

Industrial relations
**Minimum wages in 2019:
Annual review**



Minimum wages in 2019: Annual review



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Country codes: EU28 + Norway

AT	Austria	FI	Finland	NL	Netherlands
BE	Belgium	FR	France	PL	Poland
BG	Bulgaria	HR	Croatia	PT	Portugal
CY	Cyprus	HU	Hungary	RO	Romania
CZ	Czechia	IE	Ireland	SE	Sweden
DE	Germany	IT	Italy	SI	Slovenia
DK	Denmark	LT	Lithuania	SK	Slovakia
EE	Estonia	LU	Luxembourg	UK	United Kingdom
EL	Greece	LV	Latvia		
ES	Spain	MT	Malta	NO	Norway

Introduction

In most EU Member States, reviews of the statutory minimum wage rates spark a great deal of public interest, reaching far beyond those actors who are most directly involved in the process (e.g. governments, social partners and experts). The debates extend to the following: political parties; non-governmental organisations (NGOs); trade unions or employer organisations not directly involved in national-level discussions; employers in labour intensive, mainly service-based, industries; and individual workers and citizens.

This is not surprising, as statutory minimum wage rates may affect a relatively large proportion of the national workforce directly. Harmonised figures from Eurofound show that the median proportion of those earning the statutory minimum wage or less stood at an average of 7.2% in the EU in 2016, with considerable variation between countries. While less than 5% of the workforce reportedly receive the minimum wage or less in Czechia, Malta, Belgium, Croatia, Greece, Slovenia and Slovakia, the figure was more than 10% in Portugal, Germany, Luxembourg, the United Kingdom and Poland.¹

However, revisions of the rates do not just affect workers on the statutory minimum wage. Workers on lower levels of pay may experience changes via so-called ‘ripple effects’ or ‘spill-overs’, such as when pay rates within collective agreements are adapted in response to a rate increase. In some countries, various social benefits like parental allowances or in-work support may also be affected, making the impact of such revisions even more widespread.

This report presents the latest developments in terms of minimum wages and the main debates around the setting of the new rates for 2019 and beyond in the EU

and Norway. It complements this information with new comparative findings on workers on, around and below the minimum wage level, together with recent national policy-related research.

Chapter 1 presents the statutory rates applicable in 2019 for the 22 Member States that have such a rate in place. For those countries that do not have a statutory minimum wage, it also includes information on very low minimum wage ranges within selected collective agreements. In addition, the chapter presents comparative data on the net value (or take-home pay) for single adults earning the minimum wage.

Chapter 2 focuses on how the 2019 rates were determined and what part the various actors played. It highlights discussions about changing the rates in the near future, and potentially the mechanisms for setting them, particularly in Italy and Cyprus. In the context of many ongoing debates around how minimum wages can be set in a ‘transparent and predictable’ way in the EU, this chapter also reflects on the types of rule-based approaches or indicators that the actors currently adhere to, and maps targets for minimum wages in relation to other wage levels.

Chapter 3 presents new data on those earning the statutory minimum wage or less and complements this with a summary of the legal sub-minimum rates for specific groups of workers, as well as evidence from national inspection bodies or surveys on the extent of non-compliance. Data by gender on who is covered by the minimum wage, as well as an overview of 2018 research in the area of minimum wages, are examined.

Chapter 4 summarises the findings of this report and draws a number of conclusions.

¹ These figures were compiled based on data from the European Union Statistics on Income and Living Conditions (EU-SILC) and need to be interpreted with some methodological caveats in mind. An explanation of the methodology is given in Box 5 (p. 25). More data may be found in Chapter 3 (p. 23).

Key messages

Minimum wages in the EU, what has changed?

- Minimum wage workers in almost all EU countries saw an increase in their pay in 2019.
- The proportion of those earning the statutory minimum wage or less stood at 7.2% in the median EU Member State in 2016, with considerable variation between countries.
- Some of the highest increases in nominal terms were recorded in Spain (22%) and Greece (10%).
- The increase in the minimum wage in Greece was the first in seven years and, for the first time, the government has implemented a centralised mechanism to set the new rates.
- Italy and Cyprus are currently considering introducing a statutory minimum wage, with much political debate around the issue on a national level.
- Transparency and predictability is an ongoing issue: just seven Member States specify relative targets for minimum wages and how they should grow and only four Member States have made these upwards targets.
- Sudden and high increases of minimum wages may be popular – but can pose risks to employment and compliance: for this reason, involving the social partners in the process of setting up mechanisms and adapting minimum wage rates is important.
- Setting a minimum wage rate and understanding possible implications of changes to the rate is a complex process. It is vital to base these decisions on evidence and best practice.
- The report shows that women are overrepresented among minimum wage earners in nearly all Member States, irrespective of how minimum wage earners are defined.
- An important question for policymakers is whether introducing or increasing minimum wage rates can help to narrow the gender pay gap, as changes to minimum wages can have broader implications for lower-wage earners that could mitigate the desired impact.

1 Developments in minimum wage rates

Statutory minimum wage rates for 2019

The nominal rates of statutory minimum wages were increased in the majority of Member States in January 2019, compared with the same reference month in 2018. The monthly rates now range from €286 in Bulgaria (BGN 560) to €2,071 in Luxembourg for a full-time working employee. Eight countries have monthly minimum wages of above €1,000, while four countries have a rate of below €500 (see Table 1). In nominal terms, a worker in Luxembourg receives 7.2 times the minimum wage of a worker in Bulgaria, a slight improvement on the previous year when the multiplier of Luxembourg compared with Bulgaria was 7.7.

The majority of countries set out minimum wages at a monthly rate for full-time workers. Table 1 also shows hourly rates, the calculations based on the average number of usual weekly hours of work, and taking into account that wages in some countries are paid 14 times per year.

The largest nominal increases in the minimum wage rates were in Spain (22%), Greece (11%, as of February 2019) and Bulgaria (10%). In Greece, this represents the first increase since 2012. For workers in Spain this means an increase of €1.11 per hour, while workers in Greece and Bulgaria receive €0.42 and €0.15 more per hour, respectively. The increase in the minimum wage rate was also substantial in Lithuania (39%), but this was largely due to a shift in taxation and so workers in actual terms received an increase of just 7.5%.

Latvia was the only Member State not to change its statutory minimum wage rate for 2019, as the existing rate (€430) is based on a three-year agreement made in 2017. Most other countries with the lowest monthly

rates (around €500 or less in 2018) saw substantial nominal increases of 7–9% (Croatia, Czechia, Estonia, Romania, Slovakia, Hungary and Poland). In Hungary and Poland, the changes were around 4% when converted into euro, which is mainly due to devaluations of the Hungarian forint and Polish złoty.

Countries with medium minimum wage rates – Portugal, Malta, Spain, Greece, Slovenia – all increased those rates to €700–1,050 (when converted into 12 payments per year). The percentage increases were lowest in Malta (1.9%), Portugal (3.5%) and Slovenia (5.2%).

Countries with the highest minimum wage rates tended to have more modest increases, ranging from around 2% in France, Belgium, Netherlands and Ireland and a similar magnitude in Germany (4% over the past two years)² – to 3.6% in Luxembourg.

As consumer prices tend to increase, the amount of goods and services that money can buy tend to decrease accordingly. It is therefore important to analyse minimum wage increases not only in nominal terms, but also in real terms, as recorded in the change in each country's Harmonised Index of Consumer Prices (HICP). Inflation in the EU 28 countries was at an average of 1.5% in January 2019 compared to the previous year, ranging from 0.5% in Greece to 3.2% in Romania (Eurostat, [prc_hicp]).

The modest increase of the Belgian minimum wage, for example, is almost completely offset by consumer price developments, leading to an increase in real terms of only 0.16%. Similarly, the absence of a nominal increase in the minimum wage in Latvia led to an overall real decrease of 2.9% in the country, leaving workers on the minimum wage worse off than a year previously.

² In Germany to date, the statutory minimum wage was increased every second year, so the 4% also relates to the change between 1 January 2017 and 1 January 2019.

Table 1: Monthly and hourly minimum wages in 2018 and 2019 (in euro)

Country	2018 (monthly rate)	2019 (monthly rate)	Nominal change*	Real change**	2018 (hourly rate)	2019 (hourly rate)	2018 (monthly rate in national currency)	2019 (monthly rate in national currency)
Belgium	€1,562.59	€1,593.76	+1.99%	+0.16%	€9.22	€9.41	-	-
Bulgaria	€260.76	€286.33	+9.81%	+7.39%	€1.47	€1.62	BGN 510	BGN 560
Croatia	€462.10	€505.90	+9.48%	+8.42%	€2.64	€2.89	HRK 3,438	HRK 3,750
Czechia	€477.78	€518.97	+8.62%	+7.24%	€2.87	€3.10	CZK 12,200	CZK 13,350
Estonia	€500.00	€540.00	+8.00%	+4.98%	€2.86	€3.09	-	-
France	€1,498.47	€1,521.22	+1.52%	+0.10%	€9.88	€10.03	-	-
Germany	€1,497.79	€1,557.09	+3.96%	+2.19%	€8.84	€9.19	-	-
Greece***	€683.76	€758.33	+10.91%	+10.35%	€3.85	€4.27	-	-
Hungary	€444.69	€464.20	+4.39%	+4.95%	€2.53	€2.65	HUF 138,000	HUF 149,000
Ireland	€1,613.95	€1,656.20	+2.62%	+1.80%	€9.55	€9.80	-	-
Latvia	€430.00	€430.00	0.00%	-2.90%	€2.46	€2.46	-	-
Lithuania	€400.00	€555.00	+38.75%	+36.53%	€2.45	€3.39	-	-
Luxembourg	€1,998.59	€2,071.10	+3.63%	+1.97%	€11.55	€11.97	-	-
Malta	€747.54	€761.97	+1.93%	+0.91%	€4.25	€4.33	-	-
Netherlands	€1,578.00	€1,615.80	+2.40%	+0.35%	€9.11	€9.33	-	-
Poland	€502.75	€523.09	+4.05%	+6.39%	€2.84	€2.95	PLN 2,100	PLN 2,250
Portugal	€676.67	€700.00	+3.45%	+2.83%	€3.81	€3.94	-	-
Romania	€407.86	€446.02	+9.36%	+5.97%	€2.32	€2.54	RON 1,900	RON 2,080
Slovakia	€480.00	€520.00	+8.33%	+5.95%	€2.76	€2.99	-	-
Slovenia	€842.79	€886.63	+5.20%	+3.94%	€4.76	€5.00	-	-
Spain	€858.55	€1,050.00	+22.30%	+21.08%	€4.98	€6.09	-	-
United Kingdom****	€1,638.36	€1,746.73	+4.85%	+2.38%	€8.95	€9.54	GBP 7.83 (per hour)	GBP 8.21 (per hour)

Notes: Countries listed are the 22 Member States having a statutory minimum wage. *Nominal change in euro terms. **Real change in national currency terms based on HICP annual rate of change in the respective country for January 2019 compared to January 2018, as provided by Eurostat, dataset [prc_hicp_manr]. ***Rates in Greece increased to €758 per month in February 2019 (14 payments of €650 per year).

****Rates in the United Kingdom reflect the minimum wage changes of April 2018 and April 2019.

Source: Authors' calculations based on national regulations, as reported by the Network of Eurofound Correspondents.

Box 1: Methodological note to data regarding minimum wages (Table 1)

Eurofound's dataset includes harmonised figures on monthly wages in euro applicable to full-time working employees at the full adult rate, as well as conversions to hourly minimum wages. The conversion of local currencies into euro is carried out by applying the monthly exchange rate at the end of the previous month, as provided by the European Central Bank (see dataset EXR.M.*.EUR.SP00.E). For countries where the national minimum wage is not fixed at a monthly rate, the hourly or weekly rate is converted into a monthly rate according to conversion factors supplied by Eurostat. When the minimum wage is paid for more than 12 months per year, data have been adjusted to take these payments into account (e.g. monthly rate x 14 months/12).

Countries that stipulate hourly minimum wage rates by law, or where the government publishes official hourly figures, are Czechia, France, Germany, Ireland, Lithuania, Luxembourg, the Netherlands, Slovakia and the United Kingdom. For all other countries, conversion into hourly wages is based on the average number of usual weekly hours of work in a main job, by sex, professional status, full-time/part-time and economic activity – as provided by Eurostat, dataset [lfsa_ewhun2]. For 2018 and 2019, figures from 2017 are applied due to the unavailability of more recent data.

Box 2: Occupational minimum wages in Cyprus

Cyprus does not have a national statutory minimum wage policy. However, according to Chapter 183 of the Minimum Wage Law, the Council of Ministers may issue decrees to fix minimum wage rates for any occupation in which workers receive unreasonably low salaries. Currently, a minimum wage applies to shop sales assistants, general office clerks, childcare assistants in nurseries, childcare assistants in kindergartens, teachers' aides, healthcare assistants, cleaners and patient caretakers in private clinics and hospitals. For these groups, a minimum monthly wage of €870 is defined, increased to €924 after the completion of six months of service. Minimum wage rates also apply for private security guards (hourly rate of €4.90, increased to €5.20 after six months), as well as for cleaners of offices and corporate premises (fixed at €4.55 and €4.84 respectively).

The levels and occupations covered are subject to a consultation with the social partners within the Labour Advisory Body and are normally reviewed on an annual basis. Due to the difficult state of the economy and the Memorandum of Understanding agreed in 2013 between the Cyprus government and its creditors,³ minimum wages from 2013 to 2016 remained at the levels of 2012. However, in 2018, national debates about reforming the current system and introducing a statutory minimum wage advanced the topic (see 'Statutory versus collectively agreed minima' on page 19 for more information).

Comparing minimum wage over time: Developments in real terms

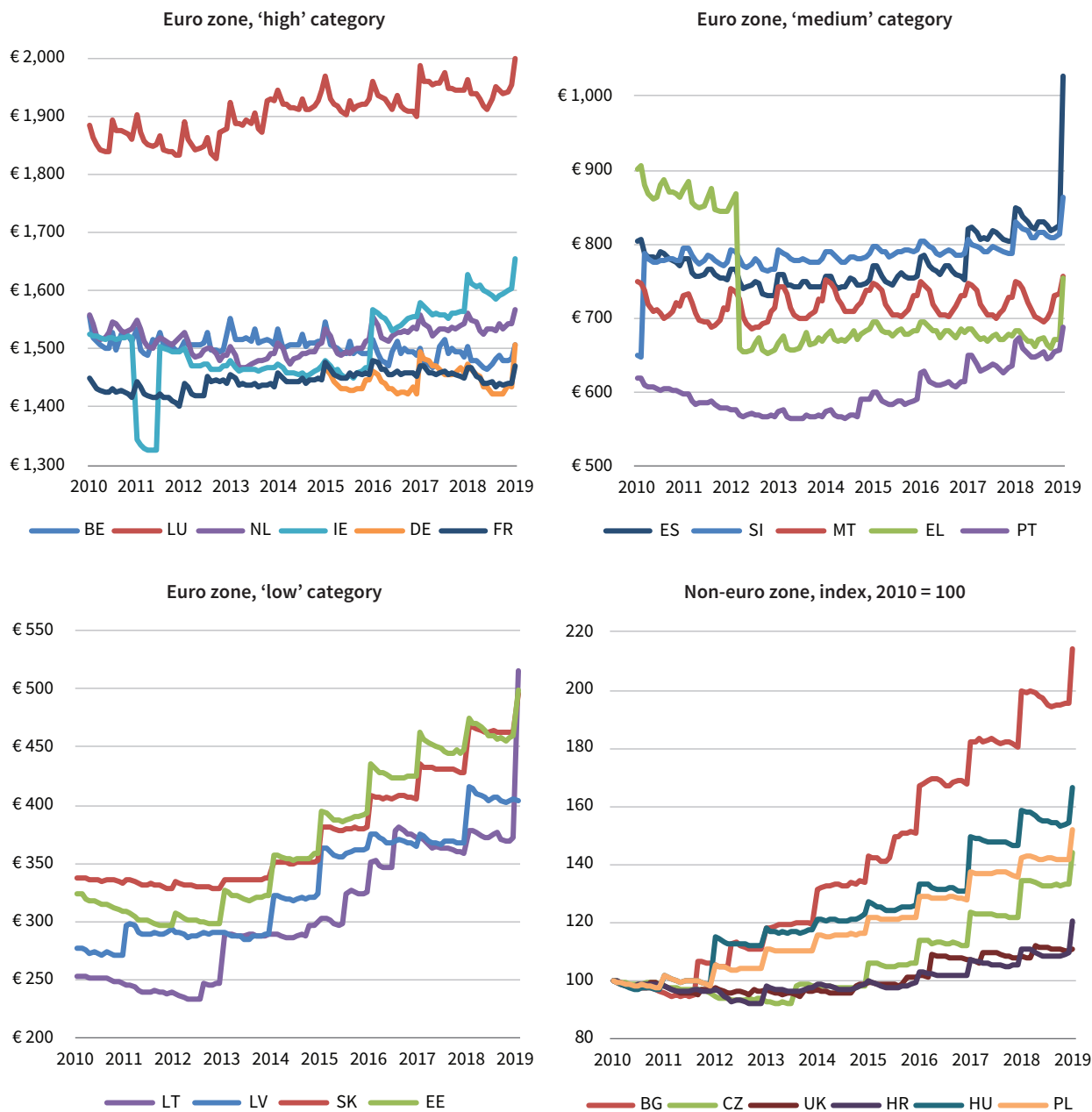
When analysing minimum wage developments over time and across countries, nominal figures can be misleading, because of fluctuations in exchange rates and price developments in the local economy. As noted earlier, price levels tend to increase over time, a phenomenon known as inflation. As price levels rise, the amount of goods and services that a given amount of

money can buy decreases. If a country does not implement a rise in the minimum wage that at least offsets the inflation from the previous year, this can mean that the purchasing power available to a worker on the minimum wage actually decreases, leaving them worse off.

To compare minimum wage developments over time, Eurofound calculated the real minimum wage at 2015 price levels based on Eurostat's Harmonised Indices of Consumer Prices (HICP).

³ This condition foresees that the minimum wage policy shall be in line with economic and labour market developments, and any revision shall be subject to consultations between the signatory parties.

Figure 1: Minimum wage developments in real terms at 2015 price levels.



Source: Authors' calculations based on national regulations, as reported by the Network of Eurofound Correspondents.

Figure 1 presents the development of gross minimum wages in real terms, using price levels of 2015. The graph divides countries in the euro zone into high, medium and low categories (for visualisation purposes only). Since inflation has an impact on exchange rates, real changes in non-euro zone countries are presented at levels starting in the base year 2010, instead of actual figures.

As both Figure 1 and Table 2 show, those countries that started with a low minimum wage gained the most between 2010 and 2019. Romania, Bulgaria and Lithuania, for example, saw their minimum wages more than double in real terms – at 180%, 114% and 104%, respectively. Other central and eastern European countries also gained substantially: in Hungary, Estonia,

Poland, Slovakia, Latvia and Czechia, the minimum wage increased in real terms by more than 40%.

Countries where the minimum wage was already high saw only at best modest real increases between 2010 and 2019, averaging 3%. Luxembourg stands out with a real increase of 6%.

Workers in Greece on the minimum wage experienced the largest deterioration in their real wage: even after taking into account the latest increase in February 2019, between 2010 and 2019 it fell by 16%. Belgium is the only country apart from Greece where the real value of the minimum wage slightly decreased: between 2010 and 2019, it fell by 3%. All other countries managed to at least offset the effects of inflation.

Table 2: Developments in real minimum wage, 2010, 2015 and 2019, in local currencies and 2015 price levels

	Country	Change in 2019 compared with:		Minimum wage at 2015 price levels in:		
		2010	2015	2010	2015	2019
High category	Luxembourg	6%	2%	€1,884	€1,968	€2,000
	Ireland	9%	12%	€1,526	€1,481	€1,656
	Netherlands	1%	2%	€1,559	€1,535	€1,567
	Belgium	-3%	-2%	€1,555	€1,545	€1,508
	Germany	n.a.	3%	n.a.	€1,468	€1,506
	France	1%	0%	€1,448	€1,477	€1,469
	Spain	28%	33%	€805	€772	€1,027
Medium category	Slovenia	33%	8%	€650	€798	€863
	Malta	1%	1%	€749	€748	€758
	Greece	-16%	9%	€900	€695	€754*
	Portugal	11%	15%	€618	€601	€688
Low category	Lithuania	104%	70%	€253	€303	€516
	Estonia	54%	26%	€325	€395	€499
	Slovakia	47%	30%	€337	€380	€496
	Latvia	46%	11%	€276	€364	€404
Non-euro area category	Hungary	66%	31%	HUF 83,732	HUF 106,534	HUF 139,409
	Czechia	44%	36%	CZK 8,696	CZK 9,246	CZK 12,535
	Croatia	20%	21%	HRK 3,072	HRK 3,067	HRK 3,701
	Poland	52%	24%	PLN 1,439	PLN 1,755	PLN 2,184
	Romania	180%	102%	RON 702	RON 971	RON 1,963
	United Kingdom	11%	12%	GBP 1,212	GBP 1,207	GBP 1,348
	Bulgaria	114%	50%	BGN 253	BGN 361	BGN 541

Notes: Comparison of developments in real minimum wage, comparing January 2019 with January 2010 and January 2015, in local currencies and price level of 2015. * Greece: Value based on minimum wage in February 2019; n.a. = not applicable.

Source: Network of Eurofound Correspondents; Eurostat Harmonised Index of Consumer Prices (HICP), (2015 = 100) - monthly data (index), [prc_hicp_midx]

Comparing minimum wage across countries: Developments in purchasing power standards

When comparing countries, both nominal and real figures of minimum wages can be misleading due to different economic conditions, resulting in different levels of purchasing power for consumers. Data on final household consumption expenditure, for example, reveal that household expenditures in Bulgaria are priced at only 50% of the EU average, while prices in Luxembourg are well above the average – at 126% (Eurostat, 2019, in turn based on dataset [prc_ppp_ind]). Hence, €1 in Luxembourg has less purchasing power than €1 in Bulgaria.

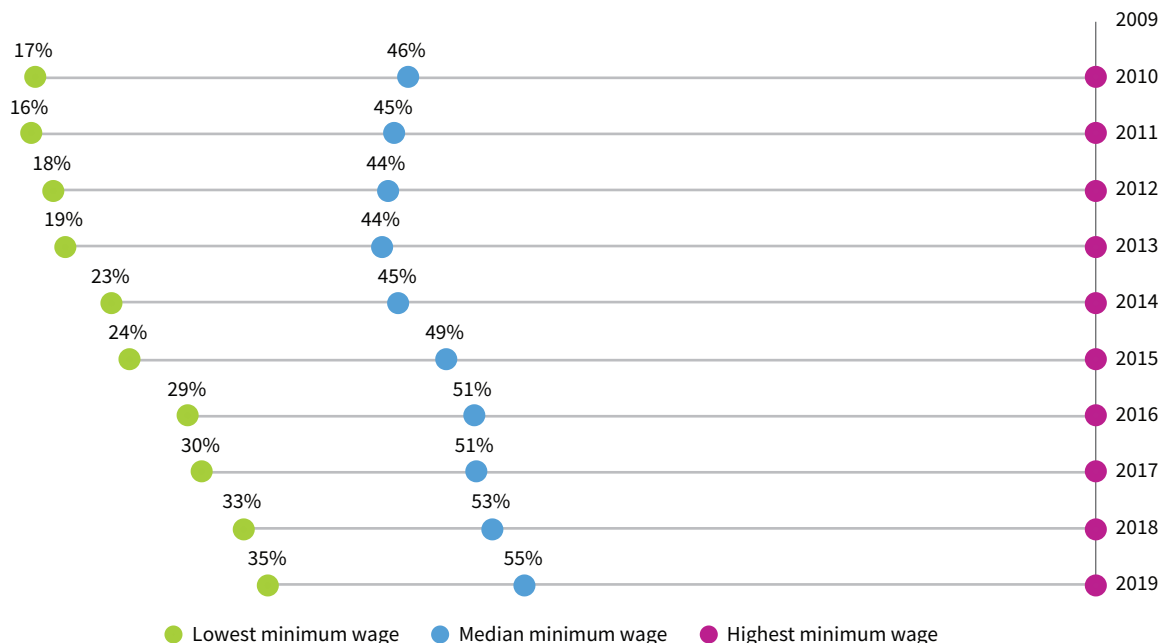
To compare levels of minimum wages across Member States, it is therefore useful to look at figures relating to purchasing power standards (PPS), an artificial currency unit calculated by Eurostat. In theory, 1 PPS can buy the

same amount of goods and services in every country and therefore allows better comparisons to be made.

Figure 2 presents the ‘distances’ of EU Member States’ minimum wages in PPS compared with the Member State with the highest minimum wage in PPS (which has consistently been Luxembourg). The graph indicates that minimum wages are converging, or moving closer together upward, as defined in the Eurofound report *Progress on convergence in employment and the socioeconomic area* (Eurofound, forthcoming). Across the Member States, gross minimum wages in PPS have converged over the past two decades, although no strict upward convergence is visible.

The distance between the country with the highest and the lowest minimum wage (in PPS) has narrowed between 2010 and 2019. In 2010, workers in the country with the highest wage (Luxembourg) had a purchasing power 5.9 times that of a worker in the country with the lowest wage (Bulgaria). In other words, the purchasing

Figure 2: Relative distance between purchasing power of lowest and median minimum wage Member States and highest minimum wage Member States



Note: Percentage labels indicate how high the lowest or median minimum wage was compared to the highest minimum wage in a given year.
Source: Eurostat [earn_mw_cur] and authors' calculations.

power of the minimum wage in Bulgaria was 17% that of the purchasing power of the minimum wage in Luxembourg. After a slight increase in 2011, this distance has since constantly narrowed. In 2019, the highest minimum wage has a purchasing power 2.9 times that of the lowest, meaning that workers in the lowest minimum wage country now receive 35% of the highest minimum wage.

The difference between the median minimum wage and the highest minimum wage has also decreased. In 2010, the highest minimum wage was 2.2 times that of the median country; this distance narrowed to 1.8 times in 2019.

The Eurofound report on convergence finds that between 2000 and 2017, national gross minimum wages in PPS in the EU saw a pattern of upward convergence, as the central and eastern European countries – in particular – converged towards the EU average (Eurofound, forthcoming). In contrast, when looking at the euro zone and non-euro zone areas separately, a process of upward divergence was detected.

Although gross figures of minimum wages in PPS indicate a narrowing of the gap between countries, there are still substantial differences. Even when local economic differences are taken into account, the data show that in terms of minimum wages in the EU, there is still potential for further convergence.

It is important to note that these figures refer to gross minimum wage levels in PPS and are still subject to

personal income taxes and social contributions. The substantial increase in the purchasing power of the minimum wage in Romania visible between 2017 and 2019, for example, is offset by the fact that there was a recent transfer of social security contributions paid previously by the employer directly to the state. As of 2018, employees rather than employers must pay these contributions. The substantial increase in the minimum wage is therefore reduced by the amount of social security contributions employees must now themselves pay. This is a general issue when comparing gross minimum wage figures. As the next chapters show, the overall tax burden and social contributions differ significantly across Member States and have a significant impact on the take-home pay of workers on the minimum wage.

Net value of minimum wage

Minimum wages in EU countries are defined as gross amounts and are usually subject to personal income taxes and social contributions. It is therefore important to consider the net amounts of wage payments (the amount that employees actually receive). To allow comparability, figures presented in this section refer to individuals with no other income, who have no children, who are not married and who are living in the capital region of their country. The data refer to minimum wage rates in 2018 and 2019 on an annual basis (for some countries, additional Christmas or holiday remunerations are included) (Figure 3).

Differences between gross and net payments range from 4.25% (Belgium) to 39.5% (Lithuania). Minimum wage workers in Luxembourg, the Netherlands and Ireland, where the highest nominal rates exist, have deductions from their gross salaries of between 6.7% and 13.5%. Denmark and Norway, where no statutory minimum wage exists, have the highest minimum net annual earnings via comparable collective agreements

of €27,341 and €26,199, respectively. There is a tendency for countries with low nominal levels of statutory minimum wages to have higher social security contributions and taxes. The 10 countries with the lowest rates see deductions of 22% on average, while the 10 countries with the highest rates see deductions of 13% on average.

Figure 3: Gross and net annual earnings of a single adult worker on the minimum wage, EU28 and Norway, 2018–2019

Country	Gross	Net	Tax and social contributions
Lithuania	€6,660	€4,029	39.50%
Romania	€5,356	€3,252	39.28%
Hungary	€5,570	€3,704	33.50%
Sweden*	€23,464	€15,912	32.19%
Czechia	€6,228	€4,290	31.12%
Denmark*	€38,596	€27,341	29.16%
Greece	€9,100	€6,552	28.00%
Italy*	€22,999	€16,679	27.48%
Poland	€6,277	€4,559	27.38%
Germany	€18,684	€13,810	26.09%
Slovenia	€10,640	€8,004	24.77%
France	€18,255	€14,194	22.25%
Latvia	€5,160	€4,154	19.50%
Austria*	€21,000	€17,115	18.50%
Slovakia	€6,240	€5,160	17.31%
Finland*	€21,500	€17,899	16.75%
Norway*	€31,468	€26,199	16.74%
Bulgaria	€3,436	€2,902	15.54%
Croatia	€5,658	€4,857	14.16%
Luxembourg	€24,853	€21,489	13.53%
United Kingdom**	€20,960	€18,184	13.24%
Portugal	€8,400	€7,476	11.00%
Netherlands	€20,940	€18,750	10.46%
Malta	€9,092	€8,178	10.05%
Cyprus*	€10,440	€9,573	8.30%
Spain	€12,600	€11,573	8.15%
Ireland	€19,874	€18,535	6.74%
Estonia	€6,480	€6,197	4.36%
Belgium	€19,125	€18,312	4.25%

Notes: *Figures for countries that do not have a statutory minimum wage in place refer to comparable collective agreements. For Austria, the 'coordinated wage floor' of €1,500 was used. The annual salary in the Netherlands includes an 8% gross holiday bonus. **Estimated value of April 2019 rate, based on exchange rate of €1.00 = GBP 0.86.

Source: Network of Eurofound Correspondents, based on national tax regimes (see Table A1).

Lowest wage levels in collective agreements

In the context of this report, Eurofound's national correspondents from Member States without statutory minimum wages – Austria, Denmark, Finland, Italy, Norway and Sweden – were asked to provide information on those collective agreements with the lowest agreed levels of pay (Table 3), as well as information on the lowest rates of pay within the largest collective agreements (Table A3)⁴. All correspondents pointed to the difficulty inherent in this exercise due to the lack of an electronic register or database in which the contents of all agreements are stored. For this reason, the following cases are illustrative examples of collective agreements with comparatively low pay rates in a country context, rather than being necessarily 'the' lowest ones. The 'largest' collective agreements on the other hand, are also agreements that are known to cover a high number of employees. In order to facilitate international comparisons, rates were converted into 12 monthly payments, mirroring the method applied for the statutory minimum wages.

This mapping shows that the lowest rates (of 'around' €1,330 on average) are found within the reported **Austrian** collective agreements. The figures relate to a small number of blue-collar and/or unskilled workers within the following occupations: florists; taxi drivers; cinema employees (in one region); newspaper deliverers; and furriers, glovers and tanners. The lowest rates reported from **Italy** range from €1,330 to €1,630 and all relate to blue-collar workers within secular private schools, cleaning, agriculture, consultancy firms and social welfare services.

In the Nordic countries, the rates in collective agreements are often differentiated by seniority and

age, but are mostly confined to the beginning of a career and/or to younger workers (see also Eurofound, 2019). The figures reported here are related to the 'full adult' rates, if not indicated otherwise.

In **Sweden**, the lowest reported rates are between €1,500 and €2,380; these have to be paid to staff in private dental clinics (excluding dentists and nurses), hairdressers, white-collar workers in ports, aviation and bus transport, workers in beauty salons, maintenance staff in non-profit organisations and cleaning staff in the construction sector.

Finland's lowest rates partially coincide with those detected in the 'largest' agreements (bearing in mind the constraints of having limited information). The rates range from €1,720 to €1,790 for employees with little or no experience in the commerce and construction sectors.

These sectors are also among those with the lowest rates in **Denmark**, where they range from €2,500 for unskilled workers in retail up to €3,220 for skilled waiters in the hotels and restaurant sector, covered by the HORESTA agreement.

In **Norway**, for which no full adult rates were obtained, the lowest rates range from €2,318 for check-out clerks in petrol stations to €2,964 for unskilled cleaners in cleaning companies with less than two years of experience.

While the reported occupations or sectors with the lowest levels of collectively agreed minimum wages are generally diverse across countries, professions within HORECA, retail and cleaning services are frequently featured. The average minimum pay rates in the 'largest' collective agreements are higher, ranging from about €1,720 in Finland and €1,850 in Austria, to €2,570 in Denmark.

⁴ Sources of these agreements are listed in Table A2 in the Annex.

Table 3: Collective agreements with lowest agreed pay rates, Member States without statutory minimum wages

Collective agreement	Minimum rate applies to	Estimated number of workers covered in the agreements/earning the minimum rate	Normal working time (per week)	Nominal minimum wage	Converted * (per month)
Austria (14 payments per annum)					
Florists, blue-collar workers	Unskilled workers	4,500/n.a.	40	€1,252 per month	€1,461
Taxi drivers, blue-collar workers	Taxi drivers	11,000/11,000	40	€1,235 per month	€1,441
Cinemas in the Tyrol region	All employees: operatives, cashiers, ushers etc.	n.a. (in total 8,000 employees in Austrian cinemas)	40	€1,029 per month	€1,201
Dispatch department workers	Postman/postwoman for newspapers Blue-collar workers	n.a./n.a.	36	€217.42 per week	€1,090
Furriers, glovers and tanners etc.	Blue-collar workers	n.a./n.a.	40	€7.58 per hour	€1,445
Denmark (12 payments per annum)					
Hotel and restaurants agreement, by HORESTA (2017-2020)	Skilled waiters	50,000 in total	37	DKK 24,052 per month	€3,221
	Skilled gastronomes		37	DKK 21,925 per month	€2,936
	Skilled receptionists		37	DKK 21,925 per month	€2,936
Construction	All construction workers except painters	n.a.	37	DKK 124 per hour	€2,663
Retail (2017-2020)	Skilled workers	150,000	37	DKK 20,166 per month	€2,701
Retail (2017-2020)	Unskilled workers	n.a.	37	DKK 18,666 per month	€2,500
Industrial cleaning	Mainly industrial cleaners	20,000	37	DKK 108 per hour	€2,319
Finland (12.5 payments per annum)					
Building construction	New employees with limited or no previous work experience	n.a.	40	€10.33 per hour	€1,791
Facilities services	Lowest 'competence classification' group as of 1 April 2018.	n.a.	37.5 / 40	€1,691 per month	€1,761
Commerce	First year's monthly wage for the occupational group with the lowest wage	n.a.	37.5	€1,652 per month	€1,721
Italy (13 payments per annum for social welfare and secular schools, 14 for others)					
Social welfare services	Blue-collar workers	234,170/n.a.	38	€19,515 per year	€1,626
Consultancy firms	Blue-collar workers	190,121/n.a.	40	€19,415 per year	€1,618
Agriculture	Blue-collar workers	347,611/n.a.	39	€17,703 per year	€1,475
Cleaning	Blue-collar workers	265,303/n.a.	40	€17,693 per year	€1,474
Secular private schools	Blue-collar workers	62,211/n.a.	38	€15,926 per year	€1,327

Collective agreement	Minimum rate applies to	Estimated number of workers covered in the agreements/earning the minimum rate	Normal working time (per week)	Nominal minimum wage	Converted * (per month)
Norway (12 payments per annum)					
Cleaning companies	Unskilled cleaners, 18+ years old, 0–2 years' experience	n.a.	37.5	NOK 181.43 per hour	€2,964
Security Guards	Unskilled employees with 0–12 months' experience	n.a.	37.5	NOK 180.47 per hour	€2,948
Hotel and restaurants	Unskilled employees (except chefs), 20 or 18+ years of age with four months' experience	n.a.	37.5	NOK 161.87 per hour	€2,644
Commerce sector	Unskilled shop assistants, office workers and warehouse clerks; 18–24 years old	n.a.	37.5	NOK 157.53 per hour	€2,573
Petrol station agreement	Checkout staff, less than 2 years' experience	n.a.	37.5	NOK 141.88 per hour	€2,318
Sweden (12 payments per annum)					
Hairdressers	Workers not having completed training/guaranteed minimum wage	n.a.	40	SEK 16,742 per month	€1,633
Beauty salons	Newly employed workers, wages minus commission	n.a.	40	SEK 21,794 per month	€2,125
White-collar workers in ports/planes/buses	Employees aged 24+ years	n.a.	40	SEK 20,364 per month	€1,986
Maintenance in non-profit organisations	Employees aged 20+ years	n.a.	40	SEK 22,685 per month	€2,212
HORECA sector	Employees aged 20+ years, 2 years' experience	n.a.	40	SEK 22,670 per month	€2,211
Staff in private dental clinics	Full-time employees 18+ years old (except dentists and dental nurses)	n.a.	40	SEK 15,323 per month	€1,494
Construction sector	Cleaning staff, 19+ years old, 1+ years' experience	n.a.	40	SEK 24,423 per month	€2,382

Notes: *Figures have been rounded. Monthly earnings are converted to 12 monthly gross payments, not taking into account any more favourable taxation that might arise for the additional annual payments.

Source: Network of Eurofound Correspondents

This exercise shows that the knowledge gap remains large in terms of the content of collective agreements and the levels of collectively agreed pay. While the countries included in this mapping are among those that provide regular statistics on the development of

collectively agreed pay (see Eurofound, 2018a and 2018d), information on the lowest levels of minimum wages per sector or agreement were not available from any national statistical sources.

2 Setting minimum wages for 2019 and beyond

While there were no dramatic changes in the way that minimum wages were set in most Member States in 2019, there was an increasing number of deviations from the standard approaches used in previous years.

Determination of rates

Role of increased political influence

Political influence in several Member States impacted the role of social partners in the determination of the 2019 increases. The drivers ranged from controversies originating from the country-specific recommendations within the EU Semester (Bulgaria), political demands from citizens (France) or from populist parties (Slovenia, Spain) – and all limited the role of the social partners. Also, in Portugal, some increased government influence was noted, yet, this did not restrict the social partners' bargaining autonomy.

In **Bulgaria**, discussion moved from the tripartite forum to the highest political level because of ongoing controversies over the establishment of a transparent mechanism for setting the minimum wage.

The **French** Prime Minister responded to demands from the *gilets jaunes* (yellow vests) protest movement by announcing a new minimum wage level ahead of standard formal consultations with social partners and the tripartite expert committee.⁵

In **Slovenia** and **Spain**, the governments adopted proposals coming from non-governmental parties (the left-wing eco-socialist party Leвица and the

left-wing populist party Podemos respectively). These parties gained support among voters because of their strong focus on the minimum wage and pre-election promises to substantially raise it.

In **Portugal**, there was a more positive response from the government, which proposed to increase the minimum wage to at least €600 and encouraged the social partners to agree a higher level. However, as the social partners did not reach such an agreement, the Council of Ministers approved the initial proposal.

Germany and **Luxembourg** also experienced greater political influence, with proposals on higher increases in the future or other measures to increase take-home pay being put forward by several parties. In **Cyprus** and **Italy**, the introduction of a universal statutory minimum wage is under consideration. As these cases did not ultimately have an impact on how the 2019 rates were set for the respective countries, they are discussed in more detail in 'Debates during 2018 beyond the regular increases' on page 17.

New process of setting and new differentiated rates

Changes in the process of defining and setting minimum wages were reported in **Greece**, **Romania** and, to some extent, **Portugal** (see the previous section). **Belgium** is in the process of introducing new sub-minimum rates for younger workers, which are presented in more detail in the section 'Sub-minimum wages or higher rates for specific groups' on page 26.

Box 3: Minimum wages adapted to non-standard employment relationships

One change in the **Netherlands** in 2018 concerned so-called 'piece work', where employees are paid a fixed rate for each action they perform or unit they produce. Since 1 January 2018, employees undertaking piece work have to be paid at least the minimum wage, regardless of the amount of work they do.

In the **United Kingdom**, the *Taylor review of modern working practices*, commissioned by the government and released in 2017, suggested that hours worked beyond those guaranteed as part of a contract should attract a higher minimum wage rate. The aim of this action was to tackle the fact that some workers – notably those on zero-hour contracts – are subject to erratic and unpredictable working hours and income. The rationale was that a higher minimum wage for non-guaranteed hours could compensate workers for the additional risk they bear and encourage employers to offer more stable work schedules.

⁵ According to the Eurofound national correspondent for France, neither of these are likely to play a strong role due to the formula-based indexation mechanism and the government's legal right to unilaterally alter the outcome.

The Low Pay Commission (LPC) then launched a consultation and asked for:

- evidence about the scale and nature of the income of low-paid workers
- evidence about the unpredictability of hours for low-paid workers
- views on the potential impact of a premium rate for non-guaranteed hours
- ideas on what potential policy changes could lead to the same or similar outcomes

The LPC is due to publish a report based on the consultation in autumn 2019.

The end of the budgetary adjustment programme in **Greece** during 2018 brought substantial changes to how minimum wages will be determined in the future. Traditionally, minimum wages had been determined through a bilateral social partner agreement (which was automatically extended to the whole economy). In 2012, the Greek government set up a new process for its determination. It was agreed that this process would take place after the end of the financial assistance programme, as the minimum wage was frozen until then. From 2019, Greece is implementing the new consultative approach – devised in 2012 – with a stronger role for government (see Box 4). The Greek trade union confederation (GSEE) refused to participate in the process.

Following a series of consultations with social partners, the **Romanian** government announced an increase of the minimum wage rate initially for November or December 2018; it came, however, into effect only in January 2019. In addition, differentiated rates based on seniority and level of education were introduced from January 2019 onwards. The Economic and Social Council (CES), a tripartite body that plays a consultative role, responded favourably to the government's decision, although social partners disagreed with its date of implementation (CES, 2018).

Box 4: New mechanism for setting the minimum wage in Greece

In **Greece**, the process of setting the level of the minimum wage begins with a step-by-step consultation process. This process last approximately four months and involves social partners and their institutions, specialised public agencies, scientific institutions and related bodies. The consultation is run by a coordinating committee, which is specifically set up for this purpose and consists of the President of the Organization for Mediation and Arbitration (OMED), one representative from the Ministry of Labour and one from the Ministry of Finance.

The stages are as follows.

1. A dossier with proposals is created.
2. Social partners and their scientific bodies produce studies/memorandums, including the results of a tripartite meeting/dialogue held by the coordinating committee.
3. The Centre of Planning and Economic Research (KEPE), a research centre supervised by the Ministry of Finance, processes all material.
4. The KEPE drafts a proposal or recommendation on the level of the minimum wage, in conjunction with a committee of independent experts appointed by the Ministries of Labour, Finance and Development.
5. The KEPE's proposal is discussed in the Council of Ministers, before the Minister of Labour decides on the level of the minimum wage.

Exceptionally for the year 2019, the process started on 21 August 2018 and concluded on 31 January 2019.

Unilateral government decisions

In **Bulgaria, Croatia, Czechia, Poland and Slovakia**, social partners failed to agree on a minimum wage level following consultations and negotiations in the relevant tripartite fora. The government therefore set the level unilaterally. While regulations in most of these countries foresee that social partners negotiate the level jointly, a non-agreement leading to a unilateral government decision has been commonly observed in the past.

Social partner agreements

In Hungary and Latvia (in 2017), agreements were concluded through successful tripartite negotiations. **Hungarian** social partners reached a consensus after a long period of negotiations in the Permanent Consultation Forum (VKF) and agreed on an increase over two years up to 2020. A similar increase over two years had been reached in **Latvia** in 2017, so no further negotiations took place in 2018 and the agreed non-increase for 2019 was implemented according to the plan.

Predetermined formulas

The process of setting the 2019 rates was not controversial in Member States with existing pre-agreed formulas (Belgium, France, Luxembourg, Malta and the Netherlands) and in Estonia, which introduced a pre-agreed formula.

In **Belgium**, social partners reached a consensus in the National Council following the 'pivot index' increase, which is based on changes in consumer prices.

The **French** government followed a formula-based increase, but also announced the aforementioned increase in take-home pay for low paid workers by increasing the 'employment bonus'.

In **Luxembourg**, the government adjusted the minimum wage from 2019 onwards in line with the increase in average wages between 2016 and 2017. In addition, it announced other measures to increase the net value of the minimum wage. The new (current) government made a commitment to increase the minimum wage so that every minimum wage earner would receive €100 more per month, starting 1 January 2019. This is to be accomplished by increasing the minimum wage by 1.1% (which has already been done) and again by 0.9% (yet to be done), as well as giving a tax reduction for that category of employees (also yet to be done).

In **Malta**, a tripartite committee directs the calculation of the Retail Price Index, which enables the government to calculate cost of living increases. These increases – termed 'cost of living adjustment' ('COLA') – are then added to the minimum wage.

In the **Netherlands**, statutory minimum wages are linked to the projected development of collectively agreed wages and updated twice a year.

During 2018, there was an increase in the number of countries that held debates on the implementation of new formulas (which guide the setting of minimum wage rates). These countries were Bulgaria, Czechia, Lithuania and Slovenia. In addition, debates took place in Greece on the context of establishing a genuinely new process of wage setting. As the debates were not finalised, the experience of these countries is discussed in more detail in the section 'Debates during 2018 beyond regular increases' (p. 17).

Estonia was the only Member State where the introduction of a new formula-based approach appeared to be relatively smooth. In 2017, the government and social partners agreed on a formula for 2018–2022, using developments in labour productivity and economic growth as a basis for negotiations. Social partners proposed an increase of €40 per month for 2019 and consulted the public on the proposal for the first time. While the feedback mainly stated that the minimum wage rate was too low, social partners kept their initial proposal in the final agreement.

Support of expert committees

Only a few Member States – France, Germany, Ireland and the United Kingdom – have expert committees in place, with a formal role in the process of setting the new rates. These committees consist of social partners and independent experts that develop recommendations for governments. While varying in their mandates, composition and resourcing, these committees usually follow developments relating to the impact of the minimum wage rate on their national labour market very closely. They achieve this by commissioning and promoting their own research, as well as consulting with stakeholders on their views.

In **Germany**, the determination of the minimum wage is closely pegged to the development of collectively agreed wages and the minimum wage rate is usually reviewed and adapted every second year. For 2019, the Minimum Wage Commission (composed of employer representatives, worker representatives and economic experts) agreed on an increase; for the first time, the increase consists of two steps over the next two years. This two-step process is a compromise, the trade unions having called for a 'considerable' pay rise based on the country's favourable economic position. The €9.19 level relates to the collective agreements reached during 2017 (wage indexation) and the rise to €9.35 relates to the collective agreements reached in the first half of 2018.

The **Irish** Low Pay Commission for the first time unanimously issued recommendations, which were followed by the government.

In the **United Kingdom**, the LPC proposed rates that were based on extensive consultation with social partners and followed the previously determined path towards a 60% increase in median earnings by 2020. The government followed the LPC's recommendations.

Existing formulas and predefined relative targets

Against the background of efforts made in many countries to establish transparent and predictable mechanisms for setting the minimum wage, it is worth reviewing the current situation in the EU. Table 4 summarises which countries apply fixed formulas or algorithms to determine new minimum wage rates, and whether relative targets for the level of minimum wages exist, linking them to the average or median level of actual wages. Additional information for each country can be found in Table A4 in the annex.

In total, 5 of the 22 countries with a statutory minimum wage do not have any fixed formulas, sets of criteria or specific relative targets (Bulgaria, Hungary, Latvia, Slovakia and Spain). The introduction of such a mechanism has only been debated in Bulgaria so far. While debates on formulas have also been held in Czechia and Lithuania, both countries have specific relative target levels within which minimum wages should remain.

Seven countries have no fixed formulas, but broad references to economic and social factors within their minimum wage legislation that should be observed during wage setting (Croatia, Greece, Ireland, Portugal, Romania, Slovenia and the United Kingdom). With the exception of the United Kingdom (60% of median wages) and Croatia ('an increasing share'), none of these countries have set targets or trajectories for their minimum wages relative to other wages.

Mechanisms for determining future increases – although without specific reference to a relative target level – are in place in six Member States (Belgium, France, Germany, Luxembourg, Malta and the Netherlands). In Germany and the Netherlands, increases are based on the rates in collective agreements. In Belgium and Malta, they are based on changes in the cost of living. The mechanisms in France and Luxembourg include both aspects: inflation and wage developments.

Cyprus also takes both inflation and the development of other wages into account when it comes to setting occupational minimum wages, together with a target level of 50% of average wages. However, these rules have not been applied since the rates were frozen in 2012.

Table 4: Overview of fixed formulas and predefined targets

Fixed formulas	Relative targets		
	No	Yes	
		Minimum threshold	Target level
No	Hungary, Latvia, Slovakia, Spain		
Under debate	Bulgaria		Lithuania (45–50% of average wages)
Finalised, pending implementation		Czechia (not less than 40% of average wages)	
No formulas, but specified factors or variables			
Expert committees with a specific mandate and guidance regarding indicators	Ireland		United Kingdom (60% of median wages)
Referring to broad economic and social indicators, but no fixed algorithm	Greece, Portugal, Romania, Slovenia		Croatia (no specific target, but 'increasing share in wages')
Yes			
Development of other wages	Germany, Netherlands		
Only indexation and adaption to the cost of living	Belgium, Malta		
Development of other wages and inflation	France, Luxembourg ⁶		Cyprus (50% of median wages, but frozen rates)
Development of labour productivity or GDP		Estonia (not less than 40% of average wages), Poland (not less than 50% of average wages)	
No statutory minimum wages	Austria, Denmark, Finland, Italy, Norway, Sweden Cyprus: formula and targets for occupational rates exist		

Source: Own compilation, based on contributions from the Network of Eurofound Correspondents, derived from national regulations.

⁶ In addition to the automatic indexation, the Luxembourg government must produce every two years a report for the country's parliament, addressing the general evolution of salaries and the national economy – accompanied, if necessary, by a legislative proposal to increase the minimum wage by way of law. Such additional change is a commonly followed long-standing practice.

In Estonia and Poland, the determination of minimum wage rates is linked to economic development (growth of GDP or labour productivity). Thresholds have been set in comparison to average wages below which the minimum wage should not fall (the threshold being 40% in Estonia) or, if it does, it should be increased going forward (a threshold of 50% in Poland).

The European Commission (2016) presents another approach to capturing the predictability and transparency of the minimum wage setting process. Based on national legislation, the Commission has developed an indicator for the ‘stringency’ of the minimum wage setting process, based on the degree of government discretion, the frequency of updates, and whether the process of updating is predictable according to a set calendar (along with the number of criteria for a decision on the update). According to this indicator, the decision framework for the minimum wage is most stringent in Greece, Slovenia, Ireland, Poland and France, and most flexible in Bulgaria, Romania, Lithuania and Estonia (European Commission, 2016, p. 80).

Debates during 2018 beyond regular increases

Debates relating to setting a minimum wage often go beyond simply establishing a new figure. During 2018, a number of different subjects were discussed in various Member States, but most touched on the following themes (which are also reflected in the principle on wages within the European Pillar on Social Rights):

- the role of minimum wages in ensuring an adequate standard of living and addressing in-work poverty, connected to the level and take-home value of minimum wages (shaped by the taxation and benefit system, as well as interacting with it)
- potentially more substantial increases of minimum wage rates in the future, which in turn could have a detrimental impact on employment or working hours, and loss of competitiveness
- the setting of minimum wages in the future, including the possible introduction of statutory rates (in two countries), as well as new ways of organising the process, introducing or changing formula-based approaches, or setting specific target levels

Towards an adequate minimum wage

While wage levels are outside the European Union’s mandate, the European Pillar of Social Rights includes a principle on wages. This principle states that workers

have the right to ‘fair wages that provide for a decent standard of living’ and in particular:

Adequate minimum wages shall be ensured, in a way that provides for the satisfaction of the needs of the worker and his/her family in the light of national economic and social conditions, whilst safeguarding access to employment and incentives to seek work. In-work poverty shall be prevented.

(European Pillar of Social Rights, Article 6)

The idea that minimum wage rates should also match the needs of family members and should serve to prevent in-work poverty may influence how such wages are perceived, debated and determined in the future. A recent report by Eurofound (2018b) discusses the concept and practice of ‘living wages’ in those countries that are running living wage campaigns. The modern version of the concept of living wages originates from the fact that urban areas have substantially higher living costs than other areas; it also focuses on what level of wage is needed to ensure an adequate standard of living for wage earners with different numbers of dependents, (rather than looking at the cost of labour).

The reporting from 2018–2019 did not highlight any new living wage campaigns, but showed that related themes were addressed in several Member States. These themes included more substantial future increases to minimum wage rates to allow for a decent standard of living, and the extent to which minimum wages can or cannot prevent in-work poverty.

More substantial rises debated

Possible substantial rises (beyond incremental annual adaptations) were discussed in Germany and Luxembourg. Such a rise had already been implemented for 2019 in Spain, where debates focused more on the employment impact instead.

In **Germany**, trade unions (along with other bodies) believe that the current minimum wage is insufficient to support a decent standard of living or generate a sufficient retirement pension. Employer organisations, on the other hand, believe the current level is the maximum amount that small and medium-sized enterprises (SMEs) can sustain.

After the 2019 level had been decided upon, the debate gained new momentum when the Federal Ministers of Finance and Labour – both from the Social Democratic Party of Germany (SPD) – suggested that the minimum wage should be raised to €12 per hour. The move was likely motivated by political ambitions, but was also in line with the European Commission’s European Semester recommendation that the government should improve conditions for wage growth.

This political intervention was strongly criticised by the employer organisations – particularly the Confederation of German Employers' Associations (BDA) – and generated mixed feelings among the trade unions. While the unions supported the increase, they were critical of state intervention into the autonomy of the collective bargaining process.⁷

Whether the suggestion remains on the agenda for the federal ministries in 2019–2020 is currently uncertain. In November 2018, a request by the Left and the Greens in parliament to raise the minimum wage to €12 per hour and to improve monitoring of compliance was rejected by all other parties.

In **Luxembourg**, debates touched upon a variety of aspects. Mechanisms for setting the minimum wage and its net take-home value were the focus of political and social partner debates ahead of the 2018 elections, resulting in a considerable number of proposals (see OGBL, 2018 and The Socioeconomist, 2018).

Many political parties, including the Christian Social People's Party (CSV), the Luxembourg Socialist Workers' Party (LSAP) and the Greens, put forward proposals about reforming the taxation of the minimum wage. The Alternative Democratic Reform Party (ADR) proposed making disadvantaged groups the subject of such a reform. The Democratic Party (DP) argued for the need to monitor employment effects, while continuing to focus on other benefit measures and tools to avoid poverty. The Left argued for a substantial rise to up to 60% of the median wage. A similar argument was made by the Independent Luxembourg Trade Union Confederation (OGBL), while employer organisations saw the wage indexation as a problem.

In **Spain**, the debate focused on the exceptionally high increase in the minimum wage level (22%). The Spanish Confederation of Business Organizations (CEOE) criticised the increase, along with the lack of negotiations, and argued that the high level would have a negative impact on thousands of jobs. A number of organisations representing self-employed workers were also very critical of the increase, believing it would substantially raise the amount of social security contributions paid by this group; this is the position of the Association of self-employed workers (ATA). However, other organisations welcomed the increase, such as the Union of Associations of Self-Employed Workers and Entrepreneurs (UATAE).

Impact of taxation and benefits on value of minimum wage

The value of minimum wages, how they are affected by changes in taxation, and how they affect benefits was debated in Luxembourg, as has been discussed above, and in Lithuania, Latvia and Estonia.

Lithuanian employers proposed increasing the tax-exempt amount of the minimum wage for low-wage earners, to make it equal to the minimum wage (the Lithuanian Association of Commerce, Industry and Crafts (LPPARA) made their approval of this year's rate contingent on this proposal). The government rejected the proposal, due to its adverse impact on the state budget, and instead reduced the tax-exempt amount to €300, which is far below the current minimum wage. While there are plans to increase it again over the coming years, minimum-wage workers will still have to pay taxes.

In **Latvia**, debates on setting the minimum wage rate are always tied to those on the non-taxable minimum of the personal income tax. Since the non-taxable minimum was increased in 2018 in the framework of a reform to the tax system – thereby increasing take-home pay – the issue of potential increases to the minimum wage rate featured lower on the agenda.

The level of the minimum wage in **Estonia** is connected to several other benefits. In 2015, a debate on its connection to childcare institution fees began and this was briefly revisited in 2018. By law, the contribution of parents towards childcare services cannot exceed 20% of the national minimum wage. However, several local governments use this provision to raise the contributions automatically when the minimum wage increases, without discussing whether it is actually necessary. This can affect the affordability of childcare places and minimises the effect of the minimum wage increase. The issue has not been resolved to date, but is due to be addressed through amendments to the Preschool Child Care Institutions Act.

Changing wage-setting mechanisms

Over the past few years, the European Commission has recommended that several countries establish 'transparent and predictable' ways of setting minimum wages through its country-specific recommendations. In 2018, this principle was enshrined in Article 6 on Wages in the European Pillar of Social Rights, which stipulates that 'all wages shall be set in a transparent and predictable way according to national practices and respecting the autonomy of the social partners'.

⁷ Under the Minimum Wage Act, the German government may not set a minimum wage. It can only confirm or oppose a recommendation by the Minimum Wage Commission.

Few countries debated potential major changes to their national practice in 2018. Most engaged in debates about how the level of their minimum wage would be determined in a transparent and predictable way. While formula-based approaches often help to make the determination of minimum wage levels more predictable, national actors often disagree over specific calculation methods and underlying methodologies. This is not only confined to the set-up phases of such approaches, but also links to the details of their implementation. Methods that are already being implemented also tend to be questioned in terms of their flexibility, particularly in rapidly changing economic or political contexts (see national examples in ‘Debates on new processes, formulas and the scope of minimum wages’ on next page).

Statutory versus collectively agreed minima

The main system of how minimum wages are determined – by law or by collective bargaining – is relatively seldom subject to change. Once introduced, statutory minimum wages do not appear to be questioned often. One exception was noted during the course of 2018 in **Romania** when the Finance Minister questioned its relevance and suggested it be abolished in the private sector and only maintained for workers active in the public sector. He also said that the whole process should be replaced by an incentive scheme for employers (Ziarul Financiar, 2018). While trade unions denounced the proposal, it was immediately embraced and supported by employers’ organisations, some of which also argued for it to be set in terms of hourly, instead of monthly rates. The debate turned out to be short-lived, as the Labour Minister excluded all these proposals, claiming they are not included in the government programme, and ensuring that the minimum gross wage will be established using the same mechanism as usual.

Prior to 2018, despite brief debates and demands arising, change was limited with regard to the introduction of statutory minimum wages in those countries without such a system. Aside from the cases presented in previous annual reports in this series, **Finland** considered introducing a minimum wage of €10 per hour in 2016 during discussions on the Competitiveness Pact. While the Left Alliance call for the enactment of such a minimum wage in its target programme for 2016–2019, the issue has not gained much public attention since then.

In 2017, the then **Austrian** Chancellor urged social partners to have a minimum wage of at least €1,500 in their collective agreements or the government would consider introducing a statutory minimum wage. Despite some political support for the suggestion (in particular, from the Green Party), the majority of industry stakeholders and political parties were in favour of maintaining the existing system. In response, the peak social partner organisations commissioned their members and trade unions to develop a roadmap for introducing a minimum wage of €1,500 for all employee groups by the end of 2019, in order to avoid unilateral legislative initiative on the issue.

Debates on the potential introduction of a statutory universal minimum wage during 2018 and beyond more advanced in two countries: Cyprus and Italy.

Cyprus has a set of occupational statutory minima that has been frozen since 2013. A decreasing number of other workers are covered by sectoral or company-level collective agreements, in parallel with an increasing number of workers who are not covered. Eurofound’s correspondent judges that the Cypriot minimum wage system ‘designed 75 years ago and developed in the previous decades, is obviously approaching its end’.

The introduction of a universal statutory minimum wage in Cyprus was highlighted during the 2018 presidential campaign and the newly inaugurated president repeated his intention to do so if the unemployment rate fell below 5%.⁸ Three proposals⁹ were put forward by different political parties (the Citizens’ Alliance, the Ecologists and the National People’s Front (ELAM)). These proposals were sent to the Labour Committee of the House of Representatives, which organised a hearing towards the end of 2018 and invited all social partners. The government confirmed that it was already investigating the issue through a phased study, which will be completed during 2019, and stated its intention to consult closely with social partners on the matter. Additionally, it requested support from the European Commission and the International Labour Organization (ILO).

Social partners were divided over the case, with employer organisations the Cyprus Employers & Industrialists Federation (OEB) and the Cyprus Chamber of Commerce and Industry (KEBE) rejecting the three proposals and a statutory minimum wage in principle.

⁸ The Minister of Labour, Welfare and Social Insurance made similar statements at various occasions.

⁹ Two draft laws aim to amend the basic law in a certain manner providing the authority to the Council of Ministers to release an order (ELAM) or regulations (Ecologists) setting a statutory minimum wage for all employees in all economic activities. The draft law put forward by the Citizens Coalition aims at establishing a provisional regulation fixing a statutory minimum wage for all employees at a rate of €1,125 for a duration of two years. During these two years, comprehensive social dialogue should be carried out to elaborate on the scope and mechanism for the setting of a national statutory minimum wage.

However, they also stated their readiness to engage in social dialogue after the relevant studies were completed and before a final decision was taken by the government. Trade unions Pancyprian Federation of Labour (PEO) and the Cyprus Workers' Confederation (SEK) welcomed the Labour Committee's initiative and stressed the need for comprehensive and structured social dialogue in order to establish a mechanism for determining a minimum wage. The unions also criticised how the government had unilaterally initiated the process and underlined the importance of considering how to determine the minimum wage within the existing framework of wage setting.

Italy has not had to date a statutory minimum wage, but it does have a functional equivalent in the form of collective agreements that cover a large number of workers. The Jobs Act of 2015 also set the groundwork for introducing a minimum wage. Trade unions – and the General Confederation of Italian Industry (Confindustria) – believe that such an introduction would reduce the collective autonomy of social partners, the interest of employers in adhering to collective agreements and collectively agreed wages. Hence, on 9 March 2018, the social partners signed an agreement on a new model for industrial relations and collective bargaining, which also aimed to reduce political pressure relating to the introduction of a minimum wage (Confindustria et al, 2018).

In May 2018, government parties Lega Nord and the Five Star Movement (2018) announced their intention to introduce an hourly statutory minimum wage for workers and sectors not covered by collective agreements. In July 2018, a proposal for a law (N. 658) was presented to the Senate's Labour Commission, which stipulated a minimum gross hourly rate of €9 as a universal baseline or, if more favourable, the respective rates of the national sectoral collective agreements. At the end of 2018, both government parties held consultations with their constituencies and the leader of the Five Star Movement announced their intention to introduce a statutory minimum wage in 2019. The debate is expected to continue during 2019.

Debates on new processes, formulas and the scope of minimum wages

Debates and social dialogue around the introduction of new approaches to setting minimum wages took place in Bulgaria, Croatia and Greece. Requests and recommendations for changes to the existing approaches were made by Greek trade unions, Slovakian employers, the French expert committee and some political parties and employers in Luxembourg. Such a request was also rejected by the Romanian parliament.

In **Bulgaria**, discussions about the development of a transparent mechanism for setting the minimum wage level continued in 2018. In general, the position of trade

unions over the last three years has been that the level should be based on an interval from the poverty line projected for the following year, multiplied by a coefficient of 1.3 (lower threshold) and 50% of the projected average wage for the next year (upper threshold). Employer organisations have insisted on an upper threshold of no more than 43% of the average wage.

In 2018, Bulgaria ratified the ILO's Minimum Wage Fixing Convention (C131); the European Commission noted that this could be a good basis for setting an objective mechanism (European Commission, 2018). The expectations are that the Bulgarian government will work together with social partners to develop a mechanism that meets the requirements of the convention.

During 2018, **Croatia** focused on the introduction of a new law on minimum wages. The Ministry of Labour and Pension System held five roundtable events in different cities and a working group including representatives from social partners was subsequently formed. The working group had one joint meeting. The new Minimum Wage Act introduces economic and social criteria for determining changes to the minimum wage.

In **France**, the expert group (Cette et al, 2018) recommended that the automatic indexation role of the minimum wage should be revised or eliminated. Two options were proposed: eliminating the entire rule (which is based on both the increase in inflation and half of the purchasing power of the base hourly wage of blue- and white-collar workers) or eliminating only the second term and therefore keeping an indexation on inflation.

Having two legal criteria of automatic indexation means that France has some degree of circularity between increases in the minimum wage and in average wages, which could lead to relatively high increases when inflation is high. Moreover, a reform of the automatic indexation rule would help to strengthen the role of collective bargaining in defining wage levels – in particular, at the base level. Such a reform would be particularly important in the current context of restructuring and reducing the number of bargaining branches.

The expert group also recommended involving social partners more closely within an expert committee (and ensuring the committee has more resources), should the automatic indexation mechanism be reformed.

In **Greece**, the main trade union the Greek General Confederation of Greek Workers (GSEE) demanded the reintroduction of a system to determine the statutory minimum wage following free collective bargaining between social partners. The GSEE also called for the monthly minimum wage to be restored to its pre-2012 level of €751 for all workers.

The **Romanian** Parliament also rejected a draft law in the first quarter of 2018, which aimed to establish a correlation between the minimum wage and the minimum expenditure basket (cost of living). The proposed instrument was designed to reduce poverty among employees.

In **Slovakia**, the National Union of Employers (RUZ SR) demanded changes to the mechanism for setting the minimum wage and the Federation of Employers' Associations (AZZZ SR) proposed opening the discussion on a fixed mechanism for setting the minimum wage.

Controversies around the application of new approaches and the scope of minimum wages arose in Slovenia and Lithuania.

In **Slovenia**, the new proposal for a Minimum Wage Act from the left-wing party Levica, which was adopted by the National Assembly on 13 December 2018, is the latest development in the ongoing debate on 'what counts towards the minimum wage'. The act stipulates that allowances are not included in the statutory rates and have to be paid on top.¹⁰

Lithuania moved to a new formula-based approach agreed by the Tripartite Council in 2017, which links minimum wage increases to the development of average wages. Disagreement broke out in 2018 over whether the average wages used as basis for the calculations should include bonuses and other payments or not. The concern is that this will lead to significantly different results for the potential increase and, ultimately, a failure to reach a consensus in the Tripartite Council.

10 These allowances include for seniority, business performance or difficult working conditions.

3 Comparative figures and recent research

Workers earning around and below the minimum wage

In this chapter, new estimates will be presented on the proportion of the employees earning around or below the minimum wage in each country, based on data from the European Union Statistics on Income and Living Conditions survey (EU-SILC) 2017. Due to the limitations of the data – summarised in Box 5 on page 25 – this is not an exact exercise. The figures have therefore been calculated using three different sets of minimum wage earners:

- those earning less than 90% of the minimum wage
- those earning 90–100% of the minimum wage
- those earning 100–110% of the minimum wage

Collectively, these add up to all workers earning no more than 110% of the statutory minimum wages as per full adult rates.

There might be several reasons why workers appear to be paid below the minimum wage level (less than 100%) in this dataset. The data suggest that there is a considerable number of workers earning less than the full adult rate of statutory minimum wages; this cannot be explained solely by a lack of statistical precision.

There is a number of legally-grounded situations in which no statutory rates (or rates lower than the full adult rate) apply: particular areas, specific contracts, or being below a certain age limit. In addition to these, however, there might also be cases of non-compliance with the law.

This chapter begins by presenting findings regarding the proportion of workers in the sets described above. It then illustrates these findings with evidence from the national level, under the following themes:

- legal sub-minimum wages for specific groups of workers
- non-compliance with minimum wages

In addition, for countries without statutory minimum wages, very low pay could result from workers not being covered by a collective agreement or be related to compliance issues. This is presented in a separate section in this chapter.

Proportion of workers on minimum wage and lower

The proportion of workers earning national statutory minimum wages or below was 7.2% in the median EU Member States in 2016, with considerable variation between countries (Figure 4). Countries with a comparatively small percentage of people receiving the statutory minimum wage rate or less are Czechia (2%), Malta (2.3%), Belgium (3.2%), Croatia (3.3%), Greece (4.1%), Slovenia (4.1%) and Slovakia (4.4%).

The countries with the highest percentages are Poland (13.7%), the United Kingdom (12.1%), Luxembourg (11.3%),¹¹ Germany (11.1%) and Portugal (10.5%). It should be noted that these high percentages include a comparatively large segment of workers who earn less than 90% of the minimum wage. The reason for this is likely to be because all of these countries have either statutory sub-minimum rates or other exceptions. In **Germany**, for example, workers covered by some collective agreements with lower pay than the relatively newly introduced statutory minimum rate were still exempt from the statutory rate in 2016. Equally, **Polish** workers employed under a civil contract were not covered by the legislation on minimum pay until mid-2016.

In **Spain**, there are lower hourly rates for seasonal workers, while specific minimum rates for young people apply in other countries. These workers are still included in the data on those who are paid less than the statutory minimum rate.

Other Member States that had statutory minimum rates for young people in 2016 (Greece, Ireland and the Netherlands) have a larger sub-minimum segment (<90%) compared to the overall size of their workforce earning ‘around’ the minimum wage.

However, a relatively large percentage of workers receiving below 90% of the minimum wage could also point to higher levels of non-compliance, particularly within countries without any legal sub-minimum wages or exceptions. Data from the EU-SILC are based on surveying households, so reported earnings could also include undeclared ones. Next to the already quoted countries, the size of the sub-minimum segment was also above the EU median in Bulgaria, Estonia and Lithuania.

¹¹ National sources from Luxembourg suggest an even higher coverage of 15.3%. According to the national Eurofound correspondent, the difference is likely due to the EU-SILC’s omission of cross-border workers in Luxembourg (such workers appear to be more likely to be paid at or below the minimum wage).

Figure 4: Percentage of employees earning a certain proportion of the statutory minimum wage (all countries with statutory minimum wage in 2016)



Note: The EU-SILC 2017 wage data relate to 2016 (2015 for the United Kingdom and Ireland). (S) – Legal sub-minimum rates existed in the country in 2016. (E) – Exceptions from the application of full adult rates exist.

Source: Authors’ calculations based on the EU-SILC 2017 for the figures related to the percentage of employees covered.

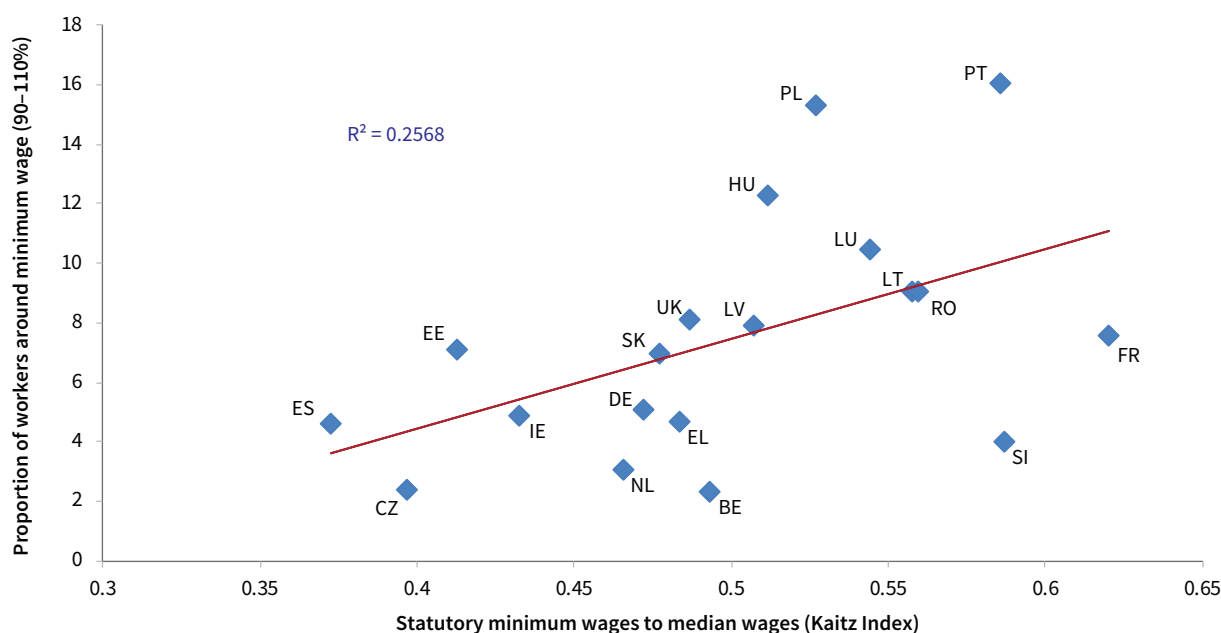
It is also worth looking into the share of workers earning somewhat above the minimum wages rates (100–110%). As additional allowances (for instance for seniority, travel expenses or arduous work) do not count towards the minimum wage in many countries, workers falling within this segment might still have their basic pay at the minimum wage level. Across the countries, the data show that the size of this segment is closely related to the size of the segment of workers earning 90–100% of the minimum wage, but not to the size of the segment of those earning less than 90%. The data are also included in Table A5 in the Annex.

The overall size of the minimum wage segment may be also determined by how generous the minimum wage level is. This is defined as the level of the statutory minimum wage in relation to actual median or average wages (also referred to as the Kaitz index). Countries with a relatively generous minimum wage level, or high Kaitz index, can be expected to have a large share of the workforce receiving the minimum wage, as there are fewer companies that can pay above it.

Using the Kaitz index from the OECD, a moderately positive correlation across EU Member States can be seen for workers ‘around’ the minimum wage (90–110%) and the relationship between statutory minimum wages and median wages within a country (Figure 5).¹²

¹² Kampelmann et al (2013) find such a positive relationship based on sector-specific minimum wages and the proportion of sectoral workers below the minimum level, but the stronger positive association is driven by also including countries without statutory minimum wages that are more generous.

Figure 5: Kaitz index and proportion of workers earning around the minimum wage



Note: The figures relate to 2016 (2015 for the United Kingdom and Ireland).

Source: y-axis – own calculations based on the EU-SILC 2017; x-axis – the Kaitz index is based on OECD, undated.

Box 5: Methodological note on the statistics based on EU-SILC

The wage data used for these calculations stem from the 2017 edition of the EU-SILC. The EU-SILC collects data on annual labour income, poverty, social exclusion and living conditions from respondents across all EU countries.

By estimating the number of respondents who earn an income that is equivalent to the annualised national minimum wage, it is possible to approximate the percentage of workers in each country who earn the minimum wage. This study uses a range of +/- 10% around the minimum wage level to account for over- and under-reporting and correct for rounding and conversion errors.

To make use of the data on annual labour income, the full-time equivalent gross monthly wage has been obtained by dividing the EU-SILC variable of annual cash gross earnings by the respondent's number of months in full-time jobs and part-time jobs (see Brandolini et al, 2010). To adjust for the potential bias of workers with more than one job, this result has been multiplied by the ratio of hours worked in the first job to the total hours worked in all jobs.

Data must be interpreted with care due to several caveats, some of them generally related to the EU-SILC and others to this study's measure of wages:

- Some missing responses have been imputed based on the characteristics of the respondent.
- Data on annual earnings do not necessarily refer to one job in particular; the income can be earned in different jobs (either at the same time or consecutively).
- The data refer to income earned in the previous calendar year, not the current one.
- Data are self-reported and may not reflect the true labour income in some cases.

Eurofound (2014) provides a more detailed discussion on the limitations of the EU-SILC.

Sub-minimum wages and higher rates for specific groups

Special rates for certain groups of workers are applied in 12 EU Member States (Table 5). In most cases, these rates aim to improve the labour market prospects of younger or less experienced people by allowing employers to pay such workers less than the statutory minimum wage. Some countries also specify higher rates based on the skills of employees. Deviations from the statutory minimum wage range from 30% for 15-year-old workers in the Netherlands to 130% for skilled workers in Hungary.

Youth minima and minima related to experience and training

In **Belgium**, sub-minimum rates for employees under 21 years of age, who are at work at least 50% of the full time equivalent, were supposed to be introduced for the first time in 2018 (with specific rates applying to the age groups of 18, 19, and 20).¹³ The regulation aims to make it possible for employers to pay young workers below the minimum wage, without loss of income for those affected by exemptions from taxes and social security contributions. However, the introduction of the measure has been postponed because the situation is more complex than initially expected and has met with resistance from trade unions. Due to the ongoing governmental issues in Belgium, it is unclear when the measure will now be introduced, although it is expected to happen sometime in 2019.

The **Netherlands** has a very differentiated scheme of sub-minimum wages for youth, ranging from 30% (for 15-year-old workers) to 85% (for 21-year-old workers). **Ireland** and **Malta** have sub-minimum wage rates in place for employees below 18 years of age (in Ireland, this also extends to employees above 18 years of age who are in their first or second year of employment). **Greece** introduced special rates for workers under 25 years of age in 2012, as a means of combatting very high youth unemployment rates. These were abolished in 2019.

In **France**, sub-minimum rates apply to 18-year-old workers with less than six months of experience, young people on 'professionalisation contracts'¹⁴ and apprentices.

Similarly, **Portugal** applies special rates to apprentices, interns and workers on certified vocational training (for a period of six months to one year), as well as disabled people depending on the level of their disability.

Minima differentiated by skills

Hungary has a special rate for skilled workers in place, who are entitled to a wage that is 31% higher than the statutory minimum wage.

In **Romania**, employees with higher education qualifications receive a 13% higher minimum wage than employees with secondary or lower education qualifications.

In **Lithuania**, the statutory rate only relates to unskilled workers (there is no specific rate for skilled workers).

¹³ The regulation does not apply to student work, employees who are part-time learners and part-time workers, and employment embedded in a re-employment programme.

¹⁴ These contracts allow young employees to acquire a professional qualification and promote their professional integration or reintegration (INSEE, undated).

Table 5: Countries with specific rates of minimum wages for certain groups of workers

Country	Group of workers	Percentage of statutory minimum wage	Rate
Belgium	18 years of age	82%	€1,306 per month
	19 years of age	88%	€1,402 per month
	20 years of age	94%	€1,497 per month
France	15 or 16 years of age	80%	€1,198.40 per month
	17 years of age	90%	€1,348.62 per month
	Young person on a professional contract	55% or more	€824.15 or more per month
	Apprentices	25–78%	€374.62–1,168.80 per month
Hungary	Skilled workers	130.8%	HUF 195,000 per month (€622.12)*
Ireland	Under 18 years of age	70%	€6.86 per day
	Over 18 years of age and in their first year of employment	80%	€7.84 per day
	Over 18 years of age and in their second year of employment	90%	€8.82 per day
Luxembourg	15 or 16 years of age	75%	€1,553.33 per month
	17 or 18 years of age	80%	€1,656.88 per month
	Qualified employees above 18 years of age	120%	€2,485.32 per month
Malta	17 years of age	96%	€169.06 per week
	Below 17 years of age	95%	€166.22 per week
Netherlands	15 to 18 years of age	30–47.5%	€484.74–767.51.40 per month
	19 years of age	55%	€888.69 per month
	20 years of age	70%	€1,131.06 per month
	21 years of age	85%	€1,373.43 per month
Portugal	Apprentices and interns	80%	€480 per month
	People with disabilities	50% or more**	€300 or more per month
Romania	Employees with higher education qualifications and one year of experience	112.9%	RON 2,350 (€493.10) per month
Spain	Domestic workers	n.a.	€7.04 per hour
	Seasonal and temporary workers	n.a.	€42.62 per day
United Kingdom***	Apprentices under 19 years of age, or aged 19 or over and in the first year of their apprenticeship	47.3%	GBP 3.90 per hour (€4.53)
	Under 18 years of age	53.6%	GBP 4.35 per hour (€5.06)
	18–20 years of age	75.4%	GBP 6.15 per hour (€7.15)
	21–24 years of age	94.3%	GBP 7.70 per hour (€8.95)

Notes: *Figures correct as at 21 March 2019. **In the case of disabled workers, the reduction percentage depends on the difference between full capacity and the coefficient of effective capacity (if the difference is higher than 10%), with a limit of 50%. ***Rates in the United Kingdom are applicable as of April 2019.

Source: Network of Eurofound Correspondents, based on national legislation.

Non-compliance with minimum wages

There are few recent international studies on the extent of non-compliance with minimum wage rates. Kappelmann et al (2013) used EU-SILC data for 2007–2009 when they found that non-compliance with sectoral minimum wages was particularly high in countries without statutory minimum wages. Goraus-Tańska and Lewandowski (2018) also use a restricted sample from the EU-SILC and define ‘violations’ as wages below the statutory minimum wage, but attribute greater weight to stronger violations.¹⁵ They find that violations are greatest in Lithuania, France and Portugal, followed by Latvia and Hungary.

National data on the extent of such non-compliance with statutory or collectively agreed minimum wages are equally hard to obtain. Even in those countries (Germany, Italy and the United Kingdom) where this topic is comparatively well researched as studies are based upon larger datasets or can rely on multiple sources, the figures are regarded as estimates, within a certain range. In addition, some countries have evidence from national labour inspectorates or similar bodies that carry out regular inspections among companies regarding their compliance with labour regulations, while others have data from bodies entrusted with addressing individual complaints.

Data from the **German** Statistical Office show that in 2017, some 1.4 million workers received the minimum wage while 830,000 workers that were entitled to it received less. While the total number of workers receiving the minimum wage decreased (the figure had been 1.8 million in 2015), the number of workers below the applicable rate increased (750,000 in 2015). This might have been due to delays in the adoption of the new rates and some potential errors in measurement but might also be the result of a degree of non-compliance (Destatis, 2018).¹⁶

In **Italy**, recent research by Garnero (2018) pointed out that the non-compliance with sectoral agreements is

significant. On average, more than 10% of workers are paid less than the wage floor established in their reference collective agreement. The average shortfall per underpaid worker (i.e. the average distance from the minimum wage for workers paid less than the minimum wage) ranges from 20% to 23%. Underpayment is particularly common in certain economic sectors, such as agriculture and mining (where almost 32% of the workers are underpaid), arts and other activities (almost 31% of workers are underpaid), and hotels and restaurants (almost 21% of workers are underpaid). Violations of sectoral wage floors are much more prevalent in the south of the country, in smaller firms and among temporary workers.

In the **United Kingdom**, estimates summarised in a study by Mor and Brown (2018) departed from data provided by the HM Revenue & Customs tax authority (HMRC), which is entrusted with enforcing the legislation. HMRC investigators identified about 200,000 workers who had been underpaid in respect of the national minimum/living wage in 2017. This figure had doubled in comparison to the previous year and was partly the result of a new online complaints service. However, Mor and Brown’s report stated that there was considerable uncertainty about the actual number and pointed to broad ranges, based on other survey data:¹⁷

Excluding unpaid time, estimates suggest that underpayment affects between 300,000 and 580,000 people aged 25 and above. If unpaid time is taken into account, the number of people underpaid the minimum wage is substantially higher. The true extent of underpayment is very difficult to estimate, but a range of 1 to 2 million underpaid workers is likely, or between 4% and 9% of employees aged 25 and above.

(Mor and Brown, 2018)

Table 6 shows the characteristics at company and individual level most associated with high levels of non-compliance with the minimum wage, based on evidence from research or monitoring.

¹⁵ Goraus-Tańska and Lewandowski’s sample excluded part-time workers, those under 25 years of age, multiple job holders and those not working full-time during any of the months within the previous year.

¹⁶ These potential errors in measurement could have affected about 69,000 jobs.

¹⁷ These are the Annual Survey of Household Earnings (ASHE) and the Labour Force Survey (LFS) for the United Kingdom.

Table 6: Characteristics associated with higher levels of non-compliance with minimum wage legislation

Company characteristics		Source (monthly rate in national currency)
Size	Small establishments	Germany: Caliendo et al (2018)
	Micro and small firms	Italy: Garnero (2018) EU countries: Goraus-Tańska and Lewandowski (2018)
Sector	Private sector	United Kingdom: LPC (2017)
	HORECA and security services	Czechia: SUIP (2018)
	Agriculture	Croatia: Mrnjavac and Blažević (2014) EU countries: Goraus-Tańska and Lewandowski (2018)
Region	Southern Italy	Italy: Garnero (2018)
	Rural areas	Croatia: Mrnjavac and Blažević (2014)
Individual characteristics		
Age	People in all age groups	United Kingdom: LPC (2017)
	Young workers (25–30)	EU countries: Goraus-Tańska and Lewandowski (2018)
Gender	Women	Croatia: Mrnjavac and Blažević (2014) United Kingdom: LPC (2017) Italy: Garnero (2018) EU countries: Goraus-Tańska and Lewandowski (2018)
Level of education	Low level	EU countries: Goraus-Tańska and Lewandowski (2018)
Non-standard employment contracts	Atypical part-time workers on mini-contracts	Germany: Pusch (2018)
	Temporary workers	Italy: Garnero (2018)
Working time	Part-time	Croatia: Mrnjavac and Blažević (2014) United Kingdom: LPC (2017)

Data from labour inspectorates or similar bodies were obtained from Czechia, France, Hungary, Ireland, Lithuania and Slovakia, and they all suggest that non-compliance with statutory minimum wages is much less frequently detected than other areas of potential non-compliance with labour laws that authorities investigate. While this might be because non-compliance with minimum wages is unusual, it could also be because it is difficult to identify such non-compliance.

In **Czechia**, 1,265 inspections in 1,200 establishments (including self-employed ones) were related to non-compliance with the minimum and guaranteed wage. The most frequently discovered violation was the failure to provide guaranteed wages according to the complexity, responsibility and workload of the employee (i.e. the non-payment of supplements to the lowest guaranteed wage level).¹⁸ Non-observance of the lowest level of guaranteed wage was found in 268 cases (22.6%)¹⁹ and in a further 22 cases (1.7%) inspectors found that employers had not paid a wage at least equal to the minimum wage (see SUIP, 2018).

In **Hungary**, the labour authority's report only devoted a small section to compliance with the minimum wage and guaranteed wage minimum rules. During the first three quarters of 2018, only a few hundred employers were found to have failed to comply with the Minimum Wage Decree. The summary concludes that 'irregularities related to the increased minimum wage and guaranteed minimum wage are still not characteristic' (Hungarian Labour Inspectorate, 2018).

Slovakia saw 682 cases of non-compliance with minimum wage demands detected in 2017. This represented about 5.4% of the 12,544 detected breaches of labour legislation.

In **France**, where the labour inspectorate monitors compliance with both the statutory minimum wages and collectively agreed wages, the figures for 2017 were as follows. Labour inspection officers wrote 420 observation letters relating to breaches of the minimum wage regulations and imposed 6 administrative sanctions (the average fine was €1,170). Officers also drew up 16 sets of minutes covering both non-compliance with the legal minimum

18 This relates to the provisions of section 212 of the labour code.

19 This relates to the provisions of section 112 of the labour code.

wage and non-compliance with the sectoral minimum wage fixed by an extended collective agreement.

The 2017 Annual Report of the **Irish** Workplace Relations Commission shows that 4,747 employers were inspected and of these, 409 (9%) were found to have breached the national minimum wage legislation (Workplace Relations Commission, 2017).

Since the introduction of the new labour code in 2017, **Lithuanian** employers are only allowed to pay the minimum wage for unskilled labour.²⁰ As reported by the State Labour Inspectorate (VDI), based on data from the State Social Insurance Fund Board, there were approximately 31,900 skilled employees who were paid the minimum wage in July 2017 (i.e. after the new labour code had been put into effect). In addition, the VDI reported that it had received 22 complaints and notifications during 2017 in relation to the minimum wage (not necessarily related to skilled employees) and had issued three binding orders about the payment of minimum wages to skilled employees (VDI, 2017). Labour dispute commissions reported receiving no applications regarding those issues.

A national campaign conducted by the **Romanian** Labour Inspectorate, from April to June 2018, showed that most Romanian employers complied with the legal provisions relating to the change in gross wages (in the context of social contributions transferring from the employer to the employee). The official statistics emphasised that employers who did not comply with the new legal provisions accounted for 2.8% of the total number of verified economic operators (from both private and public companies). Consequently, 2,017 sanctions were imposed and fines amounting to RON 51,000 (€10,708 as at 22 March 2019) issued. The labour inspectors identified only 56 employers (out of 10,280) who cut the net wages of their employees after the 'tax revolution' entered into force in January 2018 (Inspectia Muntii, 2018).

In **Denmark**, where cases of underpayment of employees were found, they largely concern foreign contractors that do not adhere to the collective agreement in the sector; examples of these are foreign companies working in the Copenhagen Metro. According to the 2017 Annual Report of the Danish Labour Court, around two-thirds of the 536 cases that went to court involved unorganised employers and 'many were about underpayment in relation to the

relevant collective agreement'. The most affected union in the construction area, the Joint Professional Association (3F), regularly reports cases of underpayment in its newsletter (Arbejdsretten, undated).

Low paid workers not covered by wage floors

The countries without statutory minimum wages are among those with the highest rates of collective bargaining coverage.²¹ This leaves relatively few workers or occupations uncovered by any wage floor regulation (hence potentially exposed to earning very low wages). The reporting from the Eurofound national correspondents shows that there is very sparse evidence from these countries on which groups of vulnerable workers are not covered by wage floor regulations and what the magnitude of the situation is.

In **Austria**, the identity of the professions that are not covered and where workers earn less than €1,500 per month is relatively well known (see Box 6), largely because of the debate on coordinating a minimum wage floor of this level via collective agreements.

The absence of a collective bargaining agreement, however, does not necessarily imply that wages are low (or among the lowest).²² **Denmark** and **Norway** both reported that companies without agreements often orient themselves to the levels set within sectoral agreements in the face of competition to attract qualified workers.

More vulnerable groups of workers – in particular, those with a foreign background – are most likely to receive low wages in the absence of collective agreements. This has triggered the need for policy intervention. In **Denmark**, unions can – in accordance with labour law – demand that companies negotiate or apply collective agreements should they be found to underpay workers.

In **Norway**, the degree of bargaining coverage varies significantly by sector and is much lower in the private sector than the public, as well as among SMEs. Wage rates in several collective agreements have been extended after it was proven that foreign workers were receiving wages that were below Norwegian standards (the affected sectors include construction, cleaning, fish processing, agriculture and HORECA). Most Norwegian studies therefore relate to groups covered by extension measures or where an extension is on its way.²³

20 'Unskilled labour' is defined as labour that does not require any special skills or professional competences.

21 The rates of collective bargaining coverage are Austria (98%), Sweden (90%), Finland (89%), Denmark (84%) and Italy (80%) according to OECD figures for the latest years available (2014–2016). Norway's rate was 69% for 2017, based on Neergard (2018), p. 28.

22 An extreme example of this is that the wages of senior managers in the private sector are not typically regulated within collective agreements.

23 See Bjørnstad (ed.) (2015) in the context of labour migration from eastern EU countries or Trygstad et al (2018), which found that the share of cleaners below the collectively agreed minimum rate dropped from 31% to 9% after the first year of the extension, and to 5% five years later.

Box 6: Low paid workers without collective bargaining coverage

In **Austria**, this non-exhaustive list indicates groups of workers or occupations not covered by collective agreements and some are likely to fall below the threshold of €1,500 gross per month:

- blue-collar workers in waste and resource management
- dental technicians
- patternmakers
- employees of photographers (blue-collar workers)
- employees of undertakers (except those in Vienna)
- employees of driving schools (blue-collar workers)
- employees of baths and swimming pools (except those in Vienna)
- employees of lawyers in some provinces (secretarial staff)

In **Denmark**, foreign workers in construction and agriculture and companies without collective agreements are most likely to fall below the minimum wage. In **Norway**, the Labour Inspection Authority list employees in the following branches as being at risk of social dumping: construction, shipyards, cleaning, agriculture, transport, fish processing, car washing and hotels and restaurants. Except for car washing, other industries are covered by extended collective agreements and the risk of falling below minimum wage thresholds are related to enforcement issues.

No information on the extent of low-paid workers without any collectively agreed wage floors was obtained for Sweden and Finland.

Minimum wage and gender

There are research-based hypotheses that introducing or increasing minimum wage rates is a way to reduce gender pay gaps.²⁴ The Spanish government voiced such a hope recently when it announced a 22% increase for 2019. However, evidence that this actually happens is more ambiguous, as minimum wages tend to affect only the lower half of the wage distribution and some workers more than others.

For **Poland**, for example, Majchrowska and Strawiński (2018) showed that the 2008–2009 increase in the minimum wage rate significantly reduced the gender wage gap among younger workers, whereas the impact on other age groups was much lower.

For **France**, research showed that the ‘spill-over effect’ from the hourly minimum wage being increased was lower for women’s wages than for men’s (Aeberhardt et al, 2016).

Another recent study for **Ireland** and the **United Kingdom** found that the introduction of minimum wages in the late 1990s and early 2000s significantly reduced the gender pay gap among low-paid workers in Ireland, but had less impact in the United Kingdom. The study argues that possible explanations for this are differences in compliance and enforcement in the United Kingdom being less effective for women than men (Bargain et al, 2018; Doorley, 2018).

In their study based on EU-SILC data, Goraus-Tańska and Lewandowski (2018) found that the degree of non-compliance was higher for women in almost all the analysed countries; however, observable characteristics do not explain these differences, and it was unclear why this was the case.

One potential counter-example, which requires further study, concerns **Belgium**. In Belgium, both the gender pay gap and the share of female workers on the minimum wage have decreased substantially over time (the latter particularly between 1996 and 2008). According to data from the Belgian Labour Force Survey, the share of female workers on the minimum wage has converged towards the share of male workers (Vandekerckhove, 2019).²⁵

²⁴ This research includes: Kahn (2015), who reviewed research and found that while wage compression via minimum wages or high collective bargaining may reduce gender pay gaps, it may come at the expense of lower female employment; Rubery et al (2005), who analysed pay setting and gender pay gaps in the EU15; and Dex et al (2000), who analysed the situation in the United Kingdom prior to the introduction of a minimum wage.

²⁵ In Belgium, in the third quarter of 1996, some 10% of women and 3.4% of men were earning at most 5% above the minimum wage, while in 2014, some 3.8% of women and 2.4% of men were earning at most 5% above the minimum wage.

However, the fact remains that women are overrepresented among the minimum wage earners in nearly all Member States, irrespective of how many workers earn the minimum wages. Figure 6 and Table 7 show the proportion of women among different sets of wage earners, next to the total share of women among all employees in each country. The three sets of wage earners under consideration are:

- those earning more than 110% of the minimum wage

- those earning ‘around’ the minimum wage (+/-10%)
- those earning less than 90% of the minimum wage

Bulgaria and Estonia are the only two countries where women and men are represented more or less equally among minimum wage earners. The degree of women’s overrepresentation among those earning the minimum wage or substantially less is highest in Malta, Czechia, the Netherlands and Slovakia.

Figure 6: Proportion of women among different sets of minimum wage earners and degree of overrepresentation (%)



Note: *For countries without statutory minimum wages, averages were developed based on rates in the collective agreements reported in Table 2. One exception was Austria, where the ‘coordinated’ floor of €1,500 was used.

Source: Eurofound calculations, based on the EU-SILC 2017

Table 7: Share of women among different sets of wage earners (%)

	Less than 90% of the minimum wage	90–110% of minimum wage	Above 110% of minimum wage	Share of women employees
Belgium	70.7	70.4	47.8	48.9
Bulgaria	53.4	51.4	48.8	49.0
Croatia	73.8	68.3	44.9	47.3
Czechia	70.0	78.2	45.7	47.1
Estonia	51.8	53.7	51.1	51.5
EU median	62.1	57.5	46.1	48.4
France	66.5	64.6	47.1	50.5
Germany	63.1	60.1	43.9	48.0
Greece	51.6	53.5	43.4	44.5
Hungary	47.1	53.8	46.1	47.3
Ireland	65.3	66.1	47.9	50.1
Latvia	64.7	63.3	49.9	51.9
Lithuania	59.2	55.2	51.0	52.4
Luxembourg	62.4	52.2	42.6	45.5
Malta	73.0	47.6	41.9	42.7
Netherlands	72.7	65.9	46.2	48.4
Poland	60.2	56.7	45.7	48.6
Portugal	67.0	62.4	47.3	51.0
Romania	46.9	53.6	41.8	43.1
Slovakia	64.2	69.6	46.3	48.5
Slovenia	62.0	53.8	45.9	47.0
Spain	62.2	53.8	46.4	47.8
United Kingdom	64.2	63.5	45.6	49.3
Countries without universal statutory minimum wages*				
Austria	61.3	58.0	43.5	46.1
Cyprus	58.1	57.0	43.8	47.8
Denmark	52.1	61.4	48.8	49.4
Finland	55.9	62.5	50.4	51.4
Italy	56.9	53.8	40.9	44.8
Sweden	56.9	55.7	47.3	49.4

Note: *For countries without statutory minimum wages, averages were developed based on rates in the collective agreements reported in Table 2. One exception was Austria, where the 'coordinated' floor of €1,500 was used.

Source: Eurofound calculations, based on the EU-SILC 2017.

Table 8: Overview of recent research on minimum wages

Focus of research	Country	Reference
Workers on the minimum wage: numbers, characteristics and trends	Belgium	Vandekerckhove (2019)
	Hungary	Portfolio (2019)
	Ireland	Callaghan and Vote (2018)
	Malta	Maltese Ministry for Finance (2017)
	Portugal	ILO (2018)
	Spain	Felgueroso and Jansen (2018)
Effect of minimum wages on employment	Belgium	Vandekerckhove et al (2018a)
	Germany	Bonin et al (2018); Bossler et al (2018); Bruckmeier (2018)
	Greece	Georgiadis et al (2017); Karakitsios (2016)
Effect of minimum wages on working hours	Germany	Bonin et al (2018); Destatis (2018)
	Ireland	McGuinness and Redmond (2018)
Effect of minimum wages on wage structure, spillovers and distributional effects	Belgium	Vandekerckhove et al (2018b)
	France	Fougère et al (2018) ; Gautier et al (2018)
	Germany	Caliendo et al (2018)
Effect of minimum wages on the economy	Spain	Archondo et al (2017)
How employers or employees react to changes in minimum wage rates	Germany	Koch et al (2018)
	Hungary	MKIK GVI (2018)
Living wages and in-work poverty	Czechia	TREXIMA and VŠE (2016)
	United Kingdom	Cribb et al (2018a)
Setting of the minimum wage	Germany	Schmid (2018)

Recent research on minimum wage

To complete this annual review of minimum wages, this section presents an overview of the most recent and policy relevant research on minimum wages in Europe (Table 8). This research looks at the following topics:

- the characteristics of workers who earn minimum wages
- the effect of minimum wages on employment
- the effect of minimum wages on working hours
- whether minimum wages affect other wages and if so, how

In particular, countries that have recently introduced or changed aspects of their minimum wage have undertaken significant evaluative research. For **Germany**, it has been established that the introduction of hourly minimum wages increased hourly wages, but not monthly earnings, and had no effect on other wages (Caliendo et al, 2018). This introduction also had a limited impact on employment as a whole, but reduced the working hours of those minimum wage earners who

used to work full-time (Bonin et al, 2018; Bossler et al, 2018). Additionally, it did not reduce the number of those needing to top up their pay (Bruckmeier, 2018).

When **Ireland's** 2016 rise of 6% was evaluated, it also revealed a negative impact on working hours. In particular, workers on temporary contracts were faced with an average weekly reduction of 3.5 working hours (McGuinness and Redmond, 2018).

For **Greece**, Karakitsios (2016) showed that the introduction of a youth minimum wage might have supported youth employment (of those aged 20–24), as their employment rates declined less sharply than those of older employees (aged 25–29).

For the **United Kingdom**, the recent introduction of the national living wage – a higher minimum wage for adult workers – was found to result in strong growth among the earnings of low-paid employees, though improvements in their average living standards have been much more modest. In addition, low-paid jobs such as receptionists or retail cashiers are now more likely to be subject to automation (Cribb et al, 2018b).

4 Summary and conclusions

Favourable economic context and public attitudes

It is not surprising that there were comparatively high nominal increases, and real increases, in the statutory minimum wage rates of many EU Member States from 2018 to 2019. The favourable economic climate, combined with continuing labour shortages in certain areas, increased the bargaining power of workers, made it more feasible for businesses to pay higher wages, and easier for the state to absorb potentially harmful employment effects for the most disadvantaged workers.

A more generally positive attitude to minimum wages was reflected in debates during 2018, where warnings from employer organisations about detrimental impacts on employment and competitiveness were perhaps less prevalent than in previous years. In addition, there was increased political support at national level for higher minimum wages, including pressure from the electorate, citizens' movements and, overall, stronger demands for higher pay.

Guiding principles in national debates

The reference in Principle 6 of the European Pillar of Social Rights to ensuring 'adequate minimum wages' likely further inspired many of the national debates in 2018. These debates covered subjects such as the role of minimum wages, their potential role in addressing in-work poverty, and how they should be set in the future.

Again, the Pillar's language of 'transparent and predictable setting' of minimum wages also informed the debate in 2018. While target-, rule- or formula-based approaches appear to offer an easy way to set minimum wages both transparently and predictably, all three still require that the parties involved agree on the mechanism and variables to be used. In addition, rules to correct the results are required when new economic or social developments arise, as is a degree of leeway to correct results that derive from statistical artefacts. This report shows that this is not an easy process: many Member States are currently struggling to set up or implement such mechanisms.

It is also worth remembering that purely formula-based approaches have been criticised in the past for being relatively rigid or too slow to react in times of economic crisis.²⁶ How the mechanisms being developed today will cope with future economic downturns remains to be seen.

The report also shows that countries are more likely to have either formulas or broad references to economic or social indicators in place to guide how minimum wage rates are adapted, rather than predefined relative targets in relation to their national median or average wages. In three out of the seven countries where such a target share is covered by legislation, it is a threshold that the minimum wage should not fall below, rather than an upward target.

Role of social partners in setting rates

Cyprus and Italy are in the process of debating whether or not to introduce a universal wage floor, while Greece, following the end of the Third Economic Adjustment Programme, for the first time implemented a new national process for minimum-wage setting which it had devised in 2012. In these countries, questions around the autonomy of the social partners and their role in the determination of the levels are regularly subject to intense debate.

Generally speaking, the involvement of social partners in the process of setting up mechanisms and adapting minimum wage rates is key, as purely technocratic solutions or unilaterally defined rates can be seen as undemocratic. Changing the rates of minimum wages can also have both positive and negative effects that need to be taken into account:

- **Positive:** may boost domestic demand and increase labour supply, could improve take-home pay of workers, potentially reduce levels of in-work poverty, and can encourage companies to opt for higher productivity paths.
- **Negative:** may cause some jobs to be destroyed, risks a reduction in working hours for employees – and therefore income – and may cause some sectors to lose their international competitiveness.

How such gains and losses are shared or compensated for are complex questions that go beyond the seemingly simple adaptation of annual minimum wage rates, or the introduction of a new rate or relative target.

26 For instance, there were calls to change automatic wage indexation during the 2008 financial and economic crisis (Eurofound, 2014).

Importance of purchasing power and net value of minimum wages

A report looking at convergence in Europe (Eurofound, forthcoming) confirms that, across the Member States, gross minimum wages in PPS have converged over the past two decades.²⁷ Much of the upward convergence from 2000 to 2017 was due to the gross minimum wages in central and eastern European countries growing faster than the EU average, particularly after the economic crisis.

In the context of international comparison, this report argues that the focus of the minimum wage debate should not only take the real values and the purchasing power of the minimum wage into account, but also the net value of minimum wages. There are two reasons for this.

- There are large differences in terms of the tax and social security contributions in each Member State, ranging from 4–6% in Belgium, Estonia and Ireland to almost 40% in Lithuania and Romania.
- Changes to the level of contributions might offset observed increases of the gross minimum wage, potentially leading to an overestimation of the observed reduction of disparities over time.

For example, four of the five countries with the highest percentage difference between the gross and net value of the minimum wage are in central and eastern Europe (Lithuania, Romania, Hungary and Czechia). Three of these countries had relatively recently altered their tax levels or social security contributions (shifting them from employers to employees – hence, from the employee’s perspective, an increase). However, these countries intended to compensate workers by increasing the gross minimum wage.

Overrepresentation of women among minimum wage earners

Based on data from the EU-SILC 2016 and 2017, analysed in the writing of this report, some 7.2% of workers are earning not more than the full adult minimum wage in the median EU Member State with a statutory minimum wage. The share of workers earning substantially less than the minimum wage (<90%) is highest in those countries with specific sub-minimum wages or other exceptions in place. But this cohort is also present in countries where the statutory minimum wage is a universal wage floor, suggesting that a certain level of non-compliance cannot be ruled out.

Breakdowns by gender show that women are overrepresented among minimum wage earners in nearly all Member States, irrespective of how minimum wage earners are defined. In the EU median country, according to calculations based on the EU-SILC 2017, the following findings apply:

- 48% of employees are women
- 46% of employees earning at least 10% more than the minimum wage are women
- 57% of employees earning 90–110% of the minimum wage are women
- 62% of those earning less than 90% of the minimum wage are women

An important question for policymakers is whether introducing or increasing minimum wage rates can help to narrow the gender pay gap. Recent research suggests that while this is a reasonable assumption, it could be hampered in practice by a number of factors, including the following:

- higher levels of non-compliance with minimum wage rates for women
- lower levels of ‘spill-over’ effects to higher wages for women than for men
- women’s employment decreasing more quickly than men’s following an increase in the minimum wage

Evidence-based setting of the rates is key

Setting a minimum wage rate and understanding the possible implications of changes to the rate is a complex process. The Eurofound series of annual reviews on minimum wages shows that research around the impact of minimum wages has been used to help set rates in countries where governments have involved social partners within sufficiently resourced expert committees in the process; importantly, the committees have been given a clear mandate to monitor and assess the social impacts of minimum wages. For countries where such participative processes are not in play and where rates are set more arbitrarily or in ad hoc negotiations, the amount and depth of policy-related research tends to be much less and evidence on the social impacts of previous changes in rates is limited.

27 It should be noted that the convergence was not ‘strict’, as some countries did not experience increases in the minimum wage.

Bibliography

Eurofound publications are available at www.eurofound.europa.eu

EU and international studies

Brandolini, A., Rosolia, A. and Torrini, R. (2010), 'The distribution of employees' labour earnings in the European Union: data, concepts and first results', in Atkinson, A. B. and Marlier, E. (eds.), *Income and living conditions in Europe*, Eurostat Statistical Books, Publications Office of the European Union, Luxembourg, p. 265–288.

Eurofound (2014), *Changes to wage-setting mechanisms in the context of the crisis and the EU's new economic governance regime*, Dublin.

Eurofound (2018a), *Developments in collectively agreed pay 2000–2017*, Publications Office of the European Union, Luxembourg.

Eurofound (2018b), *Concept and practice of a living wage*, Publications Office of the European Union, Luxembourg.

Eurofound (2018c), *Upward convergence in the EU: Concepts, measurements and indicators*, Publications Office of the European Union, Luxembourg.

Eurofound (2018d), *EurWORK database of wages, working time and collective disputes*, web page, available at <https://www.eurofound.europa.eu/observatories/european-observatory-of-working-life-eurwork/database-of-wages-working-time-and-collective-disputes>, accessed 15 March 2019.

Eurofound (2019), *Seniority based entitlements: Extent, policy debates and research*, Publications Office of the European Union, Luxembourg.

Eurofound (forthcoming), *Progress on convergence in employment and the socioeconomic area*, Publications Office of the European Union, Luxembourg.

European Commission (2016), *Labour market and wage developments in Europe: Annual Review 2016*, Directorate-General for Employment, Social Affairs and Inclusion.

European Commission (2015), *The interaction between minimum wages, income support, and poverty*, research note 10/2015, Social Situation Monitor, Brussels.

European Commission (2017), *European Pillar of Social Rights*, Publications Office of the European Union, Luxembourg.

Eurostat (2019), *Comparative price levels of consumer goods and services*, web page, accessed 22 March 2019.

Goraus-Tańska, K. and Lewandowski, P. (2018), 'Gender dimension of minimum wage non-compliance', conference paper, IZA World Labour Conference 2018, 28–29 June 2018, Berlin, Germany.

Kahn, L. (2015), *Wage compression and the gender pay gap*, IZA World of Labor, IZA Institute of Labor Economics, Bonn, Germany.

Kampelmann, S., Garnero, A. and Rycx, F. (2013), *Minimum wages in Europe: Does the diversity of systems lead to a diversity of outcomes?*, ETUI Report 128, European Trade Union Institute.

OECD (undated), *Minimum relative to average wages of full-time workers*, web page, accessed 21 March 2019.

Rubery, J., Grimshaw, D. and Figueiredo, H. (2005), 'How to close the gender pay gap in Europe: Towards the gender mainstreaming of pay policy', *Industrial Relations Journal*, Vol. 36, No. 3, pp. 184–213.

National studies

Austria

AK and OGB (eds.) (2017), '€1,700 – Schwerpunkt Mindestlohn', *Arbeit und Wirtschaft*, No. 3, available at <http://arbeit-wirtschaft.at/wp-content/uploads/2018/11/ausgabeapril2017.pdf>, accessed 15 March 2019.

Belgium

Vandekerckhove, S. (2019), *Minimum wage work in Belgium*, HIVA Working Paper, KU Leuven, Belgium, forthcoming.

Vandekerckhove, S., Van Gyes, G. and Goos, M. (2018a), *Minimum wages and low-wage work in Belgium: an exploration of employment effects and distributional effects*, Ipswich Working Paper No. 6, KU Leuven, Belgium, p. 29.

Vandekerckhove, S., Goos, M. and Lenaerts, K. (2018b), *The institutional pull towards intersectoral wage convergence*, Ipswich Working Paper No. 7, KU Leuven, Belgium.

Bulgaria

European Commission (2018), *Recommendation for a Council recommendation on the 2018 National Reform Programme of Bulgaria and delivering a Council opinion on the 2018 Convergence Programme of Bulgaria*, COM(2018) 402 final, Brussels.

Croatia

Government of Croatia (2013), *Zakon o minimalnoj placi*, Official Gazette No. 39/13, Zagreb.

Mrnjavac, Ž. and Blažević, S. (2014), 'Is minimum wage a good policy for poor workers in Croatia?', *Management: Journal of Contemporary Management Issues*, Vol. 19, No. 1, pp. 17–43.

Czechia

SUIP (Státní úřad inspekce práce) (2018), *Roční souhrnná zpráva o výsledcích kontrolních akcí za rok 2017*, SUIP, Opava, Czechia.

TREXIMA and VŠE (2016), *Minimální mzda a životní úroveň zaměstnanců*, Prague.

Denmark

Arbejdsretten (undated), *Årsberetning 2017*, web page, available at <http://arbejdsretten.dk/generelt/publikationer/aarsberetninger/aarsberetning-2017.aspx>, accessed 15 March 2019.

Finland

Ahtiainen, L. (2016), *Työehtosopimusten kattavuus vuonna 2014*, Ministry of Employment and the Economy, Helsinki.

France

Aeberhardt, R., Givord, P. and Marbot, C. (2016), *Spillover effect of the minimum wage in France: An unconditional quantile regression approach*, *Série des Documents de Travail*, No. 2016-05, Center for Research in Economics and Statistics (CREST), Palaiseau, France.

Cette, G., Garnero, A., Mejean, I., Villeval, M-C., Zylberberg, A., Pele, L-P, et al (2018), *Salaire minimum interprofessionnel de croissance*, Rapport du groupe d'experts, available at <https://www.tresor.economie.gouv.fr/Articles/284b121f-b187-4280-b327-05f18064c3fa/files/e74d03a9-feb8-4d37-882e-df0071013d2f>, accessed 15 March.

Fougère, D., Gautier, E. and Roux, S. (2018), 'Understanding wage floor rigidity in industry-level agreements: Evidence from France', *Labour Economics*, Volume 55, pp. 72–97.

Gautier, E., Roux, S. and Suarez-Castillo, M. (2018), 'Le rôle des accords collectifs sur la dynamique des salaires', *Emploi, chômage, revenus du travail*, Insee, pp. 27–38.

INSEE (Institut national de la statistique et des études économiques) (undated), *Professionalisation contract*, web page, accessed 27 March 2019.

Germany

Bonin, H., Isphording, I., Krause-Pilatus, A., Lichter, A., Pestel, N., Rinne, U. et al (2018), *Auswirkungen des gesetzlichen Mindestlohns auf Beschäftigung, Arbeitszeit und Arbeitslosigkeit*, IZA Research Report No. 83, IZA Institute of Labor Economics, Bonn, Germany.

Bossler, M., Gürtzgen, N., Lochner, B., Betzl, U., Feist, L. and Wegmann, J. (2018), *Auswirkungen des gesetzlichen Mindestlohns auf Betriebe und Unternehmen*, Mindestlohnkommission, Germany.

Bruckmeier, K. (2018), *Auswirkungen des Mindestlohns auf die Armutsgefährdung und die Lage von erwerbstätigen ALG II-Bezieherinnen und -Beziehern*, Mindestlohnkommission, Germany.

Caliendo, M., Schröder, C., Obst, C., Preuss, M., Buraue, P. and Grabka, M. M. (2018), *Auswirkungen des gesetzlichen Mindestlohns auf die Lohnstruktur*, Mindestlohnkommission, Germany.

Destatis (2018), *Verdiensterhebung 2017: Erhebung über die Wirkung des gesetzlichen Mindestlohns auf die Verdienste und Arbeitszeiten der abhängig Beschäftigten*, Statistisches Bundesamt, Wiesbaden, Germany.

Koch, A., Kirchmann, A., Reiner, M., Scheu, T., Boockmann, B. and Bonin, H. (2018), *Verhaltensmuster von Betrieben und Beschäftigten im Zuge der Einführung des gesetzlichen Mindestlohns*, IZA Research Report No. 84, IZA Institute of Labor Economics, Bonn, Germany.

Pusch, T., (2018), 'Bilanz des gesetzlichen Mindestlohns: deutliche Lohnerhöhungen, aber auch viele Umgehungen', *Wirtschaftsdienst*, Vol. 98, No. 4, pp. 252–259.

Schmid, G. (2018), 'Mindestlohn – ein gerechter Lohn? Plädoyer für einen Autonomie stärkenden Mindestlohn', *WISO Diskurs*, No. 16, Friedrich Ebert Stiftung, Bonn, Germany.

Greece

Georgiadis, A., Kaplanis, I. and Monastiriotis, V. (2018), *Greece after the bailouts: The impact of the minimum wages on wages and employment – evidence from Greece*, *GreeSE – Hellenic Observatory Papers on Greece and Southeast Europe* 131, Hellenic Observatory, LSE.

Karakitsios, A., (2016), *The effect of subminimum wage introduction on employment in Greece*, Athens University of Economics and Business.

Hungary

Hungarian Labour Inspectorate (2018), *A Pénzügyminisztérium Foglalkoztatás-felügyeleti Főosztályának jelentése – a munkaügyi hatóság 2018. I-III negyedévi ellenőrzési tapasztalatairól*, Ministry of Finance, Budapest.

MKIK GVI (2018), *A minimálbér és a garantált bérminimum emelésére adott vállalati válaszok: Egy vállalati felmérés tapasztalatai*, Budapest.

Portfolio (2019), *Sosem látott számok: kiderült, mennyien dolgoznak minimálbérért Magyarországon*, 7 January.

Ireland

Callaghan, N. and Vote, D. (2018), *Social impact assessment 2018: National minimum wage*, Irish Government, Dublin.

McGuinness, S. and Redmond, P. (2018), *Estimating the effect of an increase in the minimum wage on hours worked and employment in Ireland*, IZA Discussion Paper, No. 11632, IZA Institute of Labor Economics, Bonn, Germany.

Workplace Relations Commission (2017), *Annual report 2017*, Ireland.

Ireland/United Kingdom

Bargain, O., Doorley, K. and Van Kerm, P. (2018), 'Minimum wages and the gender gap in pay: New evidence from the United Kingdom and Ireland', *The Review of Income and Wealth*.

Doorley, K. (2018), *Minimum wages and the gender gap in pay*, ESRI Research Bulletin, Economic & Social Research Institute, Dublin.

Italy

Confindustria, CGIL, CISL and UIL (2018), *Contenuti e indirizzi delle relazioni industriali e della contrattazione collettive di Confindustria e Cgil, Cisl, Uil*, Italy.

Garnero, A. (2018), 'The dog that barks doesn't bite: Coverage and compliance of sectoral minimum wages in Italy', *IZA Journal of Labor Policy*, Vol. 7, No. 1, p. 3.

Lega Nord and the Five Star Movement (2018), *Contratto per il governo del cambiamento*, Government of Italy, Rome, available at http://www.ansa.it/documents/1526568727881_Governo.pdf, accessed 18 March 2019.

Lithuania

VDI (Valstybinė darbo inspekcija) (2017), *VDI primena: minimali alga – tik už nekvalifikuotą darbą*, web page, accessed 18 March 2019.

Luxembourg

OGBL (2018), '10%+ salaire social minimum', *Dossier*, No. 1.

The Socioeconomist (2018), *Série "Au programme" (4/4) – Salaire minimum : vers un 'coup de pouce' de 100 euros?*, 12 October.

Malta

Maltese Ministry for Finance (2017), *Pre-budget document 2018 – Upgrading Malta's infrastructure*, Valletta.

Norway

Bjørnstad, R. (ed.) (2015), *Virkninger av allmenngjøring av tariffavtaler*, Report No. 2, Center for Wage Formation, Oslo.

Nergaard, K. (2018), *Organisasjonsgrader, tariffavtaledekning og arbeidskonflikter 2016/2017*, Fafo-notat 2018, No. 20, Fafo Research Foundation, Oslo.

Trygstad, S. C., Andersen, R. K., Jordfald, B. and Nergaard, K. (2018), *Renholdsbransjen sett nedenfra*, Fafo-rapport 2018, No. 26, Fafo Research Foundation, Oslo, available at <https://www.fafo.no/images/pub/2018/20675.pdf>, accessed 15 March 2019.

Poland

Majchrowska, A. and Strawiński, P. (2018), 'Impact of minimum wage increase on gender wage gap: Case of Poland', *Economic Modelling*, Vol. 70, pp. 174–185.

Portugal

ILO (2018), *Decent work in Portugal 2008–18: From crisis to recovery*, International Labour Office, Geneva, Switzerland, pp. 124–127.

Romania

CES Romania (2018), *Aviz referitor la proiectul de Hotărâre a Guvernului pentru stabilirea salariului de bază minim brut pe țară garantat în plată*, available at <http://www.ces.ro/newlib/PDF/avize/2018/Avize-Plen-CES-05-12-2018.pdf>, accessed 18 March 2019.

Inspectia Muncii (2018), *Rezultatele oficiale ale Campaniei Naționale din perioada aprilie – iunie 2018, privind verificarea modului în care angajatorii au aplicat prevederile legale, legate de modificarea salariului brut în contextul transferului contribuțiilor sociale obligatorii de la angajator la angajat*, press release, Bucharest, 12 July.

Ziarul Financiar (2018), *Ministrul Finanțelor propune eliminarea salariului minim, patronatele îl sprijină*, 6 August.

Spain

Archondo, I., García, J. R. and Ulloa, C. (2017), *Repercusiones del aumento del salario mínimo en España*, Observatorio Económico España, BBVA, Bilbao, Spain.

Felgueroso, F. and Jansen, M. (2018), *Aumento del salario mínimo: datos para el debate*, Fedea Economy Notes No. 2018-02, FEDEA, Madrid.

Sweden

Kjellberg, A. (2018), 'Kollektivavtalens täckningsgrad samt organisationsgraden hos arbetsgivarförbund och fackförbund', *Studies in Social Policy, Industrial Relations, Working Life and Mobility*, No. 1, Lund University, Lund, Sweden.

United Kingdom

Cribb, J., Keiller, A. N. and Waters, J. (2018a), *Living standards, poverty and inequality in the UK: 2018*, Institute for Fiscal Studies, London.

Cribb, J., Keiller, A. N. and Joyce, R. (2018b), *Will the rising minimum wage lead to more low-paid jobs being automated?*, Institute for Fiscal Studies, London.

Dex, S., Sutherland, H. and Joshi, H. (2000), 'Effects of minimum wages on the gender pay gap', *National Institute Economic Review*, Vol. 173, No. 1, pp. 80-88.

LPC (Low Pay Commission) (2017), *Non-compliance and enforcement of the national minimum wage: September 2017*.

Mor, F. and Brown, J. (2018), *Workers underpaid the minimum wage*, Briefing Paper No. 8235, House of Commons Library, UK Parliament, London.

Annex

Table A1: Sources and reference periods of gross/net minimum wage calculations

Country	Source
Austria	https://bruttonetto.arbeiterkammer.at/
Belgium	http://tools.kluwer.be/Bruto-Netto/ http://www.sd.be/loonsimulator/public/?lang=NL
Bulgaria	http://www.calculator.bg/1/zaplata_bruto_netto.html
Croatia	https://www.isplate.info/kalkulator-place-2019.aspx
Cyprus	n.a.
Czechia	https://www.penize.cz/kalkulacky/vypocet-ciste-mzdy#mzda ; https://www.vypocet.cz/cista-mzda
Denmark	n.a.
Estonia	https://www.kalkulaator.ee/et/palgakalkulaator
Finland	https://www.tax.fi/taxcalculator
France	http://www.service-public.fr
Germany	https://www.brutto-netto-rechner.info/
Greece	https://www.kepea.gr/article.php?cat=15 https://aftertax.gr/
Hungary	https://officina.hu/gazdasag/196-minimalber-2019
Ireland	https://salaryaftertax.com/ie
Italy	https://salaryaftertax.com/it
Latvia	https://blog.swedbank.lv/kalkulatori/darba-algas-kalkulators
Lithuania	https://www.tax.lt/skaiciuokles/atlyginimo_ir_mokesciu_skaiciuokle
Luxembourg	https://reforme-fiscale.public.lu/fr/personnes-physiques/calculatrice-fiscale.html
Malta	http://maltasalarycalculator.com
Netherlands	https://www.berekenhet.nl/werk-en-inkomen/nettoloon-2018.html
Poland	https://wynagrodzenia.pl/kalkulator-wynagrodzen
Portugal	https://www.economias.pt/calculo-do-salario-liquido/
Romania	http://www.calculatorsalariu.ro/salariul-minim-pe-economie
Slovakia	https://podnikam.sk/kalkulacky/vypocet-cistej-mzdy-cena-prace/
Slovenia	http://www.mddsz.gov.si/si/medijsko_sredisce/novica/8536/ https://www.uradni-list.si/glasilo-uradni-list-rs/vsebina/2018-01-4067/zakon-o-spremembah-zakona-o-minimalni-placi-zminp-b
Spain	https://www.ccoo-servicios.es/aliseda/html/39369.html
Sweden	https://statsskuld.se/en-sv/jobs/berakna-nettolon
United Kingdom	https://www.gov.uk/estimate-income-tax

Table A2: Sources of collective agreements in countries without a statutory minimum wage

Country	Workers or activities covered by collective agreement	Source
Austria	Construction and trade	https://www.kollektivvertrag.at/kv/bauindustrie-und-baugewerbe-arb/bauindustrie-und-baugewerbe-rahmen/2966830
	Metalworking	https://www.gpa-djp.at/cms/A03/A03_2.3.201.b/kollektivvertrag/alle-branchen/metal/bergbau-stahl/kollektivvertrag?dokid=430994&dokset=236
	White-collar workers in commerce	https://www.kollektivvertrag.at/kv/handelsangestellte-ang
	White-collar workers in commerce	https://www.kollektivvertrag.at/kv/handelsangestellte-ang/handelsangestellte-rahmen/271651
	Blue-collar HORECA workers	https://www.kollektivvertrag.at/kv/hotel-gastgewerbe-arb/hotel-gastgewerbe-rahmen/200588
	Florists and retail of flowers (blue-collar workers)	https://www.kollektivvertrag.at/kv/floristen-und-blumeneinzelhaendler-arb
	Taxi drivers (blue-collar workers)	https://www.kollektivvertrag.at/kv/personenbefoerungsgewerbe-mit-pkw-taxi-ang/personenbefoerungsgewerbe-mit-pkw-taxi-rahmen/260460?term=pkwtaxi
	Cinemas in Tyrol	https://www.kollektivvertrag.at/kv/lichtspieltheater-t-arb/kinobetriebe-rahmen/4188851
	Dispatch department workers	https://www.kollektivvertrag.at/kv/expeditarbeiter-arb/expeditarbeiter-beilage-lohn-gehalt/223380
	Furriers, gloves, tanners, etc. (blue-collar workers)	https://www.kollektivvertrag.at/kv/kuerschner-handschuhmacher-gerber-arb
Denmark	Municipal agreement	https://www.kl.dk/arbejdsgiver/overenskomster-og-aftaler/overenskomstforhandling-2018/
	Industrial agreement (2017–2020)	http://www.co-industri.dk/Delte%20dokumenter/371648_CO_indhold_bog_Industris_low.pdf
	HORESTA	https://www.horesta.dk/media/2168/hotel_fast290517_final.pdf
	Construction	https://www.3f.dk/fagforening/fag/anlaegsstruktoer-(byggeri)/bygge-og-anlaegsoverenskomsten
	Retail (2017–2020)	https://www.danskerhverv.dk/siteassets/mediafolder/downloads/overenskomster-2017-2020/butiksoverenskomsten-2017-2020
	Industrial cleaning	https://www.3f.dk/fagforening/fag/rengoeringsassistent-(privatansat)/serviceoverenskomsten-sba
Finland	Teachers in the municipal sector	https://www.kt.fi/sopimukset/ovtes/2018
	Hotel, restaurant and leisure	http://netpaper.lonnberg.fi/pam/tes-fi/marava/mobile/index.html
	Collective agreement between the Technology Industries of Finland and the Industrial Union	https://www.verkkotes.fi/
	Building construction	https://rakennusliitto.fi/wp-content/uploads/2018/06/Talonrakennusalan-ty%C3%B6ehtosopimus-1.5.2018-30.4.2020.pdf
	Facilities services	http://netpaper.lonnberg.fi/pam/tes-fi/kiinteistopalvelualan/mobile/index.html
	Commercial	http://netpaper.lonnberg.fi/pam/tes-fi/kaupan/mobile/index.html
	Hotel, restaurant and leisure	Not available online
	Municipal sector general collective agreement	https://www.kt.fi/sopimukset/kvtes/2018
Italy	Agriculture	https://www.cnel.it/Archivio-Contratti/Contrattazione-Nazionale/Archivio-Corrente
	Secular private schools	http://www.flcgil.it/contratti/documenti/scuola-non-statale/ccnl-agidae-2016-2018-del-7-luglio-2016.flc
	Cleaning	http://www.filcams.cgil.it/impresedi-pulizia-multiservizi-ccnl-1-01-2010-30-04-2013-impresedi-industriali-e-cooperative-testo-ufficiale/?size=x
	Consultancy firms	http://www.filcams.cgil.it/studi-professionali-ipotesi-contratto-collettivo-nazionale-17042015/?size=x
	Social welfare services	https://www.fpcgil.it/linkres.php?obj=/flex/cm/pages/ServeAttachment.php/L/IT/D/8%252Fe%252F1%252FD.1accf3a8d2a792704a3b/P/BLOB%3AID%3D735/E/pdf

Country	Workers or activities covered by collective agreement	Source
Italy (cont'd)	Retail	http://www2.filcams.cgil.it/info.nsf/0/E61760E9FA127C33C1257E19004728E6/\$file/CCNLTDs%20IpotesiAccordo300315.pdf?OpenElement
	Metalworking	https://www.federmeccanica.it/relazioni-industriali/contratto-collettivo-nazionale-di-lavoro-ccnl.html
	Public schools	http://3.flcgil.stgy.it/files/pdf/20180419/ccnl-istruzione-e-ricerca-2016-2018-del-19-aprile-2018.pdf
	Banks	http://www.fisac-cgil.it/wp-content/uploads/2016/06/CCNL-ABI-31-marzo-2015.pdf
	Agriculture	https://www.cnel.it/Archivio-Contratti/Contrattazione-Nazionale/Archivio-Corrente
Norway	Construction	http://tariffavtaler.nho.no/getfile-english.php?TA_Radnr=13956
	Finance	https://www.finansnorge.no/siteassets/arbeidsgiver/avtaleverk/sentralavtale_2018_2020_finansnorge-finansforbundet.pdf
	State employees	https://www.regjeringen.no/contentassets/43efadcb4e394a5fa57176b00f7b07ea/2018/hovedtariffavtalen_2018-20_lostat_unio_ysstat.pdf
	Manufacturing agreement	https://lovdata.no/dokument/TARO/tariff/taro-2018-1/*#*
	Municipalities	https://www.regjeringen.no/contentassets/43efadcb4e394a5fa57176b00f7b07ea/2018/hovedtariffavtalen_2018-20_lostat_unio_ysstat.pdf
	Cleaning companies	http://tariffavtaler.nho.no/getfile-english.php?TA_Radnr=13993
	Security guards	http://tariffavtaler.nho.no/getfile-english.php?TA_Radnr=14003
	Hotels and restaurants	https://www.nhoreiseliv.no/contentassets/3b3a903b8ed84576a60df30606b3fe5b/riksavtalen-2018---2020.pdf
	Commerce	https://www.virke.no/globalassets/tariff-og-lonn/tariffavtaler-dokumenter-for-tariff-og-lonn/landsoverenskomsten-virke---hk-2018-2020.pdf
	Petrol stations	https://www.virke.no/globalassets/tariff-og-lonn/tariffavtaler-dokumenter-for-tariff-og-lonn/bensinstasjonsoverenskomsten-virke-hk-2018-2020.pdf
Sweden	Construction	https://www.byggnads.se/siteassets/kollektivavtal/byggavtalet-2017.pdf
	Retail	https://www.hrf.net/lon-och-villkor/din-lon/minimilon-for-lonegrupp-2/
	Manufacturing	http://verkstadsklubben.se/wp-content/uploads/2017/06/Teknikavtalet_2017.pdf
	Municipality and county councils, the main agreement (HÖK number 16).	Not available online
	HORECA	https://www.hrf.net/lon-och-villkor/din-lon/minimilon-for-lonegrupp-2/
	White-collar workers in ports, and on planes and buses	https://www.unionen.se/sites/default/files/files/loneavtal_transportgruppen_2017-2020.pdf
	Maintenance in NGOs	https://www.fastighets.se/Kollektivavtal/vara-kollektivavtal/arbetsgivaralliansen-ideella-och-ideburna-organisationer/
	Staff in private dental clinics, excluding doctors and nurses	https://www.unionen.se/sites/default/files/files/1111_loneavtal_2017-2020.pdf
	Hairdressers	https://handels.se/pa-jobbet/lagstaloner/s://handels.se/pa-jobbet/lagstaloner/
	Beauty salon workers	https://handels.se/pa-jobbet/lagstaloner/
	Construction	https://www.byggnads.se/siteassets/kollektivavtal/byggavtalet-2017.pdf

Table A3: Lowest minimum rates in large or largest sectoral collective agreements

Collective agreement	Workers covered	Nominal minimum wage	Converted* (per month)
Austria (14 payments per annum)			
White-collar workers in commerce	Unskilled workers	€1,572 per month	€1,834
Blue-collar workers in commerce	Unskilled workers	€1,535 per month	€1,791
Metalworking industry	Unskilled workers	€1915 per month	€2,234
Construction industry and trades	Unskilled manual worker	€11.09 per hour	€1,874
Blue-collar HORECA workers	Unskilled manual worker	€1,500 per month	€1,750
Denmark (12 payments per annum)			
Industrial agreement 2017–2020	Mainly industrial employees and employees in transport, but also service sector employees	DKK 118 per hour**	€2,533
Municipal agreement	Wage level 9, group 0 (e.g. home helpers)	DKK 121 per hour	€2,598
Finland (12.5 payments per annum)			
Commerce sector	Unskilled, non-trainee	€1,652 per month	€1,720
Municipal sector (General CA)	Interns/trainees without a degree or relevant work experience	€1,570 per month	€1,635
Teachers in the municipal sector	Pre-primary teachers without a degree	€1,907 per month	€1,986
Collective agreement between the Technology Industries of Finland and Industrial Union	Lowest job requirements category	€1,555 per month	€1,620
Hotel, restaurant and leisure industry	Employees with 0–2 years of experience	€1,599 per month	€1,666
Italy (13 payments per annum for social welfare and secular schools, 14 for others)			
Retail sector	Blue-collar workers	€22,634 per year	€1,886
Metalworking	Blue-collar workers	€23,670 per year	€1,973
Public schools	White-collar workers	€26,739 per year	€2,228
Banks	White-collar workers	€39,559 per year	€3,297
Agriculture	Blue-collar workers	€17,703 per year	€1,475
Sweden (12 payments per annum)			
SKL/Kommunal. HÖK 16	Employees (aged 19 and over)	SEK 18,700 per month	€1,824
Retail sector	Employees (above 20 years of age, unskilled without experience, wage group 2)	SEK 21,482 per month	€2,095
Manufacturing industry	Workers (aged 18 and over)	SEK 20,161 per month	€1,966
Construction sector	Construction workers (first year of employment)	SEK 27,144 per month	€2,647
HORECA sector	–	SEK 16,598 per month	€2,211

Notes: *Figures have been rounded. Monthly earnings are converted to 12 monthly gross payments, not taking into account any more favourable taxation that might arise for the additional annual payments. **Figures correct as at 25 March 2019.

Source: Network of Eurofound Correspondents.

Table A4: Fixed formulas for determining level of change, as well as predefined targets

	Formulas/rules	Predefined relative targets
Belgium	The change can be either determined based on inter-professional negotiations or by a pivot index. For the calculation of the index, a number of essential products and services are monitored. If their prices exceed a certain level, life is deemed to have become more expensive and an index is applied to alleviate this increase in living costs.	
Bulgaria	There are ongoing debates about the introduction of formulas.	The Midterm Budget Forecast of the Ministry of Finance stated that the minimum wage should be BGN 510 in 2018 (€260.78), BGN 560 in 2019 (€286.32) and BGN 610 in 2020 (€311.89).* No explanation was given about how these forecasted rates had been calculated, which led the European Commission to criticise the wage setting mechanism as inexplicit and non-transparent in its 2016–2018 country specific recommendations for Bulgaria.
Croatia	The new minimum wage act (which has not yet been published in the Official Gazette) introduces criteria for determining the minimum wage. Article 6, paragraph 3 stipulates: <i>The Minister, having in mind the increase in the share of the minimum wage share in average gross earnings paid into legal entities from January to July of the current year, taking into account inflation, wage trends, unemployment and employment trends, demographic trends and the state of the economy in total, paying particular attention to low-wage and vulnerable groups of employees after consultation with the social partners, proposes to the Government of the Republic of Croatia the amount of the minimum wage.</i>	The minimum wage level is determined every year by the government, following a proposal from the Minister of Labour and Pension System and consultation with social partners ‘bearing in mind the increase of the share that the minimum wage holds in the average wage’ (Government of Croatia, 2013, article 7). There has been a proposition by the trade unions to gradually increase the minimum wage to the desired ratio of 50% of the average wage in the next three years, but it has not been accepted.
Cyprus	The determination of the statutory occupational minimum wages takes into consideration the inflation rate, the wage growth and the median wage. During the financial and economic crisis (2013–2017), the occupational minimum wages remained frozen at the 2012 level and so no calculations were made.	In 2003, the Council of Ministers defined a target: the minimum wages should be gradually increased to 50% of the median wage by 2008. In reality, the minimum wage was set at a level slightly over the 50% threshold of the median wage by 2008. The minimum wage was also set above the 50% threshold from 2008 to 2012. However, due to the financial and economic crisis, it remained frozen at the 2012 level during 2013–2017. Despite this, it is believed (in the absence of statistics) that the minimum wage remained over 50% of the median wage throughout 2013–2017 due to general wage cuts that occurred during this period.
Czechia	No predefined formula (or algorithm) exists in Czechia. A future algorithm has been under discussion since 2017 and is due to be debated further in 2019. In its proposal, the Ministry of Labour and Social Affairs (MoLSA) takes into account the development of the average monthly nominal wage, the inflation rate, the development of employment in the national economy and the unemployment rate.	The predefined objective is to maintain a minimum wage of 40% of the average nominal wage in the national economy. This target was agreed in tripartite negotiations that took place in 2017 and is recognised by all sides of social dialogue. The RSHD ČR (i.e. those involved in tripartite negotiations and the MoLSA), as the competent authority as well as the party that proposes the minimum wage level, monitors and assesses this objective on an ongoing basis. However, this target will not be reached for 2018 due to the rapid increase in nominal wages. The share stood at 37.3% in 2017 and 38.7% as of Q3 2018 (i.e. the minimum wage valid in 2018 divided by CZK 31,516 (€1,223)).
Germany	The calculated change is based on the increases observed within a specific number of collective agreements in the preceding 6–12 months.	
Estonia	The basis for the minimum wage increase is twice the projected increase of labour productivity (based on the forecast from the Bank of Estonia). However, the increase cannot be higher than twice the foreseen real economic growth and the new level of minimum wage cannot be lower than 40% of the foreseen national average wage.	In 2017, social partners agreed that the minimum wage could not be lower than 40% of the foreseen national average wage.

	Formulas/rules	Predefined relative targets
France	There is an automatic indexation rule, which is based on both the increase in inflation and half of the purchasing power of the base hourly wage of blue- and white-collar workers.	
Greece	The legislation on minimum wages (Law 4172/13 and Law 4564/18) only provides general guidelines on what should be taken into account when setting a minimum wage (e.g. the state of the Greek economy and its prospects for growth).such as <i>'the situation of the Greek economy, its prospects for growth in terms of productivity, prices, and competitiveness, employment, rate of unemployment, income and purchasing power'</i> . There is no constituted or agreed specification on the above variables or factors.	
Ireland	According to the Minimum Wage Act 2015, the LPC shall take the following into account when setting the minimum wage level: <ul style="list-style-type: none"> • changes in earnings, currency exchange rates and income distribution • whether unemployment/employment and productivity have been increasing or decreasing (both generally and in the sectors most affected) • changes in earnings during the relevant period • international comparisons, particularly with Great Britain and Northern Ireland • the need to create jobs • the likely effect that any proposed order will have on levels of employment, unemployment, the cost of living, and national competitiveness 	No specific target, but the changes to the 'income distribution' in the list of factors that the Low Pay Commission has to have regard to, indirectly also points to such a relative, yet not further specified, target.
Lithuania	-	At the meeting of the Tripartite Council of the Republic of Lithuania on 21 September 2017, it was unanimously agreed by representatives of the government, employers and employees that the minimum wage level should be linked to the average wage and account for 45-50% of the same in Lithuania. A specific ratio should be fixed based on the average of the four EU countries with the largest gap between minimum wage and average wage, but the ratio of 45-50% should be maintained.
Luxembourg	<p>1) Adjustment of social minima</p> <p>With other social minima, the minimum wage can be adjusted every two years according to the evolution of the average level of remuneration. When the average level of remuneration has increased relative to the minimum social wage, the level of the minimum wage can be raised to partially or completely fill this gap. For this purpose, the government is obliged to submit a report every two years to the Chamber of Deputies on the evolution of general economic conditions and incomes. The employer must, where appropriate, increase the wages of employees paid at the minimum wage by the new rate.</p> <p>2) Salary indexation</p> <p>Wages, salaries and social benefits (including the minimum wage) are indexed to the trend of the cost of living. When the consumer price index increases or decreases by 2.5% in the previous semester, the treatments are in principle adjusted in the same proportions. The consumer price index and its impact on the sliding wage scale are published monthly by the National Institute of Statistics and Economic Studies (Statec). The employer must, if necessary, increase the wages of all employees by 2.5%.</p>	<p>So far, there is no consensus on a binding reference value for minimum wage fixing, but ongoing debates. The minimum wage was introduced by Grand-Ducal Decree of 30 December 1944 at the request of the workers' group of the National Labor Conference.</p> <p>The purpose of this decree is as follows: 'Considering that, in the interest of economic order and social peace, pending the fixing of wages by collective agreement or otherwise, the salaries considered indispensable for to allow workers to purchase essential items and the housing necessary to maintain an adequate standard of living.'</p>

	Formulas/rules	Predefined relative targets
Malta	The minimum wage is adjusted annually on the basis of the cost of living adjustment (COLA). The latter is determined by the change in the retail price index (12-month moving average rate). This percentage is applied to a weekly base rate that was set in 1990 and that has increased every year by the amount of COLA. The result is rounded and reduced by the amount of social benefits that the state may grant during the year (commencing on the effective date of the cost of living increase).	
Netherlands	The Dutch Central Planning Agency (CPB) applies a standard formula, which is also based on predicted wage developments for the next six months, and uses that to establish the new minimum wage (among others). A basket of collectively agreed wages is part of the equation.	
Poland	see 'Predefined relative target' cell.	The rule provided by the law is as follows: If, in the year in which the negotiations within the Social Dialogue Council take place, the minimum wage will be less than half of the level of average salary, the degree of its growth is increased in addition by 2/3 of the forecast real growth rate of output GDP growth.
Portugal	There is no system of indexation, but the minimum wage increase takes into consideration inflation, productivity growth and wage growth. It also aims to promote purchasing power and combat in-work poverty and social exclusion.	The programme of the Socialist Party government, and the parliamentary commitments between the Socialist Party and the left parties, established goals for a minimum wage trajectory (2016–2019) with the objective of reaching €600 in 2019.
Romania	No major change to report, as in 2018. The minimum wage has been determined by the same mechanism since 2000. The increase is usually established arbitrarily by the government, after formal consultations with social partners. It is based on economic development, and social and economic objectives (e.g. reducing in-work poverty, and increasing labour participation and social equity – as mentioned in the government's programme for 2018–2020). Regarding the European Commission's country specific recommendations on establishing a transparent mechanism for setting the minimum wage, there is a lack of consensus between social partners, a committee of independent experts and the government. Negotiations have been suspended since 2017.	
Slovenia	An agreement on implementing a new formula-based approach has been reached. From 2021 onwards, the adjustment will be predominantly linked to the minimum living costs (and, to some extent, inflation, wages, employment and GDP growth may be taken into account). From January 2020, all allowances will be exempt from the minimum wage.	No target in relation to wages, but: the minimum wage amount should surpass the level of minimum living costs by 20–40%.
Spain		There is no predefined relative target level. In 2018, the level discussed in the negotiations with the left-wing political party Podemos was €1,000 per month. This was then reduced to €900 in an agreement reached with the party in October 2018.
United Kingdom	The government's remit for the LPC's 2019 recommendations asked it to take into account the state of the economy, employment and unemployment levels, and relevant policy changes (in addition to the target of 60% of median earnings in 2020).	When the national living wage was introduced in 2016, the government set a target for its rate to reach 60% of median earnings in 2020, subject to sustained economic growth. This target has been maintained since then.

Notes: *Figures correct as at 25 March 2019.

Source: Network of Eurofound Correspondents.

Table A5: Proportion of employees in different subsets of the wage distribution, countries with statutory minimum wage (%)

	Below 90% of the minimum wage	90–100% of the minimum wage	100–110% of the minimum wage	Above 110% of the minimum wage
Belgium	2.2	1.0	1.3	95.5
Bulgaria	5.5	2.9	5.6	86.3
Croatia	1.4	1.9	4.3	92.5
Czechia	1.3	0.7	1.7	96.4
Estonia	5.1	3.2	3.9	88.0
EU median	4.8	2.4	4.2	88.3
France	7.2	2.6	5.0	85.4
Germany	9.2	1.9	3.2	85.9
Greece	3.0	1.1	3.6	92.4
Hungary	2.4	4.4	7.9	85.4
Ireland	6.2	1.8	3.1	89.0
Latvia	3.9	2.6	5.3	88.3
Lithuania	6.3	2.1	7.0	84.8
Luxembourg	6.5	4.8	5.7	83.4
Malta	1.6	0.7	3.0	94.7
Netherlands	4.5	1.2	1.9	92.5
Poland	6.9	6.8	8.5	78.4
Portugal	5.0	5.5	10.6	79.2
Romania	2.2	3.5	5.6	88.8
Slovakia	1.4	3.0	4.0	91.7
Slovenia	2.8	1.3	2.7	93.3
Spain	7.3	2.2	2.4	88.3
United Kingdom	8.7	3.4	4.7	83.5

Source: Authors' calculations based on EU SILC 2017 for the figures related to the percentage of employees covered

Table A6: Network of Eurofound Correspondents – Members participating in the research

Country	Correspondent	Institution
Austria	Georg Adam	Working Life Research Centre (FORBA)
Belgium	Dries Van Herreweghe and Sem Vandekerckhove	HIVA Research Institute for Work and Society, KU Leuven
Bulgaria	Lyuben Tomev	Institute for Social and Trade Union Research (ISTUR)
Croatia	Predrag Bejakovic and Irena Klemencic	Institute of Public Finance
Cyprus	Pavlos Kalosinatos	Cyprus Labour Institute (INEK-PEO)
Czechia	Peter Pojer	Research Institute for Labour and Social Affairs
Denmark	Carsten Jørgensen	Employment Relations Research Centre (FAOS), University of Copenhagen
Estonia	Ingel Kadarik	Praxis Center for Policy Studies
Finland	Rasmus Firon	Oxford Research
France	Frédéric Turlan	IR Share
Germany	Birgit Krämer	Walther Schücking Institute for International Law (WSI)
Greece	Georgiadou Penny	Labour Institute of the Greek General Confederation of Labour (INE GSEE)
Hungary	Éva Palócz	Kopint-Tárki Institute for Economic Research
Ireland	Roisin Farrelly	IRN Publishing
Italy	Lisa Dorigatti	University of Milan
Latvia	Raita Karnite	EPC Ltd.
Lithuania	Rasa Mieziene and Inga Blaziene	Lithuanian Social Research Centre
Luxembourg	Kristell Leduc and Nicaise Misangumukini	Luxembourg Institute of Socio-Economic Research (LISER)
Malta	Manwel Debono	Centre for Labour Studies, University of Malta
Norway	Kristin Alsos	Fafo Research Foundation (Fafo)
Netherlands	Bob Kruithof and Amber van der Graaf	Panteia
Poland	Marta Trawinska	Institute of Public Affairs
Portugal	Maria da Paz Campos Lima	Centre for Studies for Social Intervention (CESIS)
Romania	Mihaela Stoica	EurActiv Network Srl
Slovakia	Ludovit Cziria	Institute for Labour and Family Research
Slovenia	Ana Selan	Faculty of Social Sciences, University of Ljubljana
Spain	Oscar Molina	Autonomous University of Barcelona
Sweden	Anna-Karin Gustafsson	Oxford Research
United Kingdom	Mark Carley	Industrial Relations Research Unit (IRRU), University of Warwick

In most EU Member States, reviews of the statutory minimum wage rates spark a great deal of public interest. Such reviews affect the wider workforce, beyond those workers on the statutory minimum wage. Pay rates in collective agreements may be adapted in response to an increase in the minimum wage, affecting lower-paid workers more generally; social benefits may also be affected, making the impact of such revisions even more widespread. This report covers developments in statutory minimum wages in 2018–2019 in the EU and Norway. It looks at the level of minimum wages, how they were set and how they have developed over time in nominal and real terms. It also covers major debates in relation to setting minimum wage levels. While the report focuses on the net remuneration of those receiving the minimum wage, it also documents minimum rates from selected collective agreements in countries without statutory minimum wages as well as minimum wage coverage rates of workers by gender.

The European Foundation for the Improvement of Living and Working Conditions (Eurofound) is a tripartite European Union Agency established in 1975. Its role is to provide knowledge in the area of social, employment and work-related policies according to Regulation (EU) 2019/127.

