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Review

Evolution of the Minimum and Average Wage in the Countries of the European Union

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Abstract

This paper synthesises the available evidence on the evolution of statutory minimum and average wages across European Union Member States over the period 2019–2024. It examines patterns of wage convergence and wage adequacy, the implementation of Directive (EU) 2022/2041 on adequate minimum wages, and their implications for broader labour market developments. The core period of analysis is 2019–2024. Earlier years are used only as historical or institutional background, while selected 2025 references are used for contextual policy updates and not as part of the main comparative period. The analysis draws upon peer-reviewed academic literature alongside official institutional and statistical data from Eurofound, Eurostat, the European Commission, the OECD, the ECB, and national authorities. The central research question asks whether recent increases in statutory minimum wages and average wages have contributed to upward wage convergence and wage adequacy across EU Member States, and under which institutional and macroeconomic conditions these developments have affected inequality, employment, inflationary pressures, and competitiveness. Its theoretical framework is grounded in the concepts of wage spillover and wage compression effects, the wage–price spiral debate, and institutional approaches to collective bargaining and wage setting. Evidence indicates substantial nominal increases in statutory minimum wages in most EU countries, especially in Central and Eastern Europe, where upward wage convergence has reduced the gap with Western European countries. Despite concerns about inflationary pressures, the evidence does not support the existence of a generalised wage–price spiral. Instead, wage increases largely represent compensatory responses to externally driven inflation, producing moderate spillover effects on neighbouring wage levels and contributing to a partial compression of wage inequality at the lower end of the wage distribution. The study also identifies continuing challenges, including youth unemployment, precarious forms of employment, regional wage disparities and uneven collective bargaining coverage. It concludes that sustainable and adequate wage floors are best supported by transparent adjustment criteria, productivity growth, effective labour inspection, investment in skills and training, and inclusive collective bargaining institutions.

Keywords: minimum wage; average wage; wage convergence; collective bargaining; labour market; wage–price spiral; wage adequacy; European Union

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1. Introduction

The debate on wage adequacy returned to the centre of the European Union agenda after the Porto Social Summit of May 2021, where EU institutions, social partners, and civil

society organisations reaffirmed the European Pillar of Social Rights and the objective of promoting fair working conditions and adequate wages. This political momentum marked a renewed emphasis on Social Europe after a decade in which wage moderation, fiscal consolidation, and decentralised bargaining had often dominated EU economic governance.

Minimum wages and collective bargaining are increasingly seen as important institutions supporting inclusive and sustainable economic development, rather than as barriers to labour market flexibility. This policy shift is reflected in the European Commission proposal of October 2020 for a Directive on adequate minimum wages and in the adoption of Directive (EU) 2022/2041 in October 2022 (European Commission, 2020, 2022). The Directive does not impose a uniform European minimum wage; instead, it establishes a common procedural framework for adequacy, transparency, and stronger collective bargaining. This perspective, however, is not without debate. Collective wage-setting systems often involve trade-offs between equity, labour market flexibility, and competitiveness. The German industrial relations model, for example, combines sectoral collective bargaining with firm-level codetermination and incorporates flexibility mechanisms that help firms adjust to changing economic conditions. At the same time, these mechanisms may weaken collective bargaining coverage and contribute to greater wage inequality (Jäger et al., 2022). Against this background, the European Commission proposed a Directive on adequate minimum wages in October 2020, which was subsequently adopted as Directive (EU) 2022/2041. The Directive aims to promote adequate minimum wages while respecting the diversity of national wage-setting systems.

The new policy environment is particularly significant because wage developments in the EU have been shaped by several overlapping shocks, including the COVID-19 crisis, the energy price shock following Russia's invasion of Ukraine, high inflation, labour shortages, and demographic change. Together, these developments intensified national debates on wage floors, real wages, purchasing power, and the ability of wage-setting institutions to protect low-paid workers while preserving competitiveness.

The central research question guiding this study is the following: To what extent did changes in statutory minimum wages and average wages across EU Member States during 2019 to 2024 contribute to upward wage convergence and wage adequacy, and under which institutional and macroeconomic conditions did these developments influence inequality, employment, inflationary pressures, and competitiveness?

This research question is particularly relevant in the current European policy context for three reasons. First, wage developments between 2019 and 2024 unfolded amid a series of overlapping shocks, including the COVID-19 pandemic, the subsequent inflationary surge, energy–price volatility and tightening labour markets. These developments intensified the debate over whether wage increases should be viewed primarily as a necessary response to rising living costs or as a potential driver of second-round inflationary effects. Second, the adoption of Directive (EU) 2022/2041 on adequate minimum wages established a new legal and institutional framework for assessing wage adequacy, strengthening collective bargaining and promoting upward social convergence across the European Union. Although the Directive does not introduce a uniform European minimum wage, it encourages Member States to assess adequacy using transparent criteria and widely recognised reference values, including 60% of the gross median wage and 50% of the gross average wage. It also requires Member States with collective bargaining coverage below 80% to develop action plans aimed at strengthening collective bargaining (European Commission, 2022; Eurofound, 2023). Third, the relationship between statutory minimum wages and average wages has become a key indicator for assessing whether wage growth can improve living standards and reduce wage inequality without undermining employment or productivity-based competitiveness.

On this basis, the paper pursues three specific objectives. The first objective is to examine the evolution of statutory minimum wages and average wages across EU Member States during the period 2019–2024, with particular attention to differences between Western, Southern and Central–Eastern European labour markets. The second objective is to assess whether recent wage developments indicate upward convergence between lower-wage and higher-wage Member States, focusing on changes in the minimum-to-average wage ratio, spillover effects on adjacent wage groups, and wage compression at the lower end of the wage distribution. The third objective is to examine how national wage-setting institutions, collective bargaining systems, inflationary pressures, and labour market conditions mediate the social and economic effects of wage increases.

The present article should be considered as a systematic evidence synthesis rather than as a causal econometric analysis. Its contribution does not lie in estimating new causal effects of minimum-wage changes, but to bring together recent empirical studies, official statistics, and institutional developments in order to assess wage adequacy and wage convergence across the European Union. The analysis combines descriptive evidence with a broader analytical discussion. It documents wage developments and examines their implications for social protection, upward convergence, employment, working hours, productivity, inflation and competitiveness. This approach places the observed wage trends within the broader literature on wage–price dynamics, wage spillovers, wage compression, and the institutional governance of labour markets.

Methodologically, the study adopts a systematic literature review, complemented by official statistical data and policy documents. Peer-reviewed studies are used to examine the empirical and theoretical debates on minimum wages, average wages, employment effects, inequality and wage-setting institutions, while institutional sources such as Eurostat, Eurofound, the OECD, the European Commission, and the ECB provide up-to-date cross-country evidence on wage and labour market trends. This combination is appropriate because the research question requires both theoretical interpretation and robust comparative evidence on wage developments across Member States.

The analytical contribution of the paper lies in integrating three dimensions that are often examined separately: the evolution of statutory minimum wages, average wages, and the institutional transformation of EU wage governance following Directive (EU) 2022/2041. By linking these dimensions, the paper demonstrates that wage convergence in the EU cannot be assessed solely on the basis of nominal wage increases. Instead, it should also be evaluated with reference to purchasing power, productivity, collective bargaining coverage, wage inequality, employment quality, and national institutional capacity. The paper therefore contributes to the literature by providing an integrated assessment of wage adequacy and wage convergence in the European Union over a period of exceptional economic and institutional change.

Finally, the present paper is organised as follows: Section 2 presents the theoretical framework. Section 3 describes the methodology adopted including the data sources, analytical approach, and methodological considerations. Section 4 examines the evolution of minimum wages across European Union Member States between 2019 and 2024, while Section 5 focuses on the development of average salaries and broader wage trends over the same period. Section 6 analyses the relationship between minimum wages, average wages, and wage structures, exploring patterns of convergence, spillovers, and inequality dynamics. Section 7 examines the legal and political framework governing minimum wage policies, with particular attention to Directive (EU) 2022/2041 on adequate minimum wages and its implications for Member States. Section 8 discusses the empirical findings in relation to the theoretical perspectives and broader policy challenges, including social protection, competitiveness, and labour market inequalities. Finally, Section 9 concludes

the study by summarising the main findings and presenting practical policy implications for achieving sustainable wage adequacy and inclusive labour market outcomes.

2. Theoretical Framework

Wage-setting reforms in the European Union are situated at the intersection of labour economics, industrial relations, and social policy. The relationship between statutory minimum wages and average wages is particularly important because it provides an important basis for assessing wage adequacy, distributive fairness and the sustainability of national wage systems. This section therefore examines the relationship between wage indicators, institutional wage-setting arrangements, and the European framework for adequate minimum wages.

2.1. The Structural Asymmetry of European Integration

A key insight in critical European integration studies is the asymmetry between negative and positive integration. Negative integration removes national barriers to the free movement of goods, services, capital, and labour, whereas positive integration requires new common rules and social standards at the EU level. Because market-opening measures can often proceed through legal and judicial mechanisms, while social-policy harmonisation requires political agreement among heterogeneous Member States, the EU has historically found it easier to liberalise markets than to establish social protections (Scharpf, 2010).

This asymmetry has significant implications for wage governance. National wage-setting institutions, collective bargaining systems, and labour standards are rooted in diverse economic and social models. Common EU rules therefore face resistance from Member States seeking to preserve high national standards, collective bargaining autonomy, or competitiveness in lower-wage economies. Streeck (2014) and Höpner (2018) interpret this tension as a structural limitation of Social Europe under market-led integration.

At the same time, relying exclusively on national labour systems is increasingly insufficient because EU economies are already deeply integrated through the single market, monetary union, cross-border production chains, and labour mobility. Wage competition and migration pressures have weakened purely national approaches to wage protection. Consequently, the relevant question is not simply whether wage policy should be national or European, but how national institutions and EU-level social rights can complement one another (Seikel, 2021).

Directive (EU) 2022/2041 should be analysed within this broader structural context. It does not create a European wage rate or transfer wage-setting competence to the EU. Instead, it attempts to address the social imbalance of market integration by requiring transparent adequacy criteria, regular updating mechanisms, effective access to statutory minimum wages and stronger collective bargaining frameworks.

The minimum-to-average wage relationship is therefore not only an economic indicator but also an indicator of institutional capacity. When wage floors increase without collective bargaining and enforcement, convergence may remain fragile. Where wage floors are embedded in coordinated bargaining, productivity policies, and labour inspection, minimum-wage increases are more likely to improve wage adequacy without undermining employment or competitiveness.

2.2. Minimum-to-Average Wage Ratio and the Kaitz Index

A key indicator for assessing wage adequacy is the minimum-to-average wage ratio, often discussed alongside the Kaitz index. The ratio indicates the position of the wage floor within the broader national wage structure. A higher ratio generally implies stronger protection for low-paid workers and a greater capacity to reduce wage dispersion at

the lower end of the distribution, although it may also raise concerns about labour cost competitiveness in low-productivity sectors.

Eurofound (2021) indicates that statutory minimum wages increased faster than average wages in a majority of EU countries over the previous decade. This trend was particularly visible in Central and Eastern Europe, where governments used minimum-wage policy as an instrument for wage convergence, labour retention, and social protection. The EU debate on adequacy has increasingly referred to benchmark values of 60% of the gross median wage and 50% of the gross average wage.

Theoretically, this evidence is consistent with wage-compression models. Increases at the wage floor may directly raise the earnings of minimum-wage workers and indirectly affect adjacent wage bands when employers adjust pay scales to preserve internal wage hierarchies. This mechanism contrasts with the standard competitive model, which predicts employment losses when wage floors exceed marginal productivity, and is closer to institutional and monopsony-based explanations of wage-setting.

The risks associated with wage compression depend strongly on institutional context. In systems with coordinated collective bargaining, social dialogue and reliable enforcement, wage hierarchies can be adjusted gradually. In fragmented systems, by contrast, rapid statutory increases may create stronger pressure on small firms and low-margin sectors.

The push for increased minimum wages is not an isolated national demand but part of broader shifts in labour policy paradigms across the EU. As noted by Schulten and Müller (2021), the release of the Proposed Directive on Adequate Minimum Wages in October 2020 represents a significant shift away from the previous policy orientation that had characterised much of the post-2008 period.

For most of the past decade, EU fiscal governance preferred wage moderation and internal devaluation, particularly in crises-affected economies. Minimum wage freezes, austerity adjustments, and decentralisation of wage bargaining were common elements of policy conditionality under the Troika. This policy approach has subsequently changed.

The new Directive reflects a policy reorientation: adequate minimum wages and collective bargaining coverage are no longer framed as obstacles to economic growth, but as conditions for sustainable and inclusive development. The European Commission presented the proposal within this framework, arguing that adequate minimum wages can support decent standards of living, domestic demand, in-work poverty reduction, reduction of the gender pay gap, and social cohesion (European Commission, 2020).

Directive (EU) 2022/2041 does not impose a uniform wage floor across the EU. Instead, it requires Member States with statutory minimum wages to use transparent criteria for assessing adequacy and to involve social partners in wage-setting. It also requires Member States where collective bargaining coverage is below 80% to establish an action plan to promote collective bargaining (European Commission, 2022).

Equally important is that Denmark, Italy, Austria, Finland, and Sweden are not required to introduce statutory minimum wages, because minimum-wage protection in these systems is provided through collective agreements rather than a national statutory wage floor. This distinction is central to the Directive's respect for national wage-setting traditions.

2.3. Minimum Wage Convergent Trends in Central and Eastern European EU Member States 2015–2024

Since the mid-2010s, Central and Eastern European Member States have been among the most active adopters of statutory minimum wage policies as instruments of convergence. Although absolute wage levels remain below Western European benchmarks, the pace of nominal growth has been faster and accompanied by stronger policy commitment than in most older Member States.

Between 2015 and 2024, several CEE countries experienced substantial cumulative increases in statutory minimum wages. Eurostat reported very low nominal wage floors in January 2015, including approximately EUR 218 in Romania and EUR 184 in Bulgaria. By 2024, Romania had exceeded EUR 660 and Bulgaria reached approximately EUR 477, while Lithuania reached EUR 924 and Poland increased from PLN 1750 in 2015 to PLN 4242 in January 2024 and PLN 4300 in July 2024. These changes represent substantial nominal convergence, although exchange-rate movements and inflation mean that comparisons based on nominal euro values must be interpreted cautiously (Eurofound, 2024; Eurostat, 2024).

Several countries have introduced or considered formulas linking minimum wages to average wages or other macroeconomic indicators. Slovakia, for example, applies an automatic mechanism when social partners do not reach agreement. Trade unions in several CEE countries have used the EU adequacy benchmarks—60% of median wages and 50% of average wages—as policy reference points in national campaigns.

Despite relative convergence, absolute wage gaps remain. In January 2024, Bulgaria's gross monthly minimum wage was approximately EUR 477, whereas France and Germany were both above EUR 1700. The gap narrows considerably when wages are expressed in purchasing power standards, but the absolute difference remains large.

The CEE experience therefore highlights both the opportunities and limitations of wage convergence. Minimum wage policy can narrow relative gaps and improve low-wage protection, but sustainable convergence depends on productivity growth, stronger collective bargaining coverage, enforcement capacity, and complementary investments in skills and innovation.

2.4. Integrating Theoretical Perspectives, Institutional Critiques, and Dynamic Monopsony

Understanding recent developments in minimum wage requires drawing on different theoretical perspectives rather than relying on a single model of labour market adjustment. In the neoclassical competitive model, a statutory minimum wage set above the market-clearing level may reduce labour demand, particularly for low-productivity workers, young employees or sectors operating with narrow profit margins. By contrast, monopsony and other imperfect-competition models argue that employers often possess wage-setting power and may pay wages below workers' marginal productivity. Under these conditions, a moderate increase in the minimum wage can raise earnings with little or even positive effect on employment. Institutional economics further suggests that the impact of minimum wage policies depends on factors such as collective bargaining coverage, enforcement capacity, social dialogue, and the credibility of wage-setting institutions. Finally, wage-led growth approaches emphasise that higher wages can support aggregate demand and reduce inequality, provided that wage increases are supported by coordinated macroeconomic policies and productivity gains.

The importance of statutory minimum wages and collective bargaining is also highlighted by dynamic monopsony models. These models suggest that labour markets characterised by search frictions, limited worker mobility, regional labour market concentration, information asymmetries, or employer wage-setting power may produce wages below workers' marginal productivity. In such circumstances, minimum wages and collective bargaining can help address imbalances in bargaining power and reduce the risk of labour exploitation (Manning, 2003; Azar et al., 2024). This does not imply that minimum wages are without cost. Rather, it helps explain why empirical studies often find limited or heterogeneous employment effects instead of consistently large job losses.

The German model illustrates the institutional trade-offs between labour market flexibility and collective action. Sectoral bargaining and codetermination can support cooperation between employers and workers, while flexibility mechanisms may enable

firms to opt out of collective agreements or reduce bargaining coverage with potential implications for wage inequality (Jäger et al., 2022). For the purposes of this article, the effects of the minimum wage policies depend not only on the level of the statutory minimum wage but also on productivity, collective bargaining, and sector-specific conditions.

3. Methodology

This study applies a systematic literature-review-informed design to examine the evolution of statutory minimum wages and average wages in EU Member States over the period 2019–2024. The review follows the logic of the PRISMA 2020 statement where applicable to interdisciplinary social science research, while recognising that the article combines peer-reviewed academic literature with official institutional and statistical data (Page et al., 2021).

The review was guided by three research questions: (i) how statutory minimum wages and average wages have evolved across EU Member States since 2019; (ii) what recent studies show regarding wage convergence, inequality, employment, and inflation-related risks; and (iii) how Directive (EU) 2022/2041 has reshaped national wage-setting debates and institutional reforms.

3.1. Temporal Scope of the Study

The core period of analysis in this study is the period 2019–2024. This period was selected because it captures a distinctive phase in European wage developments, marked by the post-pandemic recovery, the inflationary shock of 2021–2023, tightening labour markets, substantial nominal minimum wage increases in several Member States, and the adoption and initial transposition of Directive (EU) 2022/2041 on adequate minimum wages. The 2019 to 2024 period therefore provides an appropriate empirical window for examining wage adequacy, upward wage convergence, wage spillover effects, inflation-related concerns, employment outcomes and the evolving institutional governance of wage-setting in the European Union.

Earlier years are used only where they are necessary to establish historical or institutional baselines. For example, the pre-2019 period is referenced in relation to the post-2010 austerity legacy in Greece, the introduction of the statutory minimum wage in Germany in 2015, and the longer-term minimum wage convergence trajectory in Central and Eastern European Member States. These references are not treated as part of the main comparative period, but as contextual evidence required to explain the starting conditions and institutional path dependencies that shaped wage developments in the post-2019 period.

Similarly, selected references to 2025 are included only as contextual policy updates, particularly where recent national minimum-wage decisions or transposition-related reforms help clarify the direction of wage policy after the end of the main observation period. These 2025 references are not used to redefine the empirical scope of the study. The comparative analysis, synthesis of wage developments, and main conclusions remain centred on the period 2019–2024.

3.2. Country Selection Rationale

Although the article examines wage developments across the European Union as a whole, more detailed country-level discussion is used for analytical purposes. The countries discussed in greater depth were not selected as a statistically representative sample of all EU Member States, but on the basis of a purposive comparative approach designed to capture the main institutional and economic patterns of wage change in the EU during the period 2019–2024.

The most important criterion for country selection had analytical relevance to the study's core research questions, particularly the extent to which each case illustrates a distinct wage-setting regime, wage-convergence trajectory, or labour-market adjustment mechanism. In other words, countries were selected because they reflect different combinations of statutory minimum-wage policy, average-wage dynamics, collective bargaining institutions, inflationary pressures, employment effects, and exposure to Directive (EU) 2022/2041.

Central and Eastern European countries such as Poland, Romania, Bulgaria, Lithuania, and Latvia were included because they experienced some of the strongest nominal increases in statutory minimum wages and are therefore central to the analysis of upward wage convergence within the EU. These countries allow the study to examine whether rapid minimum-wage growth narrows the gap with Western European Member States and how such convergence interacts with inflation, productivity, labour shortages, and emigration pressures.

Germany was selected because it represents a major case of institutional change after the introduction of a statutory minimum wage in 2015. It also offers one of the richest bodies of empirical evidence on employment effects, wage spillovers, and adjustments in marginal employment, including mini-jobs. Furthermore, Spain was included because the 2019 increase in the statutory minimum wage provides an important example of a large policy shock in a segmented labour market, with particular relevance for youth employment, agriculture, temporary work, and regional disparities.

Greece was selected as a focused case study because it illustrates a distinct trajectory of wage suppression, institutional weakening, and gradual restoration following the sovereign debt crisis and the adjustment programmes. The Greek case is especially relevant for analysing how minimum-wage policy operates in a country marked by austerity legacies, fragmented collective bargaining, small-firm dominance, tourism dependence, and renewed alignment with the EU adequate minimum wage framework.

Additional country references, including France, Belgium, Austria, Denmark, Sweden, Italy, Portugal, the Netherlands, and Slovakia, are used to illustrate institutional contrasts rather than to provide full case studies. France and Belgium are relevant because of their relatively strong minimum-wage or indexation mechanisms; Austria, Denmark, and Sweden illustrate collectively bargained wage-setting systems without a national statutory minimum wage; Italy highlights the challenges of wage adequacy in the absence of a statutory minimum wage; and Slovakia illustrates the use of formula-based links between minimum and average wages.

Therefore, the country selection follows a maximum-variation comparative strategy. The purpose is not to rank countries, but to compare different wage-setting models and labour-market contexts. The selected countries together cover high-wage and low-wage economies, statutory and collectively bargained systems, Western, Southern, and Central-Eastern European contexts, coordinated and more fragmented bargaining regimes, and cases with both moderate and rapid wage growth. This approach strengthens the explanatory value of the review by linking EU-wide wage developments to concrete national institutional settings.

3.3. Search Strategy and Information Sources

Searches were conducted across Scopus, Web of Science, ScienceDirect, SpringerLink, SAGE Journals, and Google Scholar. The search was complemented by targeted checks of official EU and international sources, including Eurofound, Eurostat, the European Commission, the OECD, the ECB, the ILO, national ministries, and national central banks. Search terms included "minimum wage", "average wage", "wage convergence", "Kaitz in-

dex", "wage spillover", "wage–price spiral", "collective bargaining", "adequate minimum wages directive", "Directive 2022/2041", "EU wage policy", "in-work poverty", "youth unemployment", and country-specific combinations for Germany, Greece, Spain, Lithuania, Poland, Romania, Bulgaria, and Latvia.

3.4. Eligibility Criteria

The academic component of the review prioritised peer-reviewed journal articles published from January 2019 onwards and indexed in Scopus or Web of Science where possible. Earlier theoretical and empirical works were retained only when they provided essential conceptual baselines, such as the traditional employment-effect debate, wage-led growth theory, or the structural asymmetry of European integration.

Studies were included when they addressed at least one of the following themes: statutory minimum wages, average wage dynamics, wage convergence, wage inequality, collective bargaining coverage, wage-setting institutions, implementation of Directive (EU) 2022/2041, inflation and wage–price dynamics, in-work poverty, employment, working time, or vulnerable labour-market groups. Studies were excluded when they focused exclusively on non-EU countries, pensions, health-care policy, or unrelated social policies, or when the methods and data sources were not sufficiently transparent. In Table 1, the inclusion and exclusion criteria are presented briefly.

Table 1. Inclusion and exclusion criteria.

Criterion	Included	Excluded
Time frame	Main focus on 2019–2024; earlier works retained only for theoretical or historical baseline.	Older studies without baseline relevance.
Geography	EU member states, EU-wide comparative work, and selected EU country case studies.	Non-EU studies without direct relevance to EU wage policy.
Topic	Minimum wages, average wages, wage convergence, collective bargaining, inequality, employment, inflation, Directive 2022/2041.	Pensions, health policy, unrelated welfare programmes, or general macroeconomic studies without wage—policy relevance.
Source type	Peer-reviewed academic studies, scholarly books/legal analyses, and official institutional/statistical sources used for verification.	Editorial opinions, non-transparent policy briefs, duplicate sources, or unsupported web material.
Quality criterion	Transparent method, identifiable data source, clear relevance to wage–policy analysis.	Insufficient methodological transparency or unclear data basis.

Institutional reports and statistical databases were not treated as peer-reviewed journal articles. They were used as official sources for current wage levels, labour-market indicators, legal developments, and cross-country comparability. This distinction was introduced to avoid conflating academic evidence with official data validation sources.

3.5. Screening and Selection Process

The initial search identified approximately 300 records. After removing duplicates and clearly irrelevant records, 230 records were screened by title and abstract. Of these, 150 were excluded because they were outside the scope of EU wage policy, did not address minimum or average wages, or duplicated evidence already captured in stronger sources. A total of 80 were assessed at full-text eligibility; 26 were excluded after full-text review, 6 were outside the EU scope, 7 did not directly address wage policy, 5 lacked sufficient

methodological transparency for inclusion in the scholarly synthesis, 4 substantially duplicated stronger sources, and 4 were outdated except for historical baseline use. The final evidence base therefore comprised 54 sources. These include peer-reviewed empirical, legal, and theoretical studies, scholarly books, or policy-theory works, and official institutional/statistical sources used for verification and contextualisation. Figure 1 summarises the PRISMA-informed selection process.

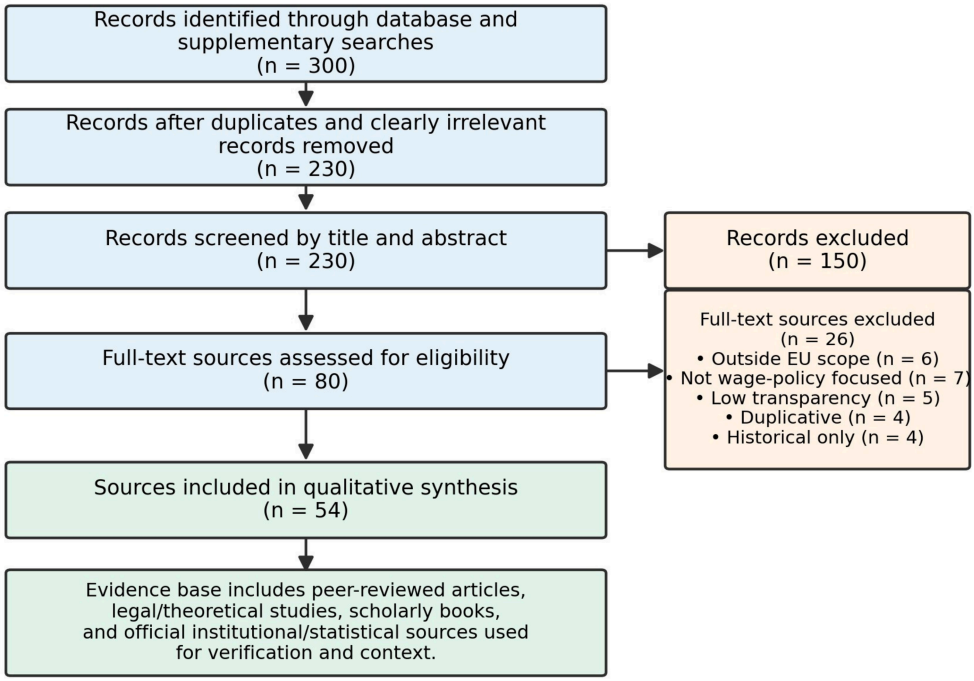


Figure 1. PRISMA-informed selection process used for the systematic review evidence base.

The screening process consisted of two stages. In the first stage, titles, abstracts, and keywords were assessed against the predefined inclusion and exclusion criteria. Potentially eligible studies were then reviewed in full text. The corresponding author carried out the initial screening, while borderline cases and final inclusion decisions were discussed with the co-authors. Any uncertainties regarding the eligibility of individual studies were solved through consensus, taking into account their relevance to the research questions, geographical scope, methodological transparency, and contribution to the analysis of minimum wages, average wages, wage adequacy, and wage-setting institutions.

As the screening process did not involve a fully independent dual review procedure, no formal measure of inter-reviewer agreement, such as Cohen's kappa, was calculated. This represents a methodological limitation of the study. To enhance the consistency of the review, however, explicit eligibility criteria were applied, data extraction followed a structured template, reporting was informed by the PRISMA guidelines and empirical findings were cross-checked against official statistical and institutional sources.

3.6. Data Extraction and Comparative Synthesis

For each included source, the following information was extracted: author or institution, year, source type, country or region examined, period covered, method or evidence type, data source, main findings, and relevance to the present article. The comparative extraction table is presented as Table 2. The table strengthens the transparency and replicability of the review by showing how each source contributes to the argument rather than appearing only as a bibliographic item.

Table 2. Comparative characteristics of the 54 evidence sources included in the review.

# of Paper	Source	Type	Country/Region	Period/Coverage	Method or Evidence	Key Finding and Relevance	Section
1	Banco de España (2020)	Official institutional report	Spain	2019 reform context	Annual macro/labour-market assessment	Documents Spanish minimum-wage increase and sectoral employment concerns; used for Spain case and youth/agriculture discussion.	Sections 4.3 and 8.3.1
2	Bank of Greece (2024)	Central bank report	Greece	2023/2024	Macroeconomic and labour-market review	Supports cautious interpretation of Greek wage recovery, productivity, and labour-market constraints.	Sections 5.2 and 8.2
3	BDA (2023)	Employer association statement	Germany	2022–2023	Stakeholder/policy position	Shows employer preference for rules-based and tripartite adjustment rather than ad hoc political minimum-wage decisions.	Section 7.2
4	BMAS (2022)	Government source	Germany	2022	Policy documentation	Documents the EUR 12/h German minimum wage increase and its policy rationale.	Section 7.1
5	Bossler and Gerner (2020)	Peer-reviewed journal article	Germany	Minimum wage introduction	Establishment-level microdata/econometric analysis	Finds wage gains in affected establishments and limited employment adjustment, especially at the margin.	Sections 4.3, 6.3 and 8.3.2
6	Bruckmeier and Wiemers (2023)	Research institute report	Germany	2022/2023 reforms	Microsimulation	Assesses distributional and labour-supply effects of mini-job and midi-job reforms; supports discussion of marginal employment.	Section 8.3.2
7	Caliendo et al. (2018)	Peer-reviewed journal article	Germany	2015 minimum wage	Individual/administrative data; short-run effects	Finds limited aggregate employment effects but adjustment in marginal employment.	Sections 4.3 and 6.3
8	Department of Enterprise, Trade and Employment (2023)	Government source	Ireland	Budget 2024	Policy documentation	Documents business-support measures used to buffer rising labour costs for firms.	Section 8.2
9	Destatis (2023)	Official statistical source	Germany	Recent earnings data	Earnings statistics	Used to validate wage and earnings distribution claims for Germany.	Sections 5.1 and 5.2
10	Destatis (2024)	Official statistical source	Germany	2022–2024	Negotiated/agreed earnings data	Supports claims about acceleration in German negotiated wage growth.	Sections 5.1 and 5.2
11	Dustmann et al. (2022)	Peer-reviewed journal article	Germany	2015 minimum wage	Administrative linked data; reallocation analysis	Shows wage gains without aggregate employment loss, partly through worker reallocation to more productive firms.	Sections 4.3 and 6.2
12	European Central Bank (2022)	Official macroeconomic bulletin	Euro area	2022	Macroeconomic analysis	Supports discussion of wage–price risks during the inflation shock.	Sections 5.1 and 8.1
13	European Central Bank (2023)	Official macroeconomic bulletin	Euro area	2022–2023	Macroeconomic analysis	Supports claim that wage growth-lagged inflation and second-round effects were limited.	Sections 5.1, 5.2 and 8.1

Table 2. *Cont.*

# of Paper	Source	Type	Country/Region	Period/Coverage	Method or Evidence	Key Finding and Relevance	Section
14	ETUI (2023)	Institutional policy brief	Europe	2022–2023	Policy review	Provides evidence on minimum-wage responses to the cost-of-living crisis and working-time adjustment concerns.	Sections 6.3 and 8.1
15	Eurofound (2021)	Institutional annual review	EU	2020/2021	Comparative annual review	Supports the minimum-to-average/median adequacy benchmarking and Kaitz-index discussion.	Sections 2.2 and 6.1
16	Eurofound (2022)	Institutional report	EU	Up to 2022	Comparative report	Supports wage convergence and lowwage/informality discussion.	Sections 2.3, 6.2 and 6.3
17	Eurofound (2023)	Institutional annual review	EU	2022/2023	Comparative annual review	Documents national wage-setting responses and early Directive-related reforms.	Sections 5.2 and 7.1
18	Eurofound (2024)	Institutional annual review/data catalogue	EU27 and Norway	2023/2024	Comparative data/report	Validates 2024 national minimum-wage changes, criteria, and Directive transposition context.	Sections 3.5, 4.1 and 7.1
19	European Commission (2020)	EU legislative proposal	EU	2020	Legal/policy proposal	Provides background on the policy shift preceding the final Directive.	Sections 2.2 and 7.1
20	European Commission (2022) Directive 2022/2041	EU legal act	EU	Adopted 2022; transposition by 2024	Legal framework	Defines adequacy, collective-bargaining promotion, 80% action-plan threshold, and social-partner involvement.	Sections 2.2 and 7.1
21	European Commission (2023)	Institutional report	EU	2022–2023	Labour-market and wage developments report	Supports claims on real wage losses, labour shortages, and wage dynamics after inflation shock.	Sections 5.1 and 8.1
22	Eurostat (2023)	Official statistical source	EU	Recent earnings/minimum wage data	Statistical database	Used for earnings distribution, minimum-wage concentration and cross-country comparisons.	Sections 3.5, 6.1 and 6.2
23	Eurostat (2024)	Official statistical source	EU	2024 data	Statistical database	Used to verify labour-market indicators, minimum wages and unemployment/working-time data.	Sections 3.5, 4.1 and 6.3
24	Fougère et al. (2018)	Peer-reviewed journal article	France	Industry-level agreements	Econometric analysis	Shows wage-floor rigidity and spillover mechanisms in collectively bargained wage floors.	Sections 6.1 and 8.1
25	Friedman (1970)	Theoretical book/essay	International	Theoretical baseline	Monetary theory	Provides classical theoretical background for wage–price spiral concerns.	Section 8.1
26	Garnero (2021)	Peer-reviewed journal article	Europe/OECD	Comparative bargaining systems	Institutional taxonomy/empirical synthesis	Shows how bargaining systems shape employment and wage inequality effects.	Sections 2.2, 6.1, 6.2 and 8.2

Table 2. *Cont.*

# of Paper	Source	Type	Country/Region	Period/Coverage	Method or Evidence	Key Finding and Relevance	Section
27	García-Louzao and Tarasonis (2023)	Peer-reviewed journal article	Lithuania	Minimum-wage increases	Empirical/econometric analysis	Finds wage and distributional impacts of minimum-wage increases without strong adverse employment effects.	Sections 4.3 and 6.2
28	Gregory and Zierahn (2022)	Peer-reviewed journal article	Germany	Minimum-wage bite	Econometric spillover analysis	Documents spillover effects and possible negative spillovers for high-skilled workers when the minimum wage bites strongly.	Sections 6.1 and 8.1
29	Hellenic Ministry of Labour and Social Security (2025)	Official government source	Greece	2024–2027	Minimum-wage regulation/documentation	Validates Greek minimum-wage rates of EUR 830 in 2024 and EUR 880 from April 2025, plus policy targets.	Section 4.2
30	Hijzen et al. (2023)	OECD working paper	Spain	2019 reform	Econometric policy evaluation	Evaluates Spain's 22% minimum-wage hike in a dual labour market and its labour-market implications.	Sections 4.3, 6.2 and 8.3.1
31	Höpner (2018)	Scholarly/policy essay	EU	Social Europe debate	Theoretical/political analysis	Supports the critical debate about the limits and myths of Social Europe.	Section 2.1
32	ILO (2022)	International policy guide	International/EU relevance	Current policy guidance	Policy guide	Frames minimum-wage policy as balancing fairness, employment, and enforcement.	Sections 6.3, 7.2 and 8.3.1
33	IMF (2023)	International institutional report	Europe	2022–2023	Macroeconomic analysis	Supports discussion of wage dynamics, inflation, and productivity after the energy shock.	Section 8.1
34	INE GSEE (2023)	Institutional report	Greece	2023	Labour-market report	Supports Greek-specific discussion of SMEs, working hours, and youth labour-market concerns.	Sections 6.3 and 8.3.1
35	INSEE (2023)	Official statistical source	France	Recent SMIC/wage data	Statistical data/reporting	Supports discussion of SMIC, wage indexation, and lower-end wage compression in France.	Sections 5.2, 6.2 and 6.3
36	Lübker and Schulten (2021)	Institutional research report	Europe	2020/2021	Comparative minimum-wage report	Supports CEE convergence, adequacy thresholds, and comparative minimum-wage development.	Sections 2.3 and 4.1
37	Ministério do Trabalho (2024)	Government source	Portugal	2024	Policy documentation	Documents Portuguese labour-policy measures and extension of collective agreements.	Section 7.2
38	Ministerio de Trabajo y Economía Social (2024)	Government source	Spain	2024	Policy documentation	Validates Spain's 2024 SMI and social-dialogue wage-setting context.	Sections 7.1 and 7.2
39	National Bank of Belgium (2023)	Central bank report	Belgium	2021–2023	Macroeconomic/inflation-wage analysis	Supports discussion of automatic indexation and real-wage protection in Belgium.	Section 5.2
40	Narodowy Bank Polski (2024)	Central bank report	Poland	2019–2024	Macroeconomic and wage/productivity review	Supports analysis of Polish wage growth and productivity/competitiveness concerns.	Sections 5.3 and 8.2

Table 2. *Cont.*

# of Paper	Source	Type	Country/Region	Period/Coverage	Method or Evidence	Key Finding and Relevance	Section
41	Neumark and Wascher (2008)	Scholarly book	International	Theoretical/empirical literature	Literature synthesis	Provides the traditional employment-risk framework for minimum-wage analysis.	Sections 4.3 and 6.3
42	OECD (2022)	Institutional report	OECD/EU	2022	Employment Outlook	Supports comparisons on minimum wages, inequality, and labour-market inclusion.	Section 6.2
43	OECD (2023)	Institutional report	OECD/EU	2023	Employment Outlook	Supports wage trends, productivity, and labour-market comparisons.	Sections 5.1–5.3
44	Scharpf (2010)	Peer-reviewed journal article	EU	Theoretical/historical	Political economy theory	Defines the asymmetry of European integration between negative and positive integration.	Section 2.1
45	Schulten and Müller (2020)	Scholarly/institutional report	EU	Minimum wage regimes	Comparative institutional analysis	Distinguishes poverty wages from living wages and supports adequacy–threshold debate.	Sections 2.2 and 2.3
46	Schulten and Müller (2021)	Peer-reviewed journal article	EU	Directive proposal period	Legal/institutional analysis	Interprets the minimum-wage Directive proposal as a paradigm shift toward Social Europe.	Sections 2.2, 7.1 and 8.1
47	Seikel (2021)	Institutional policy brief	EU	Social Europe debate	Policy/theoretical analysis	Supports the argument that national and EU-level social regulation are complementary.	Section 2.1
48	Stockhammer (2015)	Peer-reviewed journal article	International/EU relevance	Theoretical/empirical literature	Macroeconomic theory	Provides wage-led growth framework for the demand-side effects of wage increases.	Sections 8.1 and 8.2
49	Streeck (2014)	Scholarly book	Europe	Theoretical/historical	Political economy analysis	Supports the critique of liberalisation pressures in European capitalism.	Section 2.1
50	Holtemöller and Pohle (2020)	Peer-reviewed journal article	Germany	Minimum-wage introduction	Econometric modelling	Provides additional German evidence on employment effects, including marginal and regular employment adjustment.	Sections 4.3 and 6.3
51	Harasztosi and Lindner (2019)	Peer-reviewed journal article	Hungary	Minimum-wage shock	Firm-level empirical analysis	Shows how firms adjust to large minimum-wage increases through prices, profits and productivity-related margins.	Section 8.2
52	Ratti (2023)	Peer-reviewed legal article	EU	Directive 2022/2041	Legal analysis	Clarifies the legal design, potential and limits of the Adequate Minimum Wages Directive.	Section 7.1
53	Fernández de Aranguiz Chueca and Garben (2021)	Peer-reviewed legal article	EU	Directive proposal	Legal analysis	Assesses EU legal competence and income-inequality implications of a potential minimum-wage directive.	Sections 2.1 and 7.1
54	Grünberger et al. (2022)	Peer-reviewed journal article	21 EU countries	Microsimulation policy scenarios	EUROMOD microsimulation	Estimates social and fiscal effects of statutory minimum-wage scenarios on inequality, poverty, and budgets.	Sections 6.2 and 8.2

Note: The table distinguishes peer-reviewed academic studies from official institutional and statistical sources. The latter are used for factual verification and policy context, not counted as peer-reviewed journal articles.

The synthesis was narrative and comparative rather than meta-analytic. A meta-analysis was not appropriate because the reviewed sources use heterogeneous research designs, indicators, wage measures, country coverage, and time periods. Instead, evidence was grouped thematically around minimum-wage evolution, average-wage dynamics, minimum-to-average wage ratios, spillover effects, inequality, employment and working hours, legal implementation of the Directive, and unresolved sub-challenges such as youth unemployment, marginal employment, and regional disparities.

3.7. Data Sources and Factual Verification

Factual and numerical claims were cross-checked against official sources. Minimum-wage levels were verified primarily through Eurofound's national minimum wage data and Eurostat minimum wage statistics. Wage and labour-market indicators were checked against Eurostat, Eurofound, the European Commission's Labour Market and Wage Developments reports, OECD Employment Outlook data, ECB economic bulletins, and national sources such as the Hellenic Ministry of Labour and Social Security, Destatis, Banco de España, and the National Bank of Belgium. When a precise numerical statement could not be fully verified, it was either removed or replaced by a more cautious qualitative formulation. Additional country-specific sources used only to verify isolated numerical statements are cited in the text and reference list but are not counted as part of the 54-source synthesis table.

For cross-country comparisons, the article follows Eurostat's harmonised convention for minimum-wage statistics: national minimum wages are reported as gross monthly rates and, where wages are set hourly, weekly or paid more than 12 times per year, they are converted into a comparable monthly figure. This is particularly important for Greece, Spain, and Portugal, where statutory monthly rates are typically paid in 14 installments; Eurostat therefore reports a 12-month equivalent equal to the statutory monthly rate multiplied by 14 and divided by 12. Country case-study sections may also report the domestic legal monthly rate, but the text explicitly distinguishes these values from Eurostat's harmonised comparative series (Eurostat, 2024).

3.8. Quality Assessment and Limitations

Peer-reviewed studies were assessed according to relevance, geographical coverage, methodological transparency, data quality, and fit with the research questions. Official institutional sources were assessed according to authority, recency, comparability and direct relevance to the factual claim being supported. The main limitation of the review is that it integrates diverse evidence types. This is necessary for a topic that combines labour economics, law, industrial relations, and current statistical monitoring, but it requires explicit separation between peer-reviewed academic findings and official data sources. The revised methodology therefore reports both categories transparently and avoids presenting institutional reports as journal articles.

This review is also subject to some limitations. As most systematic literature reviews, publication bias cannot be ruled out, since studies reporting statistically significant effects on employment, inequality, or wage distribution are more likely to be published in peer-reviewed journals than studies with null or inconclusive findings. In addition, the literature search was limited to Scopus, Web of Science, ScienceDirect, SpringerLink, SAGE Journals, and Google Scholar. As a result, relevant working papers, studies published in national languages, or policy evaluations not indexed in these databases may not have been captured.

A further limitation relates to the heterogeneity of wage indicators used across countries and data sources. Minimum wages may be expressed as hourly, monthly, or annual

rates, while average wages can refer to different concepts, including full-time equivalent earnings, gross monthly earnings, median hourly earnings, or compensation per employee. These differences complicate cross-country comparisons, as wage measures are shaped by national wage-setting institutions, tax-benefit systems, working-time arrangements, and the treatment of additional payments such as 13th or 14th salaries. To address this issue, the analysis relies on harmonised Eurostat and OECD data wherever available and distinguishes clearly between statutory minimum wages, average wages developments, and broader institutional or policy evidence.

4. Evolution of the Minimum Wage

The evolution of minimum wage levels across the European Union over the past decade reflects a combination of economic recovery, political realignment, and renewed social policy emphasis. While all EU Member States with statutory minimum wages have witnessed nominal increases since 2015, the pace, structure, and distributional effects of these changes have varied significantly across regions. One of the most notable trends is the rapid and sustained growth in minimum wages in Central and Eastern Europe (CEE), which contrasts with the more moderate and inflation-adjusted increases in Western and Northern Europe.

4.1. Progressive Increases in Central and Eastern EU

Political commitment, strong nominal growth, and increased convergence with the EU adequacy benchmark characterise minimum wage developments in Central and Eastern European countries between 2015 and 2024. As these economies have recovered, increases in minimum wages have been used both as an economic catch-up mechanism and as a policy instrument to address inequality, labour shortages, and emigration pressure.

Romania, Bulgaria, Lithuania, and Poland illustrate the scale of Central and Eastern European minimum-wage growth. Romania moved from approximately EUR 218 in January 2015 to about EUR 663 in January 2024; Bulgaria increased from BGN 560 in 2019 (about EUR 286.32) to BGN 933 (around EUR 477) in 2024; Lithuania reached EUR 924 in 2024; and Poland increased from PLN 1750 in 2015 to PLN 4242 in January 2024 and PLN 4300 in July 2024. These increases were driven by inflation, labour shortages, political commitments to wage convergence, and the growing policy salience of adequacy benchmarks (Eurofound, 2024; Eurostat, 2024).

These increases are not purely inflationary but also reflect deliberate policy trajectories toward adequacy benchmarks, especially the frequently discussed reference values of 60% of median wages and 50% of average wages. In Lithuania and Latvia, minimum-wage policies increasingly incorporated international benchmarks or wage-distribution targets. Slovakia also illustrates the importance of formula-based mechanisms: during much of the period the reference value was 57% of average nominal wages if the social partners did not reach an agreement, while the 2024 amendment restored the 60% reference value for future uprating. This example shows that national formulas are politically adjustable and should be interpreted in relation to the specific legal period concerned (Eurofound, 2024, 2025b).

The factors driving these successive increases are both economic and institutional. On the economic front, countries of the region have witnessed strong GDP growth with low unemployment accompanied by increasing labour productivity particularly in manufacturing and export sectors. The rising cost of living, plus demographic pressures—such as a dwindling labour force supply and outbound migration—have created additional pressure for wage increases. On the institutional front, trade unions and populist governments, together with EU-level recommendations, all support a wave of rather bold minimum wage reforms.

Importantly, convergence is relative. Despite substantial percentage increases, absolute minimum-wage levels in Central and Eastern European countries remain significantly below those in Western Europe. For example, in 2024 France and Germany were both well above EUR 1700 in Eurostat's harmonised monthly series. Nevertheless, the gap is narrower in purchasing power standards (PPSs) and through the minimum-to-average wage ratio (Kaitz index).

This growth trend means that Central and Eastern European economies are gaining ground while moving closer to EU standards of decent and fair wages. The 2019–2024 period therefore provides an important window for assessing whether structural wage convergence can be institutionalised as part of long-term labour-market policy. Whether such progress can be sustained under inflationary pressures, weaker growth, and productivity constraints remains a central issue for both national and EU wage governance.

4.2. Case Study: Greece

Greece is a distinctive and particularly informative case for understanding minimum wage evolution within the EU, as it experienced a prolonged period of economic crisis, austerity, and subsequent recovery. The evolution of the Greek statutory minimum wage since 2010 reflects the interaction between macroeconomic adjustment programmes, institutional reforms, and their subsequent partial reversal through policies aimed at restoring wage levels, while increasingly aligning with broader EU objectives of wage adequacy and upward convergence.

Greece carried out a series of wage reforms as part of the economic adjustment programmes negotiated with the European Commission, the European Central Bank, and the International Monetary Fund following the sovereign debt crisis. In 2012, the government reduced the gross monthly minimum wage by 22% (and by 32% for workers under the age of 25) from EUR 751 to EUR 586 (and to EUR 511 for younger workers). The reforms substantially weakened collective bargaining, suspended the extension of sectoral collective agreements, and shifted wage-setting authority towards the state (European Parliament, 2015; Eurofound, 2025a).

The minimum wage remained frozen between 2012 and 2018, despite inflation and changes in labour market conditions. The first upward revision following the completion of the adjustment programmes was implemented in 2019, raising the gross minimum wage to EUR 650 while simultaneously abolishing the youth sub-minimum wage. This marked a significant shift in wage policy, although the increase remained relatively cautious, reflecting Greece's gradual transition out of the enhanced surveillance framework (Eurofound, 2025a; Hellenic Ministry of Labour and Social Security, 2025).

In the post-pandemic period, the government adopted a more expansionary approach to minimum-wage policy. A series of increases between 2022 and 2024 brought the domestic gross statutory minimum wage to EUR 830 per month as of 1 April 2024. Because the Greek wage system includes 14 annual payments, this domestic legal monthly rate differs from Eurostat's harmonised 12-month equivalent used in cross-country comparisons. For contextual purposes, subsequent official information indicates that the minimum wage increased to EUR 880 from 1 April 2025, while the government has also announced a medium-term target of EUR 950 by 2027. In purchasing-power terms, however, the Greek minimum wage remained below the EU average and continued to reflect the losses accumulated during the austerity period (Hellenic Ministry of Labour and Social Security, 2025; Eurostat, 2024).

The current minimum-wage strategy reflects a balance between social compensation, political signalling, and macroeconomic prudence. Although recent increases have moved Greece closer to the adequacy reference values outlined in Directive(EU) 2022/2041, com-

petitiveness concerns remain significant, particularly in tourism, retail, and agriculture, where many small firms operate with low profit margins and high labour intensity.

Wage-setting remains predominantly under a state-centric model, in which the statutory minimum wage is set by ministerial decision following consultations with social partners. Although the consultative process involving unions, employers, and research institutes has been restored, collective bargaining coverage remains well below pre-crisis levels, when sectoral collective agreements were more widespread.

Overall, the Greek case illustrates how minimum wages can adjust and how institutions are rebuilt in a non-linear process. Although nominal increases signal a return to upward wage convergence, structural weaknesses—including subdued productivity, fragmented collective bargaining, and persistent labour informality—continue to constrain the potential for achieving wage adequacy. Greece's trajectory therefore remains a hybrid model shaped by the legacy of economic stabilisation and the ongoing process of alignment with the European wage-governance framework, requiring continued monitoring as the adequacy provisions of Directive (EU) 2022/2041 are progressively implemented.

4.3. Impact on Employment—Findings from Lithuania, Germany, Spain

Raising the minimum wage has been a longstanding issue in both academic research and employment policy, particularly because of its potential effects on employment. Traditional neoclassical models suggest that statutory minimum wages set above worker's productivity may reduce employment opportunities for low-skilled, young, and informally employed workers (Neumark & Wascher, 2008). Empirical evidence from EU Member States, however, points to a more complex picture. Studies from Lithuania, Germany and Spain indicate that minimum wage increases have generally had limited, though heterogeneous, effects on employment. Where labour market adjustments occurred, they were more often reflected in changes in marginal employment, hiring practices, working hours, firm restructuring, or worker reallocation than in widespread job losses.

The minimum wage in Lithuania nearly tripled between 2013 and 2022. Although concerns were raised about potential negative effects on employment, García-Louzao and Tarasonis (2023), using evidence from Lithuania, found no statistically significant adverse employment effects resulting from minimum wage increases. Instead, their findings indicate moderate wage compression at the lower end of the earnings distribution. The evidence suggests that increases in the minimum wage contributed to wage compression among low-paid workers and may also have supported consumption and increased tax revenues.

Germany has been extensively studied since the introduction of its statutory minimum wage in 2015. The effects of the reform should be interpreted within the broader German model of industrial relations, which combines sectoral collective bargaining, firm-level co-determination, and institutionalised social dialogue, while also incorporating labour market flexibility mechanisms that may reduce unemployment but weaken collective bargaining coverage (Jäger et al., 2022). Although the empirical evidence is not entirely consistent, most studies suggest relatively modest and heterogeneous employment effects rather than substantial aggregate job losses.

Caliendo et al. (2018) estimate an overall employment decline of around 140,000 jobs (approximately 0.4%), driven primarily by reductions in marginal employment ("mini-jobs"), while finding no statistically significant effects on regular employment. Similarly, Bossler and Gerner (2020) report wage increases of 3.8% to 6.3% in affected establishments alongside an employment reduction of about 1.7%, with firms adjusting mainly through lower hiring rates and temporary reductions in working hours. In contrast, Dustmann et al. (2022) conclude that the minimum wage increased earnings without reducing

employment, instead encouraging the reallocation of low-wage workers towards larger, higher-paying, and more productive firms. Overall, these findings suggest that the main adjustment mechanisms in Germany have operated through changes in marginal employment, recruitment, working hours, and worker reallocation, rather than through widespread employment losses.

Spain implemented a 22% increase in its statutory minimum wage in 2019, raising concerns about its potential effects on youth employment, rural labour markets, and agricultural employment. However, the available empirical evidence indicates limited effects on overall employment, while also highlighting more localised risks in sectors and regions characterised by high shares of temporary or low-wage employment (Banco de España, 2020; Hijzen et al., 2023).

These findings suggest that institutional frameworks, sectoral structures, and the sequencing of policy reforms play a crucial role in shaping the employment effects of minimum wage increases. Specifically, the impact of minimum wage reforms is mediated by factors such as collective bargaining coverage, enforcement capacity, regional wage disparities and employers' adjustment mechanisms (Schulten & Müller, 2021). Where labour markets demonstrate resilience, the evidence suggests that raising the minimum wage can strengthen income security without undermining employment performance, provided that such reforms are carefully designed and gradually implemented.

Overall, the evidence from Lithuania, Germany, and Spain suggests that increases in the minimum wage increases do not necessarily lead to substantial aggregate employment losses. Instead, employment effects appear to be modest and heterogeneous, varying across institutional settings and labour market conditions. Where adjustments occur, it is more commonly reflected in changes in hiring, working hours, productivity, worker reallocation, prices, or profit margins than in large reductions in employment.

4.4. Drivers of Minimum Wage Changes

The evolution of statutory minimum wages across the European Union between 2019 and 2024 should not be interpreted as a purely market-driven process. Unlike average wages, which are influenced by factors such as collective bargaining outcomes, labour demand, productivity, sectoral composition, and firm-level wage-setting practices, statutory minimum wages are primarily determined through institutional, legal, and political mechanisms. Consequently, changes in statutory minimum wages reflect political decisions, legislative procedures, automatic indexation rules, tripartite consultation processes, or collectively agreed wage-setting arrangements, depending on the national institutional framework.

The primary driver of changes in the minimum wage is the statutory or institutional uprating mechanism through which each Member State revises its wage floor. In countries with a national statutory minimum wage, the wage floor is typically adjusted through legislation, government decisions, ministerial decrees, statutory indexation formulas, or decisions taken following consultation with the social partners. By contrast, in countries without a national statutory minimum wage, such as Denmark, Austria, Sweden, and Italy, wage floors are determined primarily through sectoral collective bargaining or collective agreements. This distinction is important because it demonstrates that the minimum wage is not merely the outcome of labour market supply and demand but also an institutional instrument of wage-setting.

During the period under review, the primary economic driver of statutory minimum wage increases was the rise in inflation and the associated loss of purchasing power. The cost-of-living crisis between 2021 and 2023 placed considerable pressure on governments and the social partners to increase minimum wages in order to protect low-paid workers.

According to Eurofound's (2024) Annual Review, inflation was the most frequently applied criterion in determining national minimum wage rates for 2024, while several Member States also considered target benchmarks linked to average or median wages. These findings indicate that recent minimum wage increases were not arbitrary but reflected a combination of institutional wage-setting procedures and macroeconomic pressures associated with rising prices and living costs (Eurofound, 2024).

A second key driver was the introduction of the EU framework on adequate minimum wages. Directive (EU) 2022/2041 does not establish a uniform European minimum wage, nor does it transfer responsibility for wage-setting to the European Union. Instead, it requires Member States with statutory minimum wages to establish transparent procedures for setting and updating minimum wages based on clearly defined adequacy criteria. These criteria include the purchasing power of minimum wages, the cost of living, the general level and distribution of wages, wage growth, and long-term productivity developments. In addition, the Directive encourages the use of indicative reference values, such as 60% of the gross median wage and 50% of the gross average wage, when assessing the adequacy of statutory minimum wages (European Commission, 2022).

This European framework contributed to a shift in the logic of minimum wage uprating. In several Member States, especially in Central and Eastern Europe, minimum wage increases have increasingly been linked to explicit adequacy objectives and to the broader goal of upward wage convergence. In this sense, the Directive functions as an institutional pull factor: it does not mechanically determine national wage levels, but it strengthens the political and legal rationale for increasing minimum wages relative to average or median earnings. According to Eurofound (2024), the practice of linking minimum wages to percentages of average or median wages has continued and has contributed to the significant increases observed in 2024.

A third driver was the interaction between minimum wage policy and collective bargaining. Directive (EU) 2022/2041 explicitly links adequate minimum wages with the promotion of collective bargaining. Member States with collective bargaining coverage below 80% are required to establish action plans to promote collective bargaining. This is important because wage floors are more likely to be adequate and effectively enforced where collective bargaining institutions are strong. In countries with extensive bargaining coverage, minimum wage protection is often provided through collective agreements rather than statutory wage floors, whereas in countries with weaker bargaining systems the statutory minimum wage plays a more direct role as the main wage-setting anchor (European Commission, 2022).

Labour market conditions also contributed to wage changes, although their impact differs between minimum and average wages. For average wages, labour shortages, tight labour markets, and negotiated wage settlements played a more direct role. For minimum wages, however, these factors operated mainly through political and institutional decision-making channels: tight labour markets and recruitment difficulties made higher wage floors more politically acceptable and, in some countries, supported the arguments that higher minimum wages were necessary to reduce emigration, attract workers, and support domestic demand (European Commission, 2025).

Productivity and competitiveness concerns acted as limiting or moderating factors. The Directive includes long-term productivity developments among the criteria to be considered when setting statutory minimum wages. This reflects the need to balance wage adequacy with the capacity of firms, especially small- and medium-sized enterprises and labour-intensive sectors, to absorb higher labour costs. Therefore, the causes of minimum wage changes were not purely redistributive; they involved an institutional balancing

process between purchasing power protection, wage convergence, productivity and competitiveness (European Commission, 2022).

Overall, the causes of wage changes during 2019–2024 can be understood as the interaction of four main factors: legal and institutional wage-setting mechanisms, inflation and purchasing power losses, EU-level adequacy objectives, and national labour market conditions. Among these, the most important driver of statutory minimum wage changes was the institutional response to the cost-of-living crisis and to the emerging EU adequacy framework. This explains why minimum wages increased substantially in many Member States, even in cases where productivity growth was moderate, and why the changes were more pronounced in countries pursuing upward convergence from lower initial wage levels. Finally, as shown in Table 3, the analytical drivers of wage changes during 2019–2024 differ across countries.

Table 3. Analytical drivers of wage changes during 2019–2024.

Driver	Mechanism	Relevance for Minimum Wages	Relevance for Average Wages
Legislative/statutory decision	Minimum wage is changed by law, decree, government decision, or statutory formula.	Main immediate cause of statutory minimum-wage change.	Indirect effect through spillovers and wage-floor anchoring.
Inflation/cost of living	Governments and social partners raise wage floors to protect purchasing power.	Most frequently considered criterion for setting 2024 national minimum wage rates, according to Eurofound.	Leads to negotiated wage claims and delayed inflation compensation.
EU Directive 2022/2041	Introduces adequacy criteria and encourages reference values.	Strengthens the use of 60% median and 50% average wage benchmarks.	Influences wage-setting debates and collective bargaining indirectly.
Average/median wage targets	Minimum wage linked to wage distribution indicators.	Raises Kaitz index and supports upward convergence.	Maintains coherence between wage floor and wage structure.
Collective bargaining	Social partners influence wage-setting procedures and sectoral wage floors.	Improves adequacy and enforcement where coverage is high.	Direct mechanism for negotiated average wage growth.
Labour shortages/tight labour markets	Higher wages used to attract and retain labour.	Makes statutory increases politically and economically more acceptable.	Direct driver of wage growth in shortage sectors.
Productivity/ competitiveness	Used as constraint or moderating criterion in wage-setting.	Limits or phases increases where firms have weak absorption capacity.	Key condition for sustainable real wage growth.
Social protection/poverty reduction	Minimum wage used to reduce in-work poverty and low pay.	Core policy motive for raising wage floors.	Indirect effects through wage compression and disposable income.

Additionally, Figure 2 that follows illustrates the nominal and the real statutory minimum wage in May 2024 as a percentage change relative to May 2019. More analytically, the green line symbols represent each country's nominal minimum wage while the green triangle represents the same country's real minimum wage. The vertical line that connects the line with the triangle represents their difference. Furthermore the graph contains two red symbols as well representing the corresponding nominal and real statutory minimum wage for OECD (Average and Medium values).

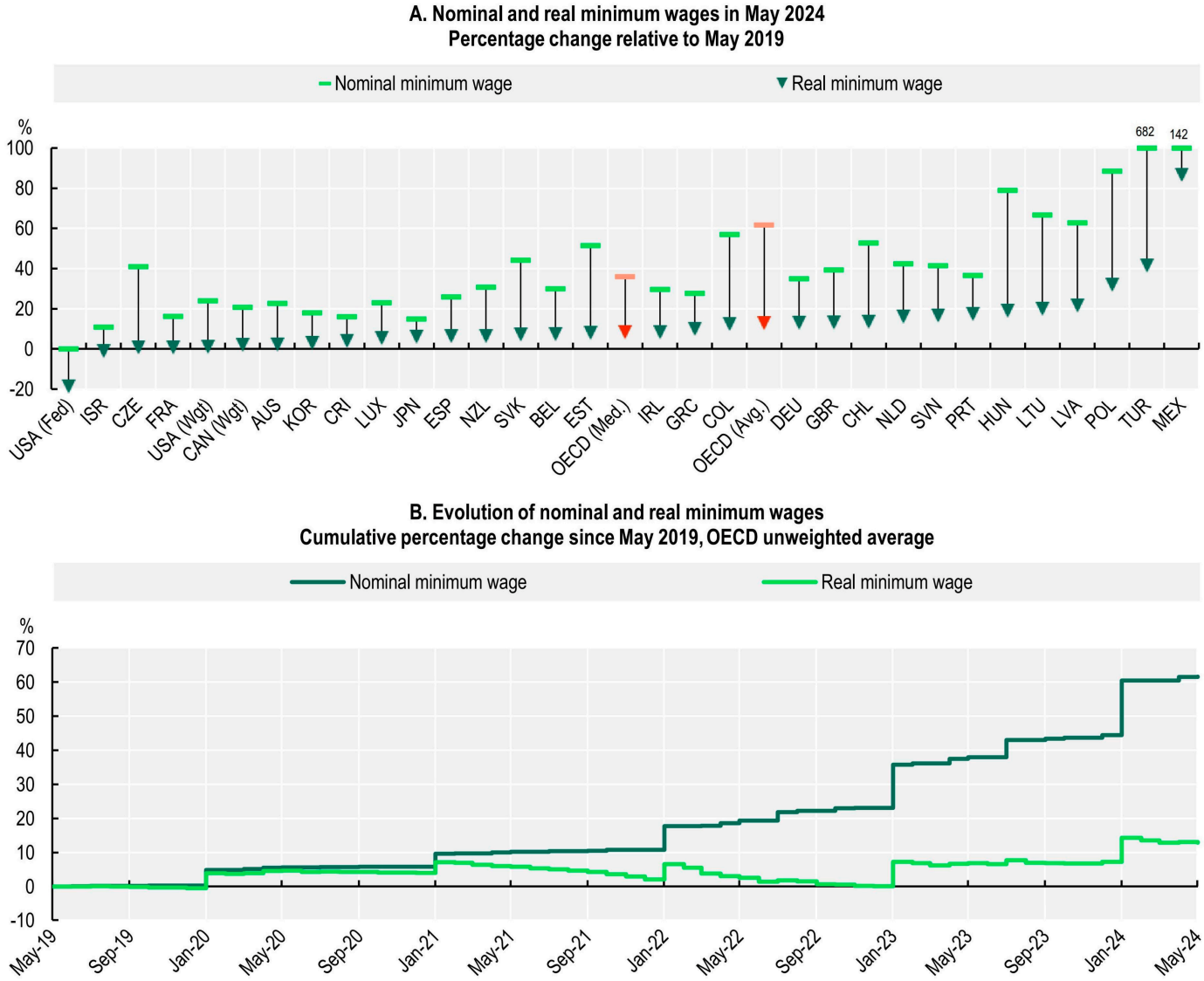


Figure 2. Nominal and real statutory minimum wages in May 2024, percentage change relative to May 2019. Note from the figure: ""OECD (Avg.)" is the unweighted average of 30 OECD countries with a statutory minimum wage shown in this chart, except the United States (weighted); "OECD (Med.)" is the median values across the same countries. Canada (weighted) is a Laspeyres index based on minimum wage of provinces and territories (excluding the Federal Jurisdiction) weighted by the share of employees of provinces and territories in 2019. United States (weighted) is a Laspeyres index based on minimum wage of states (not including territories like Puerto Rico or Guam) weighted by the share of nonfarm private employees by state in 2019. Change in real minimum wage for New Zealand (Panel **A**) is estimated by assuming that the CPI in May 2024 is the same as in Q1 2024. For further details on the minimum wage series used in this chart, current and planned minimum wage uprating in 2024, and the evolution of nominal and real minimum wages since May 2019 by country)". Source: (OECD, 2024, Figure 1.13).

5. Evolution of Average Salary

Though minimum wage policies have come to be increasingly discussed at the level of the EU, the evolution of average wages is equally significant in any assessment of wage adequacy, labour market equilibrium, or standards of living. The dynamics of average wages reflect not only policy decisions but also market-driven outcomes influenced by productivity and inflation, labour supply–demand imbalances, and sectoral restructuring. While minimum wages are administratively set or strongly influenced by negotiation,

average wages are determined through collective bargaining outcomes and enterprise-level negotiations within broader macroeconomic conditions across Member States.

5.1. Average Growth as a Result of Inflation and the Labour Market

From 2019 to 2024, average wages in the EU came under strong upward pressure from inflation and tightening labour markets. After the COVID-19 pandemic, supply-chain disruptions and the energy shock linked to Russia's war against Ukraine pushed euro-area inflation sharply higher. Eurostat reported euro-area annual inflation of 10.6% in October 2022, with energy and food contributing most significantly. Wage bargaining accelerated in many sectors as workers attempted to recover lost purchasing power (European Central Bank, 2023; Eurostat, 2024).

In Germany, negotiated wages accelerated in 2022–2023, particularly in public services, transport, and manufacturing, although wage settlements generally followed rather than led the inflation shock (Destatis, 2024). In the Netherlands and Belgium, stronger wage-indexation or collective bargaining mechanisms helped protect purchasing power more directly, whereas France's automatic SMIC indexation mainly protected the wage floor rather than the whole wage distribution.

Nominal wage growth was also strong in Central and Eastern Europe because starting wage levels were lower, labour markets were tight, and governments used wage policy to support convergence. In several countries, nominal gains were large, but real gains were partly offset by high inflation in 2022–2023.

Labour shortages have been a major factor in driving average wages up, especially in the healthcare, construction, ICT, and transport sectors. As demographic decline deepens across much of the EU, structural recruitment gaps are borne by employers, which necessitates wage improvement not only at the entry level but across the entire wage distribution (European Commission, 2023). In addition, remote work and cross-border digital labour markets have created sustained upward pressure on skilled workers' wages in urban centres.

But the evolution of average wages has not been homogeneous. The premium for higher educated workers has maintained or increased its level and wage growth has been more limited in part-time, fixed-term, and informal employment. Furthermore, gender and regional wage gaps are persistent, with rural areas and female-dominated sectors still reporting below average growth.

Average wage growth in the EU from 2019 to 2024 therefore reflected both reactive inflation compensation and structural labour market pressures. It helped limit real income erosion for some groups but did not eliminate differences across countries, sectors, and worker categories. As minimum wages converge upward, average wage dynamics remain essential for assessing the adequacy and competitiveness of wage floors.

In Figure 3 below is illustrated the real wage growth compared with pre-pandemic levels, Q1 2024. In part A of the figure The dark green color represents the nominal hourly wage while the light green the real hourly wage. Additionally with dark red and light red are the corresponding values of OECD. Furthermore, in part B the dark green represents the Q1 2024 or latest values of the real wages while the light green represents through since Q4 of 2021. One again the red color represents the corresponding OECD values.

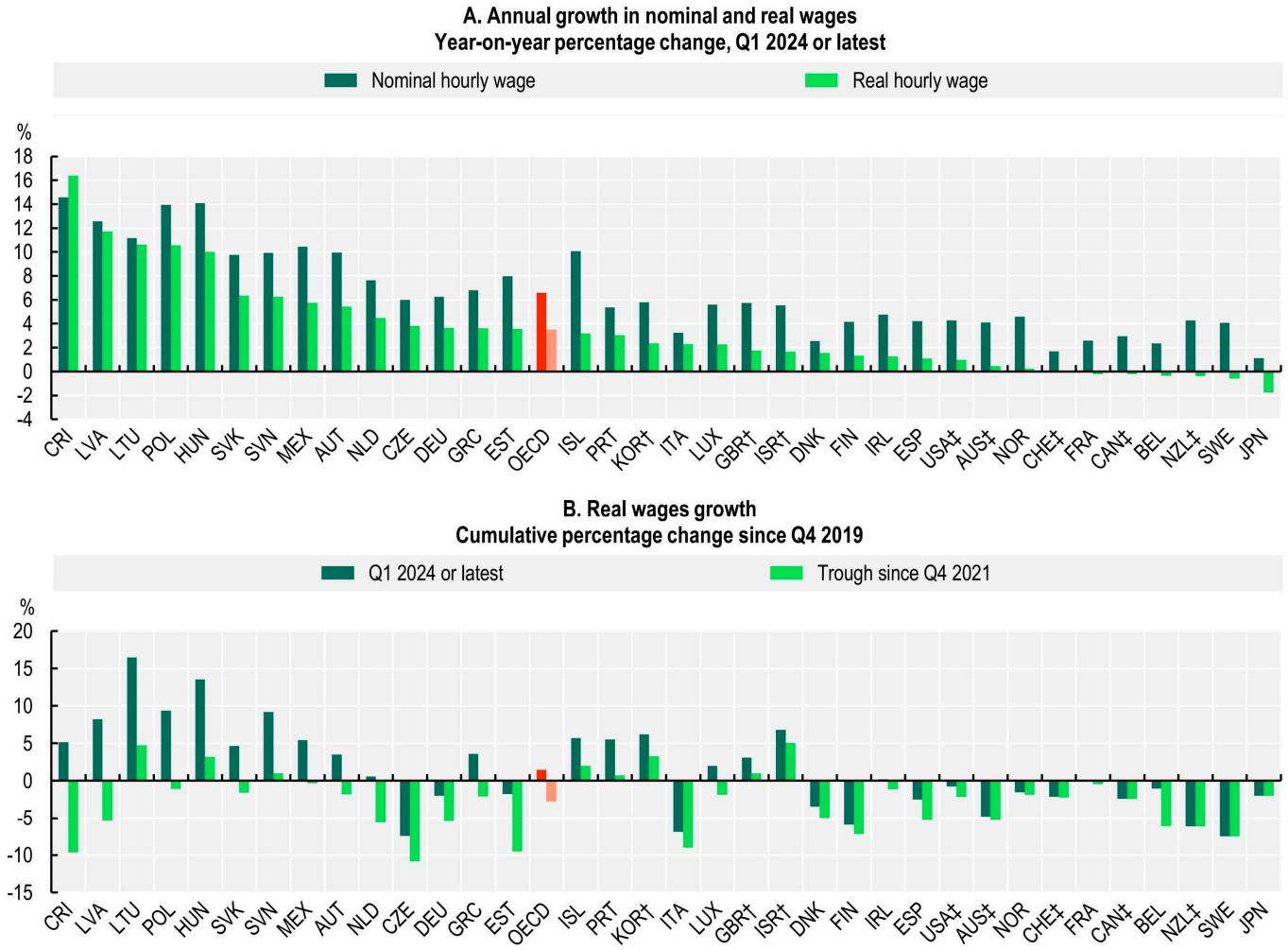


Figure 3. Real wage growth compared with pre-pandemic levels, Q1 2024 or latest available quarter. Note form the figure: "Otherwise indicated, nominal hourly wages refer to a constant-industry-structure "wages and salaries" component of the labour cost index. Statistics refer to the private sector only for Costa Rica, Japan, Korea, Mexico and the United States. Nominal wage series are seasonally adjusted for all countries except for Canada, Costa Rica, Israel, Japan, Korea, Mexico, New Zealand and Switzerland. Nominal hourly wage presents a significant amount of unreported income for Mexico. †: Nominal hourly wage refers to the actual wage i.e. without any adjustment for sources of compositional shifts for Costa Rica, Israel, Korea, Mexico and the United Kingdom, and thus comparing these results with the other countries requires caution. Moreover, nominal hourly wage refers to the average monthly wages per employee job for Israel, and to the average weekly earnings for the United Kingdom. ‡: Nominal hourly wage controls for additional sources of compositional shifts, such as regions for Australia, Canada and New Zealand, job characteristics and workers' characteristics for Australia and New Zealand, gender for Switzerland, and occupations for the United States. For Switzerland, the quarterly estimates refer to the annual Swiss wage index". Source: (OECD, 2024, Figure 1.9).

5.2. Specifically in the Euro Area

Common trends and major differences in the dynamics of average wage growth in the Euro Area are also important since monetary policy is common while institutional variation exists at the national level. As all countries of the Euro Area use a common currency, they are all under fiscal and monetary discipline from the European Central Bank (ECB), and therefore to a large extent exposed to common macroeconomic constraints alongside national differences in inflation dynamics, collective bargaining structures, and productivity. Thus, between 2019 and 2024, average wage evolution in the Euro Area was

led by two forces operating in most cases: inflationary compensation and tight labour market conditions—with varying intensity across Member States.

Following the pandemic, nominal wage growth accelerated across the euro area, but real wage outcomes differed markedly by country. Automatic indexation in Belgium protected purchasing power more effectively than in countries where wage adjustment was less institutionalised. In Spain, Portugal, Italy, and Greece, nominal increases were often insufficient to fully offset earlier real wage losses (European Central Bank, 2023; Eurofound, 2023).

In Germany, wage growth accelerated after the subdued 2020–2021 period, especially in sectors affected by labour shortages and stronger collective bargaining. France experienced indirect wage floor effects through SMIC indexation, although middle-income wages were less automatically protected from inflation. These differences illustrate why common euro-area inflation can translate into heterogeneous national wage outcomes.

Italy and Greece illustrate the importance of institutional settings. Italy has no statutory national minimum wage and relies on collective agreements, while Greece has a state-centred statutory minimum wage mechanism. In both cases, average wage recovery has been constrained by productivity, bargaining coverage, and sectoral composition (OECD, 2023; Bank of Greece, 2024).

Another key driver of wage dynamics in the Euro Area has been monetary tightening by the ECB. Since mid-2022, interest rate hikes have not only reduced inflation expectations but also put downward pressure on wage setting, particularly in the more fiscally conservative countries. Therefore, nominal wage increases had started to decelerate by late 2023 in most of the Euro Area, even though real wages were still below their pre-pandemic levels in many cases.

Though synchronised nominal wage growth has been observed in the Euro Area, real wage outcomes have diverged due to differences in the level of inflation, systems of wage indexation, bargaining strength, and labour market slack. Countries where institutional mechanisms for coordinating wages were strong prior to the shock had more success in preserving purchasing power. These include Belgium, Austria, and Germany. This contrasts with much of the southern and peripheral economies, where real wages have either stagnated or eroded. This makes inequality a significant internal divergence problem within the monetary union (Schulten & Müller, 2021; Eurofound, 2023).

5.3. Countries with Strong Increases

Several Central and Eastern European and Baltic economies recorded particularly strong nominal wage growth during the period 2019–2024. Lithuania, Romania, Poland, and Latvia are prominent examples, reflecting low starting wage levels, labour shortages, emigration pressures, public sector wage policy, and rapid increases in statutory wage floors.

In Lithuania, gross average monthly earnings were EUR 1296.4 in 2019 and had risen to EUR 2196.40 by the second quarter of 2024. This increase was supported by strong activity in ICT, finance and manufacturing, persistent labour shortages, and a rising minimum wage, which reached EUR 924 in 2024 (Statistics Lithuania, 2020; EURES, 2024b).

Romania also recorded strong wage growth. EURES data indicate that gross average earnings in 2023 were around EUR 1467, and that gross average earnings had increased by 66.5% compared with 2018 (EURES, 2024d). Inflation reduced part of the real gain, but public-sector pay decisions, construction activity, and labour shortages sustained nominal wage momentum.

Poland also experienced a rapid rise in average earnings. EURES data report gross average earnings of about EUR 1573 in 2023 and a gross increase of 46.7% compared with 2018 (EURES, 2024c). The minimum wage rose from PLN 1750 in 2015 to PLN 4300 by

July 2024, strengthening lower-end wage pressure and raising debates about productivity alignment (Narodowy Bank Polski, 2024).

Latvia followed a similar convergence path. EURES data report gross average earnings of about EUR 1547 in 2023 and a gross increase of 56.1% compared with 2018 (EURES, 2024a). Growth was concentrated in public services, ICT, logistics, and sectors affected by skill shortages.

In these countries, wage growth was not simply an inflationary response. It also reflected structural labour market change, migration pressure, foreign investment, and policy choices aimed at domestic demand support and convergence with EU wage norms.

However, fears about the sustainability of such growth persist. In many cases, unit labour costs have increased more than productivity has improved, which raises significant concerns about competitiveness, particularly in the export sectors. However, wage growth has been moderating due to inflation volatility and monetary tightening introduced in 2024, hence indicating that it may plateau or even slow down going forward.

Lithuania, Romania, Poland, and Latvia therefore show that rapid nominal wage advancement is possible when labour markets are tight and policy support is strong. The long-term sustainability of this path depends on productivity growth, investment in skills, and institutionalised social dialogue.

6. Relationship and Structure Analysis

The relation of minimum wages to average wages is the basic test of the structural integrity of wage systems in most countries of the European Union, though this fact should by no means obscure broader dynamics relating to wage adequacy, inequality, and labour market segmentation. Increasingly, however, it is being used by policy institutions as a key metric for assessing social cohesion through fair pay—most notably the European Commission and Eurofound. Over the past decade, changes in minimum wage policies have noticeably redistributed and reshaped average earnings across lower wage deciles and those sectors where statutory wage floors are binding.

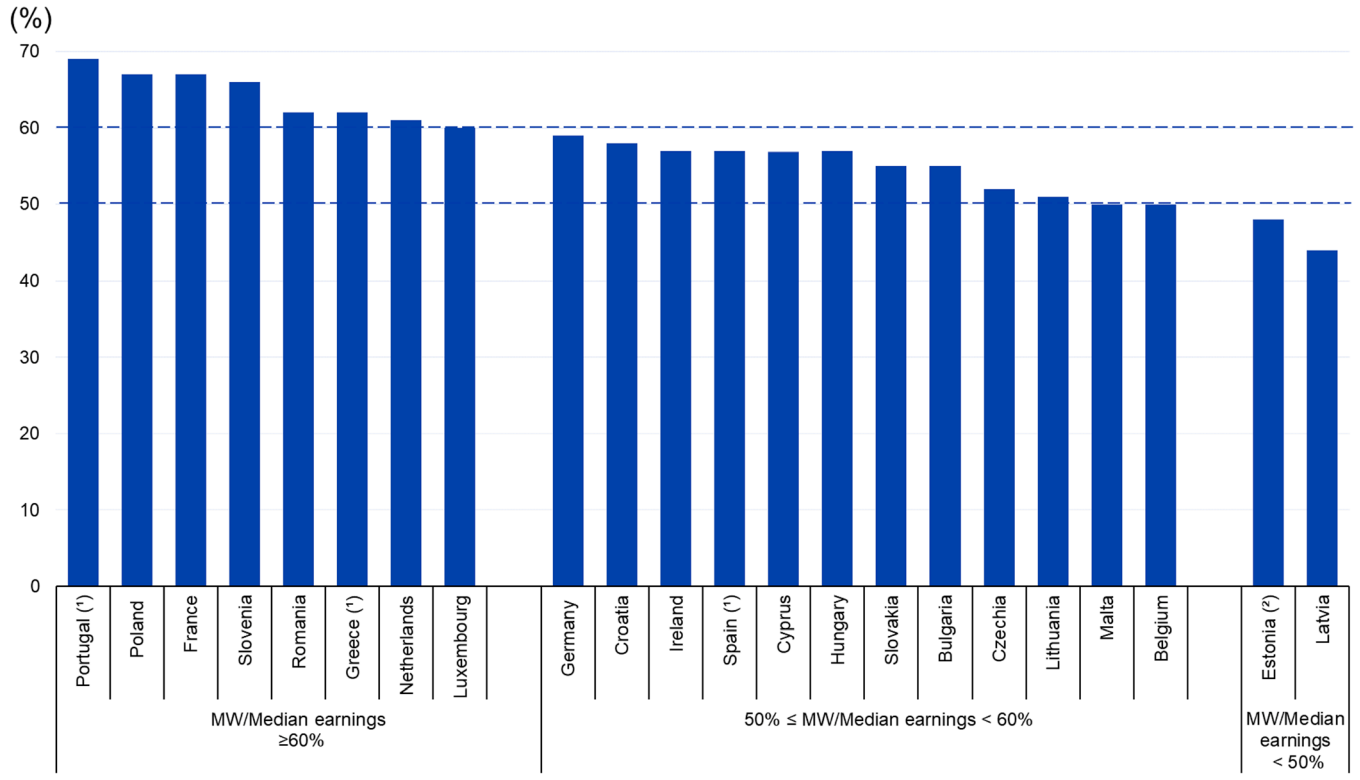
6.1. Relationship Between Minimum and Average Wages: Convergence, Concentration, Spillover Effects

The main conceptual tool used to gauge the relationship between minimum and average wages is the Kaitz index, which expresses the minimum wage as a percentage of either the average or the median wage. Directive (EU) 2022/2041 refers to indicative values commonly used internationally, including 60% of the gross median wage and 50% of the gross average wage, as possible reference points for assessing adequacy (European Commission, 2022).

In Figure 4 that follows, the minimum wages as a proportion of median gross earnings for 2024 are presented. More analytically, each blue bar represents a country of interest and the graph separated the countries into three parts. The countries where the minimum wage as a proportion of the median gross earnings are bigger or equal to 60%, the second part the proportion is between 50% and 60% and finally the third part where the proportion is less than 50%.

In Central and Eastern Europe, this convergence has occurred quite visibly. Countries such as Poland, Lithuania, and Romania are actively pursuing the upward adjustment of minimum wages so that their Kaitz index values are closer to or exceed 50% of average wages (OECD, 2023). In response to high outmigration as well as internal inequality within these countries, deliberate efforts not only toward improving standards of living but also toward readjusting minimum wage policies have been articulated. These are the countries that demonstrate what could best be described as “bottom-up convergence”;

raising minimum wages on a sustained basis sets broader wage structures through spillover effects, raising wages just above the minimum and compressing the lower part of the wage distribution.



Median earnings refer to the level of earnings, which divides the employees into two equal groups: half earn less than the median and half earn more.
Data refer to the gross monthly earnings covering the wages and salaries earned by full-time and part-time employees in the reference month (2022 in most countries).
They exclude overtime pay and other extra payments and are calculated before tax and social security contributions payable by the employee are deducted.
(1) The levels mentioned in the table are calculated excluding 13th and 14th month to be consistent with the monthly earnings based on SES 2022
(2) The gross monthly earnings including overtime pay and shift premiums
Source: Eurostat, Structure of Earnings Survey 2022 and Minimum wages; special calculation made for the purpose of this publication; data are not available in Eurostat's online database

eurostat

Figure 4. Statutory minimum wages as a proportion of median gross earnings in EU Member States, 2024. Note: Dashed lines indicate the 60% and 50% adequacy reference values. Source: Eurostat, Minimum wage statistics; Eurostat (earn_mw_cur) and Structure of Earnings Survey 2022 (https://ec.europa.eu/eurostat/statistics-explained/SEPDF/cache/1568.pdf?v=7386205344265157 accessed on 12 July 2026).

Spillover effects have been observed across several EU labour markets. Empirical studies, including Gregory and Zierahn (2022), Fougère et al. (2018), and Schulten and Müller (2021), show that increases in statutory minimum wages tend to exert positive pressure on adjacent pay bands in sectors with high minimum wage coverage, such as retail, hospitality, and care work. The effects are amplified in countries with low bargaining coverage because minimum wages often act as de facto anchors for wage setting.

Simultaneous convergence between minimum and average wages also generates structural wage compression at the lower end of the earnings distribution. This may reduce in-work poverty while also contributing to greater social cohesion; however, it can flatten wage hierarchies, providing little reward for skills and experience in some sectors. This

phenomenon has led to debate about potential disincentives for upskilling and internal promotion in France and Portugal, where the Kaitz index is already high.

Another major dimension is sectoral concentration. The proportion of workers earning at or near the minimum wage varies greatly between countries and sectors. Where the share of minimum wage workers is high, changes in statutory wage floors can have larger aggregate effects on average wage statistics, especially in low-wage sectors. In countries with strong collective bargaining, such as Austria and Denmark, sectoral agreements often set entry wages above statutory-equivalent floors and therefore reduce the direct statistical link between minimum and average wages (Garnero, 2021; Eurofound, 2024).

Furthermore, Figure 5 presents the share of employees earnings less than 105% of the minimum wage, in October 2022, for several countries of interest.

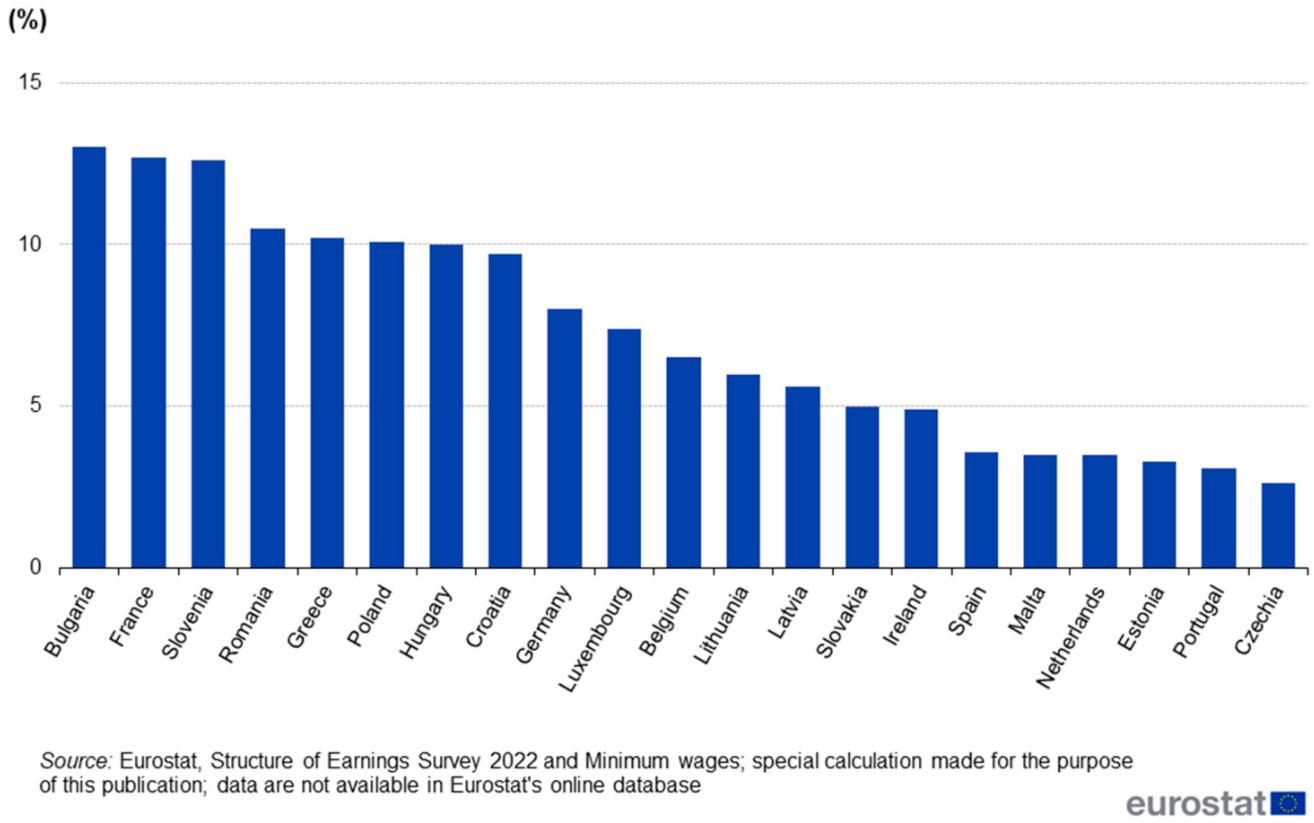


Figure 5. Share of employees earning less than 105% of the statutory minimum wage, October 2022. Source: Eurostat, Minimum wage statistics; Eurostat (earn_mw_cur) and Structure of Earnings Survey 2022 (https://ec.europa.eu/eurostat/statistics-explained/SEPDF/cache/1568.pdf?v=7386205344265157 accessed on 12 July 2026).

Convergence processes may also reflect broader political–economic models. In coordinated market economies, such as Germany and the Netherlands, the relationship between minimum and average wages tends to be mediated by collective institutions, preserving wage differentiation. In liberal or state-driven models such as Hungary and Greece, the relationship is more directly shaped by state intervention. As a result, these systems often exhibit stronger mechanical wage convergence but, in some cases, weaker alignment with productivity.

Over the last decade, political initiatives, institutional reforms, and inflationary dynamics have tightened the relationship between minimum and average wages in the EU. Convergence has led to wage compression, reducing earnings inequality and improving social adequacy, although with potential trade-offs for skill incentives and productivity alignment. Going forward, this relationship will depend on how Member States bal-

ance statutory wage-setting mechanisms, collective bargaining coverage, and productivity growth in an environment characterised by persistent inflation and low economic growth.

To clarify the comparative framework of the analysis, Table 4 summarises the main national cases examined in the present article. The table provides an overview of wage-setting mechanisms, key wage developments, employment outcomes, implications for convergence, and the main policy lessons emerging from the comparison. It complements the preceding discussion by highlighting the similarities and differences across countries that are the most relevant for understanding the effects of the minimum wage policies.

Table 4. Comparative overview of selected national wage-setting systems and outcomes.

Country	Wage-Setting Mechanism	Main Wage Development, 2019–2024	Employment/Adjustment Outcome	Convergence Relevance and Policy Lesson
Bulgaria	Statutory minimum wage set by government decree.	Strong nominal increase from a low initial level, reaching about EUR 477 in 2024.	No evidence of broad employment collapse, but affordability concerns remain for low-productivity firms.	High relevance for CEE upward convergence; increases require productivity and enforcement support.
Romania	Government-led statutory minimum wage adjustments.	Rapid increases linked to wage adequacy, labour shortages, and emigration pressures.	Labour market remained relatively resilient, but informality and enforcement remain concerns.	Illustrates use of wage policy to reduce low pay and support domestic labour retention.
Poland	Statutory wage floor with strong political uprating.	Large nominal increases and movement towards higher minimum-to-average wage ratios.	Adjustment concerns relate mainly to SMEs, productivity, and sectoral cost pressures.	Shows that wage convergence can advance quickly but requires productivity alignment.
Lithuania	Statutory minimum wage with strong adequacy orientation.	Significant increases in minimum and average wages.	Evidence points to wage compression with no statistically significant adverse employment effects in the reviewed study.	Illustrates convergence and lower-tail wage compression in a tight labour market.
Germany	Statutory minimum wage within a broader industrial-relations system of bargaining and codetermination.	Introduction in 2015 and large increase to EUR 12/h in 2022.	Effects are limited but heterogeneous; adjustment through mini-jobs, hiring, working hours, and reallocation.	Institutional benchmark showing that wage floors can coexist with strong labour markets when institutions mediate adjustment.
Spain	Statutory minimum wage with large 2019 policy increase.	Sharp minimum-wage rise followed by further adjustments.	Aggregate effects appear limited, but temporary, young, agricultural, and low-productivity workers remain more exposed.	Shows that large increases require close monitoring in segmented labour markets.
Greece	State-led statutory minimum wage after consultation with social partners.	Gradual recovery after austerity-era wage suppression; EUR 830 in 2024.	Youth unemployment, informality, and SME cost pressures remain important constraints.	Wage restoration requires stronger bargaining, enforcement, and active labour-market policies.
France	Statutory minimum wage with indexation mechanism.	Regular adjustments protect low-paid workers against inflation.	Risk of wage compression is more important than broad unemployment effects.	Indexation protects purchasing power but may flatten wage hierarchies.
Belgium	Automatic indexation combined with collective bargaining.	Purchasing power better protected during inflationary shock.	Coordinated institutions moderate adjustment pressures.	Shows how institutional coordination can reduce disorderly wage–price dynamics.
Italy	No statutory national minimum wage; sectoral collective agreements dominate.	Wage adequacy depends on collective agreement coverage and enforcement.	Coverage gaps and low-wage risks persist where bargaining is fragmented.	Non-statutory model illustrates that collective bargaining alone may leave adequacy gaps when coverage is uneven.

Note: The table synthesises the country evidence discussed in Sections 4–8. It does not rank national systems; it identifies how institutional design shapes wage convergence, employment adjustment, and policy trade-offs.

6.2. Impact on Inequality

The way minimum and average wages relate to each other has direct implications for earnings inequality inside EU Member States. Many empirical studies and institutional reports note that higher minimum wages, when accompanied by limited top wage dispersion, can significantly reduce wage inequality (OECD, 2022; Eurofound, 2021). By reducing the incidence of extremely low pay, they compress wage gaps between the bottom

and the middle of the wage distribution, which is where statutory wage floors have their greatest impact.

Evidence from countries that raised minimum wages rapidly, including Lithuania, Poland, and Romania, points to lower-tail wage compression and a reduction in the incidence of very low pay. The magnitude of these effects varies by country and depends on enforcement, tax–benefit systems, and the broader wage distribution. For this reason, this analysis avoids attributing precise changes in the Gini coefficient or the 90/10 wage ratio to minimum wage policy unless the underlying study directly estimates them.

In Western European countries, where wage inequality is generally more stable and minimum wages do not play a dominant role because of high collective bargaining coverage, the effects of minimum wages on reducing inequality are still present but more modest. For example, in Germany, recent studies on the introduction of a statutory minimum wage in 2015 have found evidence of reductions in lower tail wage dispersion, with stronger impacts on women, part-time workers, and employees in the eastern regions (Dustmann et al., 2022). However, the effects on overall income inequality were constrained by rising top-end wages.

Conversely, in countries where minimum wages remained low or stagnant relative to median earnings—such as Czechia or Slovakia—the reduction in inequality has been more limited. Moreover, in Southern European countries like Italy, where no statutory minimum wage exists, and Spain, where rapid increases only began in 2019, the inequality-reducing impact has been more recent and more sector-specific (Hijzen et al., 2023).

The institutional environment is important in determining whether the inequality effects of minimum wages are amplified or mitigated. Countries with high collective bargaining coverage and progressive taxation systems are more likely to see minimum wage policies translate into broader income equalisation (Garnero, 2021). Conversely, in countries with weak enforcement mechanisms or large informal economies, nominal increases in minimum wages often do not reach a significant proportion of low-wage earners, thereby limiting redistributive impact.

Women, young workers, and part-time employees are likely to benefit disproportionately from stronger minimum wage protection because they are overrepresented in low-paid sectors such as hospitality, retail, care, and personal services. The gender equality effect is therefore plausible, but its size depends on sectoral coverage, enforcement, and whether wage increases are accompanied by broader collective bargaining and working-time protections (Eurofound, 2022; European Commission, 2022).

Wage compression without upward mobility may occur if middle and upper-tier wages do not increase along with the minimum, while minimum wages are also rising. In addition, in the absence of parallel training, productivity, and public service investments, the impact of reducing poverty through minimum wages would be short-lived or would instead be shifted into higher costs of living.

Overall, the minimum wage strengthening mechanisms across the EU have led to a moderate decrease in wage and earnings inequality, particularly in low- and middle-income countries that previously exhibited higher levels of wage dispersion. The magnitude of this impact depends on institutional structures and complementary policies, as well as the extent to which wage increases are sustained and effectively enforced. As the EU advances towards greater wage convergence, ensuring that equity gains become structurally embedded, rather than remaining temporary or being reversed by economic cycles or eroded inflation, will remain a major challenge.

Finally, in Figure 6 below is presented the proportion of low-wage earners in EU countries for the year 2022.

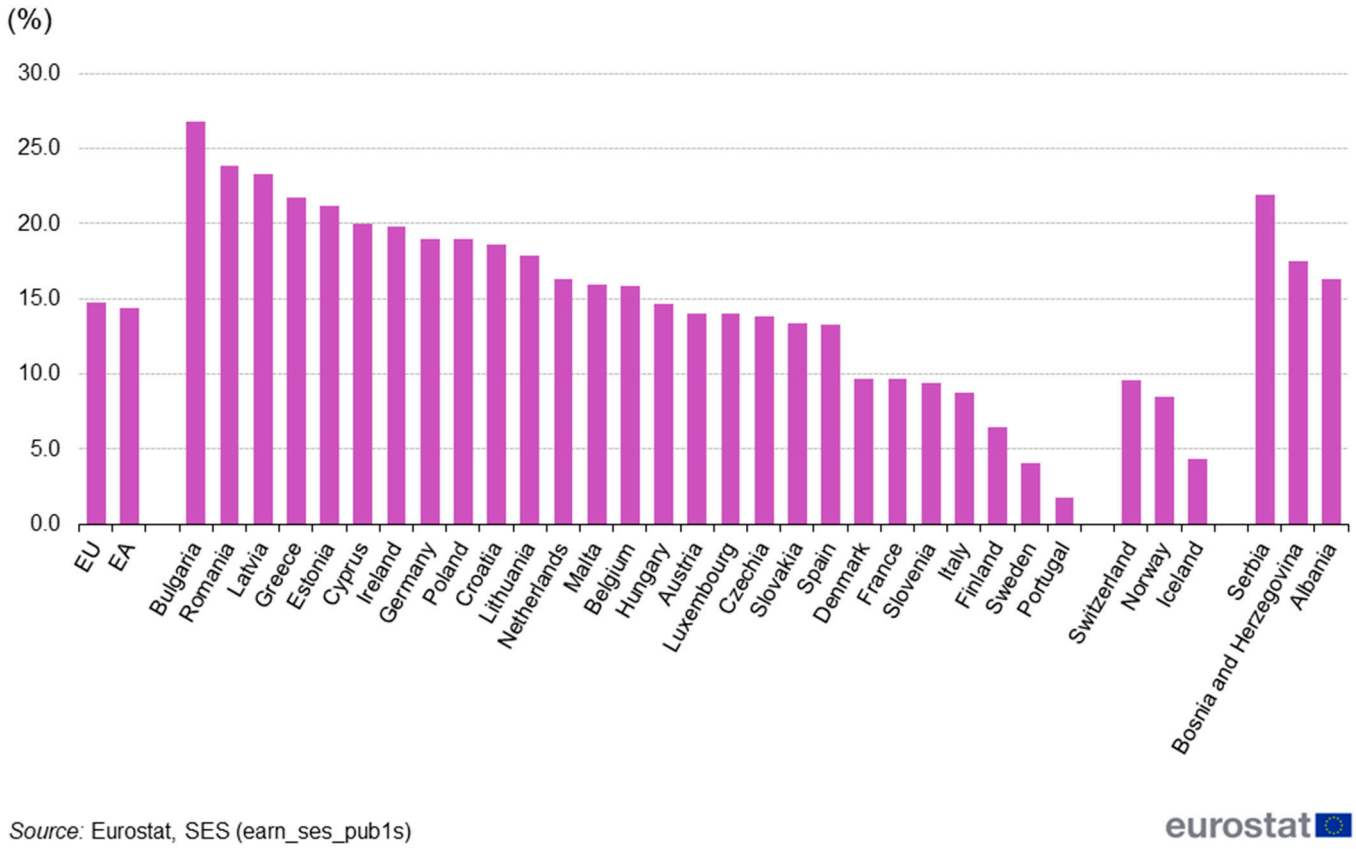


Figure 6. Proportion of low-wage earners in EU countries, 2022. Source: Eurostat, Earnings statistics; Structure of Earnings Survey (earn_ses_pub1s).

6.3. Impact on Unemployment and Working Hours

Raising the minimum wage has often been followed by fears of negative effects on employment and working hours, especially for low-skilled workers, young people, and small businesses. However, empirical evidence from across the European Union since 2015 shows that such effects are highly context-dependent and generally smaller than predicted by traditional economic models, particularly when increases are implemented gradually, carefully targeted, and accompanied by complementary institutional support measures.

In terms of unemployment, most post-2019 studies do not find a strong or systematic increase in joblessness following moderate or even substantial minimum wage hikes. For Germany, research on the 2015 reform and subsequent adjustments finds no large aggregate unemployment effect, although marginal employment and firm-level reallocation did occur (Caliendo et al., 2018; Bossler & Gerner, 2020; Dustmann et al., 2022; Holtemöller & Pohle, 2020). Evidence from Lithuania and other Central and Eastern European countries similarly suggests that rapid wage growth can coexist with low unemployment when labour demand is strong.

In Spain, the 2019 increase was large and therefore particularly relevant for assessing potential risks. The evidence indicates limited aggregate employment effects but points to greater vulnerability among temporary, young, agricultural, and low-productivity workers. This means that minimum wage policy should be monitored not only through total employment, but also across sectors, age groups, contract types, and regions (Banco de España, 2020; Hijzen et al., 2023).

Although total unemployment does not increase, there is some evidence to suggest that firms adjust on the intensive margin-meaning working hours, not headcount. Firms facing higher wage floors in France and Belgium have at times responded by limiting overtime,

shifting workers to part-time contracts, or simply by reducing weekly working hours, especially in low-margin industries (INSEE, 2023; ETUI, 2023). Surveys in Greece have indicated reduced average working hours per week among workers in the accommodation and food service sectors after recent minimum wage increases. This may reflect cost-control strategies adopted by small firms (INE GSEE, 2023).

EU labour-market evidence also suggests that higher minimum wages may encourage formalisation where informality was previously high, but this effect is difficult to isolate from broader labour inspection and tax compliance reforms. Accordingly, this analysis considers formalisation as a possible channel rather than a direct or automatic consequence of minimum wage increases.

Importantly, working hour adjustments often vary across demographic groups. Young, low-skilled, and migrant workers are more likely to experience reductions in working hours in response to wage increases, particularly in sectors without collective bargaining protections. Conversely, unionised workers and those in public administration typically maintain stable working hours, even during wage reforms (Garnero, 2021).

Overall, though the unemployment effects of minimum wage increases in the EU have been rather muted, adjustments in working hours, particularly in sensitive sectors and under conditions of economic uncertainty, should also be taken into account. These effects are also mediated by the broader institutional framework, including social dialogue, enforcement capacity, and active labour market policies where available. Therefore, future research and policymaking should extend their focus beyond employment levels to include working time, contract quality, and task intensity in order to fully capture the labour market effects of minimum wage reforms.

7. Legal and Political Framework

Minimum and average wage regulation in the European Union is no longer solely an economic and social issue but has also become part of a broader framework of legal coordination and political integration. Directive (EU) 2022/2041 on adequate minimum wages represents an important development in EU social policy because it introduces procedural obligations while respecting the principles of subsidiarity, national wage-setting traditions and the autonomy of social partners.

7.1. EU Directive on Adequate Minimum Wages—First Effects

Adopted on 19 October 2022, Directive (EU) 2022/2041 seeks to improve living and working conditions by promoting adequate statutory minimum wages, strengthening collective bargaining on wage-setting, and ensuring effective access to minimum wage protection. It does not set a specific EU minimum wage level, nor does it require countries that rely on collective agreements to introduce a statutory minimum wage. Member States were required to transpose the Directive by November 2024 (European Commission, 2022).

The Directive was built around two core pillars: (1) ensuring that statutory minimum wages are adequate and (2) strengthening collective bargaining coverage. For countries with statutory minimum wages, adequacy should be determined on the basis of objective criteria such as purchasing power, wage distribution, wage growth, and productivity (Article 5). The commonly used thresholds of 60% of the gross median wage and 50% of the gross average wage serve as indicative reference benchmarks rather than legally binding wage levels (European Commission, 2022).

Initial signs indicate that the Directive has already produced anticipatory effects. Several countries have initiated reforms to align their wage-setting frameworks with its objectives. For example, Portugal, Germany, and Slovenia explicitly referred to the Directive when announcing significant increases in minimum wages during 2023–2024 (Eurofound,

2023). In Germany, the minimum wage was increased to EUR 12 per hour in October 2022, representing a 25% increase compared with its 2021 level. This reform was justified politically, in part, by reference to broader EU objectives of social convergence (BMAS, 2022).

In Spain, the Ministry of Labour relied on social dialogue to support further minimum wage increases, including the 2024 statutory minimum wage of EUR 1134 per month, paid in 14 installments. As in Greece and Portugal, Eurostat converts this amount into a harmonised 12-month equivalent to facilitate cross-country comparison. Romania and Bulgaria have also introduced or considered adjustment mechanisms that link minimum wage revisions to changes in wages, inflation, or productivity. This approach is consistent with the Directive's provisions on minimum-wage adequacy and the involvement of social partners, as set out in Articles 5 and 7 (Ministerio de Trabajo y Economía Social, 2024; European Commission, 2022; Eurostat, 2024).

A major legal obligation under the Directive is that Member States with collective bargaining coverage below 80% must establish an action plan to promote collective bargaining (Article 4). This requirement is particularly relevant for countries such as Greece, Estonia, and Hungary, where collective bargaining coverage remains below this threshold. As of 2024, Greece had begun discussions on reforms aimed at expanding the coverage of sectoral collective agreements, although full implementation had not yet been completed.

Although ambitious, the Directive respects the diversity of national wage-setting models. Denmark, Italy, Austria, Finland, and Sweden are not required to introduce a statutory minimum wage because their wage-setting systems rely primarily on collective bargaining. Instead, they must ensure that workers have effective access to minimum wage protection where such protection is provided through collective agreements.

Politically, this Directive has contributed to re-legitimising social policymaking at the EU level after years of economic governance driven by austerity. It symbolises a renewed commitment to the "Social Europe" agenda, in line with the European Pillar of Social Rights. Although its practical impact ultimately depends on Member States' political commitment and institutional capacity to implement and enforce its provisions, its symbolic and legal significance is considerable. It establishes a common floor of protection across the Union, seeking to rebalance market integration with social protection, even where its immediate practical effects may be limited.

The Directive has already begun to influence national wage policy debates and institutional reforms, but its full effects are likely to become clearer following its transposition and subsequent monitoring. The first European Commission reporting cycle will be important for assessing whether formal compliance translates into substantive improvements in minimum wage adequacy, collective bargaining coverage, and enforcement.

7.2. Member States' Experiences: Engagement with Employers/Migrants

The application of the EU Directive on adequate minimum wages has required Member States to engage not only in institutional reforms but also with key stakeholders, particularly employers' associations and representatives of migrant workers. Success in minimum wage policy reforms—and in the implementation of the Directive itself—depends partly on how effectively national governments have managed tensions and negotiations with those directly involved in the transformation of wage-setting systems.

Employer organisations have responded with varying degrees of support across Member States. In countries such as Germany and France, which have highly institutionalised collective bargaining structures and well-established systems of social dialogue, employers were initially concerned about labour cost pressures, but they generally accepted the legal framework of the Directive as part of a broader social contract. In Germany, for example, while the Confederation of German Employers (BDA) acknowledged the legitimacy of the

increase to EUR 12 per hour, it has called for future wage adjustments to be based on tripartite consultation and economic indicators rather than on political decisions (BDA, 2023).

In the Central and Eastern European (CEE) Member States, particularly Hungary, Bulgaria, and Romania, employers' associations expressed strong resistance to the Directive's wage-related requirements. Business groups in these economies warned about competitiveness risks, arguing that small- and medium-sized enterprises (SMEs) and export-oriented firms could be adversely affected by rapid wage increases not accompanied by corresponding productivity gains. In Romania, employer groups advocated for sectoral exemptions or phased adjustments that would allow a smoother transition over the long run. They also argued that the rural and informal economies could bear a disproportionate share of the potential negative effects of uniform wage increases.

Some responses have included the establishment of structured negotiation mechanisms, such as tripartite wage councils and public consultation platforms. For example, Spain's Ministerio de Trabajo y Economía Social maintained social dialogue initiatives with employers and unions during 2023–2024 to support minimum wage increases while addressing potential adjustment challenges for small firms (Ministerio de Trabajo y Economía Social, 2024). In Portugal, collective agreements were expanded to traditionally low-unionisation sectors, such as agriculture and hospitality, through state-supported facilitation processes (Ministério do Trabalho, 2024).

An important and less frequently discussed aspect of the implementation of the Directive is its impact on migrant workers employed in low-wage sectors such as care, agriculture, construction, and food services. Migrants are disproportionatelyrepresentedin minimum wage jobs because they often lack equal bargaining power, which may be constrained by language barriers, legal status, or residency requirements.

A few Member States have already taken steps to proactively include migrant workers in wage-setting processes. Ireland established the Migrant Workers Advisory Committee in 2023 as part of its efforts to collect evidence on minimum wage adequacy and enforcement issues affecting seasonal workers. Other initiatives include strengthened labour inspections in sectors with high levels of migrant employment, particularly in Belgium and the Netherlands, in response to growing concerns regarding wage theft, underpayment, and contract fraud.

Greece, Italy and Hungary continue to face enforcement challenges in sectors where informal migrant labour is widespread. Despite legislative alignment with the Directive, practical implementation remains limited, particularly in contexts where undocumented employment is prevalent or labour inspection capacity is insufficient. In the agricultural regions of southern Italy, for example, the practice of "caporalato," (illegal gangmaster systems) remains present (ILO, 2022).

To sum up, the experiences of Member States in implementing the Directive reveal significant variations in both stakeholder engagement and enforcement outcomes. Although formal compliance is increasing, substantive compliance—particularly with regard to marginalised groups of workers and employer alignment—has not yet been achieved consistently across Member States. The establishment of inclusive and enforceable wage governance frameworks will be crucial to ensuring the Directive's long-term effectiveness, particularly in economies characterised by fragmented labour markets as well as large migrant workforces.

8. Discussion

8.1. Comparison with Theoretical Forecasts

The evolution of minimum and average wages in EU Member States between 2019 and 2024 provides an opportunity to empirically assess the economic theories that have

traditionally shaped predictions about the effects of wage policy. Two main theories have framed both academic and policy debates: the wage–price spiral hypothesis, and the wage spillover/compression model. While both perspectives offer valuable insights into interpreting the observed wage developments across the EU, the evidence suggests that the wage spillover/compression framework aligns more closely with recent trends.

The wage–price spiral theory argues that increasing wages raise production costs, prompting firms to increase prices in order to maintain their profit margins, thereby generating further inflationary pressures. From this perspective, minimum wage increases are considered potentially destabilising during periods of high inflation, particularly when they are not accompanied by corresponding gains in productivity (Friedman, 1970). This argument gained renewed prominence during the post-COVID surge in inflation, when many economists and central banks warned that coordinated wage increases could entrench higher inflation expectations, thereby requiring tighter monetary policy (European Central Bank, 2022).

However, the EU experience of 2020–2024 does not fully support such an interpretation. While minimum wages and lower-tier wages increased in nominal terms, most econometric assessments found only limited evidence of strong transmission mechanisms between wage floors and aggregate price levels (García-Louzao & Tarasonis, 2023; IMF, 2023). In countries such as Germany, France, and Lithuania, inflation was driven predominantly by external shocks, including rising energy and food prices as well as supply chain bottlenecks, rather than by domestic wage dynamics. Moreover, in many cases, real wages remained stagnant or even declined, indicating that wage growth lagged behind inflation rather than driving it.

Furthermore, the ECB's own analysis (2023) emphasised that the second-round inflationary effects of wage increases have remained moderate and have materialised only gradually, particularly in economies with well-established collective bargaining institutions, which help ensure wage moderation and support macroeconomic coordination. Consequently, the feared self-reinforcing wage–price spiral did not materialise in the vast majority of EU Member States.

The absence of a generalised wage–price spiral does not mean that wage increases cannot contribute to inflationary pressures. Instead, the extent of wage–price transmission depends on sectoral characteristics and institutional settings. Wage increases are more likely to translate into higher prices in sectors where labour costs represent a large share of total costs, productivity growth is limited, profit margins are already constrained and firms have the ability to pass additional costs on to consumers. By contrast, in economies characterised by coordinated collective bargaining, stronger productivity growth and more stable wage-setting institutions, wage adjustments may be accommodated through productivity improvements, lower profit margins, or gradual bargaining settlements. The evidence reviewed therefore suggests that the wage–price dymanics remain relevant, but does not indicate the presence of a broad, self-reinforcing wage–price spiral across the EU during 2019–2024.

On the other hand, evidence provides support for the wage spillover and compression model, which suggests that changes in minimum wages affect wage structures beyond the statutory wage floor, particularly in low-wage sectors. Empirical studies across a wide range of EU countries (Gregory & Zierahn, 2022; Fougère et al., 2018; Schulten & Müller, 2021) have documented such spillover effects, showing that increases in minimum wages also raise wages slightly above the minimum threshold, thereby contributing to upward wage convergence while reducing wage inequality.

These effects were particularly pronounced in Central and Eastern Europe, where substantial increases in minimum wages lifted lower-middle wages, resulting in a steeper

wage profile at the lower end of the distribution without having significant effects on higher-income earners. As a result, the earnings distribution became more compressed, particularly in countries such as Poland, Romania, and Latvia. Although spillover effects were generally more limited in Western Europe, they remained evident, particularly through sectoral collective agreements in sectors such as hospitality, logistics, and care services.

Importantly, the spillover effects were not inherently inflationary but were primarily redistributive, increasing labour's share of income without necessarily triggering additional price inflation. These findings support the theoretical proposition that income-led growth, when embedded in appropriate institutional frameworks, can be both equitable and macroeconomically stable (Stockhammer, 2015).

Overall, the comparison between theoretical expectations and the observed evidence suggests that the wage–price spiral remains primarily a theoretical risk under specific economic conditions rather than an outcome consistently observed in practice. By contrast, the recent EU experience is more consistent with a gradual reconfiguration of wage structures through wage spillover and compression effects. This process has contributed to improved wage adequacy, modest reductions in wage inequality, and a stronger role for wage-setting institutions, without generating persistent inflationary pressures or undermining employment performance.

8.2. Balance Between Social Protection and Competitiveness

A core policy dilemma in the governance of minimum wages is striking a balance between social protection—including adequate incomes, decent working conditions, and the reduction of in-work poverty—and economic competitiveness, particularly in open economies and export-oriented sectors. This challenge has become even more prominent following the adoption of the EU Directive on adequate minimum wages, which promotes the upward convergence of wage floors across Member States while highlighting concerns about productivity growth, particularly in labour-intensive sectors of economies where productivity remains relatively weak.

Recent wage reforms have delivered important social dividends. In Portugal, Romania, and Spain, reductions in in-work poverty have been accompanied by modest declines in wage inequality, partly reflecting increases in statutory minimum wages. In Germany and France, minimum wage hikes have enhanced earnings security among part-time and service-sector workers, particularly among women and migrants, while also supporting household income stability during inflationary shocks.

This positive assessment should not be taken to mean that wage policy alone can address broader worker dissatisfaction or political discontent. Electoral support for radical or anti-system parties is influenced by a wide range of factors, including real-wage declines during periods of high inflation, job insecurity, regional economic disparities, rising housing and energy costs, perceptions of unfairness, distrust in public institutions, migration-related tensions, and the uneven distribution of the benefits of globalisation and technological change. Political economy research further suggests that economic insecurity and exposure to adverse trade or labour market shocks can increase support for nationalist, populist, or radical-right parties, particularly when workers perceive that existing institutions are unable to protect their living standards (Colantone & Stanig, 2018; Guiso et al., 2018). Against this background, minimum wages and collective bargaining should be viewed as important elements of a broader social policy framework rather than as sufficient instruments for ensuring political stability or social cohesion.

Moreover, adequate minimum wages can have positive macroeconomic feedback effects. By increasing disposable income among low-wage earners, who typically have higher marginal propensities to consume, wage floors may stimulate domestic demand,

particularly in consumption-oriented economies (European Commission, 2023). From this perspective, minimum wage policies are not only redistributive but may also serve as a countercyclical policy instrument, contributing to economic recovery and more inclusive growth when implemented within appropriate institutional and macroeconomic conditions.

Competitiveness concerns remain particularly salient in small open economies and export-oriented sectors. In Hungary, Latvia, and Bulgaria, employer associations have argued that wage floors have increased more rapidly than labour productivity in certain sectors, potentially squeezing profit margins and raising concerns about price competitiveness and investment attractiveness (Eurostat, 2024). Similar concerns have also emerged in Greece, where SMEs already face significant cost pressures, including high energy costs, tax burdens, and limited capacity to absorb further wage increases in the absence of corresponding productivity gains.

In many cases, minimum wage hikes generate reallocation effects rather than substantial net employment losses. Firms may adjust by reducing the creation of entry-level positions, increasing reliance on part-time arrangements, or accelerating the adoption of labour-saving technologies. Such adjustments may preserve aggregate employment levels while shifting a greater share of labour market risk towards more vulnerable groups of workers, particularly young people and migrants.

The policy challenge is, therefore, to develop minimum wage regimes that are both socially protective and economically sustainable. This requires much more than simply establishing a minimum wage. It requires complementary investments in skills development, innovation, and sectoral productivity growth, as well as the design of tax and social contribution systems that reduce labour costs for employers, particularly in low-margin sectors.

Some countries have adopted more balanced policy models. For example, in the Netherlands and Austria, high collective bargaining coverage, combined with coordinated wage-setting systems, enables gradual and predictable wage increases that remain aligned with productivity developments. These systems combine robust social protection with sectoral competitiveness, supported by dual vocational education and training systems and flexible labour market institutions (Garnero, 2021). In Ireland, government subsidies and targeted tax credits have helped offset the costs of wage increases for SMEs while supporting a gradual improvement in wage adequacy among low-paid workers (Department of Enterprise, Trade and Employment, 2023).

Social protection and competitiveness should not be viewed as a zero-sum game, but rather as outcomes shaped by effective institutional design and macroeconomic coordination. Countries that integrate minimum wage policies with skills development, innovation strategies and structured social dialogue are better able to maintain wage adequacy while sustaining competitive economic growth. Therefore, the future wage framework of the EU should embed this balance not only through legal thresholds, but also within a broader framework of socioeconomic governance.

The implementation of Directive (EU) 2022/2041 raises practical challenges that extend beyond the formal adjustment of statutory minimum wages. In Member States with limited administrative capacity, fragmented labour markets, or large informal sectors, ensuring compliance with statutory minimum wages may prove difficult. In these settings, the effectiveness of minimum wage policy depends not only on the statutory rate but also on effective labour inspection, enforcement mechanisms, access to collective representation, and measures to address undeclared work, false self-employment, and wage underpayment.

Employers may adjust to higher minimum wages in a variety of ways, rather than relying solely on employment reductions. Possible responses include changes in working hours, greater work intensity, automation, price adjustments, subcontracting, or increased use of temporary and part-time employment. While these strategies may help firms

maintain overall employment levels, they can also shift part of the adjustment burden onto more vulnerable groups of workers. For this reason, improvements in wage adequacy are more likely to be sustainable when accompanied by policies that strengthen productivity, including investment in skills, innovation, digitalisation, vocational education and training, and the upgrading, of low-productivity sectors and regions.

8.3. Major Sub-Challenges: Youth Unemployment, Mini-Work, Differences in Areas

As EU Member States progress towards upward wage convergence under the Adequate Minimum Wage Directive, several structural challenges have emerged that limit the effectiveness of a uniform policy. These include persistent youth unemployment, the proliferation of mini-jobs and other forms of marginal part-time employment, and significant regional disparities, particularly between urban and rural areas. While these challenges do not affect all Member States to the same extent, they represent important obstacles to achieving equitable and sustainable wage adequacy across the EU.

8.3.1. Youth Unemployment

Following the post-COVID labour market recovery, youth unemployment continued to represent a structural challenge in several Southern and Eastern European countries, particularly Spain, Greece, and Italy. Given that youth unemployment rates vary across reporting periods and statistical sources, this analysis avoids relying on a single annual indicator. Instead, youth unemployment is treated as a key monitoring indicator for assessing the labour market effects of minimum wage reforms (Eurostat, 2024).

Studies from Spain suggest that minimum-wage increases may reduce entry opportunities for some young and temporary workers, particularly in agriculture, hospitality, and other labour-intensive, low-productivity sectors, especially among small firms with limited capacity to provide training (Banco de España, 2020; Hijzen et al., 2023). Similarly, the INE GSEE (2023) highlights concerns among Greek SMEs about hiring inexperienced workers unless higher labour costs are accompanied by targeted subsidies, vocational training programmes, or active labour-market policies.

Some countries have introduced wage subsidies and targeted active labour market programmes to mitigate the risks associated with young people's entry into the labour market. In line with the EU Directive on Adequate Minimum Wages, variations and deductions are permitted only where they comply with the principles of non-discrimination and proportionality and pursue legitimate policy objectives. Consequently, policies aimed at improving youth labour market integration should focus primarily on vocational training, apprenticeships, and targeted hiring incentives rather than relying on broad sub-minimum wage schemes (European Commission, 2022).

In Figure 7, illustrated below, is presented the proportion of low-wage earners in the EU by sex (blue bars), age groups (purple bars), education level (pink bars), and contract type (dark yellow bars) for the year 2022.

8.3.2. Mini-Work and Marginal Employment

Another persistent challenge is the prevalence of mini-jobs and other forms of marginal part-time employment, particularly in Germany, Austria, and the Netherlands. These employment arrangements typically involve short working hours, low earnings, and limited access to social protection and employment-related benefits. At the same time, they remain attractive to some employers because they reduce non-wage labour costs and provide greater flexibility in workforce scheduling.

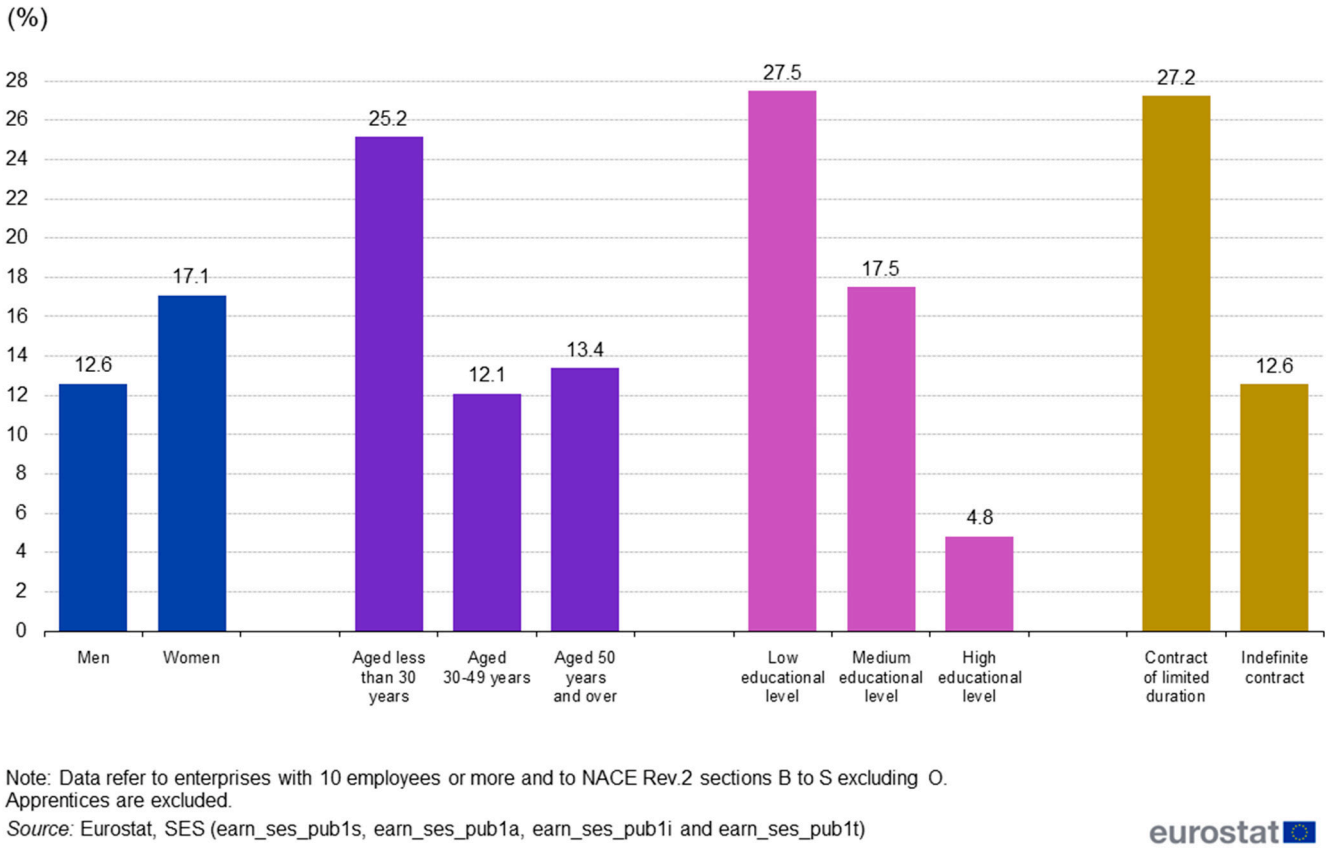


Figure 7. Proportion of low-wage earners in the EU by sex, age group, education level, and contract type, 2022. Source: Eurostat, Earnings statistics; SES datasets earn_ses_pub1s, earn_ses_pub1a, earn_ses_pub1i, and earn_ses_pub1t.

In Germany, mini-jobs remained a significant feature of the labour market, with more than seven million such contracts recorded in 2022. The introduction of the EUR 12 per hour statutory minimum wage, together with subsequent mini-job and midi-job reforms, altered incentives surrounding marginal employment. While some marginal jobs were converted into regular part-time employment, others were adjusted through changes in working hours or contractual arrangements (Bossler & Gerner, 2020; Bruckmeier & Wiemers, 2023). A continuing concern is that marginal employment remains disproportionately concentrated among women, students, and older workers, potentially limiting their long-term access to social protection and social insurance entitlements.

In the Netherlands, the rapid expansion of on-demand and zero-hours contracts, particularly in hospitality and delivery sectors, has been accompanied by growing concerns about underemployment and the erosion of real wages, despite the existence of statutory minimum wage protections. Addressing these challenges therefore requires measures that extend beyond minimum wage policy, including stronger regulation of non-standard forms of employment, effective enforcement of minimum working-hour guarantees, and improved access to collective representation.

8.3.3. Regional Disparities

Spatial disparities in wages and living costs continue to represent a major challenge, especially in geographically large or economically diverse Member States such as Poland, Italy, Romania, and Bulgaria. A uniform national minimum wage may provide adequate income protection in lower-cost regions but prove more difficult for low-productivity

firms to absorb. Conversely, in high-cost urban areas, the same wage floor may remain insufficient to meet local living costs.

In Italy, wage-setting is primarily determined through sectoral collective bargaining rather than a statutory national minimum wage, resulting in differences in wage coverage and enforcement across regions, particularly in the South. Similarly, although wage floors have increased in Romania and Hungary, rural workers remain disproportionately represented in low-wage and informal employment. As a result, shortcomings in enforcement and compliance continue to limit the effectiveness of minimum wage policies in these areas.

Some Member States have considered introducing regional differentiation or cost-of-living allowances; however, such mechanisms remain politically sensitive and administratively complex. The EU Directive on Adequate Minimum Wages requires Member States to assess the adequacy of minimum wages in light of national socioeconomic conditions, but it does not require regionally differentiated statutory wage floors, leaving these decisions to national authorities.

8.4. Limitations and Future Research

The present study has a number of limitations. First, it is based primarily on secondary evidence, including peer-reviewed studies, institutional reports and official statistics. While this approach is well suited to synthesising the existing evidence, it does not permit new causal estimates of the effects of minimum wage changes on employment, inflation, or inequality. The findings should therefore be viewed as a synthesis of the available literature rather than as new econometric evidence.

Second, comparisons across countries are constrained by differences in national wage-setting systems and statistical definitions. Minimum wages are reported using different reference units (e.g., monthly, hourly, or annual rates), while some countries also include 13th or 14th salary payments. Measures of average wages likewise vary depending on whether they are based on full-time equivalent earnings, median hourly wages, gross monthly earnings, or compensation per employee. Although harmonised Eurostat and OECD data were used wherever possible, these institutional and statistical differences cannot be eliminated entirely and should be taken into account when interpreting cross-country comparisons.

Third, it is still too early to evaluate the long-term effects of Directive (EU) 2022/2041. The period covered in this study, 2019–2024, captures the Directive's adoption and initial transposition but does not allow for a comprehensive assessment of its impact on collective bargaining coverage, wage adequacy, and institutional reforms in wage setting. As more evidence becomes available, future research will be better placed to examine these developments using longer time series and, where appropriate, causal empirical methods.

9. Conclusions and Practical Implications

The evolution of minimum and average wages across the European Union between 2019 and 2024 highlights significant changes in wage governance, labour market institutions, and social cohesion policies. Directive (EU) 2022/2041 on adequate minimum wages has marked an important step towards a more coordinated and socially protective framework for wage determination across the EU. Its significance became particularly evident during a period of inflation-driven price increases, when ensuring income adequacy emerged as a central policy priority, especially for low-paid and other vulnerable groups of workers.

When carefully designed and supported by appropriate institutional frameworks, minimum-wage increases can strengthen social protection without significantly undermining employment or economic competitiveness. Countries such as Lithuania, Poland, and

Germany have demonstrated that well-calibrated minimum wage policies can contribute to reductions in wage inequality, generate modest positive spillover effects across the lower end of the wage distribution, and in some cases, improve the real incomes of low-paid workers and households in the lowest income quintiles.

However, the outcomes have not been uniform across Member States. Countries with strong collective bargaining institutions, effective enforcement capacity, and more diversified economic structures have been better positioned to absorb wage increases. On the other hand, the benefits of minimum wage reforms are more difficult to achieve in countries where compliance mechanisms are weak, informal employment is widespread, or regional inequalities remain significant, limiting the translation of legal reforms into tangible labour market improvements.

The evidence reviewed here does not indicate the emergence of a generalised wage–price spiral across the EU. In most EU economies, inflation was driven primarily by external shocks, particularly energy and food price increases and supply-chain disruptions, rather than by domestic wage dynamics. Instead, wage growth has more often functioned as a compensatory mechanism aimed at preserving purchasing power and mitigating the effects of the cost-of-living crisis, while also helping to reduce the risk of rising in-work poverty.

Significant structural challenges nevertheless remain. In parts of Southern and Eastern Europe, youth unemployment continues to represent a persistent labour market vulnerability. The persistence of precarious employment schemes, including mini-jobs, marginal part-time work and zero-hours contracts, can constrain income stability and access to adequate social protection. Furthermore, regional disparities in wages and living costs continue to challenge the fairness and effectiveness of uniform national minimum wage systems.

Recent years have demonstrated that minimum wages alone are insufficient to guarantee adequate incomes. Rather, they should form part of a broader institutional framework that includes skills development, support for collective bargaining, and effective labour inspection systems. Equally important is the establishment of productivity-linked wage adjustment mechanisms that can maintain an appropriate balance between wage adequacy and employers' economic sustainability. The transposition of the EU Directive highlights another important lesson: the need for active monitoring and policy evaluation frameworks capable of continuously assessing the effects of wage reforms on inequality, employment, and inflation, ensuring that they deliver meaningful social outcomes rather than merely achieving legal compliance.

The current stage of European wage policy reflects a transition towards a more coordinated and rights-based model, characterised by stronger legal safeguards and a greater emphasis on reconciling social protection with economic performance. Supported by institutional resilience and inclusive governance, this transition has the potential to foster fairer and more sustainable labour markets across the European Union, while contributing to broader social and economic cohesion over time.

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