RESEARCH REPORT

Eurofound

Industrial relations and social dialogue

Minimum wages in 2023: Annual review

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Eurofound

European Foundation
for the Improvement of
Living and Working
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When citing this report, please use the following wording:
Eurofound (2023), *Minimum wages in 2023: Annual review*, Minimum wages in the EU series, Publications Office of the European Union, Luxembourg.

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Research project: Minimum wages – annual review (210204)

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Provider: Based partly on contributions from the Network of Eurofound Correspondents

Luxembourg: Publications Office of the European Union, 2023

Print:	ISBN 978-92-897-2332-9	ISSN 2599-9303	doi:10.2806/65380	TJ-AS-23-001-EN-C
PDF:	ISBN 978-92-897-2331-2	ISSN 2599-9311	doi:10.2806/950879	TJ-AS-23-001-EN-N

This report and any associated materials are available online at https://eurofound.link/ef23019

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Contents

Executive summary

Introduction

In terms of minimum wage setting, 2022 will be remembered well as an outstanding year for two reasons. High inflation rates that had not been seen in decades triggered the need to substantially uprate gross wages nominally. But it was also the year in which the EU-level negotiators reached agreement on the directive on adequate minimum wages.[1]

Policy context

Following approval by the European Council and European Parliament, EU ministers approved the directive on adequate minimum wages on 4 October, kick-starting the two-year implementation process for Member States. The directive establishes procedures to ensure the adequacy of statutory minimum wages, promotes collective bargaining on wage setting and improves access to statutory minimum wage protection for those workers who are entitled to such protection under applicable national laws. In the case of Member States bringing in variations or deductions – different rates of wage for specific groups of workers or reducing the pay to a level below that of the relevant statutory minimum wage – the directive requires that the principles of non-discrimination and proportionality be respected. While the directive does not specify what level is considered 'adequate' – leaving it up to the national minimum wage setters to decide on the international or national indicative reference values they will adhere to – it cites 60% of median and 50% of average wages in a country as examples for such target values.

The directive lists four criteria that must, as a minimum, be respected when updating statutory minimum wages: purchasing power, taking into account the cost of living; the general level of wages and their distribution; the growth rate of wages; and long-term national productivity levels and developments. In addition, all Member States with a collective bargaining coverage of less than 80% are required to establish a framework for enabling conditions and compile an action plan to promote collective bargaining.

Key findings

- Minimum wage earners in most EU countries have benefited from increases in statutory minimum wages over the past decade in various ways: their purchasing power has increased in real terms, and their gross wages have grown more than average wages and often at rates exceeding labour productivity. Those from the central and eastern European countries enjoyed the largest real gross and net wage increases in the decade, though starting from very low absolute levels.
- Between January 2022 and January 2023, Member States proceeded to boost statutory gross minimum wages in an unprecedented way, with increases ranging from more than 20% in Germany and Latvia to over 5% in Luxembourg. The median nominal increase across Member States was almost 11%, compared with 5% in 2022. However, owing to high inflation rates across the EU, these large nominal increases did not result in significant gains in purchasing power among minimum wages earners, except in a few countries (mainly Germany and Belgium).
- On a positive note, the recent losses in real minimum wages occurring in several countries have not eroded the long-term gains in purchasing power of minimum wage workers that have taken place since 2013.
- In 2022, net minimum wages (after personal income tax and social insurance contributions) for a single earner without children ranged from €282 per month in Bulgaria to €1,968 in Luxembourg. Six countries – Croatia, Czechia, Greece, Malta, Portugal and Spain – did not apply personal income tax on gross minimum wages, and in Latvia and the Netherlands the average personal income tax was very small.
- The average employee tax rate (personal income tax and social insurance contributions) on gross minimum wage for a single earner without children ranged from 6% in Spain to 40% in Romania. Minimum wage earners kept 90% or more of the gross minimum wage in Belgium, Estonia, France, Ireland, Malta, the Netherlands and Spain. At the other extreme, only 60% of the gross minimum wage was received by Romanians and 66% by Hungarians. In five countries – France, Germany, Luxembourg, Malta and the Netherlands – the same group of minimum wage earners was entitled to in-work or social benefits in 2022.

1 Directive (EU) 2022/2041 of the European Parliament and of the Council of 19 October 2022 on adequate minimum wages in the European Union.

- The most substantial change in minimum wage regulations was the introduction of a monthly statutory minimum wage in Cyprus. The Netherlands introduced a harmonised definition of an hourly rate, and Romania introduced a further statutory rate for agricultural and food workers.
- During 2022, an increasing number of countries determined new levels for their statutory minimum wages following a bipartite or tripartite agreement. At the same time, when countries made ad hoc uprates, such as Germany and the Netherlands, they were grounded in political decisions and outside the regular system of minimum wage setting.
- Because the transposition phase has just started, the impact of the EU directive on national minimum wage setting has been limited so far. However, one early impact is that the 'indicative reference values' set out in the directive (50% of average and 60% of median wages) are increasingly adopted, whether explicitly in (proposed) laws or targets (Belgium, Bulgaria, Ireland, Slovakia, Spain), based on actual uprates (Croatia, Germany), or in the form of trade union demands (for example, Czechia, Greece, the Netherlands).

Policy pointers

- In an inflationary environment, it is particularly important to ensure that the purchasing power of statutory minimum wages, taking into account the cost of living, is one of the criteria guiding their setting and updating. Currently, minimum wage legislation makes reference to inflation in some EU countries, while around a third of EU countries use rule-based mechanisms with a binding nature in order to decide on updates to the statutory rate.
- Apart from France, which takes into account inflation for the lowest-earning households (belonging to the first earnings quintile), Member States apply inflation rates calculated for the average household. As low-earning households and low-paid workers are likely to spend a larger share of their income on housing, energy and food, this could mean that the loss of their purchasing power has been underestimated. Even if minimum wage setters do not intend to move towards a living wage approach (based on a basket of goods and services needed to achieve an agreed living standard), they could reflect on how to take into account the fact that average rates of inflation might underrate the loss of minimum wage workers' purchasing power.
- On the other hand, the fact that governments have sought to cushion the impacts of inflation for citizens with a range of measures – such as subsidies for home heating, reductions in energy taxes, price caps on food and energy, or general subsidies – means that wages have not borne the whole brunt.

Introduction

Important milestones were accomplished during 2022, with agreement reached in the European Council on the minimum wage directive, and broad support for it in the European Parliament – culminating in the publication of the directive on adequate minimum wages in the *Official Journal of the European Union* on 19 October 2022.[2] This brought an end to the EU-level debate around the contents of the directive, and clarity on the way forward, as Member States are engaging with the European Commission in the detailed planning of how the directive will be incorporated into national laws.

The directive is one cornerstone in implementing principle 6 of the European Pillar of Social Rights.

> *Adequate minimum wages shall be ensured, in a way that provide [sic] 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.*
>
> *All wages shall be set in a transparent and predictable way according to national practices and respecting the autonomy of the social partners.*
>
> (European Commission, Secretariat-General, 2018)

At national level, minimum wage setters experienced 2022 as a year with unprecedented inflation rates, leading to an upward pressure on nominal rates that had not been seen in decades. Often this led to discussions on whether the frequency or future method of the uprates should be changed. These went in parallel with the debates on raising minimum wages relative to actual wages as envisaged by the directive.

This year's report continues to give information on last year's uprate cycle (during 2022) of gross statutory minimum wages valid in 2023, and provides detailed information on the actors involved, the processes and the outcomes, with a special interest in how this was carried out in an inflationary environment. It also continues the work on mapping wage floors in collective agreements for selected low-paid workers in those countries that do not have a statutory minimum wage in place. For both areas it also provides a decade-long perspective. New additions in this year's version of the regular report are the comparison of the wage developments with longer-term developments in labour productivity, actual and (where available) negotiated wages, and a detailed comparative and longitudinal analysis of how statutory minimum wages in gross terms translate into net wages. The focus on such medium- to longer-term developments is interesting in itself, providing a bird's-eye perspective on minimum wage developments, beyond the year-to-year changes that have regularly been the main focus of this series of reports. In addition, however, one of the mandatory national criteria for setting and updating the minimum wage as per Article 5(2)(d) – the level and development of labour productivity – explicitly requires a longer-term perspective.

The report is structured as follows.

Chapter 1 presents the outcomes, that is, the rates for 2023 and how they have developed over time. It distinguishes between gross (what workers obtain before taxes and social security contributions are deducted) and net (following the deduction) incomes; nominal (the figure written on the payslip) and real (a hypothetical figure that takes into account how prices have developed on average in the same period) changes; and statutory minimum wages (which are set by law and cover basically all workers) alongside collectively agreed (or negotiated) wages (which are negotiated by social partners for sectors or companies), focusing on countries without a legal minimum wage.

Chapter 2 summarises the processes for minimum wage setting and provides information on the actors involved, and how and by whom the rates for 2023 were negotiated or set during 2022. A subsection specifically looks into how countries' minimum wage-setting legislation in principle caters for inflation, and how this has been applied in practice.

Chapter 3 focuses on the future of minimum wage setting by looking into the national debates about which aspects of wage setting could be changed.

Chapter 4 maps the first national-level responses to the EU directive, even though the time for transposition has only just started.

Finally, Chapter 5 summarises new and mainly empirical research on minimum wages in EU countries published during 2022.

2 Directive (EU) 2022/2041 of the European Parliament and of the Council of 19 October 2022 on adequate minimum wages in the European Union.

1 Minimum wages in 2023: Rates and developments since 2012

This chapter starts by providing a picture of the most recent evolution of gross statutory minimum wages and collectively agreed minimum wages between 2022 and 2023, both in nominal and real terms. Gross figures are the levels set by governments (or social partners), without taking into account what impact taxes and benefits will have on them. A longer time perspective is then adopted to observe both gross statutory minimum and negotiated wages between 2012 and 2023, comparing their evolution to that of average wages or productivity. The chapter concludes with a detailed analysis over the last decade of statutory minimum wages in net terms – the amount left to wage earners after the effect of the taxes and benefits applying to them.

Gross statutory minimum wages in 2022–2023

When looking into the uprating rounds of statutory minimum wages throughout 2022, with the rates set to be valid in 2023, the immediate finding is that most EU Member States have hiked their nominal statutory rates in an unprecedented fashion, deciding on very large increases compared with previous years. On the other hand, the persistent high rates of inflation throughout 2022 explain why it is only in a few countries that such large hikes to the nominal rates have resulted in significant purchasing power gains among minimum wage earners.

Gross nominal rates

Statutory minimum wages rose very significantly in 2023 in nominal terms. As a result of the general improvement of the economic and labour market situation following the end of restrictions related to the pandemic, nominal statutory minimum wage rates were already growing significantly from January 2022 (Eurofound, 2022a). But the hikes were much larger across most EU Member States in January 2023. In the context of high inflation evident over many months, European governments have responded by lifting the wage floors of the lowest-paid employees. Whether these efforts are enough to secure the purchasing power of minimum wage earners will be shown in a separate section, but it is worth starting by saying the increases in nominal statutory rates are unprecedented.

Data on the changes in gross nominal statutory minimum wage rates between January 2022 and January 2023 are presented in Table 1, for the 22 countries in the EU with a statutory minimum wage (Austria, Denmark, Finland, Italy and Sweden are the EU Member States without a statutory minimum wage, as well as Norway). All Member States increased their rates for 2023, with increases ranging from over 5% in Luxembourg to more than 20% in Germany and Latvia. These hikes were generally much larger than those of the previous year: the median nominal increase (in national currencies) across Member States in 2023 is almost 11% (the average increase is almost 12%), while the median increase in 2022 was 5% (the average increase was 6%). Cyprus has just joined the majority group of EU Member States with a statutory minimum wage, after replacing (with effect from January 2023) the previously existing system of wage floors covering only some occupations. Its level has been set at €940 for employees with a more than six month continuous period of employment with the same employer.

A clear divide between older and newer Member States emerges when observing the magnitude of the changes in statutory rates for 2023. On the one hand, central and eastern European (CEE) countries, which generally have the lowest minimum wage levels in the EU, continued to catch up with the levels of the 15 countries that were Member States prior to 2004 enlargement. Among the 13 countries registering the biggest increases, 10 joined the EU after 2004 (the other three being Germany, Belgium and the Netherlands). Progress in statutory rates was notable. Latvia hiked its minimum wage by 24% (after freezing it in 2022); hikes of between 10% and 18% took place in most cases (in descending order: Romania, Hungary, Poland, Croatia, Lithuania, Slovenia, Estonia, Bulgaria); and Slovakia increased it by more than 8%. Poland has approved two hikes in 2023: 16% in January and an additional 3% in July. While Czechia is the only CEE country with a comparatively modest growth in its statutory rates (less than 7%), it reaches more than 10% if the minimum wage level is measured in euro instead of in the national currency, given the appreciation of the Czech koruna between January 2022 and January 2023. On the contrary, the increase is much more modest in Hungary (less than 7% instead of 16%) if minimum wages are measured in euro.

Table 1: Gross nominal statutory minimum wages, 22 EU Member States, 2022 and 2023

Country	Converted values			National rates and developments		
	2022 (€)	2023 (€)	Change (%)	2022 (€ unless otherwise stated)	2023 (€ unless otherwise stated)	Change (%)
Luxembourg	2,257	2,387	5.8	2,257/month	2,387/month	5.8
Germany	1,621	1,981	22.2	9.82/hour	12/hour	22.2
Belgium	1,691	1,955	15.6	1,691/month	1,955/month	15.6
Netherlands	1,725	1,934	12.1	1,725/month	1,934/month	12.1
Ireland	1,775	1,910	7.6	10.5/hour	11.3/hour	7.6
France	1,603	1,709	6.6	1,603/month	1,709/month	6.6
Slovenia	1,164	1,304	12.0	1,164/month	1,304/month	12.0
Spain	1,167	1,260	8.0	1,167/month	1,260/month	8.0
Cyprus	n/a	940	n/a	n/a	940/month	n/a
Portugal	823	887	7.8	823/month	887/month	7.8
Lithuania	730	840	15.1	730/month	840/month	15.1
Malta	792	835	5.4	183/week	193/week	5.4
Greece	774	832	7.5	774/month	832/month	7.5
Poland	655	746	13.9	PLN 3,010/month	PLN 3,490/month	15.9
Estonia	654	725	10.9	654/month	725/month	10.9
Czechia	652	717	10.1	CZK 16,200/month	CZK 17,300/month	6.8
Croatia	624	700	12.2	HRK 4,687.5/month	700/month	n/a
Slovakia	646	700	8.4	646/month	700/month	8.4
Latvia	500	620	24.0	500/month	620/month	24.0
Romania	515	606	17.6	RON 2,550/month	RON 3,000/month	17.6
Hungary	542	579	6.8	HUF 200,000/month	HUF 232,000/month	16.0
Bulgaria	363	399	9.9	BGN 710/month	BGN 780/month	9.9

Notes: *n/a, not applicable. 2022 data refer to January 2022, except for Bulgaria (April 2022); 2023 data refer to January 2023. The columns headed 'Change (%)' present the growth rate between 2022 and 2023. In most cases, the increase is due to only a single uprate in January 2023, with some exceptions (Belgium, France, Germany, Greece, Luxembourg, Netherlands). Countries are ordered by their minimum wage level (in euro) in 2023. Converted values: rates for non-euro-zone countries (Bulgaria, Croatia, Czechia, Hungary, Poland and Romania) were converted to euro by applying the exchange rate applicable at the end of the previous reference month (December 2022). Rates for countries with more than 12 wage payments per year (Greece, Portugal, Slovenia and Spain) were converted by dividing the annual sum of the minimum wage by 12 calendar months. Rates for countries where the minimum wage is defined as an hourly rate (Germany and Ireland) were converted to monthly rates by applying the average number of usual weekly hours as provided in Eurostat metadata for minimum wages. The rate for Malta was converted from a weekly to a monthly rate considering (52/12) weeks per calendar month.*
Source: *Network of Eurofound Correspondents and Eurofound calculations*

Growth in statutory rates was generally lower in older Member States, with some notable exceptions. Despite being higher than those in previous years, the minimum wage hikes among the pre-2004 Member States are more modest than those in CEE countries. Spain has continued its decided policy focus on minimum wages in recent years by increasing it a further 8% in 2023, while hikes of 5–8% were made in Portugal, Ireland, Greece, France, Luxembourg and Malta.

Nevertheless, there are three western European countries where the progress in statutory minimum wages has been remarkable.

Germany registers an increase of 22% as a result of two hikes: the planned mid-year increase in July 2022 (from €9.82 to €10.45 per hour) and, most importantly, the one-off increase resulting from the promises made by the coalition government, which set the new level at €12 per hour from October 2022. After this extraordinary intervention by the government, the minimum wage commission will continue to decide on future upgrades, having decided to leave the rate unchanged in January 2023.

Similarly, the 12% increase in the **Netherlands** is the result of a modest regular mid-year adjustment and, mainly, a deliberate policy intervention by the government aimed at improving the adequacy of the statutory minimum wage, which resulted in an additional 10% hike in January 2023.

Belgium has increased its statutory rate by almost 16% as a result of five automatic indexations of 2% (in March, May, August, November and December 2022) and an additional hike of almost 5% in April 2022 resulting from agreements. This last hike was a combination of two increases: a 0.4% increase agreed by the National Labour Council in July 2021, based on calculations by the Central Economic Council on the 'wage norm'; and an increase of more than €76 per month resulting from an agreement among social partners to improve the statutory rate every two years within the context of the 2021–2022 Interprofessional Agreement. Two further increases of €35 are expected in April 2024 and April 2026.

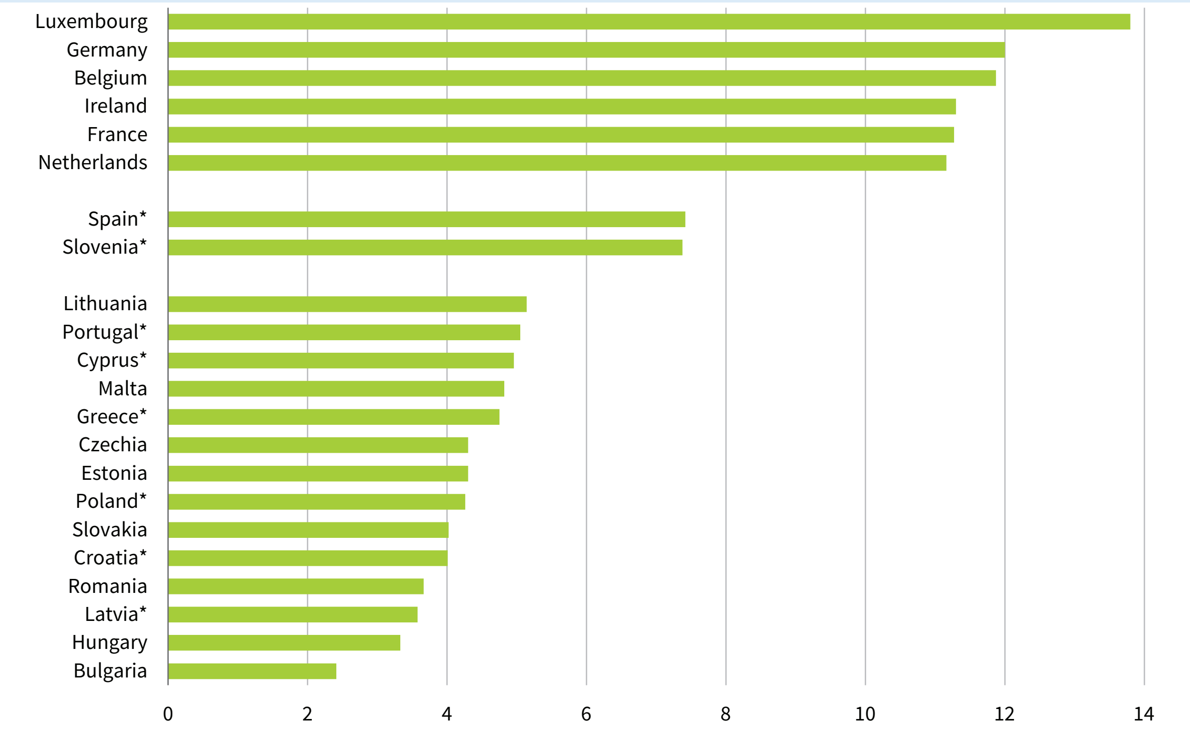
Despite this process of convergence continuing within the EU, differences in statutory rates between countries remain significant, as illustrated in Box 1.

Box 1: Hourly statutory minimum wage rates

Hourly minimum wage data provide a very direct picture of the differences in the levels of statutory rates across Member States. Moreover, hourly minimum wages are better adjusted to describe the situation faced by some minimum wage earners working part time or shorter hours.

Figure 1 presents data on hourly statutory rates across EU Member States (gross and nominal). These rates are explicitly referred to in the relevant legislation in more than half of the countries, while in the rest of the countries such rates have been inferred by means of a statistical approximation, by dividing the legally defined monthly rate by the number of hours usually worked by employees.

Figure 1: Gross hourly nominal minimum wages, 22 EU Member States, January 2023 (€)



Notes: *For most countries, hourly minimum wages are legally defined at hourly rates, sometimes in addition to a monthly definition. For countries marked with *, rates have been converted to an hourly rate by considering the average number of usual weekly hours of work (Eurostat [lfsa_ewhun2]) and 4.33 weeks of work per calendar month. This conversion is based on the average of hours worked among all employees, so it could result in an underestimation of minimum wage hourly rates in countries where working hours among minimum wage workers are below the national average.*
Sources: *Network of Eurofound Correspondents, Eurostat and Eurofound calculations*

Although some caution is needed when comparing the data across countries given the adjustment in some of them, it is possible to roughly differentiate three groups of countries.

- Six countries, all of them from the EU15, are characterised by the highest rates: almost €14 in Luxembourg, around €12 in Germany and Belgium, and above €11 in Ireland, France and the Netherlands.
- In two countries, Spain and Slovenia, hourly rates are just below €7.50, putting them well behind the previous group of countries, but also significantly ahead of the next group of countries.
- The third group of 14 countries is characterised by the lowest hourly minimum wages. A first subgroup of countries emerges with hourly minimum wages of around €5, comprising Lithuania and several Mediterranean countries (Portugal, Cyprus, Malta, Greece). The remaining nine countries, all of them newer Member States, have hourly rates ranging from above €4 in Czechia, Estonia, Poland and Slovakia to €2.40 in Bulgaria.

In order to get a complete picture of the actual situation faced by minimum wage earners, the trend in nominal statutory rates needs to be considered together with the changes in inflation. When most EU governments last fixed the new statutory rates, in January 2022, they were facing a situation where inflation was slowly growing but was nowhere near the levels it would reach as the year progressed. This time it was different: when policymakers set the nominal rates for 2023, they were fully aware of the exceptionally high price increases, which led to unprecedented nominal increases across EU Member States. Despite such remarkable increases, the purchasing power of minimum wage earners has not significantly improved across most Member States, as the next section shows.

Accelerating inflation during 2022

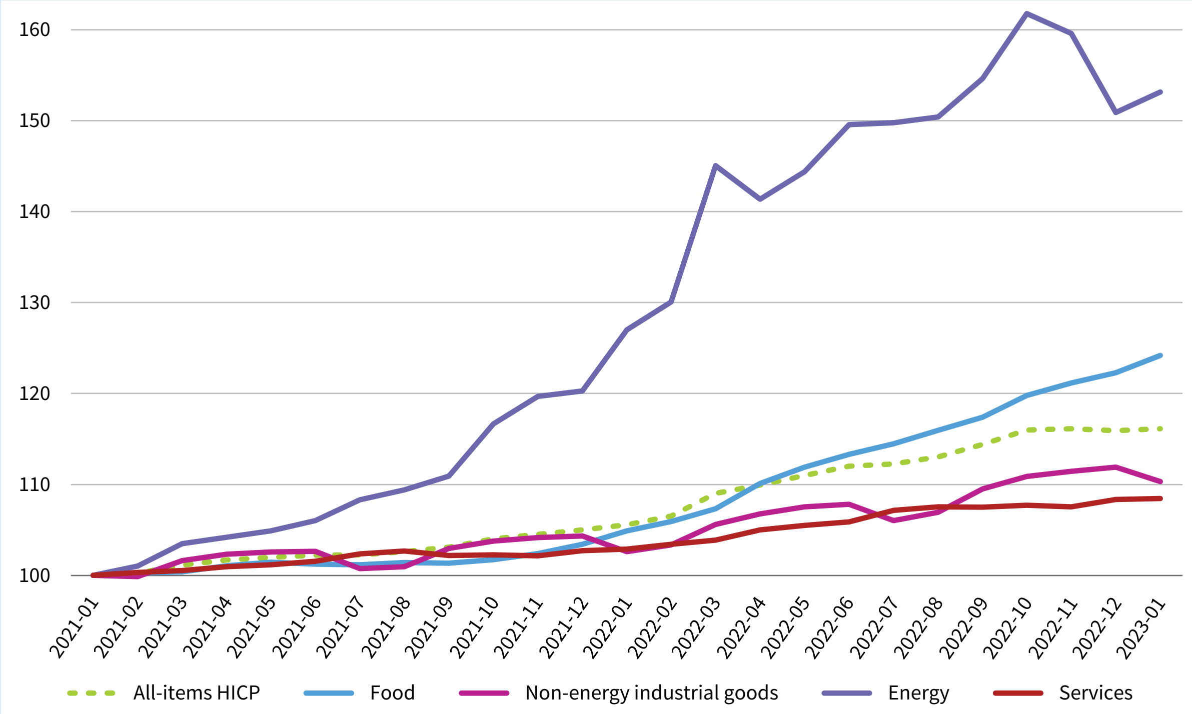
Following the joint recovery of economies across the globe as lockdown measures eased, bottlenecks in supply chains and soaring energy prices had already started to put a strain on price levels during the second part of 2021. Then the war in Ukraine exacerbated the situation and prices grew rapidly during 2022, pushed by energy prices, which had knock-on effects across the board. Member States registered inflation at levels not seen in decades. Box 2 presents detailed monthly data about the EU average price levels for various items between January 2021 and January 2023, while it also depicts recent inflation levels across EU Member States.

Box 2: Price levels for the EU aggregate and inflation across EU27 countries

Inflation has been accelerating in the EU as a whole in the last two years, as Figure 2 shows. Initially, it did so moderately during the course of 2021, mainly pushed by energy prices. But then inflation grew in intensity in 2022, as soaring energy prices started to trickle down to the rest of the economy and resulted in growing prices for food, non-energy industrial goods and, to a lesser extent, services.

Inflation seems to have stabilised only from the last months of 2022, as energy prices showed some signs of moderation and grew more slowly from October. The prices of food and industrial goods were still rising in recent months, so it remains to be seen what the trend in aggregate inflation may look like in the coming months.

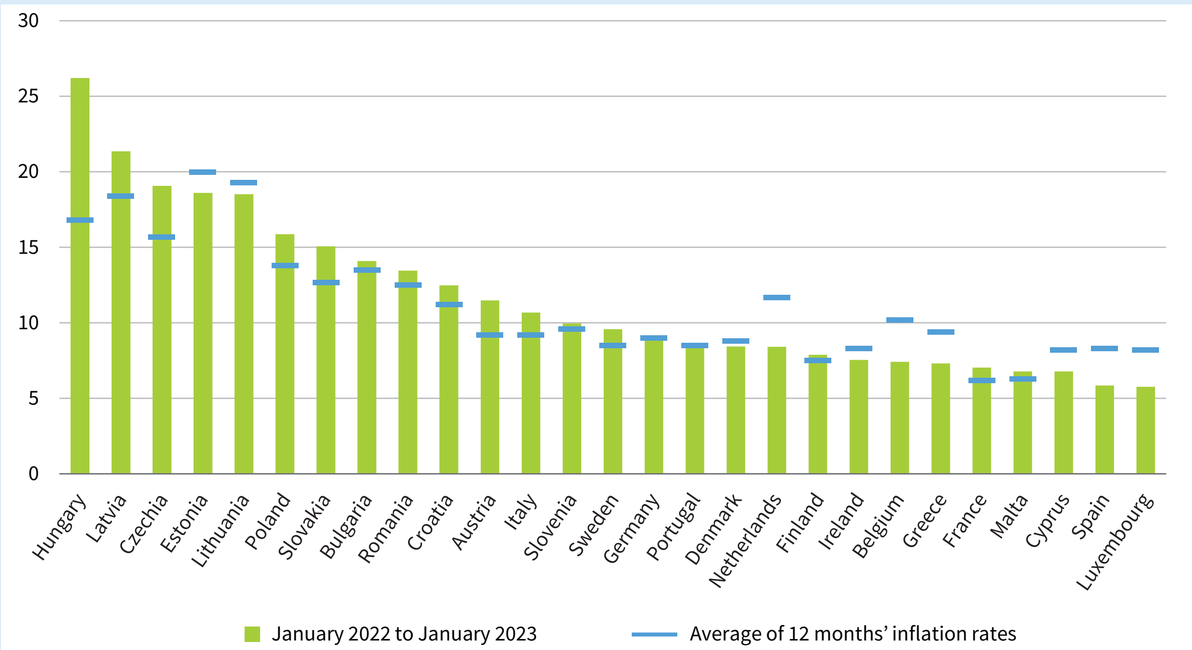
Figure 2: Monthly changes in inflation, by category, EU27, January 2021–January 2023 (index, Jan 2021 = 100)



Notes: *Inflation is measured by the Eurostat Harmonised Indices of Consumer Prices (HICP) monthly index (January 2021 = 100).*
Sources: *Eurostat [prc_hicp_midx] and Eurofound calculations*

Figure 3 presents inflation data from all EU countries over the past year. Changes in price levels between January 2022 and January 2023 are generally of a magnitude unprecedented in the most recent decades. Nevertheless, stark differences are apparent across EU countries. Inflation is much more acute in CEE countries, being close to or above 20% in Hungary, Czechia and the Baltic states. In contrast, inflation is around or below 7% in France, Malta, Cyprus, Spain and Luxembourg. This picture is broadly consistent with what emerges from using the average inflation rate over the previous 12 months as measured in January 2023 (considering all the year-on-year inflation rates between February 2022 and January 2023).

Figure 3: Recent inflation, EU27, January 2022 to January 2023 (%)



Sources: *Eurostat [prc_hicp_midx] and Eurofound calculations*

Hikes in statutory rates not enough to significantly lift purchasing power

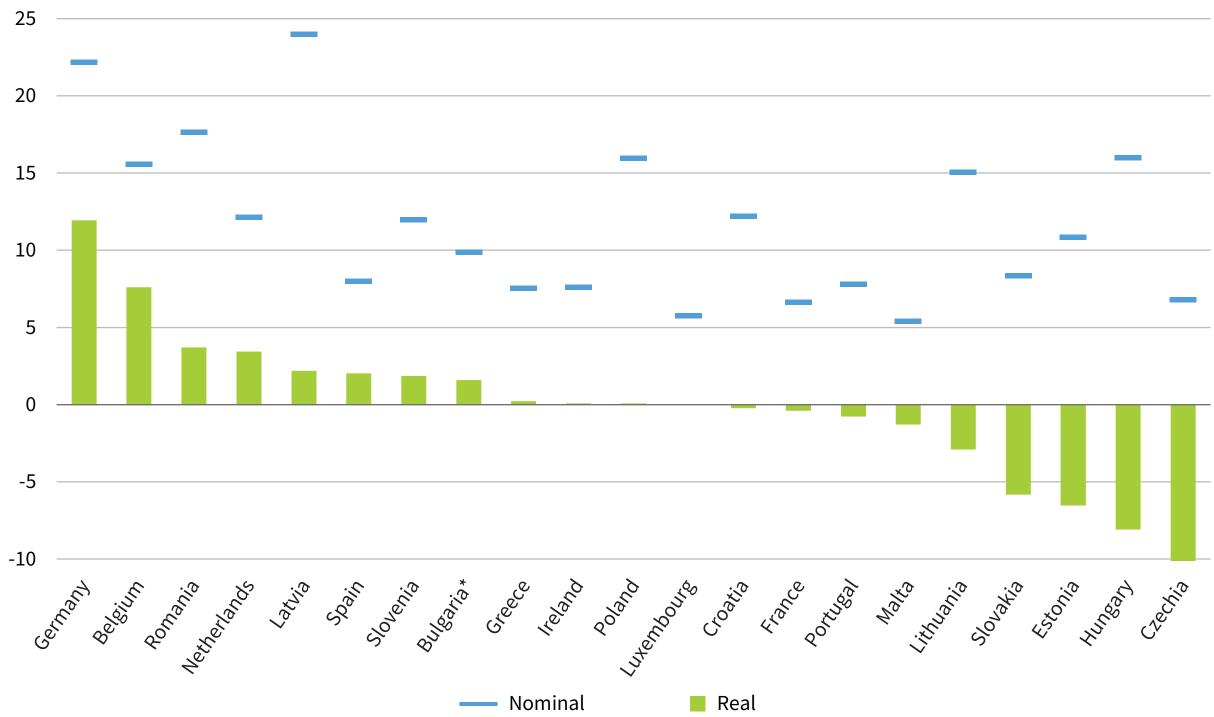
Despite the abnormally large increases for 2023, the obvious question emerges: will they be enough to maintain or improve the purchasing capacity of minimum wage earners? The general picture that emerges is that purchasing power was broadly maintained in many EU Member States, while significant increases and falls in real minimum wages also took place in a few countries, as shown in Figure 4.

- On the positive side, minimum wage earners benefited from significant purchasing power gains in Germany and Belgium.
- On the negative side, the nominal hikes in January 2023 were not enough to avoid significant falls in purchasing power among minimum wage earners in some CEE countries affected by high inflation rates, such as Czechia and Hungary (and Estonia and Slovakia to a lesser extent).
- The general picture among a majority of EU Member States is that the purchasing power of minimum wages earners was broadly restored in January 2023, with rates of change between +3% and -3% compared with January 2022. This was the case for 15 out of the 21 countries considered (Cyprus only introduced its minimum wage in January 2023): rather modest increases in real wages occurred in Romania, the Netherlands, Latvia, Spain, Slovenia and Bulgaria; modest deterioration occurred in Lithuania and Malta; and real minimum wages remained rather constant in the other EU Member States.

It is important to bear in mind that this assessment of the purchasing power of statutory minimum wages considers only the extent to which the new nominal rates set in January 2023 have been able to offset the impact of price growth up to that point. A deterioration in minimum wages in real terms is to be expected over 2023 across the Member States if inflation rates continue the recent trend.

On the other hand, it should be noted that social partners and governments across the Member States used national measures of inflation (which can deviate from the harmonised ones used here) as a reference for their discussions during 2022, which took place at a time when the inflation data may have been different. Moreover, during recent months, governments have implemented additional measures to alleviate the difficult financial situation faced by minimum wage earners and other vulnerable groups, as shown in Chapter 2.

Figure 4: Rate of change in gross statutory minimum wage, 21 EU Member States, January 2022 to January 2023 (%)



Notes: *Data refer to the growth rate between January 2022 and January 2023 (except for Bulgaria, for which April 2022 to January 2023 is used). Real values have been calculated by deflating nominal rates using monthly data on price levels (HICP). Countries are ranked by the magnitude of increase in real statutory rates.*
Source: *Eurofound, Network of Eurofound Correspondents and Eurostat (for HICP data)*

Recent trends in collectively agreed minimum wages

Austria, Denmark, Finland, Italy, Sweden and Norway do not have a statutory minimum wage but rely on collective bargaining to set wage floors. As collective bargaining coverage is high in these countries, most workers are covered by some form of wage floor (Eurofound, 2022a, p. 13).

In this section, we will first describe the overall developments in collective bargaining during 2022 in these countries, then focus on collectively agreed minimum wage increases in selected low-paid jobs and lastly discuss how inflation affects wages in real terms.

Developments in 2022

No substantial changes to collective bargaining were reported from **Austria**, though there was more industrial action than normal in a country with a usually very low level of strikes. The agreed increases in the 2022 bargaining round were higher than normal and increased throughout the year. The metal industry normally sets the trend, but its substantial increase (7.5%) in the autumn was topped by the sectors that negotiated after it, which is unusual.

In **Italy**, the main debates at the end of 2022 related to the late renewal or non-renewal of long-expired agreements. According to estimates, there are more than 957 national collective bargaining agreements in Italy, which cover more than 13.5 million workers (CNEL, 2022; Giangrande, 2022; Faioli, 2021). As many as 591 agreements have expired and not been renewed. Among the expired ones are 145 out of 211 national collective agreements signed by the most representative trade unions, which cover almost 7.5 million workers: the Italian General Confederation of Labour (CGIL), the Italian Confederation of Trade Unions (CISL) and the Italian Labour Union (UIL). Two trade unions (the CGIL and the UIL) called for a week-long strike in December in the context of the 2023 budget law and asked the government for, among other things, preferential tax treatment of collectively agreed wage increases. Employer organisations demanded the lowering of labour costs through lower taxation.

In **Finland**, the average increase from the collective bargaining round in spring 2022 was 2%, which was in line with expected inflation at the time. However, the rise in inflation resulted in a steep fall in real terms. Agreements can be renegotiated if social partners cannot agree on wage increases, and the current bargaining rounds are stalling. The pace-setting central agreement of the technology industries was ended a year before the original end date, and negotiations are ongoing at the time of writing. Blue-collar unions are intensifying their coordination in this context.

In **Denmark** and **Sweden**, the major bargaining rounds are only upcoming, so there is no information at the time of writing (February 2023). The Swedish Trade Union Confederation's (LO's) position is to opt for a shorter duration of agreements (one year instead of the usual three years), so it can renegotiate wages earlier. The Swedish unions by and large appear to be rather cautious about demanding too high increases, as their focus is more on wage development in the longer run and maintenance of employment. Even though the industry target has not been set at the time of writing, the confederation's opening bid for negotiations requested a 4.4% target increase for those earning above SEK 27,100 per month. But for those earning below that cut-off point a higher than average increase will be demanded, in the form of an amount rather than a percentage.

Norway also saw a considerable drop in wages in real terms based on bargaining results at sectoral level (though company-level pay settlements may yet counteract that drop). The 2022 bargaining round resulted in relatively large general add-ons (flat-rate increases in kroner rather than percentages) in the private sector, which is dominated by the Norwegian Confederation of Trade Unions (LO) and the Confederation of Norwegian Enterprise (NHO). In general, those add-ons benefit low-wage employees.

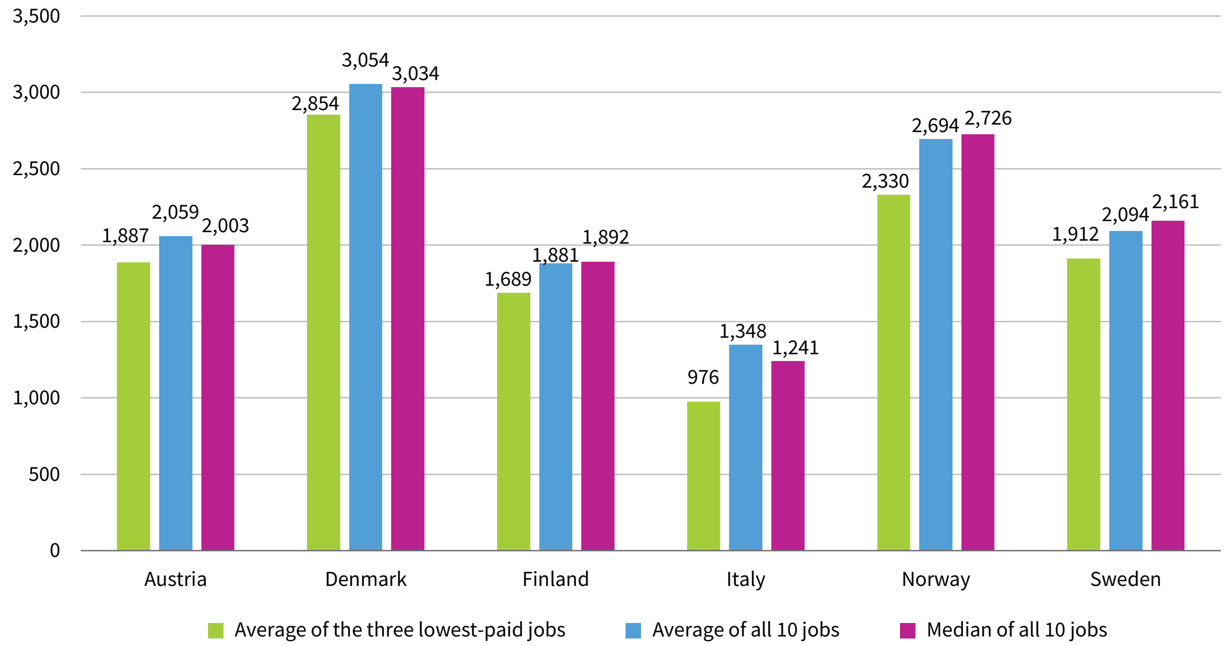
Collectively agreed minimum wages for low-paid jobs

Given the lack of comparable minimum wage data in these countries, Eurofound, as part of this annual review, asked its national correspondents to provide a time series of basic minimum wage rates for 10 selected low-paid jobs. That is used as a proxy indicator of minimum wage levels. For detailed descriptions of the methodology, see Eurofound (2021; 2022a, p. 15).

The average of the three lowest basic pay rates valid on 1 January 2023 ranges from €976 in Italy to €2,854 in Denmark (Figure 5). It is estimated at €1,689 in Finland, €1,887 in Austria, €1,912 in Sweden and €2,330 in Norway (see Annex 1, Table A2).

Across all 10 low-paid jobs, the median monthly wage was €2,188, while the average was €2,191.

Figure 5: Collectively agreed average and median monthly wages in 10 low-paid jobs, January 2023 (€)



Notes: *Rates for countries with more than 12 wage payments per year were converted by dividing the annual sum of the minimum wage by 12 calendar months. Hourly rates were converted to monthly rates by applying the collectively agreed working hours. Rates for non-euro-zone countries were converted to euro by applying the exchange rate applicable at the end of the previous reference month.*
Source: *Network of Eurofound Correspondents, based on pay rates set in the largest collective agreements related to the 10 jobs*

Between 1 January 2022 and 1 January 2023, collectively agreed wages in Austria grew on average by 6.8% in the selected low-paid jobs, reaching 9% for cleaners and helpers in offices, hotels and other establishments, 8.5% for shop sales assistants and 9.7% for childcare workers (Table 2). In Italy, large collectively agreed wage increases can be expected throughout 2023. While many pay rates remain ultra-active[3] because agreements have not been renewed, for instance those covering shop sales assistants, waiters and bartenders, and cooks, the agreements already concluded as of 1 January 2023 bring large pay hikes. The collectively agreed wages of domestic cleaners increased by 12.3%, while those of home-based personal care workers and childcare workers also increased significantly, by 9.2%.

Norway has also seen considerable nominal wage increases in the selected jobs, including a 5.1% increase for domestic cleaners, 5.1% for home-based personal care workers and 4.8% for childcare workers. In contrast, significant wage increases have not been recorded in Denmark (2.2%) and Sweden (2.7%), which are only preparing for their collective bargaining rounds, while Finland's spring 2022 bargaining round brought only a 2.3% average increase in gross collectively agreed wages.

3 Ultra-activity is a characteristic of collective bargaining related to its duration. According to the principle of ultra-activity, a collective agreement will remain applicable beyond its expiration or termination date if a new collective agreement has not been reached. See 'Ultra-activity' in Eurofound's online European Industrial Relations Dictionary: https://www.eurofound.europa.eu/observatories/eurwork/industrial-relations-dictionary/ultra-activity

Table 2: Change in monthly minimum wages in collective agreements for 10 low-paid jobs, in nominal terms, 1 January 2022 to 1 January 2023 (%)

Job	Austria	Denmark	Finland	Italy	Sweden	Norway
Domestic cleaner	5.7	2.3	2.0	12.3	2.4	5.1
Cleaner, helper in offices, hotels and other establishments	9.0	2.3	2.0	1.6	2.6	4.3
Shop sales assistant	8.5	2.0	2.0	0.0	2.3	0.9
Waiter or bartender	4.3	1.6	3.9	0.0	No data	2.5
Cook	4.3	1.9	1.0	0.0	2.0	2.5
Home-based personal care worker	9.5	2.9	3.4	9.2	4.6	5.1
Childcare worker	9.7	2.9	2.5	9.2	2.7	4.8
Agricultural, forestry and fishery labourer in standard employment	0.0	2.2	1.7	0.0	2.2	3.3
Agricultural, forestry and fishery labourer in seasonal employment	3.3	No data	1.7	0.0	No data	3.9
Courier and newspaper or parcel deliverer	3.0	2.0	3.2	1.4	No data	2.3
Average increase	5.8	2.2	2.3	3.4	2.7	3.5

Notes: *Change is calculated in national currencies. Many agreements are renewed during the year, not by 1 January. Rates agreed after 1 January 2023 have not been taken into account.*
Source: *Network of Eurofound Correspondents, based on national official sources*

Box 3: How inflation is taken into account in collective bargaining in countries without a statutory minimum wage

In **Austria**, the negotiating sectoral social partners agree on the rolling inflation level before the first negotiating round. It is based on the national consumer price index and takes into account the average inflation in the 12 months before the start of the bargaining round. No automatic indexation or ad hoc updates are included. Agreements are usually concluded on an annual basis for a one-year period.

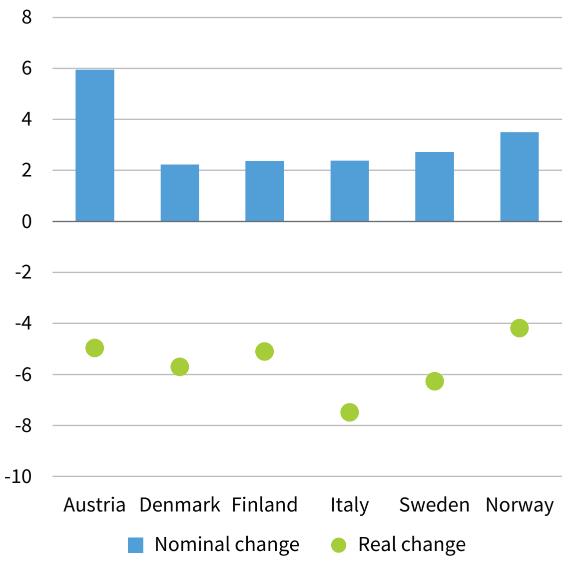
In **Italy**, there used to be an automatic wage indexation mechanism, called scala mobile, which was discontinued in 1992. Nowadays, social partners must resort to collective bargaining for wage changes. The renewals should take place every third year; however, any collective agreements not renewed remain ultra-active, without any automatic indexation mechanism. One exception is the 2020 domestic work collective agreement, now ultra-active; it contains a provision (Articles 38 and 45) to adjust minimum wages annually according to changes in the cost of living for white- and blue-collar households as recorded by the National Institute of Statistics on 30 November each year.

In **Denmark** and **Sweden**, there are no automatic indexation mechanisms related to inflation. The social partners, however, consider various economic indicators during their negotiations. The Swedish system is also characterised by its industry target for the export industries, setting a normative value for wage increases in other sectors but also considering the competitiveness of its open economy.

Effects of inflation on negotiated pay rates

On average, nominal collectively agreed wages in countries without a statutory minimum wage in January 2023 struggled to keep up with the unprecedented inflation levels, as described in the earlier section ‘Accelerating inflation during 2022’, leading to real wage decreases across the board. Even with substantial nominal basic wage hikes recorded in Austria, Italy and Norway for the 10 low-paid jobs, workers saw a decline in real terms (Figure 6). The issue of maintaining purchasing power, especially for low-paid workers, will definitely be on the agenda in the upcoming negotiations in Denmark, Finland and Sweden.
Box 3 documents how inflation is taken into account in collective bargaining in some of the countries without a statutory minimum wage.

Figure 6: Change in average monthly minimum wages set in collective agreements for 10 low-paid jobs, in nominal and real terms, 1 January 2022 to 1 January 2023 (%)



Notes: *Change is calculated in national currencies. Many agreements are renewed during the year, not by 1 January. Rates agreed after 1 January 2023 have not been taken into account.*
Source: *Network of Eurofound Correspondents, based on national official sources*

Statutory and negotiated wages: Developments 2012 to 2023

Gross statutory rates and negotiated wages

Against the current background of high inflation eroding the purchasing power of minimum wage earners, it is worth looking at trends in statutory rates in real terms over a longer time perspective. Figure 7 depicts the changes in gross minimum wages in nominal and real terms in 25 EU Member States in 2012–2023, and compares them with changes in negotiated wages.

Gross statutory minimum wages

Because of inflation, the growth in real wage rates is in all cases below that of nominal rates, with the gap widening in the most recent years of growing prices after the pandemic. Nevertheless, minimum wage earners have benefited from increases in purchasing power across most EU Member States since 2013, which means national governments have generally set nominal rates above inflation levels. Three main groups of countries can be identified, revealing a marked east–west regional divide within the EU.

- The most notable progress in real rates has taken place in the countries that joined the EU in 2004 or later. Except for Malta and Slovenia, all the other countries of this group register growth rates of between 45% and 195% in their real minimum wages during 2012–2023.
- There is a second group of countries where minimum wages in real terms increased over the period, but much less so generally. Spain, Portugal and Slovenia are an exception within this group, since their significant hikes in nominal rates in recent years led to significant gains in purchasing power among minimum wage earners. The progress is much more muted in France, the Benelux countries, Ireland and Germany, although in this last country the statutory minimum wage was only introduced in 2015 and its most recent uprate during 2022–2023 was substantial.
- There are only two countries where minimum wage earners experienced a reduction in their purchasing power over the last decade. The fall in real minimum wages has been negligible in Malta and significant in Greece, owing to the financial turmoil and rescue packages deployed in the country following the Great Recession, which resulted in a large reduction in its nominal statutory rate in March 2012.[4]

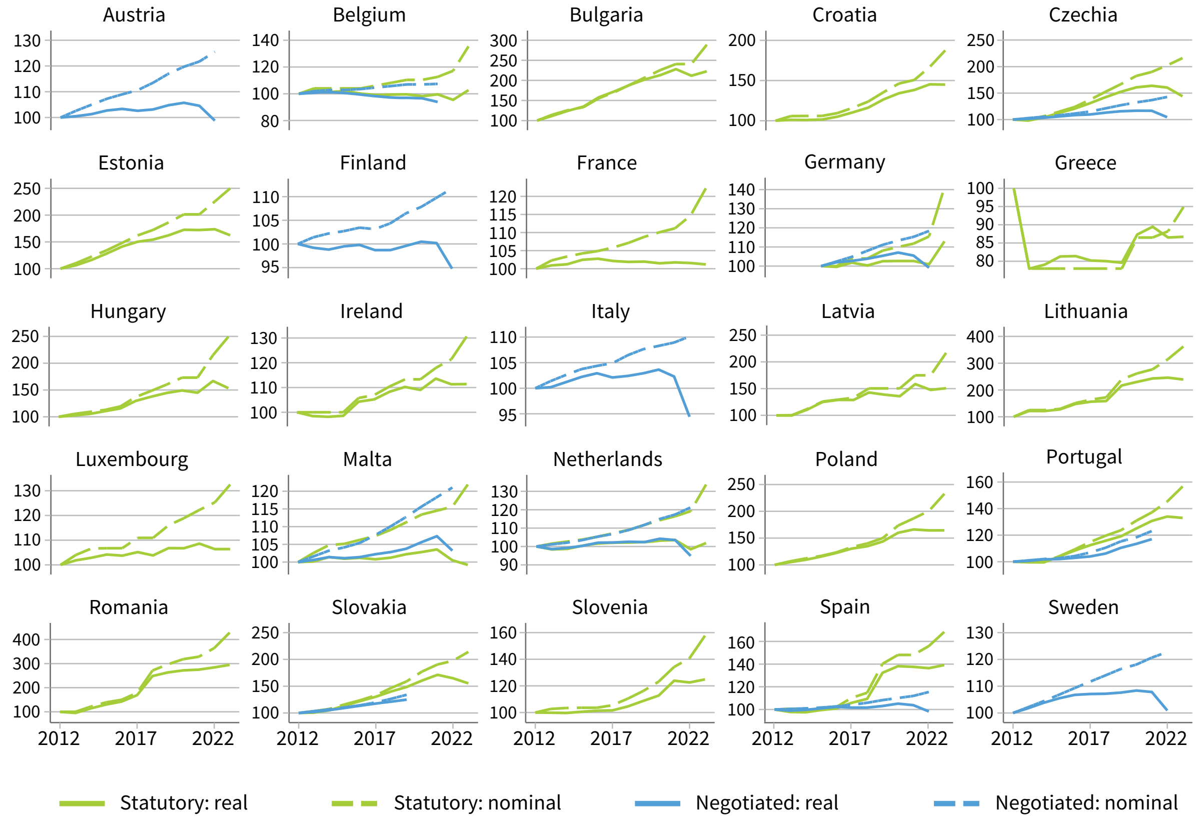
Negotiated wages

Compared with statutory rates, trends in collectively agreed wage levels over the last decade are generally less favourable. In the countries without statutory rates that have such information (Annex 1, Table A3), negotiated wages either declined in real terms over the last 10 years (Austria, Finland, Italy) or remained much the same (Sweden). One of the main reasons behind this outcome is the significant fall in real terms over the last two years (in 2021 and, mainly, 2022), which reflects the different responses to growing price levels: while governments were quicker to intervene by significantly hiking the nominal statutory rates, the (re)negotiation of collective agreements was comparatively slow and/or the agreed increases less substantial.

As a general rule, collective agreements are usually renegotiated every year in Austria and Norway, every second year in the other Nordic countries and every third year in Italy (as per the Framework Agreement of 2009). However, in Italy it can happen that pay rates contained in collective agreements are not renegotiated

4 The large cut in the Greek statutory minimum wage covering 2012–2013 has been included in Figure 7 because data on statutory rates for each year refer to the month of January, so the new level of the Greek rate from March 2012 is registered from 2013 in the figure.

Figure 7: Changes in statutory minimum wages and negotiated minimum wages, 25 EU Member States, 2012–2023 (index, 2012 = 100)



Notes: *Minimum wage levels have been converted to indices (2012 = 100, except for Germany, where 2015 = 100). Data for each year refer to January in the case of statutory rates. The large cut in the Greek statutory minimum wage covering 2012–2013 has been included because the new level of the Greek rate took effect from March 2012. Monthly HICP data have been used to translate nominal minimum wage rates into real minimum wage rates. Cyprus and Denmark not included as no data on negotiated wages and no minimum wage (the statutory minimum wage for Cyprus was only introduced in 2023).*
Sources: *Eurofound and Eurostat (for the monthly HICP levels needed to obtain the real minimum wages), for statutory minimum wages; Eurofound's EurWORK database on wages, working time and collective disputes, for negotiated wages 4.0 [average nominal collectively agreed wage change (WaCh)]*

for a longer time, but the nominal rates remain ultra-active and valid. In Denmark, collective agreements in force cannot be terminated and renegotiated even in the case of unforeseen events. In all other countries, the bargaining systems cater for the possibility of terminating agreements earlier and renegotiating, but this was not generally resorted to in the context of inflation. This may be because employers were unwilling to renegotiate and uprate pay in the light of increased total costs, or because those who are bargaining opt to provide for one-off payments rather than permanent increases. Another possible reason is a deliberate strategy on the part of trade unions not to jeopardise employment and their ability to bargain on other aspects in the context of highly uncertain economic trends – against the background that part of the decrease in real wages was cushioned by government policies. (Read more on recent developments in countries without statutory minimum wages in the previous section 'Recent trends in collectively agreed minimum wages'.)

In some countries with statutory minimum rates (Czechia, Portugal, Slovakia, Spain), negotiated wages grew less than statutory rates and thus adjusted more slowly to cost-of-living challenges. However, this lag was greater in the countries without statutory minimum wages, where the drops in real negotiated wages in the last couple of years are much more pronounced. This could be because social partners use the statutory rate as a reference to set wage floors in countries where they exist. There are other countries where statutory rates and negotiated wages developed largely in line with each other (Belgium, Germany, Malta, the Netherlands). This can be explained by the specific features of the wage-setting systems: negotiated wages are used as a reference when setting statutory rates in Germany and the Netherlands; in Belgium, changes in both negotiated and statutory minimum wages are at least partly determined through interprofessional negotiations; whereas in Malta the maintenance of workers' purchasing power via the changes to the cost-of-living allowance is applied to all wages.

Developments in comparison with labour productivity

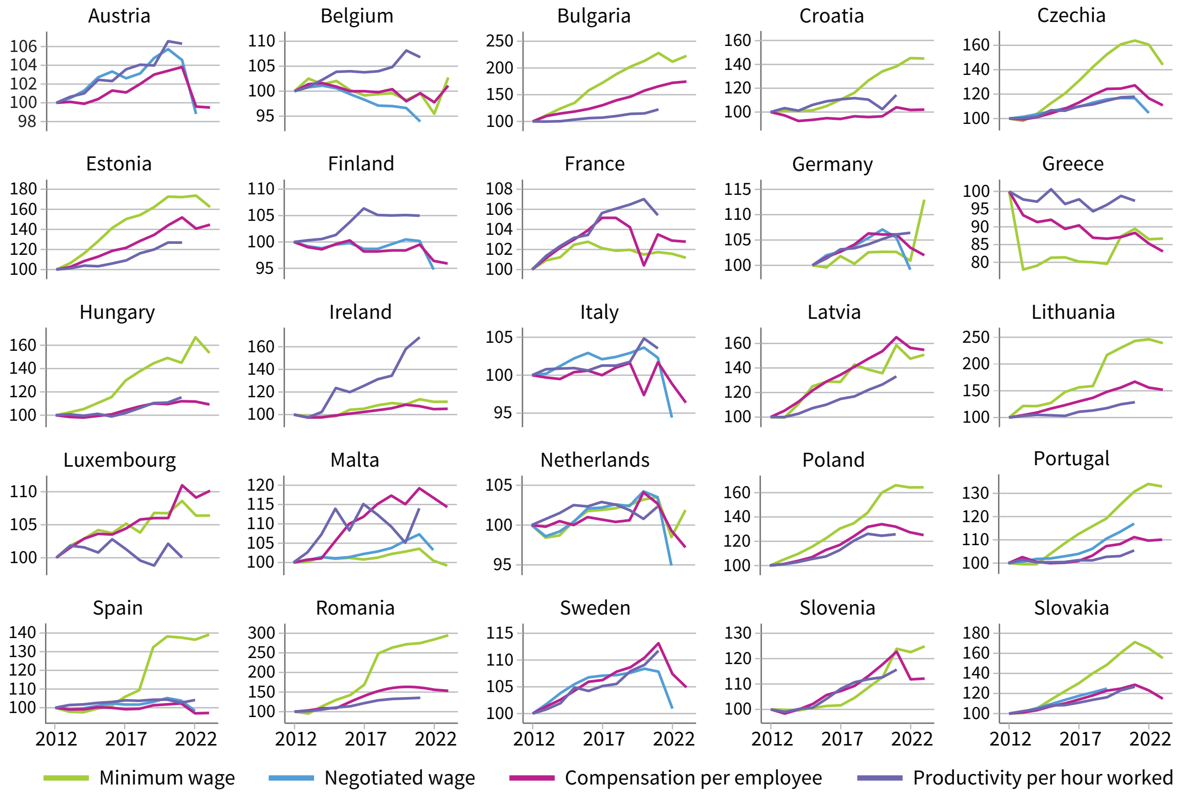
Another relevant question is how changes in statutory and negotiated rates compare with changes in labour productivity and average wages.

Figure 8 shows data for EU Member States on gross statutory rates, negotiated wages, compensation per employee ('average wages' or 'wages' for short) and labour productivity for 2012–2023, with all four indicators shown in real terms.[5]

First of all, it is worth noting that the last 10 years was not a time during which changes in average wages always compared well with changes in labour productivity. This means that, whatever gains existed in the contribution of labour to the production process and the associated creation of economic added value, these gains were not always converted into an equal increase in wages for employees on average. While the developments in labour productivity and in wages are generally comparable in 11 Member States (Czechia, Germany, Hungary, Italy, Malta, the Netherlands, Poland, Romania, Slovakia, Slovenia, Sweden), growth in wages has fallen behind labour productivity in a good number of them (Austria, Belgium, Croatia, Finland, France, Greece, Ireland, Portugal, Spain). Average wages have grown well above labour productivity in only a few countries (Bulgaria, Estonia, Latvia, Lithuania, Luxembourg).

Against this general background, changes in minimum wages stand out as being particularly positive, as they were generally set much more generously in the most recent years. Statutory rates have grown much more than average wages in a majority of EU Member States over the past decade (notably in most CEE countries and in Portugal and Spain). Minimum wages have grown less than average wages in only a few countries, particularly France and Malta. That gap is smaller in Luxembourg and was also smaller in Germany until its recent large statutory rate hike in 2022–2023. Statutory minimum wages have also outperformed negotiated wages across most EU Member States (according to available data, and except for Germany, Malta and the Netherlands).

Figure 8: A comparison of statutory minimum, negotiated and average wages and productivity, in real terms, 25 EU Member States, 2012–2023 (index, 2012 = 100)



Notes: *All four indicators are depicted in real terms. Statutory minimum wages (data referring to January of each year) and negotiated wages have been deflated using HICP data. Real compensation per employee is calculated by applying a private consumption deflator. Data about negotiated wages are only available up to 2022 and about labour productivity up to 2021. Cyprus and Denmark not included as no data on negotiated wages and no minimum wage (the statutory minimum wage for Cyprus was only introduced in 2023).*

Sources: *Own calculations for statutory minimum and negotiated wages (based on Eurofound's EurWORK database on wages, working time and collective disputes, for negotiated wages); national accounts data from the annual macroeconomic database of the European Commission's Directorate-General for Economic and Financial Affairs (AMECO) for real compensation per employee (RWCDC); and Eurostat for real labour productivity per hour worked [TESEM160].*

5 Compensation per employee, as provided by the annual macroeconomic database of the European Commission's Directorate-General for Economic and Financial Affairs, includes not only wages and salaries but also employers' social contributions. Nevertheless, it is a variable that is valid to show an approximation to the trend in average wages in the country.

Box 4: Note of caution regarding labour productivity

When comparing the development of labour productivity over time and in different countries, it is important to take two aspects into account. First, the results can depend on the choice of the base year, not least because wages tend to follow labour productivity (or economic developments) with a lag. Second, the comparison does not take into account the initial level of labour productivity, that is, how much value added is generated by an employee in that country and year. If wages in the initial year are set further below the level of labour productivity in one country than in another country (or the average of other countries), there is room for these wages to increase beyond the increase in labour productivity, without loss of wage-related competitiveness (see Galgóczi, 2017).

Focusing on changes in real statutory rates compared with labour productivity over 2012–2021, three groups of countries can be distinguished.

- The increase in real statutory rates outperforms that of labour productivity by the widest margin in several CEE countries (Romania, Lithuania, Bulgaria, Czechia, Estonia, Slovakia, Poland). It is a well-established fact that gross statutory rates (in both real and nominal terms) are increasing much more in CEE countries, which are experiencing a remarkable process of upward convergence towards the levels of older Member States.
- There is a second group of countries where real statutory rates also grew more than labour productivity, but by a narrower margin than in the previous group of countries. It includes Spain, Hungary, Latvia, Portugal, Croatia and Luxembourg. The margin is negligible in Slovenia and the Netherlands. Minimum wages have also registered significant progress in the remaining CEE countries (Hungary, Latvia, Croatia, Slovenia) and, from the middle or end of the 2010s, in Spain and Portugal.
- Finally, there is a group of six western European countries where real statutory rates rose less than labour productivity. In these countries, real statutory rates either grew relatively modestly (Germany, France, Ireland, Malta) or even declined (Belgium, Greece).[6]

Net value of statutory minimum wages

Although the year-on-year changes in gross statutory minimum wages are the basic figures national minimum wage setters are reviewing, they offer little information on how much is left for a person to take home at the end of the month, and comparison between countries is not straightforward. The net wage or take-home pay is what is left after personal income tax (PIT) and employee social insurance contributions (SIC) are deducted from the gross minimum wage. How much is deducted depends on the country’s tax and benefit system, the design of which varies greatly across the EU. There are huge variations among countries regarding PIT systems (the tax rates and thresholds for different tax rates, whether basic tax allowance is applied, if there are additional allowances for children or other dependants, if some types of income or expenses can be deducted from the tax base, etc.) and in terms of the employee SIC. Box 5 presents a methodological approach to calculating net statutory minimum pay.

6 It should be noted that Belgium and Germany hiked their statutory rates in 2022–2023, which could change this picture if trends up to 2023 were taken into account, for which labour productivity data do not exist yet.

Box 5: Calculation of net statutory minimum wages

The calculations from gross minimum wage to net minimum wage are done using the EUROMOD tax–benefit microsimulation model (version I5+).[7] This is the EU-wide model which makes it possible to calculate the effects of taxes and benefits on household incomes across countries in a comparable manner. EUROMOD simulates the taxes and benefits in place on 30 June each year. The current exercise uses a hypothetical household of one adult member without children who works full time, earning the statutory minimum wage. It is assumed that this person was earning the same minimum wage every month of the year (even if there were statutory wage changes within a year, the minimum wage is the same as it was on 30 June that year).

Although in many countries gross minimum wages do not change (substantially) throughout the year, some countries might implement important changes that will not be reflected in this exercise. For example, in Greece, a minimum wage cut took place in March 2012 (monthly minimum wage was cut from €876.60 to €683.80), which is not reflected in the calculations, since the June value of the minimum wage was used (€683.80). The cut also affects the 10-year comparison of real wages provided in this section.

All the calculations are done for a single 40-year-old household member without children, earning the minimum wage, so the results should not be assumed to be the same for a minimum wage earner living in a household with more members. Calculations for different household composition types (for example, families with dependent children, double-earner couples, single-earner couples) could yield different results depending on the design of the country's tax–benefit system. For example, in many countries dependent children might be entitled to cash benefits or additional tax allowances, which would result in higher net wages and higher disposable income.

The following definitions are used.

Taxes include PIT and SIC paid by employees and employers on gross wage.

Gross minimum wage is the wage before PIT and employee SIC are deducted.

Net minimum wage or **take-home pay** is the wage after PIT and employee SIC are deducted.

Disposable income or **net income** is income left for a person to use and is calculated as gross wage minus PIT and employee SIC plus any social benefits that a person might be entitled to. Since in most countries minimum wage earners are not entitled to any social benefits, their disposable incomes will be the same as their net wage. In a few countries, the single minimum wage earner might be entitled to social benefits, so their disposable income would be higher than their net wage (net wage plus social benefits).

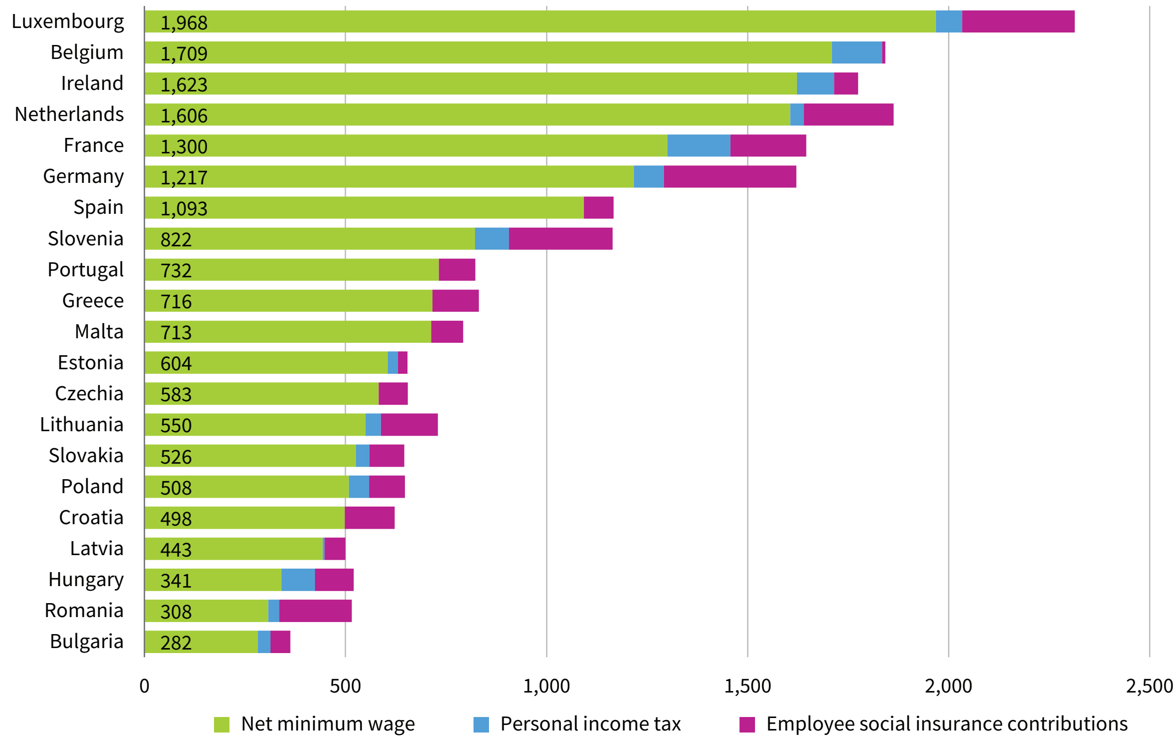
Labour cost is the gross minimum wage plus employer SIC. This is the cost incurred by the employer when hiring a person and paying them the minimum wage.

Tax wedge shows the difference between labour cost to the employer and the disposable income of the employee. The average tax wedge is calculated as the sum of PIT, employee SIC and employer SIC minus any benefits received, as a percentage of labour costs.

All this complexity means that workers from countries with similar gross minimum wages do not necessarily end up having the same net wages. For example, in 2022, the gross minimum wage for a single person in Spain and Slovenia differed by just about €3 (€1,166.70 and €1,164, respectively), but the difference in net wages was €271 (€1,093 in Spain and €822 in Slovenia). Similar comparisons could be made between Belgium and the Netherlands, or between Estonia and Slovakia (Figure 9).

7 Institute for Social and Economic Research, University of Essex; Joint Research Centre, European Commission, EUROMOD: Version I5+ (software), 2023. For detailed explanations of the model, see Sutherland and Figari (2013).

Figure 9: Net monthly minimum wages, PIT and employee SIC for a single minimum wage earner, 21 EU Member States, 2022 (€)



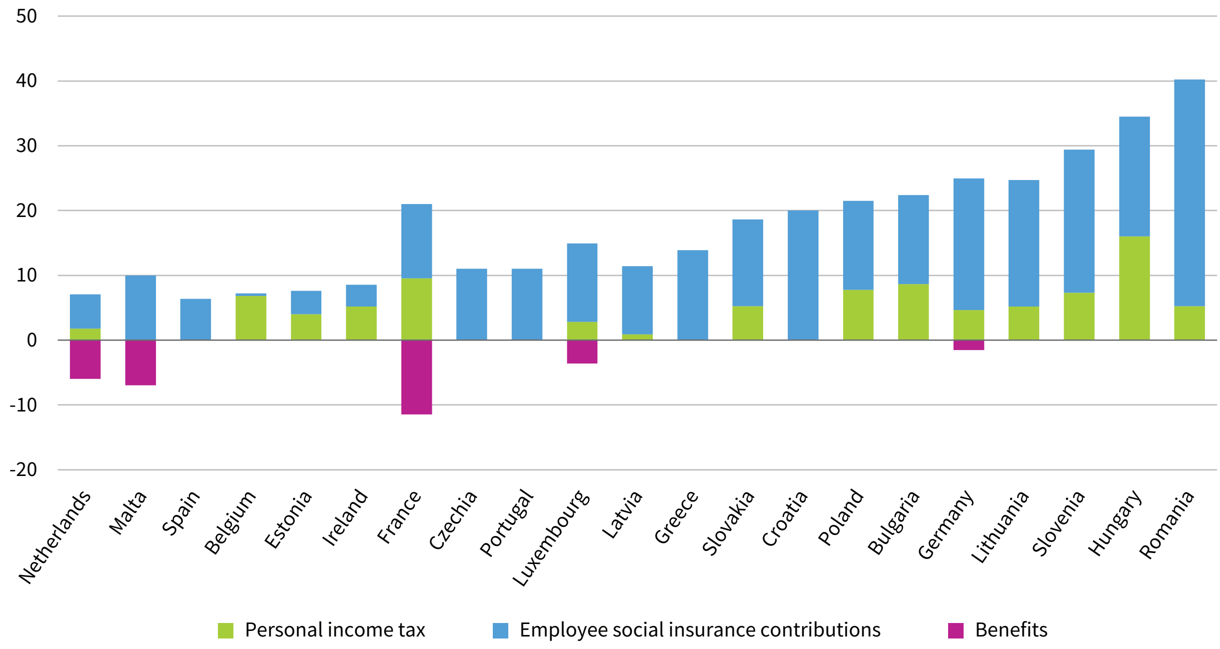
Notes: *The total length of the bar refers to the gross monthly statutory minimum wage (net minimum wage plus PIT plus employee SIC paid on the gross minimum wage). For countries with more than 12 wage payments a year (Greece, Portugal, Slovenia and Spain), the amounts of the gross monthly statutory minimum wage have been converted to reflect 12 payments. The 8% holiday allowance has been added for the Netherlands. The French model was adjusted. For non-euro-zone countries, the minimum wages in their national currencies were converted into euro by applying the monthly exchange rate of the end of the previous month (May 2022).*
Source: *Eurofound calculations based on EUROMOD I5+*

Average taxation rates

In 2022, six countries – Croatia, Czechia, Greece, Malta, Portugal and Spain – did not apply PIT on the gross minimum wage. In Latvia and the Netherlands, the average PIT was very small (1% and 2%, respectively, on the gross minimum wage). Employee SIC were paid in all countries and the average SIC on gross minimum wage varied from as little as 0.42% in Belgium to 35% in Romania.

So the average employee tax rate (PIT and SIC) on gross minimum wage ranged from 6% in Spain to 40% in Romania (Figure 10). On top of that, in five countries – France, Germany, Luxembourg, Malta and the Netherlands – minimum wage earners were entitled to in-work or social benefits. In France, they were entitled to receive an activity allowance; in Germany, a taxable lump sum energy transfer for workers; in Luxembourg, a heating allowance; in Malta, supplementary assistance and a one-time bonus; and in the Netherlands, a health care allowance (EUROMOD, 2022). Therefore, in these five countries, the minimum wage earner's disposable income (income left for a person to use after all taxes are deducted and benefits paid) was higher than their net wage.

Figure 10: Average PIT, employee SIC and social benefits as a percentage of gross minimum wage for a single person, 21 EU Member States, 2022



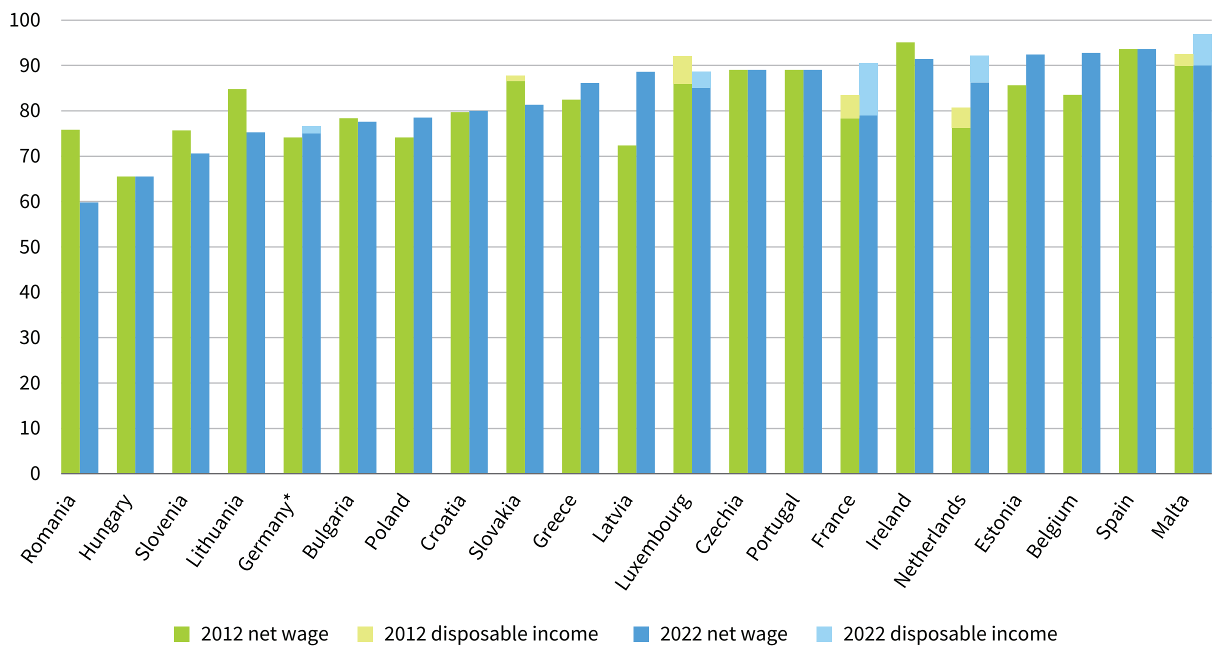
Notes: *For countries with more than 12 wage payments a year (Greece, Portugal, Slovenia and Spain), the amounts of the gross monthly statutory minimum wage have been converted to reflect 12 payments. The 8% holiday allowance has been added for the Netherlands. The French model was adjusted.*
Source: *Eurofound calculations based on EUROMOD I5+*

Disposable income

Figure 11 shows the share of the gross minimum wage that a single person had left to use (disposable income) after taxes were deducted and social benefits paid.

In most countries, disposable income was the same as the net wage. In only a few countries were workers earning minimum wage entitled to in-work benefits or social assistance benefits, which made their disposable

Figure 11: Share of gross minimum wage left for a single earner, 21 EU Member States (%)



Notes: *The minimum wage for Germany is for 2015 and 2022. For countries with more than 12 wage payments a year (Greece, Portugal, Slovenia and Spain), the amounts of the gross monthly statutory minimum wage have been converted to reflect 12 payments. The 8% holiday allowance has been added for the Netherlands. The French model was adjusted. Change in disposable income is because of social benefits paid. The minimum wages used in the calculations are for June.*
Source: *Eurofound calculations based on EUROMOD I5+*

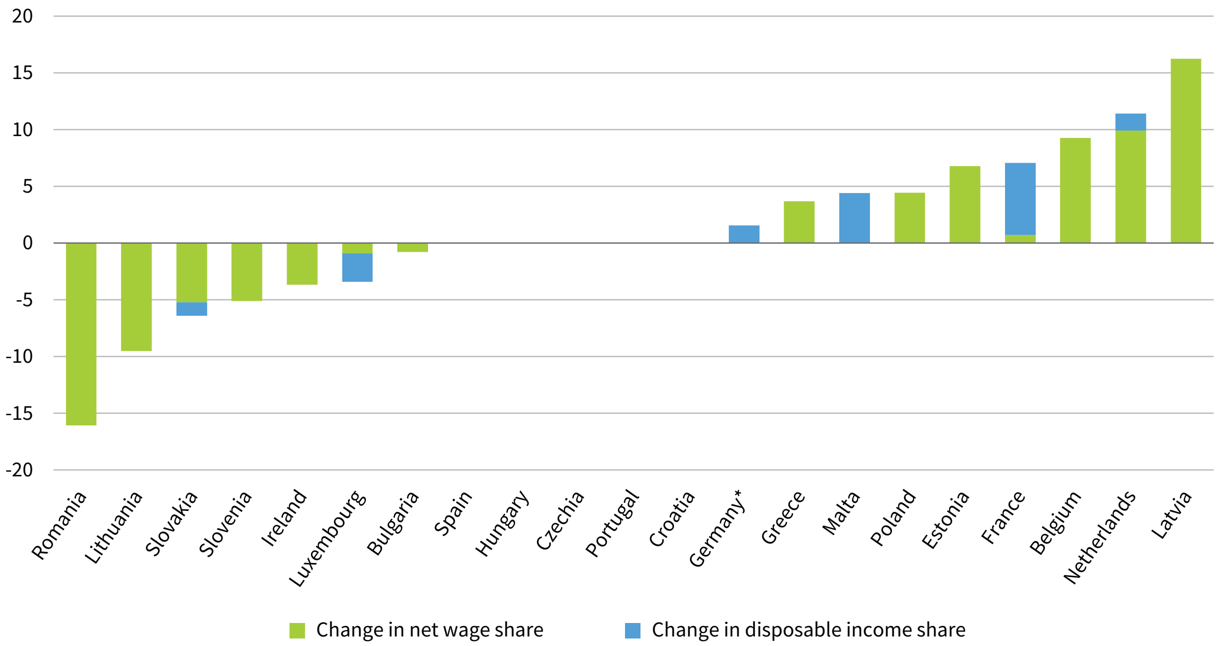
incomes higher than their net wage. In 2022, minimum wage earners in Belgium, Estonia, France, Ireland, Malta, the Netherlands and Spain kept 90% or more of the gross minimum wage. For example, a Maltese minimum wage earner ended up keeping 97% of their gross minimum wage; 90% was left after the deduction of the employee SIC (net wage), but then their disposable income was 7 percentage points higher thanks to social benefits. At the other extreme, Romanians took home only 60% of gross minimum wage, and Hungarians 66%.

Developments in net wage income in relation to gross wages

The share of net wage (income) to gross wage changed between 2012 and 2022 because of changes in the tax–benefit systems in most countries (Figure 12). However, the direction of the changes differed. Six countries either increased taxation or reduced benefit eligibility for minimum wage earners (Bulgaria, Ireland, Lithuania, Romania, Slovakia and Slovenia) so that the ratio of net to gross income reduced. However, these changes should be interpreted with caution, as they do not necessarily mean that people were left with less net or disposable income. For example, in Romania in 2018 and in Lithuania in 2019, major labour tax reforms took place. The employer social insurance contributions were shifted to the employees (their contributions were increased), but at the same time the gross minimum wage was adjusted (substantially increased) and the tax parameters were changed so that from one year to another the net wages not only did not decrease but even grew in nominal terms (Balcerowicz et al, 2019; Anciūtė et al, 2020).

Nine other EU Member States did the opposite (Belgium, Estonia, France, Germany, Greece, Latvia, Malta, the Netherlands and Poland), so that minimum wage earners paid less tax or were entitled to more in-work or social benefits. For example, in Latvia, since 2018 personal income taxation has been made more progressive by introducing three tax bands and increasing the basic tax allowance for low incomes, leading to a reduced average tax burden, especially for low-income earners (Ivaškaitė-Tamošiūnė et al, 2018). In other countries, some of the changes, especially regarding social benefits, were temporary, related to governments' recent attempts to alleviate the impact of increased inflation and high energy prices in 2022 (for example, the lump sum energy transfer in Germany or the one-time bonus in Malta). More information on the ongoing debates on the potential future changes in PIT and SIC that might affect after-tax wages in some EU Member States are given in Chapter 3 (see Table 6).

Figure 12: Ten-year change in the proportion of net wage/disposable income to gross wage for minimum wage earners, 21 EU Member States, 2012–2022 (%)



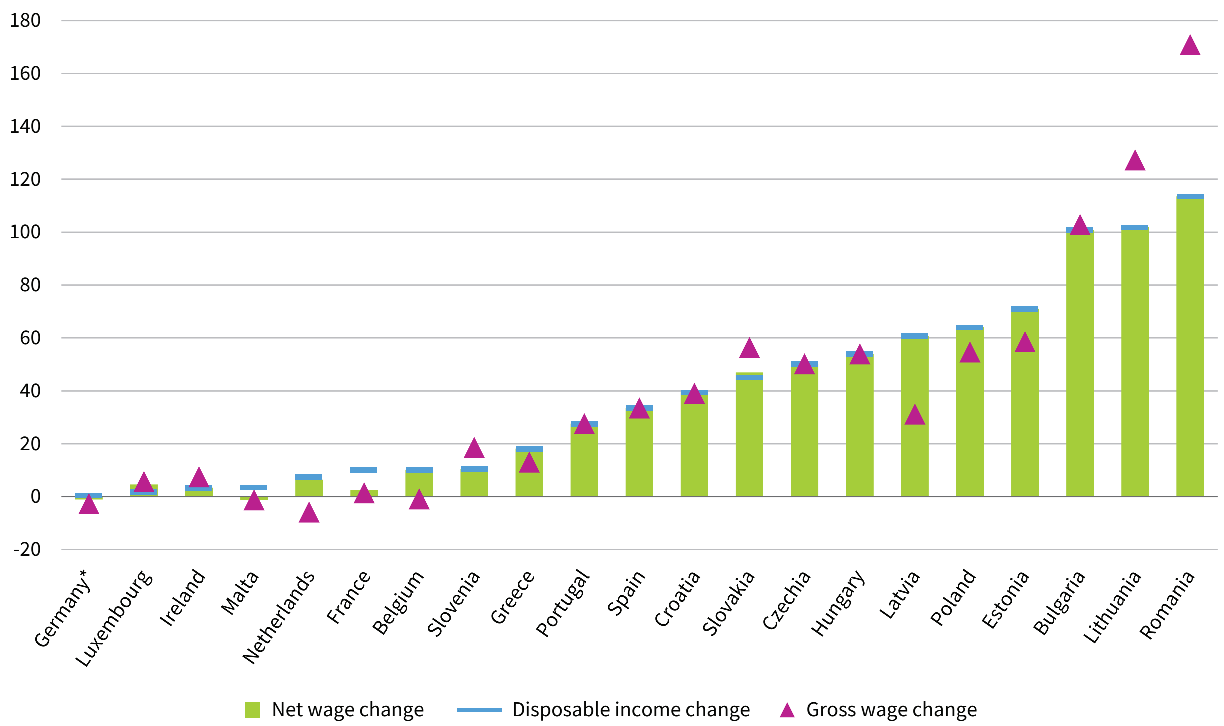
Notes: **The minimum wage for Germany is for 2015 and 2022. For countries with more than 12 wage payments a year (Greece, Portugal, Slovenia and Spain), the amounts of the gross monthly statutory minimum wage have been converted to reflect 12 payments. The 8% holiday allowance has been added for the Netherlands. The French model was adjusted.*
Source: *Eurofound calculations based on EUROMOD I5+*

Ten-year changes in the share of gross to net wages, although interesting from the point of view of the stability of the tax–benefit systems, say little about the changes in the economic situation of the minimum wage earners. Comparing inflation-adjusted gross and net minimum wages allows us to explore whether the remuneration of minimum wage earners was increasing more than inflation (see also Eurofound, 2021, 2022a).

Between 2012 and 2022, not all EU Member States saw the real wages of minimum wage earners growing, and the story was not necessarily the same when comparing real gross and real net wages (Figure 13). For example, in the Netherlands, Germany, Malta and Belgium, the gross minimum wage did not catch up with inflation, and hence the real gross minimum wage in 2022 was even lower than in 2012 (in 2015 in Germany). On the positive side, thanks to their tax–benefit systems, the real net wages and net disposable income in those countries were kept at almost the same level (up to a 10% increase) as a decade before. In addition, the real net minimum wage and the disposable income of workers earning the minimum wage had hardly seen any increase in Luxembourg and Ireland. Similarly, in France, the real minimum wage grew by only 2% but, thanks to in-work benefits, the net disposable income of a single minimum wage earner increased by 10%. Despite little progress, nominal wages in these countries are among the highest in the EU Member States that have statutory minimum wages (see Figure 9 on p. 19).

In all other EU Member States, real gross and net wages grew, although to differing extents. The minimum wage earners in the CEE countries enjoyed the largest real net wage increases over the decade. Real net minimum wages increased by at least 50% in Czechia, Hungary, Latvia, Poland and Estonia, and more than doubled in Bulgaria, Lithuania and Romania (in Romania, the increase was 113%). When the change in the real gross wage is different from the change in the real net wage, it indicates either that a country made minor changes (for example, slightly altering certain tax thresholds, changing the levels of basic tax allowances or changing eligibility requirements for certain benefits) in its tax–benefit system that affected the minimum wage earners or that it implemented more substantial reforms.

Figure 13: Ten-year change in the real gross and real net minimum wages and real disposable income of minimum wage earners, 21 EU Member States, 2012–2022



Notes: **The minimum wage for Germany is for 2015 and 2022. The real gross and net minimum wages and real disposable income are adjusted to account for inflation using HICP from Eurostat [PRC_HICP_AIND]. For countries with more than 12 wage payments a year (Greece, Portugal, Slovenia and Spain), the amounts of the gross monthly statutory minimum wage have been converted to reflect 12 payments. The 8% holiday allowance has been added for the Netherlands. The French model was adjusted. Change in disposable income is because of paid social benefits. Wages used in the calculations are for June.*
Source: *Eurofound calculations based on EUROMOD I5+*

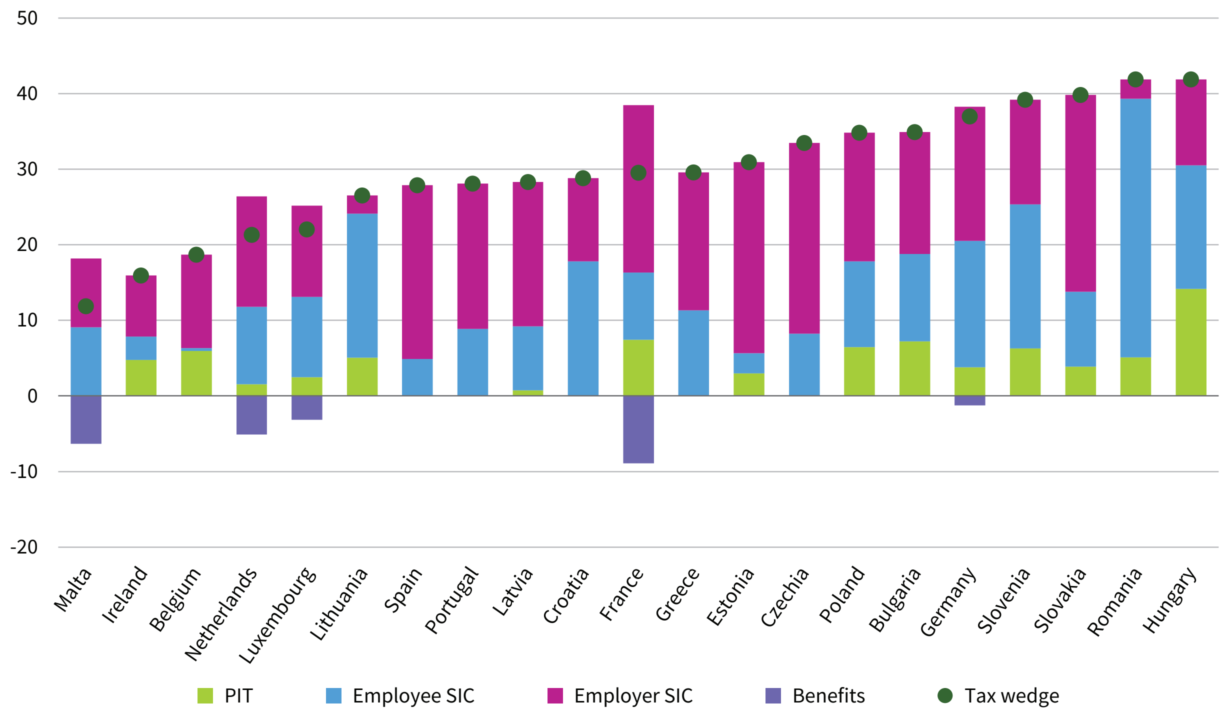
Labour costs: Tax wedge on minimum wages

Minimum wages can also be viewed from the labour cost angle. While PIT and employee SIC are borne by employees, employers also pay employer SIC on gross wages. The tax wedge on labour costs is the sum of PIT, employee SIC and employee SIC, minus any benefits received, which is expressed as a percentage of total labour costs. The Organisation for Economic Co-operation and Development refers to the tax wedge as measuring the extent to which taxes on labour income discourage employment.

Overall, as Figure 14 illustrates, the tax wedge on minimum wages in 2022 was lowest in Malta (12%) and highest in Hungary and Romania (both 42%). Similarly to what was presented earlier, the overall taxation design varies greatly country by country, including how SIC payments are shared between the employee and the employer. For example, in Belgium, Estonia and Spain, employers pay the lion's share of the SIC, while in Lithuania and Romania SIC are almost exclusively paid by employees.

Most countries had decreased the tax wedge on the labour costs of a single minimum wage earner in the previous decade (Figure 15). In only two countries had the tax wedge stayed the same for 10 years (Portugal and Spain). Another six (Bulgaria, Luxembourg, Romania, Slovenia, Slovakia and Ireland) had slightly increased the tax burden on labour costs, mostly in the last five years (2017–2022). Although for most countries the change in employee taxes (as shown in Figure 12) goes in the same direction as the tax wedge, the notable exception is Lithuania. As mentioned earlier, both Lithuania and Romania increased the tax burden on employees by shifting SIC from employers to employees, yet their tax wedges went in completely opposite directions. Lithuania reduced the tax wedge while Romania increased it.[8] The largest reduction in the tax wedge on the labour costs of the minimum wage in the decade took place in Latvia because it strengthened the progressivity of its PIT system, including more generous basic tax allowances for low-income earners.[9]

Figure 14: Average tax wedge and composition of tax wedge for a single minimum wage earner, 21 EU Member States, 2022 (%)

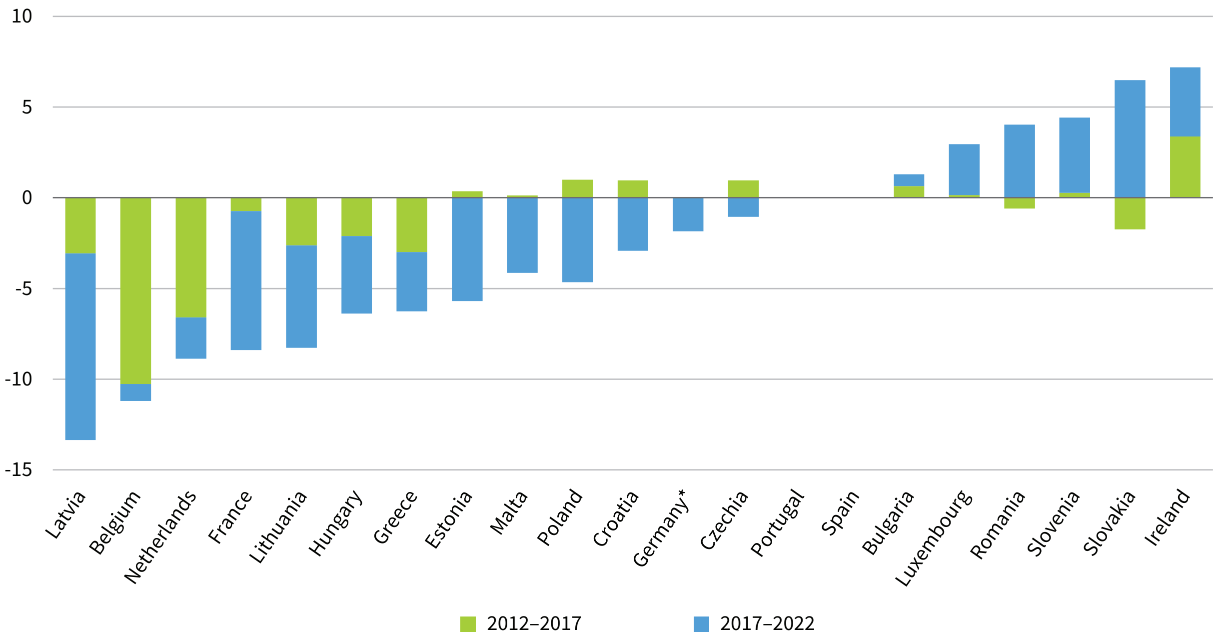


Notes: *For countries with more than 12 wage payments a year (Greece, Portugal, Slovenia and Spain), the amounts of the gross monthly statutory minimum wage have been converted to reflect 12 payments. The 8% holiday allowance has been added for the Netherlands. The French model was adjusted.*
Source: *Eurofound calculations based on EUROMOD I5+*

8 When shifting employer SIC to the employee, several tax parameters had to be revised as well. In both countries, the PIT rate was reduced: from 16% to 10% in Romania, where the tax-free allowance was increased; and from 15% to 20% in Lithuania, with the introduction of a second tax bracket of 27% and an increase in the basic tax allowance. At the same time, the minimum wages in both countries were substantially increased. With the adjustments made, Lithuania took the opportunity to reduce the average tax wedge (PIT, employee SIC and employer SIC) on labour costs, while in Romania it slightly increased. See Balcerowicz et al (2019) for Romania and Anciūtė et al (2020) for Lithuania.

9 In 2018, the standard PIT rate of 23% was reduced to 20% for incomes up to €1,667 per month, and a second tax rate of 23% was applied to incomes up to €4,583 per month. Above this threshold, a 31.4% rate was applied. The social contribution and the solidarity tax were raised by 1 percentage point. For more information on the reforms and their impact on the tax wedge and income inequality, see Ivaškaitė-Tamošiūnė et al (2018).

Figure 15: Changes in the tax wedge for minimum wage earners, 21 EU Member States, 2012–2017 and 2017–2022 (%)



Notes: **The minimum wage for Germany is for 2015–2017 and 2017–2022. For countries with more than 12 wage payments a year (Greece, Portugal, Slovenia and Spain), the amounts of the gross monthly statutory minimum wage have been converted to reflect 12 payments. The 8% holiday allowance has been added for the Netherlands. The French model was adjusted.*
Source: *Eurofound calculations based on EUROMOD I5+*

2 Minimum wage setting for 2023

Changes to the regulations on minimum wages

In most of the Member States with statutory minimum wages, there were no changes to the regulations that set out how minimum wages are changed. Only four countries noted adaptations during 2022. The widest-ranging change was of course the introduction of a statutory minimum wage in **Cyprus** (Box 6). **Ireland** expects a change to its minimum wage regulation in due course, as it intends to replace its national minimum wage with a national living wage (see more in the section 'From minimum to living wages?' in Chapter 3).

In addition to the special increase in the minimum wage for 2023, which was regulated by ministerial order,[10] the **Netherlands** passed a bill in parliament (based on an initiative proposed by the Labour Party and GreenLeft, which will change the definition of the minimum wage from a monthly to an hourly basis as of 1 January 2024. Currently the minimum wage is defined on a monthly basis, but no underlying number of hours is defined. Hence, a worker doing 40 hours of work per week implicitly receives a lower hourly minimum wage than a worker doing 36 hours of work per week. The new regulation provides for the minimum wage to be defined on an hourly basis, which will be derived from the monthly statutory minimum wage based on a 36-hour working week. With this method, no worker will be worse off than before, and those employed for more than 36 hours per week will see a raise (AWVN, 2022).

In **Romania**, the minimum wage regulation for agriculture and the food industry was introduced by Law 135/2022, which presents a derogation from the Labour Code (stipulating that the minimum wage is set by government decision). It also introduces tax exemptions for wages in agriculture and the food industry (identical to the ones introduced for the construction sector in 2018). In May 2022, when the law was introduced, the minimum wage in those industries was set at RON 3,000 gross, thus exceeding what was then the level of the statutory minimum wage (RON 2,550). As it did not increase further in January 2023, when the statutory minimum wage was also increased to RON 3,000, the industry-specific minimum wage de facto no longer exists.

Box 6: New statutory minimum wage regulation in Cyprus

The minimum wage regime of Cyprus was significantly reformed in 2022. The minimum wage now covers all employees, except in agriculture, animal production, domestic work and maritime activities. The new regime was introduced with the enactment of a minimum wage decree by the Council of Ministers and entered into force on 1 January 2023. The new decree, KDP 350/2022, replaced a previous decree, KDP 180/2012, which covered only a fraction of the country's employees, namely those working in only nine groups of occupations.

The new regime sets the minimum wage at €940 a month, applicable to workers after six months of continuous service. For workers with less than six months of service, a lower initial rate of €885 a month applies . This represents an increase of just 1.7% compared with most thresholds that had been in place since 2012, stemming from the previous regime.

The new minimum wage is expressed only in monthly rates, unlike the previous regime, in which the minimum wage of at least two groups of occupations with unregulated weekly working time was set as an hourly rate. As the new regime does not fix any working time thresholds, and there is no statutory definition of normal daily and weekly working hours, employees in different sectors of the economy may be required to work between 38 and 48 hours a week to obtain the minimum wage rate. Thus, the actual minimum wage per hour may diverge by 26.3%.

The new decree does not provide for any additional payments, such as a 13th or 14th monthly salary, and does not provide for annual public holidays, nor does it regulate the remuneration of overtime. It provides for a sub-minimum of 75% applying to persons under 18 years for casual work not exceeding two continuous months.

10 Regulation of the State Secretary for Social Affairs and Employment of 10 October 2022, No. 2022-0000204325, to adjust the statutory minimum wage as of 1 January 2023.

The new regime also provides for reductions of 15% if the employee receives meals, 10% if they receive accommodation and 25% if they receive both from the employer. If the employee receives both accommodation and meals, the sub-minimum is set at 75% of the full rate.

The new decree does not affect the other minimum wage decree introduced in January 2020 (KDP 06/2020) – setting minimum wages for 13 occupational groups in the hotel industry – which remains in place as it is. (see article 'Cyprus introduces national statutory minimum wage', published at https://eurofound.link/ef23050.)

Process of minimum wage setting for 2023

Cyprus switched its minimum wage-setting regime to a universal statutory minimum wage, from a combination of statutory occupational rates with collectively agreed rates (see Box 7). Otherwise, the national processes of minimum wage setting by and large remained stable. Nevertheless, a few countries did change from their previous approaches when determining the rates for 2023.

- First, it is noteworthy that an increased number of countries determined the new level of their statutory minimum wages following a bipartite or tripartite agreement.
- Second, the ad hoc uprates that were made in some countries tended to happen outside the regular system of minimum wage setting, and therefore with less social partner involvement than in that system. In addition, the level of the first universal statutory minimum wage rate set in Cyprus was a unilateral government decision.

Notwithstanding these exceptions, it is noteworthy that social partners had a role in determining the level of minimum wages in every country in this cycle.

Figure 16 provides a graphical outline of the high-level minimum wage setting process for 2023. It is important to mention that classifying a country in a certain box is problematic, first because the minimum wage-setting process is multidimensional, and second because it is not always straightforward to judge whether a government decision reflects an agreement (not formal and not disputed) with the social partners or is a unilateral government decision after the social partners fail to agree. Similarly, it is not always entirely clear to what extent an exchange within a tripartite forum is tripartite or bipartite between the social partners (in other words, the extent to which the government is taking part in negotiations between social partners).[11]

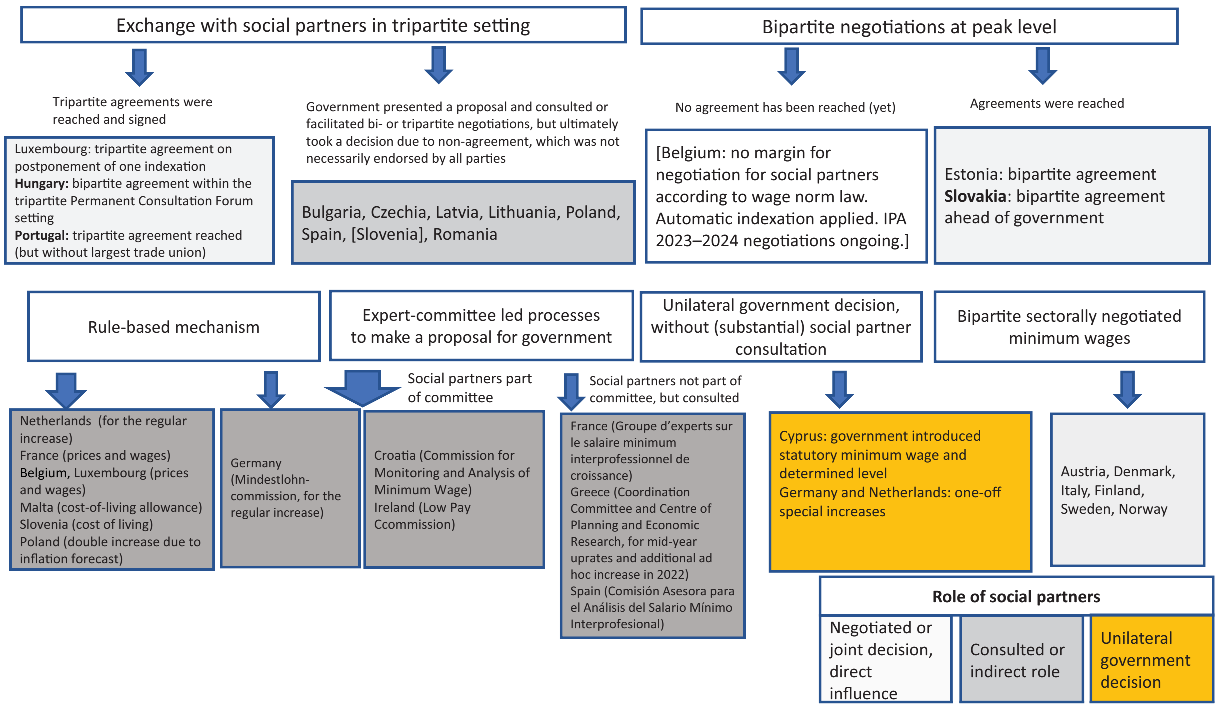
Bi- and tripartite agreements reached

Among the countries where tripartite agreements on the level of the minimum wage for 2023 were made are Hungary and Portugal. In **Hungary**, the negotiations started early in the framework of the Permanent Consultation Forum of the government and the private sector (VKF); an agreement was reached relatively quickly[12] in relation to both the basic minimum wage and the guaranteed wage for skilled workers. In **Portugal**, the process was part of the tripartite Permanent Commission of Social Concertation (CPCS), whereby the government presented a proposal and consulted the social partners. In 2022, the outcome of this consultation process was the Medium-Term Agreement for Improving Income, Wages and Competitiveness, signed on 9 October 2022 (CES, 2022). Following the tripartite agreement, the government approved the decree law setting the mandatory minimum wage on 15 December 2022. This agreement encompassed not only the statutory minimum wage increase but also incomes policy in general in the private sector, and fiscal measures compensating companies. The agreement was signed by the government and five social partners: the Confederation of Farmers of Portugal (CAP), the Confederation of Trade and Services of Portugal (CCP), the Business Confederation of Portugal (CIP), the Confederation of Portuguese Tourism (CTP) and the trade union confederation the General Workers Union (UGT). The General Confederation of Portuguese Workers (CGTP), the largest trade union confederation, refrained from signing.

11 In contrast with the version contained in last year's report, no further distinction is made between situations where the government presented a proposal and consulted and those where the government decided unilaterally following non-agreement.

12 The largest confederation of trade unions (Hungarian Trade Union Federation, MASZSZ) hesitated for a while, but signed the agreement on 15 December 2022.

Figure 16: Overview of the process of minimum wage setting for 2023



Notes: *Bold text highlights countries that have moved boxes compared with the previous year. The square brackets indicate that the country falls into more than one box/system. IPA, Interprofessional Agreement*
Source: *Eurofound, based on national contributions*

Box 7: Process of introducing a statutory minimum wage with universal coverage in Cyprus

Up to 2023, Cyprus had no universal statutory minimum wage, just statutory occupational rates for some low-paid workers. While these rates were subject to annual reviews, they had been frozen since 2012. The intention of the reform was to expand the coverage of the minimum wage to all workers and employees.

The process of setting the statutory minimum wage in 2022 in Cyprus therefore involved both the reform of the regime and the initial determination of the level of the minimum wage. The negotiations and consultations took place in the tripartite Labour Advisory Body (LAB), which is the traditional framework for addressing all labour-related issues and reforms, including setting the minimum wage. The employer organisations were in principle against any statutory regulation of wages, as, in their view, the level of wages should be the result of free collective bargaining. Nonetheless, considering the political will of the government, they signalled their readiness to engage in negotiations for a reform in the spirit of the government's intentions, but argued for a significantly lower level of minimum wage than the one finally set unilaterally by the government. Trade unions, on the other side, aspired to a far-reaching reform of the minimum wage regime, and argued, among other things, that it should cover all sectors and be determined as both monthly and hourly rates, based on a 38-hour working week.

As the negotiations did not seem to lead to a common understanding, at the end of August 2022 the government proceeded to release decree KDP 350/2022, introducing the new minimum wage regime. The government discussed with the social partners the possibility of including a reference to the median wage, but finally decided to introduce the new decree without any reference to a median or average wage. It also did not provide any explanation of how the level was calculated and whether any indicators had been taken into consideration.

Adjusting the statutory minimum wage in future

For future adjustments of the minimum wage, the new decree provides for the appointment of a Minimum Wage Readjustment Committee by the Council of Ministers. This committee will be composed of three representatives of trade unions, three representatives of employers and three independent academics or experts of recognised competence. The committee will submit a report to the Minister for Labour two months before any minimum wage readjustment. After collecting and considering the views of the members of the tripartite LAB, the minister will submit a proposal to the Council of Ministers for the readjustment of the level of the minimum wage. Finally, the readjustment process is to be activated every two years, beginning on 1 January 2024.

The tripartite agreement in **Luxembourg** related not to the level of the minimum wage but to the postponement of any potential further increase due to the regular indexation rule (read more in the section 'How countries dealt with inflation during 2022' below).

Bipartite agreements following negotiations between the peak-level social partners were reached in Estonia and Slovakia. While in **Estonia** the conclusion of such an agreement is in line with the regular practice of previous years – and it continued to be extremely fast, with an agreement reached following 10 days of negotiations and exchanges between 26 August and 5 September – it is a novelty in Slovakia. In **Slovakia**, following the change of the Minimum Wage Act in 2019, social partners as of 2021 bargain 'in the shadow of the law' (Eurofound, 2021, p. 4; see also p. 21). If they have not reached an agreement by 15 July, the government sets the minimum wage unilaterally, as 57% of average wages. Just a day short of this deadline, the negotiating social partners[13] announced in a press conference the conclusion of an agreement, which slightly exceeded the level that had been mandated by law but still took into account the current unfavourable economic situation.

Consultation and negotiation without formal agreement

In most countries, governments consulted social partners mainly within tripartite institutions or, in Spain, by organising ad hoc exchanges with or among the social partners. These exchanges ultimately tend to result in the government making the final decision on the rate, as no formal agreements with the social partners were reached, or because (some of) the social partner organisations continue to express reservations about the final decision on the rate (see Table 3 for examples).

Box 8: Negotiations for 2023–2024 in Belgium

Bipartite negotiations are also an integral part of the Belgian model of (statutory) minimum wage setting. The negotiations take place within the National Labour Council (NAR-CNT) on a two-yearly basis. These negotiations are prepared and initiated by the Central Economic Council (CRB-CCE), which delivers a report that defines the possible margins within which wages can increase, known as the 'wage norm'. This norm is important, as it forms the basis of minimum wage negotiations across all sectors, including the national minimum wage. The negotiations for an interprofessional agreement for 2023–2024 started after publication of the preparatory report in October 2022. Given the fact that the calculated maximum allowed wage growth was set at 0%, there was no need for social partners to elaborate further (as there is no margin for negotiation left). More information on Belgian minimum wage setting is described in the next section. See also the article 'Minimum wages in Belgium', published at https://eurofound.link/ef23052.

13 The Federation of Employer Organisations (AZZZ SR), the National Union of Employers (RÚZ), the Association of Industry Unions and Transport (APZD) and the Association of Towns and Communities of Slovakia (ZMOS) participated in negotiations with the Confederation of Trade Unions of Slovakia (KOZ SR) and the Joint Trade Unions of Slovakia (SOS).

Table 3: Processes of consultation and negotiation without formal agreement

Country	Process
Bulgaria	In Bulgaria, the process of setting the rate for 2022 had been delayed, and a decision on uprating the rate was only made in the first quarter of the year, becoming effective on 1 April 2022 (see Eurofound, 2022a). Regarding the rate for 2023, the discussions in the National Tripartite Cooperation Council continued until the very end of 2022. On 21 October 2022, the Bulgarian Socialist Party (BSP) proposed an amendment of the Labour Code in the parliament. This was guided by the reference values indicated in the minimum wage directive, which was being transposed into a draft law. Two national representative employer organisations opposed the proposed new amount, while trade unions (the Union for Private Economic Enterprise, UPEE, the Confederation of Labour Podkrepa and the Confederation of Independent Trade Unions of Bulgaria, CITUB) endorsed it. The Bulgarian Industrial Capital Association (BICA) would have preferred reference to median rather than average wages and argued that Bulgaria has the highest minimum wage to gross domestic product (GDP) per capita ratio (BICA, 2022). The Bulgarian Chamber of Commerce and Industry (BCCI) criticised the fact that the increase is carried out in an administrative manner, without taking into account the real state of the economy and labour productivity, and the BCCI does not support the draft law on changes to the Labour Code (see section on 'Debates on changes to minimum wage setting' in Chapter 3) (BCCI, 2022a). On 22 December, after the tripartite council had discussed the latest proposal of the government (dated 9 December 2022) for the minimum wage increase, the BCCI in a new statement (BCCI, 2022b) said that it would agree on the increase, but only if it would become effective later in the year. The government ultimately determined the rise on 29 December 2022.
Czechia	In Czechia, social partners had engaged in joint negotiations during the tripartite plenary session on 13 September 2022 but did not reach an agreement. Therefore, on 2 December 2022, the Ministry of Labour and Social Affairs presented a proposal with four scenarios to raise the minimum wage. The final decision, made by the government, was in line with the proposal of the Association of Independent Trade Unions (ASO), but it also limited the increase in the 'guaranteed wage' to the first and eighth work groups which are covered by this wage.[14] This can be regarded as a compromise for the employers, who are keen to abolish the system of guaranteed wages.
Latvia	In Latvia, the process of setting the statutory minimum wage in 2022 was shorter and faster, with fewer discussions, because the government and the social partners had previously agreed that the minimum wage would not change in 2020, 2021 and 2022, and then would be increased in 2023 and 2024. A specific amount for the minimum wage in 2023 and 2024 was not set at that time. At the first meeting of the National Tripartite Cooperation Council (NTSP) on 16 June 2022, the government proposed to increase the minimum wage from €500 to €620. The Free Trade Union Confederation of Latvia (LBAS) argued for a higher increase, while the Latvian Employers' Confederation (LDDK) stated it did not oppose the proposed linking of minimum wages to average pay, but argued that increased labour costs and pressure on wages in other wage groups needed to be taken into account. The parties agreed to continue the debate in August, but only returned to it in October and December, when the level of the minimum wage was fixed, first in the labour law and then in Regulation No. 788 of the Cabinet of Ministers. The last decision on the minimum wage was not discussed with social partners, either in the NTSP or in another format, but the decision was not openly disputed either.
Lithuania	In Lithuania, social partners had already agreed in 2017 to set the minimum wage at a level of 45–50% of average wages. Calculations on this level were presented to the tripartite council in June 2022 by the Bank of Lithuania, which also recommended a more cautious approach to delay the decision on the increase or to adapt it in stages, due to economic uncertainty. This view was also supported by the Ministry of Social Security and Labour (MSSL), which asked the tripartite council to deliver its conclusions on 15 September, instead of 15 June (Tripartite Council, 2022). In a sitting on 13 September, the Bank of Lithuania presented a new proposal to increase the minimum wage in two stages (January and June 2023). While most employers' representatives supported the first increase, they were in favour of reviewing the latter in the spring and reducing it in the event of a slowdown of the economy. In addition, they proposed to increase the monthly tax-exempt amount of income. Trade unions disagreed on this view and supported the Bank of Lithuania's proposal. Finally, in the absence of a unanimous conclusion between the social partners, it was decided to record separate opinions and to propose that the final decision be taken by the government.
Poland	In Poland, according to the Minimum Wage Act, the Council of Ministers proposes the level of the rate for the next year by 15 June for discussion and negotiations within the tripartite Social Dialogue Council. If the council is unable to reach consensus by 15 July, the Council of Ministers decides unilaterally no later than 15 September. The government's proposal in June envisaged a two-stage increase in January and July 2023. This is mandated by law, because the projected inflation exceeds 5%. As in previous years, the Social Dialogue Council did not come to an agreement.
Romania	In Romania, the regular setting of the minimum wage involves the government (which ultimately takes the decision) and the nationally representative trade union and employers' confederations (which are consulted in the framework of the Tripartite National Social Dialogue Council, TNSCDC). Within the TNSCDC, the idea of increasing the minimum wage to RON 3,000 gross per month circulated early on. Some employers demanded an increase to only RON 2,800, while some trade union representatives demanded RON 3,200. Much of the discussion focused on the possibility of implementing tax breaks on a part of the raise. In the end, the decision was taken that RON 200 of the RON 450 increase will be exempt from taxes. It was the first time this was discussed and decided, the reasoning behind it being that the increase was substantial and therefore employers required some measure of aid.

14 The governmental decree defines eight work groups, based on level of complexity and responsibility, ranging from level 1 (unskilled worker) to level 8 (financial and sales director, financial and capital market broker, demanding creative system work, etc.), each of which has different rates of minimum hourly and monthly wages.

Country	Process
Slovenia	In Slovenia, which also adheres to a rule-based mechanism, tripartite consultations were held on the method of calculation and the amount of the minimum wage. At the beginning of consultations, the government proposed that the minimum wage would be uprated in two steps. The first increase would be in November 2022, when it would be aligned with the increase in the minimum cost of living, and the second in January 2023, when it would be aligned with the growth of consumer prices. Trade unions supported the government's plan, but employers were against it, since such an early increase in the minimum wage is not envisaged in the Minimum Wage Act and represents a withdrawal from the principle of predictability of the business environment. Following this exchange, the Minister for Labour announced on 12 January 2023 that there would be a single uprate, which is retroactively effective from 1 January.
Spain	The Spanish process continued to be the same as in the previous year. Based on the recommendation of the expert committee in December 2022, the government initiated a process of consultations and negotiations with social partners, on both a bipartite and a tripartite basis, to reach an agreement. These meetings took place on an ad hoc basis, outside the Economic and Social Council, which is the main social dialogue institution in Spain. Throughout this process, social partners maintained very different positions on the minimum wage increase for 2023. Trade unions aligned with the upper limit considered in the report by the expert committee, while employers were more favourable to the lower limit. After several meetings in December 2022 and January and February 2023, the government recommended an increase to €1,080 per month, which was supported by trade unions, but was opposed by employer organisations.

Rule-based mechanisms and expert committee-led processes

The remaining Member States have rule-based mechanisms in which the level is determined according to more or less strictly defined formulas or guiding rules (Luxembourg, the Netherlands, Poland, and Malta until the end of 2022) or they have expert committees leading the process (Croatia, Ireland, Greece, Spain and Malta from 2023 onwards, or a combination of both (France, Germany). Some countries also combine rule-based processes with social partner consultations or negotiations (Belgium, France, Poland, Slovenia and previously Estonia). These regular processes were applied in all countries, except for the cases of additional ad hoc increases, which were given in Germany and Greece during 2022 and in the Netherlands from 1 January 2023. Luxembourg also modified its regular process somewhat by agreeing on the postponement of a second indexation. These cases are described in the next section, 'Deviation from standard procedures'.

Croatia continued its recently established expert committee-led process, based on the Minimum Wage Act of 2018 (OG 118/18). The act stipulates that the minimum wage level is to be determined by 31 October each year, which requires that consultations with social partners take place in September and October. The Expert Commission for Monitoring and Analysis of the Minimum Wage is a consultative body for the minister to support this process, by analysing trends relevant to minimum wage policy. In 2022, the commission had three meetings, and proposed a new rate for 1 January 2023, albeit not unanimously. One trade union representative within the committee argued that the proportion of the minimum wage to average wages was falling, and that the rise in food prices exceeded average inflation, affecting those on low incomes disproportionately. Employer representatives argued that certain sectors would not be able to bear the minimum increase, and argued for compensatory measures alongside a modest increase. Similarly, the consultation of the social partners did not result in a consensus either. The ultimate government decision on the new rate implies that the rate will amount to 51% of gross average wage or 62% of gross median wage for June 2022.

Neither did **Ireland's** tripartite Low Pay Commission (LPC) make a unanimous recommendation for the new rate of 1 January 2023. In 2022, as in previous years, the LPC carried out a public consultation and then made recommendations to the Minister for Enterprise, Trade and Employment, designed to set a minimum wage that is fair and sustainable (LPS, 2022). The recommended increase in minimum wage from 1 January 2023 was introduced against the background of a commitment in the programme for government to 'Progress to a living wage over the lifetime of the Government' (Government of Ireland, 2020, p. 74). The recommendation on the hourly rate was supported by seven of the nine members of the commission, but not by two of the employee representative members of the commission, who submitted a minority statement which was published at the end of the report. These employee representatives believed the minimum wage should be increased to €12 per hour in two stages, arguing that this would make up for the real pay cuts that workers on the minimum wage had suffered in 2021 and 2022; ensure that the increase to 60% threshold of the median wage within four years, as proposed by the government, is implemented; align increases with economic growth and consumer spending; and increase net business revenue and raise enterprise productivity.

France has a combined process in place, in which a legal formula links the growth of minimum wages to the development of actual wages and the development of consumer prices (read more on this in the next section), with the assessment of an expert committee, which can make a recommendation for an additional increase (*coup de pouce*) on top of the formula. As in other years, the expert committee did not recommend such a further increase (Ministère de l'Economie, des Finances et de la Souveraineté industrielle et numérique, 2022). This was based on – among other things – an oral and written consultation with the peak-level social partners. In addition, social partners were formally consulted in the framework of the bipartite National Committee of Collective Bargaining, Employment and Vocational Training (CNNCEFP), just ahead of the publication of the decree.

From 2018, **Greece** started to apply the consultation process on the minimum wage as per Article 103 of Law 4172/2013. When applied according to the regular procedure, the process is launched early in the year, with a view to increasing the rate in May. During 2022, the process related to the regular uprate involved a tripartite oral consultation committee for the minimum wage under the auspices of the representative of the Organisation for Mediation and Arbitration[15] and the establishment of a committee of independent experts on social policy, economy and industrial relations.[16] The coordination committee consulted a number of social and economic research bodies and organisations, including the Bank of Greece, the Hellenic Statistical Authority (Elstat), the Greek Manpower Employment Organisation (OEAD) and the Centre of Planning and Economic Research (KEPE), as well as several research institutes affiliated to social partner organisations. These organisations were asked to provide their assessments of the applicable statutory minimum wage rate and the future rate, taking into account economic circumstances, by 1 March 2022. This was followed by an oral tripartite consultation of the social partners, coordinated by the consultation committee on 21 March 2022, involving workers' and employers' representatives, without, however, reaching any common agreement on the national minimum wage. The ultimate decision, effective from 1 May 2022, was taken by the Council of Ministers, following a recommendation by the Minister for Labour.[17]

Luxembourg has a legal indexation mechanism, in which wages (including statutory minimum wages) are uprated automatically if inflation exceeds 2.5%. One such indexation-based increase was implemented in April 2022 (read more in the next section). In addition, statutory minimum wages are uprated every second year with the growth of wages. In December 2022, the Chamber of Deputies unanimously gave the green light to a 3.2% increase in the statutory minimum wage (which is the level of increase in average wages between 2019 and 2021) for people employed at the minimum wage, whereas the new indexation for other workers is postponed for the moment.

Box 9: Malta sets up a new Low Wage Commission

Malta has established a Low Wage Commission and officially launched it on 24 March 2023. It aims to give recommendations for a revision of Malta's minimum wage by the end of 2023. Its goal is to ensure that, while it does not place a heavy burden on businesses, every worker has enough income to lead a decent life.

It is anticipated that it will make its first recommendations for a new system to update the minimum wage in 2023. The Low Wage Commission reports directly to the Prime Minister and is composed of equal representation of trade union and employer organisations from organisations represented on the Malta Council for Economic and Social Development (MCESD) and government representatives. The mandate of the Low Wage Commission ascertains that any change in the minimum wage is affordable in terms of sector vulnerabilities and productivity gains, and factors in any expected changes in labour costs (as per Government of Malta and Social Partners, 2017). The MCESD is made up of a chairperson appointed by the Prime Minister following consultation with the employers and unions represented on the council, a deputy chairperson in the person of the Principal Permanent Secretary of the Civil Service, a representative of the Minister for Finance, a representative of the minister responsible for social dialogue, the presidents of the four main employer organisations (namely the Malta Employers' Association, the Malta Chamber of Commerce, Enterprise and Industry, the Malta Hotels and Restaurants Association and the Malta Chamber of SMEs), the secretaries-general of the largest unions (namely the General Workers Union and Union Ħaddiema Magħqudin), the President of the Forum Unions Maltin and the President of the Confederation of Malta Trade Unions.

15 Decision of the Minister of Labour No. 5117/19.1.2022.

16 Interministerial Decision 13 743/15.2.2022.

17 Council of Ministers Act 10/21.4.2022.

In Malta, the statutory national minimum wage and the wages specified in the Wage Regulation Orders generally increase annually by the cost-of-living adjustment (COLA), and the amount is announced in the government budget speech of each year. The minimum wage was adjusted by the regular COLA, despite a debate on potentially adjusting it (read more in the section ‘Debates on changes to minimum wage setting’ in Chapter 3).

Also relatively new is the **Spanish** expert committee, the Advisory Commission for the Analysis of the Minimum Interprofessional Wage (Cassmi), which is an ad hoc group of experts that has been entrusted for the second time with analysing the development of the statutory minimum wage (*salario mínimo interprofesional*, SMI) and providing recommendations to the government ahead of the exchange with the social partners. The mandate given to Cassmi in 2022 was to determine the level of statutory minimum wage required to continue on track to reach 60% of the average net wages of 2022 in 2023. Their recommendation should also reflect the impact of the increase on poor households or those at risk of poverty. Referring to continuing issues with the availability of data to carry out such calculations, the commission provided four scenario-based estimates, which also took into account different thresholds of the tax-exempt amount.

In **Slovenia**, according to the Minimum Wage Act, the net minimum wage after 1 January 2021 cannot be lower than 120% of minimum living costs and cannot exceed 140% of minimum living costs, and it is to be uprated with the year-on-year growth of consumer prices, while wage trends and other economic factors can also be taken into account. In 2022, tripartite negotiations were held on the method of calculation and the amount of the minimum wage. The process of setting the minimum wage was standard: after consulting social partners (see Table 3), the Minister for Labour announced the new level on 12 January 2023.

Deviation from standard procedures

For the regular within-year uprates of the minimum wages, the **Dutch**, **German** and **Greek** processes were also applied regularly in 2022. Deviations from the standard process, however, occurred because of additional ad hoc uprates that were decided upon.

In **Germany**, the Minimum Wage Increase Act was passed on 30 June 2022 and implemented a one-time statutory increase of the minimum wage to €12 gross per hour worked, as agreed in the coalition deal. The coalition parties and The Left (Die Linke) voted in favour of the federal government’s bill to increase the protection afforded by the statutory minimum wage and to make changes in the area of marginal employment. The Christian Democratic parliamentary group (CDU/CSU) and the far-right group (*Alternative für Deutschland*, AfD) abstained. The CDU/CSU parliamentary group criticised the political setting of the minimum wage level and demanded that it be determined by the Minimum Wage Commission in the future. The planned statutory increase in the minimum wage has met with a mixed response from associations and experts. The German Trade Union Confederation (DGB) supported the increase, noting that this was a long-standing demand of the trade unions (DGB, 2022). In contrast, the Confederation of German Employers’ Associations (BDA) was critical, describing it as a fundamental interference in the autonomy of collective bargaining with regard to the legal regulation (BDA, 2022).

In the **Netherlands**, for the first time since the introduction of the minimum wage, a special increase has been implemented. Debate on raising the minimum wage generally takes place in parliament, with other actors such as social partners voicing their opinions in the media. There was no formal social partner consultation on the ad hoc increase. Because of exceptionally high inflation and its impact on Dutch people’s disposable income, the government announced on Budget Day (in September) its intention to raise the minimum wage in one go. This was considered necessary to make people on lower and middle incomes more resilient against (possible) financial setbacks. The government expects that there will be a spillover effect, so that workers with an income just above the minimum wage will also benefit. Because of the special circumstances, the minimum wage adjustment can be regulated through a general administrative order instead of a legislative amendment. A general administrative order can be carried out faster and also means that all benefits linked to the minimum wage, such as social assistance, will automatically rise with it (Rijksoverheid, 2022).

Likewise, in **Luxembourg** there was a small deviation from the standard process. To ensure more predictability for companies, the government decided to postpone to April 2023 the indexation that, according to the latest forecasts of the Luxembourg Statistical Office, should have happened in August 2022 (Law of 29 June 2022). It also decided to postpone any potential additional indexation by 12 months to 2023. This decision was signed within the agreement between the government, on the one hand, and the Luxembourg Employers’ Association (UEL) and the General Confederation of Public Service (CGFP), on the other hand, on 31 March 2022. It was then also confirmed by a new tripartite agreement, which additionally included the Confederation of Independent Trade Unions of Luxembourg (OGBL), in September 2022. These two agreements were signed following the meetings of the Tripartite Coordination Committee (bilateral meeting between the government and other bodies).

Inflation as a challenge for minimum wage setting

Policymakers in minimum wage setting are facing a challenging situation due to growing price levels. Inflation started to become a serious issue of concern by the end of 2021 and early 2022, but, far from abating, it accelerated during the course of 2022 and it has shown some moderation only in recent months. Against this background, it is worth exploring how minimum wage-setting regimes across EU Member States are theoretically equipped to deal with inflation and how they actually dealt with rising price levels when setting the new minimum wage rates for 2023.

How countries deal with inflation in their minimum wage-setting systems

Regarding the extent to which inflation is explicitly mentioned in the laws governing the setting of minimum wages, EU Member States can be classified in three broad groups (see Table 4).

- The specific legislation explicitly mentions inflation (or price levels) in eight Member States.
- Similarly, there are five countries where the laws governing minimum wage do not explicitly use the word ‘inflation’, but implicitly mention the effect of inflation by referring to expressions such as cost or standard of living, or the purchasing power of minimum wages.
- There are nine countries with no reference to inflation in the regulation of minimum wages. This may be because such laws do not explicitly include inflation or because the minimum wage is negotiated among social partners without government legislation.

This means that more than half (13 out of 22) of EU Member States with statutory minimum wage systems explicitly include inflation or similar formulations in their legislation. But, while this is so theoretically, how is inflation really dealt with by EU Member States in practice?

In a majority of the countries, it is at the final discretion of the government and/or social partners to decide on the extent of minimum wage hikes, since they are not obliged to take inflation into account when deciding on the new rates. This is so in most of the first group and the entirety of the second group of countries presented above, where references to inflation or cost of living are not binding on the government and social partners. And this is obviously the case among the countries in the third group as well, although this does not preclude government and social partners from considering inflation in their discussions when setting statutory rates.

Nevertheless, there is a small group of eight EU Member States that use some type of rule-based mechanism by which they mandatorily make use of some type of formula when setting statutory rates. The details for the rules used in each of these countries are presented in Table 5, but they can be classified into two groups based on the way in which they deal with inflation.

- There are six countries (Belgium, France, Luxembourg, Malta, Poland and Slovenia) where changes in price levels are included in the formulas to decide on the new statutory rates. Inflation results in higher statutory rates and even in automatic indexation of the minimum wage during the course of the year in Belgium, France and Luxembourg. Poland uses a formula including inflation as well, although in practice the government typically decides to implement higher upgrades to the statutory minimum wage than the one resulting from the formula. Growing prices also affect the calculation of the cost of living, which is used as a basis to decide on the new statutory rates set each January in Malta and Slovenia.
- A somewhat rule-based mechanism to decide on statutory rates is also used in Germany and the Netherlands, although inflation is not part of the calculations. Uprates to the minimum wages are in both countries linked to changes in collectively agreed wages. Nevertheless, if inflation drives negotiated wages among social partners upwards across some economic sectors, it will indirectly push statutory rates upwards as well, albeit with a lag (longer in Germany than in the Netherlands, as shown in Table 5).

Table 4: Minimum wage legislation and inflation

Inflation/price levels mentioned	Related terms used	Inflation/price levels not mentioned
Belgium, France, Greece, Luxembourg, Malta, Poland, Slovenia, Spain	Bulgaria (cost/standard of living), Croatia (living standards), Cyprus (purchasing power of minimum wage in view of cost-of-living variations), Ireland (cost of living), Portugal (cost of living)	Czechia, Estonia, Germany, Hungary, Latvia, Lithuania, Netherlands, Romania, Slovakia

Source: *Network of Eurofound Correspondents, based on national statutory minimum wage regulations*

Table 5: Rule-based mechanisms to uprate minimum wage rates

Country	Description of the rule-based mechanism to uprate statutory rates
Belgium	Apart from the interprofessional negotiations, changes to minimum wages are possible as a result of automatic indexations. These indexations use what is called a pivot index, a predetermined threshold against which the change in inflation, measured by the 'smoothed health index', is compared. The smoothed health index is derived from the consumer price index (removing a number of products such as alcoholic beverages, tobacco products and motor fuels). It is calculated as an average value over the four previous months, and is the basis for indexing pensions, social benefits, and some wages and salaries. The indexation of the statutory rate is proportional to the percentage between two pivot indexes (the one that was reached previously and the one to be reached), which are always 2% apart. Therefore, once the pivot point is reached or exceeded by the health index, the pivot point is increased again by 2% (the next month), until it is exceeded again, resulting each time in an automatic indexation of +2%.
France	The minimum wage is uprated in three ways. 1. In order to decide on the new statutory rates each year on 1 January, the Labour Code provides for a formula incorporating two mandatory parameters. ◦ The first is the increase in the consumer price index (HICP), excluding tobacco, for the lowest-earning households (belonging to the first earnings quintile). This increase is calculated for the period between the last uprate of the statutory minimum wage for which it was used and the time when a new increase is being decided. The new increase typically uses inflation data up to November of each year, which are published in mid-December. ◦ The second is half of the annual increase in the purchasing power of the basic hourly wage of workers and employees, between the last known quarter of the year at the date of revaluation and the same quarter of the previous year. These two parameters are added up in order to determine the statutory rate hike (no negative contribution is possible, so parameters are limited to zero in the event of a negative value). 2. Moreover, an automatic revaluation during the year occurs if the HICP of the lowest-earning households (belonging to the first earnings quintile), calculated each month, rises by at least 2% compared with the index recorded at the time of the last change in the amount of the minimum wage. 3. Moreover, the government has discretion to add a boost to the proposed increase in the minimum wage, although no additional increase to the mechanical revaluation has taken place since July 2012. The French minimum wage expert committee may recommend such a boost or not, and if so its possible level, in its annual report published in December.
Germany	When setting the minimum wage, the German Minimum Wage Commission is guided by collectively agreed wage developments. Every incoming Minimum Wage Commission gives itself rules of procedure. In the last five-year term, it was decided to follow the development of collectively agreed wages over the previous two years as measured by the collective wage index (*Tariflohnindex*) of the Federal Statistical Office. The index takes into account the average development of the collectively agreed wages (on an hourly basis without considering extra payments) across sectors. By law, the parties to collective bargaining have to report their negotiation results to the Federal Statistical Office. The commission could derogate from the close orientation on the index based on a decision of a two-thirds majority. When adjusting the minimum wage, the commission is guided by the past development of collectively agreed wages but must make an overall assessment. There is no fixed formula for the adjustment. The decision is made every two years, with an adjustment being made in several steps for the next period.
Luxembourg	Statutory rates may be affected by two types of adjustment. 1. A social minima adjustment (affecting statutory rates and other social benefits) takes place every two years based on the change in the average level of remuneration. When the average level of remuneration has increased relative to the minimum social wage, the level of the minimum social wage can be raised to partly or completely fill this gap. For this purpose, the government is obliged to submit a report every two years to the Chamber of Deputies. 2. Wages, salaries of civil servants and social benefits (including the minimum wage) are indexed to the trend in the cost of living. When the national consumer price index (which includes a representative sample of goods and services) increases or decreases by 2.5% from the level of the last indexation, the statutory rate is normally adjusted by the same proportion. A six-month moving inflation average is calculated each month (representing the average of the overall price index of the last six available months) and then an automatic wage indexation is triggered one month after the six-month moving average has reached a difference of 2.5% from the level at the time of the last upgrade.
Malta	The minimum wage adjustment for 1 January of each year is based on the COLA. The COLA is calculated on the basis of a 12-month moving average inflation rate as at September. This percentage change (resulting from comparing price levels over the previous 12 months in September of each year with the corresponding months of the previous year) is applied to a base weekly wage. The official index of inflation is the retail price index as published by the National Statistics Office. The basic wage represents a wage level agreed upon in 1990 and since then augmented annually by means of the COLA. The resulting sum is then rounded to the nearest MTL 0.25 and subsequently converted into euro. All wage increases to be paid to employees must not be less than the COLA. All part-time employees are entitled to a pro rata increase. It is to be noted that the COLA is a fixed amount granted irrespective of wage levels. During the 2023 budget speech, the Minister for Finance and Employment announced that the COLA for 2023 would be equal to €9.90 per week.

Country	Description of the rule-based mechanism to upgrade statutory rates
Netherlands	Twice a year (1 January and 1 July) the minimum wage is adjusted based on the average expected growth of the wage levels as established in a bundle of collective labour agreements. This expected growth is calculated by the Dutch Central Planning Bureau (CPB). A fixed formula is then used to transform this expected growth into a change of level for the minimum wage, by adding these two components: 1. Half of the change in 'contract wages', meaning the average of the percentage change in contract wages in the private sector, the public sector and the public/private sector 2 The difference between (a) the change in contract wages in the previous year as published in the Central Economic Plan in that year and (b) the change in contract wages in the previous year as published in the macroeconomic outlook in that year Contract wages are the wages specified in individual employment contracts, by law or collective agreement. They are also sometimes called gross wages or base wages. The public/private sector includes subsidised private institutions, such as hospitals. For each year when the decision is being taken, the change in contract wages in the current year has been estimated in the publication of the macroeconomic outlook from the previous year. The Netherlands has about 1,250 collective agreements. The statistical index of collectively agreed wages includes 225 collective agreements. These include in principle all larger collective agreements (2,500 employees and more) and a sample of smaller collective agreements. About 95% of all employees with collective agreements are directly represented in the outcomes. Results (based on surveys of those agreements) are published monthly and yearly, and are updated continuously based on new agreements.
Poland	According to the Minimum Wage Act (Article 5.1), the minimum wage increase decided for the month of January each year cannot be lower than the increase in the price index forecast for that year. In addition, if the minimum wage is lower than half of the average wage in the first quarter, then the hike of the statutory rate should be further increased by two-thirds of the forecast growth in GDP in real terms. Moreover, the Minimum Wage Act includes a rule stating that, if the projected inflation rate is 5% or higher, then the minimum wage rate should be increased twice during the calendar year, from 1 January and from 1 July. This rule-based mechanism is binding on the Polish government, since the statutory rate hike each year must at least meet these conditions. Nevertheless, in practice, the government typically adopts minimum wage hikes well above the one resulting from these calculations.
Slovenia	The Minimum Wage Act states that the minimum wage is adjusted as follows. 1. Each 1 January, by the growth in consumer prices. To change the minimum wage, the official data of the Statistical Office of the Republic of Slovenia on the year-on-year growth of consumer prices in December of the previous year compared with December of the year before are used. 2. Every six years, by the new calculation of minimum living costs. The adjustment by the minimum living costs is determined by a formula; however, the formula is not stated mathematically. The act states that the level of the minimum wage must be 20–40% higher than the level of the minimum cost of living. The exact percentage adjustment is determined by the Minister for Labour, while taking into account other indicators, such as wage developments, economic conditions, or economic growth and changes in employment. The minimum costs of living are determined taking into account the cost of a basket of consumer items, and the total amount that the average household spends on food. The minimum costs of living are calculated every six years by an independent institute, the Institute for Economic Research.

Source: *Network of Eurofound Correspondents*

Table A1 (Annex 1) provides a picture of the extent to which inflation and similar expressions are incorporated into the labour laws of all EU Member States with a statutory minimum wage and on the process by which hikes to statutory rates are implemented in practice, whether by using specific formulas or, more usually, not, and whether inflation is part of the calculations.

How countries dealt with inflation during 2022

Soaring price levels had an obvious impact on minimum wage setting during 2022. A first group can be identified, consisting of six countries where this impact was straightforward because inflation was taken into account in rule-based mechanisms to decide on upgrades to the statutory rate: Belgium, France and Luxembourg are among the few Member States that intervened during the course of 2022 by raising statutory rates through automatic indexations of the statutory minimum wage, while higher inflation guided the decision of the Polish government to make increases in January 2023, and those in Slovenia and Malta were directly linked to calculations capturing the rise in the cost of living.

- Belgium triggered five automatic indexations of +2% (in March, May, August, November and December 2022), and an additional boost to the statutory rate of almost 5% came into effect in April 2022 as a result of an agreement among social partners.

- In France, an automatic indexation was implemented in May 2022 (+2.7%, matching the HICP increase for the lowest-earning households) and another in August 2022 (+2%). A new hike of 1.8% took place in January 2023 as a result of the standard formula (the increase in the consumer price index excluding tobacco for the first quintile of households being 1.8% between June 2022 and November 2022, while the growth in the purchasing power of the basic hourly wage of workers and employees was negative and therefore not taken into account).[18]
- In Luxembourg, an automatic indexation of +2.5% was triggered in April 2022, and a further 3.2% hike was decided upon in January 2023 following the adjustment in the social minimum wage based on the change in the average wage level. At the end of March 2022, the government and the social partners reached an agreement on various measures to offset inflation-related costs (the 'solidarity pact', Law of 29 June 2022). One of the measures was the postponement of wage indexation for 12 months, which meant that an additional indexation that should have been implemented in July 2022 was postponed to April 2023.
- In Poland, the government decided on two increases to the statutory rate in 2023 (which must be done when inflation is above 5%): by about 16% in January 2023 (from PLN 3,010 to PLN 3,490 per month) and a further 3% in July 2023 (to PLN 3,600). As is usually the case in the country, this hike was higher than dictated by the formula used, which suggested the hike should not have been lower than 10.9% for 2023. That resulted from an estimated inflation rate of 9.8% and two-thirds of the projected GDP growth in real terms (1.7%).
- Slovenia's hike of 12% in January 2023 results from both the rise in the consumer price index and the new calculation of the minimum living costs. The last calculation of the minimum living costs was done in October 2022 (equalling €669.83 per month, 9.2% more than in 2017, €613.41). The Minimum Wage Act stipulates that the minimum wage must be harmonised with the new calculation within three months and that the new level must be between 20% and 40% above the minimum living costs, the exact adjustment being decided by the Minister for Labour. Trade unions advocated the full adjustment of the statutory rate (including the new minimum living costs estimate and the increase in consumer prices), while the employer organisations argued for increasing the minimum wage just by the increase in consumer prices, as this increase would be large enough to cover the increased minimum living costs. Finally, a hike of 12% was decided, which places the new (net) minimum wage at a level 131.1% higher than the minimum cost of living and so within the expected range of 120% and 140%.
- Malta's hike of 5.5% in January 2023 is a direct consequence of growing price levels, since the previous hike of the statutory rate in January 2022 was below 1%. The new COLA for 2023 is set at €9.90 per week, computed as follows: an inflation rate of 4.93% as at September 2012 (resulting from comparing the 12-month retail price index average for October 2021 to September 2022 with the average for the same period 12 months earlier), which is applied to the base wage for 2022 (MTL 88.00), to obtain a weekly cost-of-living compensation of MTL 4.34. Rounded to the nearest MTL 0.25, the final figure for the cost-of-living compensation for 2022 stands at MTL 4.25 per week, equivalent to €9.90 per week.

There is a second group, consisting of three countries where hikes to the statutory rate occurred as well during the course of 2022, although not because inflation was part of a formula leading to higher increases in the statutory rate or to automatic indexations. These were rather ad hoc interventions, but motivated (at least partly) by the extraordinary challenges posed by rising prices.

- Germany's substantial increase in its minimum wage (22%) resulted from two hikes: a 6.5% mid-year increase in July 2022 (already decided by the Minimum Wage Commission in June 2020); and an extraordinary further hike of almost 15% resulting from the government decision to raise the minimum wage to €12, which, although it was part of a government coalition promise earlier, the government justified by reference to rising living costs as one reason to raise the minimum wage.
- Similarly, the more than 12% increase in the Netherlands resulted from two increases related to inflation: a first hike of 1.8% occurred in July 2022, based on the expected growth in wages in collective labour agreements, which was above that of July 2021 and January 2022; a second, more remarkable, hike of more than 10% took place in January 2023. It resulted from this growth in negotiated wages but also from an order in council amending the minimum wage, which is permitted in special circumstances, such as high inflation, and was used this year for the first time since the introduction of the minimum wage in 1969. In

18 Inflation was calculated over June–November 2022, for the following reasons. June was used because the last upgrade, in August 2022, was based on inflation data from June 2022; while when the new January 2023 uprate was decided, in mid-December, the latest available inflation data were from November.

response to inflation, in June 2022 the government announced that it would implement a rise of 2.5% in the minimum wage by January 2023 (with further rises in 2024 and 2025), but then in September 2022 added an extra increase to the minimum wage, for the first time since 1969, which together with the expected change in negotiated wages resulted in the hike of 10.15% from January 2023.

- Greece upgraded its minimum wage by more than 7.5% in May 2022 because of the exceptional circumstances caused by rising prices. In July 2021, given the then volatile environment due to the pandemic, the government decided on a 2% increase in the statutory rate for January 2022, which was considered moderate. However, economic recovery by the end of 2021 and, especially, high inflation, which was close to 8.9% in March 2022 (year on year) and put pressure on both households and businesses, resulted in a new ad hoc hike of the minimum wage from May 2022. This was the first time the Greek government had hiked the minimum wage in the middle of the year, although it will become the new norm now: hikes will happen once a year, not in January but in May. Therefore, the statutory rate remained unchanged in January 2023 and a revision of the rate is expected from May 2023.

Finally, there is a group comprising the majority of Member States, where a single minimum wage hike occurred in January 2023 (following the last one in January 2022) and, moreover, was not the result of an automatic indexation or a formula accounting for growing price levels. Nevertheless, this does not mean that governments and social partners in these countries did not take into account the new reality of exceptional inflation levels. Quite the contrary: the very large hikes in the nominal rates observed across EU Member States in January 2023 can only be understood by considering the efforts of European governments to protect the purchasing power of minimum wage earners. The following examples of the discussions of different stakeholders when setting the new rates for 2023 show the importance of the topic of inflation in this year's process of minimum wage setting.

- In Bulgaria, the government has been trying to mitigate the effects of the unprecedented inflation. The initial proposal for the new monthly rate (BGN 770) was presented by the Ministry of Labour and Social Policy in May 2022. In October, CITUB and the Confederation of Labour Podkrepa insisted on a new rate of BGN 850, which they found reflected better people's purchasing power, inflation, living standards and the fact that the average wage is already over BGN 1,700. On 9 November, the Bulgarian Socialist Party (BSP) joined this proposal by saying it would set the statutory rate at 50% of the average wage from January 2023, which would link it to the reference values under the EU directive on adequate minimum wages. On 8 December, the BSP's proposal was adopted by the parliament during the first reading of the proposed amendment of the Labour Code. The bill introduced a new mechanism for calculating the minimum wage. The minimum wage for the next calendar year is to be set by 31 October of the current year and should be not less than 50% of the gross average wage for Bulgaria, for the 12 months preceding its determination. On 14 December, during the second reading of the bill to increase the 2023 national budget, the parliament rejected the proposal of the BSP. Finally, on 29 December 2022, the government decided on the new level of BGN 780 from 1 January 2023.
- In Hungary, which has been affected by high inflation, the topic featured very prominently in the discussions on the new statutory rate. Employers and employees took into account the forecasts of the government (+1.5% for economic growth and +15% for inflation), although a few days after the signing of the agreement the central bank's inflation forecast of 15–19.5% was published. In order to avoid a price and wage spiral, the agreement included small reduction in real wages, since the 16% increase in the minimum wage was in line with the government's inflation forecast of 15%, but below the central bank's forecast of 15–19.5% and independent prognoses of around 19%. The social partners agreed that a renegotiation of the agreement will take place if inflation reaches more than 18%.
- In Estonia, both sides expressed the importance of taking inflation into account during the negotiation process between August and September 2022. Trade unions stressed that, because of inflation, an increase in minimum wage is especially important, while the employers stressed that it must be ensured that the wage increase would not harm employers' competitiveness and in turn create higher inflation. Prior to this, the Confederation of Estonian Trade Unions (EAKL) carried out an extensive campaign in May in favour of an extraordinary increase in the statutory rate from €654 to €700 from July 2022 and an increase in the monthly basic income tax exemption level from €500 to €700, due to the rapid increase in food and housing costs and energy prices. The employers declined to negotiate over the extraordinary minimum wage rise, saying that the Ministry of Financial Affairs forecast the annual inflation rate of 2022 to be equal to the increase in the minimum wage that had already taken effect from January 2022 (12%). Following the formation of a new coalition government in the summer, the basic exemption was increased to €654 (to match the

minimum wage level) and a new statutory rate of €725 from January 2023 was agreed upon. According to the Estonian Employers Confederation (ETKL), the joint increase in the minimum wage and the basic income tax exemption will improve the income of low income earners by €100 per month (Ärileht, 2022).

- In Ireland, the 2022 report of the LPC, recommending an increase in the minimum wage from 1 January 2023, clearly reflects the central role played by inflation in this year's assessment: 'Inflation in the year to May 2022 was 7.8%, with inflation for 2023 forecast by ESRI [the Economic and Social Research Institute] to be 4.9%. We are conscious of the need to avoid generating inflationary pressures and to consider whether wage growth is likely to contribute to a "wage-price spiral" when considering wage increases while endeavouring to ensure that low paid workers receive a real increase in wages, relative to inflation. To date, however, there is no evidence of a wage-price spiral' (LPC, 2022, p. 4). The report also outlined the view of employers who 'usually support increases in the National Minimum Wage [NMW] rate in line with inflation [but] argued that they could not support that approach this year as increases in inflation are in large part being driven by international factors' (p. 15). A final warning was included: 'While the recommended increase in the NMW of 80 cent is significant, the NMW alone cannot compensate workers for inflation and recent increases in the cost of living. Government has indicated that Budget 2023 should be a cost-of-living one and the LPC recommends taking additional measures to support minimum wage and low-paid workers' (p. 107).
- In Lithuania, the chairperson of the Lithuanian Trade Union Confederation proposed in May 2022 to reopen discussions on the indexation of wages in Lithuania. According to her, as the inflation rate rises, employees' wages should be increased by a corresponding amount (Gaidamavicius, 2022). However, this proposal was not supported by either the government or the employers' representatives. On the contrary, according to the president of the Lithuanian Confederation of Employers, a faster increase in the minimum wage could further increase inflation in the country, as employers would eventually pass on the increased costs to consumers by increasing the prices of products and services. In his view, instead of increasing the minimum wage, the tax-exempt amount of income should be raised to bring it in line with the minimum wage (Deveikis, 2022).
- During the initial debates in Latvia (in June and November 2022), only trade unions mentioned inflation as a reason why minimum wages should be increased more rapidly than the government proposed. In December, the Latvian Chamber of Commerce and Industry (LTRK) agreed that an increase in the minimum wage is important because of inflation, although on the other hand it argued that this issue should be debated in the government within the budgeting process. The LTRK mentioned that the increase in the minimum wage should be combined with increasing the non-taxable minimum of the PIT. The Free Trade Union Confederation of Latvia (LBAS) also motivated its proposals using such factors as the purchasing power of workers, which is lower in Latvia than in Estonia and Lithuania, while insisting that not only the minimum wage but also the non-taxable minimum of the PIT should be increased. The Latvian Association of Local and Regional Governments (LPS) considered that increasing the minimum wage would create financial problems in local governments, but at the same time recognised that owing to high inflation an increase in the minimum wage was necessary (Zalamane, 2022).
- In Slovakia, social partners announced their agreement on the minimum wage for 2023 at a press conference on 14 July 2022. They stated that, although the increase in the minimum wage (8%) was lower than inflation (13.2% in May), they believed they had to reach a compromise because the new level should consider its impacts on employees and households but also on the unfavourable situation of employers.
- In Spain, the expert committee advising the government on the 2023 hike noted: 'Given the current context of high inflation and the asymmetric impact that high inflation such as the current level – which has a special impact on food and energy – has on the purchasing power of the lower income groups, among which are the households that receive SMI, the committee deems it appropriate to proceed to review, as allowed by the Statute of Workers, the change in the SMI after six months from its update, with the purpose of evaluating its adequacy in an inflationary context' (Cassmi, 2022). During negotiations for the 2023 increase, the government has supported the full recovery of purchasing power for lower income groups through setting an increase in the minimum wage above the inflation rate.

Other measures to alleviate the situation of minimum wage earners

Against the background of rising price levels, especially affecting energy and food, statutory minimum wage policies are only one of several policy options available to governments to protect the income of low-wage employees and vulnerable people, and of households generally, in European societies. Apart from the discussions on minimum wage hikes mentioned above, European governments have introduced measures to cushion the impacts on citizens in general, but also on more vulnerable target groups, such as low-income households, which could also benefit low-wage or minimum wage earners if they are part of low-income households. A comprehensive collection of such measures is available in Eurofound's EU PolicyWatch database. A first analysis of these policies showed that most of the policies reported are temporary ad hoc measures, and that one-off lump sum payments were more common first policy responses than monthly supplements or permanent increases (Eurofound, 2022b). Most commonly, governments sought to increase (net) income from work, increased various types of benefits or allowances, provided general financial support, adopted preferential tax treatments or tax reductions, or changed support for housing or commuting. Reducing household energy bills (through energy tax reductions or different forms of contributions to energy bills, including price caps) or fuel prices was also frequently resorted to, but was often implemented across the board, rather than targeted.

Most countries applied different approaches simultaneously. Many introduced measures for citizens in general, but also targeting vulnerable populations or specific necessities (Eurofound, 2023).

One instrument to support lower-paid workers in particular is to change or adapt the tax-exempt thresholds for social insurance (SIC) contributions or personal income taxes (PIT). In some countries this is regularly addressed simultaneously when minimum wages are uprated (for example, in Latvia and Lithuania). In other countries, this is done ad hoc and may become a topic in negotiations on higher increases: where governments make concessions to employers in the form of reduced taxation when larger increases of the minimum wage are decided upon (as was the case in Hungary, Luxembourg and Portugal in 2022 – see the previous edition of the report). It is notable that, in the context of rising inflation during 2022, the update of thresholds became an issue in Member States that do not regularly review them, for example Austria, Germany and Romania.

Box 10 highlights those measures that could most directly benefit those living on a minimum wage.

Table 6: Overview of (debated) changes to social security contributions and income tax thresholds

Country	Description of the rule-based mechanism to upgrade statutory rates
Germany	Workers doing 'mini-jobs' in Germany are exempt from PIT and widely exempt from social security contributions.[19] Even though there is no specific level of pay associated with such mini-jobs, minimum wage earners make up a relatively large proportion of mini-jobbers. The earnings limit for low-paid employment (mini-jobs) was raised to €520 in the course of the increase of the statutory minimum wage. Going forward, it will be automatically adjusted with each minimum wage increase so that it corresponds to the minimum wage for 10 hours per week. Previously, there were fixed amounts – €450 since 2013 – which meant that mini-jobbers could work for a lower number of hours and their hourly rate would de facto rise. Any future increase in the minimum wage will thus lead to an automatic adjustment of this earnings threshold. Midi-jobs are defined as paying between €520 and €1,600, with reduced social security contributions. The earnings limit was raised from €1,300 in 2022 and is to be further adjusted.
Greece	A reduction in social security contributions was decided in 2021 (Circular No. 212168/08.06.2021) and implemented from 1 June 2022, by Circular No. 226245/17-5-2022 of the Ministry of Labour. This resulted in a further 0.25% increase in the net remuneration of private sector employees – along with those earning the minimum wage – due to the planned reduction of supplementary social security contributions by 0.5% (0.25% for insured persons' contributions and 0.25% for employers' contributions). Moreover, in line with the government's commitment to reduce non-wage costs by 5% from 2019 to 2023, an additional 0.6% reduction of contributions is pending. Employer organisations, and particularly the Hellenic Federation of Enterprises (SEV), repeatedly invoke the need to reduce non-wage costs and increase the competitiveness of businesses. On the other hand, trade unions stress the negative impact of reducing social security contributions on the revenue of insurance funds and labour support benefits, such as unemployment benefits.
Hungary	In recent years, the government has compensated for the increase in the minimum wage by reducing the social contribution paid by employers. In 2022, in the initial phase of the negotiations, the social partners expected this again. However, the government has declared that there is no possibility of reducing the social contribution tax this year. The social partners agreed that there is a possibility of renegotiating the minimum wage during the year, if, as expected, annual inflation reaches 18% and real GDP growth is positive. As part of the deal, the government accepted that the social contribution tax on wages will not increase in 2023.

19 A mini-job is short-term employment or *Kurzfristigen Beschäftigung*, where you work less than 3 months or 5 hours a week or 70 working days per year, earning a maximum of €520 per month or €6,240 per year.

Country	Description of the rule-based mechanism to upgrade statutory rates
Italy	A debate has sharpened and become even more urgent with the rising cost of living. Two trade union confederations (CGIL and UIL) criticised the 2023 budget law under negotiation because it lacked concrete answers for workers and poorer segments of the population. They called for a week of general strikes throughout Italy from 12 to 16 December 2022. Among other demands, the strikers asked the government to increase wages by making wage increases in collective agreements free of tax, raising the tax deduction to 5% for wages up to €35,000, to recover at least one month's salary, and introducing an automatic mechanism to index deductions to inflation (known as 'recovery of tax drainage'). They also asked it to give protection to all forms of work by assigning a general value to collective agreements, which would make them applicable to everyone, hence also sanctioning a minimum wage and universal normative rights.
Lithuania	In 2022, there was a lot of discussion in Lithuania about the setting of the tax-exempt amount of income (TEAI). As early as August 2022, the chairperson of the Group of the Social Democratic Party registered a draft amendment to the Law on Personal Income Tax of the Republic of Lithuania, proposing to make the TEAI equal to the minimum wage in Lithuania. The draft law also proposed extending the TEAI application formula to increase income not only for the lowest earners but also for part of the middle class (Bieliavska, 2022). The increase in the TEAI was also supported by the unions and the majority of employers' representatives (with the exception of the Lithuanian Business Confederation). Employers indicated at the same time that they would be quite satisfied with a smaller increase in the monthly TEAI (up to €740). However, these proposals were rejected by the parliament's Committee on Budget and Finance on the grounds that such a decision would result in a loss of around €714 million for the state budget, for which no funds are available to compensate. According to the chairperson of the Committee, although the idea is a good one, it should be implemented gradually (Dobrovolskas, 2022).
Portugal	The 2022 Tripartite Agreement included an increase of 50% in employers' tax deductions in return for salary increases for companies that comply with at least one of the following conditions: have dynamic collective bargaining (signed or renewed collective agreements less than three years before); annually increase wages in line with or above the values set out in the Tripartite Agreement (for 2023, this benchmark will be 5.1%); and have reduced the difference between the highest-paid 10% of jobs and the lowest-paid 10%. This can be interpreted as an incentive to respond to the stagnation of average wages and to increasing wage inequality.
Romania	Within the Tripartite National Social Dialogue Council, much of the discussions focused on the possibility of implementing tax breaks on a part of the minimum wage increase. In the end, the decision was taken that RON 200 of the RON 450 increase will be exempt from taxes. It was the first time this had been discussed and decided. The reasoning behind it was that the increase was substantial and therefore employers required some measure of aid.

Box 10: Examples of policy measures benefiting vulnerable people and possibly minimum wage workers

In **Malta**, an additional COLA mechanism targeting vulnerable people was introduced. The benefit will be paid every year and will be revised upwards whenever the inflation rate surpasses 2% and when inflation in any of three out of these five categories – food, housing, utilities, household maintenance and health – is higher than the average of the past five years. It is estimated that some 37,000 households (an average of €300 per family) or 80,000 individuals are set to benefit from the additional COLA mechanism.

In **Portugal**, targeted policies for low-income workers or households (i.e. those earning close to the minimum wage) included supporting energy costs and granting ad hoc income support for low-wage earners. In March 2022, the government created an extraordinary support mechanism worth €60 a month to mitigate the effects of the extraordinary increase in the prices of basic food goods on families that were beneficiaries of the electric energy social tariff (TSEE). In April, it extended its scope to households that are not beneficiaries of the TSEE but receive minimum social benefits. Then the government decided on a new measure to provide vulnerable households with support: a single payment (one-off measure) of €240, paid in December 2022 as part of social security. It went both to households on the TSEE residing in Portugal and to families that did not meet this criterion but received minimum social benefits in November 2022. It applied to households with an annual income up to €5,808, and it is estimated to cover 1.037 million households.

In **Greece**, in addition to the increase in the minimum wage, the government has taken several measures to boost the incomes of low-wage workers and low-income households: a fuel subsidy for low- to medium-income people and taxi services; an electricity subsidy for consumers; ad hoc financial support for vulnerable groups; the power pass – an emergency financial support for household electricity; and other support for energy bills.

In **Poland**, some targeted policies for low-income households were introduced at the end of 2021. The government adopted the 'anti-inflation shield', which introduced a number of cuts in value added tax.

In **Slovakia**, the Ministry of Labour, Social Affairs and Family provided a single inflation payment of €100 for some groups of people, for instance households on a low income, low-income people with disabilities and orphans.

3 Future of minimum wage setting

Debates on changes to minimum wage setting

Several countries noted (the continuation of) debates in 2022 concerning possible changes to aspects of their statutory minimum wage setting. These were all very country-specific.The most frequently touched upon issue related to the role of social partners and collective bargaining within the setting of statutory minimum wages vis-à-vis the role of automatic indexation (Belgium, France) or the role of social partners vis-à-vis the current set-up in **Greece**, where consultations are led by an expert committee. Three social partner organisations in Greece (the Greek General Confederation of Labour, GSEE, the Small Enterprises of the Hellenic Confederation of Professionals, Craftsmen and Merchants, GSEVEE, and the Hellenic Confederation of Commerce and Entrepreneurship, ESEE) reiterated their demand to reinstate collective bargaining for setting the minimum wage through negotiations of the National General Collective Agreement (EGSEE). In **France**, the current role and composition of the expert committee were also criticised and put up for debate by some unions separately. The General Confederation of Labour (CGT) argued for a more pluralist composition; the French Democratic Confederation of Labour (CFDT) wanted to transform the group into a decent wage commission with multidisciplinary experts and representation, co-chaired by the social partners; and Force Ouvrière (FO) proposed changing the consultation of the social partners carried out by the expert group as part of its annual recommendation, which FO called a systematic failure.

Possibly linking the uprating of statutory minimum wages to international reference values – in the spirit of the EU minimum wage directive – was on the radar in several countries, among them Bulgaria, Cyprus, Ireland and Latvia.

In Bulgaria, there is a new rule for calculating the minimum wage, set out in the amendments to the Labour Code adopted by parliament on 1 February 2023. According to this, the minimum wage for the next calendar year will be determined by 1 September of the current year at 50% of the average gross wage for 12 months, which will include the last two quarters of the previous year and the first two quarters of the current year. The new rate cannot be lower than that determined for the previous year (State Gazette, No. 14, 7 February 2023).

In **Cyprus**, the government discussed with the social partners such a link to mean or median wages as a possibility, but ultimately discarded it. The process for Ireland is documented in the section 'From minimum to living wages?' below. In **Latvia**, President Egils Levits pointed out in a special statement on the minimum wage law that, for greater predictability in the future, it would be worth considering the use of internationally accepted indicators, and that long-term risks can be caused by the fact that such an issue has been decided by the legislature by law, instead of being determined by the Cabinet of Ministers (President of Latvia, 2022). The President invited the new parliament (starting work on 1 November 2022), its Commission for Social and Labour Affairs and the new government to consider whether it is possible to fulfil the norms set by the law in 2023, taking into account the arguments of social partners and economic experts; he suggested that they return to the decision on the level of the minimum wage in 2024 (as is already prescribed by labour law).

Changes to the criteria underpinning the annual uprating were also discussed in **Lithuania**, where employer organisations wish to have labour productivity included in the formula. Trade unions do not support that change. Employers (in particular the Small- and Medium-Sized Business Council, SMSBC) also question the practice of setting the Lithuanian guiding threshold as an average of the four EU Member States with the largest ratio of minimum wage to average wage. They propose considering those countries with an average ratio instead. They also propose to differentiate minimum wages by region. In **Czechia**, employer organisations (the Union of Employers' Associations of the Czech Republic, UZS ČR, and the Chamber of Commerce) initiated a debate on the abolition of 'guaranteed wages'. These are statutorily regulated minimum wages for eight work groups (defined based on the complexity, responsibility and effort of work), the lowest of which coincides with the statutory minimum wage. They argue that this is a legacy, and they see no reason for fixed rates in the private sector other than the minimum wage. Increasing the guaranteed wage creates pressure to increase wages for all employees, regardless of productivity. For 2023, instead of increasing the lowest levels of the guaranteed wage uniformly for all work groups, as previously, the increase was only for the first and eighth work groups. This was a compromise on the part of the government, to limit the growth of wage costs for entrepreneurs.

Also in **Czechia**, following unsuccessful discussions on a new uprating mechanism for the minimum wage in recent years, the new government issued a programme statement on 6 January 2022 in which it sets out its intention to introduce a mechanism for automatic indexation of the minimum wage. The main goals of the Ministry of Labour and Social Affairs also include a gradual increase in the ratio of the minimum wage to the average gross wage.

In **Malta**, the COLA mechanism has been criticised by many over the years. Unions and non-governmental organisations (NGOs) highlight it as an ineffective way to support vulnerable people, in particular low-income earners and pensioners. On the other hand, the Malta Employers' Association argued for limiting the COLA strictly to those workers earning the minimum wage. It is in this context that in 2022 two employer organisations (the Malta Employers' Association and the Malta Chamber of Commerce, Enterprise and Industry) proposed modifications to the COLA. One proposal was to temporarily limit the amount of the allowance and defer payment of it after six years, while the second proposal suggested that employers should not be obliged to pay the full COLA to workers who had already been given a raise in the same year, but need only pay the difference between the COLA and any increases already given. These proposals were rejected by both major trade unions (the General Workers Union, GWU, and Voice of the Workers, UHM), and the government confirmed that the mechanism would continue to be applied in 2023. At the same time, the government confirmed that the tripartite MCESD is leading discussions related to the future of the COLA mechanism within the Low Wage Commission.

Debates on the introduction of statutory minimum wages

Among the remaining countries without legal minimum wages, the peak-level social partners are unanimous that they wish to continue this practice in future. In Austria, Finland and Sweden, however, some minority opinions and proposals to investigate changing to a legal minimum wage were recorded. In Italy, the debate on introducing one has been ongoing since 2018. It lost and then regained political momentum throughout 2022, linked to the election campaigns of various political forces during the last general election.

In **Austria**, in contrast to the position of the federal party of the Social Democrats (SPÖ), which has close links to organised labour and does not question the social partners' autonomy in wage setting, the regional SPÖ of Austria's easternmost state, Burgenland, has a somewhat different position, arguing for a statutory minimum wage of €1,700 (net, per month, which corresponds to an hourly wage of around €10) for all employees (ORF.at, 2022). Burgenland itself already implemented this threshold for all state employees in 2021. The current minimum wage for Burgenland's state employees is €1,820 for full-time employees. Recently, demands have been made that the federal SPÖ include this in its party programme as a minimum net income (Profil, 2022). The federal SPÖ has started to discuss new models internally and with the trade unions.

Likewise in **Finland**, the social partners consider a statutory minimum wage ill fitted to the current model. In a 2020 poll, only one political party (Left Alliance) fully supported a statutory minimum wage. On the right-hand side of the political spectrum, there has been some cautious interest in a statutory minimum wage that would add clarity to the current system, as a representative of the National Coalition Party stated at the time (Yle, 2020). A 2021 citizen initiative about a statutory minimum wage of €12 per hour only gathered 2,549 signatures in six months (Ministry of Justice, 2021). It needs 50,000 signatures for the initiative to be considered in parliament. In December 2022, however, the Minister for Social Affairs and Welfare (who represents the Left Alliance) suggested in a speech to the Left Alliance party council that Finland ought to adopt a statutory minimum wage of €12 per hour. According to the minister, this would reduce severe exploitation of labour and would not replace the collectively agreed minimum wages but rather provide a statutory backing for them (Left Alliance, 2022). As of January 2023, this proposal has not sparked much debate. The Left Alliance has in recent history been the sole party in Finland that is a proponent of a statutory minimum wage. In 2020, the market-liberal National Coalition Party, the Greens and the Christian Democrats were willing to consider it depending on the level (Yle, 2020).

In **Italy**, the introduction of a statutory minimum wage had been subject to wider debates in previous years (see previous editions of this report). Between 2018 and 2021, three bills[20] were discussed in parliament, although none of them has been passed to date, as changes of governments delayed the debates. In 2022 the Draghi government took up the discussion again, and in July 2022 Prime Minister Mario Draghi and Labour Minister Andrea Orlando announced the possibility of introducing a kind of statutory minimum wage, linking the wage figure to the wage levels contained in the most widespread collective

20 Catalfo et al S.658 (2018), Nannicini et al S.1132 (2019) and Catalfo et al S2187 (2021).

agreements or those signed by the most representative trade unions, sector by sector, without setting a minimum intersectoral figure by law.[21] The fall of the government and the summer election campaign reduced the momentum, and the new Meloni government opposed the idea. In all the statements made on this point, the new Minister for Labour and Social Policies, Marina Elvira Calderone, has made explicit the government's position not to intervene with a regulation on the minimum wage, leaving the matter to collective bargaining. In a parliamentary debate in October, further motions presented by several opposition parties, proposing different ideas for minimum wage setting, were rejected, while the right's united motion No. 1/00030, signed by Chiara Tenerini (Forza Italia), received the government's backing and the majority of votes in the chamber (Camera dei deputati, 2022).

The approved text commits the government to achieve the objective of protecting workers' rights by other initiatives than introducing the minimum wage, such as research and monitoring efforts to obtain a better understanding of the causes of non-application of national collective labour agreements or the implementation of a series of measures to combat so-called 'pirate contracts' (which are signed by non-representative trade unions), or to involve social partners in designing policies aimed at reducing labour costs and lowering the tax wedge (Tenerini, 2022).

More information on this issue can be found in the article, 'Minimum wage debate in Italy: Proposals of the Italian Parliament', published at https://eurofound.link/ef23051.

In **Sweden**, the Swedish Federation of Business Owners, which is a major player in labour market issues but not considered a social partner because it does not bargain collectively, is in a minority on the issue of minimum wages. In a document detailing its stances on 106 issues pertaining to the 2022 election, point 19 is headed 'investigate the possibility of a legal minimum wage' (Företagarna, 2022a). According to the federation, companies that choose not to collectively bargain find it difficult to set competitive wages for a particular industry, as collective bargaining agreements are often not publicly available. A minimum wage would set clear wage expectations that companies can follow. It should be noted that the federation is not as universally positive about the Swedish model as the social partners mentioned above are. Much of its work on public opinion is for the rights of companies without collective agreements to be taken seriously (see for instance Företagarna, 2022b).

From minimum to living wages?

A living wage can be defined as a measure of income that allows an employee a basic but socially acceptable standard of living. Living wage campaigns have arisen mainly in English-speaking countries, with the aims of highlighting the inadequacy of existing statutory minima (Eurofound, 2018) and seeking higher rates in the countries in question. Developments at Member State level indicate that minimum wage-setting mechanisms are increasingly taking account of income adequacy for minimum wage earners. This may in part relate to the current inflationary environment, with minimum wages declining in real value in many countries. The proposed EU minimum wage directive also explicitly envisages 'adequate minimum wages' as its desired objective and frames the issue in similar ways to the living wage campaigns (European Commission, 2020). Recital 21 indicates that 'Minimum wages are considered adequate if they are fair in relation to the wage distribution in the country and if they provide a decent standard of living.'

In practice, two main approaches have been identified for calculating living wages with a view to mapping a path for the upward convergence of minimum wages with adequate living wage rates.

The first is a needs-based approach, in which a basket of goods and services needed to achieve an agreed living standard is established based on representative citizen panels or focus groups and the gross wage required to afford such a basket – after benefits/transfers – is calculated. This is the gold standard approach to setting a living wage and derives from practice developed in research on reference budget and consensual budget standards (Eurofound, 2018). This is the approach chosen by most living wage campaigns, in order to underline the empirical credibility of the living wage rates they claim.

The second approach uses a benchmark measure, generally median hourly pay, and targets a specific proportion of that as a simple proxy for a living wage. This has been the preferred approach of legislators to date, and 60% of median pay (Eurofound, 2014) has been the main threshold targeted. Only a small number of countries have statutory minima at or above this rate. The main criticism that living wage campaigners make of this second approach is that settling on a specific percentage of median pay does not guarantee the living wage's promise of a basic but decent standard of living. Calculated using their preferred budget standards approach, living wage rates are generally significantly above the 60% threshold.

21 Press conference, Rome, 12 July 2022.

In November 2022, the coalition government in **Ireland** announced that a national living wage will be set at 60% of hourly median wages and will be introduced over a four-year period to be in place by 2026. For comparison, the 2023 statutory minimum hourly wage in Ireland in 2023 (€11.30) was 51.7% of the median.

The announcement follows a commitment in its programme for government published in October 2020 to 'Progress to a living wage over the lifetime of the Government', replacing the current statutory minimum wage (Government of Ireland, 2020, p. 74). The LPC had been tasked with examining and making recommendations on how best to achieve this commitment, and it had commissioned research to assist it in its recommendations (Doris et al, 2022).

The transformation of the Irish statutory minimum hourly wage into a national living wage over a four-year time frame is similar to the policy enacted by the Conservative government in the United Kingdom (UK) in 2015. There, too, the government retitled the statutory minimum wage as a 'national living wage' set at 60% of median pay. Set at this target level, it will require above-average pay increments for minimum wage earners for a number of years in order to converge on the 60% threshold by 2020.

In both the UK and Ireland, the move to a national living wage can be seen in part as an official response to active living wage campaigns organised by combinations of civil society and religious groups with trade union backing.[22] In Ireland, the voluntary living wage rate is based on the basket-based 'minimum essential standard of living' (MESL) for a single full-time earner without dependents. The value of the hourly MESL-based living wage for 2022–2023 is €13.85 (Living Wage Technical Group, 2022). This is 22.6% above the 2023 statutory minimum of €11.30. According to Doris et al (2022, p. 9), in relation to the 2022 rates, 'while the [national minimum wage] lies at about 50–55% of the median hourly wage rate in the Irish economy, the [MESL-based living wage] would be a much higher proportion of the median hourly wage rate – in the region of 66–70%.'

Even if, as indicated above, the approach taken by the Irish government is not that advocated by the campaigners, the pledge of a national living wage is designed to ensure greater wage growth for minimum wage earners compared with average wage earners consistently over a number of years. The 2022–2023 annual increase of the statutory minimum from €10.50 hourly to €11.30 (7.6%) should be seen in this context.

In making the announcement, the Irish government also held out the possibility that once reached, and subject to review, the 60% threshold could be progressively extended later to 66% of median pay (Government of Ireland, 2022). This, again, is similar to earlier commitments by the UK government to ratchet up the statutory UK minimum to 66% by 2025. As 66% of median pay is by convention the low-pay threshold, a minimum wage policy with such a target allows its proponents to claim that they are seeking to eliminate low-paid work.

Romania and Slovenia are the two EU Member States that have incorporated the cost of living/living wage basket approach in their national minimum wage-setting systems.

As reported in last year's minimum wage report (Eurofound, 2022a, p. 33), in **Romania**, 'The implementation of the basket-based approach turned out to be methodologically and politically challenging.' This continued to be the case in 2022. The 'living wage law', Law 174/2020, stipulates that the living wage estimate should serve as 'the main element' in setting the minimum wage, but does not indicate how this is to be achieved.

In practice, the government has not used living wage calculations in its annual minimum wage revisions since 2020, despite the legislation. In 2022, the National Institute of Statistics indicated that it could not calculate the living wage because of technical issues in the text of the law itself, notably the lack of specific indications of the quantities of some items in the living wage baskets (Eurofound, 2022a). Law 174/2020 has as yet, then, had no bearing on or influence in annual revisions of the minimum wage. The linking of the minimum wage and the living wage does, however, remain a subject of debate and position taking for Romanian trade unions. In the absence of an officially approved estimate of the living wage, widely diverging estimates have been published by groups such as the Romanian Academy and Friedrich Ebert Stiftung Romania.

The last amendments to the national Minimum Wage Act in **Slovenia** (in 2018) imposed a new formula by which the net minimum wage after 1 January 2021 cannot be lower than 120% of minimum living costs and cannot exceed 140% of minimum living costs. This is designed to establish a meaningful relationship between the incomes of those who are working and those who are inactive.

22 Republic of Ireland Living Wage (https://www.livingwage.ie/) and Living Wage Foundation (UK) (https://www.livingwage.org.uk/what-real-living-wage).

The Minimum Wage Act states that the minimum wage is adjusted annually by the growth in consumer prices and every six years by the new calculation of minimum living costs. The minimum costs of living are determined taking into account the cost of a basket of food, and the total amount that the average household spends on food. They are calculated every six years by an independent institute, the Institute for Economic Research. The most recent estimate, published in October 2022, indicates monthly minimum living costs of €669.83, 9.2% more than in 2017 (€613.41). The Minimum Wage Act stipulates that the minimum wage must be harmonised with the new minimum cost-of-living calculation within three months. For the minimum wage rate set for 2023, both the new minimum living costs and the rise in consumer prices have been used in the adjustment. The minimum wage (net level) is 131.1% higher than the estimated minimum cost of living, i.e. within the range of 120–140% of the minimum cost of living.

In **Malta**, the minimum wage is adjusted by a COLA each year. The COLAs, agreed in 1990 between employer organisations, unions and the government, are based on the retail price index, which measures inflation in Malta and is based on the monthly average price change of goods and services purchased by private households. It should be noted that the COLA is a fixed amount granted irrespective of wage levels, benefits all employees and so is not specific to minimum wage setting. A CEO of a major company and a worker on the shop floor receive the same benefit of €9.90 per week in 2023.

The COLA mechanism has been criticised. Unions and NGOs say it is an ineffective way to support vulnerable people, including low-income earners. Employers have sought to have its use limited to minimum wage earners only.

NGOs and unions have continued to promote enhancing minimum wages in line with the concept of a living wage. A study published in September 2022 by the General Workers' Union (GWU) in collaboration with the Alliance Against Poverty (AKF) and Moviment Graffitti has revamped discussions on whether the minimum wage should be linked to the concept of living wage (Gravina et al, 2022).

The UHM union has called for the minimum wage to be raised to 50% of the gross average wage over a number of years. The UHM argues that the current minimum wage levels do not satisfy the adequacy requirements suggested in the EU minimum wage directive, as minimum wage rates are below 40% of the national average wage. Currently, the MCESD is leading discussions related to the minimum wage within the Low Wage Commission, so recommendations to modify minimum wage setting are likely to emerge.

In summary, 2022 saw Ireland announce the introduction of a national living wage, targeted to reach 60% of median hourly pay by 2026. Irish legislators have opted for this simple threshold in preference to the higher rates resulting from the basket of goods/services approach, which also tend to require more elaborate data collection. Data collection has been cited in Romania as a reason for lack of progress in implementing the living wage legislation introduced in 2020. In Slovenia, minimum wages after 2021 are obliged to be in a range of 20–40% higher than basket-based minimum cost-of-living estimates. Those estimates are primarily applied in social policies regarding those who are not employed.

The two reference levels in the EU directive as regards minimum wage adequacy are 60% of median pay and 50% of average pay, but they are indicative only. In practice, either threshold remains aspirational for the majority of Member States, where statutory minimum wages are currently lower than this level. The direction of travel is clear, however, with minimum wage rates increasing faster than median or mean wages in nearly all Member States, partly in response to tighter labour markets and partly in response to the particular cost-of-living challenges of low-income households in a period of high inflation, but also influenced by living wage advocacy of the type observed in the four countries covered in this section.

4 Influence of EU policy on national minimum wage setting

More than two and a half years have passed since in mid-2019 Ursula von der Leyen, then President designate of the European Commission, announced the Commission's intention to introduce a legal instrument for adequate minimum wages. Following the regular social partner consultations and an impact assessment, in October 2020 the Commission presented a proposal for a directive (European Commission, 2020). It was negotiated upon for more than 1.5 years, and ultimately approved by the co-legislators in the second half of 2022.[23] The Member States have two years from the date of publication (19 October 2022) to incorporate the directive into national law, and the European Commission has set up committees of legal experts in cooperation with the Member States to discuss the details of the transposition.[24]

It is clear that the impact of the directive will vary greatly from country to country. It will have more impact on Member States with statutory minimum wages. Only a few of the countries with statutory minimum wages already respect the indicative reference values mentioned by the directive (see also Box 11), and most of them have a collective bargaining coverage of less than 80%. This means that they will generally have to implement measures aimed at reaching the international or national reference values and comply with the requirement of establishing a formal action plan to progressively increase the collective bargaining coverage. By contrast, Member States without statutory minimum wages already have coverage higher than required, and they will not need to establish the action plan. In addition, they will be bound neither by provisions requiring the compulsory adoption of a statutory minimum wage, as no such provision has been included in the directive, nor by provisions requiring that any specific collective agreement apply to everyone (Bomba, 2022a; Schwertner, 2022; Spattini, 2022).

From a legal perspective, and given these timeframes, changes to the currently existing minimum wage-setting systems are not yet expected. It is nevertheless interesting to see whether the directive has already exerted an influence on how minimum wages are set now or in future. Similarly to the findings of last year's edition of this report, there is not much to report to date. Generally, changes to proceed with implementation have not yet (officially) started. Some countries (for example, Finland) have reportedly started to review the implications, but this has not entered public debate. The directive may have influenced the introduction of the statutory minimum wage in Cyprus, even though the idea preceded the proposal; many features of its design resemble the requirements of the directive. The directive also reignited the same debate in Italy during 2021 and 2022, when the government changed twice, even though the latest status is that no statutory minimum wage will be introduced – clearly influenced by the directive stating that this is not required.

Trade unions are the greatest proponents of the directive and often refer to its provisions in any exchanges around minimum wage uprating or its future setting. For example, the French trade unions have made clear connections between the directive's provisions and their proposed changes to the setting of the French minimum wage, in their annual consultation round carried out by the expert group. In some cases, employers also refer to the directive, stressing the requirement to come up with predictable ways of setting the minimum wage (Latvia), or to introduce labour productivity as a criterion (Lithuania).

23 Directive (EU) 2022/2041 of the European Parliament and of the Council on adequate minimum wages in the European Union.

24 In parallel, on 18 January 2023, Denmark's new three-party coalition government announced that it had filed an annulment action at the European Court of Justice (Regeringen, 2023).

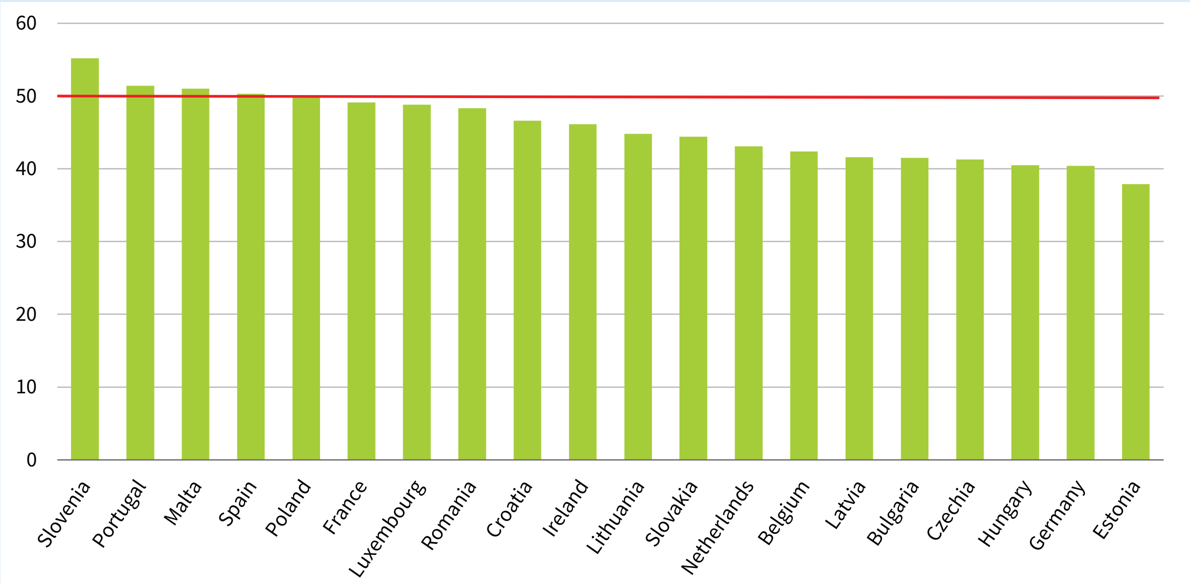
Box 11: Indicative reference values across EU countries

The EU directive on adequate minimum wages mentions the potential use of some indicative reference values that could be helpful when assessing the adequacy of statutory minimum wages. One such value, which is also commonly referred to in the literature, is 50% of average wages. As the most recent data for the other threshold – 60% of median wages – are rather incomplete for 2021, we focus on the average-based threshold.

According to the latest available data from Eurostat in 2021 (Figure 17), a few countries have already reached that level (Slovenia, Portugal, Malta, Spain, Poland) or are very close to it (France, Luxembourg, Romania). It should be taken into account that the data refer to 2021, which means the current percentages could already be higher in several countries, given the large increases in statutory rates in 2022 and 2023.

The increase in the ratio between the statutory minimum wage and the average wage across most EU Member States in recent years reflects the policy emphasis placed on the area of minimum wages, which have been typically hiked more generously than average wages. The change of policy stance among EU institutions and the importance placed on this topic, illustrated by the recent EU directive on adequate minimum wages, have certainly also played a role in explaining these developments.

Figure 17: Statutory minimum wage level as a percentage of the average wage, 20 Member States, 2021



Notes: *Data refer to 2021, except for Belgium, Ireland and France (2020). Average monthly wages have been calculated for the business economy sectors (Nomenclature of Economic Activities (NACE) B to N).*
Source: *Eurostat*

The most noted part of the directive is Article 5(4) on the adequacy of minimum wages. It mentions 'indicative references values commonly used at international level such as 60% of the gross median wage and 50% of the gross average wage' to guide the level at which they are set. Those values are continually referred to, mainly by trade unions, governments or political parties in countries that are falling short of these thresholds (for example, in Belgium, Hungary, Romania and Spain). In other contexts, and where such thresholds have already (nearly) been achieved, the adequacy of the existing level is more prominent in the debate (for example, in Croatia, Luxembourg and Portugal).

Continuing convergence of rates towards the target 50% of average/60% of median wages can be observed, through recent uprates (for example, in Croatia, Germany and Slovakia), in declarations of intentions to move towards them in the near future (such as in Bulgaria – 50% of gross average wages, Ireland – 60% of median gross wages, and Spain – 60% of net average wages), as proposals made as part of public debates, partly reaching beyond the social partners and governments (Belgium and the Netherlands), or as an intention to improve the ratio but not with a specific target (Czechia).

Box 12: Spain: Expert committee refers to the reference values in the EU minimum wage directive

In its report analysing the SMI, Cassmi made a direct reference to the directive when referring to the increases in Spain's minimum wage over the previous four years:

> *This dynamic, the result of a political commitment to the recovery of the purchasing power of the statutory minimum wage in relation to the average wage, has been accompanied and supported by the recent approval, on 4 October 2022, of the European directive on the adequacy of legal minimum wages, according to which:*
>
> *'Member States with statutory minimum wages shall take the necessary measures to ensure that the fixing and updating of statutory minimum wages are guided by criteria set to promote adequacy with the aim to achieve decent living and working conditions, social cohesion and upward convergence' (Brussels, 28.10.2020, COM(2020) 682 final, Art. 5(1), p. 26).*
>
> *The directive does not go into specifying what is meant by 'decent living and working conditions'. On the other hand, the objective of the European Commission to achieve a sufficient minimum wage would have broad support from the public in the Spanish case, as reflected in the Centro de Investigaciones Sociologicas (CIS) Barometer of February 2019, where respondents were asked about an assessment of the increase of the SMI to €900 in 2019. 71% of those interviewed respond with a score of 6 or higher on a scale that goes from 1 to 10, where 1 is the worst assessment and 10 the best.*
>
> (Cassmi, 2022, p. 8)

Reflections on what criteria will guide the uprates of the statutory minimum wages in future (see Article 5(2)), and whether the currently applied criteria are in line with the directive, were scarce (at least in the public debate). The exception is Cyprus, where the new minimum wage decree establishes a readjustment mechanism based on certain criteria, which to a great extent are almost identical with the formulations of the directive (Article 5(2)(a)–(d)). Lithuanian social partners likewise continued their exchanges in this area. Employers would like to adjust the criteria with reference to labour productivity, and trade unions highlight the need to include purchasing power, especially in the light of high inflation, but they expect that further lengthy discussions will be needed on this. The Czech government, to end an unsuccessful long-term debate among the social partners on reforming the uprating mechanism, has announced its intention to introduce an automatic indexation mechanism.

Two further countries, Cyprus and Malta, established wage commissions, which might be considered 'consultative bodies' as per Article 5(6). Moreover, Spain continued its ad hoc mandate for the expert commission for a second time, to provide a recommendation ahead of the negotiating process. This resort to expert committees is a continuation of a trend that had already started before the directive was proposed.

Only a few countries have made recent legal changes to promote collective bargaining (Romania), are intending to do so (Germany), have discussed it in a tripartite format (Estonia) or aim to promote the level of collectively agreed wage increases by incentivising employers with increases in tax deductions (Portugal). In Italy, the debate on how to define representative social partners and the relevance of their agreements – as compared with 'pirate agreements' – to the directive continues (Bonanomi, 2022a; Massagli and Spattini, 2022; see also Box 13). Such changes are not necessarily causally linked to the minimum wage directive, but are in its spirit and in line with its intentions.[25]

25 Müller and Schulten (2022) report that this legislative initiative in Germany in 2023 was a response by the relevant ministry to a request by trade unions to advance the action plan on collective bargaining even before the directive's implementation.

Box 13: Italy: Can the EU directive solve the issue of pirate agreements?

Two recent research articles discuss if and how the EU directive on minimum wages could exert an impact on solving the long-standing ambiguity around which collective agreements are 'representative' and are to be applied (see Eurofound, 2020).

Bonanomi (2022a) argues that, once all collective agreements in a specific sector have been identified, the representativeness of signatories must be measured on the basis of quantitative and effectively measurable parameters, not social partners' self-declarations. In other words, the legislation incorporating the directive into national law will ideally need to include a provision requiring social partners to follow transparent mechanisms for collecting and notifying quantitative data about representativeness.

Along the same lines, the argument of Massagli and Spattini (2022) is that, once clarified by law, the minimum threshold established by the most representative agreement must be respected, since there are many contracts that are implemented in the same sector. An employee representation law would be perhaps the real goal of many of those supporting the minimum wage today, and it would bring about a revolution in the Italian collective bargaining system. In this way, the plurality of union and employer representation, which over the years has shaped autonomous and representative bargaining systems even when they operate in the same field, could be overcome when signatories are identified by law.

Finally, for a number of countries – including Austria (Schwertner, 2022; Müller and Schulten, 2022), but also Estonia, France and Italy – it has been explicitly mentioned that no (major) impacts of the directive on legislation or the practice of setting minimum wages are expected.

A number of research and/or political articles commenting on the directive have also been identified. Apart from the ones quoted above, which also investigate the implications for specific countries – a list that can be enlarged by Kostov and Moraliyska (2022) for Bulgaria, and Bomba (2022a) for eight EU Member States – there is some disagreement on whether the directive constitutes a change of paradigm in the EU social policy field (Müller and Schulten, 2022; Ratti, 2021) or whether the directive (together with other EU initiatives in the social policy area) has a more symbolic character to countervail tendencies towards political divergence and is a result of new geopolitical challenges (Syrovatka, 2022). Critical discussion on the substance of the directive and whether its provisions will help to meet the objective of reducing in-work poverty (as has been argued in the impact assessment, based on simulations with EUROMOD; Grünberger et al, 2022) is presented by several authors (Bomba, 2022b; Skedinger, 2022; Ratti, 2021).

5 Latest research on minimum wages in the EU

This chapter provides an overview of the latest policy-relevant research on minimum wages. To this end, articles published in 2022 and pertaining to EU Member States have been taken into consideration, providing a comprehensive insight into research that looks into labour market and economic outcomes of introducing or raising the minimum wage. Another body of research focuses more specifically on the recent EU directive on adequate minimum wages, on the social effects of minimum wages and on the impacts of inflation – rising in the wake of the COVID-19 pandemic and the Ukrainian crisis – on wages.

Overview of latest policy-relevant research

All studies listed in this section were identified based on desk research by Eurofound and reports from the Network of Eurofound Correspondents. Similarly to what was reported in last year's publication, many articles and reports have been published dealing with aspects of the EU directive on minimum wages and its implications for national-level wage setting, and on the consequences of the 2015 introduction of the German statutory minimum wage and on the possible outcomes of its recent raise in 2022.

The most substantial part of the research focuses on the effects that the existence, introduction or raising of a minimum wage floor has on the labour market and on several components of the economic system. Specifically, the studies consider the effects of minimum wages on the employment level and unemployment, on wages (and possible spillovers on the wage distribution) and on the profitability of companies.

Furthermore, a considerable number of the articles identified refer to the social effects of minimum wages. This group mainly focuses on the question of whether minimum wages represent effective strategies to tackle poverty and social inequalities, and whether such policies are sufficient by themselves to address such social issues. Few articles are specifically centred on the effects of minimum wages on health and well-being.

A conclusion that can be drawn from the identified body of research (Table 7) is that there continues to be a concentration of publications in some EU Member States, while policy-relevant research is scarce – if not missing – in a number of other countries. In addition, the labour market impacts of minimum wage raises continue to be the most widely researched outcomes, while research studies on social impacts remain scarce.

Table 7: Overview of latest research on minimum wages in the EU

Theme	Research studies by country
Collective bargaining	**Belgium**: Dorssemont, 2022; **Germany** and **Spain**: Adamopoulou and Villanueva, 2022; Villanueva and Adamopoulou, 2022; **Italy**: La Repubblica, 2022; Lucifora and Vigani, 2022; Massagli and Spattini, 2022; Santucci, 2022; Treu, 2022; Tridico and Tullini, 2022; **Poland**: Bomba, 2022b; **Portugal**: Afonso et al, 2022
Compliance and enforcement	**Austria**, **Belgium**, **France**, **Germany** and **Slovenia**: De Wispelaere et al, 2022; **Ireland**: O'Sullivan, 2022
COVID-19 pandemic	**Germany**: IAB, 2022a; IAW et al, 2022
EU minimum wage directive	**Austria**: Schwertner, 2022; **Bulgaria**: Kostov and Moraliyska, 2022; **Croatia**: Grgurev, 2022; **Finland**: Törrönen, 2022; **Germany**: Haapanala et al, 2022; Müller and Schulten, 2022; Syrovatka, 2022; **Italy**: Bonanomi, 2022a,b; Ratti, 2021; Spattini, 2022; **Poland**: Bomba, 2022c; **Sweden**: Skedinger, 2022
Inflation	**Belgium**: Claeys et al, 2022; Gál, 2022; **Hungary**: Gál, 2022; **Poland**: Majchrowska, 2022
Living wage	Sirilertsuwan et al, 2022; **Ireland**: Doris et al, 2022
Official country reports	**European Central Bank**: Koester and Wittekopf, 2022; **France**: DARES, 2022; **Germany**: Deutscher Bundestag, 2022; **Italy**: CNEL, 2022, Chapter 7, pp. 167–174; **Luxembourg**: Chambre des salariés du Luxembourg, 2022; **Netherlands**: National Ombudsman of the Netherlands, 2022; **Portugal**: INE GSEE, 2022a,b
Impacts of minimum wages on:	
wages and the distribution of wages	**Germany**: Biewen et al, 2022; Caliendo et al, 2022a; Gregory and Zierahn, 2022; Isphording et al, 2022; Naguib, 2022; RWI and IAW, 2022; WSI, 2021; **Greece**: Roupakias, 2022; **Lithuania**: Garcia-Louzao and Tarasonis, 2022, **Portugal**: Oliveira, 2022
employment and unemployment	**France**: Ribeiro and Rosenberg, forthcoming; **Germany**: Caliendo et al, 2022b; Drechsel-Grau, 2022; Grünberger et al, 2022; Monastiriotis, 2022; Popp, 2022; Roupakias, 2022; **Lithuania**: Garcia-Louzao and Tarasonis, 2022; **Poland**: Majchrowska and Strawinski, 2022; **Spain**: Arranz et al, 2022; Gorjón et al, 2022; **Norway**: Dona, forthcoming

Theme	Research studies by country
Impacts of minimum wages on:	
working hours	**Germany**: Caliendo et al, 2022a; RWI and IAW, 2022; **Ireland**: Redmond and McGuiness, 2022
in-work poverty	**Germany**: IAB, 2022b; DIW Berlin, 2022; Grünberger et al, 2022; **Italy**: Ratti, 2021; **Poland**: Bomba, 2022a
health and well-being	**European countries**: Lebihan, 2022; **Greece**: Bechlioulis et al, 2022
gender pay gap	**Germany**: Grünberger et al, 2022; Schmid, 2022; Wittbrodt, 2022
income inequality	**Germany**: Backhaus and Müller, 2022; Ingwersen and Thomsen, 2022; **Hungary**: Scharle et al, 2022; **Romania**: Davidescu et al, 2022; **Norway**: Svarstad and Dapi, 2022
profitability of companies and responses by companies	**Germany**: Butschek, 2022; IAB, 2022c; IAW et al 2022; Isphording et al, 2022; ZEW, 2022; **Hungary**: GVI, 2022; **Portugal**: Alexandre et al, 2022; **Sweden**: Daunfeldt et al, 2022
Minimum wages and different contract types:	
platform workers	**Belgium**: Pulignano et al, 2022a; **Belgium/Netherlands**: Pulignano et al, 2022b
seasonal employment	**Germany**: Huschik et al, 2022
self-employment	**Germany**: Ganserer et al, 2022

Impacts of statutory minimum wage increases

This section presents selected findings from the studies listed above as regards the impact of a minimum wage – and often specifically a raise in its level – on a selected range of outcome indicators, particularly on employment and unemployment levels, structure of wages, and social issues such as in-work poverty and quality of life. They are mainly based on empirical quantitative evaluative research. A gold standard in this field is the ‘difference-in-differences’ method, which uses two different groups (of workers or companies, but also aggregate data for regions) in the research design: one that has been affected by the policy measure (for example, increase in the rate), and one that has not. It then compares the two groups for a specific outcome variable after a certain period. Many of the studies reported here adhere to such a research design, but there are other valuable studies using alternative methods, which are also referred to here. Some studies, for example, use quantile regressions, which make it possible to estimate the impacts on workers (or companies) located in different segments of a distribution. This allows for more granular insights into the effects on different groups than an ordinary regression can, which estimates the impact on the ‘average’ worker (or company).

Effects on wages and wage inequality

Before turning to the question of how minimum wage increases affect employment or other outcomes, researchers usually start by looking into the impact they have on workers’ wages. Only if such impacts can be found is it likely that they can go on to influence other social or economic indicators. Minimum wage rises not only affect those on the minimum wage, or those working just below the new rate, but typically also spill over to the wages of workers with higher earnings. This happens because companies, or social partners in their collective agreements, aim to maintain pay differentials and continue to pay higher wages to workers who also had higher earnings before the raise, as such differentials are likely to be based on different sets of activities carried out or degrees of responsibility exercised by these workers, which are rewarded. Often the literature finds that such spillover effects go up to around the middle of the wage distribution, but they get smaller and less significant the further away a worker already is from the minimum wage. The empirical studies published in 2022 showed similar results, with some variation in how far up the wage distribution a minimum wage increase affects other workers’ wages.

- The estimated spillover effects of the introduction of the German statutory minimum wage in 2015 were similar in magnitude up to the 20th percentile, according to a difference-in-differences analysis on data from the German Socioeconomic Panel (SOEP) (Caliendo et al, 2022a).
- A Greek study explored the short-run effects of minimum wage policies during 2016–2020 and estimates unconditional quantile regressions with a difference-in-differences approach. They yield economically important effects up to the 40th quantile of the earnings distribution (Roupakias, 2022).
- In Lithuania, a year after a significant minimum wage increase in January 2013, significant spillovers were found up to the median of the initial earnings distribution (Garcia-Louzao and Tarasonis, 2022).

- A Portuguese study combined distribution regression and rank regression on data collected by governmental sources (Quadros de Pessoal dataset, QP) for 1986 to 2019, and finds that minimum wage increases can structurally reshape the wage distribution through spillover wage gains up to the 54th percentile of the distribution. In addition, the rise in the minimum wage also explains almost 40% of the average wage growth over that period in Portugal. Portugal has a comprehensive sectoral bargaining system, whereby most workers benefit from collectively bargained wage floors that are often set above the minimum wage. While these floors did not increase at the same pace as the minimum wage, firms proactively raised wages further up in the distribution in order to maintain productivity and skill pay differentials. As these spillovers materialised at the firm–worker level, the authors suggest that they were not due to the heavily institutionalised character of the Portuguese labour market (Oliveira, 2022).

Another recent German study suggests that inequality in hourly wages fell between 2014 and 2018, and this fall can be largely explained also by the introduction of the minimum wage; but the long-term trend of rising inequality would already have been stopped after 2014 without the minimum wage (Biewen et al, 2022). In other words, previous trends might lead to an upward bias in the estimation of the minimum wage effect. The researchers detected the possible bias with the aid of a distribution regression difference-in-differences methodology based on the German Structure of Earnings Survey. Similar results for Germany are found by another study based on the SOEP data: by employing working sample observations in the period 2013–2018, the authors find that the minimum wage introduction in 2015 exerted a higher effect on hourly than on monthly wages (Caliendo et al, 2022a).

Yet another German study, applying unconditional quantile regression to data from the Institute for Employment Research (IAB), finds that higher minimum wage floors result in positive wage spillover effects for medium-skilled workers with salaries just above the minimum wage. More strikingly, it finds negative wage effects for high-skilled workers who are further up the wage distribution, followed by reduced returns on skills and a contraction in the skills supply to industry (Gregory and Zierahn, 2022).

Box 14: Minimum wage-setting regimes, wage floors and wage compression

In a recent discussion paper, Haapanala et al (2022) study how minimum wages and collective bargaining affect low pay. Drawing on data from the European Survey of Incomes and Living Conditions (EU-SILC) covering earnings in 2004–2019, they identify and assess the absolute and relative sizes of ‘effective wage floors’ for full-time employees in 30 countries. By specifying multilevel, random effects within–between regression models to assess the individual and joint effects of statutory minimum wage and collective bargaining coverage on wage floors, the authors reach the following policy-relevant findings.

- Countries with a statutory minimum wage have a lower share of workers earning below 60% of the gross median wage than countries without one.
- Countries without a statutory minimum wage but with collective bargaining coverage above the 80% target have roughly the same proportion of workers earning less than 60% of median wages as statutory minimum wage countries with collective bargaining coverage less than 30–40%.
- However, at higher rates of collective bargaining coverage, statutory minimum wage countries are predicted to overtake non-statutory minimum wage countries on this measure. A hypothetical statutory minimum wage country meeting the target value of 80% collective bargaining coverage is predicted to have fewer than 6.5% of full-time employees earning below-decent pay.
- Although robust effects are found demonstrating more favourable low pay outcomes in countries with high levels of collective bargaining coverage or a generous statutory minimum wage, the dynamics are not the same in every country. For instance, especially in central and eastern Europe, where industrial relations were built on a heavily decentralised model, reaching 80% collective bargaining coverage might not be realistic without deeper reforms to the bargaining system.

It follows that higher collective bargaining coverage is instrumental in reducing the inequality in and inadequacy of wages – in countries both with and without statutory minimum wages – and that non-statutory minimum wage Member States require higher collective bargaining coverage than statutory minimum wage countries to achieve lower shares of low-paid workers. If the latter set of countries increased their collective bargaining coverage to the 80% threshold, they could reduce the share of low-paid workers below the levels currently seen in non-statutory minimum wage countries.

Effects on employment and unemployment

The most widely researched effects of minimum wage increases are those on employment, working hours and unemployment. During 2022, a new empirical body of literature was added, documented here.

A theoretical search-and-matching model suggests that minimum wages up to 70% of the median wage – which is well above the Kaitz Index of 55–60%, usually taken as reference for minimum wage setting – can significantly increase productivity, hours worked and output without reducing employment. However, the study also warns, by contrast, that in frictional labour markets reallocation takes time whenever the minimum wage cuts deep into the wage distribution and, as a consequence, it is necessary to implement a high minimum wage gradually to avoid elevated unemployment rates during the transition (Drechsel-Grau, 2022).

Some empirical research findings in 2022 support the view that minimum wage policies had no significant effect on employment and that minimum wage increases have a limited negative impact on employment.

A Greek study used a sample of administrative social security records to investigate the effect of two episodes of minimum wage increase in 2009 and 2011 (5.5% and 1.6%, respectively). It suggests that a carefully raised minimum wage could increase the earnings of low-wage workers and reduce income inequality without hurting employment (Monastiriotis, 2022). Another study, based on Greek Labour Force Survey data and aggregate regional data on industry between 2016 and 2020, likewise found no statistically significant or economically important disemployment effects, but noted a significant increase in women's employment (Roupakias, 2022).

In connection with last year's review focus on the 2019 rise in the statutory minimum wage in Spain, a Spanish study (Arranz et al, 2022) concludes that that increase did not have adverse effects on the probability that the workers affected by the increase would continue to be employed in the same company several months after the increase, compared with similar workers not affected by the measure. It employed a quasi-experimental difference-in-differences method on microdata extracted from official administrative data drawn from the Spanish Muestra Continua de Vidas Laborales (MCVL) in 2004–2019, with a focus on 2017–2019.

Nevertheless, according to another Spanish study (Gorjón et al, 2022) employing data from the same database (MCVL), if the 2019 increase had no effect on employment in the period immediately following the increase (up to five months after the increase), a significant negative effect emerges thereafter. In the 12 months following the reform, the authors find a negative effect leading to an increase in the probability of transition to unemployment. They conclude that the new minimum wage increased the probability of experiencing unemployment (1.9 percentage points after one year). They also highlight a reduction in working hours (or 'work intensity' in their terminology) of 0.8 percentage points. Their results indicate that workers affected by the reform vary considerably in age and previous work intensity.

While it has been suggested that employment impacts are often not statistically significant, or are small on average, empirical studies continue to find employment impacts on specific groups of workers. This has been the case for Lithuania, where a new study (Garcia-Louzao and Tarasonis, 2022), based on data from administrative records provided by the State Social Insurance Fund Board (SoDra) and considering a sample of employed people between 18 and 60 years old, tracks workers before and after the historically large 2012–2013 increase in the Lithuanian minimum wage (nominally 17% in total). The authors find that the increase in minimum wage did not critically undermine the employment prospects of workers, thanks to the reallocation effect, which helped mitigate disemployment effects. They warn, however, that young workers, and people in highly exposed municipalities or in the tradable sector, may have been negatively affected and that employment losses were smaller in concentrated industries and among tax-evading firms However, it should be noted that, despite the evidence that negative effects on employment may have had a greater impact on specific groups of workers, the overall result of the study highlights how overall the positive wage effects (also taken into consideration by the authors) of the increase in the minimum wage outweighed the employment losses.

A study on Germany focused specifically on the employment of migrants, who are overrepresented in the low-wage sector and can be expected to benefit particularly from a minimum wage (Ingwersen and Thomsen, 2022). However, contrary to expectations, the results of this study show, with the aid of a differential trend-adjusted difference-in-differences estimator applied to data drawn from the German SOEP during 2007–2018, that the introduction of the minimum wage has weakened the position of migrants in the low-wage sector compared with their native counterparts. They experienced an increase in part-time employment, a less pronounced decline in unemployment and a greater reduction in weekly working hours. The introduction of the minimum wage caused a temporary convergence in hourly wages between migrants and natives, which subsequently turned into a wage divergence: increasing hourly wages have not translated into higher monthly salaries, so wage inequality between migrants and natives has widened.

Significantly negative, but small, employment impacts are also found in a recent German study commissioned by the German Minimum Wage Commission, which investigated the impacts of the minimum wage introduction in 2015 and of two increases in 2017 and 2019 (Caliendo et al, 2022b). Based on data from the Structure of Earnings Survey 2018, it applied difference-in-differences approaches to aggregate regional data. Regions that are more strongly affected by the minimum wage increases (because they have a higher proportion of minimum wage workers) are found to have 0.6% lower employment than regions with a smaller proportion of minimum wage workers. This effect is relatively small, and mainly due to a decline in mini-jobs. These negative impacts have grown over time. In a few labour market segments, such as construction and manufacturing, or in regions with a lower than average growth, they have also affected regular employment (beyond mini-jobs). In regions with higher growth rates, no detrimental impacts of the minimum wage are detected.

Other studies found more detrimental impacts on labour market outcomes.

A study focused on Portugal is based on data drawn from the Portuguese Integrated Business Accounts System and the QP database in 2013–2016 (Alexandre et al, 2022). The country has had a series of significant and consecutive minimum wage increases since 2014. The study provides an econometric evaluation of the outcomes in several aspects of the economy, suggesting that such policies did in fact have negative impacts on employment and on firm profitability. As regards employment growth, the average effects in 2014, 2015, 2016 and 2017 are, respectively, -0.2, -0.5, -1.0 and -1.1 percentage points for firms that were not financially distressed, and -0.7, -2.0, -3.9 and -4.7 percentage points for financially distressed firms.

Several studies point out that the employment effect of a minimum wage policy is the result of a combination of specific labour market features, such as the composition of workers and employers, and that it may vary over the business cycle. This is the finding of a Polish study interpreting data from the Structure of Earnings Survey over a 10-year period (2006–2016), estimated to cover nearly 90% of all contract workers in the country (Majchrowska and Strawinski, 2022). According to it, the regional diversity in employment elasticity due to minimum wage changes is driven mainly by age (negative employment effects are observed mostly among young workers, while positive employment effects are found in the group of workers aged 50 or more); but other significant regional drivers are the share of workers in the private sector in the region considered (negative employment effects are more substantial in the private sector than in the public sector, especially in regions with a high share of workers in the public sector), the opportunity for industries to adjust prices of their products and services, and the size of firms (big companies are less likely to resort to dismissals). Therefore, minimum wage effects cannot be easily predicted by policymakers, as labour markets present diverse features.

An analysis of records regarding regular full-time employees available in the Integrated Employment Biographies from the IAB in Germany between 1999 and 2017, and of data drawn from the Establishment History Panel shows that, in line with the theory of perfect competition, sectoral minimum wages can lead to negative employment effects in slightly concentrated labour markets, while this negative effect weakens with increasing concentration and, ultimately, becomes positive in highly concentrated or monopsonist markets (Popp, 2022).

Box 15: Impact of minimum wages on health, well-being and quality of life

To date, there is limited research in the EU on what effect minimum wages have on people's general health and well-being or their quality of life. A new study covers 17 countries: 16 EU members of the Organisation for Economic Co-operation and Development (OECD), and Israel (Lebihan, 2022). The first study of its kind, it draws on individual data from all cycles of the European Social Survey between 2001 and 2017 about people 18 to 64 years old with no tertiary education. The focus on a narrower segment than the general working age population is crucial, as minimum wage increases are unlikely to affect higher-paid workers. The study applies a linear combination model and a probit model, and controls for a number of country characteristics (GDP per capita, physicians and hospital beds per inhabitant, unemployment rates, etc.) as well as personal characteristics, taking into account that there can be a time lag between minimum changes and their impact on health. It shows that minimum wage increases tend to improve people's self-reported health and income security, as well as life satisfaction and happiness, suggesting that there is evidence for a relationship between minimum wage and – at least self-perceived – health. According to the analysis, such effects are largest among women, employed people who remain in employment following the increase, married people, those with less than a secondary education and those living in the poorest countries.

Another study investigated income inequalities and the quality of life in 10 CEE countries between 2008 and 2019 (Davidescu et al, 2022). The level of statutory minimum wages was included as one factor determining inequality, and it turned out to have a strong impact on income inequality. The empirical results, based on panel data regressions, indicated that an increase in the minimum wage determines the increase in the overall level of social progress in total but, compared with the three main pillars of the social progress index, the impact was statistically significant only for the pillars of basic needs and fundamental well-being. A potential explanation for the lack of statistical significance of the pillar of opportunities could be that they are no longer connected to the minimum wage, but to a level of respect for human rights and freedoms, tolerance in society and access to advanced education, aspects that are beyond the scope of the minimum wage level.

A Greek study looked into the effects of the introduction of a (lower) sub-minimum wage for 17- to 24-year-olds between 2010 and 2014 (Bechlioulis, et al, 2022). The study is based on the Hellenic Statistics on Income and Living Conditions and applies the difference-in-differences estimation technique. It finds that a higher minimum wage decrease for very young adults (17–24 years old) improved the likelihood of them reporting a fair health status by either 85% (among unemployed young adults looking for a job) or 91% (among unemployed young adults available for work) compared with other young adults (25–29 years old). This was, however, only true of those young adults who were unemployed and looking for or available for a job. No significant health status effects were found for young workers who were already in employment, or those not actively looking for a job. The authors explain this by the finding that the introduction of the new sub-minimum wage increased the probability that the young adults affected would find a new job.

6 Conclusions

Good progress for minimum wage earners over the past decade

The last decade has not always been a good time for wage earners in general, as illustrated by the fact that average wages have grown well above labour productivity in only a few countries – where they had started from low levels. Looking at developments for minimum wage earners, however, the situation was more positive, as most governments set nominal rates above the level of inflation. This was particularly pronounced in countries that have joined the EU since 2004, where gross statutory rates grew in real terms by between 45% and 195% over 2012–2023. Only minimum wage workers in Greece and Malta saw a decline in their gross real minimum wages over that period. This decline was small in Malta. It was more substantial in Greece because the minimum wage was cut in March 2012, as mandated within the financial rescue package that was being implemented in the country at the time. Gross statutory rates also grew more than average wages in the majority of EU Member States, notably in most CEE countries, Portugal and Spain. They also tended to outperform the growth in negotiated wages; their increase was typically greater than that of negotiated wages in countries without a statutory rate, and also in around half of the countries with statutory rates and with available data on negotiated wages. They have increased above labour productivity in more than two-thirds of EU Member States (mainly in several CEE countries) over the last decade, failing to do so in only a few countries (Belgium, France, Germany, Greece, Ireland and Malta). Convergence between the EU15 and the CEE countries is also observed when looking at the net statutory minimum wages in real terms between 2012 and 2022: while the real net value remained relatively constant in EU15 countries, it increased by at least 50% in Czechia, Estonia, Hungary, Latvia and Poland, and doubled in Bulgaria, Lithuania and Romania.

Rises in nominal rates barely sufficient to maintain purchasing power

Against the background of unprecedented high inflation, European governments have hiked statutory gross minimum wages in nominal terms substantially. The median increase was 11% between January 2022 and January 2023 compared with 5% the year before. However, in real terms, a majority of countries have managed to just broadly maintain the purchasing power of workers on the statutory rates, while deteriorations took place in Czechia and Hungary (and Estonia and Slovakia to a lesser extent) and significant gains were achieved in Belgium and Germany. As most Member States with statutory minimum wages do not increase the rates during the year, minimum wage earners will see a further deterioration of their purchasing power in 2023 if inflation continues to be high. In countries without statutory minimum wages, a more moderate increase in negotiated wages between January 2022 and January 2023 was detected for the 10 low-paid jobs that are regularly monitored in this report. This is due to the slower pace of (re)negotiating the collective agreements when inflation soared recently, whereas governments were generally quicker to intervene by hiking the nominal statutory rates in 2022 for 2023. However, in two of these countries (Denmark and Sweden), the major biannual bargaining rounds are just around the corner, so at least some re-establishment of purchasing power can be expected.

Mechanisms need to take rising prices into account

Growing rates of inflation across EU Member States in the last two years have challenged the established minimum wage-setting processes. The issue of how the countries consider inflation when deciding on updates to their statutory rates has therefore received increased attention. While the minimum wage directive does not mention inflation or price developments explicitly, it requires Member States with statutory minimum wages to include 'the purchasing power of statutory minimum wages, taking into account the cost of living' (Article 5(2)(a)) as one among four mandatory criteria to guide the updating; and it proposes that, among other instruments, 'a basket of goods and services at real prices established at national level can be instrumental to determining the cost of living' and could guide the setting of adequate levels.

Although inflation is referred to directly or indirectly (such as 'developments in cost of living') in the legislation governing minimum wage setting in more than half of countries with a statutory minimum wage, it is not mentioned in the remaining ones.

There are a few countries with automatic indexation mechanisms (Belgium, France, Luxembourg and Malta[26]),

26 In contrast to the other countries mentioned, Malta's indexation is based on a flat rate amount (the COLA), which can be updated, instead of a percentage increase of the entire (statutory) minimum wage, as in the other countries.

in which price changes above a certain threshold can trigger an automatic update of statutory rates during the course of the year.[27] Countries with such an automatic indexation are only required to update their minimum wages every four years, while countries without it must ensure that minimum wages are reviewed at least every second year once the directive has been implemented. Likewise, only two Member States have defined a basket of consumer goods to observe changes in the cost of living: Slovenia (whose mechanism captures only a fraction of the minimum wage change) and Romania (in which the directive has not been implemented).

Among the countries with an indirect reference to inflation are Germany and the Netherlands. Both have linked the updates to changes in collectively agreed wages, which may be increased in line with inflation, although this will happen with a lag, and it is also not guaranteed that negotiated (and actual) wages will maintain their purchasing power. As only a minority of countries currently use automatic indexation, cost-of-living basket developments or indirect rule-based mechanisms, and as not all national legislation refers to preserving the purchasing power of minimum wages, it can be expected that the requirement in the directive to consider purchasing power could trigger changes in some national legislation.

Sharp differences in take-home pay across countries

There are several ways for countries to formulate (minimum wage) workers' take-home pay, using a mix of net minimum wages, taxation and benefits. Often such policies are discussed alongside determining the new minimum wage. Countries differ in the design of their tax–benefit systems (how progressive their PIT systems are, how SIC are shared between employees and employers, and whether minimum wage earners are entitled to additional social benefits), so minimum wage earners receiving the same statutory gross wage might end up having quite different net wages.

Throughout 2022, most countries supported households with extra (mainly temporary) benefits, to cushion the effects of the increased cost of living. In the majority of countries, this was done for households in general, while some countries targeted low-paid households in particular. Regarding net take-home pay, using the EUROMOD model this report finds that in 2022 the average employee tax rate (PIT and social security contributions) on gross minimum wage ranged from 6% in Spain to 40% in Romania. Minimum wage earners in Belgium, Estonia, France, Ireland, Malta, the Netherlands and Spain kept 90% or more of their gross earnings. At the other extreme, only 60% of gross minimum wage was received by Romanians and 66% by Hungarians. It is notable that, in the context of rising inflation during 2022, the update of PIT (and/or social security contribution) thresholds became an acute issue in some Member States that do not regularly review them, including, for example, Austria, Germany and Romania.

Future shape of minimum wage setting

How countries set their minimum wages has been relatively stable over the past decade, with major changes of regime – such as the introduction of a statutory minimum wage with universal coverage in Cyprus as of 1 January 2023 – being rare exceptions. Nevertheless, changes to detailed aspects – such as the criteria guiding the determination of the new rate, or the processes of negotiating or consulting and the role of various stakeholders in these – are often under review. The minimum wage directive, while still being incorporated into national laws, may have already given an impetus for countries to fine-tune their systems for setting minimum wages, and it is likely to do so in future. Most notable is the pull towards 50% of average or 60% of median wages, mentioned in the directive's text, which are 'indicative reference values' to guide them towards an adequate level. Countries with statutory minimum wages are not obliged to adhere to those values – they may also refer to national values regarded as adequate – but the findings of this series of reports show that an increasing number of countries have explicitly or implicitly started to apply these guiding values. This suggests that countries prefer a more pragmatic and simpler approach to ensuring the adequacy of minimum wages. The Irish government has opted to call this a 'living wage' approach, following the example of the UK in 2016. Another methodological approach is to establish a basket of goods and services deemed adequate for workers to support themselves and their families, but this method has not gained momentum.

In countries without statutory minimum wages, minority voices among political players and the social partners argued for the introduction of a legal minimum wage in 2022. However, it is unlikely that this will change soon, if at all. In Italy, a motion was passed in parliament recommending not introducing a legal minimum wage. Only a few countries have made recent changes to promote collective bargaining (Romania), are intending to do so (Germany) or aim to promote the level of collectively agreed increases (Portugal). This is not necessarily causally linked to the minimum wage directive, but is in line with its spirit and intention, and further action can be expected.

27 Poland also has a similar rule, although the amount of the within-year update is not automatically defined.

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Annexes

Annex 1: Supplementary data

Table A1: Role of inflation in minimum wage setting: mentions in legislation and use in formulas (in the 22 EU Member States having a statutory minimum wage)

Country	Mentions of inflation in relevant legislation	Is inflation part of the formula used for uprates of the statutory minimum wages?
Belgium	Belgium has a system of automatic indexation for the minimum wage, so inflation is formally mentioned in its upgrades.	Apart from the interprofessional negotiations, changes to minimum wages are possible as a result of automatic indexations. These indexations use a pivot index – a predetermined threshold against which the change in inflation, measured by the 'smoothed health index', is compared. The smoothed health index is derived from the consumer price index (removing a number of products such as alcoholic beverages, tobacco products and motor fuels). It is calculated as an average value over the four previous months, and it is the basis for indexing pensions, social benefits and some wages and salaries. The indexation of the statutory rate is proportional to the percentage between two pivot indexes (the one that was reached previously and the one to be reached), which are always 2% apart. Therefore, once the pivot point is reached or exceeded by the health index, the pivot point is increased again by 2% (the next month), until it is exceeded again, resulting each time in an automatic indexation of +2%.
Bulgaria	The Ordinance of Wage Bargaining from 1991 states that, in determining the minimum wage, the following should be considered: the needs of workers and their families; **the cost of living and changes therein**; the general level of wages in the country; the social assistance system; the standard of living of other social groups; economic factors, including the requirements for the economic development of the country, the level of labour productivity and the maintenance of an appropriate level of employment.	No formula is used.
Croatia	The law regulating statutory minimum wage setting does not directly mention inflation, but the amendments to the Act on the Expert Commission for Monitoring and Analysis of the Minimum Wage (OG 136/21) stipulate that the commission should analyse the possible impact of the increase in the minimum wage on the economy, employment, labour productivity, **living standards and other areas of life and work (tacitly also inflation)**.	No formula is used.
Cyprus	The new decree (KDP 350/2022), which came into force at the beginning of January 2023, mentions that, two months before any future readjustment of the minimum wage level, the committee must submit a report to the Minister for Labour and Social Insurance. The committee must take into consideration certain criteria, including the '**purchasing power of minimum wage in view of cost-of-living variations**'.	No formula is used.
Czechia	No mention of inflation.	No formula is used. Nevertheless, the medium-term goal is to introduce an automatic mechanism for valorisation of the minimum wage. The gradual increase in the ratio of the minimum wage to the average gross wage is also one of the main objectives of the Ministry of Labour and Social Affairs.

Country	Mentions of inflation in relevant legislation	Is inflation part of the formula used for uprates of the statutory minimum wages?
Estonia	No mention of inflation.	No formula is used. However, it was agreed that the minimum wage for each year in the period 2018–2022 was set on the basis of a formula, using labour productivity and economic growth: the basis for the minimum wage increase was two times the predicted increase in labour productivity (GDP per employed person in constant prices), but the increase could not be higher than two times the predicted real economic growth.
France	As a result of the legal provisions (Labour Code, Articles L. 3231-5 and L. 3423-1), the legal minimum wage is adjusted annually on 1 January of each year by the government. France has a system of automatic indexation for the minimum wage, so inflation is formally mentioned in its upgrades.	The minimum wage is uprated in three ways. 1. In order to decide on the new statutory rates each year on 1 January, the Labour Code provides for a formula incorporating two mandatory parameters. ∘ the increase in the consumer price index (HICP), excluding tobacco, for the lowest-earning households (belonging to the first earnings quintile). It is calculated for the period between the last uprate of the statutory minimum wage for which it was used and the time when a new increase is being decided. The new increase typically uses inflation data up to November of each year, which is published in mid-December. ∘ half of the annual increase in the purchasing power of the basic hourly wage of workers and employees, between the last known quarter of the year at the date of revaluation and the same quarter of the previous year. These two parameters are added up in order to determine the statutory rate hike (no negative contribution is possible, so parameters are limited to zero in the event of a negative value). 2. An automatic revaluation during the year occurs if the HICP of the lowest-earning households (belonging to the first earnings quintile), calculated each month, rises by at least 2% compared with the index recorded at the time of the last change in the amount of the minimum wage. 3. The government has discretion to add a boost to the proposed increase in the minimum wage, although no additional increase to the mechanical revaluation has taken place since July 2012. The French minimum wage expert committee may recommend such a boost or not, and if so its possible level, in its annual report published in December.
Germany	The German Minimum Wage Act does not refer to inflation or changes in the cost of living or other equivalent measures to adapt the minimum wage to developments in real terms.	When setting the minimum wage, the German Minimum Wage Commission is guided by collectively agreed wage developments. Every incoming Minimum Wage Commission gives itself rules of procedure. In the last five-year term, it was decided to follow the development of collectively agreed wages over the previous two years as measured by the collective wage index (*Tariflohnindex*) of the Federal Statistical Office. The *Tarifindex* takes into account the average development of the collectively agreed wages (on an hourly basis without considering extra payments) across sectors. By law, the parties to collective bargaining have to report their negotiation results to the Federal Statistical Office. The commission could derogate from the close orientation on the *Tarifindex* based on a decision of a two-thirds majority. When adjusting the minimum wage, the commission is guided by the past development of collectively agreed wages but must make an overall assessment. There is no fixed formula for the adjustment. The decision is made every two years, with an adjustment being made in several steps for the next period.
Greece	In Greece, the law in force (Law 4172/2013, Article 103(3)) stipulates that the level of the statutory minimum wage should be determined by taking into account the situation of the Greek economy and its prospects for growth in terms of productivity, **prices**, and competitiveness, employment, unemployment rates, incomes and wages.	No formula is used.

Country	Mentions of inflation in relevant legislation	Is inflation part of the formula used for uprates of the statutory minimum wages?
Hungary	No mention of inflation.	No formula is used.
Ireland	Under the legislation establishing the LPC, the National Minimum Wage Act 2015, the LPC is obliged to take into account a number of issues in considering its recommendations. These include, but are not limited to, changes in earnings during the relevant period and the likely effect that any proposed order will have on the **cost of living** and national competitiveness.	No formula is used.
Latvia	Article 2 of the Regulation of Cabinet of Ministers No. 563, Procedures for the Determination and Review of the Minimum Monthly Salary, sets forth ten items that should be taken into account when establishing the level of the national statutory minimum wage, but none of these items refers explicitly to the level of inflation.	No formula is used.
Lithuania	No mention of inflation.	No formula is used. In practice, the minimum wage calculation is mainly based on the level of average wages, with a view to keeping the statutory rate/average wage ratio within the range of 45–50%.
Luxembourg	The amended law of 25 March 2015 laying down the salary system and the conditions and procedures for the promotion of civil servants (Law of 27 May 1975 generalising the sliding scale of wages and salaries) provides the legal basis for the automatic wage indexation system.	Statutory rates may be affected by two types of adjustment. 1. A social minima adjustment (affecting statutory rates and other social benefits) takes place every two years based on the change in the average level of remuneration. When the latter has increased relative to the minimum social wage, the level of the minimum social wage can be raised to partly or completely fill this gap. For this purpose, the government is obliged to submit a report every two years to the Chamber of Deputies. 2. Wages, salaries of civil servants and social benefits (including the minimum wage) are indexed to the trend of the cost of living. When the national consumer price index (which includes a representative sample of good and services) increases or decreases by 2.5% from the level of the last indexation, the statutory rate is normally adjusted by the same proportion. A six-month moving inflation average is calculated each month (representing the average of the overall price index of the last six available months) and then an automatic wage indexation is triggered one month after the six-month moving average has reached a difference of 2.5% from the level at the time of the last upgrade.
Malta	The minimum wage adjustment is currently based on a system called COLA (Cost of Living Adjustment) which was agreed on in December 1990, between employer organisations, unions and the government. This agreement is reflected in the Employment and Industrial Relations Act (Chapter 452), which provides for the increases in wages declared by the minister by notice in the Government Gazette to be of general application to all full-time employees. This system takes inflation into account.	The minimum wage adjustment for 1 January of each year is based on the COLA, calculated on the basis of a 12-month moving average inflation rate as at September. This percentage change (resulting from comparing price levels over the previous 12 months in September of each year with the corresponding months of the previous year) is applied to a base weekly wage. The official index of inflation is the retail price index as published by the National Statistics Office. The base wage represents a wage level agreed upon in 1990 and is augmented annually by means of the COLA. The resulting sum is then rounded to the nearest MTL 0.25 and subsequently converted into euro. All wage increases paid to employees must not be less than the COLA. All part-time employees are entitled to a pro rata increase. It is to be noted that the COLA is a fixed amount granted irrespective of wage levels. During the 2023 budget speech, the Minister for Finance and Employment announced that the COLA for 2023 would be equal to €9.90 per week.

Country	Mentions of inflation in relevant legislation	Is inflation part of the formula used for uprates of the statutory minimum wages?
Netherlands	The process for wage setting is standardised and legally enshrined in the Minimum Wage and Minimum Holiday Allowance Act. There is no mention of inflation.	Twice a year (1 January and 1 July) the minimum wage is adjusted based on the average expected growth of the wage levels as established in a bundle of collective labour agreements. This expected growth is calculated by the Central Planning Bureau. A fixed formula is then used to transform this expected growth into a change of level for the minimum wage, by adding these two components: 1. half of the change in 'contract wages', meaning the average of the percentage change in contract wages in the private sector, the public sector and the public/private sector 2. the difference between (a) the change in contract wages in the previous year as published in the Central Economic Plan in that year and (b) the change in contract wages in the previous year as published in the macroeconomic outlook in that year For each year when the decision is being taken, the change in contract wages in the current year has been estimated in the publication of the macroeconomic outlook from the previous year. The Netherlands has about 1,250 collective agreements. The statistical index of collectively agreed wages includes 225 collective agreements. These include in principle all larger collective agreements (2,500 employees and more) and a sample of smaller collective agreements. About 95% of all employees with collective agreements are directly represented in the outcomes. Results (based on surveys of those agreements) are published monthly and yearly, and are updated continuously based on new agreements.
Poland	The law regulating minimum wage setting (Minimum Wage Act) mentions inflation.	According to the Minimum Wage Act (Article 5.1), the minimum wage increase decided for the month of January each year cannot be lower than the increase in the price index forecast for that year. In addition, if the minimum wage is lower than half of the average wage in the first quarter, then the hike of the statutory rate should be further increased by two-thirds of the forecast growth in GDP in real terms. Moreover, the Minimum Wage Act includes a rule stating that, if the projected inflation rate is 5% or higher, then the minimum wage rate should be increased twice during the calendar year, from 1 January and from 1 July. This rule-based mechanism is binding on the Polish government, since the statutory rate hike each year must at least meet these conditions. Nevertheless, in practice, the government typically adopts minimum wage hikes well above the one resulting from these calculations.
Portugal	The Labour Code, in Article 273, paragraph 2, establishes that 'In determining the guaranteed minimum monthly remuneration [mandatory minimum wage], the following, among other factors, are considered: the needs of workers, the **increase in the cost of living** and the evolution of productivity, with a view to adapting them to the criteria of income and prices policy'.	No formula is used.
Romania	No mention of inflation.	No formula is used. An attempt was made in 2019 to introduce such a formula but it was de facto abandoned in 2020. It was defined as: minimum wage increase (%) = the inflation rate + labour productivity growth. The idea was to use the latest definitive data (inflation rate for the latest month available, year on year; productivity for the previous year). The formula was supposed to be applied once per year, in order to update the minimum wage. The government tacitly abandoned the idea.
Slovakia	No mention of inflation.	No formula is used.

Country	Mentions of inflation in relevant legislation	Is inflation part of the formula used for uprates of the statutory minimum wages?
Slovenia	The Minimum Wage Act states that the minimum wage is adjusted once a year at least in the amount equal to the rise in **consumer prices**.	The Minimum Wage Act states that the minimum wage is adjusted as follows. 1. Each 1 January, by the growth in consumer prices. To change the minimum wage, the official data of the Statistical Office of the Republic of Slovenia on the year-on-year growth of consumer prices in December of the previous year compared with December of the year before are used. 2. Every six years, by the new calculation of minimum living costs. The adjustment by the minimum living costs is determined by a formula; however, the formula is not stated mathematically. The act states that the level of the minimum wage must be 20–40% higher than the level of the minimum cost of living. The exact percentage adjustment is determined by the Minister for Labour, while taking into account other indicators, such as wage developments, economic conditions, or economic growth and changes in employment. The minimum costs of living are determined taking into account the cost of a basket of food items, and the total amount that the average household spends on food. The minimum costs of living are calculated every six years by an independent institute, the Institute for Economic Research.
Spain	The Labour Code (Article 27) establishes that ‘The Government will set, after consultation with the most representative trade union and employer organisations, on an annual basis, the statutory minimum wage, taking into account: a) **the consumer price index** b) the average national productivity achieved c) the increase in labour participation in national income d) the general economic situation Likewise, a semi-annual review will be established in the event that the forecasts of the aforementioned price index are not met.’	No formula is used.

Source: *Network of Eurofound Correspondents*

Table A2: Collectively agreed average monthly wages (national currency) in 10 low-paid jobs, January 2023

Jobs	Austria EUR	Denmark DKK	Finland EUR	Italy EUR	Sweden SEK	Norway NOK
Domestic cleaners	2,029	22,354	1,884	786	22,517	33,238
Cleaners and helpers in offices, hotels and other establishments	2,138	22,354	1,884	1,380	24,699	33,238
Shop sales assistants	2,153	20,940	1,974	1,760	24,032	26,574
Waiters and bartenders	1,976	25,034	1,892	1,706	No data	29,240
Cooks	1,976	22,564	1,892	1,706	24,339	30,040
Home-based personal care workers	2,353	23,200	2,249	1,071	19,947	26,667
Childcare workers	2,301	23,701	1,949	1,071	21,329	28,450
Agricultural, forestry and fishery labourers, standard employment	1,750	23,874	1,559	1,102	26,136	25,074
Agricultural, forestry and fishery labourers, seasonal employment	1,976	No data	1,624	1,102	No data	21,840
Couriers, and newspaper or parcel deliverers	1,934	20,387	1,904	1,794	No data	28,876

Notes: *Rates for countries with more than 12 wage payments per year were converted by dividing the annual sum of the minimum wage by 12 calendar months. Hourly rates were converted to monthly rates by applying the collectively agreed working hours.*
Source: *Network of Eurofound Correspondents, based on pay rates set in the largest collective agreements related to the 10 jobs*

Table A3: Sources for the nominal collectively agreed wage change

Country	Name of institution	Statistical source
Austria	Statistics Austria	Tariflohnindex TLI (Index of minimum collectively agreed wages)
Belgium	Statbel	Lonen en arbeidskosten (wages and labour costs)
Czechia	Trexima s.r.o.	Informační systém o pracovních podmínkách (IPP, formerly ISPP) (Information System on Working Conditions)
Finland	Statistics Finland	Sopimuspalkkaindeks (index of negotiated wages)
Germany	Institute of Economic and Social Research (WSI)	WSI Tarifarchiv
Italy	National Institute of Statistics (Istat)	Contractual wages and salaries
Malta	Economic Policy Department, Ministry for Finance and Financial Services	Economic Survey
Netherlands	CBS Statline	Cao-lonen, contractuele loonkosten en arbeidsduur; indexcijfers (collective labour agreement on wages, contractual wage costs and working hours); indices (2010 = 100)
Portugal	General Directorate for Employment and Labour Relations (DGERT)	Variação Média Ponderada Intertabelas (weighted average change between salary tables)
Slovakia	Trexima, s.r.o. Bratislava, and the Ministry of Labour, Social Affairs and Family	Informačný systém o pracovných podmienkach (ISPP) (Information System on Working Conditions)
Spain	Ministry of Employment and Social Security and Boletín de la Comisión Nacional de Convenios Colectivos, No. 87, November 2022	Estadística de Convenios Colectivos de Trabajo (Statistics on Labour Collective Agreements)
Sweden	National Mediation Office	Data on wage increases in central agreements

Source: *Eurofound's EurWORK database on wages, working time and collective disputes 4.0 [WaCh]*

Annex 2: Network of Eurofound Correspondents

Names of national correspondents who participated in the research

Country	National correspondent(s)	Organisation
Austria	Bernadette Allinger	Working Life Research Centre (FORBA)
Belgium	Dries Van Herreweghe and Sem Vandekerckhove	Research Institute for Work and Society (HIVA), KU Leuven
Bulgaria	Bagryan Malamin and Vassil Kirov	Institute of Philosophy and Sociology, Bulgarian Academy of Sciences
Croatia	Predrag Bejakovi	Faculty of Economics, Business and Tourism, University of Split
	Irena Klemenčić	Faculty of Law, University of Zagreb
Cyprus	Pavlos Kalosinatos	Cyprus Labour Institute of the Pancyprian Federation of Labour (INEK-PEO)
Czechia	Aleš Kroupa	Research Institute for Labour and Social Affairs
Denmark	Carsten Jørgensen	Employment Relations Research Centre (FAOS), Department of Sociology, University of Copenhagen
Estonia	Ingel Kadarik	Praxis Centre for Policy Studies
Finland	Vera Lindström	Oxford Research
France	Frédéric Turlan	IR Share
Germany	Thilo Janssen and Merlin Manz	Institute of Economic and Social Research (WSI), Hans Böckler Foundation
Greece	Penny Georgiadou	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	Michele Faioli, Silvio Bologna and Sofia Gualandi	Fondazione Giacomo Brodolini
Latvia	Raita Karnite	EPC Ltd
Lithuania	Rasa Mieziene and Inga Blaziene	Lithuanian Centre for Social Sciences
Luxembourg	Kristell Leduc and Nicaise Misangumukini	Luxembourg Institute of Socio-Economic Research (LISER)
Malta	Melchior Vella and Gilmour Camilleri	Centre for Labour Studies, University of Malta
Netherlands	Thomas de Winter	Panteia
Norway	Tord Flatland	Fafo
Poland	Aleksandra Majchrowska	Ecorys
Portugal	Maria da Paz Campos Lima	Centre for Studies for Social Intervention (CESIS)
Romania	Stefan Guga	Syndex
Slovakia	Ludovit Cziria	Institute for Labour and Family Research
Slovenia	Mitja Perko	Institute of Macroeconomic Analysis and Development
Spain	Oscar Molina	Centre for Sociological Studies on Everyday Life and Work, Autonomous University of Barcelona
Sweden	Nils Brandsma	Oxford Research

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EF/23/019

TJ-03-23-190-EN-N

The 2023 annual review of minimum wages was prepared in the context of unprecedented inflation across Europe. While this led to hefty increases in nominal wage rates in many countries, it was in many cases not enough to maintain workers' purchasing power. Based on developments over the last decade, this report shows that, overall, minimum wage earners in nearly all countries saw their purchasing power rising, the gap between their wages and average wages narrowing, and to some degree growth exceeding labour productivity development. Despite the short-term losses in real terms, these longer-term gains did not disappear in 2023.

Even in the context of rising inflation, the processes of wage setting did not change substantially. But the early impacts of the EU directive on adequate minimum wages are noticeable, with more countries electing to use the international 'indicative reference values' mentioned in the directive – 50% of the average or 60% of the median wage – when determining their targets for new levels. This year's report presents, for the first time, an in-depth insight into net minimum wages for single adults, through the EUROMOD tax–benefit microsimulation model, while presenting the latest research findings on minimum wages, published during 2022.

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.

Publications Office of the European Union

ISBN 978-92-897-2331-2
doi:10.2806/950879