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Monopsonistic Power and Wage Dynamics:

Insights from Cross-Country Labour Market Analysis

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Abstract

This paper investigates the prevalence, drivers, and implications of monopsonistic power across ten countries using harmonized labour force survey data and a structural estimation framework. We construct a structural index of monopsony that builds on readily available microdata, enabling consistent cross-country comparisons of labour market frictions. Our results reveal that monopsonistic power is systematically higher among women, younger workers, rural populations, and those employed in agriculture or informal sectors. Education and urban location consistently reduce monopsonistic exposure, suggesting that labour mobility and human capital are key buffers. Sectoral analysis confirms that monopsonistic distortions are most acute in agriculture and least severe in diversified, formalized industries. We also explore how monopsony conditions mediate the wage effects of automation, finding that productivity gains are less likely to translate into wage growth in settings with higher employer power. These findings offer new insights into the structural determinants of wage inequality and call for targeted policies to reduce labour market frictions and improve worker bargaining conditions.

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▶ Introduction

Labour market monopsony—where employers possess significant power to set wages due to limited competition for labour—is gaining renewed scholarly attention, particularly for its role in exacerbating wage inequality and restricting employment mobility. Although traditionally associated with isolated labour markets or single-employer settings, recent literature underscores that monopsonistic conditions are pervasive across various economic contexts, reflecting broader structural frictions such as geographic immobility, limited job alternatives, and institutional weaknesses (Azar *et al.*, 2022; Sokolova and Sorensen, 2021). This growing recognition compels a deeper exploration into how monopsonistic dynamics manifest differently across demographic groups, sectors, and countries, influencing both wage-setting behavior and broader economic outcomes.

Despite the growing interest in employer monopsonistic power, existing evidence remains fragmented across countries, data sources, and measurement approaches, making meaningful international comparisons difficult. This paper addresses this gap by constructing internationally comparable measures of employer monopsonistic power using a common structural framework applied consistently to harmonized ILO microdata from countries spanning different levels of economic development (i.e., Canada, Chile, Colombia, Indonesia, Italy, Peru, Türkiye, the United Kingdom, the United States, and Vietnam). Our objective is not to propose a new methodology for measuring monopsonistic power, but to employ an established structural estimator based on Ridder and van den Berg (2003) as a measurement device to develop a comparable descriptive database of employer market power across countries and worker groups. This descriptive evidence provides a benchmark for understanding how monopsonistic power (or labour market rigidities) varies across labour markets and offers a foundation for interpreting its potential implications in light of the growing literature linking employer market power to labour market outcomes such as wage inequality, informality, productivity, minimum wages, and automation.

Our contribution to the existing literature is threefold. First, we provide a comparative cross-country analysis using a consistent empirical framework, allowing for systematic comparisons of monopsony power across distinct labour markets. This addresses a significant gap, as prior studies primarily focus on single-country or limited comparative settings. Second, we examine how monopsonistic power interacts with broader economic phenomena such as wage inequality, automation, and labour productivity, providing comprehensive insights into the structural underpinnings of wage disparities and productivity dynamics. Third, we explicitly consider how monopsony power varies across demographic segments—particularly gender, age, education levels, and geographic locations—and economic sectors, offering detailed policy-relevant insights into the distributional impacts of employer power.

We find that monopsonistic power systematically varies across demographic and economic segments, being significantly higher among women, younger workers, rural populations, and employees in agricultural or informal sectors. For instance, across our sample, women consistently face higher monopsonistic power compared to men, reflecting entrenched structural inequalities such as occupational segregation and reduced bargaining power (Farmand and Ghilarducci, 2022). Similarly, younger workers exhibit higher monopsony power due to limited professional networks and lower bargaining capacity, highlighting their vulnerability in labour markets with significant frictions.

Moreover, we identify important sectoral and geographical variations. Monopsony power tends to be pronounced in rural areas and agriculture, reflecting limited employment alternatives and

weak institutional protections. In contrast, sectors with higher formalization and urban settings generally offer greater competition and lower monopsonistic constraints. Furthermore, our findings underscore how monopsonistic conditions moderate the impact of automation on wage dynamics: countries with higher monopsonistic power see fewer productivity gains passed onto workers, exacerbating wage stagnation and inequality (Acemoglu and Restrepo, 2020).

This paper thus contributes to the debate on monopsony in labour economics by providing comparative evidence of its pervasiveness and nuanced implications across diverse labour markets. By explicitly linking monopsonistic power to demographic inequalities, sectoral characteristics, and broader economic forces such as automation, we offer clear empirical guidance for policy interventions. Specifically, our results advocate for targeted measures aimed at reducing labour market frictions, enhancing worker mobility, strengthening formal employment sectors, and implementing institutional reforms to mitigate employer wage-setting power.

The remainder of the paper is structured as follows. Section 1 reviews the expanding scope of monopsonistic power in labour economics and what we know about its definition, its measurement, and the empirical evidence on labour market concentration. Section 2 details our methodological approach, including data sources and estimation strategies. Section 3 presents the empirical results. Section 4 examines the relationship between monopsonistic power, wage inequality, automation, and productivity. Section 5 provides a multivariate decomposition of monopsonistic power across demographic characteristics. Finally, Section 6 concludes with policy implications and directions for future research.

1 Labour Market Monopsony: Why It Matters, How It Is Measured, and What We Know

1.1 The Renewed Interest in Employer Power

Labour market monopsony, first analysed by Robinson (1969), refers to a situation in which (a large group of) job seekers face a single or very few employers—the latter case also being described as oligopsony. Strict single-employer cases may be rare, but they are not necessary for employer power: whenever the labour supply curve a firm faces is less than perfectly elastic—so that a firm's wage choice affects how much labour it can attract—the firm sets wages rather than taking them, even where long-run supply is elastic (Boal and Ransom, 1997, p. 94). For most of the past century, however, economists considered such power unlikely outside small pockets and specific circumstances (Manning, 2003a); empirical and policy analysis therefore proceeded under the competitive assumption or, at best, bilateral wage bargaining in the by now standard search-and-matching framework (Mortensen and Pissarides, 1994; Pissarides, 1994, 2000). This scepticism was partly fuelled by what was seen as the muted employment response to minimum wage changes, which did not appear consistent with monopsony predictions (Neumark and Shirley, 2021).

The modern literature, building on the search-theoretic framework of Manning (2003b,a), has overturned this assessment. Job-search costs and geographic immobility reduce labour mobility and thereby grant firms wage-setting power even in markets with many employers—a configuration Ashenfelter *et al*. (2010) dub "dynamic monopsony", because workers cannot switch employers costlessly to exploit wage differentials, so that both separation rates and recruitment probabilities depend on wages. Inelastic firm-level supply arises for several further reasons: mobility may be costly or legally restricted, for instance through occupational licensing (Dodini, 2020); skills and competencies are imperfectly substitutable, so workers face monopolistic competition for their services (Card *et al*., 2018); job-specific human capital cannot easily be used elsewhere (Bachmann *et al*., 2020); and jobs are differentiated by amenities that appeal differently to heterogeneous workers (Manning, 2021). The conclusion that employer wage-setting power is the rule rather than the exception has become mainstream: Card (2022) concludes that modern labour markets are best described by models in which firms have discretion over posted wages; Kline (2025) provides a unified treatment of the fundamentals and measurement frontiers; and Azar and Marinescu (2024) draw out the policy implications, in particular for merger review and the enforcement of competition law in labour markets. Importantly, wage-setting power need not originate in the labour market itself: Presidente (2026) shows, theoretically and in an event study on plant-level data, that barriers to entry in product markets increase wage markdowns—product market monopoly and labour market monopsony are intimately connected, so competition policy in product markets carries a direct externality for workers.

This reassessment has implications for both efficiency and equity. In the standard static monopsony, firms offer too little employment at too low wages relative to perfect competition (Boal and Ransom, 1997; Benmelech *et al*., 2022, p. 88), partly because workers' lack of outside options depresses their pay (Bassanini *et al*., 2019). With search frictions, however, employment may instead be inefficiently high, and thick-market externalities can generate multiple equilibria that can be Pareto-ranked (Manning, 2003a, ch. 3). Monopsonistic competition may also contribute to gender discrimination—women's higher propensity to be hired out of inactivity and their lower labour

supply elasticity to the firm are consistent with this (Hirsch *et al.*, 2010)—and it reduces firms' and workers' incentives to invest in general training, leaving the economy with less human capital than is socially optimal. At the macroeconomic level, rising employer concentration is associated with higher wage inequality (Cortes and Tschopp, 2020) and a falling labour income share (Berger et al., 2022; De Loecker et al., 2020); micro evidence shows that less elastic labour supply to firms is associated with substantially lower earnings, with the largest losses at the bottom of the distribution (Webber, 2015). Weaker competition also allows inefficient firms to survive longer, depressing productivity (IMF, 2019; De Loecker *et al*., 2020; Banerjee and Hofmann, 2020; Jiang *et al*., 2017)—though the link is more complex if concentration is driven by intangibles, in which case early concentration gains may reflect innovative entry before dominance stifles further innovation (De Ridder, 2019)—and it lets firms shield themselves against shocks, lowering the pass-through of input prices and reducing the effectiveness of monetary policy (Heise *et al*., 2020). These concerns have renewed interest in antitrust tools as instruments of labour market regulation (Naidu *et al*., 2018) and have prompted official reviews calling for harmonised methodologies to measure market power across countries and sectors (Competition and Markets Authority (CMA), 2024); comparative evidence confirms that labour market institutions play a crucial role in shaping employer wage-setting power (Barth *et al*., 2020).

1.2 Measuring Employer Power

How best to measure employer power is itself the subject of a growing literature. Langella and Manning (2021) provide a systematic discussion and argue that no single indicator is appropriate in all circumstances: concentration ratios, labour supply elasticities and wage markdowns capture different sources of monopsonistic power and are best seen as complements rather than substitutes (see also Kline, 2025). With this caveat in mind, five main approaches have been used.

Employer concentration.

A first strategy measures employer concentration, for instance through the market shares of the largest firms or Herfindahl indices for employment or vacancies in a sector, region or local labour market. This is particularly useful where labour market information is scarce and a more direct approach is infeasible. Azar et al. (2022) estimate concentration indices for some 8,000 US local occupational labour markets (commuting zones) from online vacancy postings and document important effects on posted wages; Azar et al. (2020) show that labour market, unlike product market, concentration significantly lowers wages; and Marinescu et al. (2022) confirm that greater employer concentration is associated with lower wages even after controlling for local labour market characteristics. Manning (2010) uses average plant size in commuting zones to show that agglomeration allows labour market power to depress wage premia relative to competitive wages, compensating for congestion effects; for developing countries, Amodio et al. (2020) calculate concentration for 204 local labour markets in Peru and find a strong negative impact on wages in both formal and informal employment, while Benmelech et al. (2022) document similar effects for the United States. Concentration-based measures have recently been refined in several directions: Dodini et al. (2024) construct concentration indices in skill space with Norwegian administrative data and show they predict wages and workers' vulnerability to shocks better than industry-based Herfindahl indices; Schubert et al. (2024) combine concentration with occupational mobility data to capture outside options, finding that negative wage effects are strongest for workers with few local alternatives; and Bassanini et al. (2026) provide the first harmonised cross-country estimates for six European countries, documenting

a strikingly similar wage–concentration elasticity of −0.02 to −0.03 across countries as well as negative effects on hiring on permanent contracts. Related evidence suggests concentration is, if anything, even more consequential in low- and middle-income countries (Amodio et al., 2024; Pignatti and Ananian, 2026).

The elasticity of labour supply to the firm.

A second approach estimates the elasticity of the labour supply the individual firm faces, which directly determines the wage markdown the firm can sustain. The meta-analysis of Sokolova and Sorensen (2021), synthesising more than 800 estimates, finds significant wage-setting power across employers, with substantial variation by country, sector and methodology; administrative and vacancy data consistently deliver low firm-level elasticities (Webber, 2015; Azar et al., 2022). Azar et al. (2019) confirm that concentration and elasticity measures are inversely related and hence mutually informative. Early quasi-experimental studies exploiting hiring difficulties of (public) employers—for hospitals and schools—produced elasticities Manning (2011, p. 1003) considered implausibly low given the specific circumstances; the subsequent natural-experiment literature finds low but more credible estimates (Staiger et al., 2010; Falch, 2010; Matsudaira, 2014). More recent work exploits firms' wage policies directly: Bassier et al. (2022) use matched employer–employee data from South Africa and identify elasticities of 3–5 from workers' separation responses to firm-specific wage policies, implying substantial wage-setting power even in a high-unemployment developing economy. Recruiting behaviour, however, complicates interpretation: Bloesch et al. (2025) show in a wage-posting model estimated on Danish data that the labour supply curve to the firm is upward-sloping only in the short run—because recruiting effort exhibits approximately constant returns, the long-run curve is nearly flat, and although wages lie about 8 per cent below marginal products, much of the rent is dissipated in hiring costs. Short-run elasticity estimates are therefore best read as an upper bound on long-run wage-setting power. Jäger et al. (2024) add a further qualification: workers systematically underestimate their outside options, so perceived elasticities are lower than actual ones. Finally, Manning (2003a, p. 44) offers a simple alternative indicator within the standard search framework—the share of hires coming from non-employment rather than job-to-job transitions—which is useful for comparisons over time within a country, though institutional differences (for instance, German *Kurzarbeit* versus US layoff-and-rehire practices) limit cross-country comparability.

Structural estimation of labour market frictions.

A third, most data-intensive approach sets up a structural model to estimate demand and supply jointly on relevant labour markets. Ridder and van den Berg (2003), building on their equilibrium search model (van den Berg and Ridder, 1998), derive estimates of labour market frictions for several European countries and the United States; their framework enables cross-country comparison and has informed recent efforts to link observed frictions directly to firms' wage-setting behaviour (Davalos and Ernst, 2021).

A key challenge is that tenure and worker flows may depend on job characteristics— such as the wage—that are often unobserved; where only aggregate information is available, the unconditional approach is less demanding but sensitive to institutional features of wage setting and may yield estimates that are not comparable over time or across countries. Structural approaches have also been extended beyond the canonical search-frictions tradition: Jarosch et al. (2024) develop a "granular" search model in which large employers internalise the effect of their wage-setting on workers' outside options, and quantify it on Austrian data; Lamadon et al.

(2022) estimate a model with compensating differentials and rent sharing on US data, showing how firm-level amenities and productivity jointly shape wage markdowns.

Wage markdowns from production data.

Complementary to the above, wage markdowns—the wedge between the marginal revenue product of labour and the wage—can be estimated directly from production data, adapting methodologies developed for price markups (Loecker andWarzynski, 2012). Yeh et al. (2022) use this framework to document rising monopsony power in the United States since the early 2000s, finding that US manufacturing workers earn on average only 65 cents for each dollar produced, with aggregate markdowns declining from the 1970s to the early 2000s before rising sharply thereafter; Kroft et al. (2025) estimate markups and markdowns jointly for the US construction industry. Robustness concerns remain, however, particularly in the absence of reliable quantity and price data (Bond et al., 2021). The strategy has proved feasible precisely where detailed labour market data are scarce: Amodio and de Roux (2024) estimate plant-level markdowns for Colombian manufacturing that increase with local employer concentration, and Amodio et al. (2024) extend the methodology to more than 13,000 establishments in 82 low- and middle-income countries, estimating a median markdown of 2.33—implying that the median worker receives less than half of the marginal revenue product of labour.

Indirect evidence from minimum wages.

Finally, the employment response to minimum wage changes offers an indirect test. Card and Krueger (1995) famously explained positive employment effects of the 1992 New Jersey minimum wage increase by monopsony in fast-food labour markets; conversely, where minimum wages fail to raise employment, researchers have inferred low or absent monopsony (Neumark and Wascher, 2008; Neumark and Shirley, 2021). Evidence from the 2015 German minimum wage introduction points in the same direction: employment losses were much smaller than competitive models predicted (Caliendo et al., 2019). As Manning (2003a) cautions, however, the minimum wage–employment relationship depends on market characteristics: with free entry, monopsony and competition can be observationally equivalent even though a minimum wage remains socially efficient under monopsony. Azar et al. (2024) sharpen his test by interacting state-level minimum wage variation with local concentration, showing that employment elasticities are lower—and even positive in the most concentrated markets—where employer concentration is higher.

1.3 What We Know: The Main Empirical Results

Three robust facts emerge from the empirical literature.[1]

- First, the degree of monopsonistic exploitation varies enormously across occupations, markets and contractual arrangements, and is not confined to low-skilled workers. Historical estimates for the United States, summarised by Boal and Ransom (2002), range from essentially zero for teachers, nurses and early twentieth-century coal miners, through 5–15 per cent for university professors and 1–3 per cent for the labour market in general, to 100–600 per cent for baseball players bound by reserve clauses—with exploitation vanishing once

[1] For a meta-analysis of more than 100 studies, see Sokolova and Sorensen (2021).

those clauses were removed.[2] Quasi-experimental evidence based on discrete changes in local employer structure corroborates the wage-depressing effect of concentration: Prager and Schmitt (2021) show that US hospital mergers slow wage growth only for workers with industry-specific skills; Lehner *et al.* (2026) exploit the staggered opening of Walmart Supercenters and find that average household earnings fall by around 6 per cent and local poverty rises by about two percentage points for more than a decade after entry, with higher public transfer receipt and lower tax payments; and Rinz (2022) shows that even though local employer concentration has declined since the late 1970s, workers in more concentrated markets earn significantly less, with the strongest effects at the bottom of the distribution. Even highly educated workers are not immune: Goolsbee and Syverson (2019) find substantial monopsony power over university professors, especially tenured faculty. Guest workers in the United States experience wage reductions of up to 13 per cent relative to a competitive benchmark (Gibbons *et al.*, 2019), and French employer–employee data reveal significant sectoral heterogeneity and industry spillovers from labour market concentration to job losses elsewhere (Marinescu *et al.*, 2020).

- Second, labour market power appears more pronounced where measurement frameworks can reach beyond high-income countries. Median wage markdowns of 2.33 across 82 low- and middle-income countries (Amodio *et al.*, 2024) imply labour market power well above US estimates; in Peru, concentration forces salaried workers into informal self-employment, linking monopsony to informality (Amodio *et al.*, 2020, 2025); and firms in Ghana increased their labour market power after trade liberalisation, compensating for lost product market power (Damoah, 2021), while labour demand changes from trade liberalisation translate into smaller employment changes where employer power is greater (Davalos and Torres, 2024). Cross-country evidence on concentration remains scarce, but Pignatti and Ananian (2026), matching firm-level data with harmonised household surveys for more than 40 countries, document that higher employment concentration is systematically associated with higher wage inequality—particularly in the upper half of the distribution—with the relationship stronger in developing countries and attenuated where collective bargaining coverage is higher and minimum wages are more binding.
- Third, the evidence recasts the role of minimum wages and labour market institutions. In monopsonistic markets a minimum wage can raise both wages and employment, particularly in concentrated, low-wage sectors: in US retail, the most concentrated markets exhibit positive employment elasticities with respect to minimum wage increases (Azar *et al.*, 2024), and sectoral estimates for Germany around the 2015 introduction show high employer power in accommodation and restaurants but little in low-wage manufacturing (Bachmann and Frings, 2017). Normative analysis qualifies this: Berger *et al.* (2025) show that moderate minimum wages raise employment and welfare by countering markdowns, whereas ambitious ones reduce employment—a non-monotonicity echoed by Caselli *et al.* (2023), who find for Italy that minimum wages curb the power of productive lowwage firms but can destroy jobs or force exit in less productive sectors; Kudlyak *et al.* (2025) document that minimum wage increases reduce vacancies, slowing new hiring in low-wage occupations; and Valverde Rodríguez (2023) finds effects in Mexico that depend significantly on market concentration. Spatial differences matter too: larger German cities tend to be more competitive, so minimum wage effects differ between urban and rural labour markets (Bamford, 2021). The rise of platform work adds a further margin: although online labour markets appear highly competitive, intermediaries fix conditions and capture significant shares thanks to incomplete information

[2] The underlying studies include Scully (1974); Kahn (2000); Zimbalist (1992), Boal and Ransom (2000), Hirsch and Schumacher (1995), Ransom (1993), Boal (1995), Vedder et al. (1978); Zevin (1975) and Brown and Medoff (1989).

(Kingsley *et al.*, 2015), and experiments on Amazon Mechanical Turk confirm low recruitment and retention elasticities (Dube *et al.*, 2020).

Taken together, the literature establishes that monopsonistic power is widespread, measurable through several complementary approaches, and systematically larger for vulnerable groups and in developing countries—while comparable cross-country evidence remains scarce, a gap the present paper sets out to fill.

▶ 2 Methods

Building upon the work of Ridder and van den Berg (2003), hereafter RvdB, this study develops market power indicators across different countries and segments of the labour force. Utilizing ILO microdata from ten nations, namely Canada, Chile, Colombia, Indonesia, Italy, Peru, Türkiye, the United Kingdom, the United States, and Vietnam, the paper estimates indicators of monopsonistic power, with some data updated through 2022 or 2023. The countries are categorized into three income tiers according to their status at the beginning of our observation period in 2011: High Income (Canada, Italy, the United Kingdom, the United States), Upper-Middle Income (Chile, Colombia, Peru, Türkiye), and Lower-Middle Income (Indonesia, Vietnam).

2.1 Monopsonistic Power Index

Upon calculating the labour market frictions index k for the entire workforce using either parametric or linear regressions (detailed below), we adapt the RvdB approach to derive market power indicators through the employer's markup on worker productivity: $\mu = E(p - w)/E(p)$. Here, $E(p)$ represents expected worker productivity, whereas $E(p - w)$ denotes the employer's portion. The formula can be restructured, using RvdB's theoretical framework, as:

$$\mu = \frac{\mathrm{E(w)} - \mathrm{E(w)}}{(1 + \mathrm{k})\mathrm{E(w)} - \mathrm{E(w)}}$$

where $E(w)$ and $E(\underline{w})$ are the expected wage and the segment-specific lower wage bound respectively, with k determined per country. For less productive workers, regulations imply $E(\underline{w})$ aligns with the minimum wage. For highly productive employees, $E(\underline{w})$ could be a reservation wage, potentially above the minimum. Even though van den Berg and Ridder (1998) offer a model for estimating $E(\underline{w})$, theirs is susceptible to data and measurement biases. We identify $E(\underline{w})$ as the lower end of the minimum wage within a segment.

Labour market segments

For each country, we segment the labour force into distinct markets according to characteristics considered exogenous to labour outcomes, such as gender, age group, education level, and location (urban or rural if data allows). We also factor in the economic sector, presuming greater mobility within rather than between sectors. Each segment acts as a separate labour market, with an indicator of market power computed. To evaluate the labour market frictions index in each segment, data on wage and job duration distributions, both treated as continuous variables, is necessary.

Vietnam requires a specific treatment as the country does not have a continuous measure of job duration. Vietnam's Labour Force Survey (LFS) collects this data through elapsed time intervals, which are ordinal. Consequently, we modify our analysis followinguous the methodology in the reference article (RvdB) to adjust for ordinal (categorized) job duration data and individual wage information in order to calculate the frictional index.

2.2 Conditional Inference - Linear Regression Approach

This approach builds on RvdB's structural model whose equilibrium conditions depend on offered F(w) and observed G(w) wages distribution. Under the model assumptions two parameters are key: the wage offers arrivals a λ rate (per unit of time) and the layoffs rate δ (per unit of time). Thus, the observed wages distribution writes :

$$G(w) = \frac{F(w)}{1 + k(1 - F(w))}$$

where $k \equiv \lambda / \delta$ stands for the average number of job offers in a given spell of employment. This is the labour market friction index (higher values of k imply less frictions). From the previous condition, the following steady state relationship between the expected elapsed employment spell (left-hand side) and the observed wages distribution, can be derived:

$$\frac{1}{\delta + \lambda(1 - \mathrm{F(w)})} = \frac{1}{\delta(1 + \mathrm{k})} + \frac{\mathrm{k}}{\delta(1 + \mathrm{k})} G(w)$$

where $\delta + \lambda(1 - F(w))$ is the hazard rate of the distribution of elapsed job durations. It is also interpreted as job exit rate for workers earning *w*.

The reciprocal provides an alternative expression to the hazard rate of elapsed durations:

$$\delta + \lambda(1 - F(w)) = \frac{\delta + \lambda}{1 + kG(w)}$$

2.2.1 Linear Regression (Semi-Parametric) Estimation

The key parameter k can be estimated from equation (1). Its left hand side is interpreted as the average elapsed employment spell at a given wage level. This steady state condition depends on the right hand side determinants and parameters where G(w) is the observed wages cdf. Thus, adding an error term to the theoretical relationship yields univariate linear model $y = \beta_0 + \beta_1 x + u$ such that $y \equiv \frac{1}{\delta + \lambda(1 - \mathrm{F(w)})}$ and $x \equiv G(w)$ from which k is easily identified without distributional assumptions by β_1 / β_0. The caveat of this approach relies on its dependence on observed wage micro-data. Alternative robust regression methods, can be implemented in order to control for the potential bias of the OLS estimator induced by extreme observations.

2.3 Parametric Estimation

The parametric approach also builds on RvdB and is vowed to be more efficient (lower variances) as it exploits information on the distribution of employment durations.

Elapsed employment duration (t_e) may be represented by an exponential distribution:

$$f(t_e) = \theta_x exp(-\theta_x t_e)$$

where θ_x represents the hazard function. Alternatively, it can be interpreted as the expected number of job interruptions per unit of time or the inverse of the expected elapsed employment duration. θ_x may be conditioned on a set of explanatory variables (x). From RvdB model, the hazard function is defined by the right side of equation (2) as a function of wages cdf ($G(w)$):

$$\theta_x := \frac{\delta + \lambda}{1 + kG(w)}$$

Thus, the log-likelihood function for the non-censored i-th individual duration is simply defined as $\ln\theta_x - \theta_x t_e$. However, in most applications household and labour force surveys) introducing censoring implies that complete employment spells are usually not observed. We could write its likelihood from the probability of having a complete employment spell noted ˜te that is longer than the observed elapsed employment duration: $P\left[\tilde{t}_e > t_e\right] = 1 - F\left(\tilde{t}_e\right)$. In practice, the latter model parameters cannot be identified without a complementary sample of non-censored observations. Combining the sample of censored (C) and non-censored observations ($\bar{C}$) yields the log-likelihood function:

$$\sum_{i \varepsilon \bar{C}} \left[\ln \theta_{x_i} - \theta_{x_i} t_{e_i}\right] - \sum_{i \varepsilon C} \theta_{x_i} t_{e_i} \equiv \sum_{i \varepsilon \bar{C}} \ln \theta_{x_i} - \sum_{\forall i} \theta_{x_i} t_{e_i}$$

In the case of Vietnam, we can define the probability of observing a given worker within a specific *j*-th tenure interval:

$$P\left[t_{e,l} < t_e < t_{e,u}\right] = F\left(t_{e,u}\right) - F\left(t_{e,l}\right) \equiv \psi\left(t_{e,j}\right)$$

The likelihood function for the i-th observation whose elapsed employment belongs to the j-th interval becomes:

$$\prod_h \psi\left(t_{e_j}\right)^{1(h=j)}$$

Our parameter of interest *k* is estimated by maximum likelihood from this expression.

2.4 Formal and Informal Labour Markets

Our analysis does not explicitly separate formal from informal wage earners. However, the segmentation variables – education, gender, location, economic sector, and age – allow for a proxy-identification of labour market segments where informality is likely to be more prevalent. Hence, the assessment of labour market frictions and monopsonistic power can be inferred through worker profiles typically associated with informality, for instance younger age, lower education, and employment in rural areas and in agriculture.

For countries with high informality rates, including Colombia (56%), Peru (71%), and Türkiye (32%), complementary estimates excluding informal workers are provided in the appendix.

▶ 3 Empirical Results

This section summarizes the estimated outcomes of monopsonistic power for the ten countries studied, with a focus on distinguishing patterns by sex, age, education, and economic sector.

An overview of the monopsonistic power indicators at the country level suggests that in high-income nations, despite more formal and diverse labour markets, significant frictions maintain high monopsonistic power (Figure A1). Influences such as sector-specific employer concentration, low union presence, and restricted labour mobility – exemplified by Canada's 2014 Temporary Foreign Worker Program reform and post- Brexit UK labour policies – limit replacement capacity, particularly in lower-skilled jobs. This results in workers' bargaining power not necessarily reducing exposure to employer dominance, as seen in the rising μ index. In upper-middle income countries like Colombia, Peru, and Türkiye, frictions are varied (Figure A2). The blend of formal and informal sectors, along with non-diversified economic structures, hampers mobility and reinforces monopsonistic power exposure. Periods of increased frictions often coincide with lower commodity prices and reduced employment options. In lower-middle income countries such as Indonesia and Vietnam, monopsonistic power ranks highest (Figure A3). Here, severe labour frictions and limited access to quality jobs persist, where informal employment offers insufficient counterbalance to employer dominance in key sectors.

3.1 Monopsonistic Power and Gender distribution

For most of the countries analyzed (see Figure 1), the results suggest that women endure higher monopsony power than men, which translates into limitations in mobility and bargaining power in the labour market. Structural factors may be influencing this dynamic, such as occupational segregation (Sharma, 2023; Hirsch, 2010), low elasticity of female labour supply, and high levels of informality.

Beyond these conditions, some studies suggest that employers may also play an active role in shaping gendered monopsony power. Farmand and Ghilarducci (2022) argue that practices such as gender-based job assignments, limited promotion opportunities, or the design of benefits that tie female workers to the employer, such as in-house childcare, can reinforce women's dependence on their employers. Similarly, certain policies, such as restrictions on unionization or persistently low minimum wages, may be amplifying these dynamics (Johannsen and Rodriguez, 2025).

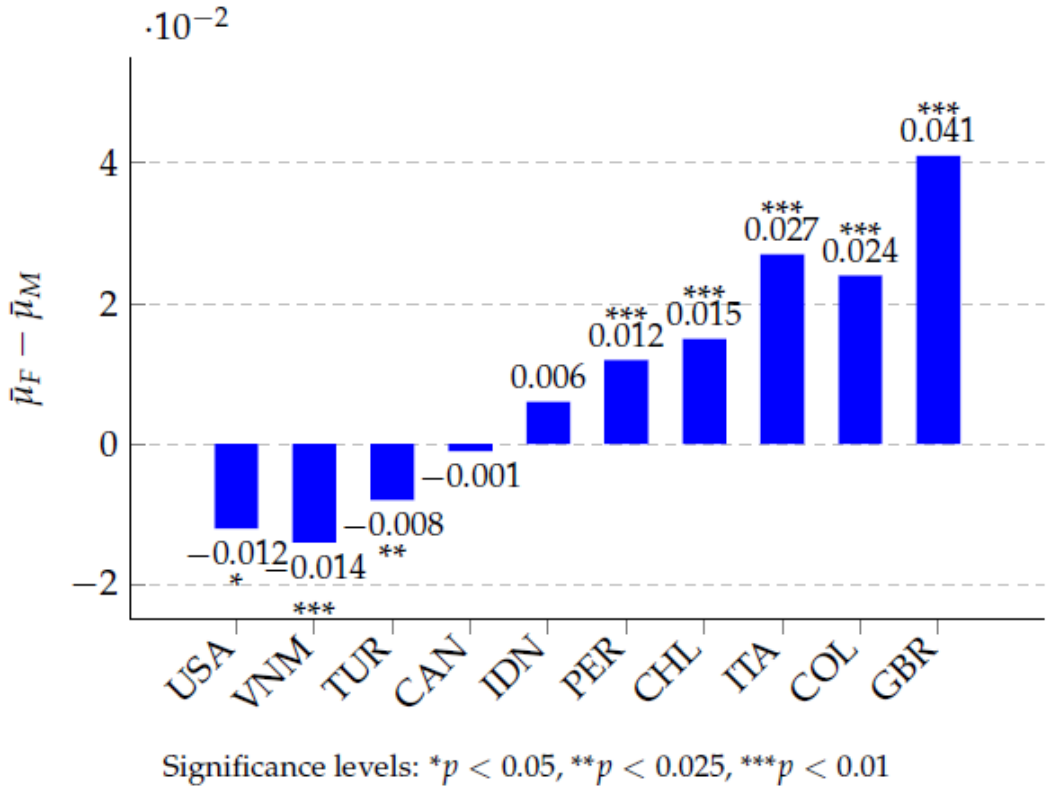
Although there are exceptions, notably Türkiye and Vietnam, where men are estimated to face higher employer monopsonistic power, the prevailing pattern suggests that women generally face greater employer monopsonistic power.

The Gender Wage Gap

The literature suggests that monopsonistic power plays a crucial role in perpetuating the gender pay gap. Women often face greater search frictions than men, resulting in lower labour supply elasticity and weaker bargaining power. According to Webber (2016), these factors are associated with wages that are approximately 3.3% lower for women than for men in the United States. Similarly, Sánchez et al. (2022) find that men earn approximately 22% more than women, partly due to gender differences in labour supply elasticities and the concentration of women in firms

with greater employer monopsonistic power. Hirsch et al. (2010) further show, using a dyopsony model with a game theoretical approach, how firms can set lower wages for women, even under competitive conditions, due to their lower labour supply elasticity.

▶ **Figure 1: Monopsonistic Power Gap - Female over Male**

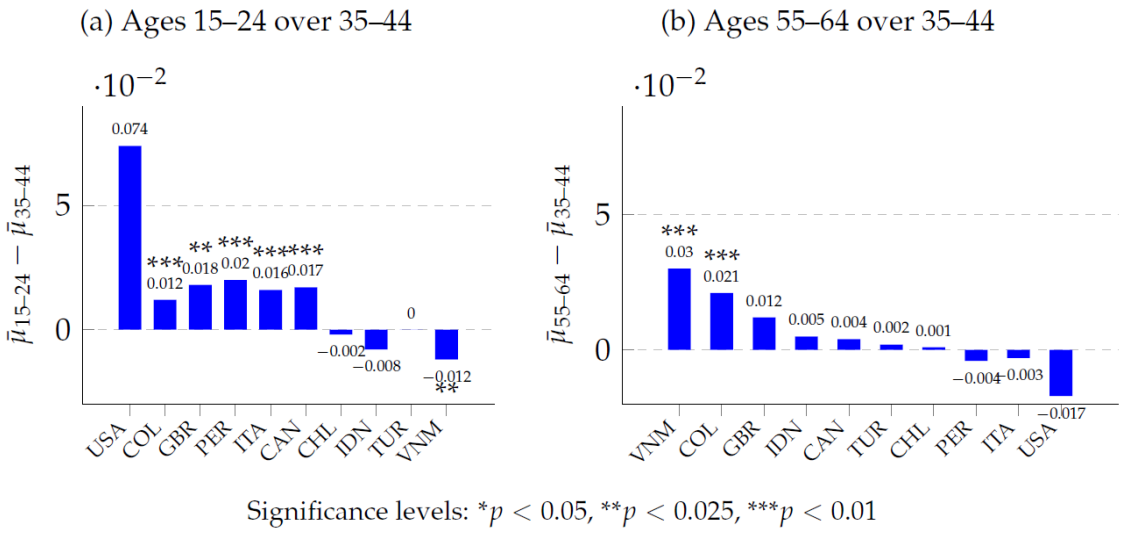


3.2 Monopsonistic Power and Age Distribution

Beyond gender, age also plays an important role in shaping workers' exposure to employer monopsony power. According to Figure 2a, monopsony power does not affect all workers equally, younger workers (ages 15–24) face higher monopsony power compared to their middle-aged counterparts (ages 35–44), a pattern observed in both advanced and emerging economies. This could make them more vulnerable to bargaining and mobility barriers. Their limited work experience and lack of professional networks may restrict their employment alternatives and reduce their ability to negotiate for better wages.

However, the situation for older workers (ages 55–64) is more heterogeneous (Figure 2b). In most of the countries analyzed, the difference in monopsony power between this group and the middle-aged cohort (35–44 years) is not statistically significant or shows values close to zero. This suggests that older workers may not be systematically disadvantaged. Nevertheless, there are notable exceptions: in Colombia and Vietnam, older workers face significantly higher monopsony power than their middle-aged peers, indicating increasing vulnerability for this group.

▶ **Figure 2: Monopsonistic Power Gap**

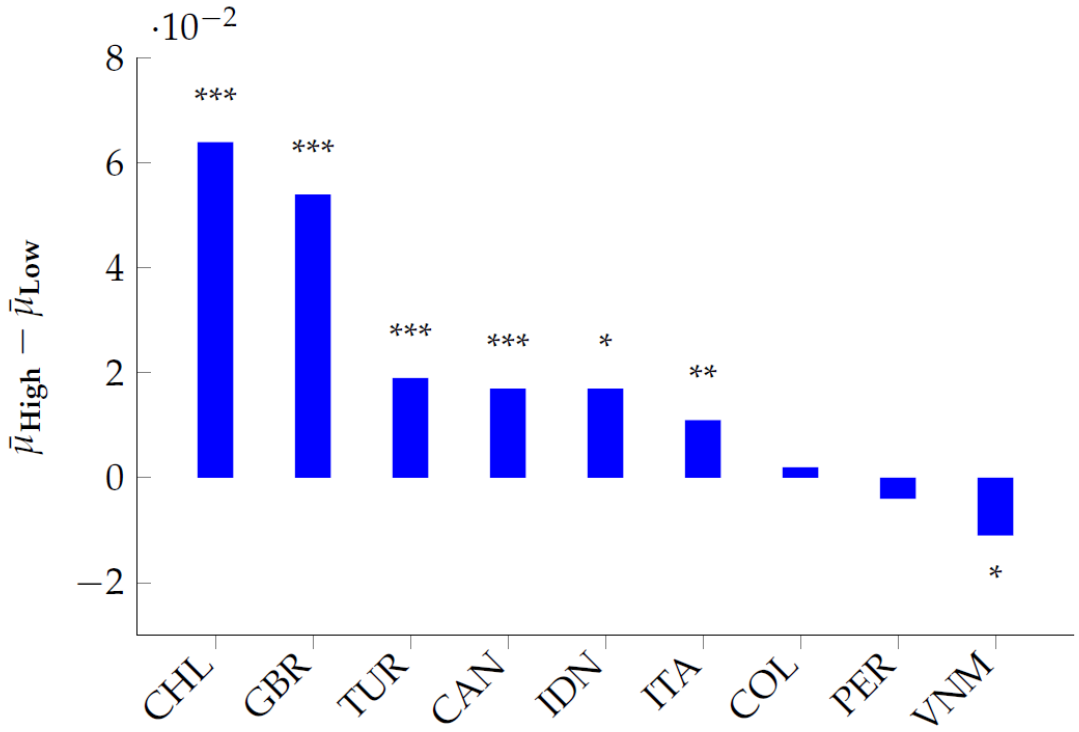


3.3 Monopsonistic Power and Education Levels

Across the majority of examined countries, employees with advanced education levels encounter heightened monopsony power relative to those with basic or intermediate education levels (Figure 3). This phenomenon can be attributed to their specialized skills, which constrict the pool of potential employers, diminishing their employment options. This hypothesis is affirmed by (Goolsbee and Syverson, 2019), who observe that in the U.S. higher education sector, tenured professors – being more specialized and less mobile – experience elevated monopsony power compared to those in flexible positions. Additionally, Dodini et al. (2023) highlight that the adverse impacts of shocks in concentrated labour markets are more severe for those with university education, indicating that higher educational qualifications might not shield against employer market dominance.

Conversely, in countries like Peru and Vietnam where informality is prevalent, findings indicate an opposite pattern. In these countries, workers with less education experience greater employer monopsony power compared to their more educated counterparts given their lack of outside options.

▶ **Figure 3: Monopsonistic power gap: highest over lowest education levels**



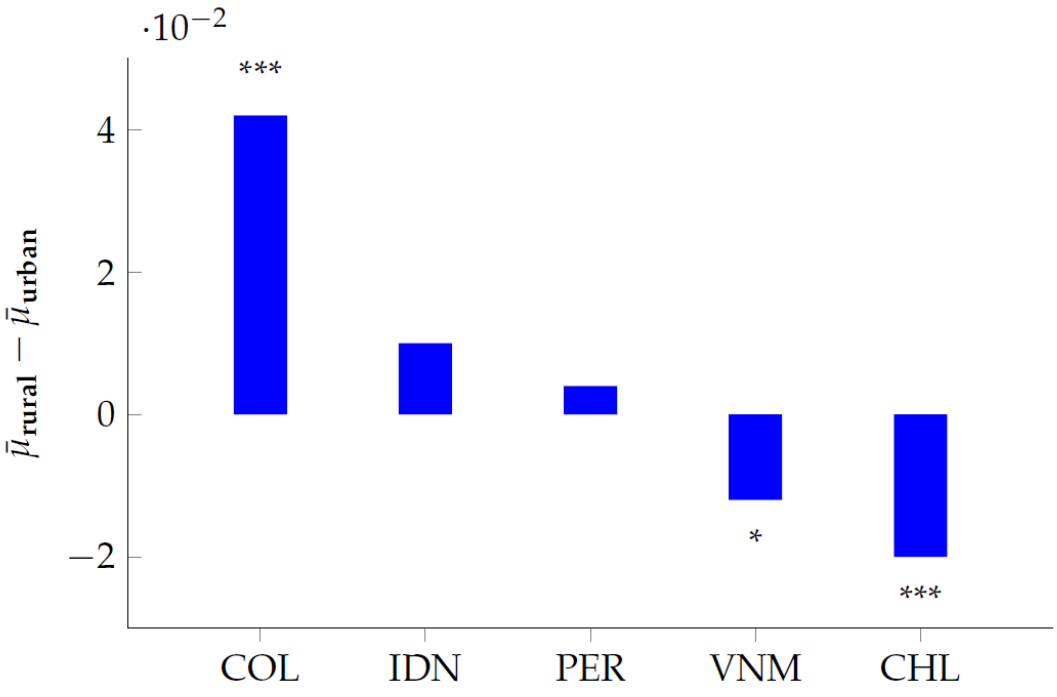
Significance levels: $^{*}p < 0.05$, $^{**}p < 0.025$, $^{***}p < 0.01$

3.4 Monopsonistic Power and Urbanization

In addition to individual characteristics, geographic location may also shape labour market competition by influencing workers' mobility and access to alternative employers. Figure 4 illustrates that the link between urbanization and monopsony power differs among nations. In countries like Colombia, evidence suggests rural workers experience greater employer monopsony power than urban workers, likely owing to fewer employers, high informality, and job concentration in minimally regulated agricultural sectors. Similar trends, albeit less statistically robust, appear in Indonesia and Peru.

In contrast, in Chile, rural workers exhibit lower levels of monopsony power compared to urban workers. This may be linked to economic diversification in rural areas, driven by export-oriented agricultural sectors, such as viticulture and fruit farming, which operate under stronger regulatory frameworks and lower informality. In this context, monopsony power appears to be concentrated in urban areas, where sectors such as commerce, construction, and services show a greater business presence but lower levels of unionization, limiting workers' bargaining power. In Vietnam, the results also suggest a negative gap, though more moderate, possibly reflecting similar conditions of partial formalization in rural areas.

▶ **Figure 4: Monopsonistic power gap: rural over urban area**



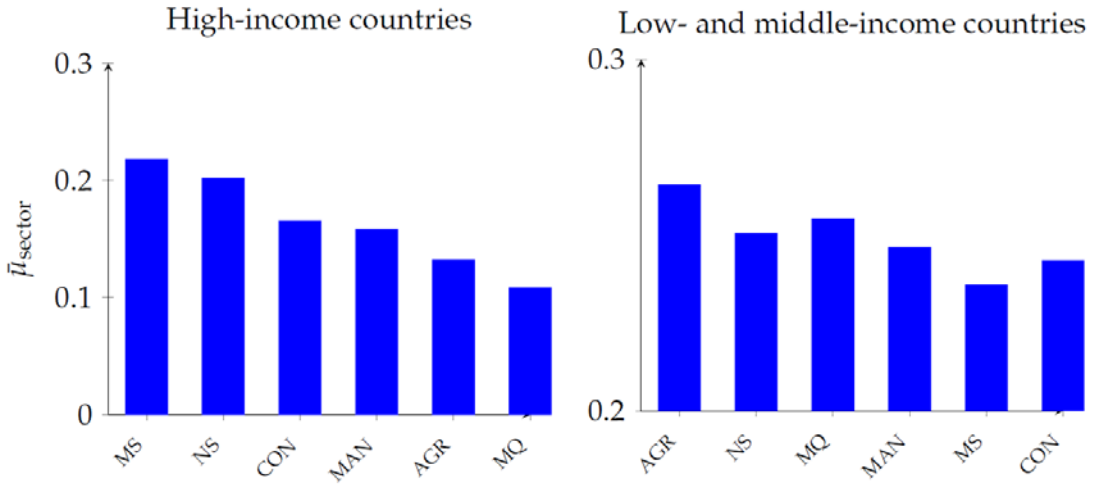
Significance levels: $^{*}p < 0.05$, $^{**}p < 0.025$, $^{***}p < 0.01$

3.5 Monopsonistic Power and Economic Sectors

The distribution of monopsony power also varies significantly across economic sectors (Figure 5). In low- and middle-income countries such as Peru, Colombia, Indonesia, and Türkiye, agricultural workers face high levels of monopsony power, likely due to the limited workers' bargaining capacity. Despite the fragmented structure of the agricultural sector, the coexistence of small production units and informal employment relationships amplifies employers' control over wages and working conditions.

In high-income nations like Canada, the UK, and Chile, significant monopsony power is prevalent in both market and non-market services. Industries such as retail, healthcare, and education exhibit high employer concentration, thereby limiting job options for workers, leading to unfavorable conditions and diminished bargaining power.

▶ **Figure 5: Monopsonistic Power by economic sector**



Note: AGR = Agriculture, CON = Construction, MAN = Manufacturing, MS = Market Services, MQ = Mining and Quarrying, NS = Non-market Services.

4 How does Monopsony impact Inequality, and Productivity?

In this section, we summarize key insights from the literature on monopsonistic power that are relevant to the countries under analysis. We then assess whether our findings align with the main relationships highlighted in the reviewed literature.

4.1 Inequality

Some studies suggest that monopsonistic power can influence economic development and inequality, particularly in low-income countries. Amodio *et al*. (2025) find monopsonistic power is more prevalent in labour markets of poorer countries, where lower labour supply elasticity gives firms greater power to suppress wages, pushing workers toward self-employment. This shift limits the effectiveness of industrial policies aimed at creating formal jobs, as workers remain in low wage (informal) jobs.

The relationship between monopsonistic power and wage inequality provides extensive evidence on how employers can influence wages and increase disparities, particularly in labour markets where jobs offered by different employers are not considered perfect substitutes by workers. The consensus suggests that employers with monopsonistic power can set lower wages, disproportionately affecting vulnerable groups such as women and racial minorities. This pattern is especially visible in studies focused on the United States, which make up a significant portion of the research in this area. Azar *et al*. (2022) focuses on how the concentration of labour markets in the United States allows employers to exert significant control over wages, leading to reduced compensation and amplifying wage inequalities. Similarly, Stelzner and Bahn (2022) highlight that racial and gender discrimination dynamics are exacerbated by monopsonistic power in this context, resulting in greater wage penalties for Latina and Black women.

Brooks *et al*. (2021) study rapidly growing economies like China and India, finding that employers' market power has decreased labour's share of income, emphasizing that these dynamics are not exclusive to developed economies. Additionally, historical studies, such as those by Paker *et al*. (2023) on 18th-century England, show that monopsonistic power has long influenced wages and inequality.

The literature review by Sokolova and Sorensen (2021) further broadens the perspective, showing that labour supply elasticity varies considerably by region and market type. According to their findings, labour markets appear to be more competitive in Europe and less so in developing countries compared to the U.S., Canada, and Australia. While much of the literature on monopsonistic power and wage inequality focuses on the United States, there is growing evidence showing how these dynamics operate in different contexts.

Figure 6 explores the link between monopsonistic power and the Gini coefficient calculated from the median wages of each country.[3] The slope described in the figure shows that greater employer monopsonistic power by firms over wages is associated with higher wage inequality, although this varies across contexts. Vietnam represents a notable case where its socialist-based economy illustrates the significant impact of state intervention in curbing wage inequality, despite substantial monopsonistic power. Measures like regional minimum wages contribute to narrowing wage gaps. Conversely, Indonesia experiences greater wage inequality attributed to insufficient state regulation and extensive labour informality, enabling firms to exert more wage control.

Chile and Peru, for their part, exhibit higher levels of wage inequality despite operating in environments with moderate monopsonistic power, largely due to the persistence of informality in their labour markets. In Peru, informality is particularly high, enabling firms to keep wages low and exacerbating disparities. Although Chile has less informality than Peru, wage differences remain significant due to the concentration of power in certain sectors and the lack of effective regulation to reduce the gaps between high- and low-productivity sectors.

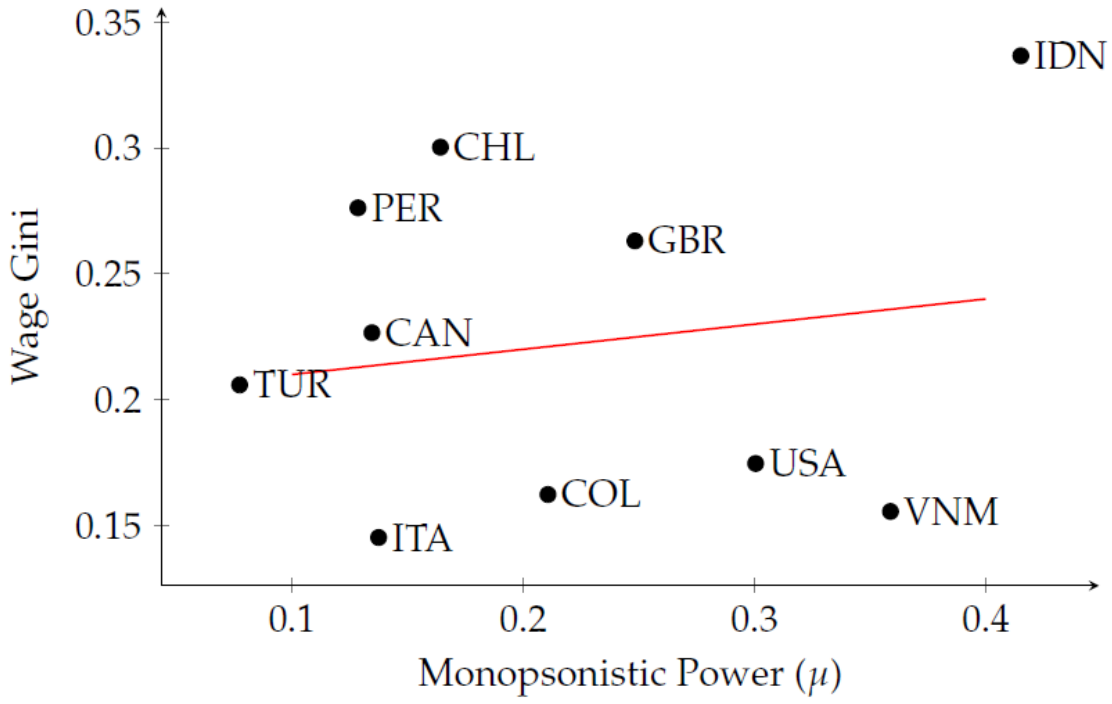
Alternatively, Canada, with a similar level of monopsonistic power as Peru and Chile, shows much lower wage inequality. This is mainly due to its low informality and a more formal and regulated labour market, where labour protection policies and collective bargaining mechanisms allow for a more equitable distribution of wages.

[3] The Gini coefficient G calculated by the Inequal package in Stata is given by:

$$G = 1 - \frac{\sum_{i=1}^{n}(n-i+1)\bullet y_i}{n\sum_{i=1}^{n} y_i}$$

where y_i represents the income or wage for individual i, ordered from lowest to highest, and n is the total number of individuals in the sample.

▶ **Figure 6: Monopsonistic Power vs. Wage Gini**



Note: Relationship between monopsonistic power and wage inequality, measured by the wage distribution's Gini coefficient. Monopsonistic power estimates are based on the Ridder and Van den Berg (2003) structural approach. Data sourced from the International Labour Organization (ILO); authors' calculations.

4.2 Automation

Acemoglu and Restrepo (2020) provide evidence that the introduction of robots in manufacturing reduced job opportunities and depressed wages in U.S. regions heavily exposed to automation (displacement effect). By replacing routine tasks, automation exerts downward pressure on wages and intensifies inequality. The authors also mention the possibility of a productivity (or reinstatement) effect by which automation increases firm productivity, which can lower prices, raise demand, and potentially create new tasks or occupations where human labour is still essential. We argue that the displacement effect risks to be amplified in labour markets characterized by high monopsonistic power, as employers have greater ability to retain productivity gains from automation rather than share them with workers. Consequently, wages remain suppressed, and employment opportunities diminish, further deepening existing inequalities.

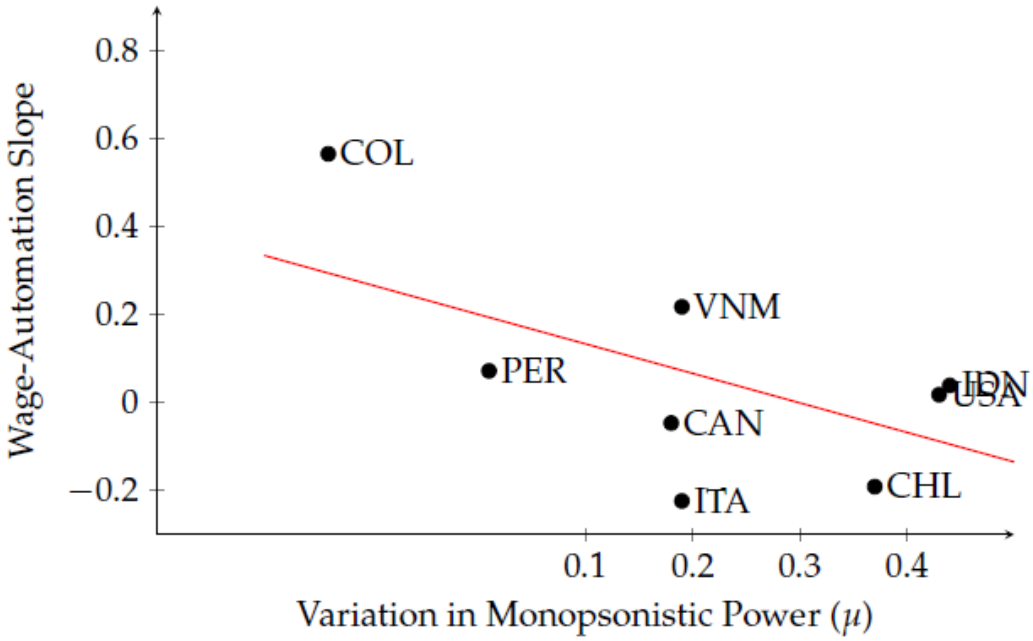
Figure 7 illustrates this relationship for the period 2017–2022. The vertical axis measures wage responsiveness to automation, proxied by the ratio of average wage changes to shifts in automation readiness: $\frac{\Delta w}{-\Delta r(I)}$. Specifically, we use the Automation Readiness Index[4]. Here, the numerator (Δw) captures the average change in mean wages from 2017 to 2022, and the denominator ($-\Delta r(I)$) represents the inverse of the change in each country's relative position (r) in the Automation Readiness Index (I) over the same period. Thus, this metric quantifies how sensitive wages are to improvements in automation preparedness. The horizontal axis shows the change

[4] The Automation Readiness Index, published annually by the Economist Intelligence Unit (EIU) since 2018, evaluates a country's capacity to adopt and leverage advanced automation technologies. It considers factors such as government policy, educational infrastructure, and labour market dynamics.

in monopsonistic power. As the figure suggests, countries experiencing larger increases in monopsonistic power tend to exhibit diminished wage gains from automation, reflecting employers' capacity to capture these productivity enhancements rather than distribute them to workers.

In Colombia, Peru, and Vietnam, the positive slope suggests that these countries' reduction of monopsonistic power are associated with a stronger translation of automation-driven productivity improvements into wage increases. Conversely, in economies such as the United States, Italy, Canada, and the United Kingdom, greater employer monopsonistic power appears to restrict the wage benefits derived from automation. In certain instances, higher monopsonistic power might even correlate with wage reductions, as employers are better positioned to retain productivity gains rather than distributing them to workers. Aligning with Acemoglu and Restrepo's argument, this dynamic may reflect a "displacement effect," where automation replaces routine jobs without generating sufficient new opportunities or compensating wage increases.

▶ **Figure 7: Monopsonistic Power andWage-Automation Link**



Note: The wage-automation slope (vertical axis) shows how automation readiness relate to changes in average wages, with data sourced from the Economist Intelligence Unit's Automation Readiness Index. Monopsonistic power estimates follow Ridder and Van den Berg's (2003) approach, with other data from the International Labour Organization (ILO); authors' calculations.

4.3 Productivity

The relationship between monopsonistic power and productivity remains limited and requires further exploration. On one hand, research by Bachmann *et al*. (2026) indicates that monopsonistic power can negatively impact productivity. For instance, in East Germany, firms often remain small to avoid the costs associated with higher wages, leading to reduced investment in growth and, consequently, lower aggregate labour productivity. This highlights how the power of the employer's market can restrict economic expansion and efficiency.

However, Berger *et al*. (2022) suggest that monopsonistic power does not always lead to negative results. Under certain regulatory conditions, such as the implementation of minimum wage

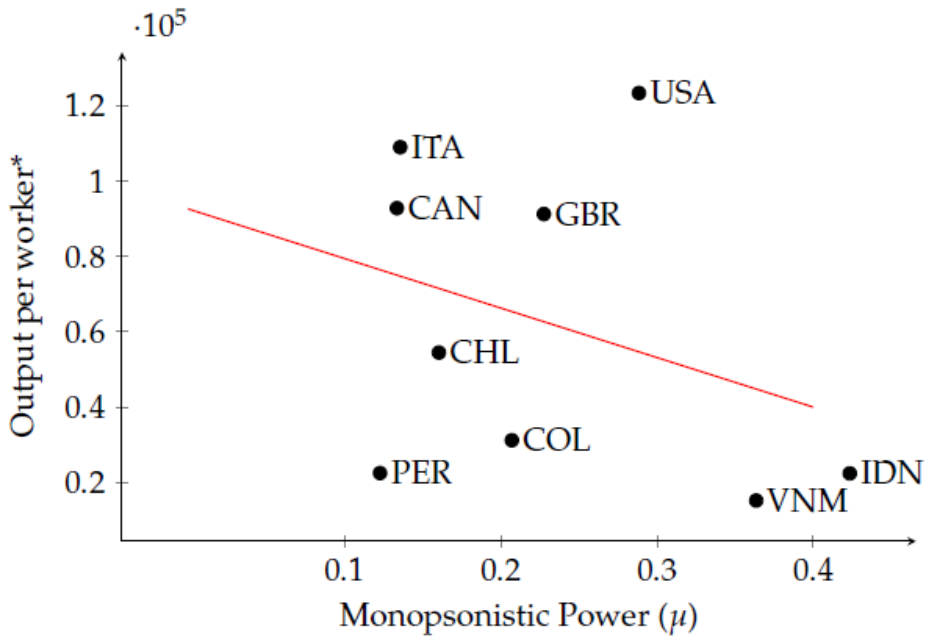
policies, monopsonistic power can facilitate a more efficient allocation of workers to highly productive firms, enhancing overall market efficiency.

Figure 8 illustrates that the relationship between monopsonistic power and labour productivity is not uniform across countries. On the one hand, the United States, despite exhibiting moderate levels of monopsonistic power, displays high productivity. Canada, the United Kingdom, and Italy show similar patterns. This suggests that, in advanced economies, factors such as investment in technology, human capital, institutional quality, and lower levels of labour informality may help sustain high productivity levels even in the presence of some degree of monopsonistic power in labour markets.

On the other hand, Chile, Colombia, and Peru exhibit lower productivity levels than high-income economies, although they also display lower monopsonistic power than countries such as Vietnam and Indonesia. This pattern suggests that productivity outcomes are shaped by multiple factors and that monopsonistic power represents only one part of the explanation; labour informality and other structural constraints may also play an important role in explaining the observed differences. Meanwhile, Vietnam and Indonesia combine relatively high levels of monopsonistic power with lower productivity levels. This pattern is consistent with the presence of structural constraints, including higher labour informality, which may limit investment, technological adoption, and productivity growth in key sectors of the economy.

Overall, the results suggest that the relationship between monopsonistic power and productivity depends on each country's broader economic and institutional context. In line with the findings of Bachmann *et al*. (2026), the observed patterns are consistent with the view that monopsonistic power may be associated with lower productivity, particularly in environments characterized by labour market frictions and high levels of informality.

▶ **Figure 8: Monopsonistic Power and Productivity**



*Note**: GDP is measured in constant 2017 international dollars at PPP. Data sourced from the International Labour Organization (ILO); authors' calculations

▶ 5 Multivariate Decomposition

While section 3 provided preliminary insights into monopsonistic power through univariate comparisons by gender, education, age, and urbanization, the regression results presented in Tables 1 and 2 enable a multivariate decomposition of the monopsonistic power indicators across countries. This econometric approach simultaneously controls for various worker characteristics, economic sectors, and temporal and regional variations, allowing a more nuanced assessment of each factor's independent contribution.

For gender, the multivariate analysis (Table 1) confirms that women face consistently higher monopsonistic power than men across the international sample, even after accounting for differences in education, age, sector, and location. Specifically, being female is associated with a significantly greater employer monopsonistic index (an increase of approximately 0.036), reinforcing the structural vulnerabilities highlighted earlier. However, this pattern is notably absent in the U.S. context (Table 2), where gender differences in monopsony disappear once additional factors like education, sector, and region are controlled for. This implies that in the U.S., gendered disparities in monopsonistic power observed in the univariate analysis are largely explained by other intersecting socioeconomic characteristics rather than gender alone.

Turning to education, the univariate analysis previously suggested mixed outcomes across countries, particularly noting a paradoxical increase in monopsony among highly educated groups due to specialization. Yet, the multivariate estimates in Table 1 provide clearer evidence of education's protective role, with higher education levels systematically associated with significantly lower monopsonistic power compared to those with less-than-basic education. Indeed, basic, intermediate, and advanced education levels reduce monopsony power by roughly 0.03 to 0.06 points relative to the lowest education level. Similarly, in the U.S. context (Table 2), higher education robustly correlates with decreased monopsonistic exposure. This indicates that, despite potential limitations from specialized skills highlighted in section 3, higher education predominantly serves as an asset, enhancing labour mobility and bargaining leverage when holding other demographic and economic factors constant.

Regarding age, section 3 indicated higher monopsonistic vulnerability among younger workers. The multivariate decomposition strongly supports this conclusion. Workers in intermediate age groups (35–44 and 45–54) exhibit significantly lower monopsonistic power compared to younger workers (15–24 years). This robust result persists across international contexts (Table 1) and in the U.S. (Table 2). Thus, youth consistently appear disadvantaged due to fewer accumulated skills, limited professional networks, and restricted employment alternatives, confirming the critical need for targeted policy interventions aimed at younger demographics.

The regression analyses also provide valuable clarification on the urban-rural divide. Initially, section 3 described varied outcomes across countries, emphasizing the complex relationship between location and monopsony. The multivariate regression explicitly indicates that, internationally, urban areas offer significantly reduced monopsonistic power compared to rural areas, with a large and statistically significant negative coefficient (approximately -0.065). This reveals that, once differences in sectoral composition and workforce demographics are accounted for, urban environments consistently exhibit greater labour market competitiveness, promoting better mobility and wage outcomes.

Finally, the sector-specific results from the regression analyses enrich our understanding of monopsonistic variation across economic activities. Both international and U.S.-specific analyses highlight agriculture as a sector characterized by significantly higher monopsonistic power relative to others. Industries like construction, manufacturing, and professional services notably reduce monopsonistic exposure compared to agriculture. These sectoral effects, identified robustly in the multivariate regressions, confirm the structural barriers within agriculture—such as informality and limited bargaining power—emphasized in section 3, while highlighting the protective nature of diversified and regulated sectors.

▶ Table 1: Monopsonistic competition index decomposition (μ)

Variable	All countries (excl. USA)	With area effects
(Intercept)	0.161***	0.281***
Sex: women	0.036***	0.024***
Basic	-0.026***	-0.035***
Intermediate	-0.038***	-0.062***
Advanced	-0.029***	-0.042***
Ages 25–34	-0.009	-0.008
Ages 35–44	-0.012*	-0.012
Ages 45–54	-0.014**	-0.010
Ages 55–64	-0.014*	-0.009
Mining and Quarrying	-0.009	0.061***
Construction	-0.014*	0.021**
Manufacturing	-0.017*	0.036***
Market Services	-0.010	0.012
Non-Market Services	-0.002	0.035***
Urban area	—	-0.065***
Year 2011	0.008***	0.013***
Year 2012	0.002*	0.004**
Year 2013	0.004***	0.005***
Year 2014	0.008***	0.016***
Year 2015	0.041***	0.067***
Year 2016	0.067***	0.113***
Year 2017	0.072***	0.111***
Year 2018	0.073***	0.108***
Year 2019	0.124***	0.206***
Year 2020	0.143***	0.232***
Year 2021	0.130***	0.165***
Year 2022	0.147***	0.163***
Year 2023	0.150***	0.162***
Country fixed effects	Yes	Yes
Time fixed effects	Yes	Yes
Observations	48,594	30,011
R^2	0.16	0.30
Countries	9	5
Clustering	Segment level	Segment level

Notes: Base categories: Less than Basic (education), Ages 15–24, Agriculture (sector), year 2010, and male. In the second column, the urban area dummy uses rural as the reference. Significance levels: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

▶ Table 2: USA: Monopsonistic competition index decomposition (μ)

Variable	Estimate
(Intercept)	0.307***
Sex: women	0.007
Basic	-0.036***
Intermediate	-0.067***
Advanced	-0.049***
Ages 25–34	-0.010
Ages 35–44	-0.015*
Ages 45–54	-0.016*
Ages 55–64	-0.014
Business and Repair Services	-0.083***
Entertainment and Recreation Services	-0.032
Finance, Insurance, and Real Estate	-0.044
Manufacturing	-0.023**
Professional and Related Services	-0.063***
Public Administration	-0.067***
Transportation, Communication, others	-0.007
Wholesale and Retail Trade	-0.027**
Middle Atlantic	-0.022
East North Central	-0.027*
West North Central	-0.032**
South Atlantic	-0.001
East South Central	-0.001
West South Central	-0.016
Mountain	-0.023
Pacific	-0.001
Year 2012	-0.053***
Year 2014	0.039***
Year 2016	0.003
Year 2018	0.116***
Year 2020	0.019*
Year 2022	0.130***
Observations	730
R^2 (base OLS model)	0.45
Number of countries	1
Country fixed effects	Yes
Time fixed effects	Yes
Clustering	At segment level

Notes: Base categories: Less than Basic (education), Ages 15–24, Agriculture (sector), year 2010, urban area, and male. Significance levels: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

▶ 6 Concluding Remarks

This paper provides comprehensive insights into the prevalence and implications of monopsonistic power across diverse labour markets. Using harmonized microdata from ten countries and a structural econometric framework, we have presented evidence highlighting how monopsonistic dynamics shape wage inequalities, labour productivity, and the distributional outcomes of automation.

Our findings suggest that monopsonistic power disproportionately affects vulnerable groups, notably younger workers, women, rural populations, and those employed in agriculture and informal sectors. Multivariate analyses robustly confirm that female workers generally face greater employer monopsonistic power internationally, although in some contexts, such as the U.S., gender disparities diminish when controlling for other socioeconomic factors. Educational attainment consistently emerges as a protective factor against monopsonistic power, underscoring the role of skills and mobility in enhancing worker bargaining leverage. Younger workers remain significantly disadvantaged across all contexts, suggesting targeted policy interventions are necessary to mitigate their vulnerability.

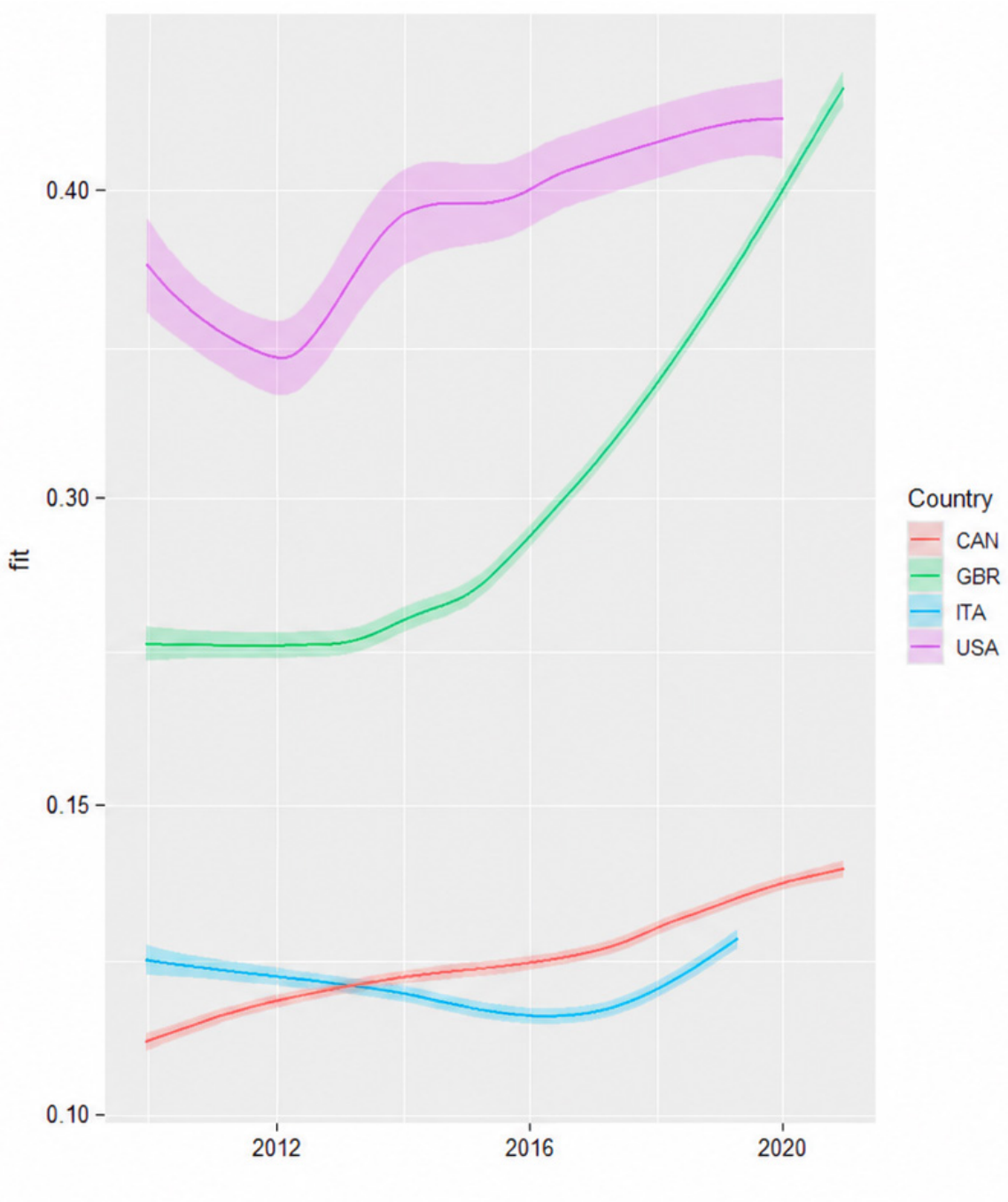
Sector-specific analysis further reveals that monopsonistic power is particularly pronounced in agriculture, reflecting structural barriers, limited employment alternatives, and prevalentt informality. In contrast, diversified sectors such as manufacturing and professional services exhibit relatively lower monopsonistic power, emphasizing the importance of economic diversification and stronger labour market regulation.

Additionally, our exploration into the interactions between monopsonistic power, wage inequality, and automation reveals nuanced dynamics. Automation, while capable of generating productivity gains, often fails to translate into wage growth in contexts of higher monopsonistic power, where employers retain these gains rather than distributing them to workers. Thus, without complementary institutional reforms, technological advancements may exacerbate existing inequalities.

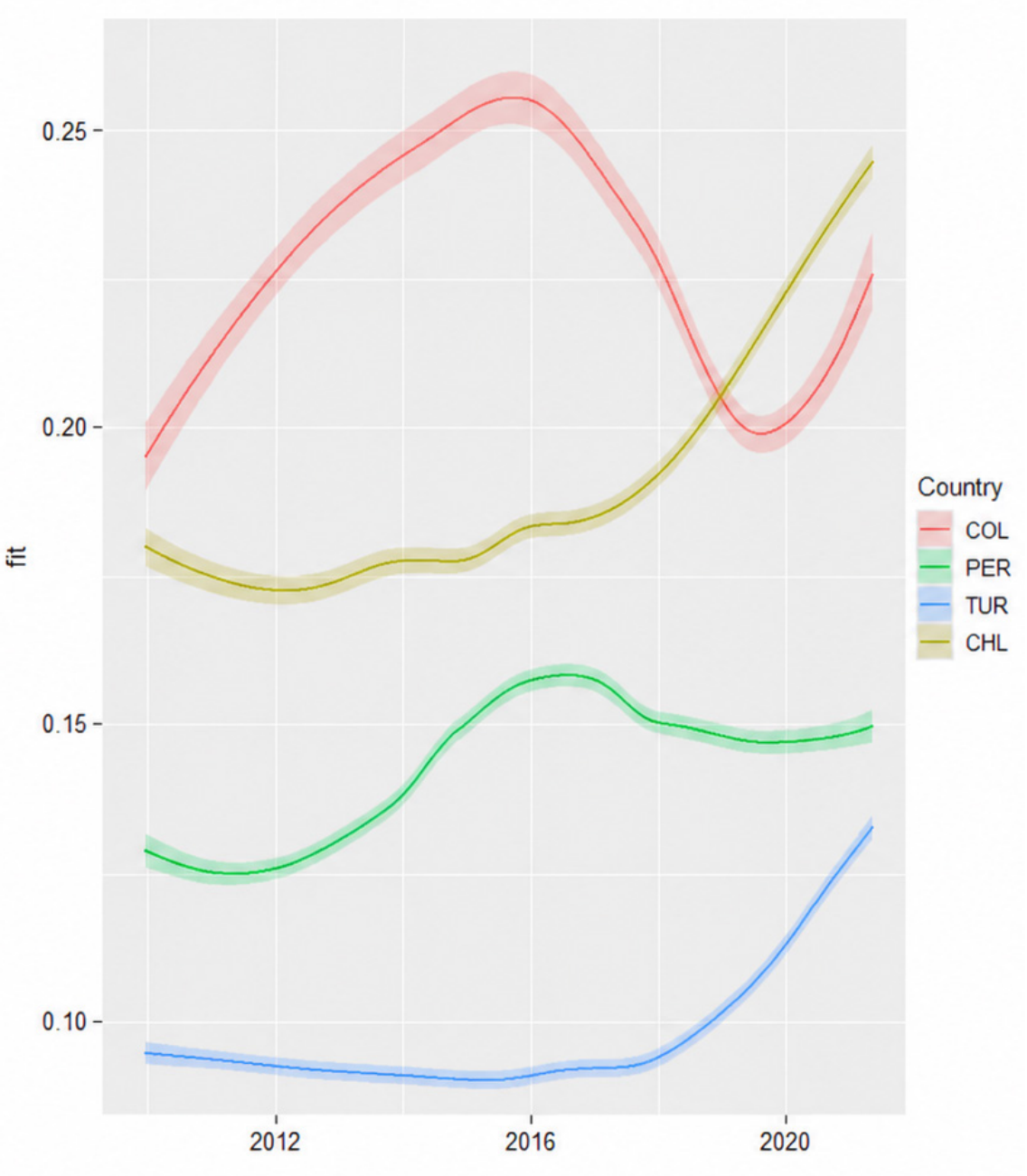
Overall, the analysis strongly supports policy measures aimed at reducing monopsonistic power through enhancing labour market mobility, promoting formal employment, improving educational access, and strengthening regulatory frameworks. These interventions not only promise more equitable wage distributions but also foster conditions conducive to sustainable productivity growth and inclusive economic development.

Appendix

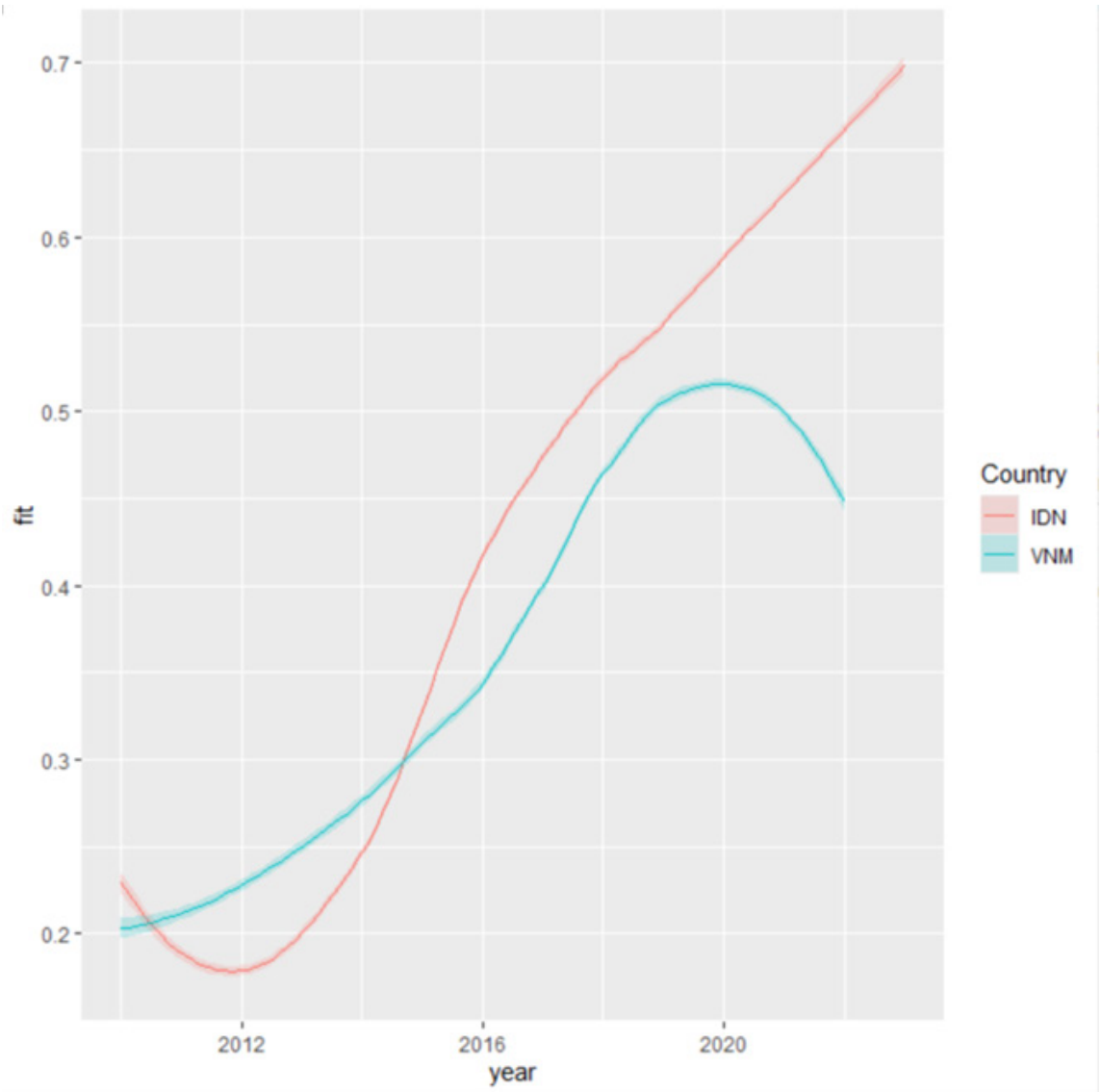
▶ **Figure A1: Monopsony power - higher income countries**



▶ **Figure A2: Monopsony power- upper middle income**



▶ **Figure A3: Monopsony power- lower middle income**



Appendix A. Additional Results

▶ **Table A1: Monopsonistic Power by Gender (female over male)**

Country	Mean Difference	t-value	p-value	Significance
	$\left(\bar{X}_F - \bar{X}_M\right)$			
CAN	-0.001	-0.43	6.64e-1	
CHL	0.015	5.25	1.57e-7	***
COL	0.024	7.73	1.05e-14	***
GBR	0.041	9.71	2.74e-22	***
IDN	0.006	1.08	2.81e-1	
ITA	0.027	17.62	1.74e-69	***
PER	0.012	5.86	4.64e-9	***
TUR	-0.008	-4.15	3.40e-5	**
USA	-0.012	-1.74	8.22e-2	
VNM	-0.014	-4.44	9.03e-6	***

Results are based on a two-sample t-test. The test compares the monopsonistic power gap between genders across different countries. Significance levels: *p < 0.05 (*), **p < 0.025 (**), ***p < 0.01 (***)

Appendix B. Additional Results

▶ **Table B1: Monopsonistic power gap: youngest over intermediate age group**

Country	Mean Difference	t-value	p-value	Significance
CAN	0.017	5.65	1.58e-08	***
CHL	-0.002	-0.34	7.34e-01	
COL	0.012	4.00	6.35e-05	***
GBR	0.018	2.42	1.55e-02	**
IDN	-0.008	-0.90	3.71e-01	
ITA	0.016	5.45	5.01e-08	***
PER	0.020	6.83	8.31e-12	***
TUR	0.000	0.11	9.10e-01	
USA	0.074	1.69	9.07e-02	
VNM	-0.012	-2.71	6.75e-03	**

Results are based on a two-sample t-test. The test compares the monopsonistic power gap between the youngest age (15-24) range over the intermediate age range (35-44). Significance levels: *p < 0.05 (*), **p < 0.025 (**), ***p < 0.01 (***).

▶ **Table B2: Monopsonistic power gap: oldest over intermediate age group**

Country	Mean Difference	t-value	p-value	Significance
CAN	0.004	1.36	1.74e-01	
CHL	0.001	0.18	8.61e-01	
COL	0.021	3.83	1.30e-04	***
GBR	0.012	1.90	5.71e-02	
IDN	0.005	0.52	6.03e-01	
ITA	-0.003	-1.35	1.76e-01	
PER	-0.004	-1.20	2.31e-01	
TUR	0.002	0.51	6.10e-01	
USA	-0.017	-1.42	1.55e-01	
VNM	0.030	5.43	5.67e-08	***

Results are based on a two-sample t-test. The test compares the monopsonistic power gap between the oldest age (55-64) range over the intermediate age range (35-44). Significance levels: *p < 0.05 (*), **p < 0.025 (**), ***p < 0.01 (***).

Appendix C. Additional Results

▶ **Table C1: Monopsonistic power gap: highest over lowest education levels**

Country	Mean Difference	t-value	p-value	Significance
CAN	0.017	6.37	1.87e-10	***
CHL	0.064	9.42	4.43e-21	***
COL	0.002	0.26	7.96e-01	
GBR	0.054	8.24	1.69e-16	***
IDN	0.017	2.08	3.73e-02	*
ITA	0.011	3.06	2.22e-03	**
PER	-0.004	-0.96	3.38e-01	
TUR	0.019	6.34	2.32e-10	***
VNM	-0.011	-2.07	3.86e-02	*

Results are based on a two-sample t-test. Significance levels: *p < 0.05 (*), **p < 0.025 (**), ***p < 0.01 (***).

▶ **Table C2: Monopsonistic power gap: rural over urban area**

Country	Mean Difference	t-value	p-value	Significance
CHL	-0.020	-3.44	5.80e-04	***
COL	0.042	5.99	2.03e-09	***
IDN	0.010	1.08	2.82e-01	
PER	0.004	1.01	3.14e-01	
VNM	-0.012	-1.93	5.34e-02	*

Results are based on a two-sample t-test. Significance levels: *p < 0.05 (*), **p < 0.025 (**), ***p < 0.01 (***).

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The International Labour Organization is the United Nations agency for the world of work. We bring together governments, employers and workers to improve the working lives of all people, driving a human-centred approach to the future of work through employment creation, rights at work, social protection and social dialogue.

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