find the Baltic countries (LT: 59,6% - LV: 60.2% - EE: 67.6%] and Portugal (61.8%). From 2010 to 2015 the proportion of workers with very good or good health particularly decreased in the U.K.(-9.5%-points), Lithuania (-5.7%-points), Luxembourg (-5%-points) and Portugal (-3.2%-points). Steepest increases were observed in Croatia (+7.7%-points) and Slovenia (+5.2points).

Figue 10 compares proportions of workers with very good and good health aged 55 to 64. The patterns differ from the overall population of workers. In Belgium, the Netherlands, Sweden, Ireland and Norway proportions in 2015 were above 80%, but they were at or below 45% in Baltic countries, Hungary and Portugal. Between 2010 and 2015, self-rated health deteriorated mostly in the U.K.(11.6%-points), followed by Lithuania (-8.8 points), Denmark (-4.6 points) and Hungary (-3.7 points) and improved above 8%-points in Finland, Slovakia, Cyprus and Slovenia.

Figure 9: Self-perceived general health of workers (% of very good and good)

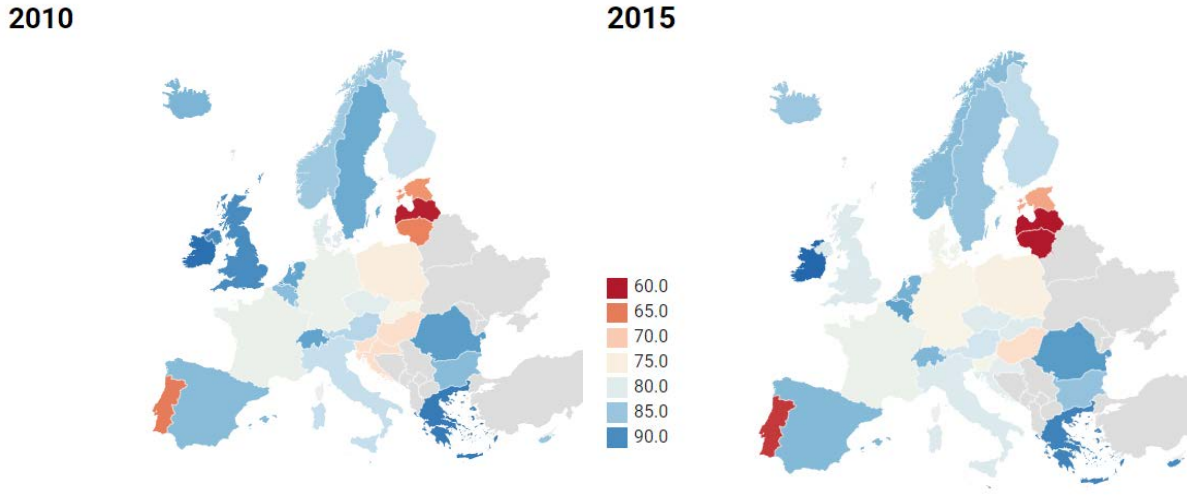
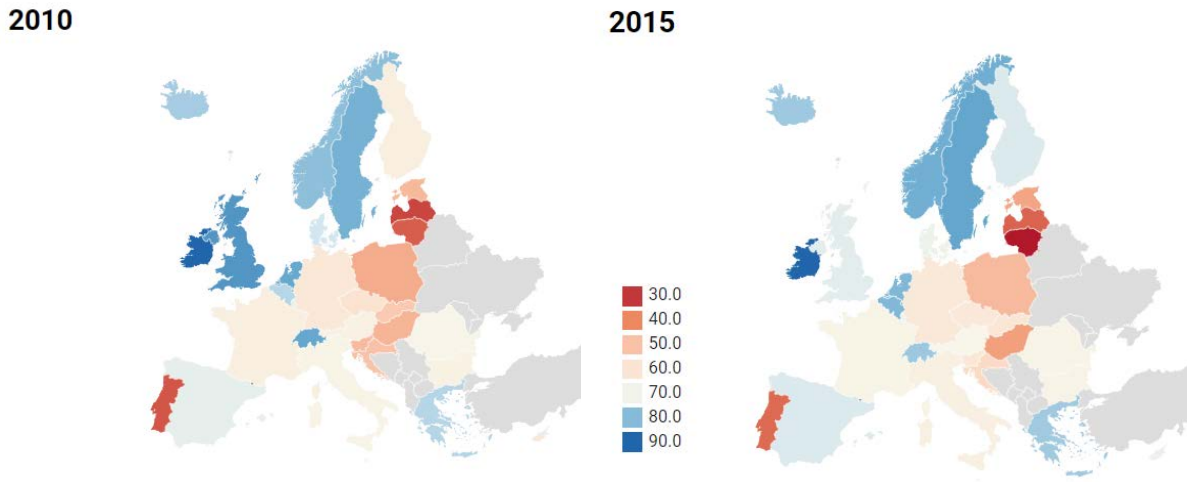


Figure 10: Self-perceived general health of workers aged 55-64 (% of very good and good)



Source: Eurostat, EU-SILC.

Overall assessment of sustainable work outcomes

In a final step, sustainable work is explored as a holistic outcome combination of the societal and the individual level (see Table 2). No normative decisions in terms of indicator weighting are taken (which means that all indicators are weighted equally). In order to characterise the country situation as regards outcomes of sustainable work along both dimensions (micro level / macro level), the selected indicators were combined and normalised between 0 and 1 and averaged across each dimension. Each indicator is constructed such that higher values correspond to better sustainable work outcomes. Table 2 shows highest and lowest levels across all countries.

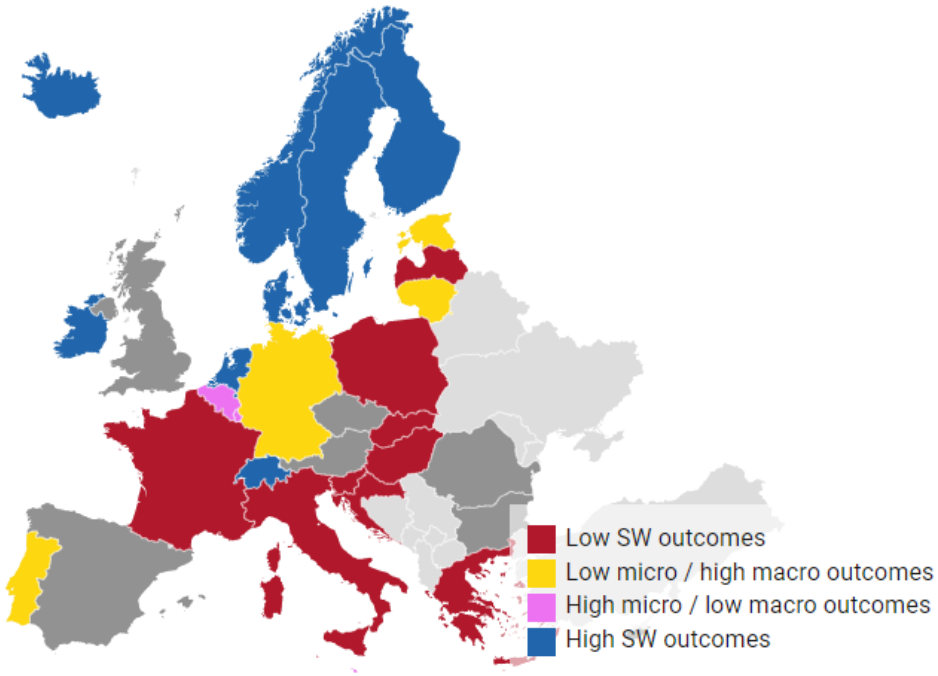
Table 2: The highest and lowest observed levels for each of the SW outcome indicators

	Work engagement (all workers)	Work engagement (55+)	Very good or good self-perceived health status (all workers)	Very good or good self-perceived health status (55-64)	Employment rate (55-64)	Duration of working life	Effective Retirment age - men	Effective retirement age - women
Value corresponding to 0=min	68.5	63.5	59.6	26.0	40.5	31.8	59.7	59.4
Value corresponding to 1=max	79.9	84.3	92.9	88.6	80.7	46.3	69.8	67.4

Source: Eurofound, Eurostat, OECD

On this basis, countries were grouped in six main categories as shown in the map below: Countries with comparatively (i) high outcomes in both societal and individual level outcomes (*blue*), (ii) low outcomes in both (red), (iii) a combination of either high macro-level and low micro-level outcomes (*yellow*) or the other way around (*pink*). *Grey* symbolises average levels in both micro- and macro-level outcomes.

Figure 11: Clusters of sustainable work



Source: Author's computation

EU Member States with comparably high achievements in both individual and societal level outcomes are Ireland, Sweden and the Non-EU Members Norway and Switzerland. Netherlands, Denmark, Finland, and Iceland with high societal level outcomes and average individual level outcomes. Low outcomes on both levels are observed in Poland, Slovakia, Hungary and Croatia. Average health- and engagement outcomes in combination with a comparably low macro-

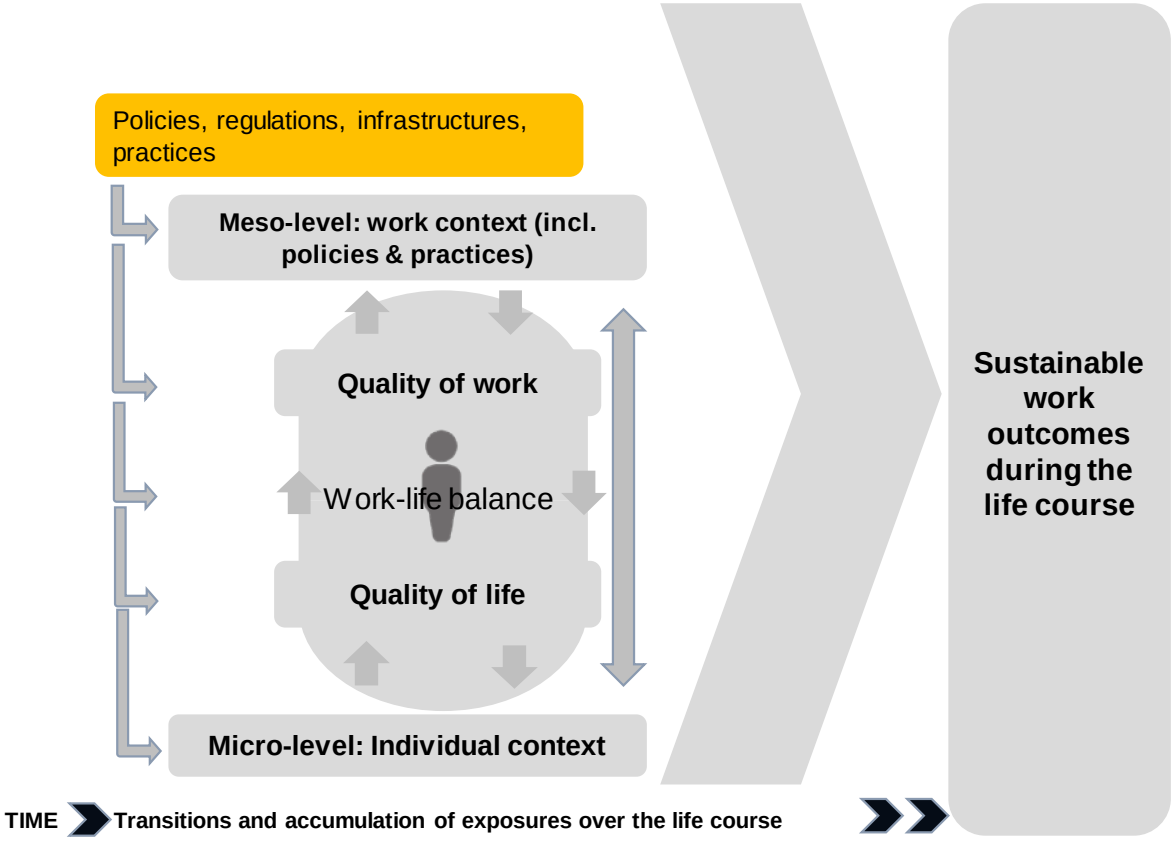
performance were reported in France, Italy, Slovenia, Greece and Latvia. France must however be considered a border liner with comparably high engagement levels, average proportion of workers with very good or good self-perceived health and old age employment rates, but low macro-level outcomes. The *yellow* Member States, finally, are those with low-high combinations such as Portugal, Germany and Estonia (low health/engagement – high employment/duration of working life etc.). Lithuania is a mixed case with good health results, low engagement but high old-age employment and long duration of working life and a medium effective retirment entry. Belgium and Luxembourg, on the other hand, combine high health-engagement levels and very low senior employment/duration of working life levels. The standardised values for all indicators can be found in Annex A.1

In the following, we will contrast "*blue*" and "*red*" countries and explore associations of overall sustainable work outcomes with institutional and work-related mixes that can give insights of how work can be made more sustainable overall.

3. Employment-related developments and welfare state practices

Legislation and public policies intervene at points outside of the workplace across a life course. Social protection systems assist with critical life events (providing, for instance, income support for transition periods, sickness insurance, child benefits, unemployment benefits and pensions). Quality services provide support, ideally in a coordinated and integrated way. Through legislation, rights to certain working time and

leave options (such as part-time work and parental leave) are guaranteed. A range of policies are aimed at creating inclusive labour markets through labour market activation, tackling labour market segregation, and improving access to employment for the disadvantaged. Legislation establishes rights to non-discrimination, including the adaptation of workplaces to workers with special needs, and to lifelong learning.



Contextualisation of sustainable work

In this chapter the contextual and institutional indicators will be explored with the purpose to identify factors that are favourable for overall desirable outcomes. We hence focus on the *blue* countries of Figure 10 and compare them to the *red* group.

Table 3 summarises once more sustainable work outcomes for "good performer" and "poor performer" European countries. The blue countries with good overall sustainable work outcomes include the Nordic group with Denmark, Sweden, Finland plus the Netherlands; Ireland and the Non-EU Members Switzerland, Norway and Iceland. The red group includes the Southern countries Greece, Croatia and Italy, continental France (which is a border liner case but still included in the analysis here) and the Central- and Eastern-European countries Hungary, Poland, Slovakia, Slovenia plus Latvia.

In the blue group high rankings dominate in both individual- and societal-level indicators, while low ranks dominate the red group. Some countries were under evaluation of being included in the red group such as for instance Lithuania which reports very poor self-perceived general health status of both the overall workforce and of the older workers aged 55-64 where only 26% perceive their health as very good or good general. However, it is also highest ranking in work engagement (all workers) and quite up as regards macro-level performance, which is why it was dropped from the red group (as was Portugal). Denmark and Iceland are comparbly low-ranking as regards self-perceived health of the overall workforce, but they also report a high percentage of older workers with very good or good health. Romania and Bulgaria showed some surprising results. Indeed, Romania has very positive health outcomes and scores above average in work engagement. The country also has high effective retirment ages for men and women. However, senior employment is very low in Romania and the average duration of working life is with 33 years at the lower end too. Bulgaria has good outcomes in health.

Greece in the red group ranks low in work engagement and macro-level outcomes but reports one of the highest proportions of workers with very good or good health (91%). France and Slovenia have comparably high work engagement but score well below average in all other outcome measures.

Table 2: Overview of Sustainable Work outcomes

	Individual level indicators					Societal level indicators				
	Work engage-ment	Work engage-ment 55+	General self-perceived health (very good/good)	General self-perceived health 55+ (very good/good)	**Standardised micro-level score**	Senior employ-ment rate	Duration of working life	Effective retirement - men	Effective retirment - women	**Standardised Macro-level score**
Ireland	78	82	92.9	88.6	100	60.4	37.0	66.0	64.2	54
Denmark	78	80	77.6	70.5	68	70.7	39.9	64.6	62.8	62
Finland	74	76	83.0	73.6	69	65.4	38.6	63.8	63.1	51
Sweden	72	77	85.2	82.2	78	77.9	41.9	66.0	65.1	81
Netherlands	80	84	86.9	80.3	91	67.7	40.5	63.8	62.7	60
Norway	76	78	85.9	81.3	81	72.0	39.6	65.4	64.1	67
Switzerland	76	79	86.3	78.6	81	72.6	42.7	65.7	64.3	81
Iceland	x	x	77.6	78.5	75	80.7	46.3	69.8	66.6	100
Croatia	69	68	79.6	54.4	37	41.1	32.9	63.2	60.5	2
Greece	70	70	90.7	78.4	70	42.8	32.4	61.5	59.9	0
Italy	70	72	80.5	65.8	52	52.2	35.2	62.4	61.0	21
France	75	78	78.3	67.5	62	54.4	34.1	60.5	60.6	20
Hungary	69	68	72.0	44.1	20	47.0	36.1	63.3	60.2	15
Poland	72	69	75.5	48.7	32	40.5	33.5	62.7	60.0	0
Slovakia	70	70	80.3	59.9	41	49.7	35.9	60.7	59.4	14
Slovenia	74	76	77.4	60.1	54	50.3	33.2	62.3	60.6	15
Latvia	70	70	60.2	35.5	6	59.2	38.0	63.4	61.9	39

Source: Eurofound, Eurostat, OECD

Employment context

Obviously, both the red and blue groups are relatively heterogeneous, and it cannot be expected that contexts are similar even within the groups. However, it is worth exploring if specific contextual combinations favour positive outcomes. The first set of indicators scrutinised in this chapter includes the following:

A Demographic situation:

Old-age dependency ratio, defined as the number of individuals aged 65 and over per 100 people of working age defined of those aged between 15 and 64. The ratio describes how much pressure an economy faces in supporting its "non-productive" older population.

B Labour market dynamics for older workers:

Retention rate after 60 (% of employees t-5): All employees currently aged 60-64 with job tenure of five years or more as a percentage of all employees aged 55-59 5-years previously.

Hiring rate 55-64 (in % of employees): Employees aged 55-64 with job tenure of less than one year as a percentage of total employees.

C Employability of older workers:

Share of 55-64 with tertiary education (% of the age group)

Participation in formal or non-formal training

D Employability and labour market affiliation of young people:

Share of NEETs: young people (aged 15-34) not in employment, education or training

The analyses cover a time span of ten years in contextual development from 2006 to 2016. This period covers the economic and financial crisis as well as the recovery thereafter.

Old-age dependency is a relevant indicator of economic pressure. Higher old-age dependency means increased need of keeping people working longer in order to assure sustainable public finance. In 2016, the number of people aged 65 and over per 100 people of working age was 29.3 in the EU overall, which is an increase of 4.3 compared to 2006. There is no clear pattern in the blue or red group in terms of old-age dependency, but we observe that growth rates between 2006 and 2016 were above EU-average in the blue countries and below in the red ones, while the average old-age dependency ratio across both groups was below the EU level.

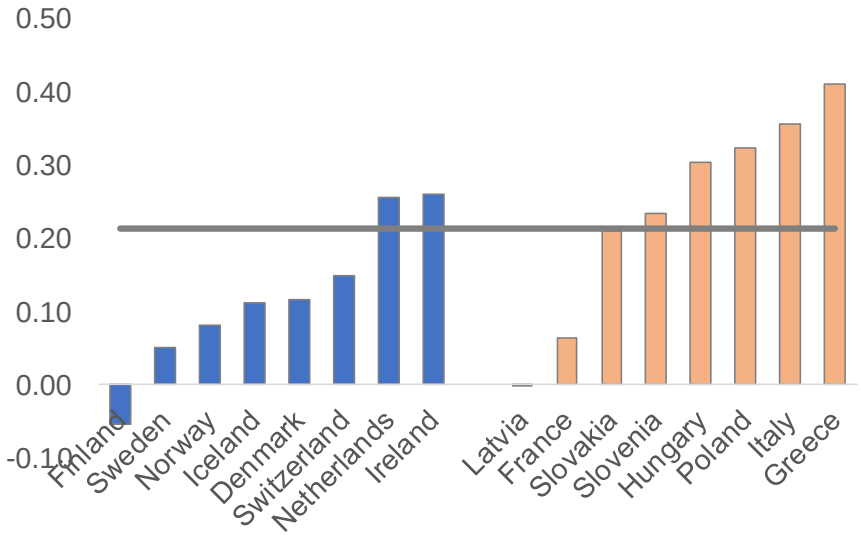
Labour market indicators show favourable dynamics for older workers with both hiring rates of workers aged 55-64 and retention rates after 60 well above average in most blue countries (the Netherlands being the exception). Retention rates are especially high in Norway (70%) and Iceland (80%) and hiring rates were in 2016 highest in Denmark (10%) and Sweden. The red countries, on the other hand, reported retention rates below EU average except for Italy and Latvia, the latter also recording hiring rates of 12%.

Unemployment of the workforce aged 55-64 in 2016 was EU-wide at 6.5%, slightly higher than in 2006. While old-age unemployment was well below this level in Denmark (4%), Sweden (5.3%) and the Non-EU Members Iceland (1.6%), Norway (2%) and Switzerland (3.8%), it was well above average

in other blue countries such as Finland and the Netherlands. Half of the red countries had unemployment levels below EU average (Poland and Hungary 4.4%, Italy 5.7%). Between 2006 and 2016 old-age unemployment increased in most of the explored countries except for Poland (-4.3) and Slovakia (-0.7).

Figure 11 illustrates the old-age gender employment gap , which is the ratio of the difference in male and female employment rates by male employment. In the EU28 overall, the gender gap went down from 0.34 in 2006 to 0.21 in 2016. Apart from Ireland and the Netherlands, the gap was lower in all blue countries and particularly so in Finland (no gap) and Sweden (0.05). A majority of red countries, on the other hand, recorded old-age gender employment gaps well above the EU average such as for instance Greece (0.41), Italy (0.36) and Hungary (0.3). However, we also find clear exceptions like France (0.06) and Latvia (no gap).

Figure 12: Gender employment gap, 55-64



Source: Eurostat

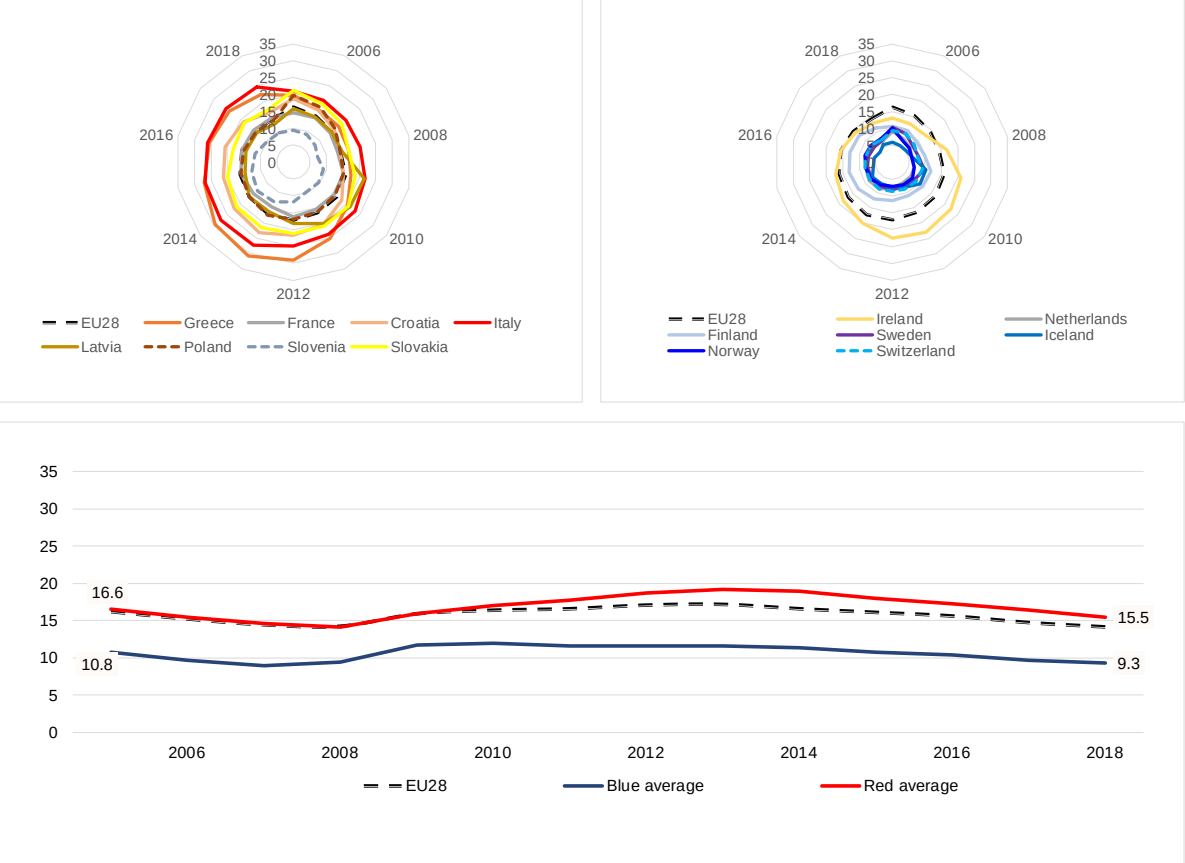
The employability of older workers (55-64) was explored in terms of tertiary education and participation in training over the 12 months before the interview (formal and informal). Previous research has shown that both skills levels and further training are essential ingredients of sustainable work (see for instance OECD 2015). Lifelong learning is especially of value for lower skilled workers who need to be more flexible in adapting to new demands on the labour market. The share of workers aged 55-64 with tertiary education increased EU-wide from 17% in 2006 to 22.3% in 2016. It was above EU-average in all blue countries with Finland (37%) reporting the highest level. Most red countries reported tertiary quotes below average with very low proportions in Italy (12.4%), Poland (13.9%) and Croatia (16.2%). In Latvia, however, proportions were above average (27%). The blue-red pattern is less clear-cut (though it still prevails) when it comes to participation in training with an EU28 average of 32.9% of people aged 55-64 attending a formal or informal course over the 12 months before the interview. Still, most blue countries are above the EU average and with Finland, Denmark, Sweden and Switzerland reporting proportions of well above 50%. In the red

group, it's Hungary (38.2%), France (35.1%), Latvia (34.1%) and Italy (33%) reporting proportions above the EU average.

In conclusion, employment-related context factors as those explored in this section are grossly associated with different sustainable work outcomes in the blue and the red group. There are however important exceptions in the red group faring above EU average in most contextual indicators such as Hungary and Latvia.

Finally, we move the focus to the young generation by looking at the NEET indicator. The term covers unemployed and inactive young people not enrolled in any formal or non-formal education. The NEET concept has proved a powerful tool in enhancing understanding of young people's vulnerabilities in terms of labour market participation and social inclusion (Eurofound 2016b). It is a crucial indicator of sustainable work contexts as it is known from previous literature that longer spells of unemployment and inactivity have scarring effects on later paths (e.g. Schmillen and Umkehrer, 2017). Figure 13 shows clear patterns of the blue and the red group with above average level of NEETs in the red (except for Slovenia) and below EU average levels in the blue group. Ireland is somewhat of an outlier in the blue group with a peak of 23% in 2011 but below-average levels from 2015 onwards. The gap between the blue and red group remained almost unchanged over the years (around 6%-points) following a similar trajectory. However, the economic crisis had more negative impact on the red group with the gap reaching its peak in 2013 (7.7%-points).

Figure 13: Development of NEET indicator in red and blue countries and overall, 2006-18



Source: Eurostat

Institutional context

The institutional context in terms of welfare state practices, regulations and infrastructure surely matters for creating a sustainable work environment. It can however not be expected that one specific institutional aspect is directly driving sustainable work outcomes. In this section we investigate selected indicators representing various areas of the welfare state: Pensions, labour market policies, child care facilities and social protection expenditure. There are of course many other aspects which might be relevant for keeping people in work such as parental leave schemes, elder care infrasctructure etc.

Pensions

Two pension-related aspects are investigated: the statutory retirement age[4] as indication of what the state assumes to be the fair and appropriate age to exit the labour market and second, the aggregated replacement ratio compiled as the ratio between gross retirement benefits and gross earnings (defined as median individual gross pension income of those aged 65-74 relative to median individual gross earnings from work of those aged 50-59 expressed in percentage terms).

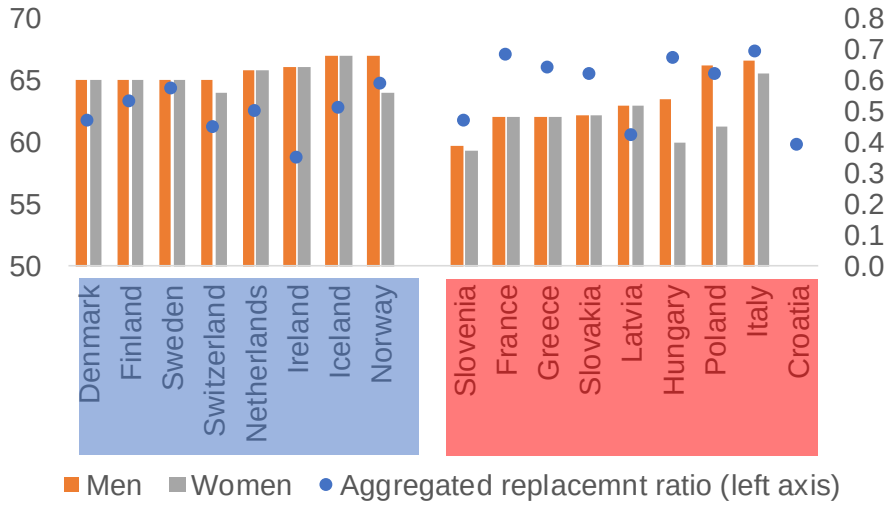
The Eurofound sustainable work concept implies that statutory retirement age will not contribute to making work more sustainable unless it is accompanied by workplace-related measures, initiatives addressing workers' health and positive incentive systems. Still we observe that the legally defined age in which workers can exit the labour market without any reduction in their pension is – on average – higher for both men and women in the blue group compared to the red one. The country average lies at 65.3 compared to 62.8 years for men and at 64.1:61.7 for women. The statutory retirement age is highest in Iceland with 67 years for both men and women.

The replacement ratio is with 58% – illustrated in Figure 12 –higher in the red countries than with 50% in the blue group. With just 35% it is particularly low in Ireland and is highest in Italy (69%), France (68%) and Hungary (67%), all red countries.

Even if the figures suggest so, it would be bold to conclude that higher retirement ages combined with lower replacement ratios provide a mix of incentives that overall contributes to better sustainable work outcomes. As it appears, it might however be a part of the puzzle.

[4] The legal retirement age is the age at which an individual can retire without any reduction to their pension having had a full career from age 20.

Figure 14: Statutory retirement age and aggregated replacement ratio in red and blue countries



Source: OECD

Labour market policies

Labour market policy (LMP) expenditure is usually composed by three main intervention types: services, measures and supports as Eurostat states in Statistics Explained[5]:

"**LMP services** cover the costs of all publicly funded services for jobseekers (guidance, counselling and other forms of job-search assistance) as well as any other expenditure of the public employment services (PES) not already covered in other LMP categories**. LMP measures** (active interventions) cover interventions that aim either to provide people with new skills or experience of work in order to improve their employability or to encourage employers to create new jobs and take on people who are unemployed or otherwise disadvantaged. **LMP supports** (passive interventions) mostly cover financial assistance designed to compensate individuals for loss of wage or salary and to support them during active job-search (i.e. mostly unemployment benefits)."

These measures have different functions with the main objectives to first support people who lost their job both financially and in terms of training and second, to get people back into the labour market as quickly as possible. LMP measures are not necessarily associated with unemployment rates. They rather reflect conscious political choices on how active the state should be in re-adapting people to labour market needs. There are also ideological debates around financial support of unemployed people which can be summarised as two polarised positions a) financial pressure to take up employment and b) assuring adequate financial security during unemployment spells. In reality, LMP choices often reflect a range between these extreme positions.

Below, a couple of indicators are explored. These indicators include:

c) Total labour market policy expenditure: % of GDP[6]
d) Unemployment replacement ratio after 6 months

[5] https://ec.europa.eu/eurostat/statistics-explained/index.php/Archive:Labour_market_policy_expenditure
[6] No data are available for Bulgaria, Croatia, Greece and Romania

e) Unemployment benefits in % of GDP

The total expenditure for labour market policies in 2016 was highest in Denmark (3.16%), a country famous for its active approach on LMP, followed by the red country France (2.98%), blue Finland (2.82%) and the blue Netherlands (2.36%). As share of GDP, LMP increased in most red countries between 2006 and 2016 except for Slovakia. It also increased in many blue countries but went down in Denmark, Sweden and the Netherlands.

Table 3: LMP Measures compared, 2006 and 2016

	Net replacement ratio after 6 months unemployment		LMP total % of GDP	
	2006	2016	2006	2016
Ireland	37	38	1.41	1.53
Denmark	85	85	3.26	3.16
Sweden	82	65	2.17	1.73
Finland	59	59	2.50	2.82
Netherlands	73	68	2.51	2.36
Norway	67	68	0.86	1.06
Iceland	52	52	n.a.	n.a.
Switzerland	72	73	1.27	1.73
Latvia	62	62	0.51	0.64
Slovakia	61	63	0.64	0.6
Poland	49	35	0.86	1.06
Hungary	40	18	0.69	1.17
Slovenia	63	66	0.65	0.73
Italy	74	70	1.12	1.92
Greece	30	39	n.a.	n.a.
Croatia	n.a.	n.a.	n.a.	n.a.
France	74	68	2.70	2.98

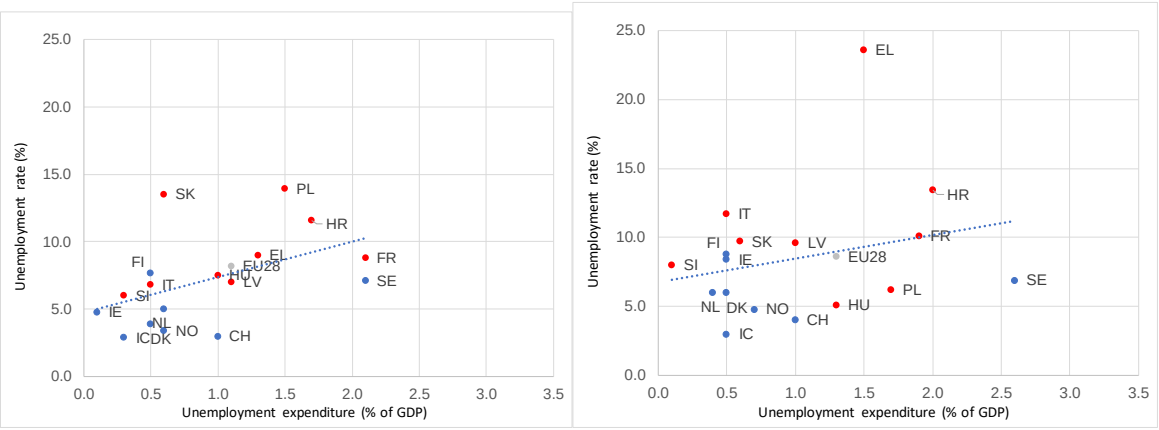
Source: OECD and Eurostat

Net replacement rates are calculated for workless families. For couples, this means that the spouse of the person claiming unemployment benefits, is out of work. The indicator measures the

proportion of previous in-work income that is maintained after 6 months of unemployment. Curiously, within the blue group replacement ratios are clearly correlated with LMP expenditure probably except for Norway with a high replacement rate of 68% but low LMP expenditure. The pattern is different in the red group where we observe high replacement rates and low LMP expenditure in Slovakia, Latvia and Slovenia. Between 2006 and 2016, replacement rates went substantially down in Hungary (-22 points), Sweden (-17 points) and Poland (-14 points) probably due to labour market repforms in those countries. In Greece, the rate increased by 9 points.

Figure 14 compares overall unemployment rates to the overall unemployment expenditure as percentage of GDP in 2006 and 2016. This shows that in both years blue countries and red countries are clearly clustered (though with outliers in both groups). However, this clustering is rather driven by unemployment rates than by overall unemployment expenditure. Blue countries tend to have lower unemployment rates in both years of observation which is also reflected in the overall averages across both groups (blue group: 4.9% (2006) / 5.9% (2016); red group: 9.3% (2006) / 10.8% (2016). However, some red countries such as Hungary and Poland reported unemployment rates well below EU28 average in 2016 and without the outlier of crisis-struck Greece, the average rate of unemployment wouldn't have changed in the red group. Unemployment benefits were around 1% of GDP in both groups. Sweden (2.6%) is the outlier in the blue group. The case of Sweden is particularly curious as unemployment stayed almost at the same level in 2016 than it was in 2006, but both the replacement ratio and the expenditure on labour market policy went substantially down in this period. We hence see a policy shift which most likely was driven by higher unemployment rates during the years of the crisis (e.g. Davidsson 2018).

Figure 15: Unemployment rate by unemployment expenditure, 2006 and 2016



Source: Eurostat

In conclusion, labour market policies vary significantly even within the groups. This comes as no surprise as each group includes Member States with very different welfare institutional arrangements such as for instance France and Hungary in the red or Sweden and Ireland in the blue group. However, with the caveat of data gaps in a couple of countries we also observe that the approaches to labour market policy are on average more active in the blue group with higher replacement ratios for long-term unemployed, more people wanting to work in training and more spending on LMP in proportion to GDP. Moreover, the average unemployment rate was substantially lower in the blue group in both points of time compared.

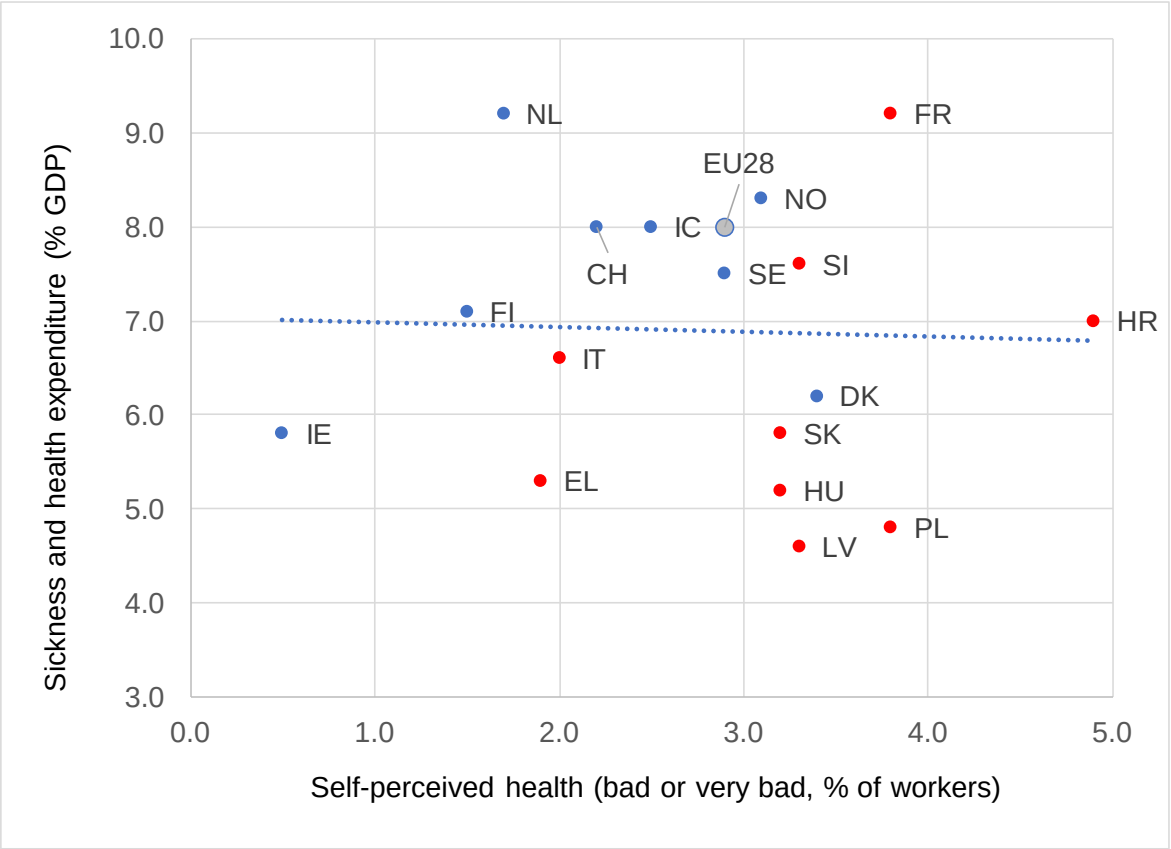
Welfare state

In his famous book *The Three Worlds of Welfare Capitalism*, Esping-Andersen (1990) outlined three main types of welfare states and grouped European countries accordingly into Liberal regimes, Conservative regimes and Social democratic regimes. Since then, researchers further developed his typology and applied it to new emerging welfare states in Central and Eastern Europe after the fall of the Iron Curtain (e.g. Kuitto 2016). A lot is hence known from the literature about institutional similarities and characteristics of EU Member States. Still, it is worth checking if specific patterns can be identified across our two groups of sustainable work *regimes*. Three indicators are investigated:

1. Expenditure on sickness/health benefits (% of GDP)
2. Childcare: children under 3 in childcare (% of population group)
3. Net childcare cost for parent using childcare

Figure 16 puts two health-related indicators into relation: On the x-axis we see the sustainable work outcome indicator self-perceived health of workers. The figure shows the proportion of workers who report a *bad* or *very bad* health status. The y-axis shows the Member States' expenditure on sickness and health benefits as a proportion of GDP. The figure reveals no clear relationship between the two indicators. However, we see countries clustered in their groups: Blue countries such as the Netherlands, Switzerland or Iceland tend to have comparably low rates of workers with bad health but high expenditure on sickness and health benefits. The red countries, on the other hand, rather show above average of poor health-rates and below average health-related expenditure such as Slovakia, Hungary, Latvia and Poland. There are outliers such as France in the red group and Denmark in the blue group

Figure 16: Sickness and health benefits by self-perceived health status of workers (2016)

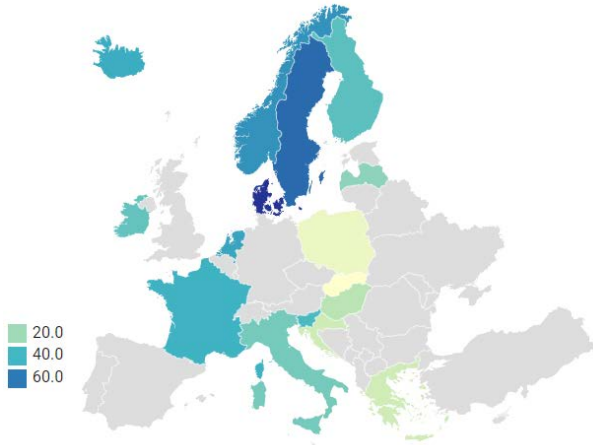


Source: Eurostat

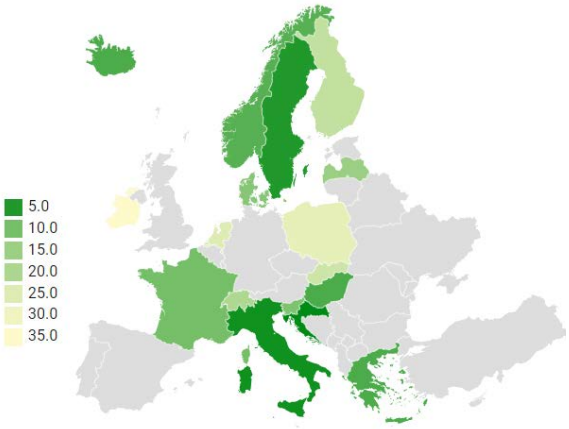
It is assumed that the provision of childcare and related costs are essential welfare state factors for sustainable work over the life course. Availability and affordability of childcare allow parents with young children to return to work sooner without potential harming effects on their career development. However, childcare often reflects social norms and historic developments. Figure 17 contrasts the overall take up of formal childcare (1 hour or more, Panel A) with the net costs paid by parents for full-time centre-based childcare after any benefits designed to reduce the gross childcare fees (Panel B). Take-up rates are highest in Denmark and Sweden and lowest in Poland and Slovakia. Provision of childcare for children below 3 is – by far – most expensive in Ireland and comparably cheap in Sweden, Iceland, Italy and Slovenia. The comparison shows that usage of childcare is highest in countries with reasonable costs involved, but it also illustrates that countries such as Croatia, Greece and Hungary although confronted with low costs, are not taking advantage of it which might be related to a limited provision of places. Italy is another example of a country with low involved cost but only a medium take-up rate. On the other we see Ireland with massive costs and a comparably high proportion of children under three in formal childcare.

Figure 17: Child care indicators 2015

Panel A % children < 3 in childcare



Panel B Net childcare cost for parent using childcare



Source: Panel A Eurostat Panel B: OECD

The provision of institutional elderly care and employment in the care sector would be another important information changing focus from caring parents to caring partners or children. However, data are scarce on the topic and quality requirements vary hugely across countries which is why we don't further explore this topic here.

Summary

In this chapter we looked at socio-economic developments and welfare state practices in order to contextualise the findings of Chapter 2. Obviously, no statements can be made about direct associations between sustainable work outcomes and the contextual factors as countries in both groups explored (blue and red group) have different socio-economic history and traditions. Nonetheless, some conclusions can be made about settings that are likely to be favourable for sustainable work environments.

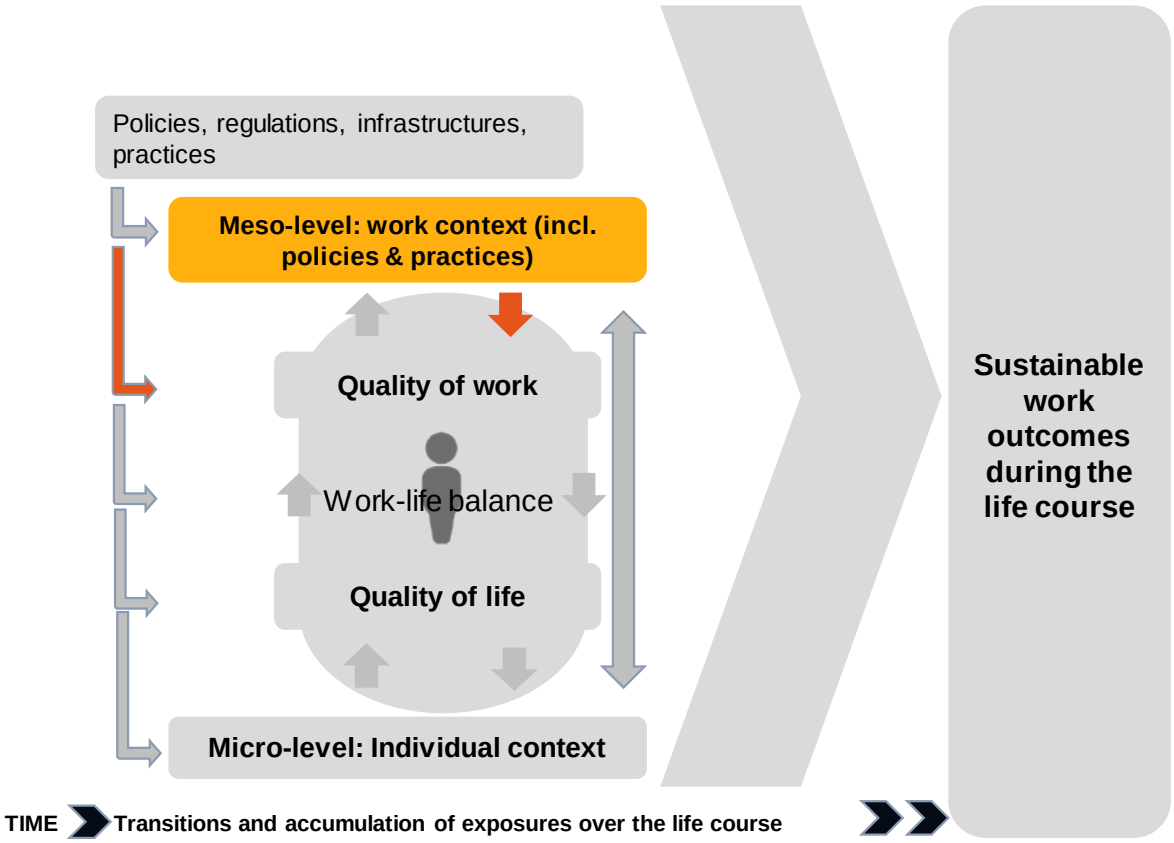
Other welfare statement investments can improve the situation of workers such as preventive health measures to keep workers as fit as possible. It was shown that low proportions of workers with poor health tend to be correlated with higher levels of health expenditure.

A good balance between pressure to keep on working and social protection / active labour market policy etc. shows somewhat favourable results. Keeping unemployment spells short and actively supporting job seekers to get back to the labour market are crucial elements of work sustainability.

Provision of good quality early childcare facilities are key and need to be available at reasonable prices. Some of the red countries such as Italy have space to increase the percentage of children younger than three in childcare as it is available at comparably low cost. However, investments in childcare infrastructure are indispensible particularly across the Central- and Eastern European countries.

4. Work context, employment relationships and company level practices

In addition to the institutional framework, shaped by regulation and public policies, company practices play a crucial role. In fact, the translation of regulations and policies into concrete actions and practices is, in many cases, done at company level. This is the case for measures affecting job quality but also with regard to achieving a better fit between the needs and abilities of the individual and the requirements of the job, and to improving the overall work environment.



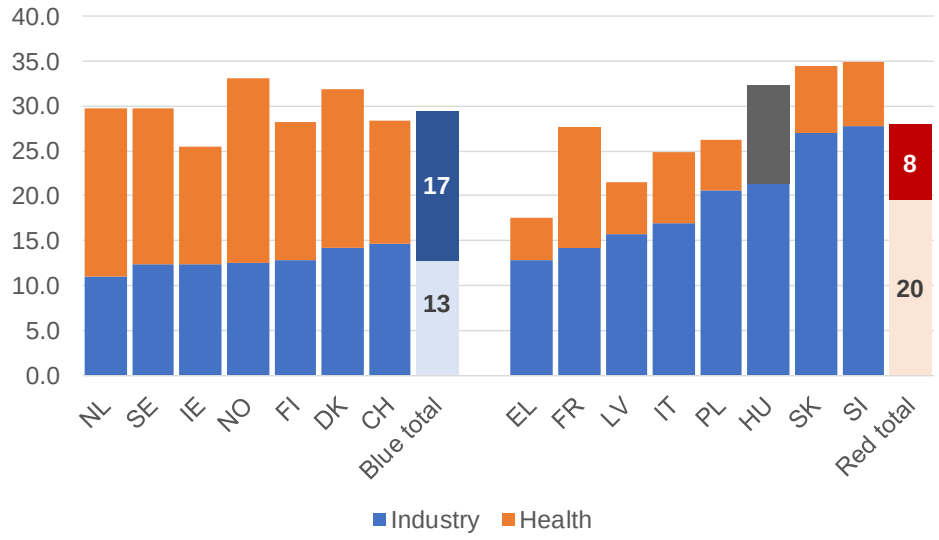
This chapter sheds some light into the work context and company level practices in the countries of interest. We first look at common features as regards the sectoral structure, prevalent employment statuses and occupations and then explore issues around representation, work organisation and workplace social dialogue.

Structural context and employment relationships

The sectoral structure is mostly driven by historic developments and paradigmatic shifts from Agriculture to Industry or from Industry towards Services. Indeed, the distribution of dominant sectors can be better explained along geographical lines than with reference to any specific sustainable work outcomes. Overall, however, we observe that Industry is more prevalent among the red group. An average of 20% of workers are occupied in this sector as compared to 13% of workers in the blue group. The Health sector on the other hand, is one of the dominant sectors in the blue Nordic countries but in none of the red ones.

To a certain degree, the sectoral structure also explains the prevalent occupations in each country. The blue group has a higher proportion of professionals in their workforce (21/% vs. 17%), while the proportion of lower skilled occupations is slightly higher in the red group (33% vs. 27%).

Figure 18: Dominant sectors in blue and red groups (% of workers employed)

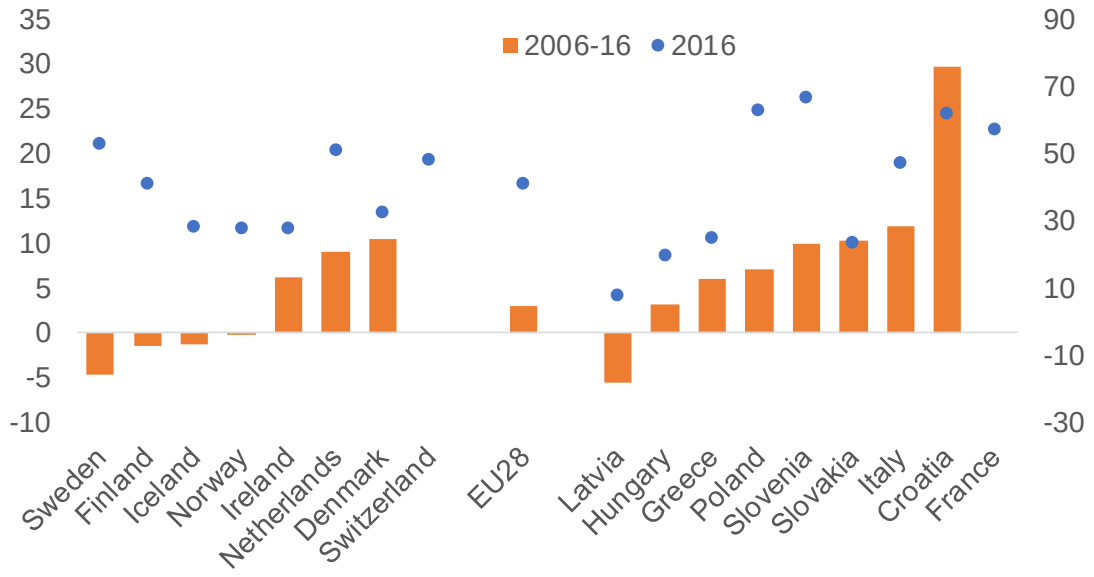


Source: Eurofound, EWCS 2015

No diverging patterns between the groups emerge as regards employment and contractual statuses. Greece and Italy are outliers in the red group when it comes to solo-self-employment with respectively 27% and 19% of workers with this status in 2015. The proportion of workers with fixed-term contracts ranges from 8% (Norway) to 17% (Netherlands) in the blue group and from 3% in Latvia to 22% in Poland in the red group. From a sustainable work point of view, it is interesting to look at labour market entrants and their predominant employment relationships. Between 2006 and 2016 the proportion of workers aged 15-24 with temporary contracts increased by 3%-points in the EU overall to 41%. Although we observe very high proportions in Sweden (53%), the Netherlands (51%) and Switzerland (48%), the overall average of the blue group amounted to 39%, while it was

41% in the red group with three countries (Croatia, Slovenia and Poland) reporting proportions over 60%. Greece reported a low proportion of only 25% of young workers having fixed-term contracts. However, we also observe a high proportion of young Greek workers with other or no contracts at all. Very low proportions were observed in Latvia (8%). The prevalence of fixed-term contracts among young workers decreased in four blue (Finland, Sweden, Iceland, Norway) and only one red country (Latvia). It increased in three (Denmark, Netherlands, Irleand) blue and seven red countries.

Figure 19: Change and prevalence of fixed-term contracts (% of employment, 15-24)



Source: Eurostat, LFS

Involuntary part-time is another employment indicator emphasising labour market pressure and associated constraint choices of workers. In the EU28 overall, involuntary part-time was at 28% in 2016 (23% in 2006). The overall average of the red group was with 40% well above the blue group average of 21%. The drivers in the red group were Greece (72%!), Italy (64%) and France (44%). Without those three countries, the mean would go down to 26%. Involuntary part-time particularly increased between 2006 and 2016 in blue Ireland (+19%-points) and red Italy (+27pp), Greece (+26pp) and Slovakia (+18pp). It decreased in Poland and Latvia (both -4pp).

Company-level practices and workplace social dialogue

Workplace practices and the approach to social dialogue touch upon the core of the work experience. How do companies organise their day-to-day tasks and what is the role of employees in the organisation? Previous Eurofound research has shown that inclusive HRM practices and strong employee involvement in decision-making are associated with beneficial performance outcomes as regards innovation, productivity or workplace wellbeing (Eurofound 2016; 2017). Work engagement is positively associated with organisational justice and other motivational features linked to an active role for the employee at the workplace (Eiffe 2018). In this section a number of company-level indicators are explored based on the European Company Survey 2013:

Company performance and workplace wellbeing

Workplace wellbeing: computed by taking the average of the standardised scores on the following items: work climate, change in work climate, problems with employee retention, problems with poor employee motivation and problems with high sick leave. (Eurofound 2015b)

Company performance: computed by taking the average of the standardised scores on four items: the current financial situation; changes in the financial situation since 2010; changes in labour productivity since 2010; and changes in the amount of goods and services produced since 2010.

Both indices were subsequently transformed such that they range between zero and 100. (Eurofound ebd.)

Work climate reported by Employee Representatives: % of workplaces with official employee representation reporting a very good work climate.

Workplace social dialogue and employee involvement

Regular staff meetings: % of companies reporting to have regular staff meetings at the workplace

Management attitude towards employee involvement: % of companies reporting positive attitude of management

Official ER at workplace: % of companies reporting official ER structure at the workplace

Industrial action: % of companies reporting industrial action at the workplace the 12 months preceding the survey

Table 4 displays the scores for these indicators for both the blue (without Norway and Switzerland) and the red group. At first glance we see that the groups clearly differ much stronger from each other than was observed in the macro-indicators above. The blue group reports better performance and better workplace wellbeing. Also, employee representatives evaluate the work climate more positively in the blue group.

Table 4: Company-level indicators, (Mean values and % of companies)

	Per-formance (Mean)	Work-place wellbeing (Mean)	Work climate very good (ER), %	Regular staff meetings, %	Manage-ment positive about EI, %	Official ER at workplace, %	Industrial action, %
Denmark	68	81	93.2	82.7	85.4	79.8	4.3
Ireland	65	77	88.0	67.4	88.6	28.4	1.9
Netherlands	63	77	84.1	59.0	75.8	55.0	7.7
Finland	66	78	85.4	63.2	92.7	70.3	16.6
Sweden	69	83	92.6	88.1	94.1	54.1	3.7
Iceland	73	80	94.8	71.2	93.5	96.7	3.6
Blue group average	**67**	**79**	**89.7**	**72.4**	**87.8**	**63.9**	**7.4**
Greece	49	74	85.9	62.9	82.7	13.7	49.3
France	60	71	78.3	57.1	80.3	55.1	11.7
Croatia	56	75	86.0	65.8	70.0	23.5	10.8
Italy	46	69	75.9	55.9	83.8	27.5	28.9
Latvia	64	73	73.9	52.8	82.5	9.3	9.3
Hungary	53	68	65.0	57.2	65.3	15.6	0.1
Poland	59	71	73.4	44.9	51.2	24.1	4.2
Slovenia	55	70	76.3	70.6	84.2	39.0	21.5
Slovakia	56	72	83.1	77.0	64.4	37.7	1.8
Red group average	**55**	**71**	**76.2**	**57.6**	**73.5**	**28.6**	**13.6**

Source: Eurofound, ECS 2013

Looking at performance first, Latvia stands out as the only red country with performance well above the group average. The patterns are even sharper for workplace wellbeing. There is no single red country reporting a wellbeing score at or above the blue average. Work climate is perceived as very good by employee representatives in 90% of companies in the blue group and by 76% in the red group. Proportions were particularly high in Denmark (93%) and Iceland (95%) and very low in Hungary (65%). In Slovakia, Croatia and Greece, the work climate was rated well above the group average.

Regular staff meetings took place in 72% of workplaces in the blue group and in 57% of the red group. Outliers with lower than average scores were the Netherlands (59%) and Finland (63%) and with higher average scores in red Slovakia (78%) and Slovenia (70%). Sweden had the the highest proportion with 88%, whereas Poland had the lowest rate with 44%.

Management was positive towards employee involvement in 88% of companies in the blue and in 74% of companies in the red group with red Slovenia, Italy (both 84%) and Greece (82%) as positive outliers. Official ER structures were in place in 64% of the companies in the blue group but only in 29% of the red group. Both groups again have a couple of outliers (blue group: Ireland (28%) / red group France (55%).

Industrial action was carried out in 14% of companies in the red and in 7% of companies in the blue group, but here there is less of a general pattern. Particularly in the red group, countries are spotted with a high and very low prevalence such as Greece (49%), Italy (30%), Slovenia (22%) or Hungary (0%).

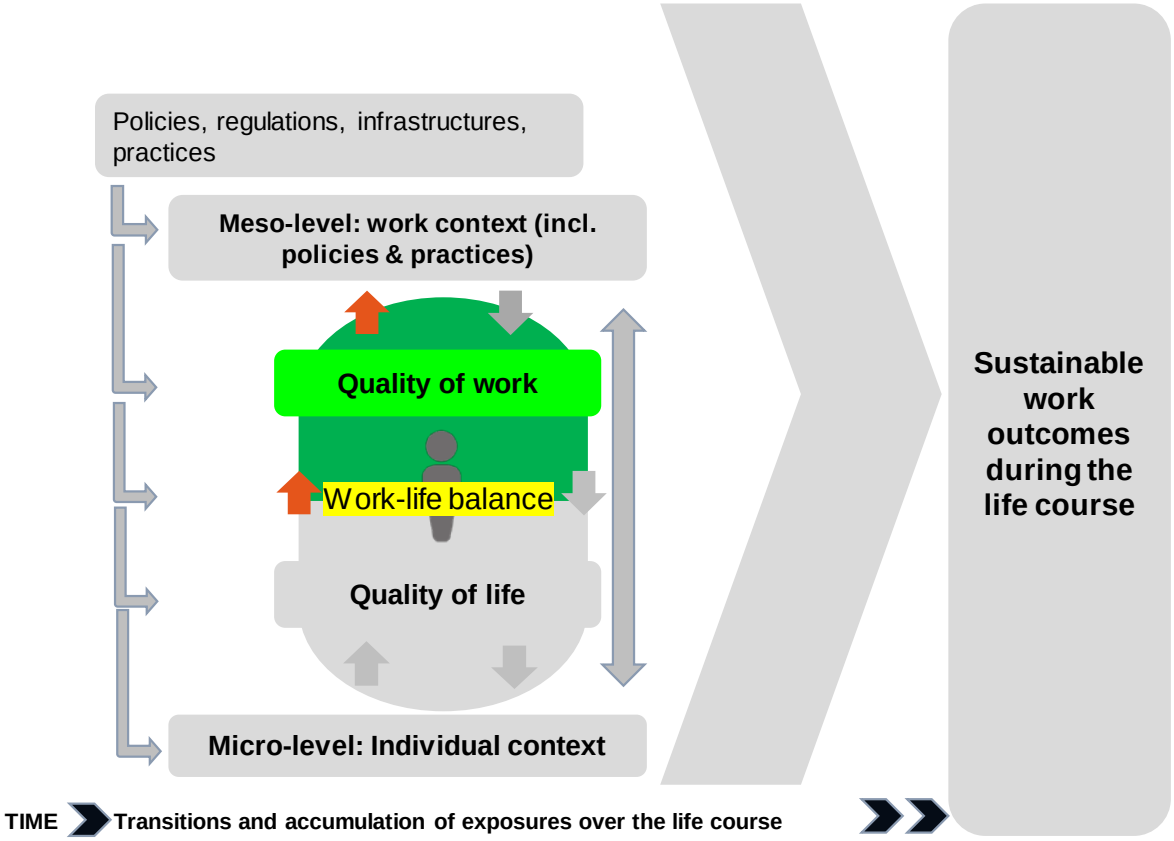
Summary

The analysis in this chapter has shown that countries in the explored groups show heterogeneous results regarding employment-related indicators. Overall, however, a higher proportion of workers with fixed-term contracts and in involuntary part-time is observed in the red countries. Moreover, except for Latvia, these proportions increased between 2006 and 2016 in all countries of the red group. The Industry sector dominates the red group, while a relative majority of workers in the blue group is occupied in the Health sector or services.

Both homogeneity within the groups and differences between them are much more pronounced when focusing on company-level indicators and workplace practices. The blue group has higher average levels of performance and workplace wellbeing, a more favourable work climate as assessed by employee representatives and overall a better functioning workplace social dialogue with formal structures in place.

5. Job quality and work-life balance

The most direct and obvious determinant of the sustainability of work is the characteristics of the job. Eurofound's work on job quality identifies the aspects of a job that have the most impact on the sustainability of work (Eurofound, 2017). Eurofound defines job quality as a measure of the potential impact of the characteristics of jobs on the well-being of workers. The model distinguishes seven dimensions of job quality: the physical environment, the social environment, work intensity, skills and discretion, working time quality, prospects and earnings.



Job quality as a multidimensional concept

The Eurofound Job Quality concept was developed with the aim to capture central objective aspects of the job experience. Together with leading experts in the field, Eurofound (2016, 2017) developed seven job quality dimensions with various sub-dimensions all associated with workers' health and wellbeing as previous Eurofound research has shown (Eurofound 2012, 2019).

In discussions with experts in the course of the feasibility study (*how to operationalise sustainable work*), there was consensus that job quality plays a core role in making work sustainable. Job quality reflects the central conditions of the work experience. It ranges from the physical to the social environment, from work intensity to working time and from skills use and autonomy to career prospects and earnings. There are obvious trade-offs in the job quality concept meaning that it is unlikely that one job will have high scores in all the dimensions (Eurofound 2016, p.128ff). However, they can also be compensatory: Working time quality might for instance be higher in lower paid jobs. Some jobs might on the other hand be well paid, but with a high work intensity or long working hours.

Table 5 shows scores for six job quality indicators[7] for countries of both the blue and the red group. Overall, in 2015 the blue group scored clearly above the red group in three dimensions, skills & discretion, working time quality and prospects. Both groups score almost equally in the physical environment, social environment and work intensity, the latter being slightly higher in the blue group.

In both groups, outliers were identified and are highlighted in the table. In the blue group Denmark and Finland score comparably high in work intensity. In the red group very low work intensity is observed in Latvia and Poland and career prospect scores are comparably high in Slovakia. Italy reports a comparably good physical work environment.

[7] Earnings not included here due to data quality issues

Table 5: Job quality indicators, (Mean values)

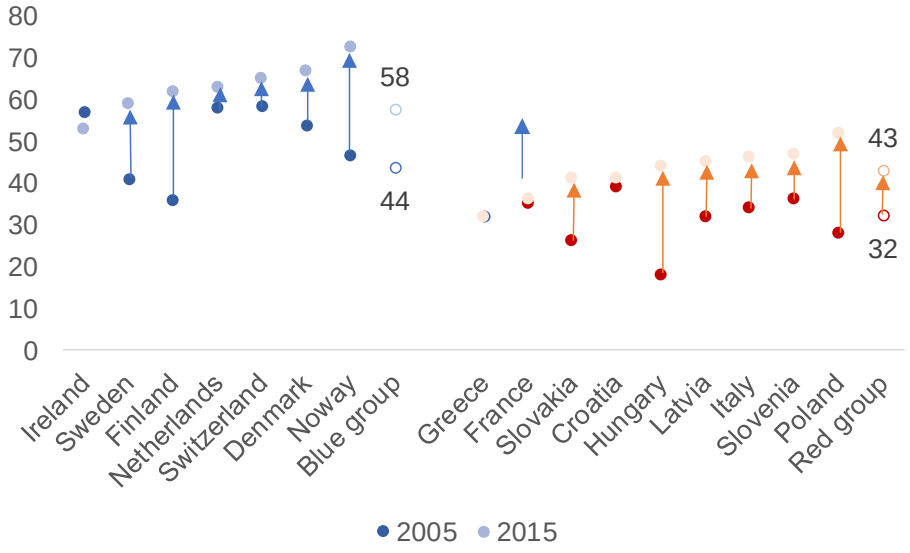
	Skills and discretion		Working time quality		Physical environment		Work intensity		Prospects	Social environ-ment
	2010	2015	2005	2015	2005	2015	2005	2015	2015	2015
Denmark	67	66	88	89	85	85	48	45	72	75
Ireland	59	61	82	80	87	86	37	43	64	80
Netherlands	63	63	89	88	86	86	40	39	62	72
Finland	66	66	86	86	79	83	50	41	66	77
Sweden	64	63	88	87	83	83	48	46	67	74
Norway	65	66	88	89	85	85	47	45	70	80
Switzerland	n.a	57	84	88	86	86	43	43	69	75
Blue total	**64**	**63**	**87**	**87**	**84**	**85**	**45**	**43**	**67**	**76**
Greece	50	47	67	69	73	80	50	49	52	84
France	52	59	89	86	80	80	41	43	65	72
Italy	51	51	81	84	85	86	42	38	54	74
Latvia	58	50	78	85	81	83	34	31	62	75
Hungary	54	50	78	83	78	84	47	45	64	82
Poland	53	53	72	80	80	82	36	35	60	76
Slovenia	60	60	79	81	79	83	49	43	61	80
Slovakia	51	52	77	81	81	84	40	36	66	74
Croatia	51	52	75	77	76	82	32	38	61	80
Red total	**53**	**53**	**78**	**81**	**79**	**83**	**41**	**40**	**61**	**77**

Source: Eurofound, 4th, 5th and 6th EWCS

Income and earnings-related aspects

While earnings is obviously itself a central dimension of job quality, we excluded it from the table above due to issues of data quality. It is however worth taking a look at non-monetary but income-related items such as *Do you feel that you are paid appropriately*? This item neutralises different wage levels across countries as reference groups to which the own income is compared are usually in the same country or even the same workplace. The blue group clearly shows better results with a country average of 60% in 2015 answering affirmatively to this question compared to 43% of the red group. Over the years this gap has actually widined though both groups improved considerably.

Figure 20: % of workers who feel that they are paid appropriately, (%, strongly agree/agree)



Source: Eurofound, 4th, and 6th EWCS

Reconciling working and private life

The reconciliation of professional and private life is to some extent covered by the working time quality index (e.g. in terms of time arrangements). However, it plays a special role in the sustainable work framework as it marks the intersection between job quality and quality of life. It was argued that striking a balance between work and other aspects of life is fundamental for people of working in general and as a consequence also for the sustainability of work specifically (Eurofound 2018b).

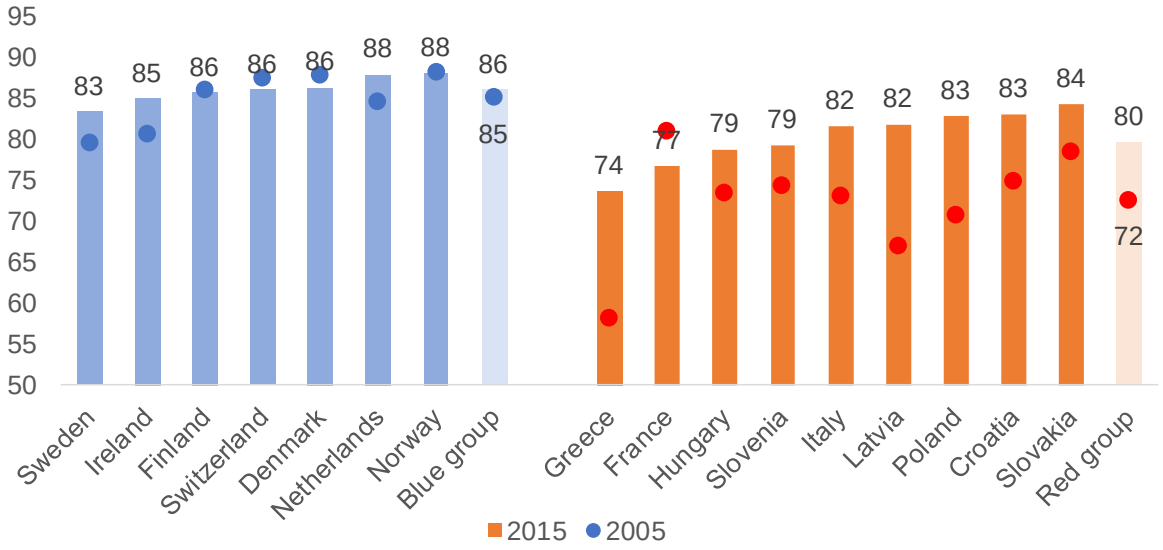
The reconciliation of working and private life includes many aspects such as working time preferences, the balance of paid and unpaid works etc. Those are dealt with in other reports (e.g. Eurofound 2017, 2018). For the purpose of our analyis, however, only two indicators are explored:

1) In general, how do your working hours fit in with your family or social commitments outside work? (% of people answering very well or well)
2) Fairly easily or easily arranging to take an hour or two off during working hours to take care of personal or family matters (%)

Figure 21 illustrates that in blue countries a higher proportion of workers find that their working hours fit well with other commitments than in the red group with Norway and the Netherlands (both 88%) reporting the highest proportions of workers assessing their work-life balance favourably. However, in Sweden proportions were only slightly above the red group's averages (83%).

With the exception of France, all countries in the red group have improved between 2005 and 2015 (which was only the case in half of the blue countries). The overall gap between the red and the blue average shrank from 13%-points in 2005 to only 6 points in 2015. Slovakia (84%) reported the highest proportion within the red group. Greece was with 74% at the bottom but considerably improved compared to 2015. It was also highligheted in previous research that gender patterns play a crucial role in the answering behaviour to work-life balance related items: men are more likely to say that their working hours do not fit with their private commitements. However, such findings are not likely to indicate a better work-life balance for women but rather for the latter of making choices that adapt to their situation. Men, in contrast, are more likely that confirm to still dominant model of a full-time, long-term employee career and adapt as necessary, when they need to accommodate other commitments (Eurofound 2017, p.114).

Figure 21: Working hours fitting very well or well with family or social commitments (%)



Source: Eurofound, 4th, and 6th EWCS

Group differences are even more pronounced when it comes to difficulties in taking time off for personal or family matters. There was a gap of 18%-points in 2015 with an average of only 60% of the red group finding it very or fairly easy to take time off compared to 78% of workers in the blue group. Italy was the exception in the red group with proportion of 72 and 67% respectively – well above their group's mean value, though going down between 2010 and 2015.

Table 6: Arranging time off for family or personal matters (%)

	% of those arranging to take off on hour or two from				
	2010	2015		2010	2015
Sweden	85	79	Greece	62	52
Bulgaria	67	71	France	57	63
Ireland	77	78	Hungary	69	53
Finland	76	80	Slovenia	61	60
Switzerland	n.a.	82	Italy	74	67
Denmark	82	76	Latvia	74	72
Netherlands	85	85	Poland	65	65
Norway	76	75	Croatia	53	61
			Slovakia	51	48
Blue group	**78**	**78**	**Red group**	**53**	**60**

Source: Eurofound, 4th, and 6th EWCS

Summary

This chapter has provided some evidence that job quality and the reconciliation of working and private life play a crucial role in making work sustainable. Job quality indices and work-life balance indicators will be used in the in-depth analysis in Chapter 6, where associations of sustainable work outcomes with household and job characteristics are explored. So far it can be concluded that at least three of the five job quality dimensions are correlated with more desirable sustainable work outcomes: skills and discretion, working time quality and prospects. Scores in the indices

summarising these three dimensions are coherently higher in the blue group. Work-life balance is clearly favourable in blue countries with huged differences as regards fit between work-related and family commitments and flexibility to take time off. Moreover, the perception of being paid fairly shows more favourable results in the blue group.

The relevance of job quality for sustainable work is also confirmed when taking a more holistic approach. In the Eurofound Overview Report of the EWCS (2017), workers were classified into a number of groups of different sizes based on similarities in the patterns of job quality. Five distinct profiles ob job quality resulted of this exercise raning from high-flying job to poor quality jobs. As Table 6 shows, 33% of workers in blue (not including Iceland, Norway and Switzerland) are in the *high-flying* group compared to only 12% of workers in the red group. On the other hand can 30% of workers of the red group be found in *poor quality jobs*, which is three-times the proportion of the blue group average (France being the exception in the red group).

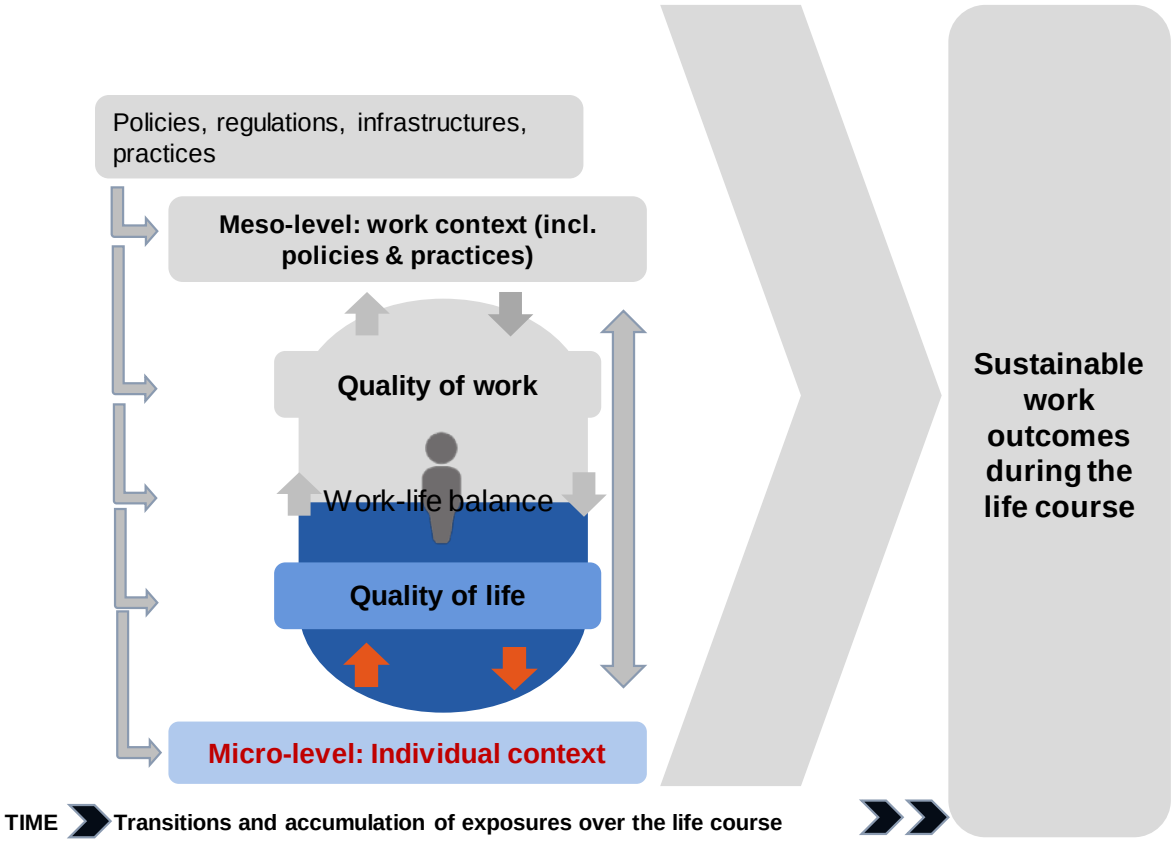
Table 6: Job quality profiles by Country groups (%)

	High flying	Smooth running	Active manual	Under pressure	Poor quality
Blue size total	33	17	19	21	11
Netherlands	27	22	11	23	17
Ireland	28	23	17	19	12
Finland	36	13	26	21	5
Sweden	36	12	25	18	10
Denmark	39	13	16	22	10
Red size total	12	29	21	8	30
France	23	15	27	21	14
Slovenia	22	22	20	13	24
Slovakia	12	33	20	8	27
Italy	12	37	18	5	28
Poland	11	33	21	6	29
Croatia	8	32	22	5	32
Latvia	8	40	10	5	37
Hungary	9	28	20	4	39
Greece	5	24	28	2	41

Source: Eurofound, EWCS 2015.

6. In-depth analysis: The role of the individual and household context

The characteristics and circumstances of the individual determine their availability for work. Factors that influence availability and can prevent an individual from being employed include care responsibilities; poor health and well-being; lack of skills; spells of unemployment and inactivity; and lack of motivation. Areas of intervention where policies, regulation or practice can influence such factors include care infrastructure and assistance with life events; income and in-kind subsidies, inclusion, particularly related to health; lifelong learning; labour market activation; and other areas that influence the motivation to (continue) work.



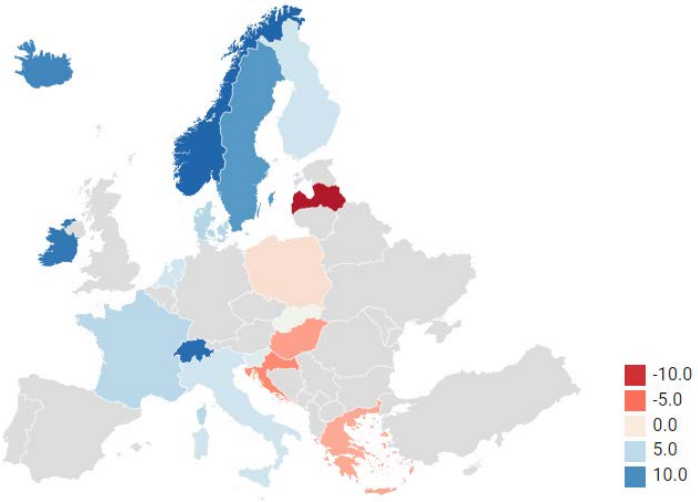
So far, the working paper has explored the economic and instutional context, the work context and aspects of job quality on Member State level. This chapter focuses on the household context which is assumed to play an important role in the employability and work availability of the working age population. Dependant children or elder people in the household, the overall financial situation of the household, deprivation in central aspects of life all impact on the work ability and are hence to be considered. While section 1 and section 2 of this chapter still explore the Member State level as regards the overall demographic composition of households, deprivation and poverty risks, section 3 investigates associations at the individual level and employs more sophisticated statistical analysis.

Population change and household context

As a first step, the demographic developments over a ten-year period are explored before we take a look at household compositions in the two country groups. Population change is per se an important indicator of people's expectations of their chances in a specific country. How is the overall standard of living? Will I find work? Will I be able to raise a family? Questions like those guide migration decisions and hence tell us a lot about the pereceived sustainability of living standards and work opportunities in a given country. However, migration is obviously an extremely complex topic that cannot be explained by those factors alone.

Figure 22 illustrates that it is mostly Eastern European countries that witnissed a population decline between 2006 and 2016. Latvia for instance lost over 10% of its population. Population loss was less pronounced in Croatia (-3.3.%), Hungary (-2.6%) and Greece (-2,2%) and was neglegible in Poland. The population grew above 10% in Norway (12.3%), Switzerland (11.9%), Ireland (11.3%) and Iceland (10.4%). The overall average population of the blue group increased by 8.6% between 2006 and 2016, while it shrank by 1% in the red group. The small population decline in the red group is mostly due to migration flows into Italy and France from third countries.

Figure 22: Change in the average population, %, 2006-16



Source: Eurostat

Household structure is another aspect to look at from a sustainable work perspective. While it is for instance an existential question for single person households to make a living with income from

work, concerns are different for households with two adults and three or more dependent children. Obviously, the question of how to make ends meet is equally important for those households, but there are also more organisational questions to be solved: Who takes care of the children in terms of supervision, transport, schooling etc? How are household work and resources being distributed among household members? etc.

The figures below show the distribution of single households and households with two adults and three or more dependent children in 2006 and 2016. Both of the household types discussed matter from a sustainable work point of view as they both face challenging conditions. This is for instance reflected in poverty statistics showing over-proportionate risks of poverty for both types: 26% of single persons and 27% of people living in households with 2 adults and 3+ children were at-risk-of poverty in 2016 across the EU compared to 16.8% on average. In the Nordic countries these two household types together account for over 50% of the poverty population (which is high above the total proportion). Another observation is that the proportion of single households is slightly higher in the red group whereas households with two adults and three or more children are slightly more frequent in the blue group, though these difference have decreased over the period analysed. It has to be kept in mind, of course, that many people in single person households are above working age.

In 2016 14.5% of all households were single households, which was around 1.5 points above the 2006 level. Highest proportions in 2016 of over 20% were observed in the Nordic countries Denmkark (22.5%), Norway (22.4%), Sweden (20.5%) and Finland (20.3%), followed by Netherlands, France and Switzerland all well above the EU average. Lowest proportions were on the other hand recorded in Slovakia, Ireland, Croatia and Poland with rates below 10%. The proportions of single households increased by over 5%-points in Slovenia and Hungary and slightly decreased in Slovakia. The development of single households has various drivers such as the distribution of age, average housing and rental costs, available space, etc.

Households with two adults and three or more dependent children, on the other hand, accounted for 7% of EU households in 2016 (slightly less than in 2006). This proportion was above 10% in Ireland (14.4%), Iceland (13.5%), Finland (10.8%), Norway (10.6%), the Netherlands and France (both 10.3%) (with the exception of France, all blue countries). It was below 5% in Latvia, Poland and Italy. The proportion of this household type went down in most of the observed countries but increased in France (+3%-poitns), Greece (+2.8%-points) and Slovenia (+1 point).

Figure 23: Single person households (%), 2006 and 2016

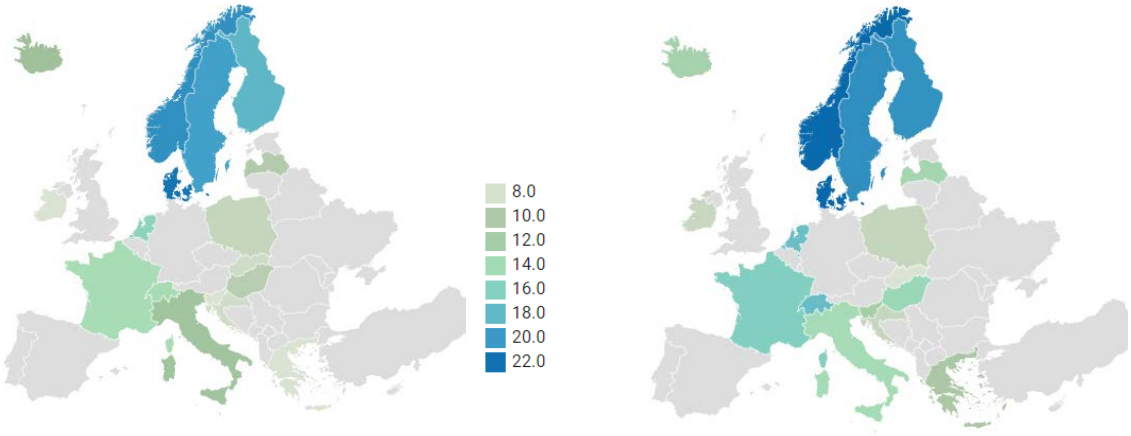
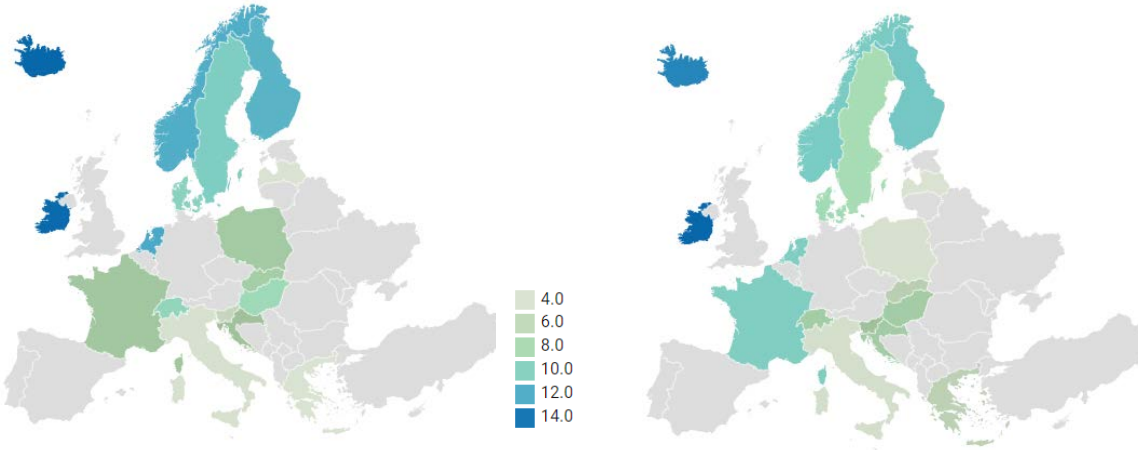


Figure 24: Households with 2 adults and 3 or more children, (%), 2006 and 2016



Source: Eurostat, EU-SILC

Material living standards of workers

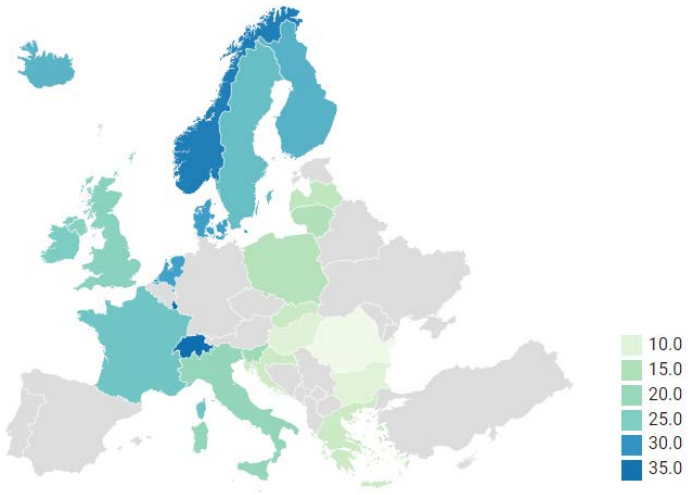
While the section above was concerned with the overall demographic structure and household composition, this section focuses again on the working population (employed persons aged 18-64). The guiding quesition is under which material conditions do workers live and what does it mean for their future ability to offer their work force at the labour market. Indicators explored include:

1. Median equalivalised disposable household income
2. At-risk-of-poverty rate
3. Severe material deprivation

The **equivalised disposable income** is the total income of a household, after tax and other deductions, that is available for spending or saving, divided by the number of household members[8]. The resulting figure (equivalised disposable income) is attributed equally to each member of the household.

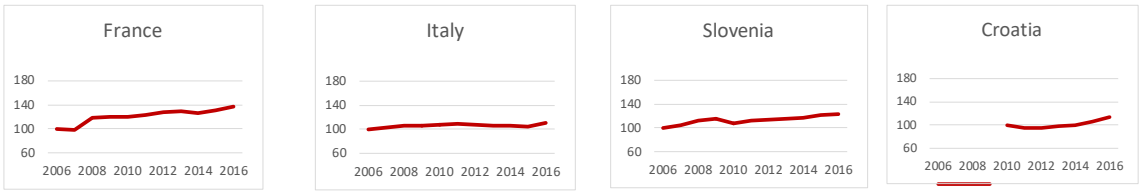
Figure 25 shows the map of the median annual disposable household income of workers (aged 18-64) in purchasing power parities (PPP) across the countries scrutinised. In 2016, median purchasing power of workers was highest in Switzerland and Norway (all above 30k) and lowest in Hungary and Slovakia. The map unsurprisingly shows a clear East-West devide with former Soviet countries still being in a catching-up process. This is also reflected in the developments since 2006 as illustrated in Figure 26. In Latvia, Poland and Slovakia growth rates were ranging from 83 to 136%. However, with Croatia, Hungary and Slovenia there are some exceptions were growth rates were only around 20%, whereas the Nordic countries all recorded increases of well above 30%. At the lower end, we see Greece with a decrease (-17%) and Ireland with a comparably small plus (+9.5). The economic and financial crises that burst out in 2008 is reflected in the income developments of many countries but especially so in Iceland, Greece and Latvia.

Figure 25: Median equivalised net disposable household income (PPP), 2016

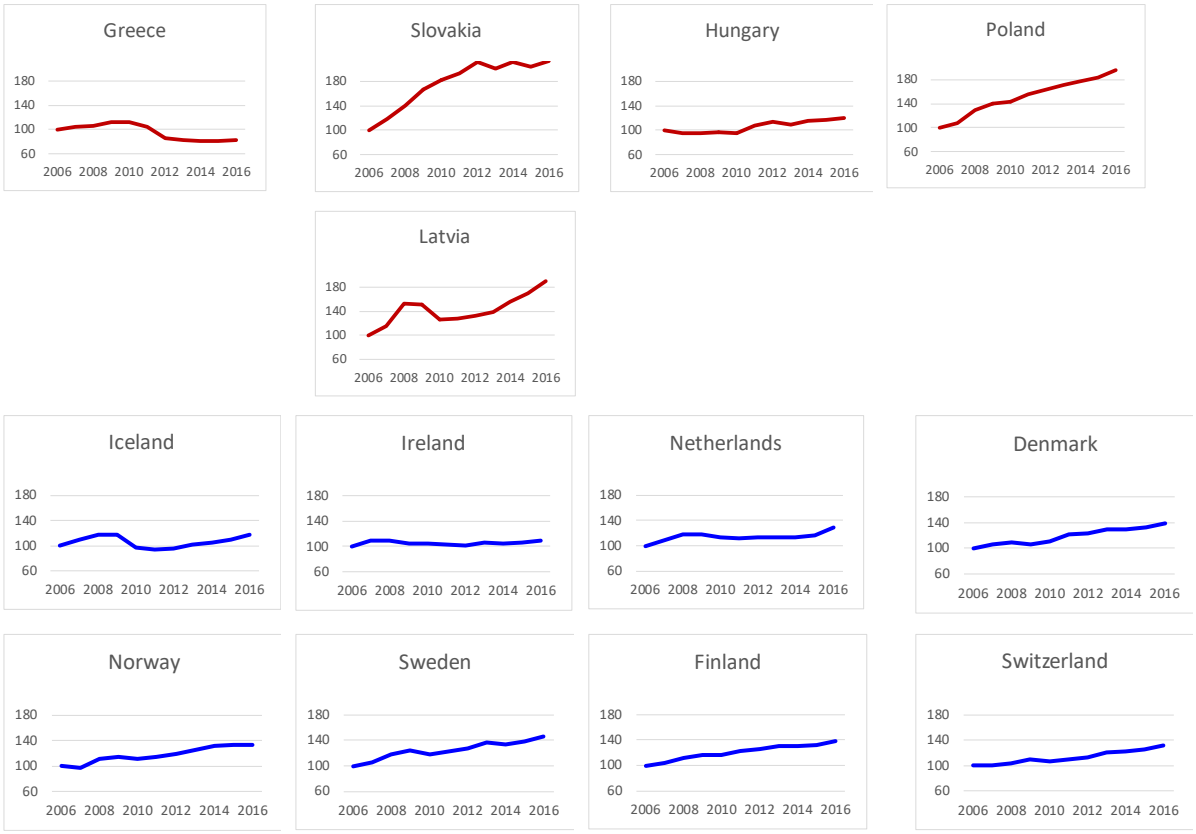


Source: Eurostat, EU-SILC

Figure 26: Indexed median equivalised net disposable household income (PPP), 2006-16, 2006=100



[8] Household members are equalised or made equivalent by weighting each according to their age, using the so-called modified OECD equivalence scale. See https://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Equivalised_disposable_income

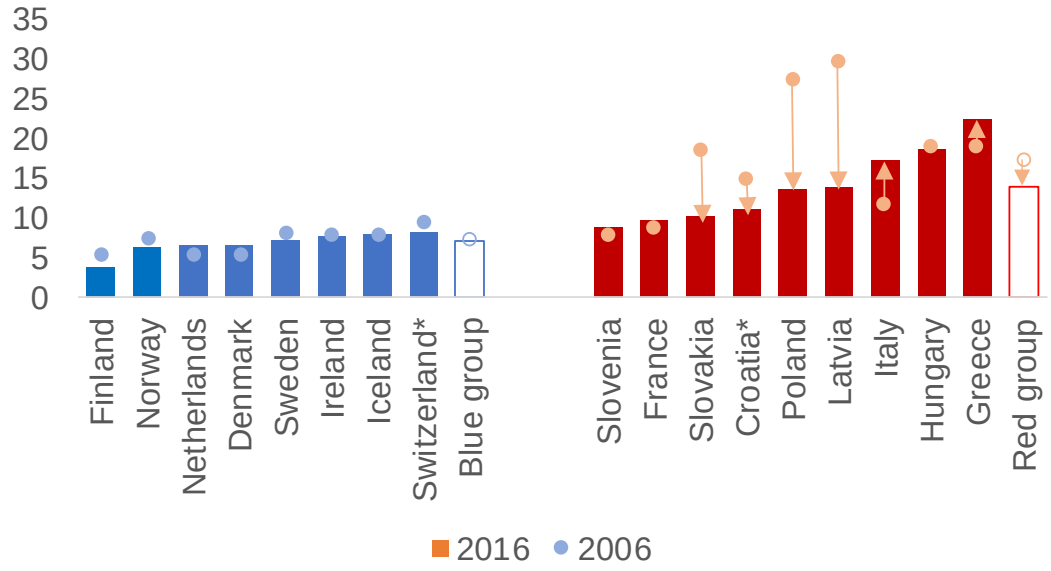


Source: Eurostat, EU-SILC; Indices for Switzerland and Romania refer to 2007

The **at-risk-of poverty rate** is a relative measure of monetary poverty. It is defined as the share of people with an equivalised disposable income (after social transfers) below the at-risk-of-poverty threshold, which is set at 60 % of the national median equivalised disposable income after social transfers. This indicator does not measure wealth or absolute levels of poverty, but low income in comparison to other residents in that country, which does not necessarily imply a low standard of living[9]. Figure 27 takes a closer look at the at-risk-of poverty rates of employed persons in the country groups. Overall, similar patterns are found in both groups. Blue countries had average poverty rates of around 7% ranging from 3.8% in Finland to 8.2% in Switzerland. The rate in the red group ranged in 2016 from 8.8% in Slovenia to 22.5% in Greece with an overall average of 14% of workers being at risk of poverty. Increases were recorded in Italy (+5.5%-pts) and Greece (3.7%-pts), decreases in Latvia (-15.8%-pts), Poland (-13.7), Slovakia (-8.2) and Croatia (-3.8).

[9] See Eurostat Glossary: https://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:At-risk-of-poverty_rate

Figure 27: At-risk-of poverty 2006 and 2016, % of employed persons

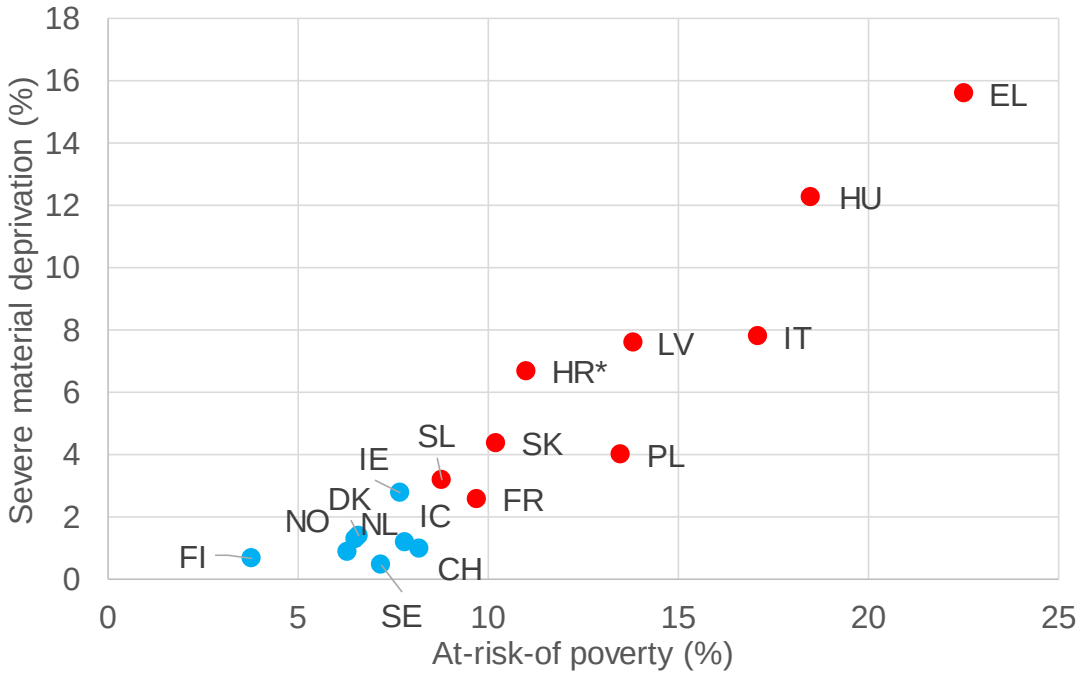


Source: Eurostat, EU-SILC; * Data for Romania and Switzerland are from 2007; data for Croatia are from 2010

While the poverty-risk indicator is a relative measure, material deprivation provides a complementary view, based on objective and absolute criteria. It refers to a state of economic strain, defined as the enforced inability to afford a set of indicative material standards, considered by most people to be desirable or even necessary to lead an adequate life[10]. Figure 28 illustrates that both measures are highly correlated: Countries with high rates of workers at risk of poverty are also those who have high levels of severe material deprivation in this group. On the other end, we see countries such as Finland, Norway or the Netherlands with low poverty rates and low proportions fo material deprivations.

[10] These include the inability to afford: mortgage or rent payments, utility bills, hire purchase instalments or other loan payments; a one-week annual holiday away from home; a meal involving meat, fish or a protein equivalent every second day; unexpected financial expenses; a telephone (including mobile); a colour television; a washing machine; a car; heating to keep the home adequately warm. The severe material deprivation rate is defined as the share of the population that is unable to afford at least four of the above-mentioned items.

Figure 28: At-risk-of poverty by severe material deprivation 2016, % of employed persons



Source: Eurostat, EU-SILC 2016.

In this section clear patterns of demographic developments and material living standards were identified. Blue countries show population growth, higher purchasing power and low proportions of poverty and material deprivation. The population is shrinking, on the other hand, in most red countries, but material standards are still on the rise especially in Eastern European countries with growing purchasing power and reduced levels of monetary poverty. However, a few red countries are developing less favourably such in terms of material living standards, such as Greece, Italy, Croatia and Hungary.

Determinants of work engagement and workers' health

Methodology

After exploring income and living standards of workers at the country level, in this section the analysis focuses on the individual level of the worker. The analysis is based on a matched EU-SILC/EWCS data set, where variables from both sources can be analysed jointly[11]. This is done with the purpose of exploring associations beween household characterstics (only collected for EU-SILC) such as household income, financial burden of housing costs etc. and sustainable work outcome indicators. Furthermore, we explore if country group effects keep being significant even after controlling for these factors.Three indicators serve as dependent variables in the following multivariate ordinary least square (OLS) and logistic (binary outcomes) regressions:

1) Work engagement

[11] For further information please see Annex C

2) Self-perceived health
3) Negative health effect of work

Three models are applied:

- Model 1: Only household and socio-demographic characteristics are included as covariates

Individual characteristics	Gender
	Educational attainment
	Limited in daily activities due to health issues
	Self-perceived health status
Household characteristics	Household size
	Net total disposable annual household income
	Tenure (owner, tenant, social housing, etc.)
Financial aspects of the household	Total Housing cost
	Financial burden of the total housing cost
	Capacity to pay unexpected expenses Family allowance
Country	Blue
	Red
	Other

Model 2: Only work-specific characteristics are included

Earnings	Monthly income
Occupation	High skilled
	Medium skilled
	Medium-low skilled
	Low skilled
Supervisor	Yes/no
Working hours	Categories of working hours
	Financial burden of the total housing cost
	Capacity to pay unexpected expenses Family allowance
Job quality indices	Physical environment
	Work intensity
	Skills and discretion
	Working time quality

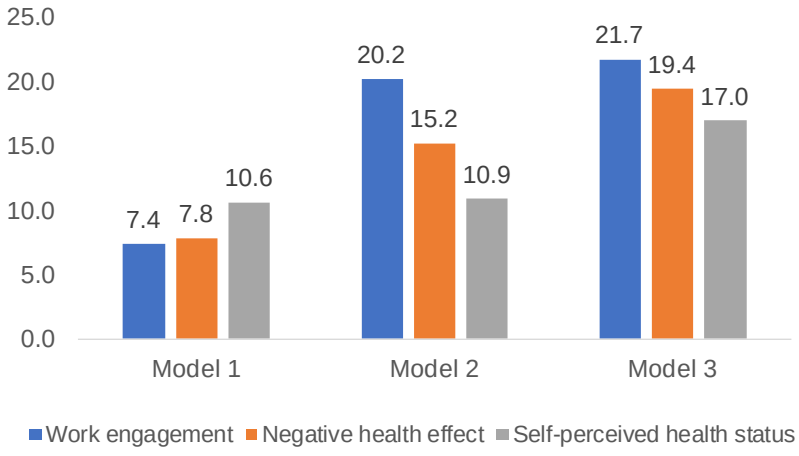
	Career prospects
	Fair pay
Country	Blue
	Red
	Other

- Model 3: Combination of Models 1 and 2

Results

Figure 29 illustrates how much of the variance is explained for each dependent variable by each of the Models. Model 1, which controlls for individual and household characteristics, explains between 7 and 8% of both work engagement and negative health effects of work but over 10% of self-perceived health status. Model 2, controlling for work characteristics only, explains 20% of work engagement, 15% of negative health effects and 11% of the self-perceived health status. Model 3, combining the first two models, only explains slightly more variance of work engagement than Model 2 (22%) but substantially increases the variance explained of the health-related variables. The first conclusion we can draw on these findings is that for both work engagement and negative health effects of work, work-related aspects matter more than household factors, while both factors are equally important for the self-perceived health status. However, both household- and job-related factors together can explain more variance of work engagement and negative health effects than of self-perceived health.

Figure 29: Explained variance per Model by SW outcome variables, (%)



Source: Matched data set EU-SILC / EWCS

When running the models by gender, we find differences in the variance explained. Model 3 explains 19% of the variance of self-perceived health of women, but only 15% of men. For negative health effects, the differences are less pronounced, but still more variance is explained for women. There are no differences as regards work engagement. The results reported in the following sections refer to Model 3 (overall Model – see Annex B).

Individual and household effects

Household size increases the likelihood of reporting a negative effect of work on health but at the same time has a positive effect on self-perceived health status. **Women** are more likely to report a negative health effect and are less likely to rate their health as very good or good compared to men. The latter finding is however only significant in *red* and *other* countries, not in the blue group. Higher formal **educational attainments** are positively associated with good self-perceived health but also increase the likelihood of perceiving a negative health effect of work. There is no significant association between educational attainments and work engagement.

Health-related covariates are unsurprisingly associated with health-related dependent variables. Workers who are **limited in daily activities** due to health problems are more likely to also report negative health effects of work and poorer self-rated health statuses. There is however only a weak negative effect on work engagement. **Self-perceived health** (which is also a covariate in the estimations of work engagement and negative health effects) is however strongly related to work engagement. Workers who rate their health as good or very good increase their work engagement score on average by 4 points and are less likely to report a negative health effect of their work.

As regards the **financial resources** of households, we found that workers in lower quintiles of total net disposable household income are less likely to report very good or good health as compared to the middle or higher quintiles (however, only significant in *red* countries, not in the blue group). Workers living in households of the fourth and highest quintile are on the other hand, less likely to report negative health effects of work compared to the lower income groups (*again, only significant in the red country group*). Work engagement, curiously, is significantly lower (after controlling other covariates) for workers in households of the lowest and highest household income quintiles. The amount of family allowance received decreases the negative effects of work on health, while total housing costs are positively linked with both self-perceived health and work engagement.

Work-related effects

The work-related aspects, as was mentioned above, include monthly earnings, occupations, job quality aspects and working hours. Workers in higher **wage or income categories** are more likely to report negative health effects of work as compared to the lowest income group. It is however the other way around as regards self-perceived health with workers in higher income groups being significantly more likely to rate their health-status as very good or good. There are no significant associations between monthly earnings and work engagement.

Elementary occupations but also the group of technicians, clerks and service and sales agents are less likely to report negative health effects of work compared to managers and professionals. While elementary occupations have significantly poorer self-perceived health and lower average work engagement scores, technicians are more likely to have a very good or good health status than managers and professionals but also report lower engagement scores. Being a supervisor, increases engagement levels on average by 1.2 points, though the effect is only significant in the blue country group.

Perceived negative health consequences of work was also used as covariate in the regressions estimating self-perceived health and work engagement and shows strong effects on both variables.

Workers who report negative impacts of work on health on average score 4 points lower in work engagement than the reference group and are less likely to rate their health as very good or good.

A **higher number of working hours** increases the likelihood of reporting **negative health effects** of work. However, only 46 weekly hours or more are impacting negatively on the self-perceived health status, while it is 31 hours or more that are negatively associated with work engagement compared to workers with less than 16 working hours. The working time quality JQ index is, on the other hand, significantly related to both to a reduced likelihood of negative health effects but also to a lower probability of very good or good health status. A higher score in skills and discretion, increases both work engagement but also negative effects on health. The latter is also true for work intensity: the higher the greater the likelihood of a negative health effect of work and the lower the work engagement.

Both variables, **fair pay and career prospects** are significantly **associated with all three variables as expected**. Workers who agree to the statement that they are appropriately paid and workers who agree that their jobs offer good career prospects on average have higher work engagement, better self-perceived health and are less likely to report negative health effects of their jobs. The significant effect also holds for workers who neither agree nor disagree to those statements compared to their fellow workers who do agree.

Country groups

Even after controlling for individual, household and work characteristics, the negative correlation of *red* countries with all three sustainable work outcome variables stays highly significant. The average in *red countries* of negative health effects of work is 6.3%-points higher than in *blue* countries. The proportion in *other* countries (grey, yellow, pink) is still 5%-points above the blue group. *Red countries* report average proportions of workers with very good or good health that are 5%-points below the blue country proportions after controlling for other confounding factors and score- on average and after controlling for other factors - 2-points lower in work engagement than the *blue country group*.

Summary and interpretation of results

The sub-chapter has explored the relationship of household- and work-related factors and three distinct sustainable work outcome indicators: self-perceived health, negative effects of work on health and work engagement. Household and individual characteristics alone, explain around 10% of the variance of self-perceived health but only between 7 to 8% of the variance of the other two variables. Work-related characteristics such as earnings, occupation or job quality contribute to explaining 20% of the variance of work engagement and 15% of negative health effects but only 10% of self-perceived health. It can hence be concluded that the household context plays a role for health-related outcomes but is less relevant for work engagement. The variance explained is higher for women than for men when running the Models for both groups separately. Statistical significance of some covariates differs across country groups.

The results show that all three outcome variables capture different aspects of work. For instance, household size impacts positively on self-perceived health but also increases the likelihood of reporting negative health effects of work. Households with more dependent children arguably put pressure on those who have to provide financial resources which in turn might increase stress levels at and perceived health impairment of work. Likewise, it can be argued that work is stressful and makes it harder to meet one's desires or need to manage the family (e.g. by bringing home irritability). Workers in households with dependent children are, on the other hand, younger and are hence more likely to self-rate their health status as very good or good.

Higher levels of education show the same pattern with higher likelihood of negative health effects reported (probably due to more responsibility and longer working hours at the job) but better overall self-rated health. Previous research has shown that health awareness and healthier life styles is more widespread in groups with higher formal education. However, unskilled jobs carry the highest health-related risks (Eurofound 2019). This goes hand in hand with negative effects of low household income on self-perceived health. However, the perception of negative effects of work on health are lower in workers in the upper household income groups. Another finding that fits into this picture is that with increasing wage or income levels, also the likelihood of both reporting negative health effects and very good or good health increases. Elementary occupations report poorer self-perceived health than higher skilled occupations, but their likelihood of perceiving their work as damaging for their health is lower as is their work engagement. Higher scores in skills and discretions are associated with higher work engagement but also with a higher likelihood of interpreting work as health-damaging.

The only variables that are consistently associated with positive outcomes in all three variables are good physical environment, fair pay and positive career prospects.

Finally, the analyses carried out above provide some further though implicit evidence that regulations, policies and institutions matter: All three outcome indicators are positively associated with the *blue country group* with independent positive effects.

7. Conclusions and policy pointers

The concept of sustainable work acknowledges the need of welfare states to extend working lives and to adapt to new risks (in terms of social protection) by emphasising the necessity to keep a balance between policy measures at the macro-level, favourable work environments and workplace measures and improved job quality. A further essential element is the **life-course perspective** highlighting the need to focus on workers of all age groups. This makes sustainable work a complex policy area for which a **holistic approach is desirable**. A range of intervention areas was already listed in the Eurofound conceptual paper of 2015 (p.13): *to support individual development, individual transitions, services to match labour market demand and supply and improved social infrastructures.*

This working paper explored a couple of sustainable work outcome indicators which had been defined in the course of a feasibility study of how to operationalise the concept. On this basis, EU Member States plus Norway, Switzerland and Iceland were clustered into five broad (colour) groups combining outcome measures at both macro and micro levels. Macro-level indicators contained **senior employment, average duration of working life** and **effective retirement age**. **Work engagement** and **self-perceived health status** of all workers and those aged 55-64 were the indicators at micro-level. The blue country group comprises all Member States (plus Iceland, Norway and Switzerland) with a combination of favourable outcomes on both levels. The red group, to which it was further on contrasted, includes countries with comparably poor outcomes on both levels. The remaining three groups were not further explored and included *grey* countries (average results on both levels), *yellow* countries (low micro-level, good macro-level combinations) and *pink* countries (good micro-level / poor macro-level combination).

The Working Paper moved on with the exploration of socio-economic developments and welfare states practices in blue and red countries, investigated the work context, employment relations and company-level practices and finally scrutinised job quality and work-life balance in both clusters. The concluding in-depth chapter took a closer look at the individual and household context by applying multivariate-statistical models to three micro-level sustainable work outcome indicators: (i.) **self-perceived health,** (ii.) **negative effects of work on health** and (iii.) **work engagement**.

Overall, **three main conclusions** can be formulated. **First**, we were able to provide empirical evidence supporting some of the hypotheses stated in the conceptual framework (Figure 1): There are for instance obvious relationships between favourable socio-economic developments, well-functioning welfare-state institutions and overall positive sustainable work outcomes. Furthermore, correlations between inclusive workplace measures such as workplace social dialogue and employee involvement and SW outcomes were shown. Moreover, job quality tends to be better – on average – in blue countries. Blue countries score significantly higher in skills and discretion, working time quality and prospects. In addition, the analysis found a more favourable work-life-balance in blue countries compared to the red cluster and showed overall a **higher prevalence of *high-quality* jobs in blue** and of ***poor-quality* jobs in red countries**. The micro-analysis adds to this that three job quality dimensions are significantly associated with positive outcomes in all three micro-level

indicators scrutinised (self-perceived health, negative health effect of work, work engagement): the physical environment, career prospects and appropriate pay.

Second, we found that the cluster of countries with favourable sustainable work outcomes is more homogeneous than the red group countries. It includes all Nordic countries, Sweden, Finland and Norway, Denmark, the Netherland and Ireland who all share a similar institutional design. Switzerland and Ireland are the *liberal* outliers of this groups, but still have a comparable economic structure and as the others do well in terms of GDP and income. All blue countries are comparably small whereas the red group comprises huge countries such as France, Italy and Poland. However, the red group is populated by very different country types such as continental and Mediterranean countries and Eastern-European countries. Hence, it is not straightforward to derive best practices of the blue group that could easily be implemented in red group countries.

Third, for monitoring purposes indicator dashboards can be useful to keep track of developments across various aspects of sustainable work. The analysis has shown that various indicators capture different phenomena and distinct aspects of sustainable work. For instance, the statistical analysis highlighted that self-perceived health, negative effects of work on health and work engagement reflect different angles and display diverse statistical associations. Selections of specific indicators are normative choices as was mentioned in the introduction. The selection is furthermore based on statistical criteria such as data availability and data quality. While these aspects don't impose problems in themselves, it is essential to properly justify these choices and make them explicit. Synthetic measures of sustainable work such as those used in this Working Paper to cluster countries and to illustrate overall desirable outcomes are on the other hand very useful complements helping to highlight the holistic perspective.

Policies addressing sustainable work

Making work individually sustainable means from a policy point of view creating a fit between structural characteristics of a job (job quality) and the characteristics of an individual in relation to work (abilities, needs, health, skills, etc.) so that they can interact complementarily at the workplace. From a macro-economic point of view, policy makers need to react to developments with growing numbers of retirees straining public budgets and slowing economic growth. Interventions should take place at all levels: government level (legislation, regulation, public services, infrastructure, public funding), sectoral and company level (collective agreements, social dialogue) and individual level (LLL, new learning, upskilling, employability, etc.). In the following a few areas shall be highlighted (without being exhaustive), where all actors have a stake:

Following up on the OECD Council recommendation on Ageing and employment

In 2015, the OECD put forward an age-friendly agenda in three broad policy areas with the main objective to promote employment at an older age. These included (i) improving incentives to work at an older age, (ii.) encouraging employers to retain and hire older workers and (iii) improving employability of older workers by adopting a life-cycle approach. (OECD 2019). This is very much in line with the Eurofound sustainable work agenda . All areas are crucial for achieving better sustainable work outcomes and need to be addressed by policy makers at national and EU level.

Activation policies for young and old (life-course perspective)

While the share of the economically inactive population has substanially declined over the past 15 years (from 31.4 % in 2002 to 26.7 % in 2017 in the EU-28) , there is still a lot of potential to further integrate inactive people of all age groups into the labour market. A particular focus must be put on young people not in education, employment or training (NEETs) with the objective to prevent scarring effects for further career paths. Further enforcement of youth guarantees is needed at Member State levels. Customised active labour market policies are key to re-skill and up-skill people at risk of or in unemployment. Policy makers and social partners need to align forces to keep older workers employable and productive to prevent skill obsolescence. A strong focus should lie on closing the age gap in digital literacy.

Work-life balance policies

The reconciliation of work and private life or work and personal responsibilities is a crucial element in the sustainable work framework and is key for starting employment, remaining in or returning to work, work engagement and productivity at work (see Eurofound 2018). Work-life balance needs hence to be put at the core of employment policies at EU and national level: This includes family leave entitlements and flexible work arrangements for parents and carers as set out in the Proposal for a work-life balance directive (EC 2017).

Gender equality and gender mainstreaming

Though it was not the focal point of this working paper, we know from previous research that there substantial difference in sustainable work outcomes between men and women. Gender mainstreaming and a focus on gender equality is hence indispensible in designing sustainable work policies.

High involvement workplaces

Previous research has shown that involving workplaces and well-functioning workplace social dialogue are likely to produce more motivated, more engaged and more productive and healthier workers (e.g. Eiffe 2018, Eurofound 2016; 2017b, Kornelakis et al., 2018). Such evidence should encourage employers and social partners to implement inclusive measures in companies and to increase employees' voice and active partcipation in organisational decisions at the workplace.

Return-to-work schemes

Return-to-work schemes can help to faciliate the re-entry into the labour market after spells of long-term sick leave for instance of cancer survivors. Multidisciplinary interventions of physical training, psychological and vocational elements can improve return-to-work. Some authors suggest rehabilitation outpatient services in communities or reintegration teams at large workplaces and/or multinational corportations (de Boe et al., 2015). Important shifts in the policy making process are required to guarantee the provission of equitable and supportive legal frameworks for ill-workers. To this end, employment, health and social security systems have to cooperate in order to set up coherent return-to-work pathways (Kiasuwa et al., 2018).

Adressing job quality

The key message of the Eurofound Sustainable Work Framework is that job quality and working conditions are at the core of keeping people engaged and working longer at a better health. Past EU strategies and initatives (such as the Lisbon Strategy or Europe 2020) have incorporated the view that the conditions under which work is performed need to be looked at. The OECD has agreed in its job strategy that the quality of working environment will be closely mornitored. TheJoint Assessment Framework (JAF) of the European Commission tracks job quality as a *non-recommendation* semester objective and Eurostat provides information on quality of employment on its website[12]. The European Pillar of Social Rights stresses the importance of fair working conditions. However, this proclamations need to be further filled with substance at all levels. A coherent system of regularly monitoring working conditions with key indicators in each dimension could be the backbone of a future Europe 2030 strategy on Employment and Job Quality.

[12] https://ec.europa.eu/eurostat/web/labour-market/quality-of-employment/database

References

Bambra, C., Reibling, N. and McNamara, C.L., 2018. States of health: Welfare regimes, health and healthcare. In Routledge Handbook of the Welfare State (pp. 254-266). Routledge.

Davidsson, J.B., 2018. Dualising the Swedish model: insiders and outsiders and labour market policy reform in Sweden: an overview. Labour Market Policies in The Era of Pervasive Austerity, pp.169-195.

de Boer, A.G., Taskila, T.K., Tamminga, S.J., Feuerstein, M., Frings-Dresen, M.H. and Verbeek, J.H., 2015. Interventions to enhance return-to-work for cancer patients. Cochrane database of systematic reviews, (9).

Ebbinghaus and Hofäcker 2013

Eiffe, F., 2018. Sustainable work – The role of motivation for sustainable work. Eurofound Working Paper Series WPEF18010, Dublin: https://www.eurofound.europa.eu/sites/default/files/wpef18010.pdf

Esping-Andersen, G.,1990. The Three Worlds of Welfare Capitalism. Oxford, UK:Polity Press.

Eurofound, 2012. Trends in job quality in Europe, Publications Office of the European Union, Luxembourg

Eurofound, 2015. Sustainable work over the life course: Concept paper, Publications Office of the European Union, Luxembourg.

Eurofound, 2016. Win–win arrangements: Innovative measures through social dialogue at company level, Publications Office of the European Union, Luxembourg.

Eurofound, 2016b. Exploring the diversity of NEETs, Publications Office of the European Union, Luxembourg.

Eurofound, 2017. Sixth European Working Conditions Survey – Overview report (2017 update), Publications Office of the European Union, Luxembourg.

Eurofound, 2017b. Innovative changes in European companies: Evidence from the European Company Survey, Publications Office of the European Union, Luxembourg.

Eurofound, 2017c. Working conditions of workers of different ages: European Working Conditions Survey 2015. Publications Office of the European Union, Luxembourg.

Eurofound, 2018. Striking a balance: Reconciling work and life in the EU, Publication Office of the European Union, Luxembourg.

Eurofound, 2019. Working conditions and workers' health, Publications Office of the European Union, Luxembourg.

European Commission, 2017. Proposal for a directive of the European Parliament and of the Council on work-life balance for parents and carers and repealing Council Directive 2010/18/EU, COM(2017) 253 final, 2017/0085 (COD), Brussels.

Fleuren, B.P., 2019. Caught somewhere in time: Conceptualizing, measuring, and predicting sustainable employability (Doctoral dissertation, Maastricht University).

Green, A. and Livanos, I., 2017. Involuntary non-standard employment in Europe. European Urban and Regional Studies, 24(2), pp.175-192. Van Dam et al. 2017

Kiasuwa Mbengia, R., Tiraboschi, M., Bouland, C. and de Brouwer, C., 2018. How do social security schemes and labor market policies support the return-to-work of cancer survivors? A review article on challenges and opportunities in the European Union.

Kocakulah, M.C., Kelley, A.G., Mitchell, K.M. and Ruggieri, M.P., 2016. Absenteeism problems and costs: causes, effects and cures. International Business & Economics Research Journal (IBER), 15(3), pp.89-96.

Kornelakis, A., Veliziotis, M. and Voskeritsian, H., 2018. Improving productivity: the case for employee voice and inclusive workplace practices. ETUI Research Paper-Policy Brief, 1.

Kuitto, K., 2016. Post-communist welfare states in european context: Patterns of welfare policies in Central and Eastern Europe. Edward Elgar Publishing.

Lain, D., van der Horst, M. and Vickerstaff, S., 2020. Extended Working Lives: Feasible and Desirable for All?. In Current and Emerging Trends in Aging and Work (pp. 101-119). Springer, Cham

OECD, 2006. Live Longer, Work Longer. Ageing and Employment Policies. OECD, Paris, France.

OECD, 2015. OECD skills outlook 2015: youth, skills and employability. OECD, Paris, France.

OECD, 2019. Working Better with Age. Ageing and employment policies, OECD Publsihing, Paris, France. https://doi.org/10.1787/c4d4f66a-en.

Schaufeli, W.B. and Bakker, A.B., 2003. Utrecht work engagement scale: Preliminary manual. Occupational Health Psychology Unit, Utrecht University, Utrecht, 26.

Schmillen, A. and Umkehrer, M., 2017. The scars of youth: Effects of early-career unemployment on future unemployment experience. International Labour Review, 156(3-4), pp.465-494.

De Tavernier, W., Naegele, L., Holman, D. and Hess, M., 2019. Delaying Retirement. Kuleuven. https://lirias.kuleuven.be/2830939?limo=0

Virtanen, M, Ervasti, J, Ropponen, A., 2018. Working conditions – Measuring sustainable work over the life course – feasibility study, Eurofound Working Paper Series WPEF18063, Dublin: https://www.eurofound.europa.eu/sites/default/files/wpef18063.pdf

Annex 1

Fig. A.1. Macro-level standardised indicators

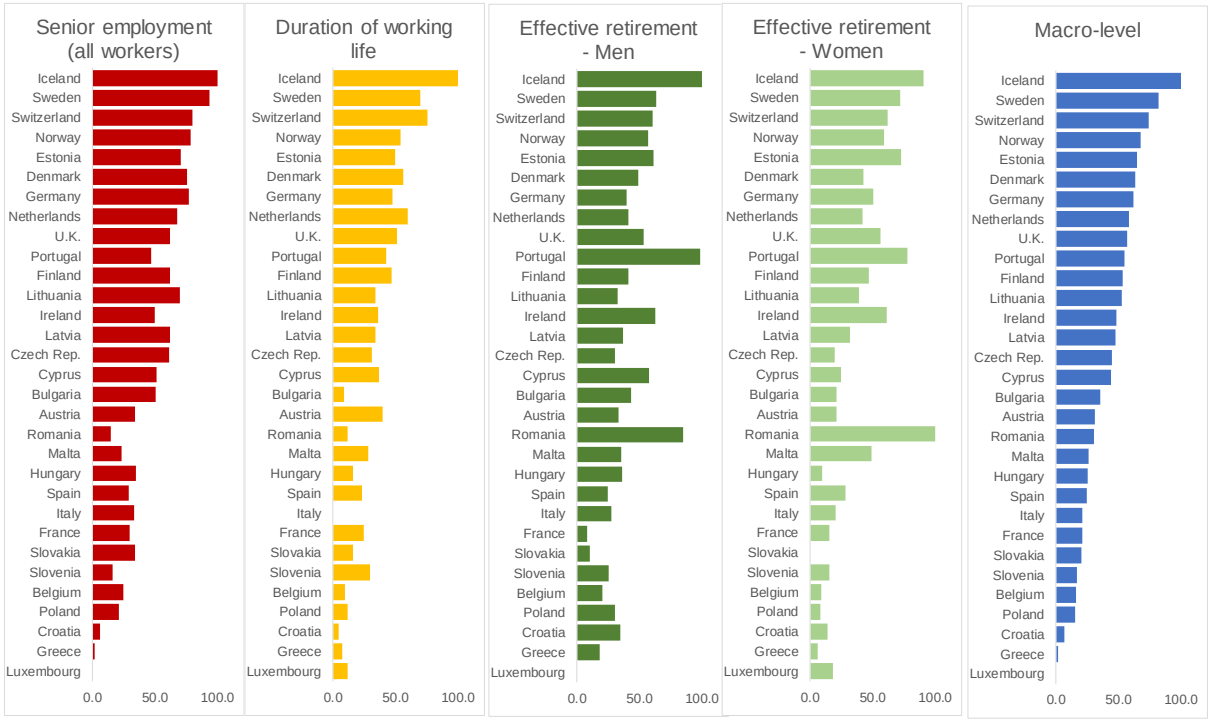


Fig. A.2 Micro-level standardised indicators

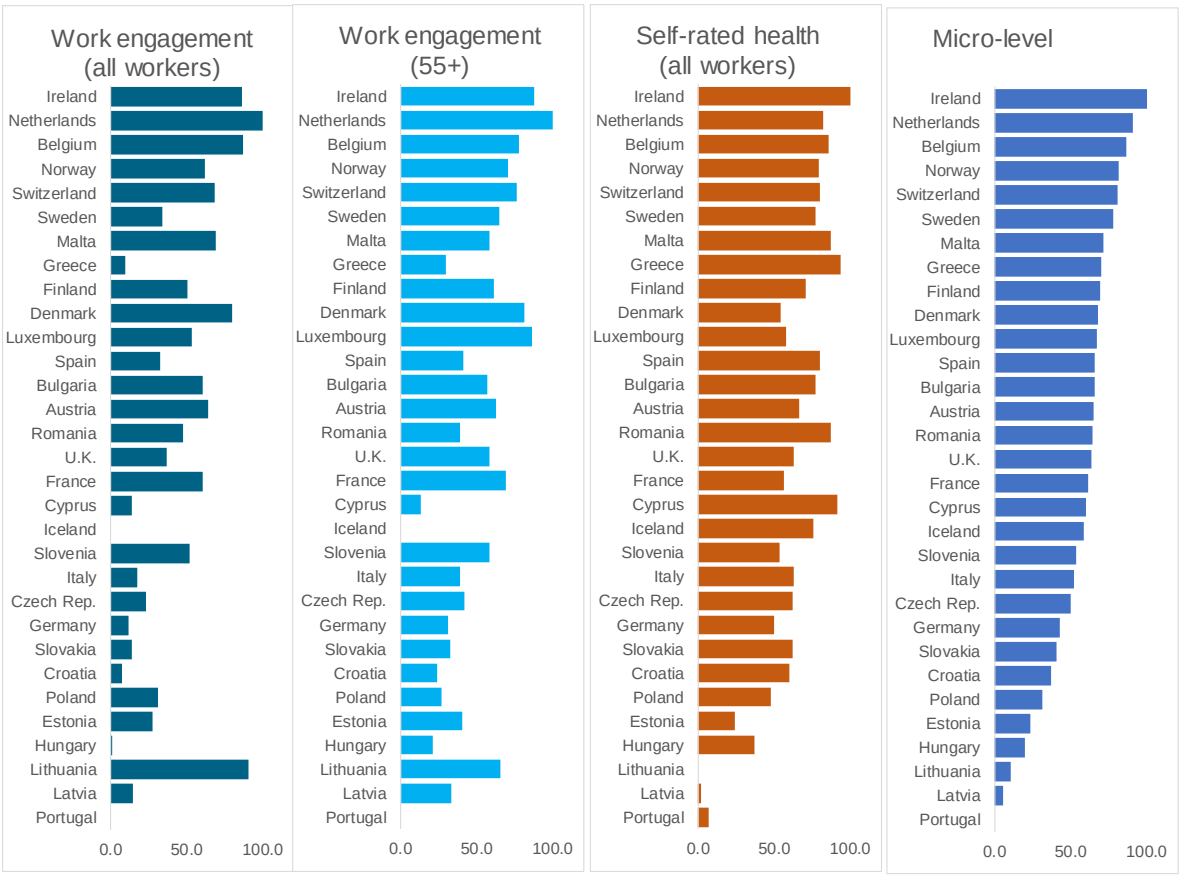
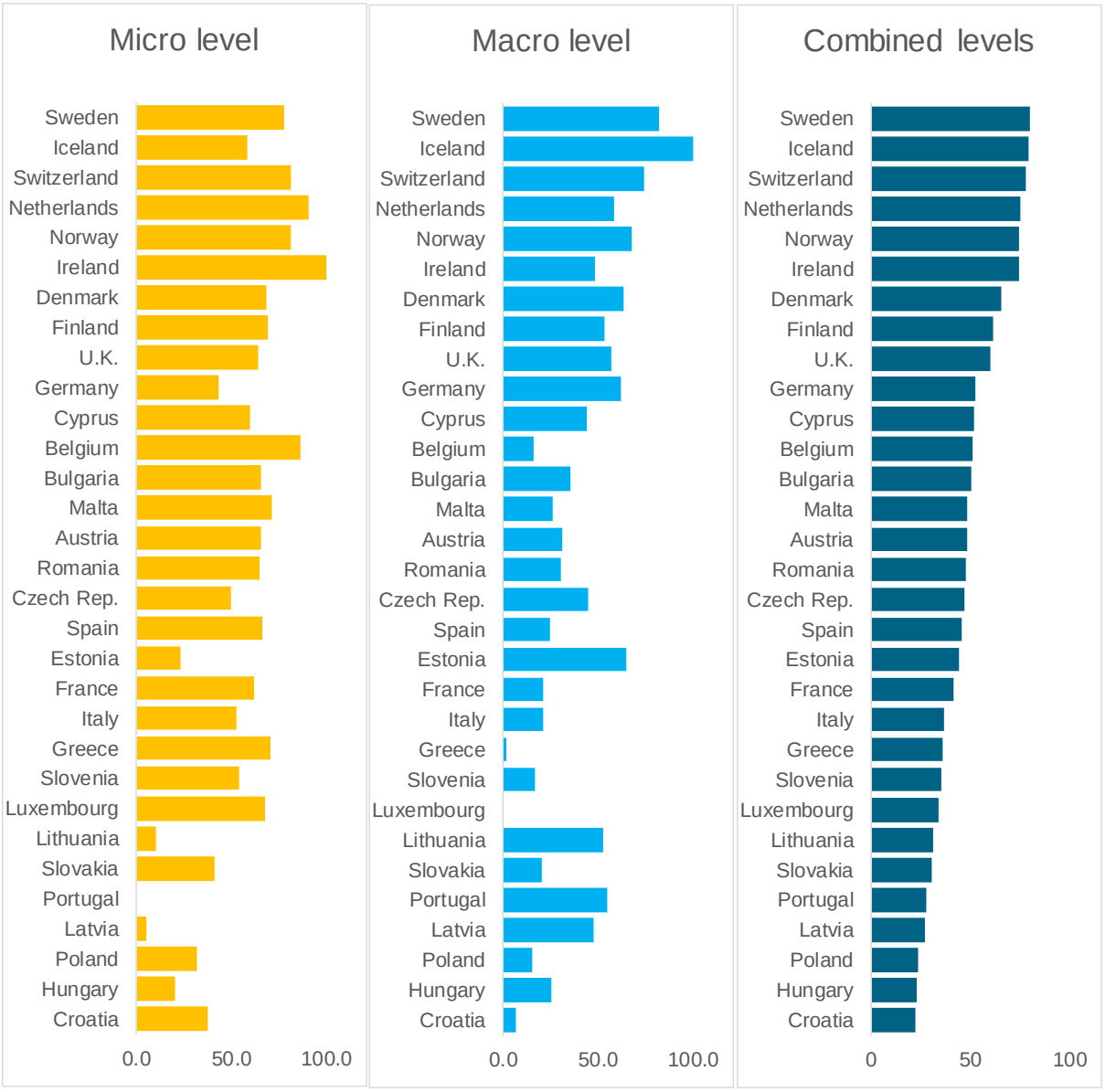


Fig. A.3 Combined Micro-Macro Rankings



Annex 2

Table B.1. Regression Results (Model 3)

	Negative Health	Self-perceived health	Work engagement
	Odds ratio	**Odds ratio**	**Reg. coeff**
Individual and household characteristics			
Household size	0.0748***	0.0826***	0.178**
	(0.00999)	(0.0106)	(0.0766)
Women (*Ref. Men*)	0.0724***	-0.166***	0.0429
	(0.0236)	(0.0251)	(0.179)
Educational attainment (Ref. *primary level*)			
Secondary level	0.0833***	0.215***	0.388
	(0.0294)	(0.0291)	(0.253)
Tertiary level	0.270***	0.400***	-0.158
	(0.0365)	(0.0383)	(0.297)
Net disposable equivalised household income (Ref. *third quintile*)			
Lowest quintile	-0.0366	-0.337***	-0.742***
	(0.0369)	(0.0383)	(0.281)
Second quintile	-0.00770	-0.138***	-0.345
	(0.0341)	(0.0361)	(0.258)
Fourth quintile	-0.144***	0.00107	0.315
	(0.0357)	(0.0386)	(0.264)
Highest quintile	-0.157***	-0.00883	-0.770***
	(0.0379)	(0.0414)	(0.281)
Family allowance	-1.38e-05***	1.19e-06	1.48e-05
	(4.78e-06)	(5.14e-06)	(3.57e-05)
Tenure (Ref. Rightout owner)			
Owner paying mortgage	-0.0178	-0.0458	0.0461
	(0.0298)	(0.0323)	(0.218)
Tenant or subtenant paying rent at market rate	-0.0927**	-0.0445	-0.373
	(0.0379)	(0.0418)	(0.267)
Accommodation is rented at a reduced rate	-0.135***	0.0553	-0.837**
	(0.0521)	(0.0545)	(0.417)
Accommodation is provided free	0.173***	0.154***	0.355
	(0.0508)	(0.0539)	(0.381)
Housing cost	7.07e-05*	0.000174***	0.00108***
	(3.77e-05)	(5.20e-05)	(0.000242)
Can't pay unexpedted expenses	0.0297	0.0373	0.0599
	(0.0258)	(0.0269)	(0.200)
Financial burden of household cost (Ref. no burden at all)			
A slight burden	-0.0235	-0.0936***	0.0171
	(0.0254)	(0.0267)	(0.196)
Not a burden at all	0.00301	-0.0873**	0.298
	(0.0327)	(0.0351)	(0.251)
Daily limitations due to health (Ref. limited)			
Health somewhat limited	-0.0121	0.794***	0.152
	(0.124)	(0.149)	(0.833)
Health not limited at all	-0.407***	1.805***	1.763**
	(0.124)	(0.148)	(0.837)
Very good self-perceived health (*Ref: all other w*)	-1.065***		4.303***
	(0.0245)		(0.227)

Table B.1. Continuation (Model 3)

	Negative Health	Self-perceived health	Work engagement
Job characteristics			
Monthly Earnings (Ref: low)			
Medium-low	0.165***	0.233***	0.0381
	(0.0353)	(0.0355)	(0.269)
Medium-high	0.272***	0.297***	0.546*
	(0.0390)	(0.0406)	(0.289)
High	0.399***	0.282***	-0.448
	(0.0441)	(0.0468)	(0.323)
Occupation (Ref: Managers, professionals)			
Technicians, clerks, service and sales	-0.180***	0.0723**	-0.542**
	(0.0304)	(0.0334)	(0.214)
Craft, trades, machine operators	-0.00141	-0.0180	1.734***
	(0.0404)	(0.0438)	(0.307)
Elementary occupations	-0.206***	-0.159***	-1.436***
	(0.0464)	(0.0479)	(0.375)
I am not a supervisor	-0.0225	0.0746**	-1.244***
	(0.0303)	(0.0331)	(0.221)
Working time (Ref: 1-15 hrs)			
16-30	0.325***	0.104*	-0.485
	(0.0603)	(0.0553)	(0.424)
31-45	0.443***	0.0421	-1.572***
	(0.0566)	(0.0516)	(0.396)
46-60	-0.0823	-0.193**	-1.445**
	(0.0860)	(0.0830)	(0.614)
61-75	0.169	-0.100	-2.000*
	(0.124)	(0.124)	(1.194)
76-200	-0.0201	-0.296*	-1.325
	(0.154)	(0.155)	(1.452)
Negative effect of work on health		-1.063***	-3.997***
		(0.0247)	(0.200)
Job quality indices			
Physical environment	-0.0341***	0.00460***	0.0606***
	(0.000749)	(0.000756)	(0.00615)
Work intensity	0.00869***	-0.000141	-0.0910***
	(0.000455)	(0.000480)	(0.00365)
Skills and discretion	0.00465***	0.000800*	0.0749***
	(0.000439)	(0.000450)	(0.00352)
Working time quality	-0.0143***	-0.00425***	0.0140*
	(0.00106)	(0.00109)	(0.00802)
Neither good nor bad prospects *(Ref good prospects)*	0.174***	-0.285***	-2.393***
	(0.0303)	(0.0328)	(0.201)
Poor career prospects (*Ref good prospects*)	0.502***	-0.554***	-4.212***
	(0.0273)	(0.0293)	(0.204)
Pay neither fair nor unfair (*Ref fair pay)*	0.177***	-0.181***	-3.628***
	(0.0289)	(0.0303)	(0.213)
Unfair pay (*Ref fair pay)*	0.642***	-0.320***	-4.260***
	(0.0260)	(0.0278)	(0.201)

Table B.1. Continuation (Model 3)

	Negative Health	Self-perceived health	Work engagement
	Odds ratio	**Odds ratio**	**Reg. coeff**
Country groups (Ref. blue)			
Red country group	0.386***	-0.397***	-2.183***
	(0.0392)	(0.0427)	(0.296)
Grey, pink, yellow countries	0.315***	-0.295***	-1.324***
	(0.0358)	(0.0399)	(0.254)
Constant	2.393***	-1.489***	65.31***
	(0.190)	(0.211)	(1.383)
			29,479
R2 / Pseudo-R2	19.4	17.0	21.7
Observations	58,605	58,605	0.217

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1