

Monopsony and non-competitive labour markets

Workers' weakening bargaining position

Wouter Zwysen

Report 2024.10

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European Trade Union Institute

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Abstract

This report provides an overview of labour market monopsony by delving into two of its sources which deliver unilateral firm wage setting power; namely, concentrated labour markets and the use of anticompetitive contractual instruments such as non-compete clauses. These sources limit workers' outside options and thereby increase the bargaining power of employers over workers, resulting in reduced wages and worse working conditions for the workers affected, and higher wage inequality. First, in labour markets with fewer employers and fewer outside options for workers, there is greater scope for labour market monopsony power. Indeed, based on a meta-analysis of studies on labour market concentration, a 10 per cent more concentrated labour market, meaning relatively fewer employers, is associated with a 0.2 per cent lower wage for the workers in those labour markets. Second, workers can also be affected by non-compete clauses (and other anticompetitive instruments). These are increasingly used with the seeming aim of restricting workers' outside options, resulting in lower job mobility and worse labour market outcomes. The report highlights possible ways forward, in particular by strengthening workers' bargaining power, but also by addressing labour market concentration directly, for instance through merger control and by regulating the use of non-compete clauses.

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Introduction

There is growing evidence of workers being in an increasingly vulnerable position relative to their employers. This is evident in different ways such as a decline in the share of income going to labour (Berlingieri et al. 2017; Paternesi Meloni and Stirati 2022; Lombardi et al. 2023) but also in greater inequality between workers. Across many countries, rising wage inequality increasingly reflects differences in pay setting between firms for otherwise similar workers (see e.g. Criscuolo et al. 2020; Tomaskovic-Devey et al. 2020; Zwysen 2022). Workers also face rising uncertainty in the labour market, for different reasons, heightening workers' dependence and reducing their power to affect or negotiate their working conditions (Flecker 2010; Weil 2014; Rubery 2015). These trends all indicate an increase in employers' power over workers. While there are several important factors contributing, such as the weakening of labour market institutions protecting workers (see e.g. Tomaskovic-Devey et al. 2020; Zwysen 2024a), and macro-trends such as globalisation and digitalisation, increasing attention is also given to the issue of labour market monopsony power.

More people may be familiar with monopolies, where there is only one seller of a product who can consequently mark-up the product power without losing customers. In a monopsony there is one buyer who can pay less for their factors – for workers in the case of labour market monopsony – and like in a monopoly this is generally economically inefficient (Council of Economic Advisers 2016). In the context of the labour market it is generally no longer the case that there is only one employer, as in the traditional company town, but there are circumstances under which employers can exert monopsony power even when they are not the only one, because there are fewer other options available to workers. Monopsony power can be defined as 'the situation that arises where firms have the power to set wages unilaterally, leading to inefficiently low levels of employment and wages' (Araki et al. 2022: 133).

There are different sources of such wage setting or monopsony power for employers. This report focuses on two sources which are most often discussed as well as the main targets of policy interventions: that is, labour market concentration, where few employers hire most workers in a local labour market and thereby have greater pay setting power as workers have fewer outside options (see e.g. Azar et al. 2020; Benmelech et al. 2022; Bassanini et al. 2024; Jarosch et al. 2024); and the use of specific instruments aimed at limiting competition for labour, such as agreements between employers not to poach staff, or non-compete clauses (see e.g. Boeri et al. 2024; Young 2024). These factors contribute to workers being more dependent on

one company setting wages either because there are few alternative employers or because they cannot easily move to them.

This higher relative power of employers over their workers results in negative outcomes for the workers themselves – lower wages particularly, but also less job security (Bassanini et al. 2024; Lehner et al. 2024). It also means poorer outcomes for the economy more widely in terms of lower mobility and innovation, resulting in lower growth and lower employment than there would otherwise have been (Manning 2021; Sokolova and Sorensen 2021; Berger et al. 2022).

There is, however, scope to regulate and moderate this. First, there is growing political interest in addressing these anti-competitive tendencies in the labour market in different countries. Most prominently, in the United States, there is an increase in the monitoring of labour market concentration and guidelines being set to control this; while there has been an initiative to ban non-compete clauses for all workers, among other proposals (Krueger and Posner 2018; Marinescu and Hovenkamp 2019; US Department of the Treasury 2022). In the EU these issues are predominantly regulated at the level of Member States, but here as well it is increasingly high on the policy agenda. At EU level, there are several steps that could be taken to achieve a more level playing field across Member States. By fostering greater mobility and a level playing field, engendering workers' mobility and alternative options, firms' pay setting power would also be relatively decreased.

The aim of this report is to provide an overview of the incidence and impact of different contributors to monopsony power and anti-competitive labour markets. The report focuses particularly on the European case and seeks to point towards possible steps forward. Section 1 sets out the conceptual framework in more detail and links the issue to growing inequality. Sections 2 and 3 then delve deeper into two possible sources of monopsony power in the labour market – labour market concentration (Section 2); and the use of anticompetitive artificial frictions in job search (Section 3), such as non-compete clauses. The aim is to describe the growing literature and identify patterns where possible. Section 4 then provides a policy discussion and identifies the ways forward for regulation.

1. Background

1.1 Monopsony and bargaining power

Originally, a monopsony described the situation where there is one company (mono) or a few (oligo) companies hiring a specific type of worker. The clear parallel to this is the case of a monopoly, where there is one seller who maximises their profits by charging marked-up prices without losing all their customers. In the case of the labour market a monopsony means there is one 'buyer' of labour who can maximise their profits by marking down wages, and also then employing fewer workers than in a truly competitive labour market (Council of Economic Advisers 2016). However, in the 'new monopsony' framework there do not truly need to be only a few employers but, through concentration of the labour market, some would play a dominant role and establish market power. This allows them to offer lower wages than if the labour market would be more competitive, and it would further result in lower employment overall (Manning 2021; Araki et al. 2022; Berger 2022). Under monopsony, the link between labour productivity and paid wages is weakened. This means there can also be increasing differences in the pay of similar workers, who are similarly productive, depending on the firm where they work. Importantly, given increasing fragmentation in the labour market, a company may be dominant also in the influence it has on other employers that are in a subordinate position to it (Weil 2014), as happens often in the case of franchising or subcontracting.

Crucially, this monopsony power depends also on workers' labour supply elasticity with respect to wages; that is, their sensitivity to wage changes¹ – the less sensitive they are, the more likely they are to stay at the firm, regardless of the wage, and thus the greater the firm's monopsony power and the greater the wage mark-down (Robinson 1933; Alves et al. 2024). In their extensive meta-analysis, Sokolova and Sorensen (2021) estimate that, given the best available estimates of current monopsony power from 53 studies globally, marginal wages are around 7 per cent lower than they would be in a competitive labour market.

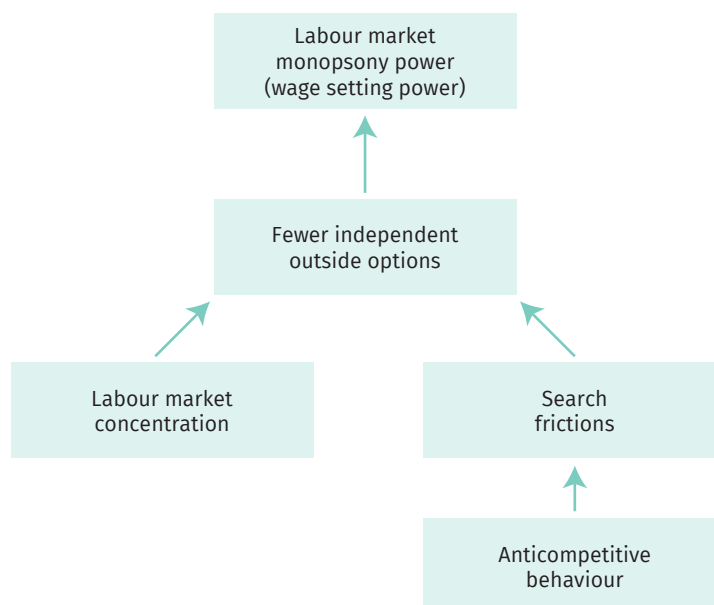
Figure 1 illustrates the relationships between these concepts. Schematically, labour market monopsony power is treated here as the specific pay setting power an employer has. By employer, what is meant is the entity with final responsibility

1. This elasticity would also depend on the labour market institutions and policies such as unemployment benefits and social security more generally, as well as individual constraints workers face, with for instance women often being less sensitive to wage changes as they more often face care or mobility constraints.

which can either be the direct employer or the one that exerts influence through subcontracts or franchises (Weil 2014). This monopsony power originates primarily from a lack of outside options, or from it being difficult or costly to find another job (Marinescu and Posner 2019; Azar et al. 2020; Caldwell and Danieli 2024; Jarosch et al. 2024). Crucially, such a lack of outside options can come about for different reasons, one of which is that there is a dominant employer in the local labour market, but I can also reflect other labour market institutions or benefits such as the social security system (see e.g. Jarosch et al. 2024).

There are three main reasons put forward in the literature that reduce the outside options and thereby lead to monopsony power. First, it can result from a concentrated local labour market where there are few independent employers in a specific field to which a worker could go (Araki et al. 2022; Bassanini et al. 2024). Such concentration can arise for different reasons, including a lack of competition between employers, or a substantial degree of specialisation through for instance technological innovations. Second, firms may derive wage setting power from the costs related to job search (Mortensen 2003). These costs can also be artificially increased, and workers' options reduced, by specific anti-competitive instruments that limit workers' options, such as non-compete clauses in contracts or collusion between employers (Boeri et al. 2024). Finally, workers may also evaluate firms differently depending on non-wage aspects such as other forms of compensation or reputation. This will not be discussed in more detail here.

Figure 1 The relationship between monopsony and its drivers



Source: author's elaboration.

The remainder of this report first highlights empirically how the importance of employers for workers' labour market outcomes has increased over time, through rising differences in wages and conditions and through a greater fragmentation of

the relationship between workers and their employers. Such differences between employers and the emerging existence of pay setting power at firm level also directly affect inequalities. The report then discusses two key contributors or proxies for monopsony; namely, labour market concentration and non-competitive frictions, particularly non-compete clauses, as these can be addressed by policymakers.

1.2 Labour market monopsony and wage inequality

One implication of labour market monopsony power is that the link between labour productivity and wages diminishes, meaning there will be increasing differences even between otherwise similar workers (Council of Economic Advisers Brief 2016). Indeed, wages increasingly differ between otherwise similar workers at different employers (Abowd et al. 1999; Card et al. 2017; Song et al. 2019).

Empirically, recent cross-national studies have shown that, indeed, wage inequality between firms rises faster than wage inequality within firms (Criscuolo et al. 2020; Tomaskovic-Devey et al. 2020; Zwysen 2022). This is generally attributed to variations in firms' pay setting and particularly the extent to which profitability is shared with workers – so-called 'rent sharing' (Card et al. 2017). The existence of such differences between firms are consistent with a relative increase in firms' pay setting power. This could partially reflect a greater divergence between firms in their profitability which is then reflected in wages (Berlingieri et al. 2017).

Theoretically, there are several other reasons for such differences between employers, primarily due to variations in the sharing of rents (Card et al. 2017), pay policies (Zwysen 2021), or frictions in the job search process (Mortensen 2003). Such costly job search puts workers at a disadvantage, particularly when firms have greater labour market power.

This importance of where people work fits within the increasing fragmentation of labour markets (Weil 2014; Rubery 2015), with a growing divide between workers in core activities and those more on the periphery (Flecker 2010). Such differences can also be seen in the growing complexity of employment relations, with different levels of subcontracting or outsourcing. This includes the case where workers' conditions and employment relations are shaped by more than one employer (for a more detailed description, see e.g. Grimshaw et al. 2004; Flecker 2010; Marchington et al. 2011; Zwysen 2024b). Such fragmentation may make workers more vulnerable relative to their employers, as well as lead to greater actual dominance of one company through its subsidiaries.

Crucially, monopsony and firms' wage setting power is by no means the only aspect driving changes on the labour market, and in its effect on workers it interacts with other macro-trends, individual characteristics, and labour market institutions that shape their outside options. This also entails that not all workers are similarly exposed to firms' wage setting power. One crucial element which is apparent from recent studies is that women are disproportionately vulnerable as they have fewer outside options, due to greater care responsibilities and a limited mobility (Cardoso et al. 2016; Barth et al. 2017). In their fascinating study, Avram et al.

(2024) show that women are indeed less likely to move for work-related reasons and that, when moving for family reasons, they incur significant wage losses. Such trends can make women more vulnerable to firms' monopsony power and result in lower wages overall. In their meta-analysis, Sokolova and Sorensen (2021) find indications that monopsony power is generally higher towards women than towards men. Corroborating this finding, Card et al. (2016) find that women earn less at the same firm than men. This is driven particularly by women receiving less of the firms' rents, resulting from profit or productivity, which indicates relatively lower bargaining power. In their study in Germany, Caldwell and Danieli (2024) find that reductions in outside options, and the relative lack of bargaining power this conveys, contributes strongly to the gender pay gap. An important role here is played by the higher cost of moving or commuting for women due to their often still higher share of caring responsibilities.

Further, there are variations between occupational groups in how vulnerable they are to monopsony power. This again is due to dissimilarity between occupational groups in their outside options, which may result in greater wage mark-downs for the affected groups (Caldwell and Danieli 2024; Schubert et al. 2024). This particularly affects some essential occupations such as teachers and nurses, whose working conditions are under pressure despite the experience of high labour shortages (Sokolova and Sorensen 2021; Araki et al. 2022; Parent-Thirion 2023; Weber 2023).

It is important to note that greater firm wage setting power also means more selective hiring and employer discretion. When there is more choice, there is a greater selection of highly skilled workers, as well as of those of more advantaged backgrounds, similar to what can be seen in times of slack labour markets or recession (Zwysen 2016). Greater monopsony may then also increase polarisation with the more advantaged, both for skills and non-meritocratic reasons, accessing the best jobs.

2. Labour market concentration raising firms' wage setting power

2.1 Measuring labour market concentration

One of the main sources of monopsony power in the labour market is the situation where there are few employers,² namely a more concentrated local labour market (Araki et al. 2022; Berger et al. 2022; Jarosch et al. 2024). In a concentrated labour market, an employer has greater wage setting power as employees have few outside options.

With the advent of near-universal data on workers and employers, it has become more possible to map such concentration in terms of employment, hires or vacancies. However, this growing literature is still somewhat difficult to compare as different methodological and conceptual choices³ – the definition of the local area; taking into account either employment, vacancies or hiring; and the timing of the study by looking at annual or quarterly rates – can all affect the estimates (Martins and Melo 2024; Schubert et al. 2024). Further, when considering the relationship between concentration and labour market outcomes – generally wages – there is clear potential bias. One example would be where local labour markets with lower levels of productivity both pay less and contain fewer active firms. The studies reported here differ in what factors are controlled for, with productivity (see e.g. Benmelech et al. 2022; Bassanini et al. 2023) and the simultaneous impact of product market concentration (e.g. Marinescu et al. 2021; Qiu and Sojourner 2023) both being particularly important, as well as in their approaches to identification.

-
2. Throughout this report, the employer is meant to be the main firm which has pay-setting power, which could also be a non-contractual employer or the leading contractor in the field.
 3. First, some studies consider industry in determining local labour markets (see e.g. Benmelech et al. 2022; Rinz 2022) while others use occupation (e.g. Bassanini et al. 2023; Qiu and Sojourner 2023). Recent studies by Dodini et al. (Dodini et al. 2024) and Schubert et al. (Schubert et al. 2024) make a strong case for definitions based on detailed occupation, and likely also those based on industry, being too narrow as there is movement of workers between occupations and, crucially, the rates of such outside occupational options differ between groups with nurses exhibiting very little outward mobility while bank clerks demonstrate much more (see also Caldwell and Danieli 2024). Second, labour market concentration can be defined based on all employment, or only on hires or vacancies. The latter two are likely to constitute a more realistic approach to the concentration in place (Jarosch et al. 2024). Third, some studies are limited in what sectors can be considered and, for example, only include manufacturing (as in Benmelech et al. 2022).

Despite such issues of comparability, the resulting literature has shown quite consistently that: (1) there is sizeable concentration in local labour markets, although it differs strongly between occupations/industries, geography and, to some extent, types of workers; and (2) concentration is negatively associated with wages. This negative impact seems to be non-linear, meaning that, particularly in settings with very high concentration (Arnold 2019; Benmelech et al. 2022) or in larger firms (Martins and Melo 2024), the effect is more strongly negative.

It is, however, also important to note that a labour market may be functionally concentrated despite several companies existing and competing, if these companies are in some way dependent on one another, or if one company has outsize influence on the others. This is particularly relevant when there is technological dominance or dependence (see e.g. Rainone, forthcoming).

2.2 How concentrated are local labour markets?

Several studies have addressed the extent of concentration in labour markets. In their seminal study based on job vacancies in the US, Azar et al. (2020) estimate that the average labour market in the US is highly concentrated according to the thresholds of the Herfindahl-Hirschman index (HHI) commonly used in the product market. This index is calculated by summing the squared shares of either full employment or open vacancies within a local labour market. The result is a score ranging between 0 and 10 000 (if percentages are used) or 0 and 1 (if proportions are used), where the highest value would indicate full concentration with all employment or hiring happening at one employer. A common threshold for a highly concentrated labour market is 2,500 (or 0.25).

A cross-national overview by the OECD in eight countries from 2003 to 2017, reveals that an estimated 20 per cent of workers are situated in highly concentrated labour markets (OECD 2021). In another study by the OECD using vacancy data in 15 OECD countries and Singapore, 16 per cent of workers are estimated to be in moderately concentrated labour markets and 10 per cent in highly concentrated ones (Araki et al. 2022). In a related overview of labour market concentration in six European countries, Bassanini et al. (2024) find around 25 per cent of new hires being hired in concentrated labour markets. Single country studies seem to bear out similar numbers; for instance in Portugal, Martins and Melo (2024) report fewer than 9 per cent of workers exposed to high concentration.

Generally, this concentration tends to be higher in rural than urban areas, in manufacturing rather than services and for lower rather than higher-educated workers (OECD 2021). It is important to note here that there are sizeable differences between occupational groups in their outside options and the extent to which they are exposed to such concentration. Some of the so-called essential professions, such as nursing, are consistently found to work in highly concentrated labour markets (Araki et al. 2022; Schubert et al. 2024). This then contributes to their relatively weaker position and can contribute to their poorer working conditions (Parent-Thirion 2023).

2.3 Labour market concentration and earnings

A growing body of evidence describes the relationship between real wages and local labour market concentration. This section seeks to summarise that relationship through a structured literature review and elementary meta-analysis of the reported elasticities between labour market concentration and real wages. Additionally, the aim is also to identify patterns in the data.

The systematic literature review consisted of searching for all papers or studies published since 2010 – in order to limit the search to more recent literature using similar methods and a comparable framework – that provide empirical evidence of the elasticity of wages and local labour market concentration reported through the Hirschman-Herfindahl index on wages. Studies were included if they were accessible, included the elasticity – by what percentage the wage is estimated to change when local labour market concentration increases by 1 per cent – or allowed for its calculation; and where the focus was on the whole economy or a sufficiently large sector thereof, rather than highly specific subgroups such as pharmacists (Thoresson 2024), auditors (Aobdia et al. 2024) or clerics (Petach 2024), for the sake of generalisability. Studies focusing on one occupational group or a very small sector were not included. This resulted in 338 estimates across 22 studies, covering 16 countries.⁴ Table A1 provides a full list of the studies included. More information on the search criteria and the meta-analysis methods are provided in the box below.

Literature review and meta-analysis

Studies were included on the basis of a regular literature review of recent relevant studies and their references and through a systematic search of different online databases. First, a search through the EBSCO host based on 'concentration' AND ('wage*' or 'earning*') AND 'labour market' OR 'labor market') AND ('monopsony' OR 'oligopsony'), which yielded 50 hits. Second, a search through Web of Science using the same syntax, yielding 30 results. Third, a search through Google Scholar, which is less systematic as the algorithm is not as transparent and the search terms not as flexible, but which delivers grey literature including manuscripts and working papers. With Google Scholar the search terms were: 'wage' AND 'labor market concentration' AND 'elasticity' AND 'monopsony' (565 hits); 'wage' AND 'labour market concentration' AND 'elasticity' AND 'monopsony' (109 hits); 'labor market concentration' AND 'wage elasticity' (155 hits); and 'labor market concentration' AND 'wage' AND 'log' AND 'Herfindahl' (355 hits).

The outcome of interest is the elasticity of earnings or wages in relation to local labour market concentration. In 261 of the 338 reported estimates, elasticity was directly estimated through regressing log wages on the log of labour market concentration; in the remainder, it was estimated as the relative change in wages or earnings when local labour market concentration increases by around 1 per cent of the average. The local labour market is defined by the intersection of job – industry in 154 cases and occupation in 181 – and a locality, most often the commuting zone.

To summarise the coefficients, a random effects meta-analysis was carried out. This combines the estimates, accounting for variation in the uncertainty surrounding them. To account for variation in the estimate, the different characteristics of the study and specification are explored. This includes whether the study is a peer-reviewed article

4. The countries (with the number of studies) are: Austria (1), Australia (1), China (1), Costa Rica (1), Germany (1), Denmark (2), Spain (2), Finland (1), France (5), Ireland (1), Italy (2), Japan (1), Portugal (3), Russia (1), United Kingdom (1) and United States (6).

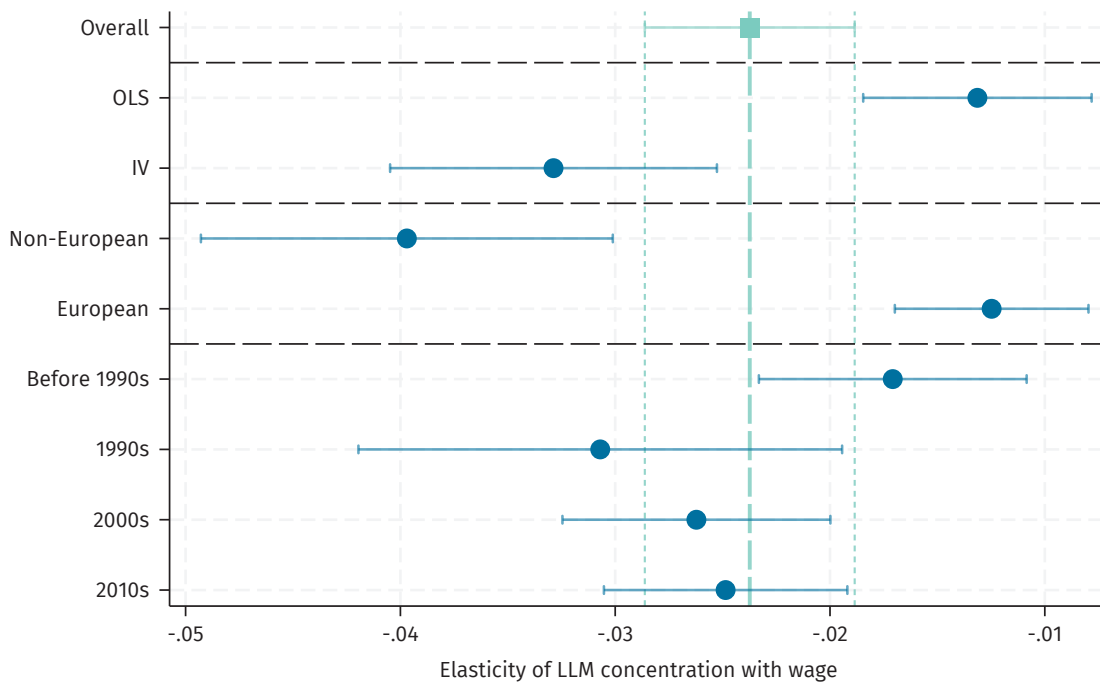
rather than a working paper or report; what population was covered (all workers, only full-time workers, vacancies or new hires; or rather subgroups such as specific sectors, or men or women); whether the elasticity was reported or calculated; what country and time period was covered; and whether the specification included any of the following: worker fixed effects, market fixed effects, firm fixed effects, interactions of time with any other fixed effects, and time-varying controls, as well as whether productivity or product market concentration was controlled for.

An important differentiation is between descriptive studies where the estimate was obtained through Ordinary Least Squares regression (OLS). In this case, there may be bias if there are characteristics of the local labour market that lead both to higher concentration and to lower wages. One example – as indicated above – could be low productivity. To counter this endogeneity issue, a two-stage least squares or instrumental variable (IV) regression is often carried out, using a variable assumed to affect concentration but not wages.

Figure 2 shows the estimated overall wage elasticity reported in these different studies both overall and then split by groups.

On average, a 1 per cent increase in the concentration of a local labour market is associated with a 0.02 per cent decrease in wages. This means a 10 per cent increase in concentration is associated with wages being 0.2 per cent lower on average in that labour market. As expected, there is substantial variation between studies. In descriptive analyses using standard linear regression (OLS), wages would be expected to be 0.13 per cent lower on average for a 10 per cent increase in concentration, while the causal estimate through instrumental variable analysis (IV) is more than twice as high (0.33 per cent lower).

Figure 2 Summary of meta-analysis of 338 reported estimates from 22 studies on the elasticity of earnings and local labour market concentration



Note: the figure shows the estimated elasticity and 95% confidence interval estimated from random effects meta-analysis, with each variable considered separately.

Source: author's elaboration.

There is also variation between the countries studied, with average elasticity being -0.04 in non-European countries and -0.01 in European ones. One possible explanation for this could be labour market regulation and particularly the greater coverage of workers by collective bargaining, which may offset monopsony power (Martins and Melo 2024).

Studies are also differentiated based on the timeframe. On average, studies including years from before the 1990s tend to find somewhat lower elasticities than those using later years, but there is limited variation between them.

Table 1 then formalises this description by including several characteristics of the estimates at the same time in a meta-regression. Controlling for the specification and study characteristics allows a comparison of whether there are still variations keeping those other factors constant.

Table 1 Variation in estimated coefficients, from meta-analysis

	Coefficient	Standard error
European country	0.0449***	(0.00699)
IV estimate	-0.0316***	(0.00500)
Population (Reference = full population)		
– Full-time	-0.00847	(0.00826)
– Hiring vacancy	-0.0522***	(0.00935)
– Subgroups	-5.95e-06	(0.00711)
Peer-reviewed	0.0187***	(0.00623)
Productivity controls	0.0166*	(0.00860)
Product market concentration	-0.00861	(0.0111)
Worker characteristics	0.00654	(0.00698)
Firm characteristics	-0.0148**	(0.00656)
Interactions with year	0.00392	(0.00529)
Time-varying coefficients	-0.00951	(0.00687)
Mid-point of time period	0.000536	(0.000424)
Constant	-1.109	(0.851)
Observations	338	

Note: estimated coefficient and standard error of meta-analysis controlling for different key characteristics of the study and estimates.

*: $p < 0.1$, **: $p < 0.05$, ***: $p < 0.01$.

Source: author's elaboration.

This shows that, on average, the estimated elasticity is higher by 0.04 in European than non-European countries. Similarly, on average and when controlling for the specification and study characteristics, the causal estimates obtained through IV analysis tend to yield an elasticity which is lower by 0.03 than analyses relying on OLS. The estimates based on new hires or vacancies tend to be substantially lower than those based on all workers, by 0.05. This supports the idea that it is primarily wages mentioned in vacancies and the wages for new hires that are affected by monopsony power. There is a small difference between peer reviewed studies and working papers in that the former are somewhat closer to 0 while the latter may

be somewhat more negative. Finally, studies that include controls for productivity tend to find somewhat more positive estimates of elasticity.

Few studies have addressed how concentration affects wages in their totality. Arnold (2019) estimates that concentration in the US depresses wages by 4-5 per cent relative to full competition; while Jarosch et al. (2024) estimate that, in Austria, concentration depresses wages by 2.1 to 3.1 per cent.

In a recent study, Bassanini et al. (2024) show that greater concentration is also associated with a substantially higher risk of working on temporary contracts and a lower probability of temporary contracts being converted to a more permanent position. Besides reducing employment, wages and job security, concentration may also be associated with more selective hiring by employers, as for instance measured by a higher level of skill demand (Araki et al. 2022). Finally, in an interesting expansion, Bassanini et al. (2023) show that both incumbents and new hires are affected by greater concentration in the labour market, although new hires are affected more.

While concentration does contribute to lower wages than would be paid in a competitive market, and lower labour shares in general, it is less clear whether this has increased over the long term (see e.g. Abel et al. 2018; OECD 2021; Araki et al. 2022; Rinz 2022). However, even if concentration itself has remained rather stable over time, its impact may have become more negative in that period (OECD 2021; Benmelech et al. 2022).

2.4 Supporting workers' power to offset monopsony resulting from concentration

As the main issue with firms' monopsony or wage setting power is that the bargaining power of employers is too high, one key countermeasure is to increase workers' bargaining power. This can be done by a greater regulation of working conditions, for example through minimum wages;⁵ or through strengthening worker representation and collective bargaining coverage (OECD 2021; Araki et al. 2022). Indeed, several studies find clear evidence that the negative impact of concentration on wages – indicating the monopsony power of employers leading to marked-down wages and employment – is reduced in the presence of collectively bargained agreements (Abel et al. 2018) or where there are stronger trade unions as measured by union density (Benmelech et al. 2022; Dodini et al. 2022; Qiu and Sojourner 2023). In a convincing study, Dodini et al. (2022) explore the introduction of tax subsidies for union membership fees in Norway, showing that this substantially increased union membership and, in turn, counteracted some of the negative impact on wages and employment of labour market concentration. Theoretically and empirically then, strengthening workers' representation can

5. While minimum wages in conventional economic theory are expected also to reduce employment, this would not be expected to be the case in a monopsonistic labour market where employment is below its market level.

be one clear way of counteracting the loss of workers' bargaining power through monopsony.

Inspiration for ways to address labour market concentration can be found in regulations used in the product market, particularly when it comes to mergers. Several studies have directly addressed the impact of mergers on labour market outcomes. In one interesting study, Alves et al. (2024) examined over 2000 UK merger and acquisition events between 1997 and 2021 in the UK, finding that such events negatively affect employment, but not wages. Similarly, Todd and Heining (2024) find that mergers in Germany are associated with employment loss, but initial wage gains for the remaining workers. These findings are not necessarily inconsistent with monopsony and firm wage setting power, however, as the impact of a merger would be expected to depend on whether workers have outside options beyond the newly merged company; that is to say, whether or not the merger results in dominance. In a study using matched employer-employee data in the US between 1999 and 2009, Arnold (2019) differentiates between mergers and acquisitions that increase local concentration and those that do not. Events leading to greater labour market concentration are associated with lower wages for workers, particularly in already concentrated markets. In the 20 per cent of cases with the highest merger-induced changes in concentration, average earnings fall by about 3.3 per cent for those workers at other firms than the merging ones. This is due to concentration increasing and outside options reducing.

While mergers can contribute to greater concentration in the labour market, they do not seem to be the sole or even the most important driver (Araki et al. 2022; Schubert et al. 2024). Nevertheless, several proposals on addressing labour market concentration have focused on regulating the impact of non-competitive mergers on the labour market, particularly in the United States (see e.g. Marinescu and Hovenkamp 2019; Marinescu and Posner 2019) although further would also be possible within the EU (see e.g. Holmes and Meagher 2023; Rainone, forthcoming). This could be an important part of a regulatory framework which tackles concentration and monopsony in the labour market.

3. Labour market frictions and anticompetitive instruments

3.1 Anticompetitive instruments

A second source of monopsony power, besides being in a concentrated labour market, can originate from the costs involved with job search – making it more difficult to move from one employer to another. The more difficult this mobility is, the more wage setting power employers have, resulting in marked-down wages (Marinescu and Posner 2019; Araki et al. 2022). Such frictions are, to some extent, inherent in a job search within a market, such as the time and effort it takes to look for jobs alongside other job search costs (Mortensen 2003). Non-competitive behaviour by employers – either multilateral through no-poaching agreements, where companies agree not to hire each others’ employees; or unilateral through contractual clauses such as non-compete clauses – raise these job search costs by making it more difficult or more costly, or simply more risky, to find a specific job. They limit the outside options by restricting future employers.

A growing literature shows that such agreements do limit job mobility directly (Starr 2019b; Araki et al. 2022). This is bad for the individual, as job mobility can be an important path to wage growth (Hahn et al. 2017; Hijzen et al. 2021), and for the economy as a whole as a lack of mobility limits innovation and productivity growth (Serafinelli 2019; Bertheau and Vejlin 2023).

There is already some regulation of these issues. First of all, agreements or collusion between employers, as embodied by no-poaching agreements, are generally sanctioned by the authorities (Starr 2019b; Aresu et al. 2024): for example, in one recent move, the European Commission is evaluating the relationship between Glovo and DeliveryHero on suspicions of cartel forming and of the use of no-poaching agreements.⁶

As for contractual clauses limiting competition, national frameworks differ, but there is an increasing scholarship calling for regulation given their widespread use (see e.g. Krueger and Posner 2018; Starr 2019b). There is substantial variation between such instruments in how the benefits for the employer and the costs for the employee are divided, and it is this balance that is generally taken into consideration when determining the reasonableness of such a restriction and whether it can be enforced (Starr 2019a; Aresu et al. 2024).

6. https://ec.europa.eu/commission/presscorner/detail/ga/ip_24_3908

This section focuses particularly on non-compete agreements, as the most studied and arguably the type of anticompetitive agreement that has the most impact, but it is important to mention that non-disclosure agreements are also widely used, while non-solicit agreements also reduce workers' outside options (Balasubramanian et al. 2024).

3.2 Non-compete contract clauses

3.2.1 Theoretical background

Non-compete clauses, or agreements, are 'postemployment restrictions that prohibit departing employees from joining or starting a competing enterprise, typically within time and geographic boundaries' (Starr et al. 2021: 54). There is an economic case to be made for a non-compete agreement, which is that it solves the 'hold-up' problem where employers may be reluctant to make significant investments in capital or in training if employees can then move away with the knowledge thus acquired. They may also serve to protect legitimate intellectual property or trade secrets. In these cases, it would be expected that such clauses are clearly indicated in the contract negotiation phase and that workers are compensated for this.

However, non-compete clauses in practice are generally too widespread and, in the status quo, negatively affect the labour market. In a very useful overview, Starr (2023) discusses the state of non-competes through six key questions in order to inform policymaking in the United States. He highlights that they are likely to be associated with lower wages for the workers affected, but are also linked to reduced innovation and mobility, thereby harming the economy more widely.

Survey evidence indicates that many workers do not receive compensation, that non-compete clauses are relatively often added to a contract without bargaining or even after it has been signed and that, while they are more used for professionals and managers, they are pervasive across all types of jobs including those where it is more difficult to make any sort of business case (see e.g. Starr et al. 2021; Boeri et al. 2024; Hiraiwa et al. 2024). Crucially, many non-compete clauses do not fit minimum legal standards and would therefore be expected not to be enforceable in court (Boeri et al. 2024). This points to the use of non-compete agreements as a deterrent towards employees, limiting the probability of their leaving and reducing business dynamism.

In advice to the Australian government regarding legislative action to be taken, Ross (2024) succinctly summarises the issues with non-compete clauses by pointing out three competing interests: (1) employers seek to protect their businesses; (2) former employees want to work within their field; and (3) promoting competition and fair allocation of resources is in the public interest. It is the balancing of these three interests that needs to be accounted for. The sense is that, with the high share of workers being covered by non-compete agreements also in cases where it is unlikely that this legitimately protects business interests, the balance has turned

too much against workers and the public interest, and in favour of employers who are seeking to limit competition as a way of deterring workers from leaving.

Non-compete clauses have two main aspects, which also come out in empirical work. On the one hand, they can address the hold-up problem for investment and training, and indeed are associated with the generally higher provision of training for some workers (see e.g. Starr et al. 2021; Alves et al. 2024). On the other, they seem also to be used with the specific aim of limiting workers' outside options and placing a cost on these, this being the case particularly at the lower end of the wage distribution (Johnson and Lipsitz 2022; Boeri et al. 2024). To this end it may not even matter if the clause is enforceable, as its deterrent effect is what matters (Dau-Schmidt and Barton 2023; Boeri et al. 2024; Hiraiwa et al. 2024).

In their interesting study on US hairdressing salon workers, Johnson and Lipsitz find 30 per cent of employers or owners required non-compete agreements to be signed, and indeed find they are more used in the presence of market frictions which act against the reductions in wages that would theoretically take place in certain circumstances, including those of a higher unemployment rate but with the presence of minimum wage laws. Shi (2023) models non-compete clauses as a way for firms to extract rents from the future employers of their employees, which carries a societal cost. In modelling optimal restrictions on non-compete clauses, these would be so severe as to amount effectively to an outright ban on their use.

3.2.2 How widespread are non-compete clauses?

With the renewed interest in monopsony and labour market power, there has been a rise in studies mapping the extent of non-compete as well as other anticompetitive contractual clauses. In a seminal study, Starr et al. (2021) report on a 2014 survey with over 11 000 respondents in the US which indicated 18.1 per cent of private sector employees were covered by a non-compete agreement at the time of the survey, and 38.1 per cent had been covered at some point. This shows a surprisingly high rate overall as well as quite strong applications among lower-skilled workers, with 14.3 per cent of workers without a bachelor degree being covered. Using data from the Survey of Household Economics and Decisionmaking, around 11.4 per cent of adult workers are estimated to have non-competes (Boesch et al. 2023), with again a non-negligible share among lower-skilled workers. Balasubramanian et al. (2024) report on 35 983 survey responses in the US in 2017 and similarly find around 20 per cent of workers covered by a non-compete agreement. They report that many more workers are covered by non-disclosure agreements, or are affected by non-solicit or non-recruitment agreements, with 82 per cent of workers covered by at least one – generally a non-disclosure agreement. In a study of 634 private sector establishments in the US in 2017, around half of establishments reported having at least some employees covered by such agreements, with 31.8 per cent reporting all their employees had to enter one (Colvin and Shierholz 2019). This translates to between 27.8 and 46.5 per cent of private sector workers.

Similar surveys have also been carried out in other countries. In Australia, Andrews and Jarvis (2023) show that 22 per cent of workers who changed jobs

in the last year had signed a non-compete clause, often jointly with other clauses such as non-disclosure agreements. Alves et al. (2024) carried out a survey of workers in the UK and found 26 per cent covered by a non-compete agreement. In an all-encompassing review of market power in the labour market in the UK, around 30 per cent of workers are estimated to have signed non-compete clauses (CMA 2024).

In their noteworthy study on Italy, a country characterised by a much more regulated labour market and higher coverage by collective agreements, Boeri et al. (2024) estimate that 16 per cent of private sector employees are bound by non-compete agreements. Crucially, only a quarter of these seem to meet the legal criteria for enforcement in Italy. They also point to the use of many other clauses, such as non-disclosure agreements, pre-assignment agreements, non-solicitation agreements or agreements to repay benefits and bonuses or training costs. Jointly, almost half of workers are covered by at least one such agreement limiting their mobility.

Several other studies have been carried out that focus more on specific groups of workers and cannot be directly compared. Dahl and Stamhus (2013) summarise different surveys carried out by trade unions and professional organisations in Denmark, finding that between 7 and 20 per cent of workers were covered by non-compete agreements. In a study supporting new legislation in the Netherlands, around 19 per cent of workers were thought to be covered by a non-compete in 2015, rising to 37 per cent in 2021 (van Gennip 2024). In a survey among their members – professional and managerial workers – the Finnish trade union Akava show that 37 per cent of high-skilled workers had a non-compete agreement in their contract (reported in Boeri et al. 2024)

3.2.3 Labour market impacts

As indicated above, non-compete and other contractual clauses provide benefits to firms, in terms of committing their workers and incentivising greater investment and training as well as protecting strategic interests. Indeed, there is some evidence that non-compete agreements are associated with the greater provision of training to workers (Starr 2019a).

However, they carry a clear cost to workers and the key question is whether such costs are reasonable given the benefits to employers. In theory, a non-compete agreement should result in compensation for the worker. While it is not straightforward to map the negative impact of non-compete agreements on the labour market, some studies have indicated a risk of wage loss and definitely a lowering of job mobility which can, in turn, reduce wages (Haltiwanger et al. 2018). Theoretically, the link with worsening labour market outcomes is evident as non-competes directly lower workers' outside options and increase firms' bargaining power, which then leads to a mark-down in wages.

In their initial survey, Starr et al. (2021) show a dualisation – those employees who knew about non-compete clauses prior to signing their contracts had somewhat

higher earnings than those without; but those who were informed after signing did not see any wage gain. In their study, Balasubramanian et al. (2024) show that workers covered or affected by four different types of agreement – non-disclosure, non-compete, non-solicitation and non-recruitment agreements – earned about 5.4 per cent less than workers covered only by non-disclosure agreements.

There is evidence that non-competes do indeed limit the mobility of workers, which has a direct impact on overall growth. Several studies have used the variation in whether non-competes can be enforced to look at the association with labour market outcomes. This should also be considered jointly with the issue of labour market concentration, as non-competes would have a far greater impact on reducing workers' outside options when a non-compete further affects them in an already concentrated labour market. Crucially, this is reflected in the report on the future of European competitiveness prepared by Mario Draghi, where non-compete agreements and related clauses are linked, in a document focused clearly on policy orientation, to limited mobility in the EU in the sense that 'there are increasing concerns that they are being deployed to stifle job mobility and competition' (Draghi 2024: 265).

In a fascinating study, Marx et al. (2009) report on the 1985 Michigan Antitrust Reform Act which repealed a previous regulation prohibiting the enforcement of non-compete agreements. They make a convincing case that this was not actually an intended consequence, but happened as part of a larger antitrust reform and was not foreseen in advance. After the reform passed it was then discovered that non-competes could be enforced again. This provided a natural experiment in how the enforcement of non-competes affects labour market outcomes and mobility. Their focus is inventors based on the filing of patents, and find an 8.1 per cent baseline drop in mobility for Michigan inventors following this rule change.

Using that same Michigan reform, Berger and Frey (2017) find that allowing for non-competes to be enforced is associated with technical professionals moving more outside their industry than within it, compared to other states, and that importantly such professionals also earned lower wages. This implies the non-competes limited their ability to find good matches in the same industry.

Marx (2011) also studies how non-competes affect the career trajectories of engineers in the US. He shows that these measures, which firms use to limit mobility in the face of declining internal labour markets, lead to career detours in which the engineer involuntarily leaves the technical field to avoid a potential lawsuit. Such outcomes are inefficient.

Young (2024) studies a 2006 law change in Austria which banned non-competes for low-earning workers. The law was adopted specifically because the high rate of low-wage workers covered by non-competes was deemed unreasonable. Job mobility increased by 0.27 percentage points from 16 to 16.27 per cent (a 1.7 per cent increase) following the rule change, while transitions within the same strictly-defined industry increased by 6.4 per cent, with people being primarily more likely to move up the job ladder. However, they did not find a clear effect on wages.

Garmaise (2011) shows that enforceable non-competes are associated with greater executive stability and a shift in their compensation.

At a more aggregate level, Marx et al. (2015) show that there is a brain drain in the US from states that enforce non-competes to those that do not. This further indicates the cost for workers, as well as for the economy at large.

Interestingly, Kang and Fleming (2020) study how a Florida law change making non-competes more easily enforceable affected a firm's decisions. They find that larger firms were more likely to enter the state and create more jobs while smaller firms exited, thereby contributing more to labour market concentration. This is a clear indication of the link between the two sources of monopsony power.

3.2.4 Regulatory framework and enforceability

As shown above, these different studies indicate clearly that non-competes are heavily used, at such a rate and with such a scope that it is unlikely that, in any reasonable way, they protect firms' interests. This widespread use is driving an increase in calls for regulation, both in the US (US Department of the Treasury 2022) as well as across Europe concerning, for example, the proposed revisions to legislation considered in the UK (DBT 2023) and the Netherlands (van Gennip 2024). This section provides a non-exhaustive description of the regulatory framework on non-compete agreements and the issues of enforcement.

There is substantial variation in the extent to which non-compete agreements are regulated and how they are enforced. Generally a non-compete would be evaluated based on whether it is reasonable and whether it is transparent and clearly defined in terms of industry and geographical scope (Starr et al. 2021; Boeri et al. 2024; Hiraiwa et al. 2024). However, in order to protect lower-paid workers, certain types of non-compete agreements have already been made unlawful, and therefore non-enforceable, in several countries and US states. In Belgium, Luxembourg and Austria, there is an earnings limit under which non-competes are automatically non-enforceable (Young 2024). In a recent legislative change in the state of Seattle, all non-competes up to the 79th percentile of wages (100 000 dollars in 2020) could no longer be enforced (Hiraiwa et al. 2024). This change did not, however, result in employers boosting employees above that threshold, indicating that employers were not willing to pay anything in order for a non-compete to be enforceable. In California, North Dakota, Oklahoma and Minnesota, a relatively general ban on non-competes is in place and, while the rate of non-compete clauses is lower than in the US as a whole, it is still estimated at 7 per cent (Boesch et al. 2023; Dau-Schmidt and Barton 2023). In the USA, a proposal was made by the Federal Trade Commission in April 2024 effectively to ban non-competes for all employees, motivated by the welfare losses and reduced mobility (Federal Trade Commission 2024).⁷

7. The ban was meant to enter effect on September 4, but due to legal challenges this is delayed at the time of writing.

The regulation in Europe varies by Member State with key differences in the form a non-compete must take, where it is acceptable, the maximum duration and the requirement for compensation, the latter being required in Belgium and Germany (OECD 2021; Dau-Schmidt and Barton 2023; Boeri et al. 2024). The effect of this variation between EU Member States is that there is no level playing field when it comes to contractual clauses (Zekić 2022).

There are moves towards regulating this issue more widely. In the UK, different proposals have been considered to address the issue of the widespread use of non-competes and their detrimental effects on business dynamism, wages and job mobility (DBT 2023). Several options have been under consideration, including a full ban, but a prior impact assessment alights upon the preferred solution of a limited maximum duration of three months. In the Netherlands a new law is being prepared with the proposal consisting of requiring a legally limited duration, a geographic and reasoned limitation, an explanation of the company's interests and a fixed percentage of the final salary to be paid in compensation (van Gennip 2024).

Anticompetitive behaviour on the labour market is also increasingly on the agenda in the EU, as exemplified by a focus on cartels (Vestager 2021) and as laid out in a recent competition policy brief (Aresu et al. 2024). Even so, it is not clear that non-competes or other contractual clauses are seen as a target. The position of the European Commission seems to be that most actions will need to be taken at national level, but that there can be EU-level support and coordination. This institutional note does specifically mention clear and possible actions against non-poaching and anticompetitive behaviours that harm the economy and workers, and that are constituted from agreements between employers. It follows from an institutional communication on the scope of application of Article 101 TFEU, which prohibits a whole series of anticompetitive agreements between firms (2021/C 359/02). However, non-compete clauses are specifically mentioned as not falling within potentially unlawful practices since they do not concern anticompetitive behaviour between entities:

Under EU competition law, non-compete clauses [between firms and their employees] are generally outside the scope of Article 101 TFEU, as they are not agreements between undertakings. From an antitrust point of view, and as long as they are compliant with national labour laws, non-compete clauses would be considered less restrictive ways of protecting the employers' investments in training or non-patent IP as, unlike no-poach agreements, they are transparent vis-a-vis employees, who can, at least, ask for an equitable compensation. (Aresu et al. 2024: 5).

More promising could be the use of Article 102 TFEU, which addresses the unilateral conducts of undertakings, as pointed out in a recent article by Holmes and Meagher (2023) on how merger control can be used to tackle market power.

In a discussion of the EU regulation on non-compete clauses in the labour market, Zekić (2022) states that the inaction of the EU contrasts with its efforts in other, related areas and that there is scope to act. Specifically, she notes there is no clear

reason it was not considered in the Directive on Transparent Working Conditions, especially as it was considered in the impact assessment but then later abandoned (SWD(2017) 478 final: 14-15).

The existing regulation across European Member States mainly encompasses a framework that is set by the regulator which specifies when particular non-compete agreements are allowed, for example when compensation is provided and where there are clear time and geographical limits. This approach seems appealing as it allows for a balance between firms' genuine interests and the costs to workers (Johnson and Lipsitz 2022; Boeri et al. 2024; Hiraiwa et al. 2024). However, survey evidence indicates first that many workers are not aware that their non-competes are actually non-enforceable (see e.g. Boeri et al. 2024). Second, the threat of having to go to court may in itself be enough to deter workers and, in that sense, the simple threat emanating from a non-compete (in *terrorem*) seems sufficient to limit mobility and workers' outside options, as also reported by workers saying they will not look for other work because of the clause (Starr et al. 2021; Boeri et al. 2024; Hiraiwa et al. 2024).

With that in mind, the clearer the rules are, the better, while this also provides 'legal certainty'. For instance, in Austria there is a clear and clearly communicated earnings threshold and all workers have access to free advice (Young 2024). The US approach which bans it essentially in general also has the clear advantage of clarity.

4. Discussion and possible ways forward

This report reviews the growing literature on monopsony and firms' wage setting power. The literature surveyed here indicates that there is a clear and consistently found issue of firms having wage setting power over their employees. This results in generally lower wages as well as lower employment. At a wider societal level, there is also an association with inequality through a lower labour share and wider spread of wages, and lower consumer welfare (Araki et al. 2022; Berger et al. 2022; Rinz 2022; Jarosch et al. 2024).

The report surveys two sources of monopsony power. First, a non-negligible, and in some cases rather large, share of workers in the United States and Europe find themselves in concentrated labour markets, the estimates of which range, as far as Europe is concerned, between 10 and 20 per cent. This limits their outside options and reduces their wages and job security (see e.g. Bassanini et al. 2024). While survey evidence is mixed, there does not seem to be an overall growth in labour market concentration although its effects may have well worsened over time (OECD 2021; Benmelech et al. 2022), possibly indicating that the link between concentration and monopsony power is intensifying.

A second source of monopsony power is the direct limiting of employees' outside options and mobility through imposing frictions such as non-compete clauses. Again, a growing literature indicates that having employees sign a non-compete agreement is widespread across the industrialised world, with on average between 15 and 30 per cent of workers having them (see e.g. Colvin and Shierholz 2019; Starr et al. 2021; Boeri et al. 2024). For some specific groups, such as highly skilled workers or professionals, the share can even be substantially higher. Importantly, this practice does seem to have been rising over time (Colvin and Shierholz 2019; DBT 2023; Boeri et al. 2024; van Gennip 2024). While there are acceptable reasons for non-compete agreements in protecting employer investments and interests, the high shares of coverage, including in sectors where these reasons do not seem to hold, indicate that non-competes are also used with the aim of limiting worker power and mobility (Johnson and Lipsitz 2022; Boeri et al. 2024).

The question is then what can be done to rebalance power between workers and employers, and to increase the competitive working of the labour market. Several policy avenues are brought forward in this report. There are three direct approaches that can be taken.

First, to counterbalance employers' bargaining power, workers' organisations should be strengthened (see e.g. Marinescu et al. 2021; Benmelech et al. 2022;

Dodini et al. 2022; Alves et al. 2024). This can be done through increasing multi-employer collective bargaining coverage, as is one of the aims of the new Directive on Adequate Minimum Wages (see e.g. Müller 2024), or through bolstering trade unions. In an interesting reform in Norway, union dues were made tax deductible, which had a sizeable impact on union density (Dodini et al. 2022) and, in turn, affected monopsony power.

Second, greater scrutiny can be directly levelled at labour market concentration. Like with antitrust measures in the product market, mergers could be evaluated more explicitly based on their impact on the labour market (Krueger and Posner 2018; Naidu et al. 2018; Marinescu and Hovenkamp 2019; Naidu and Posner 2022). This will not address all issues, as monopsony can also occur without further mergers, but empirical evidence does indicate that concentration-inducing mergers and acquisitions negatively affect workers (Arnold 2019). In an interesting article focused on the digital economy, Rainone (forthcoming) surveys the extent to which the European Union has already introduced competition law instruments that could potentially be deployed to address employers' accountabilities in non-competitive labour markets. However, despite some progress being made, this is still rather limited, since labour rights stand on a weaker footing than market competition.

While fruitful, the turning of attention to anticompetitive behaviour in the labour market faces obstacles as, first, it is unclear that consumers are directly harmed, making a less clear-cut case for competition law to apply; and second, it risks ignoring that there are complementarities between labour law and competition law. Hafiz (2020) points to the need to combine competition and labour law in tackling the issues of labour concentration and monopsony power. This is in line with arguments by Naidu and Posner (2022) who state that competition law itself can only marginally address some of the issues behind monopsony power. In Europe, there may be further obstacles to dealing with the issue of labour market power through the narrow definition of consumer interests, or the single economic unit doctrine (Dau-Schmidt and Barton 2023).

Third, non-compete clauses could be regulated more strictly or banned altogether, as they impose sizeable costs on workers and the economy while other, less invasive, contractual means already exist, such as non-disclosure agreements. This would then follow the example of the United States (Federal Trade Commission 2024). If not banned, then a level playing field providing adequate compensation and a limited duration, together with clear communication to ensure workers are aware of their rights, would be a minimum step forward.

There are also more indirect ways to curtail employers' monopsony power. These can involve providing adequate wage floors through minimum wages to limit wages being pushed downwards, as proposed by the Directive on Adequate Minimum Wages in the EU (Haapanala et al. 2023). Supporting worker mobility through the greater transferability of skills, delivering more training and upskilling/reskilling, or providing more support in terms of regional mobility or commuting costs, may also increase workers' outside options, as would greater use of telework.

One important takeaway from this growing field of study is that the default assumption should not be that the labour market is competitive. There are several frictions that strengthen firms' wage setting power and mean that workers' wages are marked down and their interests threatened. This realisation is important in considering regulation, and it points to the need to rethink the reach of labour law in conjunction with considering applications of the approach to competition law.

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All links were checked on 14.11.2024.

Appendix

Table A1 Overview of empirical studies on labour market concentration and wages

Study and country	Country	Number of estimates
Abel, Tenreyo and Thwaites (2018)	UK	1
Aragao de Almeida (2023)	Portugal	7
Arquie and Bertin (2022)	France	2
Azar, Marinescu and Steinbaum (2020)	United States	19
Bacheron, Blasco, Moreno-Galbis and Tanguy (2024)	France	42
Bassanini, Batut and Caroli (2023)	Germany	8
Bassanini, Batut and Caroli (2023)	Denmark	11
Bassanini, Batut and Caroli (2023)	France	13
Bassanini, Batut and Caroli (2023)	Portugal	11
Benmelech, Bergman and Kim (2022)	United States	36
Devereux and Studnicka (2024)	Ireland	24
Hambur (2023)	Australia	3
Handwerker and Dey (2024)	United States	6
Izumi, Kodama and Kwon (2023)	Japan	10
Liu, Cai and Lin (2023)	China	10
Luccioletti (2022)	Spain	3
Marcato (2022)	Italy	10
Marinescu, Ouss and Pape (2021)	France	10
Martins and Melo (2024)	Portugal	34
OECD (2021)	Austria	4
OECD (2021)	Costa Rica	4
OECD (2021)	Denmark	4
OECD (2021)	Spain	4
OECD (2021)	Finland	4
OECD (2021)	France	4
Passerini (2022)	Italy	16
Qiu and Sojourner (2023)	United States	21
Rinz (2022)	United States	9
Schubert, Stansbury and Taska (2024)	United States	6
Zhuravleva (2021)	Russia	2

Source: author's elaboration.

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