Minimum wages in times of rising inflation

December 2022 http://www.oecd.org/employment

Inflation has reached levels not seen in the last four decades in most OECD countries, hitting disproportionally the most vulnerable, low-income households. This policy brief discusses the functioning of minimum wages across OECD countries, and their role in the current high inflation context. The role of working-age benefits is the focus of another policy brief (OECD, 2022[1]) while a third one focuses on the challenges for the pension systems (OECD, 2022[2]).

Key findings

- In most OECD countries, inflation has reached levels not seen in the last four decades, hitting disproportionally the poorest households. Despite the recent increases, minimum wages are struggling to keep up with inflation.
- Although high uncertainty and a significant slowdown in economic growth may suggest caution in raising minimum wages, several countries have margins to go beyond the current minimum wage levels and protect at least partially the most vulnerable workers from rising prices. While accounting for the different national institutional settings and uprating mechanisms, it is important that statutory minimum wages adjust regularly.
- Over and above the minimum wage, collective agreements (even tripartite ones at national level) can help companies and workers find tailored and *ad hoc* solutions to fairly share the cost of inflation and avoid a wage-price spiral, for instance by limiting wage increases in exchange for lump-sums and/or non-wage benefits.
- Effective co-ordination of minimum wage adjustments with the other tax and benefits provisions, including the extraordinary measures taken to cushion the effect of the crisis, is key to ensure that increases in the headline value of the minimum wage translate into higher take-home pay while limiting the rise in labour costs for employers and keeping the cost for public budgets in check. In some countries, the statutory minimum wage, formally or informally, is used as a reference for the adjustment of other policy tools, such as social minima, income tax brackets and benefit income eligibility thresholds with implications that can go well beyond minimum wage earners.

The salience of statutory minimum wages in times of rising inflation

Recent years have seen renewed interest at international level in statutory minimum wages. Germany introduced a statutory minimum wage in 2015, South Africa did so in 2019. In 2022, the European Union passed a new Directive to promote adequate statutory minimum wages and enhance effective access of workers to minimum wage protection. Moreover, even before the recent surge in inflation, significant increases in the minimum wage had been observed in several OECD countries (e.g. Hungary, Korea, Spain and the United Kingdom) as well as several US States and cities. The unfolding cost of living crisis which affects in particular workers at the bottom of the distribution, make the statutory minimum wage even more salient.

Statutory wage floors are the most direct policy lever governments have for influencing wage levels at the bottom of the distribution. Minimum wages have been justified as a measure for: i) ensuring fair pay and counterbalancing the negative effects of firms' labour market power; ii) making work pay; iii) boosting tax revenue and/or tax compliance by limiting the scope of wage under-reporting; and iv) providing an anchor for collective bargaining, particularly for vulnerable workers with low bargaining power.

This renewed attention also echoes an increasing consensus among policy makers and academics that, at the level set in most OECD countries, minimum wage increases (even large ones) have had a positive effects on low incomes but no or limited negative effects on employment – see Dube (2019[3]) for a comprehensive review of the recent evidence. Moreover, the increasing body of evidence across OECD countries on the significant monopsony power, i.e. firms' power to set wages unilaterally leading to inefficiently low levels of employment and wages, has reinforced the arguments for raising the minimum wage where it is too low, or introducing one where it does not exist, in particular when workers are not already covered by effective collective bargaining (OECD, 2022[4]).

With inflation reaching levels not seen in the last four decades in most OECD countries and hitting disproportionally the most vulnerable, low-income households, minimum wages may become an even more important tool to protect the standard of living of low-paid workers, while keeping inflation and public finance under control. Beyond increasing the minimum wage, other tools have to be mobilised to protect the income of vulnerable households, from negotiations with and between social partners to targeted and temporary energy bonuses to in-work benefits and other social transfers. Workers cannot absorb the costs of inflation alone. Nor can companies or governments.

This policy brief discusses the functioning of minimum wages across OECD countries, their role in preserving the purchasing power of the low paid as well as their interactions with the tax-benefit systems. The role of working-age benefits in the current juncture is the focus of another policy brief (OECD, 2022[1]) while a third one focuses on the challenges for the pension systems (OECD, 2022[2]).

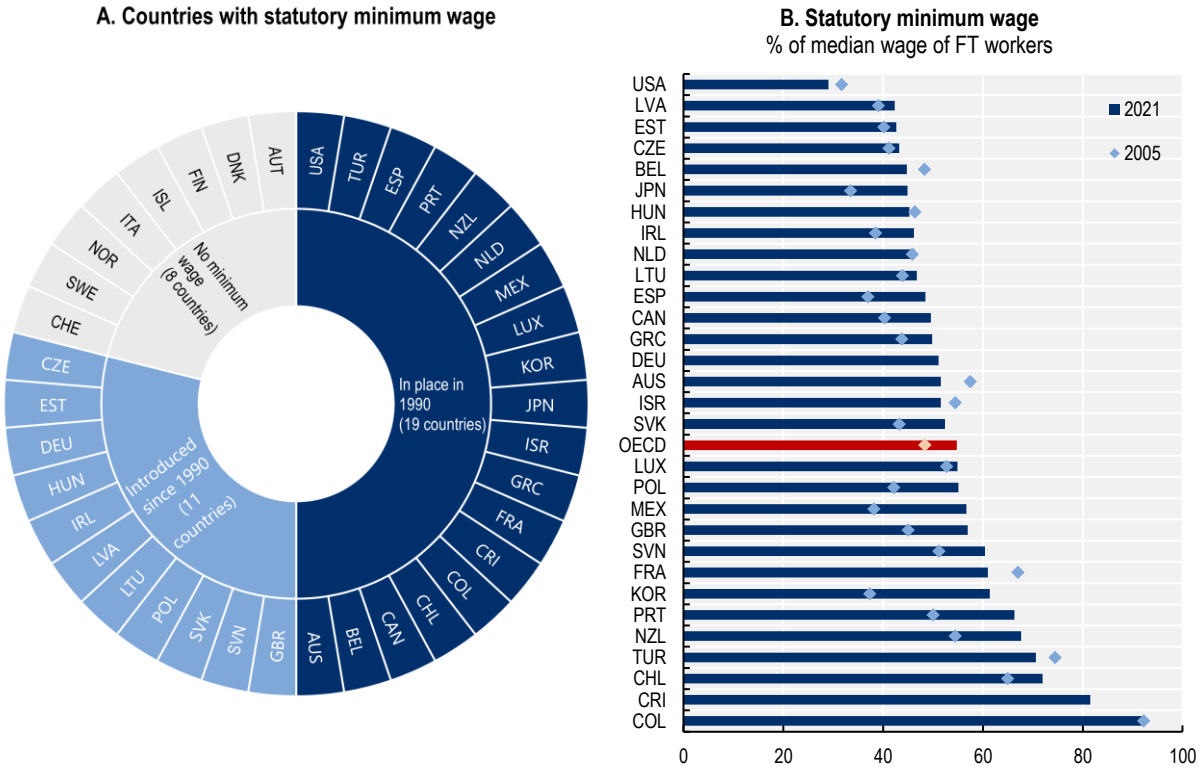
A widespread yet heterogenous institution

Currently, 30 out of 38 OECD countries have a statutory minimum wage in place (Figure 1, Panel A) and minimum wages also exist in most non-OECD emerging economies. In the 8 OECD countries without a statutory minimum (Austria, Denmark, Finland, Iceland, Italy, Norway, Sweden and Switzerland), sector- or occupation-levels collective agreements include *de-facto* wage floors for large parts of the workforce. Yet in Switzerland, five cantons (e.g. local areas such as Geneva and Basel) have also introduced a statutory canton-wide minimum wage.

Gross minimum-wage levels expressed as a share of median wages (so-called "Kaitz ratios") vary significantly across countries. In the OECD area, they ranged from below 30% of median full-time wages in the United States to 70% and over in Türkiye, Chile, Costa Rica and Colombia in 2021 (Figure 1, Panel B).

The average for the OECD area, at 55%, increased over the last 15 years from 48% in 2005, in a context of modest overall wage growth. Indeed, the 2005-21 period saw substantial upwards movements in about half of OECD countries, particularly in Central and Eastern European countries. Yet, the minimum-to-median ratio fell in Australia (-5.9%), Belgium (-3.6%), France (-6%), Hungary (-1%), Türkiye (-3.8%) and the United States (-2.6%), reflecting periods of freeze in the nominal value of the minimum wage[1] or upwards adjustments lower than the evolution of median wages. The only OECD country where the minimum wage fell in nominal terms was Greece[2] where the minimum wage was cut by 22% in nominal terms between 2011 and 2012[3] and frozen until February 2019 when it was increased by 11%.

Figure 1. Statutory minimum wages are increasingly common in OECD countries and significantly higher than in 1990



Note: OECD is the unweighted average of OECD countries shown. No data in 2005 for Costa Rica and Germany.
Source: OECD Employment database, https://www.oecd.org/employment/emp/onlineoecdemploymentdatabase.htm.

A large part of those disparities reflects country differences in average wage and productivity levels more broadly. But tax burdens play a significant role as well. Even at the very bottom of the wage ladder, taxes and social levies can strongly reduce take-home pay. At the same time, taxes and other mandatory non-wage labour costs also push up the cost of employing minimum wage workers.

On average across the OECD, the total burden from income taxes, social contributions and related mandatory payments amounts to one third of gross earnings at the median wage, with approximately equal shares paid by employer and employee.[4] To lower employers' costs and the risk of employment losses, some countries have introduced sizeable reductions in employer social security contributions for workers at around the minimum wage. The most notable case is the one of France: since 1995, social security contributions that employers pay for minimum-wage workers have been reduced repeatedly and are now among the lowest in the OECD. By contrast, social levies or payroll-tax burdens for minimum wage workers in Spain, Slovenia, the United States and, more strikingly, in Mexico are higher than for median-wage earners.

In addition to taxes and social security contributions, the benefit system also has a significant impact on the net incomes of minimum-wage workers (OECD, 2015[5]). In some OECD countries, minimum wage earners, particularly those living with other dependents, may have access to family benefits, housing and guaranteed minimum income benefits.[5] Similarly, several countries operate some form of in-work benefits, which support earnings of low-wage workers (for example the *Prime d'activité* in France, the Earnings Income Tax Credit in the US, or the Working Family Payment and the Back to Work Family Dividend in Ireland). While in-work benefits can provide important earnings complements for low-paid workers and are

well suited to take into account specific family situations, they are not a functional equivalent to minimum wages, even if both are linked to work. Workers may also perceive them differently: the wage as the remuneration (and the value) of one's work, the benefit as a public handout (with the possible stigma effect attached to public subsidies). Moreover, wages open up specific rights to pension, unemployment benefits and other forms of social protection while in-work benefits usually do not. In addition, depending on their design, not all minimum-wage workers may receive in-work benefits. For instance, if benefit eligibility is assessed at the household level and targeted to low-income families, some minimum wage workers, e.g. those living in dual-earner families, may not be eligible. Similarly, when access to the benefit requires filling out a formal claim, e.g. in Ireland and France, some workers may not request it.[6]

While the minimum-wage levels shown in Figure 1 are commonly referred to in the policy debate, they neither give an accurate picture of workers' take-home pay after taxes and related mandatory wage deductions, nor of the costs of employing minimum-wage workers (the "minimum labour cost") – see Figure 2. In terms of the labour costs, for instance, France is below the OECD average while the net household income at the minimum wage level is among the highest. Or, Lithuania, which is well below the OECD average in terms of the gross minimum wage has the second highest net household income at the minimum wage level.

Figure 2. Measuring the minimum wage in net household income or labour cost terms changes the standard rankings

Percentage of median net household income and median labour cost respectively, OECD and EU countries, 2022

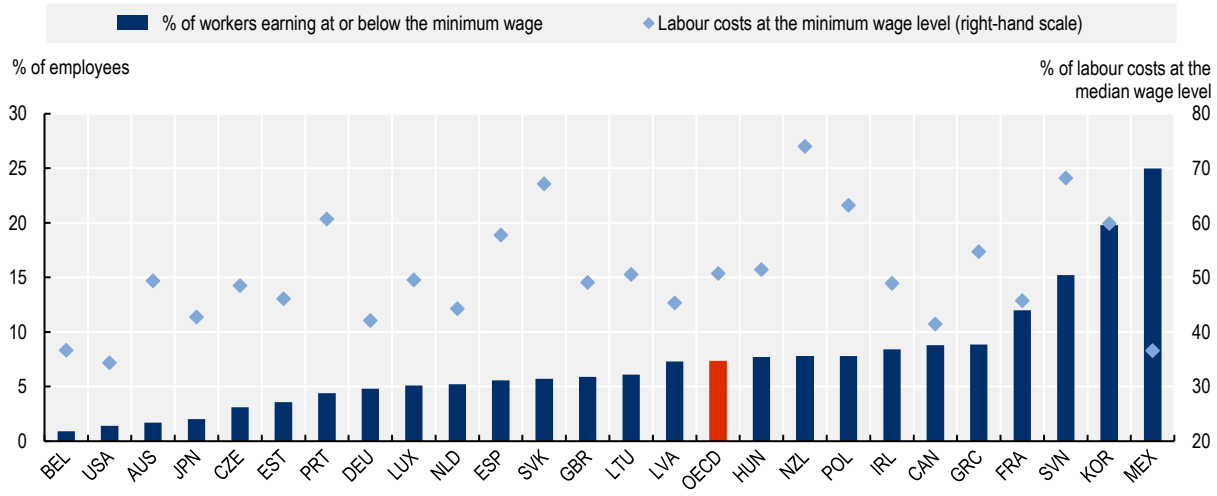
Note: Labour cost is calculated as the gross minimum wage + employer social security contributions and payroll taxes, including any other mandatory payments to private insurance for health, retirement pensions, etc. Results refer to a single person without children aged 40 and working full-time and full year. Social assistance and housing benefits are available if the relevant eligibility and income conditions are met. Housing benefits are calculated assuming private market rent plus other relevant charges amounting to 20% of the national average wage. Countries are ordered in ascending order of the labour cost at the minimum wage. OECD is the unweighted average of OECD countries shown. Statistics shown in this Chart refer to the year 2022 when available, data for 2021 is shown for Greece, Israel, Netherlands, Poland, Portugal, and the United States.
Source: OECD Database on Minimum Wages (https://stats.oecd.org/Index.aspx?DataSetCode=MIN2AVE) and OECD Tax-Benefit Model ("TaxBEN") version 2.5.0. For details on the model, see http://oe.cd/TaxBEN and http://oe.cd/TaxBENmanual.

The share of workers covered by a minimum wage varies also significantly across countries and does not only depend on its level (Figure 3).[7] For instance, in Belgium, less than 1% of workers are paid at the minimum wage because almost all workers are covered by higher wage floors set in sectoral collective agreements to wages. By contrast, in Canada, for a similar labour cost at the minimum wage level, 9% of

workers are earning at or close to the legal minimum due to weak collective bargaining. There is very limited evidence on compliance to minimum wages in OECD countries but the data available show that it is far from perfect (Clemens and Strain, 2022[6]; Garnero and Lucifora, 2022[7]).

Figure 3. Even when the minimum wage is generous, few people may actually receive it

Number of minimum-wage earners and labour costs at the minimum wage level, latest year available



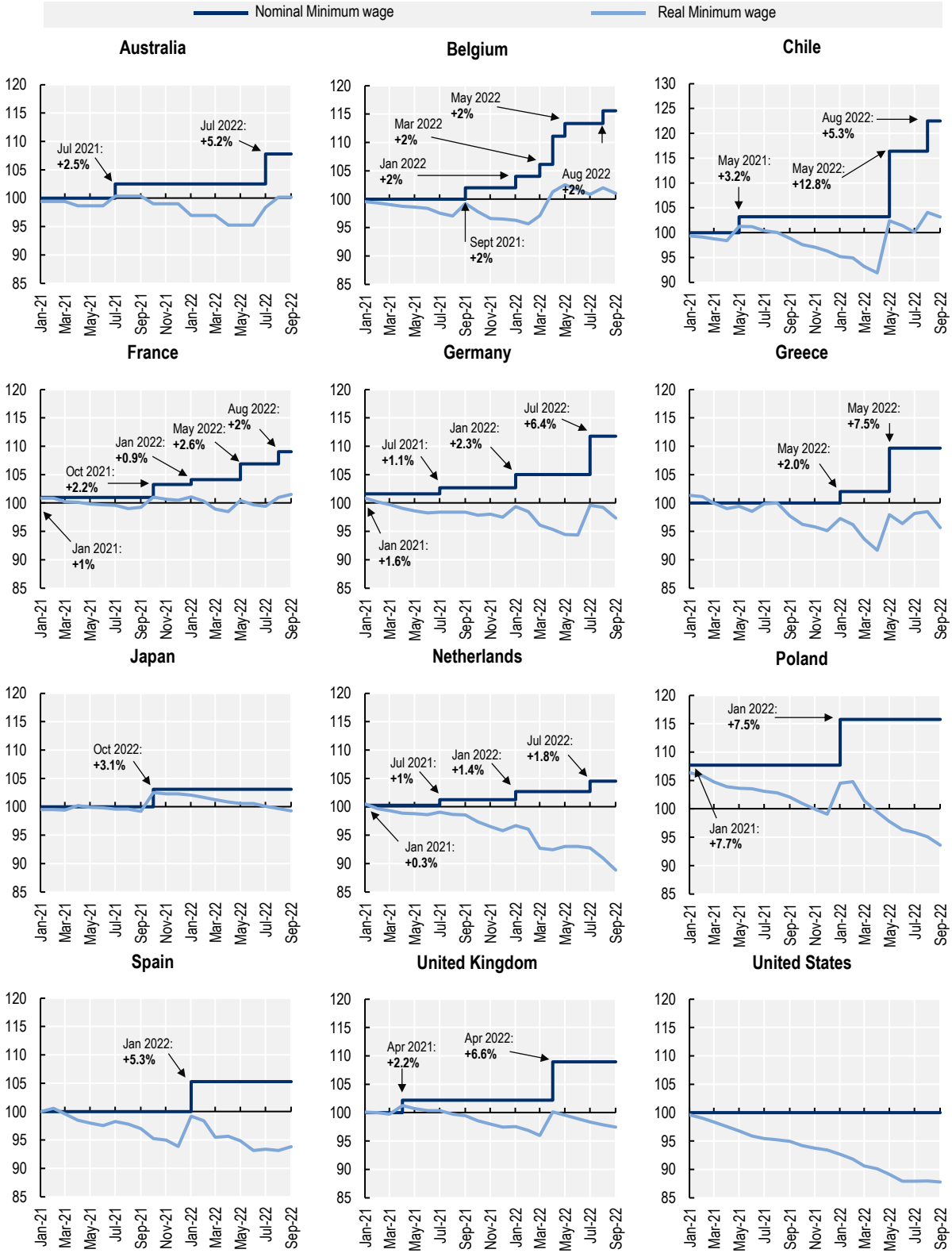
Note: The number of minimum-wage earners cannot usually be established with certainty and can vary between data sources and studies. Counts of minimum-wage earners are commonly based on survey data, which are affected by measurement error, both in earnings and in working hours. It is therefore common to include those with wages below the minimum and slightly above it. Data sources and approaches differ however. Statistics on employees paid at or below minimum wage refer to 2018 for Australia, Belgium, the Czech Republic, Estonia, Greece, Hungary, Latvia, Lithuania, Luxembourg, Portugal, the Slovak Republic, and Slovenia; to 2019 for Canada and Germany; to 2020 for Japan, the Netherlands, Poland, and Spain; and to 2021 for France, Ireland, Korea, Mexico, New Zealand, the United Kingdom and the United States. Statistics on labour costs at the minimum wage level refer to the year 2022 when available, data for 2021 is shown for Greece, the Netherlands, Poland, Portugal, and the United States. OECD is the unweighted average of the 25 OECD countries shown.
Source: Eurostat, Minimum Wage Statistics, https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Minimum_wage_statistics (based on the European Structure of Earnings Survey 2018) and the following national sources and studies: Australia: ABS Employee Earnings and Hours (EEH), May 2018; Canada: Who earns the minimum wage in Canada?, Fraser Institute, 2021; France: La revalorisation du Smic au 1er janvier 2021, DARES, 2022; Germany: Destatis, Minimum wage indicators; Ireland: Low Pay Commission, Recommendations for the National Minimum Wage 2022; Japan: Ministry of Health, Labour and Welfare; Korea: Minimum Wage Commission; Netherlands: CBS, Employment and minimum wage; characteristics employee, collective labor agreement sector; Mexico: Employed population by income level based on the ENOE; New Zealand Minimum Wage Review, 2022; Poland: GÜS, Earnings structure by occupation in October; Spain: INE (2020), Percentage of workers based on their earnings with respect to the Interprofessional Minimum Wage (SMI); United Kingdom: National Minimum Wage Low Pay Commission Report 2021; United States: U.S. Bureau of Labor Statistics (2021), "Characteristics of Minimum Wage Workers, 2021". OECD Database on Minimum Wages (https://stats.oecd.org/Index.aspx?DataSetCode=MIN2AVE) and OECD Tax-Benefit Model ("TaxBEN") version 2.5.0. For details on the model, see http://oe.cd/TaxBEN and http://oe.cd/TaxBENmanual

Minimum wages are struggling to keep up with a soaring inflation

Almost all OECD countries have raised minimum wages between January 2021 and September 2022, but increases often fell short of inflation, leading to falling real minimum wages[8] – see the trends for a selected group of OECD countries in Figure 4 (the figures for all OECD countries with a statutory minimum wage are available at https://www.oecd.org/employment/Recent-minimum-wage-revisions-and-real-minimum-wage-growth.xlsx).

Figure 4. Real minimum wages are falling despite the recent increases

Base 100 in December 2020, January 2021 to September 2022



Note: Real minimum wages are deflated with the Consumer Price Index (all items, national series). In Belgium and France minimum wages are indexed on different price indices and, consequently, the evolution of real minimum wages shown in this Chart does not reflect exactly the effect of the indexation. Belgium: Minimum wage for employees aged 18 and above. From April 2022, the minimum wage no longer includes age and seniority conditions and has been adjusted accordingly by an increase of 4.7%. Greece: Minimum daily wage for blue-collar workers. Spain: Minimum wage includes bonuses (13th and 14th months). United States: Minimum wage at the federal level (see note 1). Germany: the minimum wage has been further increased by 15% in nominal terms in October 2022 to 12 Euros.
Source: OECD Employment database, https://www.oecd.org/employment/emp/onlineoecdemploymentdatabase.htm, and OECD Consumer price indices (CPIs) Database.

Some of the differences across OECD countries in the timing, frequency and size of the nominal increase are linked to different uprating procedures. In some countries, like the United States, the increase in the federal minimum wage is legislated by the Congress with no specific timing. In others, it is set annually by the government following a formal (and, in some cases, binding) consultation process with the social partners and/or independent commissions (e.g. France, Germany, Ireland, Spain, the United Kingdom, etc.). In other countries it is the outcome of a bargaining process between social partners, with or without the involvement of government (e.g. Belgium and Mexico). Finally, in Australia, the minimum wage is set by an independent body.

In most countries, price developments are taken into consideration when governments, social partners or independent commissions decide on the increase in the minimum wage (OECD, 2015[8]; Eurofound, 2022[9]). In some, such as Belgium, France, Luxembourg, and Poland, the minimum wage is formally and automatically indexed to prices (Table 1). Belgium, France and Luxembourg link the minimum wage to the evolution of (past) prices (in Belgium and Luxembourg the indexation mechanism is the same as the one for general wages while in France the formula also takes into account increases in real wages) and multiple increases can take place in years of high inflation. Poland links it to future price developments and corrects it *ex post* in case of difference between the forecasts and the realised rate. In the Netherlands, there is also a form of indexation but, in this case, the minimum wage is not indexed to prices but to negotiated wages.

Table 1. Automatic minimum wage indexation in selected OECD countries, 2022

	Indexation mechanism including prices
Belgium	*All* wages are indexed to past CPI excluding alcohol and tobacco and petrol but including heating fuel, gas and electricity (every time CPI increases by 2% or more since last increase)
France	The minimum wage only is indexed to past CPI for the bottom quintile (every time CPI increases by 2% or more since last increase) + half real salary increase of blue collar workers (annually and only if positive).
Luxembourg	*All* wages are indexed to past CPI (every time CPI increases by 2.5% or more since the last semester)
Poland	The minimum wage is indexed to future inflation + 2/3 of future GDP growth if, in the first quarter of the year, the amount of the minimum wage is lower than half of the average wage. If the inflation forecasts differ from the real price index, a correction takes place in the following year.
	Other forms of indexation
Netherlands	The minimum wage is indexed to the predicted wage developments for the next six months using a basket of collectively agreed wages.

Note: In Belgium, wage increases are capped by a "wage norm" (a ceiling based on which takes into account weighted wage developments in France, Germany and the Netherlands).

There is a concern that an automatic minimum wage indexation to prices may ignite a wage-price spiral in the current context of high inflation and uncertainty. In effect, an increase in the minimum wage goes beyond the direct beneficiaries and may spill over on those workers above-minimum wages as the latter is used, formally or informally, as a benchmark in the negotiation of collective and individual wages as well as a reference for certain social minima (see next section). In countries where *all* wages (as well as social benefits and pensions) are indexed to prices, such as Belgium and Luxembourg, the risk of a wage-price

spiral, therefore, may be higher than elsewhere. Moreover, most empirical studies agree that part of minimum wage increases is passed through to consumers – see e.g. Harasztosi and Lindner (2019[10]).

However, on average, the contribution of minimum wages to aggregate wage growth appears quite limited (ECB, 2022[11]) and given the relatively low share of minimum wage workers, even sizeable increases in the minimum wage have a limited impact on inflation. For instance, Lindner (2022[12]) calculates that in the United Kingdom, where about 5% of workers are paid at the minimum wage, even an increase in the minimum wage of 20% would only lead to an increase in inflation of 0.2% (which compared to current inflation rates is very small). In countries where the share of minimum wage workers is higher and the rules are different the effect could be larger. For instance, evidence from France (where about 14% of workers benefitted from the increase of the minimum wage in January 2022) shows that an increase in the national minimum wage generally leads to a renegotiation of collective agreements and an amplification of the effect of inflation on aggregate wages (Fougère, Gautier and Roux, 2018[13]).

Beyond the (likely limited) risk of a wage-price spiral driven by increases in the minimum wage, there are other considerations to be made in assessing the merits and pitfalls of automatic minimum wage indexation. On the one hand, automatic indexation mechanisms safeguard the purchasing power of minimum wage earners, they may help to reduce in-work inequality (or at least limit its increase, in cases where high-wage workers are able to negotiate wage increases that keep pace with inflation while low-wage workers are not) and it may increase visibility and transparency for firms (i.e. firms can more easily anticipate future increases,[9] as opposed to discretionary increases). On the other hand, automatic indexation mechanisms may reduce the margins of judgement that governments, social partners or commissions have in deciding future increases (e.g. in a period of stagflation, decision-makers may have to weigh the risk of loss of purchasing power against the risk of job losses), limit the role of social partners in setting wages, and could lead to an excessive compression of the wage distribution if the rest of the wage structure does not move, with consequences on individual careers, as well as on the design of redistribution policies.

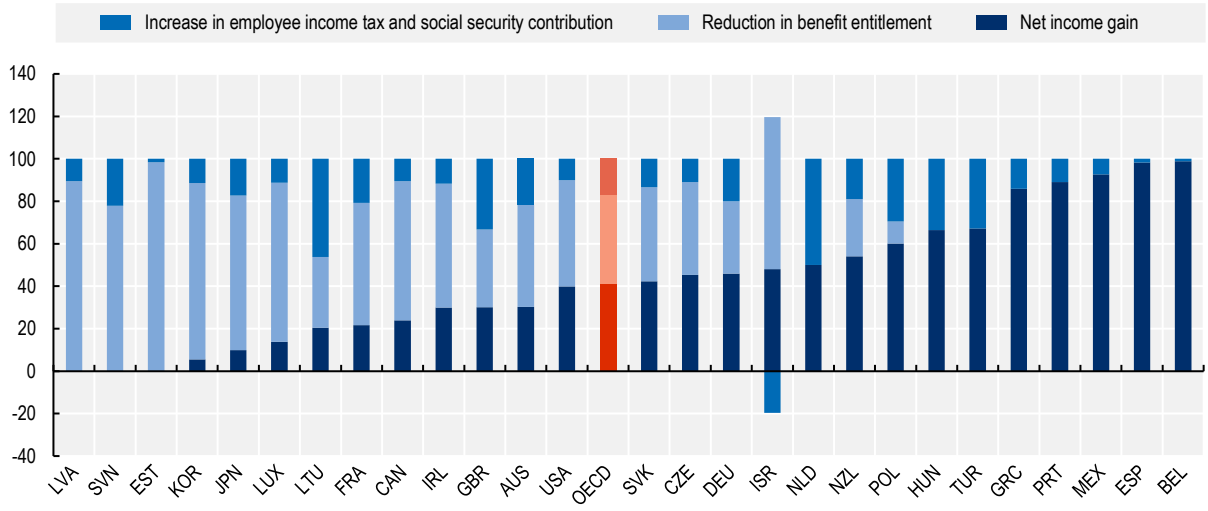
In any case, in the current context, it is important to ensure regular adjustments of statutory minimum wages in order to maintain their usefulness as a policy instrument and protect, at least partially, the most vulnerable workers from rising prices.

The minimum wage needs to be closely co-ordinated with the tax and benefit system

Effective co-ordination between minimum wage policy and tax and benefit provisions is key to limit potential adverse effects on employment, but also to ensure that minimum wage increases actually add to net incomes of the intended beneficiaries. In some countries, without any accompanying measures such as raising means-tested benefits in line with the minimum wage, a tiny share of a minimum wage increase would end up in the pockets of minimum wage earners as a result of higher income taxes and social security contributions as well as lower benefits (Figure 5). In Slovenia, for instance, withdrawal of the social assistance benefit absorbs almost all the gain from the minimum wage increase. In France, reductions in housing and in-work benefits as well as increases in income taxes and social security contributions absorb about 80% of the gross wage increase.

Figure 5. Without effective co-ordination between minimum wage policy and tax and benefit provisions, net income gains at the minimum wage level can be limited

Net income gains at the minimum wage level for a one-earner couple with two children (% of additional income added to the net income considering to higher taxes or lower benefits)



Note: The figure shows the share of the 5% minimum-wage increase that adds to the net household income, after accounting for any increases in taxes and reductions of benefits. Calculations refer to a one-earner couple with two children aged four and six, respectively. The non-working partner is assumed not to be eligible for unemployment benefits. Other benefits, including social assistance, housing and family benefits are available if the relevant eligibility and income (OECD, 2015[5]) conditions are met. Housing benefits are calculated assuming private market rent plus other relevant charges amounting to 20% of the national average wage. Results refer to 2022 rules for most countries (2021 for Greece, Israel, Mexico, Netherlands, Poland, Portugal, and the United States).
Source: OECD calculations using the OECD tax-benefit model, version 2.5.0. Results for Mexico are based on the OECD Taxing Wages models.

Co-ordinating the minimum wage with the tax and benefit system may however require some trade-offs. Tax concessions or benefits that are tightly targeted to low-wage earners (and are therefore phased quickly out when wages increase above the minimum), make it less attractive for workers to progress to higher-paid jobs. They also create incentives for wage underreporting. By contrast, weakly targeted benefits, that are available over a wider wage range or in-work benefits that top up earnings compensating for the loss of other forms of income support, avoid these adverse incentives. However, because they are available to large numbers of workers, they can be more expensive for governments – and these costs may rise further when the minimum wage is increased. The difficulties of targeting are most pronounced when very large shares of workers are within or close to the targeted wage range.

In some countries, the statutory minimum wage is used as a reference for other policy tools such as social minima, income tax brackets and benefit income eligibility thresholds with implications that can go well beyond minimum wage earners. For instance, in Türkiye, minimum and maximum unemployment benefit amounts, as well as employee and employer social security contribution floors are all a fraction of the statutory minimum wage. Similarly, in France, in-work benefit amounts and income thresholds are adjusted in line with the minimum wage. In the Czech Republic, the minimum wage defines the maximum amount of the tax reliefs for families using formal childcare, whereas in Australia the minimum wage value is used as a reference for the parental leave benefit. When the minimum wage, directly or indirectly, affects other policy parameters, it is particularly important to take into account the impact of minimum-wage adjustments on the population as a whole. In addition, without effective co-ordination, frequent minimum wage adjustments can alter the way different policy level interact with one another in practice. This should be careful considered in the current juncture, when the high inflation put several policy parameters in motion at the same time and prompts countries to implement quickly extraordinary income support measures to cushion the effect of the crisis.

Concluding remarks

Minimum wages can have a strong impact on wages at the bottom of the distribution and help preserving the purchase power of low-paid workers. Especially in times of high inflation, minimum wages need thus to be regularly revised to ensure that they maintain their usefulness as a policy instrument, as indicated in the OECD Employment Outlook 2022.

Although high uncertainty and slowing economic growth may suggest caution in raising minimum wages, margins exist in several OECD countries to adapt, at least partially, the existing level of the statutory minimum wage so as to protect those workers who are most exposed to the increase in prices, especially given the substantial monopsony power that low wage labour markets have in most OECD countries. However, it is important to consider carefully both the economic and social effects of minimum wages adjustments and consult social partners and other stakeholders as trade-offs may be amplified by uncertainty, tight labour markets and inflation. In such a context, promoting minimum wage adjustments that are transparent and predictable for both business and workers is crucial.

Statutory minimum wages only determine the wage floor. Above that floor, collective bargaining can play an important role in ensuring a fair share of the cost of inflation for a large share of the employees, in particular at the bottom and the middle of the wage distribution. Moreover, collective agreements (also tripartite ones at national level such as the one signed recently in Portugal) can help companies and workers find tailored and *ad hoc* solutions to avoid a wage-price spiral, for instance by limiting (permanent) wage increases in exchange for lump-sums and/or non-wage benefits.

However, minimum wages, either statutory ones or negotiated ones, should be seen as part of a broader policy package. To be more effective, it is essential that minimum wage policies be co-ordinated with tax and benefit policies in order to ensure that increases in the statutory value of the minimum wage translate into higher take-home pay while limiting the rise in labour costs for employers. This is even more important in the current juncture, when governments have put in place a large range of subsidies and transfers.

Finally, statutory minimum wages apply only to employees. The emergence of new forms of work, in some cases poorly paid, is forcing policy makers to reflect on how to extend protections against low pay to workers who are formally self-employed but find themselves in an unbalanced power relationship.

References

Azmat, G. (2019), “Incidence, salience, and spillovers: The direct and indirect effects of tax credits on wages”, *Quantitative Economics*, Vol. 10/1, pp. 239-273, https://doi.org/10.3982/qe319. [14]

Bennmarker, H., L. Calmfors and A. Seim (2014), “Earned income tax credits, unemployment benefits and wages: empirical evidence from Sweden”, *IZA Journal of Labor Policy*, Vol. 3/1, https://doi.org/10.1186/s40173-014-0026-1. [16]

Brewer, M. and H. Hoynes (2019), “In-Work Credits in the UK and the US”, *Fiscal Studies*, Vol. 40/4, pp. 519-560, https://doi.org/10.1111/1475-5890.12207. [15]

Brummund, P. and M. Strain (2018), “Does Employment Respond Differently to Minimum Wage Increases in the Presence of Inflation Indexing?”, *Journal of Human Resources*, Vol. 55/3, pp. 999-1024, https://doi.org/10.3368/jhr.55.2.1216.8404r2. [17]

Clemens, J. and M. Strain (2022), “Understanding “Wage Theft”: Evasion and Avoidance Responses to Minimum Wage Increases”, *Labour Economics*, p. 102285, https://doi.org/10.1016/j.labeco.2022.102285. [6]

Dube, A. (2019), *Impacts of minimum wages: review of the international evidence*, HM Treasury, London. [3]

ECB (2022), "Minimum wages and their role for euro area wage growth", in *ECB Economic Bulletin*. [11]

Eurofound (2022), *Minimum wages in 2022: Annual review*, Publications Office of the European Union, Luxembourg. [9]

Fougère, D., E. Gautier and S. Roux (2018), "Wage floor rigidity in industry-level agreements: Evidence from France", *Labour Economics*, Vol. 55, pp. 72-97, https://doi.org/10.1016/j.labeco.2018.09.001. [13]

Garnero, A. and C. Lucifora (2022), "Turning a 'Blind Eye'? Compliance with Minimum Wage Standards and Employment", *Economica*, Vol. 89/356, pp. 884-907, https://doi.org/10.1111/ecca.12421. [7]

Harasztosi, P. and A. Lindner (2019), "Who Pays for the Minimum Wage?", *American Economic Review*, Vol. 109/8, pp. 2693-2727, https://doi.org/10.1257/aer.20171445. [10]

Lindner, A. (2022), *It's time to increase the National Living Wage to help with the cost of living*, UCL Policy Lab. [12]

OECD (2022), "How inflation challenges pensions"*, Coping with the cost of living crisis*, OECD, Paris, https://www.oecd.org/pensions/How-inflation-challenges-pensions.pdf. [2]

OECD (2022), "Income support for working-age individuals and their families"*, Coping with the cost of living crisis*, OECD, Paris, https://www.oecd.org/social/Income-support-for-working-age-individuals-and-their-families.pdf. [1]

OECD (2022), *OECD Employment Outlook 2022: Building Back More Inclusive Labour Markets*, OECD Publishing, Paris, https://doi.org/10.1787/1bb305a6-en. [4]

OECD (2015), "Minimum wages after the crisis: Making them pay", OECD, Paris, https://www.oecd.org/social/Focus-on-Minimum-Wages-after-the-crisis-2015.pdf. [5]

OECD (2015), *OECD Employment Outlook 2015*, OECD Publishing, Paris, https://doi.org/10.1787/empl_outlook-2015-en. [8]

Notes

[1] Most notably in the United States where the Federal minimum wage has not been increased since 2009. However, partly in response to this erosion of the federal minimum, there were increases of minimum wages at state, county or city level (through automatic indexation − in 15 states − or discretionary interventions).

[2] In Ireland, the minimum wage was reduced to EUR 7.65 effective February 2011 but this was reversed in July 2011 when the minimum wage was restored to EUR 8.65.

[3] The minimum wage for employees aged above 25 was cut by 22% between July 2011 and March 2012, while the minimum wage for those aged below 25 was lowered by 32%.

[4] However, in some countries, the total "tax wedge" can be 45% or more (Czech Republic, Germany, Poland, Estonia, Slovak Republic, Latvia and Hungary). In these cases, tax policy may be as important a driver of net wages and labour costs as "headline" minimum wage levels.

[5] Minimum income and housing benefits are an important part of the net household income of one-earner couples with children in Slovenia, Lithuania and Luxemburg.

[6] More generally, minimum wage policies and in-work benefits are useful complements. For instance, by imposing a wage floor, statutory minima limit the risk that employers lower wages in an effort to "pocket" parts of the in-work benefits and tax credits, thereby reducing their impact on the take-home pay of workers (Azmat, 2019[14]; Bennmarker, Calmfors and Seim, 2014[16]). However, there is currently little empirical evidence and consensus about the overall general equilibrium effects on wages of in-work benefits and refundable tax credits (Brewer and Hoynes, 2019[15]).

[7] For several EU countries, the latest year available is 2018 and hence it does not necessarily reflect coverage after the sizeable increases in the minimum wage that took place in the following years in the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovak Republic and Spain.

[8] In several countries, the fall in real minimum wages is larger than the one shown in Figure 4 because low-income groups (among which minimum wage earners are more likely to be found) face a higher inflation rate than the one measured by the Consumer Price Index used to deflate nominal minimum wages in Figure 4.

[9] Clemens and Strain (2022[6]) find lower non-compliance in US states where the minimum wage is indexed. However, Brummund and Strain (2018[17]) suggest that companies may need time to adjust to automatic indexation when it is introduced. Studying the employment effect of such an introduction in some US states (e.g. Alaska, Arizona, Colorado, etc.), they find that, in the first four years, the negative effects on employment tend to be greater than in US states that do not index, but then the difference fades. Yet it is important to note that the study by Brummund and Strain is among those finding stronger negative effects in the US while the majority tends to have a more positive view, see Figure 4.B in Dube (2019[3]).

Contact

Stéphane CARCILLO (✉ stephane.carcillo@oecd.org)

Sandrine CAZES (✉ sandrine.cazes@oecd.org)

Andrea GARNERO (✉ andrea.garnero@oecd.org)

Daniele PACIFICO (✉ daniele.pacifico@oecd.org)