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The importance of collective bargaining in the area of wage development and negotiation of working time conditions

**The importance of collective bargaining
in the area of wage development and negotiation
of working time conditions**

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Abstrakt

Cílem této práce je analyzovat, jak se kolektivní vyjednávání promítá do úrovně mezd zaměstnanců a jejich charakteristik pracovní doby. Zamýšlí se však i obecněji nad rolí odborů v kontextu vývoje pracovního trhu. Studie se opírá o dosavadní poznatky o sledované problematice v zahraniční literatuře a dále prezentuje analýzy dostupných datových zdrojů, zejména *Evropského šetření pracovních podmínek* (EWCS).

Dosavadní výzkumy se ve většině shodují, že kolektivní vyjednávání má pozitivní vliv na úroveň mezd, a to zejména u nízkopříjmových zaměstnanců. Neshodují se však na velikosti tohoto vlivu, neboť ten podléhá dlouhé řadě intervenujících faktorů. Rozporuplné jsou rovněž poznatky týkající se míry snižování nerovností mezd v důsledku kolektivního vyjednávání. Ani v oblasti pracovní doby nejsou závěry o vlivu kolektivního vyjednávání jednoznačné a naše zjištění naznačují, že zatímco smluvní pracovní doba je u zaměstnanců pokrytých kolektivním vyjednáváním kratší než u zaměstnanců ostatních, pracovní doba, kterou zaměstnanci skutečně odpracují, vlivu kolektivního vyjednávání příliš nepodléhá. Souvisí to s rostoucím podílem flexibilních pracovních režimů, v nichž je autonomie a odpovědnost za časování práce přenesena na zaměstnance, a to především u pracovníků s vysokou úrovní kvalifikace. Z prezentovaných poznatků vyplývá, že odbory se budou muset vypořádat s proměnami trhu práce a zaměřit svou pozornost přednostně na nová témata, která nabývají na důležitosti a zatlačují problematiku mezd a délky pracovní doby do pozadí.

Klíčová slova: kolektivní vyjednávání; odborová mzdová přírážka; mzdová nerovnost; smluvní pracovní doba; faktická pracovní doba; flexibilita

Abstract

The aim of this paper is to analyse how collective bargaining is reflected in the wage level of employees and their working time characteristics. Additionally, it reflects more generally on the role of trade unions in the context of actual developments of the labour market. The study is based on the existing knowledge of the issue in foreign literature, and also presents analyses of available data, especially the European Working Conditions Survey (EWCS).

Most research to date agrees that collective bargaining has a positive effect on wage levels, especially for low-wage employees. However, they do not agree on the size of this influence, as it is subject to a long series of intervening factors. Findings regarding the rate of reduction of wage inequalities that result from collective bargaining are also contradictory. Similarly, in the area of working hours, the conclusions about the influence of collective bargaining are not unequivocal, and our findings indicate that while contractual working hours are shorter for employees covered by collective bargaining than for other employees, the working hours that employees actually work are not much influenced by collective bargaining. This is related to the increasing share of flexible working arrangements, in which autonomy and responsibility for the timing of work is transferred to employees, especially among workers with a high level of qualification. From the findings

presented, it follows that the trade unions will have to deal with changes in the labour market and focus their attention primarily on new topics that are gaining importance and pushing the issue of wages and working hours into the background.

Keywords: collective bargaining; union wage premium; wage inequality; contractual working hours; actual working hours; flexibility

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Introduction

Trade unions and collective bargaining are undoubtedly a very important part of labour relations around the world. Historically, trade unions are associated with several important milestones. One of the greatest milestones was the strike of 1 May 1886 in the US city of Chicago. The day has gone down in history as "a symbol of the international struggle for workers' rights" (*Haymarket Affair | History, Aftermath, & Influence | Britannica, 2024*) and is still commemorated as Labour Day in most countries around the world, although public awareness of the events it commemorates is already relatively low. On that day in 1886, a general strike took place in which workers fought for an eight-hour working day. Between 300,000 and 500,000 workers are estimated to have joined the strike, with others following in the following days. These were not only 'unskilled workers', translated as nonqualified workers, but also 'high skill workers', skilled workers who are associated with better jobs (Thale, 2004). During the protests, there was a very violent clash with the police, and the whole event ended in a massacre that resulted in several activists being sentenced to death.

The roots of collective bargaining, however, go deep into the past and its germs can be identified as far back as the Mesopotamian period. Already there were indications of joint contracts that defined the object of the work, i.e. what would be built, for example, and also the wage that would be paid for the act (Mark, 2018, 2022). The origins of trade unions in their modern form date back to the beginning of the Industrial Revolution in Great Britain. At that time, a large number of people started moving to the cities and the new tools meant that a lot of labour was needed. The one, however, was far from being properly rewarded. Workers were exploited, working long hours for very little pay. This prompted the formation of trade unions, as these workers felt a pressing need for collective representation given the highly unequal status between them and their employers (Cartwright, 2023).

Collective bargaining is much more than just negotiating a mutually acceptable wage level. In particular, it is a key mechanism in labour relations that allows workers to negotiate better working conditions through representative unions. Collective bargaining thus covers many aspects of the working environment, including not only wages but also working hours, safety in the workplace, the benefits employees receive for their work, and much more. However, times are changing particularly fast and what has worked so far may not work in the next few years. The relevance of collective bargaining and trade unions as such is increasingly being questioned and more than ever before, the question of whether it is still effective is being debated. Labour force, which was the original focus of the trade union movement, is gradually giving way to completely different forms of work with the advent of the information society, changing both the prevailing nature of work and the status and demands of employees. In many countries, such as the USA, trade unions have been rapidly abandoned and abandoned, and the question is whether the same will be true in the rest of the world. There is no doubt that trade unions will have to deal with many current challenges in the near future, one of the biggest being the changing labour market. There are an increasing number

of types of employment contracts that are short-term, in many countries the desire to stir up a rigid labour market is leading to a push for flexibility, and much more.

If we are to answer the question of whether unions still have something to offer workers today, we need to look at the extent to which they are succeeding in influencing the conditions under which people will work and whether, in what areas and for whom collective bargaining is delivering results in terms of more favourable characteristics of working life. However, the information about the impact of collective bargaining that appears in the public domain is often disseminated in an attempt to convince the public of the importance or otherwise uselessness of unions and is rarely based on facts or scientifically based arguments. In the following chapters, therefore, we will focus on two areas that have so far been the most important subjects of collective bargaining - wage levels and working time - and attempt to summarise the scientific evidence on the importance of collective bargaining in both areas. As knowledge in this area has evolved as the labour market has changed, we will also try to capture the evolution of knowledge on the impact of collective bargaining, including moments when existing findings have been reassessed. The final summary then reflects on the role of collective bargaining today in light of the findings presented.

1. The impact of collective bargaining on wage levels

There are not many data sources to analyse the impact of collective bargaining on wage levels. Where wage levels are monitored, there is usually no indication of the presence of collective bargaining, and in sample survey's respondents are reluctant to report their earnings, so this is generally a difficult data to obtain. The results of the *Information on Working Conditions (IWC)* survey, conducted by Trexima under the auspices of the Ministry of Labour and Social Affairs of the Czech Republic, which collects data on the content of collective agreements, show that a substantial part of collective agreements is centred around wages and their individual components. In 2023, 96.3% of collective agreements agreed on remuneration for employees. In three-quarters of collective agreements, wage developments were negotiated, most often in the form of an increase in earnings through year-on-year increases in pay scales (half of collective agreements, scales were increased by 7.1% on average) or year-on-year increases in average nominal wages (one-fifth of collective agreements, nominal wages were increased by 6.1% on average). Only 11% of collective agreements linked wage developments to economic indicators. Some 69% of collective agreements directly negotiated pay scales, and a significant proportion of collective agreements also contained provisions on bonuses and remuneration or wage compensation for personal obstacles to work beyond those guaranteed by the Labour Code. It was common to negotiate 13th and possibly even 14th wages (half of the collective agreements) and more than half of the collective agreements included rules for the provision of incentive wage components (bonuses, performance or team rewards, bonuses, etc.) (Trexima, 2023).

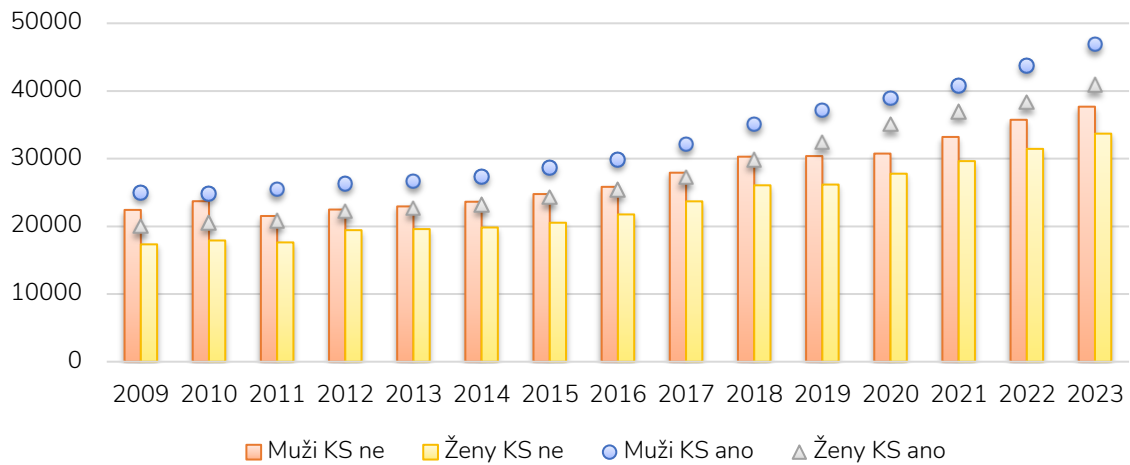
However, the extent to which collective bargaining has actually increased the wage levels of employees cannot be assessed on the basis of the IPP data, as this survey does not contain any information on the wage levels of employees for whom collective agreements were not concluded. A source of data that allows at least a very general comparison is the structural survey of employee wages conducted continuously by the Czech Statistical Office. It publishes annually data on the average monthly paid working time and the average and median monthly wages of employees¹, classified according to whether or not the employees' company has a collective agreement.

This statistic shows that for both average and median wages, the wage level of employees with a collective agreement is consistently higher than that of employees without a collective agreement in the enterprise. Moreover, data from a long-term perspective show that the wage gap between workers with and without collective agreements is gradually widening (see Chart 1), so that while

¹ Mediánová mzda je úroveň mzdy zaměstnance, který se nachází přesně uprostřed mzdového rozdělení. Tato hodnota vypovídá lépe o „typické“ úrovni mezd zaměstnanců než průměrná mzda, neboť není ovlivněna výkyvy a extrémními hodnotami tak jako údaj o průměru. Výstupy ze strukturální statistiky mezd zaměstnanců viz <https://www.czso.cz/csu/czso/struktura-mezd-zamestnancu-2023>.

in 2009 men covered by collective agreements received on average 5% higher wages than men not covered by collective bargaining and women in companies with collective agreements 8% higher wages than their colleagues not covered by collective agreements, by 2023 the gap was already 16% for men and 18% for women. Similarly, in the case of median wages, the gap between the wages of employees with and without a collective agreement increased from 11% to 25% for men and from 15% to 21% for women.

Chart 1 Evolution of median wages since 2009 by gender and presence of a collective agreement (in CZK)



Men CA no

Women CA no

Men CA yes

Women CA yes

Source: CSO, structural survey of employee wages; own calculations

As compelling as this data seems to be for the positive impact of collective bargaining on wage levels, it should be taken with caution. The problem with the available data is that the CSO publishes only aggregate data on wages of employees in the whole economy and does not provide data that would allow for the economic sectors concerned or the occupational characteristics of both groups of employees, i.e. those who have collective agreements in the enterprise and those who do not. It is clear that some sectors and occupational groups are more likely to have collective agreements than others, and it is the sector and occupational classification that are very important

in setting wage levels. For example, it is known that collective bargaining coverage is significantly higher in the public than in the private sector (cf. RILSA, 2024), which has quite a significant impact on how occupations requiring certain skill levels etc. are distributed among employees in enterprises with and without collective agreements. Thus, in order to know how much influence collective bargaining has, we would need to have data disaggregated so that we could compare wage levels between comparable groups of employees. However, such data is not publicly available.

As we do not have suitable statistical data on wages in connection with collective bargaining in the Czech Republic, we will focus in the following text on the knowledge on this

issue as it has been collected in the literature so far, while outlining its development, which closely corresponds to the development of the labour market itself and the nature of labour relations as such. Although these are almost exclusively foreign studies, their conclusions have relevance for understanding the issue in the Czech context.

1.1 First influential research

At the outset, it is appropriate to discuss in more detail a book that has had a major impact on subsequent studies over many years and is still cited today, even though some of the findings are less current. This book is a 1984 study entitled *"What Do Unions Do?"* by Harvard economists Richard B. Freeman and James L. Medoff. This book deals with unions and their impact on employee wages in great detail, and more than one author has acknowledged its importance for subsequent research, whether or not they agree with the conclusions of the publication. It can be said that *What Unions Do* was a pioneering work in the field we have been looking at, which has fundamentally influenced the way in which academics, politicians and the public have subsequently thought about the role of unions and has set the course for many subsequent studies. Therefore, we present here the findings of these authors that are relevant to the context of this publication.

Very interesting in this respect is the introduction to the chapter on the so-called union wage effect. The chapter itself begins with the words: *"Everyone knows that unions are raising wages. The questions are how much, under what conditions, and with what effects on the overall performance of the economy"* (Freeman & Medoff, 1984). This is interesting because this sentence implies some consensus that unions did indeed raise wages in those days. At least Freeman and Medoff saw it. This conclusion is particularly important for us, since in the following sections we will examine whether this assumption is still valid today. At the same time, at the outset, the authors mention previous studies, some of which feared that union monopoly power over wages would be so great as to threaten the American competitive system (Lindblom, 1949; Simons, 1944; Haberler, 1972). Freeman & Medoff explain that early work on "union wage premiums," i.e., union-induced wage

increases for employees, often compared the wages of workers in completely different industries. Although some studies at the time already included comparisons of unionized and non-unionized workers, most studies at the time used a more indirect approach, where the wage effect of unions was estimated by comparing the wages of more organized groups of workers with less organized groups of workers. Freeman & Medoff show this procedure with a case study. If, other things being equal, the average wage in a sector that is 80% organized is \$4.00 per hour, while in a sector that is only 30% organized it is only \$3.50 per hour, this implies an estimate of the effect of union organizing of 1 cent per percentage point of union organization: $(4.00 \$ - 3.50 \$) / (80\% - 30\%)$. This estimate implies that the difference between the wages of a fully organized sector and a sector that is not organized at all would be \$1.00 per hour. This would mean a 33% "union wage effect" ($\$1.00/\3.00). The reason for this method of calculation was the lack of data, which did not allow for a more detailed statistical analysis.

Freeman & Medoff (1984) go on to cite another very important author, H. Gregg Lewis, who summarized much of the early work on the union wage premium. Lewis wrote a book in 1963 entitled *"Unionism and relative wages in the United States: an empirical inquiry"*. In short, early studies found a wage effect of 10-15% on average, with this effect varying significantly over time and between different groups of workers. An interesting observation is that this effect decreased during inflations and increased during recessions. Among occupational groups, the effect was particularly significant for airline pilots, miners and skilled construction workers. On the contrary, it was very low for unskilled workers. It is important to note that until this time it was not possible to use the data and computing technology available today. The authors Freeman and Medoff themselves point this out, mentioning that it is the change in the statistical processing capabilities of big data that has marked a significant shift in the analysis of wage effects, as it allows comparisons between unionized and non-unionized workers who share the same demographic characteristics and work in the same industry.

It is to contemporary approaches to data analysis concerning the wage effects of collective bargaining that Freeman and Medoff (1984) delve more deeply and compare the results of two basic analytical methods: A cross-sectional data-driven method that analyses data on unionized and non-unionized employees at a single point in time and that estimates wage premiums in the range of 10-20%, and a longitudinal method that compares employees' wages after a change in union status with their wages before the change. Based on both methods, the authors conclude that a union wage effect does exist, but it appears to be smaller using the longitudinal method. Therefore, knowledge of the methodology used to estimate the wage effect is crucial for interpreting the results of individual analyses. They go on to discuss the merits and pitfalls of both approaches, adding that neither method is conducted under laboratory conditions and therefore the result of either method should not be taken as "the true union wage effect." In the case of cross-sectional analyses, the interchanging of wage differences caused by individual differences between workers with the union wage effect appears problematic. This problem has been addressed by the authors in their previous study (Freeman & Medoff, 1981), in which they note that many authors

have attempted to eliminate this problem by using complex economic models involving systems of equations instead of a single equation but have failed in their efforts. In comparison, the longitudinal approach, based on comparing the wages of the same people at different points in time, is not subject to "ability bias", which can be translated into Czech as a bias due to differences in individual employee ability. However, it should be borne in mind that this type of study also has its difficulties and shortcomings, which may include, for example, limiting the sample of workers to only those who have changed status from union to non-union and vice versa. This is a small sample of employees, some of whom may have changed jobs for a very specific reason, so the sample cannot be considered representative of the population of workers surveyed. The authors go on to explain other problems that this type of study entails. This is, among other things, a potential understatement of the wage effect, since workers who voluntarily change jobs to get better pay will demand the same increase whether they leave or join the union. If there are higher wages in jobs that are under the auspices of unions, few people will voluntarily leave those jobs. And based on the logic of the previous propositions, those who do so do so because they expect higher wages even when they leave union status (Freeman & Medoff, 1984).

Freeman & Medoff (1984) further discuss who the aforementioned wage premiums increase wages for and who do not. They conclude unequivocally that wage increases, i.e. the union wage effect, do not occur for all workers. They mention that unions tend to standardize wages, which excludes the power of management to set wages on an individual basis. By equating the wages of workers in a particular market or sector, these measures result in higher wage increases for low-paid workers compared to high-paid workers. The wage effect of unions should therefore be higher for blue-collar workers, who are manual workers. The authors found this pattern to be true, but not for all groups. The wage premium appears to be highest for the youngest workers, who are paid the least, and lowest for prime-aged workers, who are paid the most. When the length of employment is taken into account, unionized workers who have been employed longer tend to have higher wages than non-unionized workers. As regards the differences in the wage premium based on skin colour, here it appears to be higher for non-white workers. However, these results are valid only for some years, so considerable caution is needed in generalising from this statement. In general, it seems safer to say that this effect does not differ based on race. A similar pattern holds for gender, as here too the union wage effect results vary substantially from year to year, so it seems plausible to conclude that the effect is roughly the same for both genders (Freeman & Medoff, 1984).

As already announced, the union wage bonus is particularly significant for so-called blue-collar workers, i.e. workers who hold manual jobs. According to the authors' findings, at the time of their calculations and analyses, the wage premium for blue-collar workers averaged 19%, compared to just 4% for white-collar workers. By "white collar" we can imagine mainly administrative workers. Very substantial differences were found between wage bonuses in different sectors. Of course, which industry has higher wage bonuses can change substantially over time, so when analysing older books and studies, it is important to focus on variables that tend to be consistent across industries and can be used as a guide for today. In this context, Freeman & Medoff (1984), for

example, concluded that wage premiums vary primarily on the basis of how much monopoly power a union has in a given industry. This is reflected in how responsive labour demand is to changes in wages, i.e. how employment changes as a result of wage increases. If a change in wages triggers a large response and thus large employee layoffs, there is less scope for a wage effect, compared to sectors where large wage increases result in minimal layoffs. In such sectors, the wage effect of unions can be expected to be much larger. It is this factor that may seem consistent today, some 40 years after the publication of *"What Do Unions Do?"*, and across different regions. Indeed, the level of the union wage premium in different sectors can vary dramatically both over time and space.

Looking at what characteristics affect the size of the monopoly power of unions reveals that it depends largely on how much of the workforce in a given industry is organized. A market or industry that is largely organized is more likely to have a high wage effect. Using real numbers, Freeman & Medoff (1984) estimate that for manual (blue-collar) workers, a 10% increase in organization in a particular industry is equivalent to a 1.5% increase in wages. Interestingly, the wages of unorganized workers do not respond to changes in unionization. The second major factor that plays a role in the extent of the monopoly power of unions is the level at which bargaining takes place, i.e. whether it is sector-wide or whether it takes place at the level of individual firms or plants. The explanation for this mechanism is primarily that, when each plant and branch bargains for itself, it must fear that when wages are increased, prices will also have to be increased, which may mean a decline in demand for its products and ultimately an outflow of its workers to other plants. In addition, the wage gap decreases as the size of the firm or workplace increases. The wage premium for blue collar workers was found to be 35% in firms with up to 100 employees, but only 8% in firms with 1,000 workers. The authors explain this effect by the fact that large organizations have the means to maintain a certain bargaining threshold, whereas smaller units do not (Freeman & Medoff, 1984).

From Freeman and Medoff's (1984) extensive study, it is worth recalling another concept they mention that was relatively new at the time. It is based on Albert O. Hirschman's 1970 book *"Exit, Voice, and Loyalty"* and, as its title suggests, it is a concept of economic theory called "exit versus voice". In their study, Freeman & Medoff (1984) talk about how unions provide workers with the opportunity to actively express their dissatisfaction and seek change through collective bargaining instead of simply walking away. There is certainly room for discussion here but from a certain point of view, it is possible to consider the effort to reach an agreement as a mutually beneficial solution, at least from an economic point of view. In this way, the company can reduce turnover while meeting employee demands, which can save the company considerable costs of constantly recruiting new employees, and employees can keep their jobs. Even in cases where employees leave their employer voluntarily, finding a new job can take some time, depending on the state of the labour market. If they do not find a new job within the notice period, their income will be reduced for some time and so will the demand for goods and services. An individual alone will not fundamentally affect the product produced, but on a large scale, reduced consumption can be a problem for some firms and a so-called snowball effect can arise where reduced consumption forces some firms to

lay off, which will only reduce consumption more and the situation in the economy can deteriorate further.

The book *"What Do Unions Do?"* has received a large number of reviews due to its importance (e.g. Addison, 1985; Ghilarducci, 1984; Kaliski, 1986). All these authors find strong evidence in the study that trade unions have a positive effect on wage levels as well as on wage equality within organisations. Most subsequent studies have confirmed the claims made in the book, and other research has also shown the positive impact of unions on wages, turnover and inequality. Richard B. Freeman himself, as one of the authors of the book, looked back on the 20th anniversary of its publication to respond to 18 critical essays dealing with the book and to assess the validity of his and Medoff's conclusions at the time. His "update" of the book summarizes very well what the book has stood up to and what the author would change in retrospect. Freeman (2005) acknowledges three errors in particular. The first is the disregard for unionism outside the US, as it is in many ways very different. The second error is the omission of the public sector trade union movement. The third error, according to the author, is the failure to analyse the impact of unions on economic growth. Adding to these three errors is the problem of determining the "optimal union level" based on estimates of what unions do. Freeman's erudition is evidenced by the fact that as early as 2005 he warned of the need to adapt to the new, modern working environment. It also encourages future researchers to do so, as it talks about new labour institutions that would be able to provide workers with a platform and means to express their needs and demands instead of trade unions. In some ways, Freeman was ahead of his time in this respect, because the need to adapt to the modern working environment in order to ensure that unions do not lose their integrity and, above all, their meaning, is a very relevant issue today.

Freeman (2005) also reflects on where research methods have evolved, which, while much more accurate and based on detailed statistics, still face a number of challenges. In this respect, he appreciates the work of Hirsch and Schumacher (2004) who pointed out the problem of the ineffectiveness of questionnaire surveys as a method of obtaining data on the difference between the wages of employees covered by collective agreements and those not covered, which we also point out in the introduction to this section. In fact, people do not always want to answer questions about wages, which leads to a problem called "match bias" that arises as a result of imputation of earnings² in the survey. This match bias arises because the imputation does not take into account an attribute that may be relevant to the wage level, such as union affiliation. This often leads to union workers being "paired" with non-union workers. This matching is the result of a "hot deck" method that pairs respondents with missing data with respondents whose data are not missing and have similar characteristics (e.g. gender, age, education, occupation, etc.). The respondent with the

² Imputace je metoda využívaná při statistickém zpracování dat, která řeší problém chybějících hodnot. Pomocí imputace se chybějící hodnoty do dat doplní (imputují) na základě dalších charakteristik respondentů. V případě mezd se tak chybějící hodnota odhadne například na základě dosažené úrovně kvalifikace, vykonávané profese, místa bydliště a dalších proměnných, u nichž byla zjištěna souvislost s úrovní mezd.

missing value is then imputed the value of the respondent it was paired with. However, by omitting the factor or attribute of union organization, respondents with and without union affiliation are "shuffled" together. The specific situation may then be that a non-unionized worker does not fill in their income, but because they otherwise have similar characteristics to unionized workers, they are allocated the income received by unionized workers. This process may subsequently lead to an understatement of the wage differential. Hirsch and Schumacher suggest correcting this problem by either dropping respondents with missing values from the analyses or including all attributes, including unionization, in the imputation. According to the authors, at the time of writing their study, approximately 30% of the survey respondents had their earnings imputed (Hirsch & Schumacher, 2004).

In this context, Freeman (2005) also cites Blanchflower and Bryson (2004) who point out that estimates of the wage gap based on the *Current Population Survey* (CPS)³ are biased downward for the same reasons (the unionization figure was not included in the respondent characteristics when imputing income). At the same time, however, they show that this does not affect the structure of the differences between workers with different characteristics or in different sectors. In this context, they also confirm that there is not just a single wage effect, but a set of effects that also depend on worker and industry characteristics. Blanchflower & Bryson (2004) also show that the data support the ^{claim of} *What Unions Do* (WDUD) that a decline in the unionization rate should cause the labour demand curve to become more flexible, leading to a decline in the union differential, and that this differential should change countercyclically because non-union wages respond more quickly to immediate market pressures than union wages. On the other hand, they add that the declining union premium in the private sector means that the estimated monopoly effect of unions through static redistribution of labour is smaller than the WDUD book suggests.

Freeman himself considers the original literature on the wage effect to be primarily the work of the aforementioned H. Gregg Lewis. Lewis (1964) analysed the wage effect some 20 years before the publication of *What Do Unions Do*. He evaluated some 20 studies at the time and, given the time period in which this analysis was carried out, it includes data from the Great Depression, among other things. It is very interesting to note that in this period, according to the author's calculation, the union wage premium was approximately 25%, then fell to only 5%, and then increased again to 10-15% in the 1950s. By analysing around 20 studies, Lewis was able to go quite deep in his analysis of the trade union issue, and the resulting information was quite significant at the time. Lewis (1964), like Freeman a few years later, notes that unions in the United States have a significant impact on wages. At the same time, however, they argue that unions generally have a negative effect on employment and that higher union wages lead to lower employment. This leads to the question of what the priority issue from the employees' point of view is. Indeed, if it is confirmed that collective bargaining results in higher wages, the question is whether it is beneficial

³ Jde zhruba o obdobu Výběrového šetření pracovních sil, prováděnou (byť se zásadními úpravami) od roku 1940 v USA.

if it is associated with higher unemployment (Lewis, 1964). Under no circumstances should we automatically adopt this result and generalise it to the current situation in Europe, where trade unions operate in many different ways and 60 years have passed since these conclusions. This does not mean, however, that we should not keep this idea in mind in more recent analyses. On the contrary, we should observe closely whether this conclusion still appears or is no longer valid.

Harold Gregg Lewis returned to the topic less than 20 years later in a study that this time provides a detailed analysis of 34 empirical studies using macro data, i.e. aggregate data (Lewis, 1983). This addendum is crucial, as Lewis points out in his study that the macro estimates of the wage gap also include the effect of the "unionization rate". The wage gap is often defined as a certain premium that unionized employees receive over their non-unionized colleagues under otherwise similar working conditions. The degree of unionization or the extent of unionization is then one of the other factors Lewis (1983) discusses. According to Lewis, the wage gap is often overstated if a proper distinction is not made between the wage gap and the effect of the degree of union organisation ("unionization"), or the effect that unions in a particular industry or region have on wages, regardless of whether or not a particular worker is a union member. Thus, the effect of unionization rates is broader and includes the effect that high unionization rates can have on total wages in an industry or region, regardless of individual union participation. Lewis's criticism of studies based on macro estimates, which is the result of a combination of these two factors, is crucial. According to Lewis, this approach leads to misinterpretation of wage differentials, and the author therefore points to the importance of analyses conducted at the micro level, where detailed information on individual employees can be used. They are logically more demanding to perform, as more detailed data is needed, but they lead to significantly more accurate results compared to analyses on aggregated data.

From the older works, one more study cannot be omitted. Stewart (1987) also looked at the wage differential between unionized and non-unionized employees. In his study, he found out that "pre-entry closed shops" played an important role in this period. Some imagination is required in translating this term but the meaning of it is not complicated. It was a pre-arranged bargain in the sense that certain companies recruited employees exclusively from the ranks of the trade unions. In other words, in order to be hired and even apply for the job, the employee had to be a union member. And it is the presence of such pre-entry closed shops that appears in this study to be crucial for wage growth, both for skilled and semi-skilled employees. For example, for skilled employees, the wage gap was approximately 7.5%. In some cases, depending on the size of the establishment, the wage differential was as high as 12% (Stewart, 1987). In the European context, such a practice is difficult to imagine, since Article 11 of the European Convention on Human Rights on the one hand gives everyone the right to peacefully assemble, including the right to form trade unions to protect their interests, but at the same time it simplistically prohibits the enforcement of such participation. Therefore, an employer cannot discriminate in this way against workers who are not and do not want to be part of a union. However, to understand the wage effect, it is useful to become familiar with the workings of this mechanism.

1.2 Findings published at the turn of the century

The studies mentioned so far have focused mainly on the USA, which is quite logical, as this is where most of the original literature on trade unions and collective bargaining originates. However, you can't start a new century and leave the U.S. with a better study than "*The Union Membership Wage Premium: An Analysis Using Propensity Score Matching*" by British author Alex Bryson (2002). Bryson has made a significant contribution to the "union" literature with more than one publication, but in the aforementioned study he directly attempted to measure the wage premium for union participation. The data for this study come from the 1998 Workplace Survey of Employee Relations - WERS). The questionnaire used in the survey provides combined data on employees and employers in the UK. Specifically, the study attempted to estimate the wage premium using a technique called propensity score matching, which, in short, compares workers based on similar characteristics. More specifically, the author uses this method to address selection bias and helps isolate the effect of union membership on wages from other characteristics, both personal and workplace. Thanks to the very comprehensive data on employers and employees from the aforementioned questionnaire survey, the author was able to assess certain factors that could affect or distort the union wage bonus, thus providing a more accurate estimate than another research.

The findings of the study are very interesting as earlier research not controlling for employee characteristics suggested a very significant union wage premium of 17-25% of gross hourly pay in the UK private sector. However, this union wage premium proved to be significantly lower when unionized employees were compared to non-unionized employees with similar characteristics. This was achieved by propensity score matching. After this adjustment, the union wage premium was reduced to only 3-6%. This very significant decline indicates that the higher wages of unionized workers are largely due to their individual characteristics and job types, not simply union status, which supports our reservations about the results of the structural survey data on employee wages presented in the introduction to this section. However, this does not discount that a union wage premium of 3-6% was found here, and the study also acknowledges that the wage premium for union membership declined in the 1990s, so was higher in the previous period.

However, the conclusion of this study could be summarised as that although union membership is associated with higher wages, this is not predominantly due to the bargaining power of unions but rather to the characteristics of union members themselves. Therefore, a very important conclusion from this study is that there is a wage premium for union membership, but it is very small. This suggests that, at least at the time of Bryson's analysis, it was the case in the UK that higher quality and more skilled workers were more likely to work in firms that were unionized than their colleagues who were less well equipped for the labour market. This can be attributed to several reasons. For example, transparency of pay conditions in companies with unions, where employees know that their wages are negotiated and, if necessary, have representation in these companies, could be one of them. These firms may have a good reputation for these reasons and may therefore attract quality employees who will subsequently be paid more, the original impetus or reason not

being union participation per se. However, the fact that different sectors are characterized by different levels of unionization will also play a role, with workers in higher-skilled sectors more likely to unionize.

Compared to the original literature on the union wage premium, which largely came from the United States, Bryson's study concludes that while a wage premium does exist, it is smaller than assumed. However, because Bryson based his findings on a questionnaire survey, he too is subject to the match bias described by Hirsch and Schumacher (2004). It should also be taken into account that the style and scope of collective bargaining sometimes varies quite substantially from country to country, which is undoubtedly reflected in the level of the union wage premium. In light of this, another relevant study should also be approached, in which the French authors Bunel & Raveaud (2011) again attempted to assess the wage premium associated with union membership using a comprehensive representative survey of employers and employees in France. France in particular is a rather specific country in terms of its collective bargaining system, where union organisation is extremely low (only around 8% of employees are union members), yet 92% of employees are covered by collective agreements. This unique scenario is shaped by institutional factors such as the assumption of representativeness of the major unions and access to public funding, which decouples the need for high membership from the bargaining power of the unions. Contrary to expectations, Bunel and Raveaud's findings showed that union membership does not translate into significant financial benefits for most employees. A small increase in the UMPW (Union Membership Wage Premium), or wage premium, was recorded for blue-collar and white-collar workers. Specifically, this was an increase of approximately 3%, suggesting that union membership provides few financial benefits indeed. This may affect, among other things, the overall dynamics of union membership (Bunel & Raveaud, 2011).

In addition to studies on the impact of collective bargaining on wage levels, it is also worth mentioning and taking into account studies that deal with wage inequalities in the context of, for example, different types of collective bargaining. Specifically, Dell'Aringa & Pagani (2007) examined how wage dispersion, i.e., wage inequality, varies for workers covered by different types of collective bargaining. In particular, how this inequality differs between employees covered by 'multi-employer bargaining' (MEB) and those covered by both MEB and 'single-employer bargaining' (SEB) in Italy, Belgium and Spain. The authors reach several conclusions, for example that in Belgium and Italy SEBs contribute to lower wage dispersion due to a high degree of collective bargaining coordination. In Spain, the impact of SEBs on wage dispersion is mixed and depends on the specific characteristics of workers and firms. Although the authors mention that coordination and centralization of collective bargaining matters a lot, they conclude that collective bargaining at the firm level tends to reduce wage dispersion more than sectoral bargaining (Dell'Aringa & Pagani, 2007).

Marsden & Moriconi (2009) in their study focused on the analysis of the impact of collective agreements on wages in the Czech Republic, Slovakia, Hungary and Poland during the period of

economic transition from centrally planned economies to market economies. Although there are many new firms currently operating in these countries for which the findings of this study are very likely not valid, its findings are very interesting. This is also because the study analysed, among other things, the Czech Republic and is already close to its present date. As already announced, this study looked at the transformation of economies from centrally planned to market-based, comparing the effect of sectoral and firm-based collective agreements. The study classifies firms according to the period of their establishment in the context of transformation. If the firm was founded before the transition, it is classified as "pre-transition". If the firm was created during the early to mid-transition phase, it falls into the "early-middle transition" group. The last group of firms are those that were created in the "late-transition". The reason why the authors examined this period and area is that the transition to a market economy in Central and Eastern European countries brought with it major changes in their labour markets. One of the characteristics of these pre-transition labour markets is the artificially created full employment that characterized the communist regime. Its collapse created space for the creation of new firms and for the restructuring of employment due to the recruitment of new workers into these firms and the dismissal of workers from existing firms, where they had often been doing inefficient or even unnecessary work. At the time, unions had to adapt to new standards in employee-employer relations and to changes in wage demands in the face of the decline in employment at the time. Blanchflower & Freeman (1997) and Boeri & Terrell (2002) talk about how the distrust of trade unions during the communist period, as they were seen by many as mere agents of the authorities, made it necessary to rebuild unions from scratch. In this context, the authors cite a study by R. B. Freeman in 1992, in which he predicted that it would take several years for economists to assess the impact of the transition on collective bargaining and wages in Central Europe (Freeman, 1992).

Regarding the specific results of their study, Marsden & Moriconi (2009) found that in Slovakia, for example, company collective agreements did not have a significant effect on wages in firms that were established before the transformation, but that sector-level collective agreements had an effect in firms that had not undergone restructuring, i.e. newer firms. For the Czech Republic, the authors found a statistically significant 5% effect on wages in firms that were founded almost in the transition late-transition. Perhaps an even more interesting conclusion is that in the Czech Republic, sectoral collective agreements had the effect of raising wages for low-skilled workers in all transition firms. In contrast, for rather medium- to high-skilled workers, collective agreements had the effect of raising wages in those firms that were established late in the transition. The authors mention, among many other conclusions, that collective agreements can have a negative impact on wage inequality in some countries (Slovakia, Poland), while this effect is not noticeable in the Czech Republic and Hungary.

In the context of Central European countries, it is also worth mentioning two follow-up studies in which Basu et al. (2004, 2005) present a comparative analysis of employment and wages for the Slovak Republic, the Czech Republic, Hungary and Poland in the early stages of transition. These studies have shown that profit-sharing mechanisms between employers and employees that were

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introduced during the transition were more effective in newly established ("de novo") firms than in former state-owned enterprises (SOEs). Furthermore, it appears that firms' decisions on employment adjustments became increasingly sensitive to wage levels as the transition progressed. In other words, this means that newly established firms were better at implementing mechanisms that more fairly distributed profits between employees and employers. A look back at this period shows that trade unions have already had to deal with the fundamental transformation of the labour market in the past and to transform themselves internally in order to be able to function in the newly established relations between employees and employers. Whether they can maintain their relevance in the context of current labour market changes will depend on the extent to which they are able to adapt to the new labour market realities, just as they were forced to do thirty years ago.

Another important study from the beginning of the new century that should not be overlooked was by Cardoso & Portugal (2003). The study focuses on the analysis of how the European wage bargaining system - including collective bargaining, etc. - coexists with the low unemployment rate and high wage flexibility in Portugal. While this micro-data-based study focuses on collective bargaining "only" in Portugal, a number of important and interesting insights emerge. The authors comment on the common perception that unions can cause wage rigidity, which in turn is negatively reflected in unemployment. Negative labour market shocks cause redundancies as wages are rigid due to collective bargaining and collective agreements. However, the authors argue that more detailed analyses show that the degree of centralisation and coordination in the collective bargaining process is what matters in this respect. Higher levels of coordination between employers can lead to lower wage agreements (Cardoso & Portugal, 2003). Under this coordination, it is easy to imagine that employers agree on lower wages so that workers do not have the option to increase their wages by moving to another firm if they find their wages low in their current firm. At the same time, Cardoso & Portugal (2003) mention a study by Nickell (1997), who argues that lower wage setting based on collective bargaining also theoretically reduces unemployment because employers are not committed to paying high wages in the event of negative shocks and therefore do not have to lay off workers en masse. They also mention a study by Calmfors & Driffill (1988) who concluded in their research that either a highly centralized or, conversely, a highly decentralized collective bargaining system leads to lower unemployment, while average centralization leads to the worst outcome.

Cardoso & Portugal (2003) arrive at two other findings worth mentioning in addition to those concerning wage rigidity. The first is that collective bargaining raises wage levels, but it also reduces "returns to workers." This can be seen as a return related to the attributes of the workers, i.e. their capabilities. This means that egalitarian union policies that seek to eliminate individualism may bring some benefits, but clearly, they are to the detriment of talented workers who could receive higher wages with an individual approach. However, this finding is seamlessly linked to a second finding, which is "wage drift", which in turn increases the returns to worker attributes while decreasing the returns to union bargaining power. Wage drift is, in short, the difference between

actual or paid wages and contractual or agreed wages. Agreed wages are those set by collective agreements, while actual wages are those actually received by workers. Wage drift is partly offset by collective bargaining, which gives firms some freedom to set wages. Firms have some freedom to pay workers above the agreed wages through collective bargaining. Most of the time this is so-called positive wage drift, i.e. a case where actual wages are higher than the agreed wages, but exceptionally negative wage drift can also occur (Cardoso & Portugal, 2003). Employers in the Czech Republic also have some flexibility in rewarding and/or motivating employees, for example through bonuses and bonuses.

A similar issue is also addressed in a study by Canal Domínguez & Gutiérrez (2004), who address the impact of the two basic types of collective agreements, i.e. sectoral and firm-level, on intra-firm wage dispersion. The study concludes that firm-level collective agreements have a negative effect on wage dispersion and that this effect is larger than for sectoral collective agreements. However, they mention that firm and worker characteristics, such as firm size or worker education, may offset the effect of reducing wage dispersion to some extent. It also depends on the type of employment contract - employees on permanent contracts usually have more stable and predictable wages. In contrast, employees with temporary contracts may have more variable wages. However, this conclusion is quite logical, since in traditional long-term contracts, employees usually have a similar number of hours worked (in the range of full-time work), so their wages do not differ as much as for workers with fixed-term contracts and frequent part-time work. Therefore, their wages vary more, mainly due to the fact that their working hours vary more significantly and also due to the more individual setting of these agreements.

1.3 Contemporary literature

The literature on the impact of collective bargaining on wages that has emerged in recent years understandably reflects the latest developments in the field of union influence, and there is a growing body of studies that are more applicable to the Czech Republic as they relate to Europe or, at best, Central Europe.

For example, Reeves (2021) in his study examines the impact of wage-setting institutions, specifically collective bargaining, on population health in 22 developed countries, such as the US, UK, France, Germany, Sweden, over a long time period between 1960 and 2010. One of the main conclusions of the study is that countries with extensive collective bargaining have lower mortality rates and higher life expectancy compared to other countries. The study found no evidence that collective bargaining improves the health of the population by reducing inequality, rather it is due to an increase in average wages (Reeves, 2021). These conclusions are again quite logical, as higher wages mean better access to health care for the population - of course, only if these additional incomes are not "overshadowed" by much higher prices for health care and medicines. The author's

conclusions are relevant to this paper because they document - albeit indirectly - the impact of collective bargaining on wage levels.

Similarly, another recent study indirectly enriches the literature on collective bargaining. Álvarez et al. (2021) examined in their study the impact of inclusive growth policies proposed by international organizations on economic inequality as well as income distribution. The authors identified two neglected aspects of the study, one of which is collective bargaining. The analysis included 42 developed countries and covered the period 1990-2018. An important finding for us is that increasing coverage of collective bargaining significantly increases the share of wages in GDP. Put simply, an increase in the wage share of GDP means that a larger share of total economic output is paid out in the form of wages to workers. This means that collective bargaining leads to higher wages. A second valid conclusion is that collective bargaining reduces income inequality, and thus, according to the authors, international organizations should take collective bargaining more into account in their inclusive growth policies (Álvarez et al., 2021).

There are several perspectives and approaches to examining the impact of collective bargaining on wages. Some studies focus on the degree of union organisation, others on the type of employment contracts, some use questionnaire surveys to collect data, others use data from statistical offices. Many studies and articles deal with the type of collective bargaining for which different terminology has been adopted. Some studies distinguish between collective bargaining and collective agreements at the enterprise level and bargaining and agreements at the sectoral level, while others analyse the same phenomenon through the degree of decentralisation of collective bargaining, which implies a shift from sectoral collective agreements to enterprise-based ones that are not centrally managed. In his study, Kauhanen (2023) examines this process and its impact on wage levels and also on wage dispersion, specifically in the Finnish forest industry and IT sector. Moreover, Kauhanen divides the individual decentralization effects into blue- and white-collar effects. The study detected only one statistically significant wage effect, and that was for blue-collar workers, specifically manual workers in the paper industry. The wage increase in this case was approximately 6% of the average wage in the sector. The conclusions about the positive effect on manual workers are consistent with the early literature, which reported the largest effect for this type of workers. However, as the effect was not confirmed in all blue-collar groups analysed, these results cannot be generalized with confidence.

On the other hand, it is surprising to find that for the same type of worker, there has been a significant increase in intra-firm wage dispersion with the increase in decentralisation of collective bargaining, which is not consistent with the idea that collective bargaining through collective agreements tends to equalise workers' wages and thus remove the individualism aspect. The same topic was addressed a decade earlier by Dahl et al. (2013). In this study, the authors focus on the Danish labour market, where collective bargaining was decentralised during the period under review. Regarding wage dispersion, the study concludes that wage dispersion is higher in decentralised systems. It should be noted that the increased wage dispersion found in Kauhanen

(2023) was related to intra-firm wage dispersion, while Dahl et al. (2013) talk about the dispersion of wages between firms. The results further suggest that, after accounting for unobserved heterogeneity, the average wage is not higher in decentralised systems and may be even lower than in centralised systems. As a result of decentralisation, employers can more easily decide what wage policy to adopt in their company, i.e. whether to try to motivate existing employees and attract quality new employees through high wages, or whether to keep wages as low as possible and thus reduce labour costs. It can be assumed that if firms have set wages lower at the firm level in the course of decentralisation, the labour market situation in the country probably allows them to do so. If the economy is characterized by high unemployment, firms can afford to take more risks with lower wages because they have a sufficient arsenal of potential workers who would be willing to work for a given wage. If the situation is reversed, and the company still tries to keep wages to a minimum, it risks losing skilled employees. This conclusion would not be so interesting in itself, but it does suggest that the situation and impact of decentralisation can vary considerably from one economy to another.

If we are to contribute to the debate on whether the presence of unions reduces or increases wage dispersion with empirical findings, we can only briefly mention an indicator that is monitored by the Czech Statistical Office as part of the structural wage survey mentioned at the beginning of this section. This indicator is the wage coefficient of variation, which expresses the de facto degree of wage heterogeneity. Its values over the past 15 years suggest that in the Czech context, wage variability is consistently higher for employees whose company does not have a collective agreement. In the year 2023, the wage coefficient of variation was 0.58 for employees covered by collective bargaining and 0.76 for employees whose company does not have a collective agreement. This means that the wages of these employees were more variable and ranged over a wider range than those of employees covered by collective agreements. The difference in the coefficient of variation has been more or less constant since 2009. This would support the thesis that collective bargaining has a kind of "levelling" effect on wage levels.

However, let us return to what has been the subject of research abroad in recent years. Bono-Lunn's 2023 study (Bono-Lunn, 2023) examines the implications of Right-to-Work (RTW) laws in the United States. These laws prohibit contracts that require union membership or payment of fees. Right-to-Work laws were introduced to limit the power of unions by allowing workers to enjoy the benefits of collective bargaining agreements without the need for membership. The study mentions the ambiguity of the impact of this measure on wages, but these laws have logically caused a decline in union membership and strength. One of the impacts cited by the author is a 5.9% reduction in employers' contributions to health insurance among all workers. At first glance, it would seem that the principle, based, among other things, on Article 11 of the European Convention on Human Rights, which has already been mentioned in the text, is similar, if not identical, in Europe. However, it is important to understand the differences in the overall approach to the issue. The European model places more emphasis on the protection of labour rights through collective bargaining and a strong role for unions, while the American model is more focused on individual

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freedoms with potentially negative impacts on working conditions and union power. These differences are the result of the different legislative frameworks, cultural values and historical contexts in the two regions.

Green et al. (2022) examine a closely related issue in their study. Their study was also conducted in the United States, where it addressed, among other things, the "spillover effects" that collectively bargained wages have on non-union firms. The study argues that this important link is responsible for the overall decline in wages in the period 1980-2010, when de-unionization, caused to some extent by RTW laws, also had an impact on non-unionized enterprises and reduced average wages. The overall decline in US wages over this time period is more complex and was driven by broader structural changes in the labour market, but there was also a spillover effect. The significant decline in the proportion of unionized workers during this period reduced the total number of workers who benefited from higher union wages and their spillover effects. As a result, the overall average wage has also decreased. However, it is important to note that Green et al. (2022) discuss the positive effect of "union" wages on "non-union" wages, as the presence of well-paid union jobs presents opportunities for non-union workers, leading to pressure on non-union firms to retain their quality employees. Of course, this only applies if the wages of unionized employees are higher.

Fang & Hartley (2022) further examine the evolution of unionized wages and the factors that influence this evolution. The authors discuss the already mentioned "union wage premium", which represents the wage premium of unionized workers compared to non-unionized workers. They ask how this mark-up has evolved over the years and what factors influence it. The authors divide these factors according to the level at which they operate into micro-level factors, meso-level factors and macro-level factors. Micro-level factors include mainly individual characteristics, and the authors mention the tendency of unions to narrow the wage gap between workers of different skill levels, meaning that the wage premium is typically lower for highly skilled workers. They also comment on the results of studies suggesting that trade unions help to reduce wage inequalities between ethnic groups and between men and women and point out that this effect may vary between countries or sectors. As for the meso-factors, a higher level of unionization (percentage of workers in unions) is associated with a higher wage premium. The authors state that at least 30% union organisation is usually needed to make a significant difference. Unions that are active and meet and communicate regularly with management also show higher wage premiums. Finally, Fang & Hartley (2022) discuss firm and industry size in the context of meso-factors, with smaller firms exhibiting higher wage premium values, and in terms of industries, traditionally heavily unionized industries such as manufacturing and transportation exhibit higher wage premiums than less unionized sectors. In terms of macro factors, the authors mention legislation and regulation, citing the Taft-Hartley Act in the US as an example, which limited union tactics and also enabled the adoption of RTW laws. The list also includes globalization, which is associated with increased international competition, generally leading to a reduction in the union wage premium. The authors add that this is particularly true in developed countries where unions face greater competition from cheaper foreign labour.

In terms of empirical evidence, Fang & Hartley (2022) report that studies show a wage premium in developed countries of between 10% and 15%, depending very much on the methodology used and also on the country in which the study was designed. As an example, they cite longitudinal studies that typically find wage markups between 5 and 15%, while selection correction models often show higher markups, often over 20%. The clear conclusion of this study is that unions play a key role in raising the wages of their members, but the size of the wage premium itself depends on many factors, including individual worker characteristics, union organization and activity, the legislative framework and others. In terms of time, the trends show a reduction in the wage premium over the last decades, which is, among other things, a consequence of globalization, changes in legislation or technological changes. Despite various challenges and the trend of declining wage premium, according to the authors, unions are still important actors in the mechanism for improving not only wages but also working conditions for a wide range of workers (Fang & Hartley, 2022).

Another very useful analysis is the study by Zwißen & Drahekoupil (2024), in which they analysed wage premiums associated with collective agreements for the period 2002-2018 in European countries. The study uses data from the European *Structure of Earnings Survey* (ESES), which provides information on worker and workplace characteristics, including coverage by collective agreements and the type of collective agreements (central vs. firm-level). One finding is the decline in collective bargaining coverage in most European countries, especially in the private sector. The authors also report that the public sector generally has higher levels of collective agreement coverage, with significant differences in some countries (Germany and the UK). As for the wage premiums themselves, studies show that they too have been declining over time. They go on to say that in 2006 the average wage premium was 5%, but by 2018 it had fallen to around 2.5%. In terms of centralization, central collective agreements are associated with higher wage premiums than enterprise-level agreements. Moreover, in countries with high union organisation and high coverage of collective agreements, central agreements have more influence. In general, higher union organisation is associated with higher wage premiums, especially for the aforementioned central collective agreements. One reason may be that union organisation strengthens the bargaining position of workers and increases the effect of collective agreements on wages. Similar to some previous studies, these authors also reach conclusions regarding the spillover effect mentioned above, stating that in sectors with high coverage by collective agreements, wages also increase for non-covered workers. In addition, firms that are not covered by collective bargaining agreements can raise wages to attract and/or retain quality employees. In relation to the Czech Republic, the authors argue that the significantly smaller presence of unions in the private sector compared to the public sector ultimately implies that wage premiums are higher in the public sector, as unions have greater bargaining power there due to the higher coverage of collective agreements.

1.4 Current challenges in collective wage bargaining

Historically, unions and collective bargaining have achieved many important milestones that cannot be questioned. The early literature, mostly from the United States, already concluded that collective bargaining has a positive effect on wages, with the largest effect present for the least skilled. Yet, there are also studies that question the functionality of unions and collective bargaining today. Their number is undoubtedly growing, along with the many pitfalls that unions and collective bargaining face today, which threaten their very existence.

For example, Baccaro (2011) in his study argues that despite the former strong redistributive effect of trade unions and collective bargaining, which contributed significantly to reducing income inequality, this effect is nowadays much smaller. In other words, unions are unable to effectively raise the wages of low-wage workers, thereby reducing income inequality. This, he said, is evidence of union inefficiency, as it is this type of worker that has been found to have the highest wage premium in most of the studies mentioned. One could argue with this conclusion in the Czech context by referring to the Czech Statistical Office's structural wage survey mentioned in Section 1.3, where the redistributive effect was confirmed. However, the degree to which this mechanism operates is related to the kind of economy we are analysing, so we can only conclude that Baccaro's claims on this topic are not universally valid. However, more recently, Visser (2016), in his study on the evolution of collective bargaining in the context of the so-called Great Recession (the global economic downturn of 2007-2015) in many different countries around the world, based on existing studies, also assumes that collective bargaining has a significant impact on reducing the wage gap between different groups of employees. Similar to other authors, he explains that unions often negotiate higher minimum wages and better wage conditions for low-wage workers, which brings their wages closer to other employees within organizations and reduces wage differentials between different industries (Visser, 2016).

Baccaro (2011) further discusses globalization, structural constraints and conservative monetary policy as factors reducing the effectiveness of unions. According to him, increased global competition and capital mobility are putting pressure on unions, which often have to adopt moderate wage policies to prevent inflation and unemployment. Conservative monetary policy, aimed at controlling inflation, further limits the ability of unions to negotiate significant wage increases. Together, these factors lead to a weakening of the redistributive role of trade unions, which, as already mentioned, have historically played a key role in raising the wages of low-wage workers and reducing inequality (Baccaro, 2011). If real wages were rising too much, this could be one of the drivers of rising inflation, as this increase would feed through into consumption, but it is questionable how high an increase could be considered dangerous. Rather, a valid conclusion in this regard is the impact of globalization, which opens up avenues for cheap labour. From this perspective, it clearly limits the bargaining position of unions.

Similar conclusions are also reached by Bengtsson (2014), who examines the relationship between union organisation and the wage share of national income. Bengtsson notes a generally positive relationship between union organisation and the wage share of national income but points out that this relationship is relatively weak and also varies considerably from country to country as well as over time. Bengtsson (2014) further discusses the declining correlation between these variables and attributes the decline in the impact of union organization on the wage share of national income over time to increased global competition and conservative monetary policy, which has weakened the ability of unions to push for wage increases since about 1980.

Hayter et al. (2011) examine the evolution and challenges of collective bargaining in the context of the modern global economy. The authors of the study cite several challenges to collective bargaining, one of which is the decline in union organisation. According to the study, this trend is visible in most developed industrial economies (the Czech Republic is no exception, see RILSA, 2024) and is caused by several factors, including structural changes in the economy, such as the decline in the share of the manufacturing sector and the growth of the service sector. This is very significant, as it is (especially manual) low-wage workers who have been the main target group of unions and collective agreements, given that it is this type of worker who has benefited most. Another challenge, according to the authors, is globalization and increased competition, in which they agree with the other studies mentioned. Changes in employment relations are also a significant challenge, as the increase in the use of non-standard forms of employment, part-time work, fixed-term contracts or agreements is slowly but surely changing the nature of the labour market.

In response to these and other challenges, unions have now integrated several innovative practices and structures into their operations. One such measure to help cope with the pressures of globalization is bargaining coordination, for which formal and informal mechanisms have been developed in some countries at national and international levels. Other changes introduced include multilevel bargaining, the extension of the collective agenda and a change in the role of tripartite institutions. Hayter et al. (2011) recommend several key areas for promoting innovation in collective bargaining in their study. The authors argue that public policy instruments should play a key role in promoting collective bargaining by protecting fundamental rights and providing dispute resolution mechanisms. Another recommendation is to disseminate innovative practices, i.e. best practices and innovations through training and information sharing among social partners. Last but not least, the authors recommend the development and promotion of labour relations, whereby advanced labour relations systems can be a key resource in dealing with economic crises and managing change.

Schnabel (2020), like previous authors, mentions that in order to remain a relevant actor, trade unions need to adapt to changing conditions and innovate their strategies, which includes engaging new groups of workers and adapting to the labour market. In his study, the author again mentions several recommendations for future developments. One of them, as in the previous study, is the support of public policy, which, according to the author, should facilitate collective bargaining. It also recommends innovating collective bargaining strategies to adapt to changes in the labour market, including the inclusion of irregular and informal workers in their structures. However,

1. The impact of collective bargaining on wage levels

Schnabel points out that studies have reached contradictory conclusions on globalization and its impact on collective bargaining. While some studies suggest a negative impact of globalization on the bargaining power of unions due to the possibility of shifting production to countries with cheaper labour, other studies do not find a significant link in this area.

In general, however, a growing number of authors have spoken of the future challenges facing collective bargaining and the fact that its effectiveness and relevance are steadily declining. It is up to the unions how they deal with these challenges if they don't want to lose their relevance. It has been argued several times that collective bargaining is particularly effective for low-skilled and low-wage workers, whose wages are raised the most as a result of collective bargaining, so that a decline in the workforce in these positions may lead to a loss of union relevance. They will therefore probably have to find new approaches and areas in which to be efficient and effective in the near future.

2. The impact of collective bargaining on working time

Working time is one of the most important issues in collective bargaining. This is because this aspect of working conditions is crucial for employees. Among other things, how they are able to balance their working life with other areas of their life depends on it. Historically, this was one of the main reasons for forming unions, alongside the struggle for decent wages for employees, of course. The exploitation of employees who worked long hours for minimum wages at the beginning of the Industrial Revolution was the reason for the creation of unions as we know them today. Unions have also achieved the goal of reducing working hours in the past. The decisive moment in this effort was the aforementioned milestone of the eight-hour workday in Chicago in 1886, won through several days of strikes. Since this standard is still in force today, we owe the current setting of permissible working hours to these relatively ancient events.

In the European Union, the working time of employees is regulated mainly by the Directive of the European Parliament on certain aspects of the organization of working time (Directive 2003/88/EC, the so-called Working Time Directive). This sets out minimum requirements for the regulation of working time so that the safety and health of employees are protected. These include minimum rest periods, breaks and holidays and maximum weekly working hours. It also concerns the regulation of night work and shift work. Another regulatory instrument in the field of working time is the Directive on the Framework Agreement on Part-Time Work (Council Directive 97/81/EC), which guarantees employees the right to reduced working time and with it a level playing field for employees with different ranges of working time (Lehmann, 2016). Legislation and collective

agreements in individual EU countries can only deviate from this regulation to the benefit of employees.⁴

In the area of working time, we have witnessed its increasing diversification in recent decades (Gershuny, 2000). The traditional 40-hour weekly fixed-hours schedule has been gradually giving way to more flexible forms of working time since around the 1980s. Diversification occurs both in the length of working time and in its distribution over time. This development is partly due to the redefinition of gender roles and the increasing participation of women in the labour market, but the evolution of the labour market as such, especially in the context of globalization and the development of technology, also plays a role. In recent years, the nature of work has been radically transformed with the development of digital technologies and the increasing use of telework, which is fundamentally redefining the approach to working hours and the definition of work and privacy space (cf. e.g. Berg, Bosch & Charest, 2014). The relationship between wages and hours worked is also loosening. Increasingly, compensation for work is based more on task completion than on the number of hours spent working (Rubery, Ward & Grimshaw, 2006).

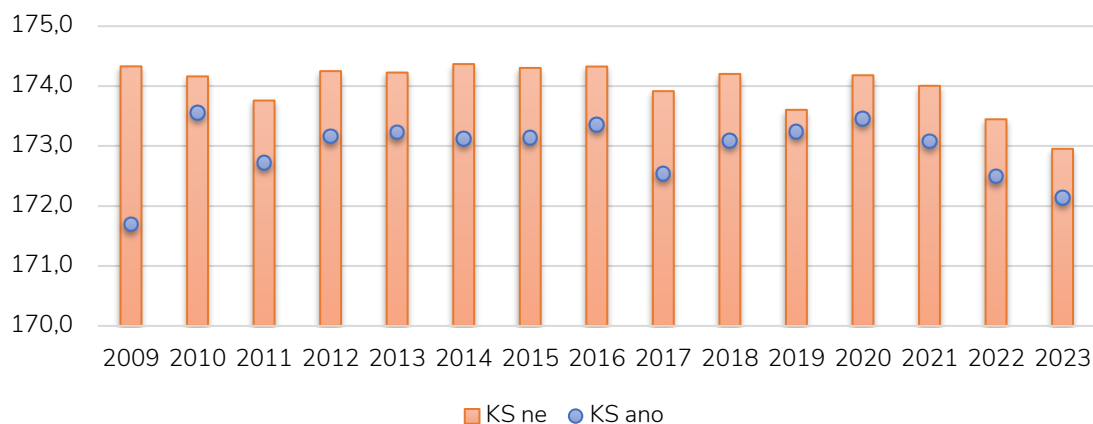
As all these trends are related to the aforementioned reconciliation of work and private life, it is crucial for trade unions to advocate that these new trends do not lead to the precarization of working conditions, but rather to greater employee control over working hours. In 2018, the Czech-Moravian Confederation of Trade Unions (CMCTU) raised the topic of the possibility of shortening working hours without cutting pay and came up with demands to shorten the working week to 37.5 hours per week and to set the minimum length of holidays at 5 weeks per calendar year. These requirements have not been enforced so far, among other things due to the lack of labour force in the Czech economy, but given the above-mentioned trends, it can be assumed that at least a certain segment of workers will gradually reduce working time without reducing wages in the future, regardless of whether the reduction of working time is supported by legislation (cf. Kroupa et al., 2020).

In addition to data on average and median wages, the data from the structural survey on employee wages mentioned in the introduction to Chapter 1 contain data on employees' paid working time. These suggest that employees with collective agreements in the enterprise work on average fewer hours per month than their colleagues not covered by collective agreements, or at least that their paid working hours are shorter than those of employees without collective agreements in the enterprise (see Chart 2).

Chart 2 Evolution of monthly working time since 2009 by presence of a collective agreement (in hours)

⁴ Některé členské státy uplatňují výjimky z regulace pro určité kategorie pracovníků (zejm. v bezpečnostních složkách, ve zdravotnictví apod.). Srovnej [Zpráva o provádění Směrnice 2003/88/ES o některých aspektech úpravy pracovní doby členskými státy](#).

2. The impact of collective bargaining on working time



CA no
CA yes

Source: CSO, structural survey of employee wages; own calculations

The problem with these statistics, as with the data on the level of wages of employees, is the lack of information on what type of employees and in what sectors the working time refers to. However, the scope of weekly working time is defined differently in Czech legislation for workers in different working time arrangements, so the sectoral structure may play a significant role for both groups of employees. Although the Labour Code (Act No. 262/2006 Sb.) states that the length of the fixed weekly working time is 40 hours per week (Section 79(1)), it also immediately defines the groups of employees for whom a shorter weekly working time applies. These are both employees working in mines, whose weekly working hours are set at 37.5 hours per week, and shift workers, whereby the set weekly working hours of 38.75 hours per week are applied to two-shift working patterns and 37.5 hours per week to three-shift and continuous working patterns. Collective agreements may - like internal regulations - further reduce the working time of employees without reducing their pay, but not for employees remunerated by salary, i.e. those working in public administration, education, etc.

Given that different sectors and occupations are associated to different degrees with different working patterns in terms of working hours - while some do not have shift patterns, others, for example, have a three-shift or continuous working pattern - it is difficult to assess the impact of collective bargaining on the length of working time using the data presented above. A number of authors point to sectoral and occupational specificities of working time, and some even consider them to be the most important factor determining the nature of employees' working time (cf. e.g. Kümmerling & Lehndorff, 2007; Eurofound, 2015; Eyraud & Vaughan-Whitehead, 2007; Lehmann, 2016)

Working time may be set by legislation in individual countries (within the above-mentioned boundaries) or may be the result of collective bargaining at different levels (national, sectoral or company). The ways in which working time is regulated have received attention in a number of

research studies (Berg, Bosch & Charest, 2014; Eurofound, 2015; Anxo & O'Reilly, 2000; Cabrita & Boehmer, 2016). In terms of the prevailing method of regulating working time, three basic settings are distinguished in the literature: 1. systems in which working time is regulated purely or mainly by legislation ("*mandated configuration*"); 2. systems regulating working time through collective bargaining ("*negotiated configuration*"); 3. systems regulating working time in individual contractual relationships between employees and employers, referred to as "*unilateral configuration*" (Berg, Bosch & Charest, 2014; Cabrita, Boehmer & Galli da Bino, 2016).

These systems differ, of course, in the degree of flexibility in working time arrangements and in the possibility for employees to negotiate their own working time. The lower the level at which working time is negotiated, the lower the degree of standardisation and the higher the variability of working time arrangements (cf. Kroupa et al., 2020; Lehmann, 2016). The ability to regulate working time primarily through collective bargaining is conditional on a high level of employee coverage of collective bargaining. Where this level is low, protection for employees is provided by statutory regulation, which, however, cannot take into account the specificities of all sectors of the economy, all professions or enterprises, so it usually guarantees only a certain minimum standard. Therefore, in systems where the regulation of working time relies primarily on collective bargaining, it is easier to achieve a shorter standard of working time than is the case in systems with legislative regulation.

In this classification, the Czech Republic falls into the former category, thus applying a system in which working time is primarily determined by legislation. All the countries of Eastern Europe are of the same type, as well as Ireland, France, Portugal, Greece and Malta. Although in enterprise collective agreements or in individual employment contracts of employees it is possible to agree on different working hours (in favour of the employee), this level of working time setting does not play a significant role due to the relatively low coverage of employees by collective agreements and the working hours of most employees are based on the mentioned legal regulation. Countries of the second type, i.e. those in which working time is primarily regulated through collective bargaining, within Europe could include Austria, Germany, the Benelux countries, the Scandinavian countries, Spain, Italy and Cyprus. An example of the third type in Europe would be the United Kingdom in particular (Cabrita, Boehmer & Galli da Bino, 2016).

The results of the *Information on Working Conditions* (IWC) survey, which was also presented in the introduction to the first chapter, show that working time in the Czech Republic is regulated by the vast majority of collective agreements. In 2023, 90.8% of collective agreements agreed on the length of the working week, 30.1% of agreements contained flexible working arrangements and 89.6% of collective agreements agreed on an increase in holiday entitlement (Trexima, 2023). Although it is not possible to ascertain from the data provided to what extent the working time arrangements differ from the statutory arrangements, it is clear that this is a crucial area of collective bargaining for both sides of the social dialogue.

In the following chapters, we will therefore look at how existing research assesses the impact of collective bargaining on working time, and then try to draw our own insights by analysing data from

the *European Working Conditions Survey* from the last completed wave of this survey, i.e. from 2021.

2.1 Findings from literature

The level of wages and the length of working time are undoubtedly closely linked, because if working hours are extended at a constant wage, this means in most cases a de facto decrease in hourly wages, as the employee receives the same pay for more work. Conversely, if working hours are reduced without a pay cut, hourly wages will increase. Thus, the list of literature from the first part of this study focusing on the impact of collective bargaining on wages could largely be listed here. However, since we want to take advantage of the availability of empirical data to look at the issue when analysing the impact of collective bargaining on working time, we only present here a few titles that seem most relevant to our context.

The question of the impact of collective bargaining on working time in Europe is addressed in some detail in a study by Keune & Galgóczi (2006). This book contains, among other things, an analysis of collective bargaining on working time in 21 European countries, including the Czech Republic. It looks at the evolution of collective bargaining and working time in different regions of Europe and notes the trends that affect the degree of influence of collective bargaining. In the long run, according to the authors, reducing working hours has been one of the main objectives of trade unions in previous decades. According to them, significant reductions in working time have been achieved in many countries, especially during the 1980s and 1990s. At the time of the study, however, the authors perceived that the trend had reversed. Employers and governments in many countries have begun to push for longer working hours and greater flexibility without adequate compensation. As for the average weekly working time in Europe for full-time workers, it was 41.9 hours in the EU-25 in 2005. The shortest working time was in Lithuania, Denmark, Finland, the Netherlands, Ireland and France (under 41 hours per week). The UK, Poland and Greece had the longest working time (over 43 hours per week). Between 1998 and 2002, working time was reduced in almost all European countries. The most significant reductions were made in Lithuania, the Czech Republic (in these cases it was a need to harmonize national legislation with the EU regulatory framework) and France (here, it was a reduction of the working week to 35 hours in order to reduce the high unemployment rate), with working hours in these countries being reduced by more than 2 hours per week. In the following period 2002-2005, as already announced, the trend was reversed according to the statistics. Working hours have been extended in 12 countries, while the average for the EU-25 has increased. The largest increase in working hours occurred in France, where, after a swing towards a 35-hour working week, working time began to increase again after the costs of switching to a shorter working week were shifted from the state to employers (for more on this topic, see Kroupa et al., 2020). More recently, studies by Eurofound (2012) and Cabrita & Boehmer (2016) have also highlighted the ambiguity of trends in working time, showing that while working time is gradually decreasing in some European countries, it remains the same in others.

The developments outlined by Keune and Galgóczi (2006) imply that trade unions have not been very successful in achieving their targets for working time in the economic and political context of the beginning of the century. Many of them are therefore beginning to focus more on another aspect of working time, which is flexibility, especially with regard to new forms of flexibility. These unions are working to ensure that work time flexibilization is not to the detriment of employees, but rather to their benefit. In this effort, Keune and Galgóczi (2006) also see a new goal for unions to pursue today. They also believe that the issue of shortening working hours will once again come to the forefront of the trade union agenda when conditions are more favourable.

The chapter by Martin Fassman and Helena Čornejová focuses on the relationship between collective bargaining and working time in the Czech Republic in the period before and after the Czech Republic's accession to the EU, i.e. around 2004. The legal weekly working time in the Czech Republic was reduced to 40 hours by the so-called harmonization amendment to the Labour Code, the purpose of which was to transpose the relevant European directives into Czech legislation so that the provisions of the Labour Code were already fully in line with European regulations before accession to the EU.⁵ At the same time, a maximum overtime limit of 150 hours per year was set and a basic holiday allowance of four weeks was enacted. Regarding the specific relationship between collective bargaining and working hours in the Czech Republic, Fassman & Čornejová (2006) report that in 2004, 94% of company collective agreements achieved a reduction in weekly working hours without a reduction in wages. Specifically, the average agreed weekly working time was 38 hours.⁶ Collective bargaining also had an impact on the amount of leave, with 76.5% of company collective agreements extending statutory leave by one week, and 0.5% extending it by as much as two weeks. In addition, some sectors have also concluded collective agreements that reduce on-call time and/or limit overtime below the legal limit.

Despite this list, according to the authors, shortening working time was not the main objective of collective bargaining in the Czech Republic at the time of the study. One of the reasons why this topic did not feature high on the union's agenda was labour efficiency. The authors argue that at

⁵ K tomu je třeba poznamenat, že fakticky se délka pracovní doby novelou nezměnila, změnila se pouze definice pracovní doby. V důsledku zmíněné novely se totiž v zákoníku práce operuje s „čistou pracovní dobou,“ tj. s pracovní dobou, která nezahrnuje přestávky v práci na jídlo a oddech (srovnej např. Martinková, 2006). Tím, že se přestávky v předchozí úpravě do pracovní doby započítávaly, byla zaměstnancům evidována pracovní doba delší, ačkoli celkový odpracovaný čas byl stejný. V současnosti je tedy za pracovní dobu pokládána pouze doba výkonu práce, doba odpočinku se do pracovní doby nezapočítává.

⁶ K tomu je nutno dodat, že jde o pracovní dobu bez rozlišení pracovního režimu, nelze tedy na základě tohoto údaje určit, jaký podíl zaměstnanců dotčených analyzovanými kolektivními smlouvami pracuje ve vícesměnných režimech. Není tudíž možné zjistit, do jaké míry se délka pracovní doby dohodnutá v kolektivních smlouvách odchyľuje od právní úpravy. Zda se skutečně jedná o zkrácení týdenní pracovní doby bez snížení mzdy nebo kolektivní smlouva pouze konstatuje, že je v podniku aplikována týdenní pracovní doba daná zákonem, se tedy bohužel nedá ověřit.

current levels of labour efficiency, it would be very difficult to maintain the same output if working hours were reduced, which could threaten the overall competitiveness of firms and the economy as a whole. This conclusion shows that the aspect of worker productivity cannot be ignored when trying to reduce working hours. In order to reduce working time, it would be necessary to increase the productivity of workers so that they produce at least the same amount of output in a shorter period of time. Otherwise, the reduction in working time would lead to a reduction in their wages, which would be contrary to the interests of the employees and, consequently, the trade unions. This explains why unions in the Czech Republic did not advocate for shorter working time until recently. The authors also point to the phenomenon of a preference for higher wages over more leisure time, which they observed at the time of the study (Fassman & Čornejová, 2006).

A recent initiative by unions demanding shorter working hours without cutting wage shows that the labour market has shifted significantly since the time of this study. The growth in productivity and the skills of the population, combined with the deepening problem of labour shortages, have strengthened the bargaining position of workers and paved the way not only for upward pressure on wages but also for the demand for shorter working hours advocated by the unions. People's (especially young) ideas about work and its place in life have also changed. The preference for leisure time, or the balance between work and private life, has come to the fore. However, as suggested in the introduction to this section, it is the lack of labour that is a barrier to unions' efforts to reduce working hours across the board, and so shortening the working week is more likely to be promoted as a benefit in industries where employers have to compete for talented workers.

Forth and Bryson's publication on working time in the context of collective bargaining is also inspiring but focuses not on weekly working hours but on amounts of leave. Forth & Bryson (2019) looked at the impact of unions on the provision of paid leave in the UK and examined how this impact has changed following the introduction of a statutory minimum leave rate in that country. The authors state that their main objective was to find out whether and how unions affect paid leave entitlement and what role state regulation plays in this process. They found that union members were 1.5 percentage points more likely to have some entitlement to paid leave. At the same time, these members had 0.67 more days of paid leave. Finally, they were 12 percentage points more likely to be entitled to paid leave above the legal minimum. The study therefore shows that unions have a significant impact on the entitlement to paid leave but mentions that this impact has been partly replaced by the introduction of the statutory minimum. According to the study, state regulation improved the situation especially for non-unionized workers who were otherwise less likely to have paid leave. The introduction of statutory standards is, according to the authors, evidence and a concomitant of a wider decline in the regulatory role of trade unions in Britain (Forth & Bryson, 2019). However, this conclusion could be at least partially extended to other countries as well, since the literature mentioned in the previous sections shows that in those countries where the state, through a legislative framework, ensures minimum standards for employees in the form of lower limits for wages and other employment rights and upper limits for working hours and other employee obligations, the importance of collective bargaining is diminished. In countries where

employee protection is limited, trade unions play an important role in establishing minimum standards of working conditions. However, the reverse is also true, i.e. where there is a well-developed system of collective bargaining and collective agreements protect the vast majority of employees, extensive regulation through legislation is not necessary.

2.2 Empirical findings

We used existing data to analyse the impact of collective bargaining on working time. These were data from Eurofound, the European agency, from the latest wave of the regular *European Working Conditions Survey* (EWCS), conducted in 2021. The EWCS survey is conducted at regular intervals of four to five years and maps working conditions for all types of workers in European countries. In 2021, due to the ongoing pandemic of Covid-19, the survey was conducted by telephone based on a random selection of telephone numbers generated separately for each country included in the survey. Respondents were working people over 15 years from 36 countries in Europe. However, the analysis presented here includes only the 27 countries of the European Union, as these countries share a common regulatory framework on collective bargaining, working time and (minimum) wages, and thus show a higher degree of homogeneity in these areas than other countries. The circumstances of the survey, especially the ongoing pandemic, undoubtedly influenced the results obtained, which must be taken into account when interpreting the data.

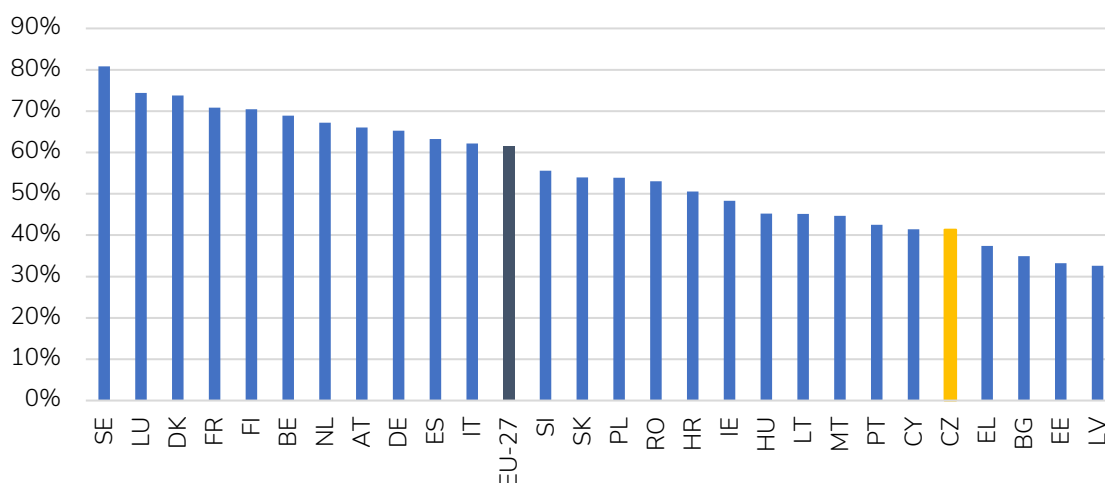
As trade unionization and the availability of trade union services for the self-employed vary across European countries, we have not included them in the analysis. In some countries, self-employed workers are completely excluded from collective bargaining, so the analysis of the impact of collective bargaining on them is not relevant in these contexts. Therefore, if we narrow the sample to employees only, we were able to interview 50 684 respondents. In the Czech Republic, 1 711 employees took part in the survey, which is a relatively large sample to allow for more detailed analysis.

The EWCS data contain both data on the employees' working hours, including their specific duration, and whether the enterprise where the employee works has a trade union, works council or similar committee representing the employees. Although the presence of a collective agreement was not part of the survey, it can be assumed that in enterprises where employee representatives are active, there is bargaining between employees and employers, which should have a positive impact on employees' working conditions. We can therefore compare the working time characteristics of employees in whose company no union-type organization is present and employees in whose employer employee representative bodies are present. This figure can be a kind of indicator that roughly tells us about the presence of collective bargaining at the enterprise level.

2. The impact of collective bargaining on working time

The proportion of employees who report that their workplace has a trade union, works council or similar committee representing employees (hereafter we will use "trade unions" for short)⁷ varies, of course, from country to country, depending on the degree of union organization in that country. To capture this context, we therefore provide an overview of the representation of employees with workplace unions among EWCS respondents in the countries surveyed (Chart 3).

Chart 3 Percentage of employees with trade unions / similar employee representatives in the workplace (%)



(Note: See Annex 1 for a list of country abbreviations)

Source: Eurofound, 2023, EWCS 2021; own calculations

It is clear that the Czech Republic is one of the countries with the lowest representation of employees in enterprises in this respect and, together with the Baltic countries, Hungary, Bulgaria, Greece, Cyprus, Malta and Portugal, represents countries where the proportion of employees with representatives at the workplace is quite significantly below average in the EU context. At the other end of the scale are the Scandinavian countries, the Benelux countries and France, where the vast majority of employees have workplace representatives.

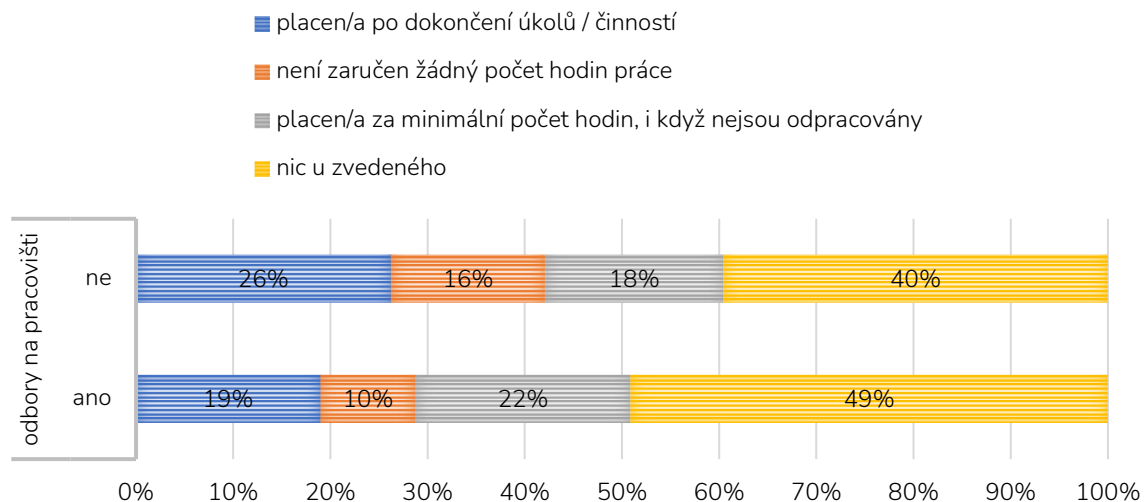
In the area of working time, we were first interested in the extent to which the extent of working time is anchored in employment contracts or agreements and whether this differs for workers who have employee representatives at their workplaces and those who do not have unions or other similar representatives at their workplaces. Analysis of the data showed that the length of working time is slightly more likely to be contractually anchored for employees with a union at the workplace: 90% of them have the expected amount of working time specified in their contract. Non-

⁷ Úplné znění otázek z šetření EWCS využitých v tomto textu je součástí přílohy č. 2.

union employees report the same in 86% of cases, which is less, but the difference is not very significant.

It is slightly more interesting to look at how remuneration is determined for those whose employment contract or agreement does not specify the scope of working times. In fact, when comparing employees with and without union representation in the workplace it appears that employees who have union representatives in the company have a greater degree of certainty about receiving some income in the coming period than their colleagues without union representation. Over 26% of employees who do not have a workplace representative said that they are paid after completing tasks or activities, and a further 16% declared that they do not have a guaranteed number of working hours, i.e. for 42% of them the remuneration for their main job is dependent on whether they complete a set task or are assigned a job by their employer (see Chart 4).

Chart 4 Method of determining remuneration in relation to working hours by union presence at the workplace (%)



- Paid on completion of tasks/activities
- No guaranteed hours of work
- Paid for a minimum number of hours, even if not worked
- None of the above

Unions in the workplace

Yes

No

(Note: N = 3 333 (Only those whose employment contract does not specify the scope of working time responded. The analysis does not include respondents who said they did not know how their remuneration was determined or refused to answer.)

Source: Eurofound, 2023, EWCS 2021; own calculations

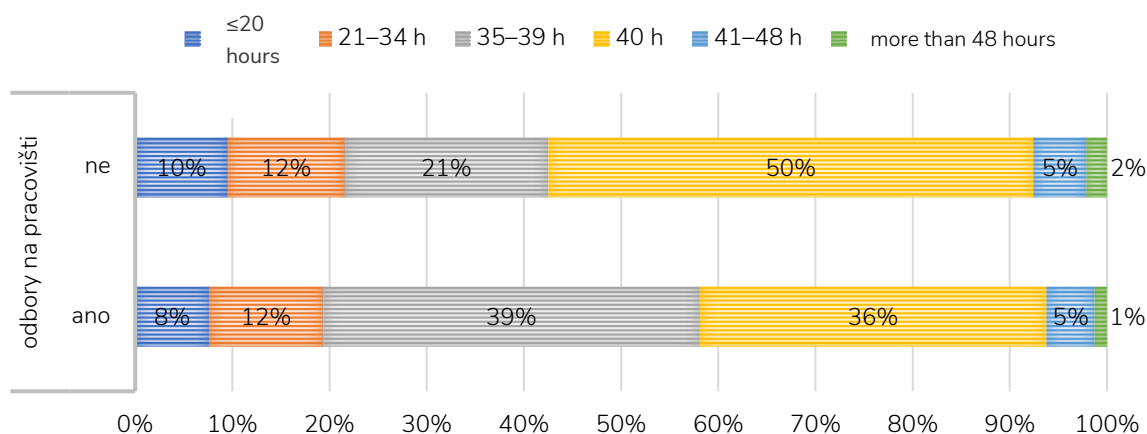
2. The impact of collective bargaining on working time

As for employees with a union in the workplace, 19% of them said their pay depends on completing tasks, and 10% of employees are not guaranteed a number of working hours, which is considerably less. In addition, 22% of them said that they are paid for a minimum number of hours in a given period, even if they do not work these hours. Employees without union representation said the same in 18% of cases.

This result would suggest that union or other similar workplace representatives are some assurances that employees will not find themselves in a precarious situation with regard to pay in the following period. However, in further analysis, we wanted to find out whether there is any difference in the length of working time between those who have employee representatives at the workplace and those who are not. We wanted to know whether the working time anchored in the employment contract are the same or whether they differ for the two groups of employees. On average, the contracted working time of both groups of employees are the same - 36 hours per week. However, if we look at the median working hours, we find that they are two hours shorter for unionized employees - 38 hours compared to 40 hours for non-unionized employees in the workplace.

The figure for average working time can be strongly influenced by the share of part-time work in a given enterprise, sector or country and the extent to which working time is homogeneous or heterogeneous in a given context. Therefore, instead of comparing the aggregate single figure for all employees in a given group, it is more useful to analyse how the length of contractual working time for both groups is structured. To do this, we use the distribution of employees into categories according to the indicator being monitored (see Chart 5).

Chart 5 Contractually anchored weekly working time by union presence at the workplace (%)



Unions in the workplace

Yes

No

(Note: N = 20,041 (Only those whose employment contract contains a scope of work clause responded. The analysis does not include respondents who said they did not know how many hours per week they were expected to work under their contract or refused to answer.)

Source: Eurofound, 2023, EWCS 2021; own calculations

The result of this analysis provides interesting results, as it shows that in the area of working time as set out in the employees' contracts or agreements, the standard working week of employees with union representation in the workplace differs from the standard working week of employees without union representation in the expected way, i.e. that the standard working week of unionized workers is often shorter than that of their counterparts.

While there is no significant difference in the proportion of part-time workers between the two groups, there is a significant difference in the proportion of workers working between 35-39 hours. Among employees with a union in the workplace, 39% reported that their contractually anchored working time were in this range, while employees without union representation in the workplace reported such working hours in only 21% of cases. However, exactly half of them have a 40-hour contract, whereas the proportion of unionized employees is significantly lower, at 36%. This would certainly indicate the positive impact of trade unions and, by extension, collective bargaining on working time.

However, we noted in the introduction to this section that comparing data on workers represented by unions or covered by collective agreements with workers not represented or covered by collective bargaining can be misleading if we do not know the internal structure of the two groups and do not know exactly which employees are involved. As already mentioned, the length of working time depends on many factors, and it is not entirely clear which of these should be properly taken into account in order to obtain a more reliable indication of the impact of collective bargaining. Therefore, we decided to split the set using the decision tree method. This statistical method makes it possible to divide the population into groups of individuals with similar characteristics with respect to the variable of interest (in this case, contractual working time). The subgrouping occurs in successive steps, with each step dividing the population into smaller subgroups, always according to the characteristic that has the greatest influence on the level of the observed variable. This not only allows us to find homogeneous groups of individuals in the data (e.g., the set of employees is divided into subgroups with similar working hours), but also provides information on which factors affect the target variable most (e.g., whether working hours depend more on the industry, the employee's educational attainment, or whether the employee is non-unionized).⁸

In order not to leave out any important factor, we have included among the factors with a potential impact on contractual working time information on the context in which the individual is located (whether the country falls within a system of working time regulation based on legislation or collective bargaining, the size of the location, whether the employee works in services or manufacturing or agriculture, whether the employee is engaged in manual or intellectual work),

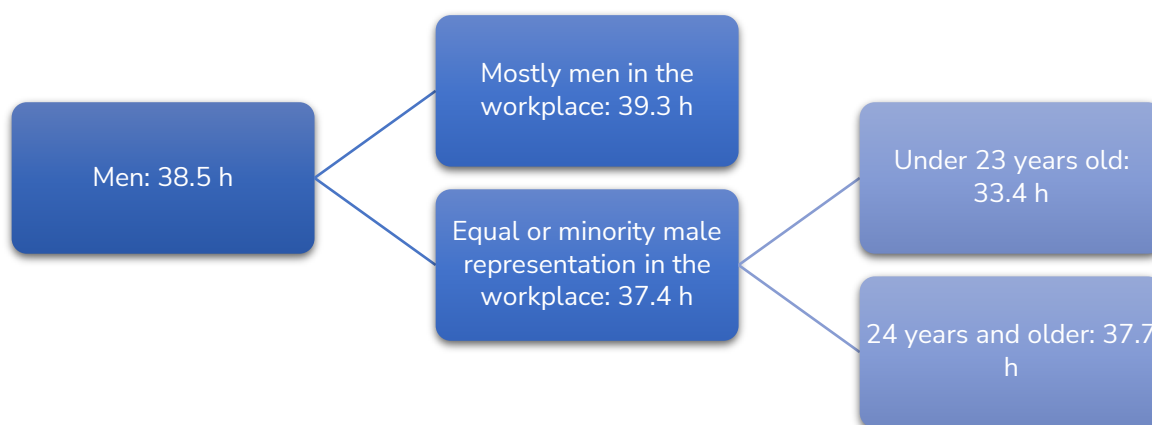
⁸ Pro více informací o metodě rozhodovacích stromů viz např. Hendl, 2006.

2. The impact of collective bargaining on working time

information on the enterprise and the employee's position in it (size, proportion of women, whether it is private or public sector, length of employment in the enterprise) and, last but not least, the employee's personal characteristics (gender, age, educational attainment, type of household according to the presence and age of children). Another factor included in the analysis was the presence of unions in the workplace, the influence of which we are most interested in.

The analysis resulted in a diagram - a decision tree - that identified the most important factor in terms of contractual working time as the gender of the employee. This is not too surprising given that women are significantly more likely than men to work part-time. If the average length of contractual working time for all employees is 37.2 hours, the average length of such working time for women is 35.8 hours and for men 38.5 hours.⁹ However, neither men nor women are highly homogeneous groups, and employees of both sexes can be further subdivided on the basis of several other factors. In the case of men, the second most important factor in the length of contractual working time is the proportion of women in the workplace (Diagram 1).

Diagram 1 **Factors influencing men's contractual working time**



(Note: Decision Tree Regressor method)

Source: Eurofound, 2023, EWCS 2021; own calculations

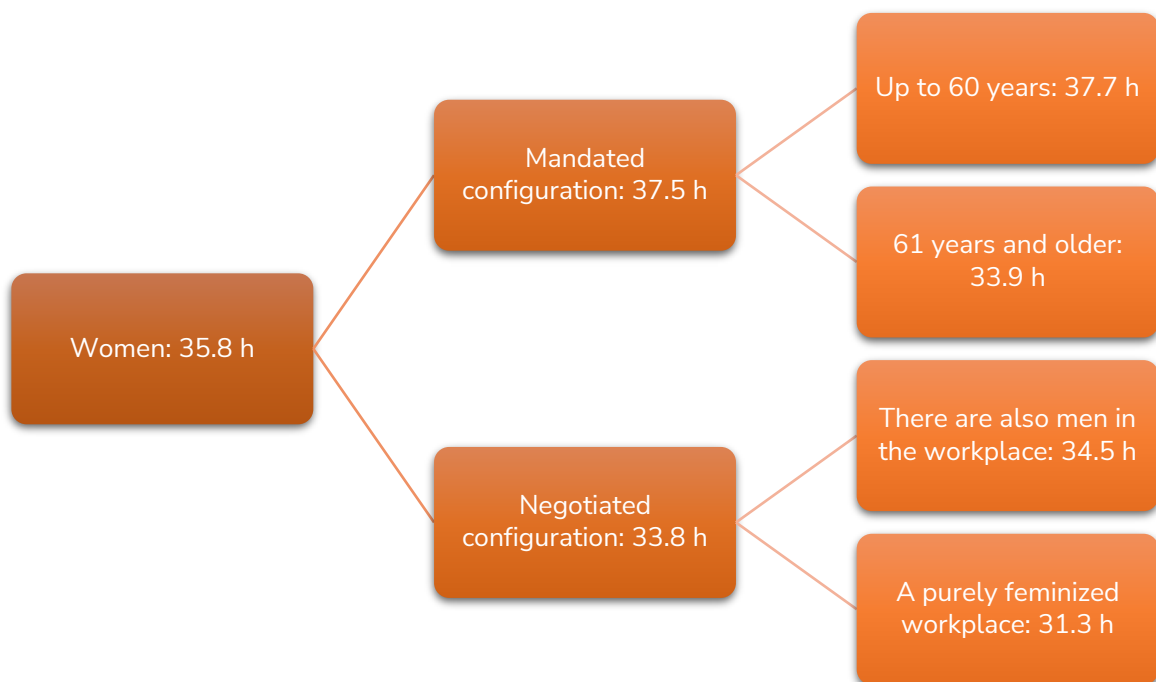
It is clear that where the proportion of women is low or where women are not present in the workplace at all (i.e. masculinized workplaces), men's contractual working hours are the longest. It can be assumed that it is not customary to work part-time in such workplaces, for example. In those workplaces where women are equally or even more prevalent than men, the average contractual

⁹ Rozhodovací strom sice využívá k popisu jednotlivých podskupin průměrnou hodnotu délky pracovní doby, avšak vzhledem k tomu, že s postupným štěpením původního souboru zaměstnanců by měly být podskupiny čím dál homogennější, měly by i průměrné hodnoty v podskupinách vypovídat o délce pracovní doby lépe než v celém souboru.

working time is shorter, which also affects men. Furthermore, the contractual working hours of men in those workplaces where women are normally employed vary according to the age of the men. For the youngest male workers up to 23 years of age, the average contractual working time is 33.4 hours, while for older workers it is 37.7 hours. In the former case, it is likely that many of these will be students or apprentices who have not yet entered the workforce in full; in the latter case, it will be men who are already fully engaged in gainful employment.

For women, the length of contractual working time is partly influenced by other factors. The most important of these seems to be whether women are recruited from countries with a mandated configuration or whether working time is regulated through collective bargaining in their countries. In the former system, the length of women's contractual working time is 37.5 hours, in the latter 33.8 hours (see Diagram 2).

Diagram 2 **Factors influencing women's contractual working time**



(Note: Decision Tree Regressor method)

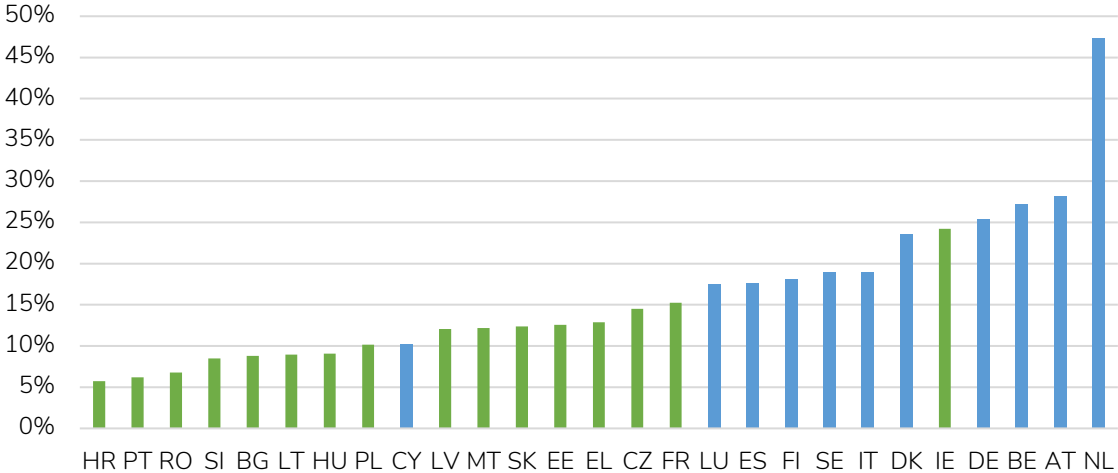
Source: Eurofound, 2023, EWCS 2021; own calculations

This finding could be seen as evidence that collective bargaining has a positive effect on working time, since women's contractual working time in the set of countries where working time is primarily negotiated through collective bargaining is on average almost four hours shorter than their female colleagues' contractual working time in the other set of countries. However, the fact that this effect is only seen in women should alert us to the fact that there will be another hidden factor at play in this relationship. When analysing the countries assigned to each system, we find that, with the exception of Cyprus, only countries with a high share of part-time jobs are classified in the system

2. The impact of collective bargaining on working time

referred to as the negotiated configuration. In contrast, the systems classified as mandated configuration are, with the exception of Ireland, exclusively countries with a low share of part-time employment (cf. Chart 6).

Chart 6 Percentage of part-time employees (%)



(Note: Countries falling under systems with legislative regulation of working time are marked in green, countries regulating working time mainly through collective bargaining are marked in blue.)

Source: Eurofound, 2023, EWCS 2021; own calculations

The coincidence of the distribution of countries according to the mentioned working time regulation systems and according to the proportion of employees surveyed by the EWCS who work part-time may be coincidental. Rather, however, it is to be expected that the high share of part-time work in countries where working time is regulated mainly through collective bargaining is linked, in addition to the regulatory framework, to a number of other characteristics of these countries, such as the social system, institutional support for reconciling work and family life, the dominant sectors in the economy, etc. One of the important factors influencing the share of part-time work in each country is the level of wages. It is well known that low wage levels push workers to use full-time jobs, as part-time jobs are not enough to cover household needs. Therefore, in Eastern European countries, where wages are below the average wage level in the European Union, the two-person full-time household model is usually applied. Instead, the 1.5 breadwinner model, in which one adult member of the household (usually a man) works full-time and the other adult member (usually a woman) works part-time, is common in many Western European countries. In northern European countries, it is not uncommon for both members of a couple to work (longer) part-time. This would suggest, however, that the impact of collective bargaining does indeed manifest itself, albeit indirectly, through wage levels. Indeed, if high collective bargaining coverage leads to higher wage levels, it indirectly encourages the use of part-time work, which well-paid employees can afford rather than low-paid employees.

Returning to the factors influencing the length of women's contractual working time (Diagram 2), it appears that in countries with legislative regulation of working time, contractual working time is further related to the age of the female employee, with women over 60 years of age having significantly shorter working hours than other women. Here, the fact that women are entering retirement age, or are pre-retirement age, and thus gradually reducing their economic activity before they leave the labour market altogether, is clearly reflected. In systems that regulate working time through collective bargaining, the length of women's contractual working time is then determined more by the type of workplace, or more precisely, whether it is a fully feminized workplace or whether men also work there. In the former case, the average contractual working time of female employees is only 31.3 hours, in the latter case 34.5 hours, i.e. three hours more.

Whether we focus on women's or men's contractual working time, the presence of trade unions or other employee representatives in the workplace does not significantly affect its length, or at least less than the above characteristics. Collective bargaining at company level thus does not appear to be a significant factor influencing contractual working time. However, the impact of collective bargaining at a higher level seems relevant for the use of part-time work in a given economy if it leads to higher wage levels.

The questionnaire used by the EWCS ascertained, in addition to the scope of the working time agreed in the employee's contract or agreement, the actual scope of the working hours, i.e. the number of hours actually worked by employees regardless of what is stated in their contract of employment. In the light of the previous findings, the analysis of these data is interesting given that when looking at the actual working time of employees, the differences between those who have a union in the company and those who do not have employee representatives are blurred. Both groups of workers work an average of 38 hours per week and the median working time for both groups is 40 hours per week. However, this would mean that even if unions can secure better contractual terms for employees, this does not necessarily mean that these terms will be better in reality, i.e. that unions can subsequently influence the actual implementation and enforcement of the agreed terms. It may also indicate that industries and occupations in which unions are more prevalent in the workplace are characterized by the prevalence of overtime work.

In this context, a parallel can be drawn with actual working time in France and Belgium, where legal working time are shorter than in other European countries (35 hours per week in France and 38 hours per week in Belgium), but actual working time in these countries are roughly on a par with those in other European countries (Lehmann, 2016; Kroupa et al., 2020). The contractual conditions can therefore sometimes differ quite substantially from the actual ones, and from the preliminary results outlined above, it seems that unions have an influence only on the former.

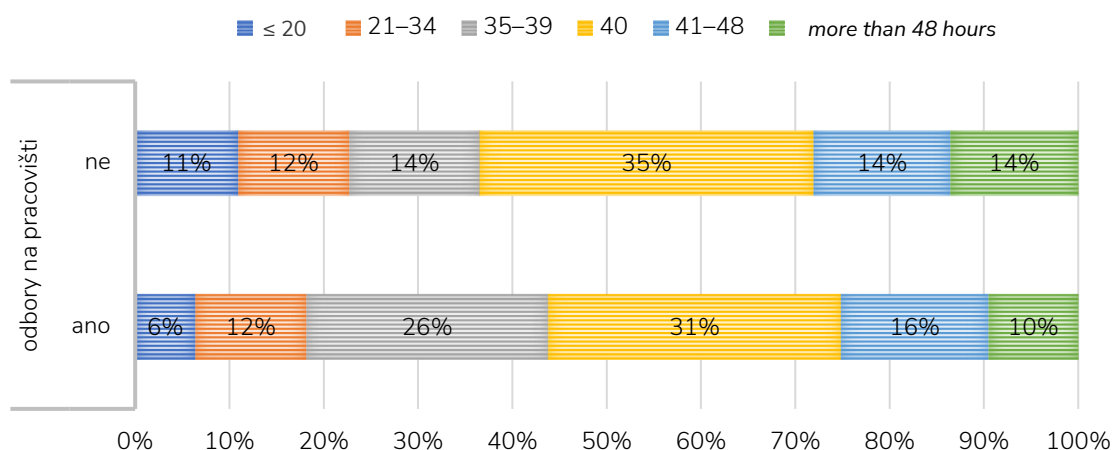
A look at the distribution of working time shows some differences in the structure of working time between employees with and without a union at the workplace, but these are not as pronounced as for contractual working time and do not lead to clear conclusions about the impact of collective bargaining (cf. Chart 7). Rather, this distribution suggests that the presence of unions in the

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workplace leads to a greater degree of standardization of working time and a more frequent situation where employees actually work 35-39 hours per week.

If employees do not have an employee representative in the enterprise, their working time is markedly heterogeneous, with a higher proportion of short working hours of up to 20 hours per week on the one hand, but also of working time exceeding 48 hours per week on the other. Since the European Working Time Directive stipulates that the maximum weekly working time, including overtime, must not exceed 48 hours, this is actually a working time outside the legal framework of the EU countries.

Chart 7 Actual weekly working time by union presence at the workplace (%)



Unions in the workplace

Yes

No

Source: Eurofound, 2023, EWCS 2021; own calculations

However, what we will be primarily interested in are the factors that affect actual working time, and of particular relevance to us will be whether the presence of unions in the workplace is reflected in actual working time. For this analysis, we will again use the decision tree method, and in order to compare the resulting model with the one we presented for the length of contractual working time, we will include the same input variables in the analysis.

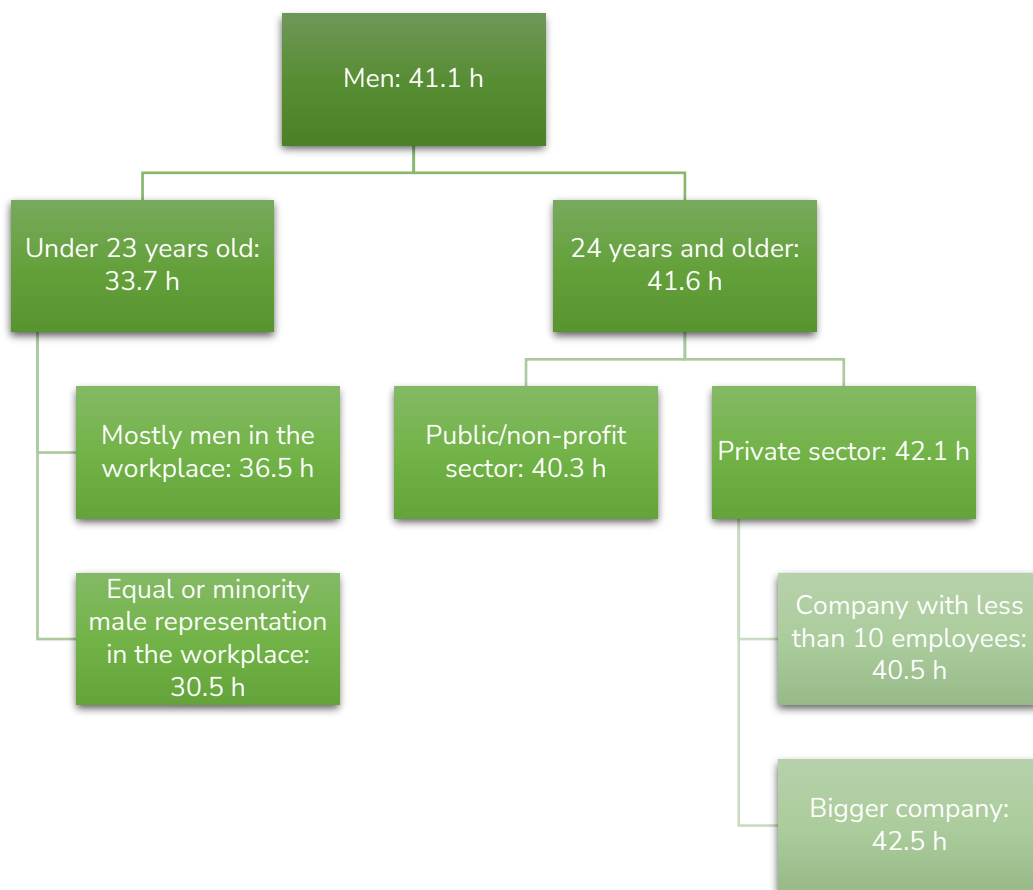
The resulting model shows that, unsurprisingly, even in the case of actual working time, the gender of the employee is the main factor. The average actual weekly working time of all employees was 39.4 hours per week. For women, the average was 37.7 hours per week, while for men it was 41.1 hours per week. However, what is more interesting is which factors affect the actual working hours of men and women separately. For men, their age has a significant impact on the length of the working week, with a notional limit again around the age of 23. For men under 23, the actual weekly working time is only 33.7 hours, while for older men it is significantly longer, averaging 41.6 hours (Figure 3). Again, it can be assumed that the two groups of men are distinguished from each other

by the fact that the former have not yet fully entered the labour market, while men in the older age group are already fully economically active.

For young men, the representation of women in the workplace also plays a role in the length of working hours. Where the workforce is predominantly male, the actual working time of the youngest age group is 36.5 hours on average. In other workplaces, the hours are significantly shorter in this age group of men - 30.5 hours per week.

For men aged 24 and over, normal working hours depend mainly on the characteristics of the undertaking in which the employee works. On average, these men work almost two hours longer in the private sector than in the public or non-profit sector. Last but not least, in private firms, the size of the company is reflected in the length of working hours. In small firms with fewer than 10 employees, working hours are two hours shorter than for men working in larger firms. It can therefore be concluded that men aged 24 and over tend to work the longest in large and medium-sized private firms.

Diagram 3 **Factors influencing men's actual working hours**



(Note: Decision Tree Regressor method)

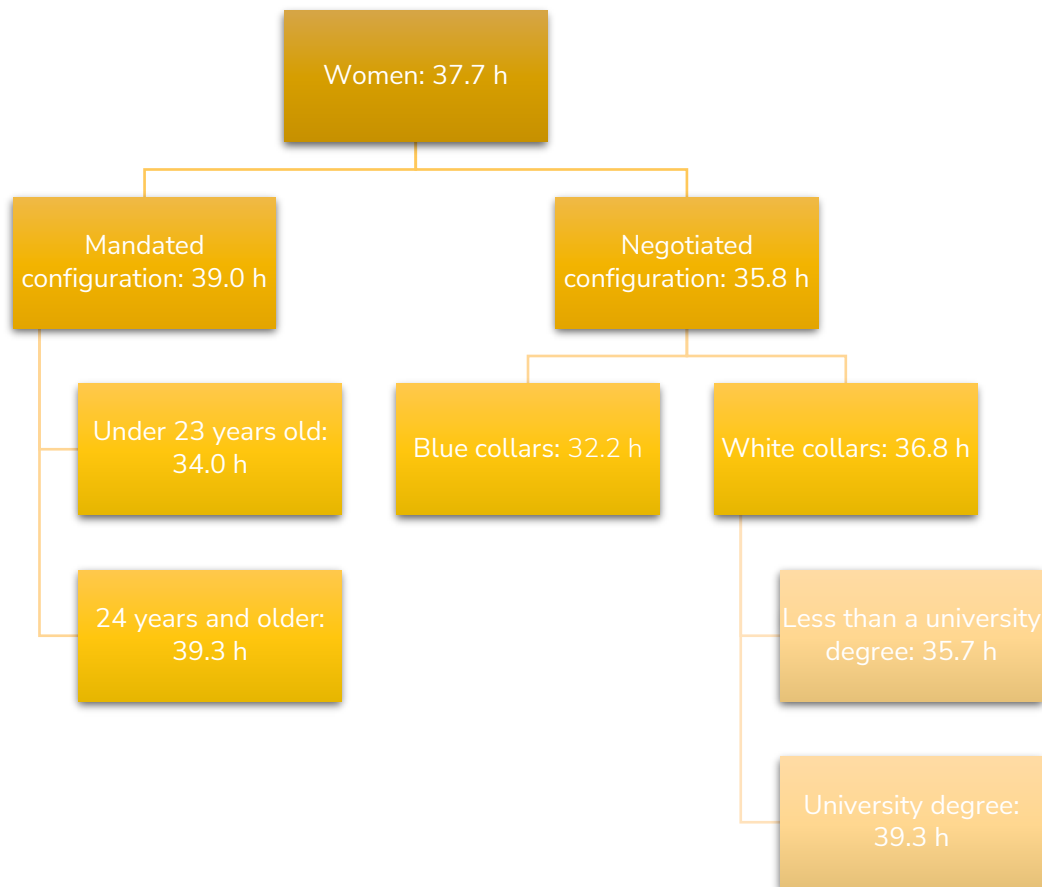
Source: Eurofound, 2023, EWCS 2021; own calculations

2. The impact of collective bargaining on working time

As regards women's actual working time, this is again most diversified according to whether the systems are those in which working time is regulated by legislation or those in which working time is regulated by collective bargaining (see Chart 4). As we already know, these two types of systems also differ in the level of part-time use, which explains why this factor is of paramount importance.

Further, in systems called mandated configuration, actual working time are diversified on the basis of age, and the dividing line between women with different lengths of working time would in this case be around 23 years of age, that is, at the time of full entry into the labour market. While women in countries where working hours are primarily set at the level of collective bargaining work on average three hours less than their female colleagues in the other type of country, this effect diminishes depending on the occupation and qualifications. On average, women in manual occupations work only 32.2 hours a week but women in what we might call white-collar occupations work 36.8 hours. The effect of negotiated configuration systems is even more blurred when women in non-manual positions have attained university education. In this case, they work an average of 39.3 hours per week. The relatively short actual working hours of manual working women, and conversely long working hours of women in intellectual professions with higher education indicate a high degree of variability in working time arrangements in this system. It also suggests a certain segmentation of the labour market for women, i.e. a division into blue collar positions with short working hours, less skilled white-collar positions with medium working hours and highly skilled white collar positions characterized by long actual working hours. It can be assumed that the first group is not always voluntary part-time work, but that this group will also include so-called underemployed women, i.e. those who are actually working less than they would like because they cannot find more or full-time work.

Diagram 4 **Factors influencing women's actual working time**



(Note: Decision Tree Regressor method)

Source: Eurofound, 2023, EWCS 2021; own calculations

In this context, let us recall the problem of "minijobs" in Germany, which are small-scale jobs (currently earning up to €538 per month) that do not give rise to social security contributions. This form of work, which in many respects could be compared to our contracts for work, allows a high degree of flexibility for employees and employers (at the current minimum hourly wage, this work cannot exceed 43 hours per month), but is often abused by employers to get out of the obligation to pay contributions on behalf of employees. Workers with a poorer bargaining position in the labour market sometimes find it difficult to find larger-scale work, so they have to combine several mini-jobs to ensure a sufficient income. The issue of precarious part-timers has been described, for example, by Fagan et al. (2014).

Although we cannot verify the degree of voluntariness in this case, it seems that in systems where working hours are collectively bargained, worse jobs for women are associated with short working hours, while 'good' (i.e. highly skilled intellectual) jobs are more likely to be associated with long working hours. In the labour market, these systems open up an imaginary scissors between underemployed unskilled workers and overworked skilled workers. The role of collective

2. The impact of collective bargaining on working time

bargaining at the enterprise level in this context is not clear, as even in the case of actual working time, the presence of unions in the workplace has not proved to be significant.

Thus, it seems that neither the working time agreed in employment contracts, nor the actual hours worked play much of a role in whether employees have representatives at the workplace, and thus collective bargaining can take place at company level. The influence of higher-level collective bargaining is more indirect (e.g. through wage influence) and only for women. It is unlikely to play a major role in the length of men's working time.

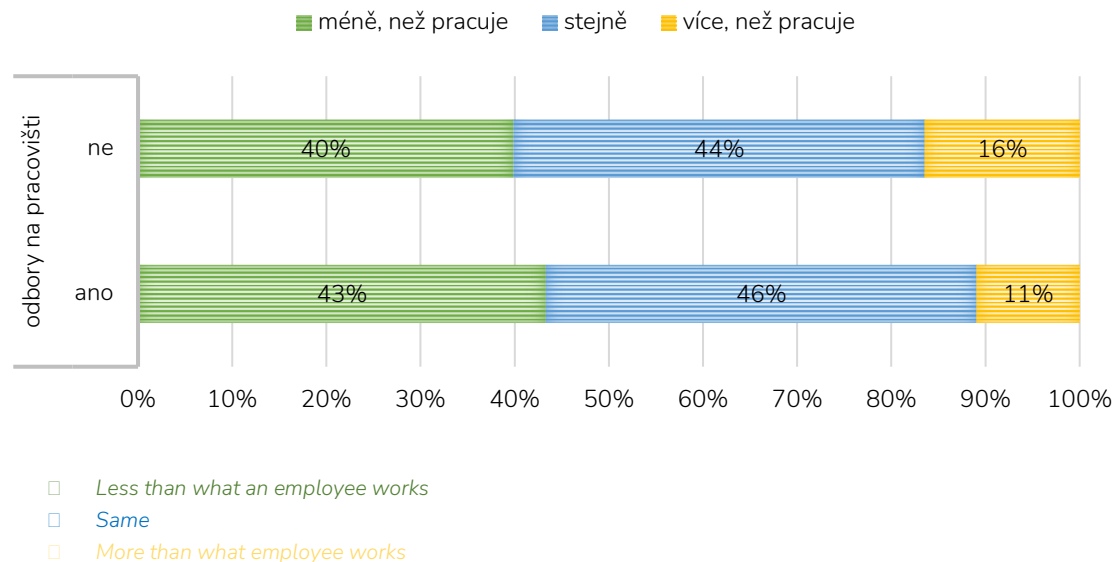
If we compare the average working hours stated in employment contracts with the working hours that employees - according to their statements - actually work, we find that employees on average work more hours than contractually stipulated. We were therefore further interested to know whether working beyond contractual working hours concerns more employees without union representatives at the workplace, or whether the presence of an employee representative at the enterprise does not play a role in this tendency. A comparison of the two groups of employees - those who have union representation in the workplace and those who do not - shows that the difference is minimal in this case. Surprisingly, a slightly higher proportion of employees with union representatives report that their actual working hours are longer than the contractual working hours. Employees with a union in the workplace reported longer actual working hours than contractual hours in 35% of cases, compared to 32% of non-union employees.

Respondents to the EWCS were asked how many hours per week they would currently like to work if they were free to choose their working hours, taking into account the wage necessary for living. Their responses show that employees with union representation in the workplace are slightly more likely to say they would like to work fewer hours than they currently do (43% of them, 40% of non-union employees; see Chart 8). In contrast, a higher proportion of non-unionized employees would prefer to work more than they currently do (16% compared to 11% of employees with a union in the workplace).

On the one hand, this may indicate that employee representatives at the workplace do not have a significant influence on the length of employees' working time. However, given that the survey respondents related their preferred working hours to their required earnings, there may also be a tendency for employees to begin to prefer leisure over other earnings from a certain level of earnings, while at lower wage levels they prefer other earnings over leisure. However, this would indirectly demonstrate the positive effect of workplace unions on earnings, since union-represented employees, in the logic of this equation, would be satisfied with their earnings to the extent that they would not want to change them or even be willing to give up some of their earnings in favour of leisure.

Chart 8 Preferred working hours compared to actual working hours by union presence at the workplace (%)

2. The impact of collective bargaining on working time



Unions in the workplace

Yes

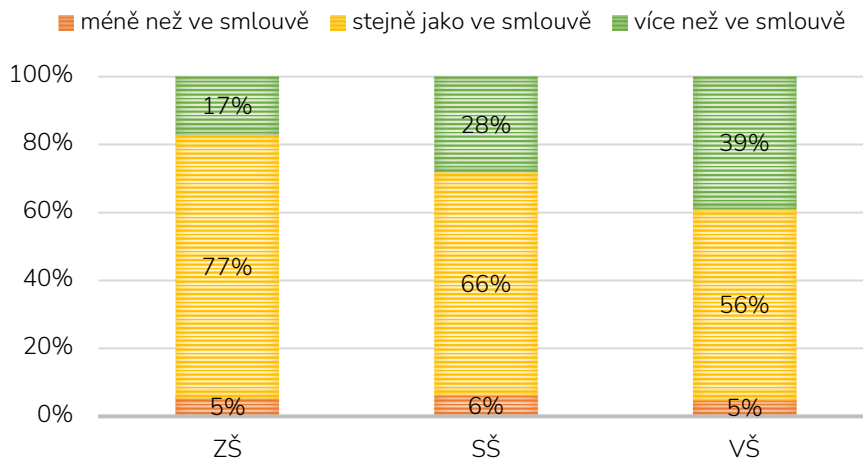
No

Source: Eurofound, 2023, EWCS 2021; own calculations

However, when we return to the question of how many hours per week employees actually work compared to how many hours they are contractually expected to work, the question arises as to what characteristics specifically affect whether or not an employee works less or more than his or her contractual hours or whether or not he or she deviates from the contractual arrangement. Thus, using the decision tree method, we evaluated the same set of factors as for the length of working hours and investigated what determines the rate of deviation from the contractual arrangement. The result of this analysis is quite unambiguous, as it identifies only one of the factors used as truly relevant to the question. The difference between employees' actual working hours and their contractual working hours depends mainly on their educational qualifications. University-educated employees tend to work longer than their contracted hours than employees with lower levels of education. On average, they work 3.2 hours more, while employees with less education work on average 1.8 hours more than they should under the contract. Collective bargaining plays no role in this phenomenon.

The relationship between working time in line or not with the employment contract and the level of education attained can be well illustrated by looking at the different educational levels separately (Chart 9). This distribution clearly shows that as education increases, the proportion of employees who actually work more hours than their contracted hours increase. The proportion of workers who spend as much time working as they should under their contract or agreement decreases in line with their level of education. The proportion of employees actually working fewer hours than expected by their contract is small for all educational categories (5 to 6%).

Chart 9 How many hours employees actually work compared to contractual hours by highest level of education (%)



Less than in the contract

As in the contract

More than in the contract

PRIMARY, SECONDARY, UNIVERSITY

Source: Eurofound, 2023, EWCS 2021; own calculations

2.3 Paradox flexibility

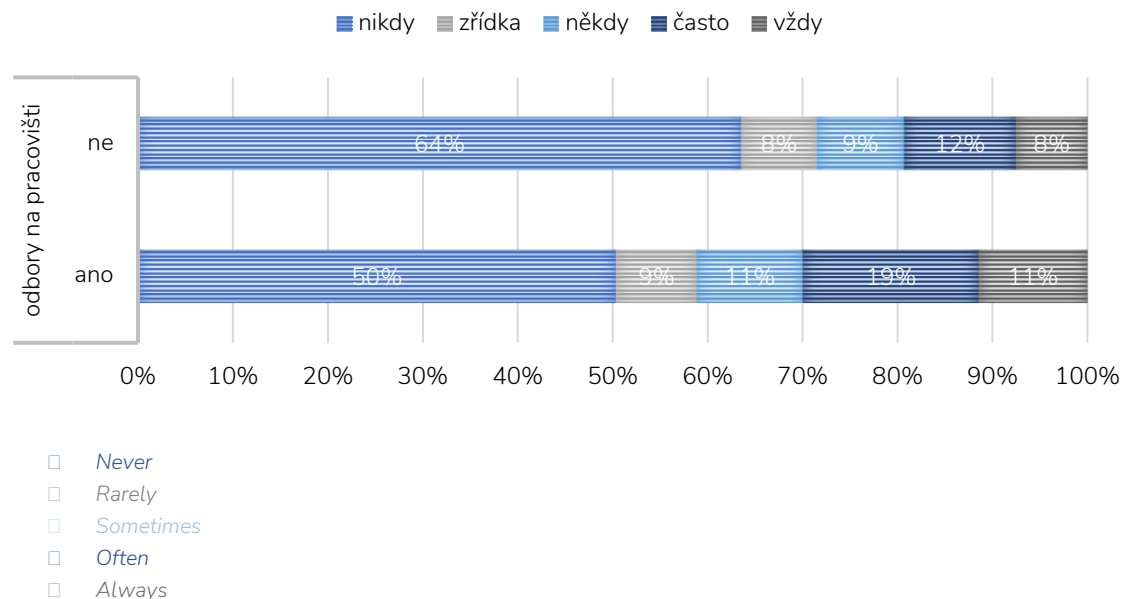
The problem of extended working time and work intensification due to increasing work autonomy of employees is addressed in Rubery, Ward & Grimshaw (2006). They concluded that the transformation of the employment relationship, which is gradually taking place in some sectors, and which is manifested, inter alia, by the separation of working time and remuneration for work, is leading to an intensification of work, often associated with an increase in working time. The whole mechanism is that employers delegate autonomy to workers. In many industries, workers' remuneration is no longer based on the number of hours worked and is increasingly dependent on the work they put in. In other words, the employee is not obliged to spend as many hours at work as the employment contract requires. It is up to the worker to choose the time in which to do the work but the remuneration for the work is linked to the results. This reduces costs for employers (they do not have to reimburse employees for the time they have to be present at the workplace, even if they have no tasks to perform) and gives employees a high degree of flexibility. However, as autonomy is being transferred to employees along with responsibility for work, employees are under increasing pressure to perform, and as a result, time spent at work is increased (sometimes quite significantly) rather than reduced (Rubery, Ward & Grimshaw, 2006). Similarly, Anna S.

Burger (2015) described the intensification of work associated with longer working hours; new managerial approaches that increase flexibility but also work intensity have been noted by a number of other authors (cf. e.g. Burchell et al., 2009; Lott, 2014; Anttila et al., 2015).

This trend is typical especially for highly skilled tertiary occupations, which would correspond with the finding presented in the previous chapter about the increased amount of work beyond the employment contract for university-educated workers. The trend is supported by the use of digital technologies, which also extend the flexibility of time to the flexibility of place of work. So-called telework has become a common part of the working lives of a significant proportion of workers, and it is only worth noting that the spread of this form of work has been accelerated in recent years by the Covid-19 pandemic, or anti-pandemic measures, which have brought work into the homes of employees to an unprecedented extent.

EWCS data shows that working from home is more common for unionized workers than for other workers. In the light of the above, this would probably partly explain why a slightly higher proportion of these workers work longer than their contractual working hours (see Chart 10). Employees with company unions said in 30% of cases that they work from home often or even exclusively, while less than one-fifth of other employees said the same. According to their statements, 64% of non-union employees never work from home, and among employees with union representatives at work, the figure is exactly half.

Chart 10 Frequency of working from home by union presence at the workplace (%)



Unions in the workplace

Yes

No

Source: Eurofound, 2023, EWCS 2021; own calculations

2. The impact of collective bargaining on working time

On the one hand, working from home (at least occasionally) significantly helps to reconcile work and family responsibilities and enables groups with increased demands for flexibility (parents of young children, people caring for family members, etc.) to participate in the labour market. However, a problem often highlighted in the context of teleworking is the blurring of the boundary between working and non-working time. This results in the extension of work activity into time that is considered non-working, including night hours, weekends, vacation time, etc., the continuous availability of workers to deal with work tasks, and the associated intermingling of work and private activities that can interfere with employees' personal lives (see e.g. Fagan et al., 2012; Bouffartigue, 2012; for the Czech setting see Bierzová, 2008).

All these trends show how flexibility can be double-edged. On the one hand, it allows employees to respond flexibly to the demands of their private lives and can allow for small-scale work, but on the other hand it can also lead to longer working hours at the same time as pressure on performance increases and the boundary between work and private time is blurred.

Conclusion

The impact of collective bargaining on wage levels and working time has long been the subject of research and controversy. Due to the complexity of both phenomena, it is difficult to prove this effect or even to determine its extent. For this reason, the results of previous analyses in this area are highly inconsistent and sometimes lead to contradictory conclusions, as the literature review presented in this study shows. Nevertheless, it can generally be said that the studies carried out agree that, at least in the area of wages, collective bargaining has a positive effect.

Research on this topic generally concludes that a union wage premium does exist and is particularly important for so-called blue collar, i.e. manual workers with the lowest wages. Hand in hand with wage increases for workers at the lower end of the wage distribution, collective bargaining tends to equalize wages. However, workers whose wages are high because of their indispensability and their skills are not affected by the wage effect associated with collective bargaining. However, the specific estimate of the size of the wage premium varies depending on the methodology used and the country under study. However, it is clear that each methodology has its own specific pitfalls, and none is free from the risk of bias, whether cross-sectional data are used for the analyses, a longitudinal approach is used, missing wage data are imputed into the data or aggregate data are used. Moreover, collective bargaining affects wage levels not only for unionized workers, but also for non-unionized workers, further problematizing wage premium analyses.

Moreover, the size of the union wage premium is not constant over time or space and varies due to a number of factors. The following factors in particular have been identified in the literature as significant in influencing the degree of impact of collective bargaining on workers' wage levels:

- **Legislative framework and market regulation** - the degree and form of labour market regulation and economic policy in individual countries define the scope for collective bargaining in the area of wages. For example, conservative monetary policy has been shown to reduce the influence of unions on wage growth, as keeping inflation low does not allow for significant wage increases.
- **Phases of the economic cycle** - in periods of economic recession, the impact of collective bargaining on wages increases because collective agreements are concluded in advance, i.e. they reflect economic developments with a delay determined by the length of the collective agreement. In contrast, employers who are not bound by a collective agreement can react immediately to market fluctuations. This countercyclical effect of collective bargaining is also illustrated by the CSO data presented in the introduction to Chapter 1. These show that employees covered by collective agreements have seen their wages rise even in times of recession, when other employees are facing stagnant or even declining wages.

- **The state of the labour market** - even regardless of the phases of the economic cycle, some economies are characterized by chronically high unemployment and others by labour shortages. The long-term state of the labour market significantly affects employers' wage policies and their willingness to negotiate wage increases. Unions are in an advantageous position in this respect when employers have to compete for skilled workers. On the other hand, it can be assumed that in such circumstances employers will be inclined to increase wages even without union intervention, or that employers who do not participate in collective bargaining will tend to match collectively bargained wages, which may reduce the union wage premium. In this sense, the labour shortage currently facing some European countries, not excluding the Czech Republic, can compensate for the insufficient power of trade unions and de facto substitute their influence.
- The **degree of union organization** in a given country or sector largely influences the bargaining power of unions. Strong unions can negotiate higher wages than unions with weak bargaining power. According to one research conclusion, union organization needs to be at least 30% to have a real wage effect. In the Czech Republic, by comparison, the union organization of employees is about 14% (cf. RILSA, 2024). However, contemporary studies point out that the influence of this factor weakens with increasing globalization and its degree also varies across countries.
- **The level of collective bargaining** - however, in this area, there is disagreement in the analysis to date as to whether the wage premium tends to rise or fall with increasing levels of centralization. However, some contemporary research concludes that the union wage premium is higher where bargaining is at a higher level, especially if union organization and collective agreement coverage are also high.
- **Collective bargaining coverage rates** - increasing coverage rates lead to an increase in the wage share of GDP, according to research findings. Where coverage is low, minimum standards are usually guaranteed by legislation. However, these standards must be set at a sufficiently low level so as not to stifle the flexibility of economic actors. Therefore, wage pressure may be more pronounced where the setting of working conditions is the result of collective bargaining than where it is based on universal legislation. At the same time, however, if agreements resulting from collective bargaining apply to all employees in a given segment of the economy, regardless of their union membership, the union wage effect is erased. Thus, union membership does not bring any advantage to employees in terms of wages (it is linked to the well-known problem of "stowaways") and it is difficult to determine to what extent wage growth is due to the impact of collective bargaining and to what extent it is influenced by other factors.
- **Firm characteristics** - the size of the firm seems to play a major role, as the wage premium is usually smaller in large firms.

-
- **Worker characteristics** - especially educational attainment - can largely offset the union wage effect. This is because highly skilled workers with a good position in the labour market can individually negotiate higher wages than those collectively bargained by unions. Thus, in the case of these workers, the union wage effect is minimal, zero or may even be negative.
 - **Contractual relationships** - open-ended contracts are associated with greater wage stability and are more often covered by collective bargaining than other types of contractual relationships between employees and employers. Where employers address the need for flexibility through the use of agreements and fixed-term contracts, the difference between the wages of workers covered by collective bargaining and the wages of workers not covered by collective bargaining can be significant.

There is little consensus among scholars on the extent to which and how collective bargaining affects wage inequality. There are also differing views on whether the redistributive effect of collective bargaining has declined or remained constant in recent decades. As mentioned, the upward pressure on the wages of the lowest paid workers has the effect of levelling wages, but again the strength of this effect depends on a number of factors and varies from country to country. The data presented by the Czech Statistical Office confirms a steadily lower dispersion of wages of employees covered by collective agreements in the Czech context. One of the research findings of foreign authors is that a high degree of coordination and centralization of collective bargaining increases the levelling effect of collective bargaining in the area of wages, but this effect is maximized when collective bargaining occurs at both the higher and enterprise levels.

More recent studies have increasingly problematized the impact of collective bargaining on wage levels and developments. Analyses based on better data and using more powerful computing techniques than earlier research have concluded in many cases that the wage premium for workers covered by collective bargaining is driven more by the individual characteristics of workers, their jobs, and industries with high collective bargaining coverage than by collective bargaining per se. Some research has confirmed the wage effect only in some sectors and only for blue collar workers. Some studies find a negative relationship between wage premiums and employment, especially in the context of increasing globalization. The higher the wages that unions manage to negotiate, the greater the risk of a fall in labour demand and a possible outflow of investment to countries with cheaper labour. It is not only in this context that a number of analyses conclude that wage premiums are gradually declining and are currently negligible. There are also a growing number of studies that directly address the current and future challenges that collective bargaining is facing with increasing intensity.

In the area of working time, existing research is inconclusive about the impact of collective bargaining. The positive effect was clearly confirmed only for the length of leave, but not for the length of the working week or other working time parameters. Some studies point out that the gradual reduction of working hours, which was one of the central objectives of trade union efforts,

has stalled in developed countries and in some of them the trend has even been reversed. To understand this phenomenon, it is necessary to look at trends in the contemporary nature of work.

The evidence so far shows that there is a gradual diversification of working time, both in terms of its length and its scheduling. In terms of working time, employees can now work in a wide range of arrangements, and a concomitant of this increasing heterogeneity is the loosening of the relationship between pay and working time. Increasingly, remuneration for work is less and less often related to the time spent on the job and more and more often based on the completion of prescribed tasks. This is certainly related, among other things, to the increasing complexity of work activities. For many of them, it is not easy to determine how much time is needed for a given work task, and the speed of work cannot be easily standardized, as it was before, when it could be determined, for example, by the speed of a running belt or the number of simple tasks per given time unit. In the case of complex activities, the relationship between work outputs and time worked is individualized. It depends to a large extent on each individual's ability, efficiency, organization or working style how quickly he or she gets on with the job, which makes time-based remuneration very difficult. Estimating the working time required is even more difficult when working hours overlap with private time (e.g., when working from home). With the transition to a knowledge-based economy, a move away from the traditional relationship between pay and hours worked seems inevitable.

This is accompanied by an increase in employee flexibility, but as some authors point out, it also increases the intensity of work, which is due to the shift of responsibility for the results of work to employees. This usually also leads to extended working time beyond the scope of the employment contract, which is typically unpaid in highly flexible working arrangements. The employer does not order the employee to work overtime, only to complete the assigned task. The employee does not disclose work beyond the scope of his contract for fear of being judged as working inefficiently. He may then perceive the overtime work as his own failure, not as a result of the inadequacy of the workload. Such a shift of responsibility to the employee, together with the breaking of the link between wages and working hours, makes it meaningless to advocate shorter working hours. Extending the time spent at work is becoming a problem especially for skilled workers and employees in senior positions, which has not been the main target group of trade union activities so far.

Our findings are consistent with these trends described in the literature. These suggest that unions in EU countries are able to negotiate better contractual terms in companies, including shorter standard weekly working hours, and provide greater income security for workers, but are unable to get workers covered by collective agreements to actually work to the agreed extent. The actual working time of employees covered by collective bargaining do not differ from those of other employees, even though their contractual working hours are often shorter. However, most workers with a university degree work beyond their contract and, in general, the higher the level of education of an employee, the more likely they are to actually work more hours than their contract stipulates.

Men working in larger private firms have the longest working hours of all employees. Among women, white-collar undergraduates work the longest hours in systems where part-time work is often used. Blue-collar women enjoy the shortest working hours among women in these schemes, but this is not necessarily a situation that women have voluntarily chosen, as many of them work less than they would like given the financial needs of their households.

The length of working time is determined primarily by the gender of the employee, which suggests that despite the already relatively high participation of women in the labour market, there is still a strong tendency towards a traditional division of gender roles, resulting in an unequal distribution of working time between men and women in many countries. A related point is that the proportion of women in the workplace is an important factor influencing the length of working hours, because while in masculinized industries and enterprises it is not customary to work part-time and long working hours are commonplace, in workplaces where women are common or even predominant, there is much more emphasis on work-life balance and both men and women in these enterprises can benefit from greater flexibility in the direction of reducing working hours.

According to our findings, the impact of collective bargaining is only indirectly reflected in the length of working hours through upward pressure on wages, as higher wages allow employees to work part-time, which has so far been predominantly used by women. In this case, however, there is no reduction in working time without a reduction in pay, i.e. the reduction in working time is accompanied by a proportional reduction in income. Wages are then crucial for the optimal length of working time from the employees' point of view, in the sense that up to a certain level of hourly wages, employees will prefer to work more because wage growth will be a more desirable good than leisure. This is understandably hampering efforts to reduce working hours. However, from a certain level of hourly wages onwards, the preference starts to reverse, and employees start to prefer additional leisure time to additional income. Collective bargaining in this way can lead to a situation where employees' preference for additional leisure time over additional income takes precedence. Men, however, do not experience this effect, so they do not appear to respond to wage increases by reducing their working hours, unless it is at the cost of reducing their income.

Last but not least, it is confirmed that the development of technology plays a significant role in the new approach to working time. The possibility of teleworking has increased employee flexibility (flexibility of time is added to flexibility of location), but this can be not only beneficial for employees (the ability to adapt work to the needs of private life) but also detrimental due to the blurring of the line between work and private life, work and private time. All this shows that reducing working hours is becoming increasingly difficult in the contemporary world of work.

While it can be assumed that contractual working time will continue to be more likely to be reduced in view of labour shortages in many European countries, particularly where employers need to attract highly skilled labour, the evolution of actual working time may be different. The lack of labour is also a factor that contributes to the fact that working time can only be reduced at the cost of intensification of work, or that working hours are contractually reduced but the volume of work

does not change. Thus, a focus on the length of working time may not be what helps employees to solve their problems. In this respect, a focus on, for example, new forms of flexibility and their associated risks seems more appropriate.

It is clear that collective bargaining systems and trade unions as such will have to undergo some transformation in the near future if they are to avert the threat of their demise. In the countries of Central and Eastern Europe, the situation of trade unions is all the more difficult because after the fall of the communist regimes they had to regain the trust of the workers, which they have done to varying degrees in different countries. Among the most frequently mentioned current challenges for trade unions and collective bargaining are the following:

- Increasing **globalization** weakens the bargaining power of trade unions by exposing a workforce largely covered by collective bargaining to competition from a workforce that is not under the influence of collective bargaining and enjoys less legislative protection overall. This risk is most pronounced in developed countries with high wage levels, which have so far been able to compete with labour forces in other parts of the world with high levels of labour skills. However, as the quality of education systems around the world increases, this competitive advantage is gradually disappearing, making it increasingly difficult for high-wage workers to compete with cheap labour. On the other hand, growth in the skill level of workers is usually associated with wage growth, which should converge the price of labour in different parts of the world in the future.
- The **development of technology** not only contributes to the blurring of the boundary between work and private time, but also leads to an increase in the complexity of the working world. Through digital technologies, workers gain access to a global labour market that is not subject to the same level of regulation as national labour markets. The global market is also breaking out of existing collective bargaining structures. It is in this area that strategies are already emerging for greater coordination of collective bargaining, which could increasingly reach international levels in the future. Collective bargaining in the future will have to take place at more levels than before, with some issues being appropriate to be addressed internationally. The challenge in this regard will be to convince large multinational corporations of the mutual benefits of collective bargaining.
- **Robotization and the increasing use of artificial intelligence** are, among other things, associated with a gradual decline in the workforce in manual occupations. However, with this, unions lose an important target group and mission, which is to improve the working conditions of this type of workers and maintain their wages at a decent level. If unions want to benefit this group in the transition to Economy 4.0, they can participate in efforts to provide these workers with the necessary retraining and help them find new jobs. In addition, workers with low incomes and precarious working conditions are increasingly concentrated in non-manual occupations (e.g. delivery services or call centre workers), so new groups are emerging on the labour market that could benefit from collective representation.

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- Changes in the labour market are leading to a **diversification of contractual relations** between employers and employees, and the proportion of employees with standard long-term contracts and full-time jobs, who have traditionally been the focus of trade union concerns, is declining. Unions should therefore look for ways to reach out to workers in non-standard contractual relationships and try to integrate workers in other forms of employment, including new forms (e.g. platform workers) into collective bargaining structures. It is some new forms of employment that could potentially become a source of precarization and trade unions could play a role in this area to prevent this from happening.
 - In addition to contractual relations, the very **nature and conditions of work** are changing. Working patterns are diversifying considerably with the introduction of flexible working arrangements, teleworking, etc., again enhanced by the use of new technologies. Hand in hand with this, new issues are becoming relevant to employees (e.g. the right not to be available outside working hours), which unions should focus on if they want to offer support to employees in areas that are really burning them at the moment.
 - Most developed countries are currently facing a **decline in union organization**, which is related to the above trends. In some countries, the fact that collective agreements cover all employees in a given segment of the economy, organized and non-organized, contributes to the decline in union membership. Non-organized workers can benefit from the results of collective bargaining without bearing the costs of union membership. It is clear that union organization plays a significant role in the bargaining power of unions. In the future, it will be necessary to communicate this fact to employees sufficiently and offer them such services that the costs of membership are offset by the benefits from the perspective of the employees.

Summarizing the findings presented in this publication, we conclude that the traditional union focus on wage levels and working hours is reaching a smaller and smaller part of the workforce in the developed world, and that the issues that workers themselves perceive as pressing and topical today, such as the possibilities of reconciling personal and professional life, the transition to industry 4.0 and the associated changes in the structure of skills needed, the use of artificial intelligence to the benefit (not detriment) of employees, etc.

Unions will also need to diversify their program and target groups of employees with different interests and different nature of issues affecting them with specific offerings. Alongside this, it will be necessary for unions to redefine their role at least to some extent. Protecting the interests of the most disadvantaged in the labour market will certainly always be an important mission of trade unions, but they should not forget that other groups of workers may also face unfavourable working conditions. There will be a need to target new threats to workers, whether they are in the lower- or upper-income brackets.

National governments can assist trade unions in their efforts if their public policies create conditions conducive to collective bargaining. A major initiative has already been launched at European Union

level in this regard. Indeed, Directive (EU) 2022/2041 of the European Parliament and of the Council of 19 October 2022 on adequate minimum wages in the European Union¹⁰ obliges Member States where collective bargaining coverage is below 80% to draw up national action plans to achieve this level of coverage through collective bargaining. It will now be up to individual governments to take up this task and whether they will support unions and employers in mutual dialogue or pass on the full costs of this transformation to the unions. Whatever approach individual governments take, trade unions should seize the coming transformation as an opportunity to play an active role in shaping the new labour market to help avoid some of the risks associated with it.

¹⁰ Viz [Směrnice Evropského parlamentu a rady \(EU\) 2022/2041 ze dne 19. října 2022 o přiměřených minimálních mzdách v Evropské unii](#).

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Annex 1

International abbreviations for country names

AT	Austria	IE	Ireland
BE	Belgium	IT	Italy
BG	Bulgaria	LT	Lithuania
CY	Cyprus	LU	Luxembourg
CZ	Czech Republic	LV	Latvia
DE	Germany	MT	Malta
DK	Denmark	NL	Netherlands
EE	Estonia	PL	Poland
EL	Greece	PT	Portugal
ES	Spain	RO	Romania
FI	Finland	SE	Sweden
FR	France	SI	Slovenia
HR	Croatia	SK	Slovakia
HU	Hungary		

Full text of selected EWCS questions

Q71A Is there the following in your company or organization...?

(FOR A COMPANY THAT HAS MULTIPLE LOCATIONS, MAKE SURE THE RESPONDENT UNDERSTANDS THAT YOU'RE ASKING ABOUT THE ENTIRE COMPANY OR ORGANIZATION, NOT JUST THE BRANCH OR LOCATION OF THE SITE)

A. Trade union, works council or similar committee that represents employees?

1 ... Yes

2 ... No

8 ... *I don't know (spontaneously)*

9 ... *Declined to answer (spontaneously)*

Q2d Do you work part-time or full-time in your (main) job?

("PART-TIME" DOES NOT HAVE TO BE "PART-TIME"; THIS IS A SMALLER NUMBER OF WORKING HOURS THAN IS USUAL FOR A "FULL-TIME" JOB. IN CASES WHERE RESPONDENTS' WORKING HOURS ARE IRREGULAR AND HIGHLY VARIABLE, AND IF THE RESPONDENT ASSESSES THAT THEY GENERALLY WORK LESS THAN STANDARD WORKING HOURS OVERALL, THE ANSWER SHOULD BE "PART-TIME")

1 ... Part-time

2 ... Full-time

8 ... *I don't know (spontaneously)*

9 ... *Declined to answer (spontaneously)*

Q24C Does your employment contract in your (main) job include the number of hours you are to work? / Does your agreement to complete a job in your (main) job cover the number of hours you are supposed to work?

1 ... Yes

2 ... No

8 ... *I don't know (spontaneously)*

9 ... *Declined to answer (spontaneously)*

If so:

Q24D1 How many working hours do you have to work in a normal week or other specified working period?

(ZERO (0) IS ALLOWED)

Number of hours per week: _ _ _

888 ... *I don't know (spontaneously)*

999 ... *Declined to answer (spontaneously)*

If No or the respondent has indicated that they are to work 0 hours in a normal week:

Q24CC Which of the following options applies to your (main) employment contract? / Which of the following options applies to the agreement for your (main) job?

- 1 ... I'm paid after completing tasks or activities
- 2 ... I don't have a guaranteed number of working hours
- 3 ... I am paid for a minimum number of hours for a set period, even if those hours are not worked
- 4 ... None of the above
- 8 ... *I don't know (spontaneously)*
- 9 ... *Declined to answer (spontaneously)*

Q24 How many hours a week do you usually work in your (main) paid job?

(NO LUNCH BREAK AND TRAVEL TO AND FROM WORK – IF MORE THAN 30 MINUTES, ROUND UP TO THE WHOLE HOUR)

Number of hours per week: _ _ _

888 ... *I don't know (spontaneously)*

999 ... *Declined to answer (spontaneously)*

Q25 If you were free to choose your working hours while taking into account the living earnings you need: How many hours a week would you like to work at the moment?

(IF THE RESPONDENT WORKS IN MORE THAN ONE JOB, ASK HIM/HER TO TAKE INTO ACCOUNT ALL JOBS)

Hours per week: _

777 ... *Same number of hours as currently (spontaneous)*

888 ... *I don't know (spontaneously)*

999 ... *Declined to answer (spontaneously)*

QM35E How often have you worked in one of these positions (as part of your main job) in the last 12 months?

E. Your own home

- 1 ... Never
- 2 ... Rarely
- 3 ... Sometimes
- 4 ... Often
- 5 ... Always
- 8 ... *I don't know (spontaneously)*
- 9 ... *Declined to answer (spontaneously)*

Q14 Do you work in ...?

- 1 ... Private sector
- 2 ... Public sector
- 3 ... Combined private-public organisation or company
- 4 ... Non-profit sector, non-governmental organization
- 5 ... Other, please specify: _ _ _ _ _
- 8 ... *I don't know (spontaneously)*
- 9 ... *Declined to answer (spontaneously)*

Q16A How many people work in total at your workplace, which is located in the place where you work?

(THE RESPONDENT WILL INCLUDE THEMSELVES (IF THEY USUALLY WORK FROM A GIVEN LOCATION) AND PEOPLE WHO USUALLY WORK AT THE SAME WORKPLACE – LEAVE OUT PEOPLE WORKING AT OTHER LOCATIONS OR WORKPLACES)

- 1 ... 1 (works alone)
- 2 ... 2–4
- 3 ... 5–9
- 4 ... 10–49
- 5 ... 50–99
- 6 ... 100–249
- 7 ... 250–499
- 8 ... 500 and more
- 88 ... *I don't know (spontaneously)*
- 99 ... *Declined to answer (spontaneously)*

If he/she is not working alone:

QN4F : Approximately how many women are included in the number?

- 1 ... None or almost none
- 2 ... Less than half
- 3 ... About half
- 4 ... More than half
- 5 ... Only women or almost all women work here
- 88 ... *I don't know (spontaneously)*
- 99 ... *Declined to answer (spontaneously)*