Work Package 2 – Deliverable 2.1

The impact of inflation on real wage dynamics.

Causes, policy responses and impacts

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Deliverable 2.1. – The impact of inflation on real wage dynamics. Causes, policy responses and impacts

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Introduction

After two decades of low inflation levels and wage moderation, Eurozone countries have witnessed a significant increase in cost of living. Several factors, including geopolitical tensions, supply chain disruptions stemming from the COVID-19 pandemic, and soaring energy prices, have all contributed to unprecedented inflation rates during the period 2021-2023. Despite exhibiting a downward trend afterwards, there remain some tensions that could rapidly bring prices up again. This episode has made clear the vulnerabilities of existing economic structures and policies, prompting questions about the adequacy of current monetary policies as well as the effectiveness of government interventions and collective bargaining responses aimed at mitigating its effects.

This stock taking report provides an overview of some of the central aspects analysed in the MAINSOC (Managing the Inflation Crisis through Social Dialogue) project. The aim of the project is twofold. First, to analyse the impact of the inflation crisis on real wage dynamics and wage differentials across sectors and groups of workers, paying attention to the asymmetric impact on those at the bottom of the wage scale and the role of industrial relations institutions to explain differences across countries. Second, to analyse the role of government policies, social partners' involvement, and industrial relations institutions in managing the inflation crisis, adapting to a new scenario, and guaranteeing inclusive growth. The project explores the impact of inflation on real wage dynamics and distribution, and the role of industrial relations institutions in explaining differences across countries. Moreover, it also explores the policy responses from governments, the involvement of social partners, including the type of incomes policy mix, the evolution of public sector wages or minimum wage dynamics. Thirdly, the project will analyse the role of collective bargaining in responding to a high inflation context, protecting those workers and sectors more affected by the cost-of-living crisis, and adapting to a new scenario of moderate inflation. Finally, the project aims to provide a set of policy recommendations to policy makers and social partners as to which policies are more effective to mitigate the distributional impact of inflation.

The aim of this report is to provide an overview of the existing literature analysing the inflation crisis in the EU, exploring its underlying causes, policy responses, and socio-economic impacts. Focusing on the interaction of external shocks, such as the geopolitical tensions following the Ukraine invasion and the residual effects of the COVID-19 pandemic, the objective of this review is to contextualize inflationary pressures and explore the causes of differences in responses and impacts. Thus, the analysis also includes a review of works focused on government interventions, which include fiscal measures like subsidies and direct payments, and their effectiveness in mitigating the crisis' disproportionate effects on low-income. Moreover, special attention is also paid to the role of social partners and industrial relations systems in providing responses in relation to wages.

Attention is also paid in this review to the distributional impact of inflation. Inflation disproportionately affects lower-income households, as highlighted by multiple studies indicating that these groups experience greater purchasing power losses compared to other socio-economic groups. Furthermore, the role of corporate profits in exacerbating inflationary pressures prompts hypotheses regarding the extent to which profit margins contribute to price hikes, thereby fuelling inequality. Addressing these questions not only aims to elucidate the causes of inflation but also evaluates the effectiveness of various policy responses.

Contrary to what happened during the Great Recession, calls have been made by international bodies to sustain real wages and mitigate the greater impact this may have on workers at the bottom of the earnings' distribution (OECD 2022, European Commission 2022). The low risk of entering a wage-price spiral based on developments in real wages over the last two decades, the erosion experiencing industrial relations institutions, or the low prevalence of indexation mechanisms in collective bargaining (Koester and Grapow 2021, Checherita-Westphal 2022) has placed fears of decline in demand and the impact on the most vulnerable groups as the main challenge facing national economies in the short term. Moreover, the European Commission has emphasised the importance of Social Dialogue and the need to strengthen it in the European Union (European Commission 2023).

There are however different roads to achieve the twin goals of sustaining real wages whilst reducing the distributional impact of inflation for the most vulnerable groups in the labour market. On the one hand, governments can rely on a variety of instruments and policy measures to achieve them, including price caps, price subsidies, income maintenance mechanisms. But most governments have two key incomes policy instruments: public sector wages and minimum wages. At the same time, they can rely on social dialogue in order to negotiate incomes policies agreements and orchestrate coordinated responses (Busemeyer et al. 2022). On their side, through collective bargaining social partners have also a key role in shaping the impact of the inflation crisis on wages and wage distribution. The combination of policy responses from governments and social partners will determine the impact of the inflation on real wages (expansion or moderation in real wages), but also distribution-wise (regressive / progressive).

The sections in the paper mirror the different dimensions dealt with in the MAINSOC project. Section one discusses the causes of inflation and its persistence in the context of the EU. Section two then moves to discuss the distributional impact of the inflation crisis. Section three analyses the role of government policies and section four focuses on the role of collective bargaining and wage indexation mechanisms.

1. The causes of inflation (persistence) in the EU

When analysing the causes of the inflation or cost of living crisis, a differentiation must be introduced between what are the causes for its increase, and those factors that may contribute to its persistence (Harr and Spange 2023). Regarding the first question, there is consensus in the literature about inflationary pressures in the European Union (EU) stemming from a confluence of structural and cyclical factors that have been exacerbated by recent global events. High energy prices, a direct consequence of the geopolitical impact of the Ukraine war, have significantly strained consumer budgets across member states, leading to inflation rates that peaked due to skyrocketing costs of basic needs (Lübker and Janssen 2022). Additionally, the EUs dependency on imported energy sources compounds this vulnerability, creating an environment where external shocks, such as the COVID-19 pandemic, magnify pre-existing. systemic weaknesses.

Supply chain disruptions have been the source of all major inflationary episodes over the last four decades. These disruptions affect not only the availability of goods but also significantly influence production costs and pricing strategies, leading to a ripple effect across various sectors. The escalation in energy costs not only directly impacts consumer prices but also indirectly drives up expenses in critical sectors like food production, amplifying inflationary pressures. Historical precedents from oil crises illustrate how supply interruptions can drive inflation and erode consumer confidence, ultimately resulting in heightened unemployment rates and weakened national economic performance (Constantini and Gracceva 2004). Some countries have nonetheless experienced stronger inflation due to the higher reliance on energy imports from Russia. For instance, Tassinari et al. (2024) show how despite similar economic structures, the stronger reliance of Italy on energy imports explains why it has comparatively registered higher inflation compared to a similar country like Spain.

Whilst there is consensus on the causes, a debate emerged in the early stages of the inflation episode about the reasons perpetuating inflationary pressures across EU countries. Two views have soon dominated the academic and policy debate, each of them with very different implications regarding the policies to be implemented to tackle inflation. The first one claims that once inflation has increased, trade unions through collective bargaining will push for higher wages in order to recover purchasing power hence leading to wage-price spirals (Lucotte and Pradines-Jobet 2023). Moreover, the existence of wage indexation mechanisms in collective agreements would also contribute to high inflation. This first scenario would thus claim for wage moderation from the union side in order to avoid fuelling inflation, but also the removal of any form of wage indexation. Moreover, it would support a stronger stance by the ECB in the form of increase in interest rates in order to fight inflation (Lucotte and Pradines-Jobet 2023). The second scenario believes that the main cause behind the persistence of inflation are not wages but profits. According to this view, the increase in corporate markups, rather than wage pressures, has predominantly fuelled inflation, suggesting that firms prioritize profit retention in the face of rising costs (Weber and Wasner 2023). For instance, Uxó et al. (2025) show how in the case of Spain, firms have often passed increased input costs onto consumers rather than absorbing them, therefore amplifying inflation.

The wage-push argument has been criticised because the weakness of trade unions, but also to the limited extension nowadays of wage indexation mechanisms, as will be discussed later on in this report. Moreover, other economists have stressed that this inflation crisis is different and can not be roughly compared to other inflationary periods. In this case, workers are experiencing a reduction in real pay and thus not contributing to any price bottom-up race (Eurofound 2023). Therefore, the existing evidence seems to suggest that if there has been any persistence, it has been triggered by companies translating higher energy costs into prices (Weber and Wasner 2023, Nikiforos et al. 2024), though some authors have questioned its importance (Lavoie 2024). As argued by Gallo and Rochon (2024), the initial cost-push shock was passed to consumers through higher prices and on a second phase, some firms in more highly concentrated sectors, benefited from the post-pandemic permissive pricing environment to increase their price mark-ups, leading to temporary profit-fueled inflation following the cost-push shock. In the case of Germany, Nabernegg et al. (2024) show that high inflation in Germany cannot be only explained by higher energy process, hence showing that inflation benefited capital owners at the expense of workers who suffered from increased prices without receiving sufficient compensation through higher wages. A similar argument is made by Uxó et al. (2025) in the case of Spain.

2. The (Distributional) Impact of the inflation crisis

Several dimensions of the impact inflation have been considered in the literature. Here the focus is on the distributional dimension which emphasizes the asymmetric effect of the inflationary shock, not only between labour and capital, but also within labour. However, inflation can also have medium and long-term impacts on growth prospects and business activity. Thus, for instance, rising inflation may alter business investment and growth trajectories by increasing uncertainty. As firms confront higher costs of production—exacerbated by tight monetary policies and supply chain disruptions—there can be a decline in capital investment, hence affecting the basis for long-term growth.

Inflation has two direct impacts on wages, with significant distributional implications. First, it leads to a decline in real wages and thus demand, thus reducing the role of wages in the functional distribution of income. Secondly, it affects to a larger extent those workers and households with lower incomes, since they have to dedicate a proportionately larger part of their wages to pay for energy bills, food etc (ILO 2022, Lokshin et al. 2023, Caisl et al. 2023). Cross-country differences in inflation rates constitute a first element to explain the differential impact on real wages. These differences may arise as a consequence of different degrees of dependence on imported gas or the capacity to replace fossil fuels with renewable energy sources. However, the translation into losses in purchasing power of wages as well as its distributional impact depends crucially on the institutional context for setting wages and those policies implemented by governments. Thus, the final impact of inflation is mediated by government policies as well as industrial relations institutions and actors.

The evolution of real wages in the EU has taken the form of a two-step process. In a first moment, the increase in inflation didn't translate into wage increases, since it took some time for collective bargaining to adjust to the new scenario. This led to a generalised decline in real wages and losses in purchasing power. In a second stage, both governments through minimum wage increases as well as public sector wages (Brezovar and Pollak 2023), or social partners through collective bargaining, promoted real wage recovery.

The interplay between wage stagnation and escalating consumer prices has eroded purchasing power in the early stages of the inflation upsurge, leading to a conspicuous decline in real wages, particularly among low-income households (Janssen and Lübker 2024). In most EU-27 countries, negotiated wage increases during 2021 and 2022 have remained below inflation levels. This has translated into real wage losses for large groups of workers (Eurofound 2023). The distributional impact of inflation, that affects disproportionately lower wage groups, has led social partners in some of the countries studied to implement wage policies aimed at favouring these groups. First, by increasing statutory minimum wages. Secondly, by setting higher increases for lower wage groups in the collective agreement. This is the case of Austria, where there was a tendency towards staggered wage increases, i.e., higher increases in the lower wage groups and lower increases in higher wage groups.

Across sectors, there is some evidence pointing towards higher wage growth in sectors characterised by generally low wages. In Portugal wholesale retail reported high wage increases compared to other sectors, including the public sector. In Italy, the domestic service sector collective agreements set wage increases well above inflation and higher than many other sectors. At the same time, the public sector has in several countries registered lower wage increases compared to the national average. This has been the case of Belgium, Czech Republic, Hungary or Portugal. By contrast, in Spain, trade unions and the government signed a collective agreement that spread a 9,8% wage increase over the next three years.

3. Government responses to the inflation crisis

EU and supranational responses

The impact of the inflation crisis has exhibited remarkable cross country variance. Three factors would contribute to explain these differences. First of all, the degree of energy dependence has been a source of cross-country differences in inflation rates. Secondly, government responses would also help to explain variance in the way inflationary pressures have affected disproportionately some social groups. Thirdly, the institutional setting, and more specifically industrial relations and collective bargaining, would also contribute to explain the capacity to maintain purchasing power of wages.

The multifaceted nature of inflation has prompted diverse policy responses across the EU, reflecting the unique challenges faced by each member state. The responses by national actors have taken place within the broader context of EU responses, where the European

Central Bank's strategies play a particularly important role. The intervention of the European Central Bank (ECB) during the inflation crisis has received several criticisms. The ECB has employed a multifaceted approach in response to the inflation crisis, focusing on a combination of monetary policy tools to stabilize the economy amid rising prices. Initially, the ECB aimed to act as a backstop against the financial turmoil intensified by geopolitical events and the lingering effects of COVID-19. Given the pressure on prices, the ECBs strategies involved tapering asset purchases and signalling intentions to raise interest rates to combat inflation effectively and stabilize the economy. Critics argue that the ECB's measures risk stifling economic growth by making borrowing more expensive for consumers and businesses. Moreover, they also risk a disproportionate impact on low-income households, who are already facing purchasing power declines (Müller, 2023). ECBs tightening measures, intended to control inflation, have raised concerns about potential slowdowns in economic growth and heightened inequality, echoing past challenges where coordinated policy approaches were deemed necessary to balance inflation control with economic stability.

The EU also sets the framework for financial stability. Recent developments underscore the need for adaptive regulatory measures responsive to volatile market conditions. For instance, the increase in inflation, compounded by geopolitical tensions and external shocks, necessitates revisiting existing financial regulations to mitigate systemic risks and enhance market resilience. Regulatory disparities across member states can exacerbate vulnerabilities, highlighting the need for harmonization in approaches to financial oversight.

National responses

At national level, governments may follow different strategies and rely on several instruments in order to address the negative impact of the cost-of-living crisis, including fiscal policy, regulations and social policy (Béland et al. 2024). We can expect each of these strategies to impact differently on sustaining purchasing power of wages (real wage expansion / real wage moderation), but more importantly on the distributional impact of inflation (progressive / regressive). A first course of action would consist in containing price increases. Here there are several instruments, from price caps on certain products (including energy, oil or a basket of basic goods), to price subsidies etc. As pointed out by several authors, whilst alleviating in the short-term inflationary pressures, these measures have several drawbacks, from incentives to higher energy consumption in the case of price caps to a high cost for public finances in the case of subsidies (Matsaganis and Theodoropolou 2022). A second strategy would aim at sustaining household incomes through social transfers and other instruments including tax credits. This is directly addressing the distributional impact of the cost-of-living crisis but requires a substantial increase in social spending. Compared to price regulations that tend to be non-targeted measures, transfers have the advantage of facilitating a better targeting of poorer households (OECD 2022b). Thirdly, the government can also rely on those instruments falling under the responsibility of public authorities to influence wage policy, including public sector wages and setting the minimum wage in those countries where it is statutory. But they can also rely on incomes policy agreements or social pacts to steer wage-setting.

Governments in the EU have followed very different paths in response to the inflation crisis and have relied on several policy measures. They've primarily implemented a combination of compensatory measures and direct interventions aimed at stabilizing prices, especially for essential goods and services. Additionally, many governments responded urgently with energy price caps and direct household payments, yet these interventions often lacked targeted efficiency, leaving lower-income groups still vulnerable. Government interventions thus reflect a blend of immediate relief strategies and longer-term economic adjustments, influenced by the unique economic contexts of individual countries. For example, while Scandinavian countries relied upon automatic stabilizers alongside targeted assistance, Southern European countries like Greece and Portugal predominantly resorted to one-off payments to vulnerable populations, thereby exposing the varying adequacy of fiscal responses across the region (Beatrice Carella, 2023). In Germany, the government's comprehensive support packages aimed to offset approximately two-thirds of the inflationary shock, highlighting significant fiscal commitment despite critiques around equity in benefit distribution (Malte Lübker et al., 2022). Concurrently, innovative approaches, such as the use of price control measures, further emphasized the diverse methodologies adopted by EU states to mitigate inflations impact on living standards (2023).

Within the EU there is considerable variance in government responses and policy mixes. For instance, the Nordic countries have employed a combination of automatic stabilizers and targeted aid that effectively mitigates the adverse impacts on vulnerable populations, reflecting a proactive approach to social policy during economic shocks (Torsten Müller, 2023). In contrast, the UK and Ireland have focused primarily on targeted support measures, yet challenges in effective implementation have emerged, demonstrating that even well-intentioned policies can falter under pressure. Belgium's robust automatic indexation systems stand in stark contrast to its neighbors, illustrating how sustained indexing can protect households from inflationary pressures (Darvas et al., 2010). Additionally, studies suggest that maintaining a strong framework for collective bargaining can enhance wage adjustments relative to inflation, aiding in income stability amid crises (Daniel Béland et al., 2024). Ultimately, the varied responses across these nations highlight the need for adaptable and multifaceted strategies to effectively address the inflation crisis, reinforcing the argument that historical policy frameworks significantly shape present-day responses (Darvas et al., 2010).

In the face of rising inflation, effective fiscal policies and government spending have emerged as critical tools for stabilizing economies across the EU. Governments have implemented various measures, including targeted income support and price controls, to alleviate the burdens on lower-income households disproportionately affected by inflation (Uxó et al. 2025). The success of these interventions, however, hinges on their design and execution. The assessment of policy responses to the inflation crisis within the European Union reveals a complex landscape marked by varying degrees of effectiveness and impact. Evidence suggests that these interventions have not uniformly mitigated the adverse effects of inflation, particularly on vulnerable populations. For instance, in Germany, substantial fiscal packages were introduced to address rising energy costs, yet criticisms arose regarding their delayed implementation and broader benefits that inadvertently favored wealthier households (Andrew Watt, 2022). Moreover, the disparities in the responsiveness of national policies highlight a gap between intended and actual financial support, as seen in the ineffectiveness of untargeted measures compared to more focused initiatives (2023). The need for robust evaluative frameworks to measure real-world impacts is underscored by the OECDs findings on political resilience and public trust, suggesting that without continuous monitoring, policy effectiveness remains compromised (2023). Such evaluations will be essential in refining future strategies and ensuring equitable outcomes amidst evolving economic challenges.

As the EU grapples with its inflation crisis, the intersection of public sentiment and social implications becomes increasingly pronounced. Economic instability, highlighted by soaring prices for essential goods, has disproportionately impacted low-income households, exacerbating existing inequalities (Antonio F. Amores et al.). This disproportionate impact fosters a sense of disenfranchisement among affected populations, leading to heightened public dissatisfaction with governmental responses. The demand for higher wages, as seen in labor actions across various sectors, underscores the growing frustration with stagnant incomes amidst rising living costs (Malte Lübker et al., 2022). Furthermore, the efficacy of government interventions, while addressing some immediate needs, reveals a significant gap in effectively supporting the most vulnerable, creating a perception of elitism in policy responses (Joshua Cova, 2023). Consequently, the social fabric is strained as resentment builds against perceived ineffectiveness, demanding a more equitable distribution of resources and responsive policy frameworks to restore public trust and social cohesion (D. Horng, 2024; Tanja Schnittfinke et al., 2024).

4. The role of industrial relations and collective bargaining[1]

Inflation dynamics and the impact on real wages and income distribution are also shaped by industrial relations institutions and actors. In order to analyse the role of collective bargaining in the cost of living crisis, two aspects need to be brought into consideration. First, the current inflation crisis hasn't been driven by expansionary wage-setting or rigidities in collective bargaining institutions (ILO 2022). Indeed, real wages have experienced in many countries sustained losses over the last fifteen years or at best, limited increases. Secondly, collective bargaining in many countries has been decentralised, coverage rates declined and many studies have showed a limited role for indexation mechanisms in collective agreements (de Spiegalaere 2023, Koester and Grapow 2021). As a consequence, negotiated wage increases over the last two years have in most countries remained far below price increases

[1] This section relies on previous work done by the author (see Molina 2023)

(Lübker and Janssen 2022). We can thus expect collective bargaining and social dialogue to play a key role in helping to mitigate the negative impacts of the cost of living crisis on workers and help to achieve inclusive responses to protect low paid groups, whilst avoiding wage-price spirals.

Several dimensions of industrial relations institutions and actors contribute to explain differences in these outcomes. First, the characteristics of collective bargaining systems. A first important feature of collective bargaining is its form and degree of coordination. In the neo-corporatist framework, coordinated wage-setting systems were associated with superior performance thanks to its capacity to generate moderate wage increases (Soskice and Iversen 2003). Thus, in those countries where trade unions are strong and collective bargaining is centralized or there is some form of centralized coordination, trade unions will go for moderate settlements to avoid negative unemployment impacts. At the same time, centralized collective bargaining incorporates a mechanism of internal labour solidarity that facilitates achieving wage moderation whilst also delivering a reduction in wage disparities. More generally, coordinated wage-setting may provide an additional tool to govern wages, especially in the context of the Euro-area. In a coordinated wage-setting system social partners may fine-tune their responses to the intensity and character of challenges, therefore contributing to steer responses.

A second important dimension of collective bargaining would be its structure, i.e. the degree of centralisation or decentralisation. In particular, the trend towards decentralisation of collective bargaining has weakened the bargaining position of many workers therefore reducing their capacity to set higher wages whilst contributing to increase inequalities. High-skilled workers, in a stronger bargaining position will manage to set higher wage increases compared to low skilled workers. In the context of an inflation crisis, centralised collective bargaining will also contribute to moderate wage increases, just as predicted by the Calmfors-Drifill hypothesis (Calmfors and Drifill 1998). However, centralised collective bargaining won’t necessarily deliver more egalitarian wage-settlements since it will only reduce variance in wage increases across sectors and occupations but won’t mitigate for the lower level groups in the wage distribution the disproportionate impact of inflation on their earnings.

Finally, a third dimension of collective bargaining to consider when analysing the impact of the inflation crisis is the existence of indexation mechanisms. These can take many forms. Formal wage indexation occurs when there are clauses in laws or contracts whereby wages (either public or private) that are to a large degree automatically linked to price developments. The ultimate impact of using wage indexation mechanisms depends at the same time on two variables. First, on the inflation indicator used for indexation (use of energy prices within the cost of living indicator etc.). Where the inflation measure used for wage indexation includes energy, global oil price shocks can have persistent effects on domestic underlying inflation through wage indexation and the possibly resulting wage-price spiral. Secondly, on the inflation indicator, forward- or backward-looking. Backward-looking indicators imply a lagged adjustment of wages to observed inflation, while forward-looking indicators need to rely on forecasts. In many cases, a combination of the two can be observed.

Moreover, indexation can be automatic, therefore leading to full recovery of purchasing power losses, or subject to negotiation. In this case inflation plays a formal role in wage negotiations, for example in the form of an explicit inflation benchmark guiding wage negotiations. However, this may only apply to some sectors of the economy and the effects of inflation on wage setting is also often less direct and less automatic than under automatic wage indexation. A third regime deploys inflation indexation for minimum wages only – therefore aiming to neutralise the effects of inflation on purchasing power for employees on the lowest labour incomes. All other regimes which have no formal role for inflation indexation in wage setting fall into the fourth category (Koester and Grapow 2021).

Social dialogue and incomes policies

Social dialogue can play an important role in providing a favourable context for coordinating and manage the responses to the inflation crisis. A first mechanisms to achieve this goal are so called incomes policies agreements, whereby social partners and the government define some policies and goals to control inflation. These agreements often involve a coordination of negotiated wages to facilitate wage moderation (Busemeyer et al. 2022), but may also include specific goals regarding the distributional impact of inflation, like limits on benefits or policies targeted to the low-wage groups.

Collective bargaining, inflation and indexation

The use of indexation clauses in collective bargaining, including cost of living adjustment mechanisms (COLAs), is back at the centre of the discussion as a consequence of the inflation crisis. These mechanisms serve to automatically adjust real wages in case of higher-than-expected inflation, helping to provide real wage rigidity and nominal wage flexibility (De Spiegelaere 2023). Even though these mechanisms were widespread until the mid 1990s, the low inflation context led to abandon them in most countries. Before the Great Depression, indexation mechanisms were still present in collective bargaining in six countries (Belgium, Spain, Cyprus, Luxembourg, Malta and Slovenia) (CEB 2008). Later studies have showed that only Belgium, Cyprus and Luxembourg have maintained automatic indexation mechanisms (Eurofound 2018).

The analysis confirms the limited extension of automatic indexation in collective agreements in the EU-27, but shows a diversity of mechanisms whereby wages have adjusted to the inflationary context. Relying on the four wage indexation regimes identified by Koester and Grapow (2021), the following sections focus on three of them: automatic wage indexation, formal role of inflation in wage-setting, and the role of minimum wages. Their impact, in terms of ability of wages to keep up with inflation developments, varies significantly.

Automatic indexation occurs when there are clauses in collective agreements that establish an automatic linkage to price developments. Automatic indexation of negotiated wages has become increasingly rare in the European context. Some countries explicitly prohibit indexation mechanism (France, Germany). In other countries, indexation clauses gradually disappeared from collective agreements. During the run-up to EMU, countries aiming to join the Euro Area undertook reforms of their wage-setting systems and removed or reduced the role of indexation. This was particularly the case of Southern European countries, with Italy removing the Scala Mobile in 1992 and Spain reducing the extension of revision clauses gradually. Eastern European countries followed a similar path over the last two decades due to the low inflation rate.

However, the analysis confirms the persistence of automatic indexation in some countries. In Luxembourg there is a wage indexation mechanism that ensures regular wage increases. More specifically, wages are automatically increased if the consumer price index increases by at least 2.5% in the previous 6 months. In Malta indexation takes place through the COLA allowance. This mechanism is based on the inflation rate that determines the annual mandatory allowance given to all employees, but that represents a small part of the total wage. In Belgium too, there is an automatic indexation system established in a 1996 law that obliged social partners to negotiate salary increases over a two-year period within the bounds of an upper limit set by anticipated hourly wage developments in key export markets (France, Germany, the Netherlands) and a floor determined by expected inflation in Belgium (Geis 2022). Moreover, there is an additional adjustment mechanism whereby allowing additional wage increases if actual inflation exceeds forecasted one and wage growth in neighbouring economies. This explains why the government has introduced no additional measures to accommodate for increases in prices of essential products.

In a second group of countries, inflation plays an important role in wage-setting, but there is no automatic recovery of purchasing power of wages through linking it to inflation. The way in which this happens, varies significantly across countries. In some cases, inflation has already a role in the bargaining rounds, through wage guidelines. In Austria the so-called Benya-formula foresees a compensation for inflation plus a share of the productivity gains of the previous year. Usually, the wage increases thus compensate for inflation and a certain top-up. A similar mechanism, the so-called distribution-neutral margin is used in some sectors in Germany. These mechanisms don’t provide for automatic recovery, nor even imply a formal role for inflation, but shape the outcome of wage-setting. In Slovenia, many collective agreements refer to inflation as a factor for adjusting salaries, though only some of them contain a fixed ex-ante indexation of wages. While inflation is merely one of the indicators in some cases, the value or adjustment ratio of wages to inflation is explicitly defined in others.

Collective agreements in other countries include mechanisms to recover purchasing power ex-post. This is the case of Spain, where around 45% of workers with collective agreement signed for 2023 have wage revision clauses that will allow to increase wages in case of real inflation exceeding the forecasted one, but the number of workers with wage review clauses has been increasing during 2022. Similarly, in the case of France several sectors have started to take the precaution of including a review clause (clause de revoyure) in their agreements to trigger new negotiations in line with inflation. Adjustment is not automatic and can only be made through negotiation. Similar mechanisms have also been observed in the case of the public sector in Ireland. Negotiations for a new public service agreement known as the ‘Building Momentum’ agreement took place in late 2020 and covered the years 2021 and

2022. The agreement featured a review clause that was triggered in early 2022 due to the rising cost of living. While a successor agreement would have been taken place in 2022 regardless, inflation was a predominant factor in the build up to, and during negotiations between the public services committee of the Congress of trade unions (ICTU) and the Department of Public Expenditure and Reform.

Collective bargaining and minimum wages in the context of inflation

In a third group of countries, there is no automatic indexation nor direct or formal role of inflation in wage-setting. However, inflation still plays a role in negotiated wages indirectly, through the impact of the statutory minimum wage that very often incorporates cost of living indicators. The interaction between minimum and negotiated wages depends on several factors, including the mechanism whereby the minimum wage is updated, or the responsiveness of collective agreements to changes in the minimum wage. Moreover, the impact of the minimum wage tends to be limited to the lower wage groups in collective agreements, which are more likely to fall below when the minimum wage increases. From this point of view, it has a positive distributional impact by compressing the wage distribution.

In the case of France, inflation plays an important role, as the indexation of the statutory minimum wage to inflation results in successive increases. As a result of the three increases in the SMIC in 2022, the minimum wages set in the sectoral collective agreements were often exceeded, as the social partners concerned were unable to renegotiate pay scales at the same pace. A similar case is Luxembourg, where negotiated wage increases in the private sector are updated following minimum wage developments. In Spain employers didn’t support the increase in the statutory MW approved by the government in 2023 in agreement with trade unions and complained that these increases reduced the scope for collective bargaining and thus the autonomy of social partners. In Estonia, trade unions supported higher increases in the minimum wage before the slow adaptation of collective bargaining to the inflationary scenario. In Slovenia, collective agreements usually determine their values at levels lower than the statutory minimum wage, so the employer must pay those workers the difference up to the minimum wage. Their pay rise thus relies on the indexation of the statutory minimum wage, not on changes in sectoral agreements. In Slovakia, the increase in the statutory minimum wage was also included in some multi-employer collective agreements, usually in their supplements for 2023.

The mechanisms used by social partners to increase real wages and sustain their purchasing power have exhibited remarkable differences in two dimensions. First, in relation to the way in which wage increases have been defined in collective agreements. Secondly, regarding the groups affected by the increases and their distributional impact.

Several mechanisms have been implemented in order to compensate for the loss of purchasing power of wages. All these have in common a one-off increase in disposable income. However, the way in which this has been implemented has taken many forms.

In most of the countries analysed, a preference for the use of flat rate payments to compensate workers for the losses in purchasing power can be appreciated. The use of these mechanisms has some advantages over traditional wage increases. First, unlike wage increases, flat rate payments have no lasting effects on wages, don't reproduce inflationary pressures and reduce the potential for second round effects. Second, they have a positive distributional impact, since they're proportionally more favourable to the interests of lower wage groups. Finally, they're more flexible and don't require the adaptation of existing wage-setting mechanisms and formulas. However, in an inflationary context they also present some drawbacks, including the lack of consolidation of wage increases and the difficulty for affected workers to exactly know the effective increase in wages. Moreover, the use of these mechanisms can be more onerous for small companies, especially when the amount is high.

The use of flat rate payments has been particularly widespread in Germany, where inflation compensation payments have topped up wage increases in collective agreements. As part of the relief package adopted by the German government to mitigate high inflation rates, companies were allowed to pay a tax-free inflation allowance ("Inflationsgeld)") in two instalments of 1,500 EUR in 2023 and 2024. In Austria, employers initially offered flat-rate payments, but the strong opposition from trade unions led to rely on standard wage increases. In Denmark, where these mechanisms have never been used, social partners have started to discuss the possibility to pay lump sums as a kind of inflation patch. In Finland too, the manufacturing sector social partners have also agreed on wage increases below inflation complemented with lump sum payments. Sweden has also combined wage increases with fat rate payments. Other countries where these mechanisms have been used include Croatia, Italy, Lithuania or Poland. In Luxembourg and Portugal flat rate payments have been used for public sector workers.

In other countries, higher disposable income for employees has taken other forms. In Ireland, one feature used to manage inflationary pressures on pay was with the expansion of the small benefit exemption scheme, whereby employers could provide to employees a tax free voucher of up to €1,000 per annum (the previous annual limit was €500). This was sought by trade unions. In the Netherlands, employers have used different ways to compensate employees, including ad hoc bonuses, tax scheme related to buy bikes, extra allowance to finance investments. In France, there are negotiations within companies on the sharing of value (partage de la valeur) in order to generalise and strengthen the benefits of value-sharing and financial participation schemes. The aim is to allow companies' profits to be shared more fairly with employees.

5. Concluding remarks

The inflation crisis in the European Union (EU) during 2021-2023 has underscored the vulnerabilities of existing economic structures and policies, highlighting the need for a reassessment of monetary and fiscal strategies. The crisis has had wide-ranging effects, particularly on real wage dynamics and income distribution, disproportionately impacting lower-income groups and exacerbating socio-economic inequalities. The analysis of inflation drivers reveals a multifaceted issue rooted in external shocks such as the COVID-19 pandemic, geopolitical tensions following the Ukraine invasion, and energy price volatility (Lübker & Janssen, 2022). Supply chain disruptions have further compounded these effects, with inflation persisting due to corporate profit retention rather than wage-driven pressures (Weber & Wasner, 2023). The evidence suggests that inflation was largely profit-led rather than wage-driven, challenging traditional economic fears of a wage-price spiral (Gallo & Rochon, 2024).

The distributional impact of inflation has been severe, particularly on low-income households, which have faced greater declines in real wages and purchasing power (ILO, 2022). Government responses have varied across EU member states, with measures such as price caps, direct transfers, and minimum wage increases attempting to mitigate adverse effects (OECD, 2022b). However, disparities in policy effectiveness highlight the need for targeted interventions that ensure inclusive economic stability. For instance, Scandinavian countries have relied on automatic stabilizers, while Southern European nations have focused on one-off payments (Carella, 2023).

The role of industrial relations and collective bargaining has been crucial in shaping wage adjustments and mitigating inflationary effects. While some countries have retained automatic wage indexation (e.g., Belgium, Luxembourg), others have adopted sectoral agreements and revision clauses to adjust wages retrospectively (De Spiegelaere, 2023). The resurgence of collective bargaining in addressing inflation underscores its importance in protecting workers and ensuring fair wage distribution (Eurofound, 2023).

Despite fears of inflation spiraling due to wage increases, the evidence suggests that workers have largely borne the brunt of rising costs without substantial wage compensation (Lübker & Janssen, 2022). Instead, firms have leveraged inflationary conditions to increase profit margins, particularly in highly concentrated sectors (Nikiforos et al., 2024). This dynamic has reinforced the argument for stronger regulatory interventions and a balanced approach to income policy, where real wages are maintained without exacerbating inflationary pressures.

Moving forward, policy recommendations should focus on reinforcing social dialogue, enhancing wage coordination mechanisms, and implementing progressive fiscal policies to mitigate inequality. Strengthening collective bargaining and social protections remains essential to achieving economic stability and ensuring that the burden of inflation does not disproportionately fall on vulnerable populations (European Commission, 2023). Governments must balance short-term relief measures with long-term structural reforms to create a resilient economic framework capable of withstanding future crises. The inflation crisis has served as a critical stress test for the EU's economic policies, highlighting the need for a comprehensive and coordinated response. By prioritizing inclusive growth and equitable policy interventions, policymakers can navigate the challenges of inflation while fostering long-term economic stability and social cohesion.

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