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ABSTRACT

How does employer market power affect workers? We compute the concentration of new hires by occupation and commuting zone in France using linked employer-employee data. Using instrumental variables with worker and firm fixed effects, we find that a 10% increase in labor market concentration decreases hires by 12.4% and the wages of new hires by nearly 0.9%, as hypothesized by monopsony theory. Based on a simple merger simulation, we find that a merger between the top two employers in the retail industry would be most damaging, with about 24 million euros in annual lost wages for new hires, and an 8000 decrease in annual hires.

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1 INTRODUCTION

How does employer market power affect workers? A burgeoning literature has shown that labor market concentration has a negative impact on wages (Azar et al., 2017; Benmelech et al., 2018; Hershbein et al., 2018; Rinz, 2018; Lipsius, 2018; Abel et al., 2018; Martins, 2018; Qiu and Sojourner, 2019). From a policy perspective, this suggests that antitrust and competition authorities should scrutinize prospective mergers between two companies for their anticompetitive effects in the labor market (Marinescu and Hovenkamp, 2018; Naidu et al., 2018; Marinescu and Posner, 2019). However, doing so requires the assessment of both wage and employment effects of consolidations. While prior literature has examined the wage effects of labor market concentration, it did not examine employment effects. Furthermore, the data used was often incomplete in terms of industries and occupations covered. Therefore, it was not possible to assess the size of the expected economy-wide wage *and* employment losses resulting from employer consolidation via mergers.

In contrast, we leverage rich administrative data on firms and workers in France to measure how increases in labor and product market concentration affect both wages and employment. More specifically, our administrative data from France includes the date, occupation, and location of all new hires. We link this data to workers' employment histories and to firm-level data. We define labor market concentration as the Herfindahl-Hirschman Index for new hires in an occupation (4-digits), commuting zone, and quarter. We find that the mean labor market concentration in France is 0.172, considered by the American Department of Justice as a signal of a moderately concentrated market. In turn, we are able to run regressions controlling for worker and firm fixed effects, and for firm size and value added per worker. Using our estimate of the wage and employment impacts of labor market concentration, we then simulate the economy-wide effects of a horizontal merger between the two largest (by employment) firms in each industry.

Our first finding concerns labor market concentration and its wage and employment impacts. In our preferred wage specification, we control for market (occupation by commuting zone), worker and firm fixed effects, and instrument labor market concentration with the inverse number of employers in other geographic markets for the same quarter and occupation, following a similar strategy to Azar et al. (2017); Rinz (2018); Qiu and Sojourner (2019). We find that a 10% increase in labor market concentration decreases the wages for new hires by nearly 0.9%. This negative effect was found to be highly robust across specifications. Furthermore, we find that effects of labor market concentration are less negative in more unionized industries and more severe when the worker is employed on a part-time basis. In our preferred specification to measure the employment effects of concentration, we control for market fixed effects and instrument labor market concentration in the same way as before. We find that a 10% increase in labor market concentration lowers new hires by about 12.4%. That labor market concentration

decreases wages and hires is exactly what economic theory would predict in an oligopsonistic labor market (Manning, 2011; Azar et al., 2019).

Our second finding concerns the impact of *product* market concentration on wages (Qiu and Sojourner, 2019) and hires. Product market concentration is calculated at the industry by commuting zone level. Since labor and product market concentrations are positively correlated, we add this variable in all our main regressions to limit omitted variable bias. For our preferred specification for new hires described above, we find that a 10% increase in product market concentration increases wages by 0.09%, with a larger effect in more unionized industries. This result is robust across specifications and consistent with rent sharing in unionized industries. Furthermore, product market concentration decreases hires as predicted by oligopsony theory, but not always significantly so.

Our third finding sheds new light on the expected impact of mergers and how antitrust authorities could anticipate their effects. We simulate the impact of horizontal mergers between the two largest employers in each industry by calculating the changes in labor market concentration that such mergers would entail. We then apply our preferred estimate for the impact of labor market concentration on wages and hires. We find that the economy-wide impact of the merger varies with initial labor market concentration: mergers seem to be most damaging for workers in labor markets in low levels of labor market concentration prior to the merger. Compared to other industries, a merger in retail would be the most damaging: a merger between the top two employers in the retail industry would be most damaging with 24 million euros of yearly lost wages for new hires, and about 8000 hires lost annually. These losses to wages and hires take into account both effects on workers in the retail industry and workers in other industries that share an occupational labor market with workers in the retail industry (e.g. stock clerks in the temporary work industry). Effects on workers outside the retail industry are not negligible since they amount to about 25% of the total effect. After the retail industry, a merger between the top two employers in the building maintenance industry would be almost as damaging with annual wage losses of about 18 million euros for new hires, and a 6,000 decrease in yearly hires.

We make three key contributions to the literature. First, we use administrative data to obtain the most comprehensive dataset to date on the labor market concentration of new hires by occupation. Relying on hires is more accurate than relying on job postings (Azar et al., 2017, 2018, 2019; Hershbein et al., 2018) because not all companies post their jobs online. Data on hires is more accurate for measuring current competition in the labor market than data on the stock of employment, especially when such a stock is based on industries (Benmelech et al., 2018; Rinz, 2018; Lipsius, 2018; Abel et al., 2018) rather than occupations. Our extensive data further allows us to control not only for value added and firm fixed effects (Benmelech et al., 2018) but also for worker fixed effects, thereby reducing the scope of omitted variable

bias arising from worker composition effects.

Our data allows us to explore the effect of labor market concentration in the European context of France: we show that the impact of labor market concentration on wages and employment is negative even when unions are powerful and labor market regulations are stringent. This adds to the evidence from Portugal (Martins, 2018), showing a negative impact of labor market concentration on wages. Our detailed data also allows us to determine which workers suffer the most from labor market concentration: we show more negative effects from concentration for vulnerable workers in unstable jobs (workers in part-time, temporary, or on-call work arrangements) who are less well protected by labor market institutions.

Our second key contribution is to go beyond the wage effects of labor market concentration that prior literature has estimated to examine the effects of labor and product market concentration on hires. We find that both labor and product market concentration negatively affect hires, but the effect is more precisely estimated for labor market concentration.

Our third key contribution is to shed light on how consolidation may affect both wages and employment by simulating horizontal mergers between the two largest players (by employment) in each industry, adding to the literature on the effects of mergers (Brown and Medoff, 1987; Shleifer and Summers, 1988; Gokhale et al., 1995; Conyon et al., 2001; Gugler and Yurtoglu, 2004; Margolis, 2006; Lehto and Böckerman, 2008; Siegel and Simons, 2010; Prager and Schmitt, 2018). Comprehensive data is critical to measure the full impact of mergers: in particular, we find that 25% of the impact of mergers affect workers in industries *other* than the industry where the merger took place. Through this exercise, we provide a simple method that can be used in practice by competition authorities to assess the likely impact of a merger. In particular, we find that in France, mergers in retail and in building maintenance would be the most damaging in terms of lost wages and jobs.

The paper proceeds as follows. First, Section 2 defines our measure of labor and product market concentration, introduces the French matched employer-employee dataset, and describes the statistical relationship between our main variables of interest. Second, Section 3 presents our main econometric evidence with regards to impact of labor and product market concentration on wages and employment. Finally, Section 4 presents the counter-factual exercise consisting in simulating the impact of mergers of the top two employers in each industry on the labor market using the estimates from the penultimate section.

2 Measuring Labor and Product Market Concentration

2.1 Data

Three main data sources are used in this paper. They form what is commonly referred to as linked employer-employee data. First, the *déclaration annuelle de données sociales* (DADS) provides us with individual level data on wages, hours worked, occupation, industry, gender, and age. Maintained by the French National Institute for Statistical and Economic Studies (INSEE), this administrative dataset covers all French private and public sector workers. The subfile *fichier salariés* allows us to identify individual workers and their primary source of income (i.e, job providing them with the most income during a given year).Whilst this dataset is not freely accessible, any researcher can request access to it through the Secure Data Access Centre (CASD). Further description of this dataset can, for example, be found in Abowd et al. (1999).

Each worker is associated with a firm identifier. This firm identifier (*code SIREN*) allows us to link workers to the characteristics of their respective firms. These characteristics are those provided in standard financial disclosures at the yearly level. These financial disclosures stem from the database *Système unifié de statistique d'entreprises* (SUSE; unified system of firm statistics) also collected by INSEE. Its main dataset is called the *(Fichier complet unifié de SUSE* (FICUS; complete unified file of SUSE). In 2007, it was replaced with *Élaboration des Statistiques Annuelles d'Entreprise* (ESANE). From this database, we get our controls for firm size and value added per employee.

Finally, the survey on financial links between companies, *Enquête sur les liaisons financières entre sociétés* (LIFI), is used to identify the business group to which firms belong. It surveys the ownership and subsidiaries of companies, identified by the *Siren* number. Respondents must identify a subsidiary if the company owns over 30,000 euros of its shares. This allows us to identify business groups in a comprehensive way. Companies with at least one of the following are surveyed each year : (a) own over 1.2 million euros of another company's shares, (b) employ over 500 employees, (c) have a turnover over 60 million euros per year, (d) being identified as a business group headquarter in the previous year, or (e) be foreign owned in the previous year (i.e, at least 50% of its shares are owned from a foreign firm). When a firm had no business group, we assigned its firm identification number (*Siren*) as its business group identifier. This dataset has already been used by Cestone et al. (2017) and can be consulted for further information.

Our sample selection procedure is the following. First, we only keep new hires. Given large wage rigidities in France, we would expect changes in concentration to impact new hires and have little effect on continuing workers. Second, we only keep private sector employees. We also exclude state-sponsored workers, apprentices, and interns. We drop workers below 18 and above 67. Beyond the public sector, we also drop the non-governmental organizations,

the art industry, museums, sports clubs, unions, and home production. Our data covers new employees from 2011 to 2015 included. During these years, the data collection system did not change, it is both the most recent and complete (in terms of response rate) version of the data[1].

2.2 Definition of the Herfindahl-Hirschman Index (HHI)

We now define our measures of concentration. Labor Market Concentration is measured through the Labor Market Herfindahl-Hirschman Index (HHI), as in Azar et al. (2017). This index measures concentration through market shares. Let $\mathscr{J}_{o,m,t}$ be the set of firms hiring in occupation o in market location m at time t. The number of workers hired by firm j is denoted $\mathscr{N}_{j,o,m,t}$. The firm's labor market ($s^L_{j,o,m,t}$) share is then:

$$s^L_{j,o,m,t} = \frac{\mathscr{N}_{j,o,m,t}}{\sum_{k \in \mathscr{J}_{o,m,t}} \mathscr{N}_{k,o,m,t}} \tag{2.1}$$

For example, if at a given time and area there is a total of 100 cleaners being hired, a firm hiring 10 of these cleaners would have a 10% market share. The labor market HHI, $\text{HHI}^L_{o,m,t}$, sums the squares of these market shares:

$$\text{HHI}^L_{o,m,t} = \sum_{j \in \mathscr{J}_{m,t}} {s^L_{j,o,m,t}}^2 \tag{2.2}$$

One way to interpret the HHI Index is through the 2010 horizontal merger guidelines of the American Department of Justice and Federal Trade Commission. An HHI between 0,15 and 0,25 is indicative of a moderately concentrated market and above 0.25 as highly concentrated.

We also construct a product market HHI. We assign each worker to an industry based on their employer. We identify the firms that have new hires in that geographic market from that same industry. We then calculate the product market HHI using the national sales shares for these firms. If the firms at the local level had the same share of sales as at the national level AND the product market were local, then this way of calculating would mimic a localized measure of labor market concentration. We also use an alternative national definition in the appendix: for each worker, take the national sales concentration of their industry at time t, not taking into account which firms are recruiting in the worker's local labor market.

Mathematically speaking, let $\mathscr{R}_{j,t}$ be the national revenue of firm j at time t (note that national revenues are at the yearly level). We can then define the product market revenue share relevant

[1] Starting in 2009, the whole population in employment is covered by the dataset, commuting zones were redefined in 2010, and non-response in 4-digit occupation is low and stable starting in 2010.

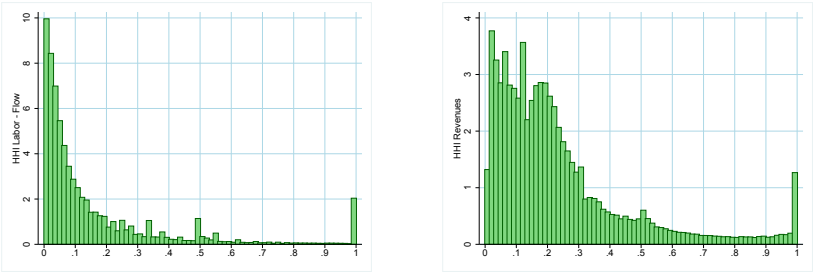
for occupation o in location m at time t as:

$$s^P_{j,o,m,t} = \frac{\mathscr{R}_{j,t}}{\sum_{k \in \mathscr{J}_{o,m,t}} \mathscr{R}_{k,t}} \tag{2.3}$$

The product market HHI, $\text{HHI}^P_{o,m,t}$,is then:

$$\text{HHI}^P_{o,m,t} = \sum_{j \in \mathscr{J}_{o,m,t}} {s^P_{j,o,m,t}}^2 \tag{2.4}$$

Despite using national sales of a company instead of the more ideal local sales, we believe this measure to be adequate for large markets. For example, in a market like Paris, most firms in an industry will likely recruit, and the sales share of each firm in Paris is likely to be similar to the national share of sales. In a small local market, one firm – e.g. a supermarket – could be very dominant, even though its share of *national* shares is very small. Although our product market HHI under-estimates the degree of competition when local firms serve a large share of the market, we believe the number of such markets to be few. Moreover, to the degree that this error is systematic, our control variables will rely on variation across time rather than in levels for identification. Finally, in Appendix E and F, we show, respectively, that our baseline estimates are not affected by the exclusion of firm level controls (including the product market HHI) and that the use of product market concentration defined using national sales (which we call the *global* product market HHI) does not significantly alter our estimates.



(a) Labor Market Concentration (b) Product Market Concentration

Figure 1: Histogram of Labor and Product Market HHI

Note: These figures were constructed using individual level data. Given that each worker is assigned a level of concentration, these histograms reflect the distribution of concentration across the new hires.
Source: DADS, FICUS, and authors' calculations.

For the purposes of calculating labor market concentration, we define a labor market, as an occupation (at the 4-digit level) by a commuting zone for a given quarter, as in Azar et al. (2018). Under this definition, Table 8 (in Appendix A) provides some summary statistics for the five most common occupations in the data.

Table 1: Summary Statistics

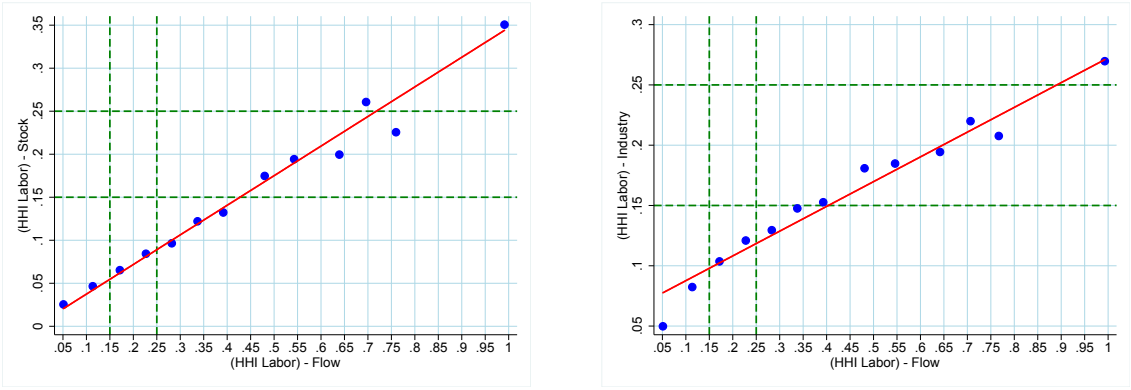
	count	min	max	p50	mean	sd
Hourly Wage (in nominal euros)	13 645 275	3	60.3245	11.76129	13.54	5.475
HHI Revenues (Firm Level)	12 910 157	0.0088763	1	.175	0.237	0.228
HHI Labor(Group Level)	13 645 275	.0008135	1	.0761719	0.172	0.233
HHI Labor (Firm Level)	13 645 275	.0005867	1	.0653114	0.161	0.231
Age (in years)	13 645 275	18	67	27	31.35	12.28
Gender: Male Dummy	13 645 275	0	1	1	0.545	0.498
Industry Unionization Rate	13 645 275	0	45.71	10.32	12.14	7.274
Number of Full-Time Equivalent Employees	12 910 157	.005	233911.5	37	2954.4	18220.1
Value Added per Worker (in nominal euros)	12 910 157	-49412.21	443262	56.58624	432.6	4148.1

According to Table 1, providing descriptive statistics for the estimation sample, the average labor market HHI at the firm level is 0.16 whilst its median nears 0.07. This difference between the mean and the median reflects the existence of a few markets with high levels of labor market concentration. This can be seen more clearly by considering Figure 1(a) which depicts the density of the HHI in the labor market. There appears to be a significant portion of workers who face a single employer (monopsony). The same can be said based on Figure 1(b) for the product market having a single seller (monopoly). Looking at Table 8 in Appendix A, this feature of the distribution in labor and product market concentration appears to extend to the most common occupations.

Before turning to the econometric evidence, it is important to discuss our measure of labor market concentration and the way it relates to other measures used across the literature. This paper measures labor market concentration through employment flows, because this is the most relevant way of capturing job opportunities for workers looking for a job. Indeed, if a worker was hired, it manifests that a job was available. By contrast, the total number of workers is not as direct an indication of the number of available jobs. Prior literature has used employment stocks to measure labor market concentration, albeit by industry rather than occupation (Benmelech et al., 2018; Rinz, 2018; Lipsius, 2018; Abel et al., 2018). Therefore, it is interesting to examine the differences between stock and flow measures of labor market concentration by occupation. We present in figure 2(a) a binscatter allowing one to convert flow levels of labor market concentration to stock levels. To construct it, we calculated for each market (occupation by commuting zone) the average HHI index and provided its best fit line. Clearly, there is a near linear relationship between labor market concentration based on flows and on stocks: the R-squared of the superimposed regression line is equal to 43% [2]. The main regression tables for the wage and employment regressions found in the following section are also provided in terms of stock level labor market concentration in Appendix D. Figure 2(b) presents a similar relationship, between our preferred measure of labor market concentration

[2] i.e: $\log(\text{Stock HHI}) = -1.45 + 0.9101 \log(\text{Flow HHI})$

and the Herfindahl index measured in terms of industry, with stock data. This latter measure has been used in prior literature, as it is often more easily available. Although the relationship is weaker, with an R^2 of 20%[3], there is nonetheless evidence of a strong correlation between the two measures.



(a) HHI - Stock v. HHI - Flow

(b) HHI - Industry-Stock v. HHI - Flow

Figure 2: Comparison of different measures of labor market concentration

Note: These figures were constructed using individual and market level data. That is, we kept the stock of employees in 2014 and 2015, and computed the stock level of concentration (the same as our measure but with all employees) and the industry-stock (where the relevant market is an industry by a commuting zone with all employees). These new measures of concentration are then averaged across our usual market definition (an occupation by a commuting zone) and matched with the flow level of labor market concentration. The sample was limited to 2014 and 2015 for computational convenience.
Source: DADS, FICUS, and authors' calculations.

While stock and flow based labor market concentration measures are highly correlated across markets, their levels are quite different. The figures use vertical and horizontal lines to indicate thresholds used by the US federal antitrust authorities to gauge levels of concentration. By the standard of the Department of Justice / Federal Trade Commission 2010 horizontal merger guidelines, 0.15 is the threshold between low and medium concentration while 0.25 is the threshold between medium and high concentration. In Figure 2(a) and Figure 2(b) , we see that stock-based measures of concentration show systematically lower levels of concentration than flow-based measures, which makes sense as not all firms hire in every given quarter. As a result, the 0.25 threshold for high concentration in the stock measure of labor market concentration corresponds to a concentration as high as 0.7 in the flow-based measure of labor market concentration! Even the threshold of 0.15 for medium concentration in the stock-based measure of labor market concentration corresponds to a flow-based HHI of about 0.4, which is way above the high concentration threshold. This shows that measuring labor market concentration by stocks severely underestimates the level of concentration among new hires. If

[3] i.e: $\log(\text{Industrial Stock HHI}) = -1.69 + 0.5322\log(\text{Flow HHI})$.

only a stock-based measure of concentration is available, thresholds of about 0.05 and 0.15 correspond to the relevant medium and high concentration thresholds in the flow-based measure. To the extent that new hires adequately measure available job opportunities for workers, competition authorities should use the flow based measure, or, if only the stock-based measure is available, realize that it corresponds to much higher levels of flow-based labor market concentration.

The existence of business groups may lead to under-estimating labor market concentration to the extent that firms within a group do not compete for workers. However, this turns out not to be a big problem empirically: as suggested by Figure 3 below, the two measures are almost perfectly correlated and estimation results were not found to be sensible to measuring labor market concentration at the business group versus the individual firm level. Table 1 also shows that the *levels* of concentration measured at the firm level or the group level are very similar, even if concentration is as expected slightly higher at the group level with a mean of 0.172 instead of 0.161 at the firm level.

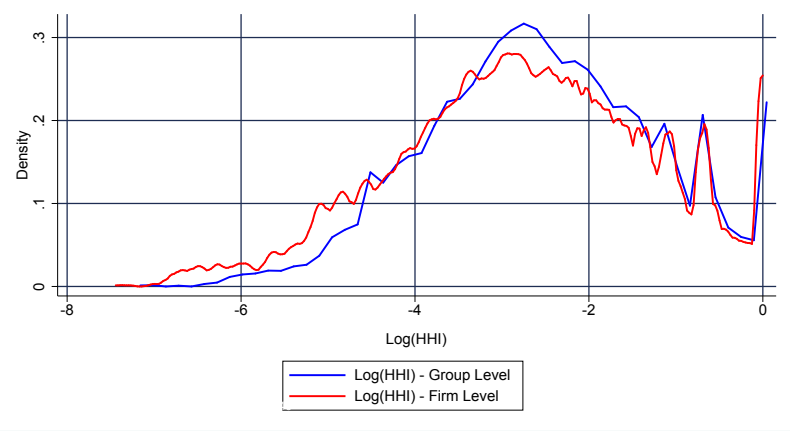


Figure 3: Distribution of the Labor Log-HHI at the Firm and Business Group Level

Note: This figure was constructed using individual level data in 2011-2015. Each worker has both a measure of labor market concentration at the business group and at the firm level.
Source: DADS, LIFI, and authors' calculations.

3 Econometric Assessment of Monopsony

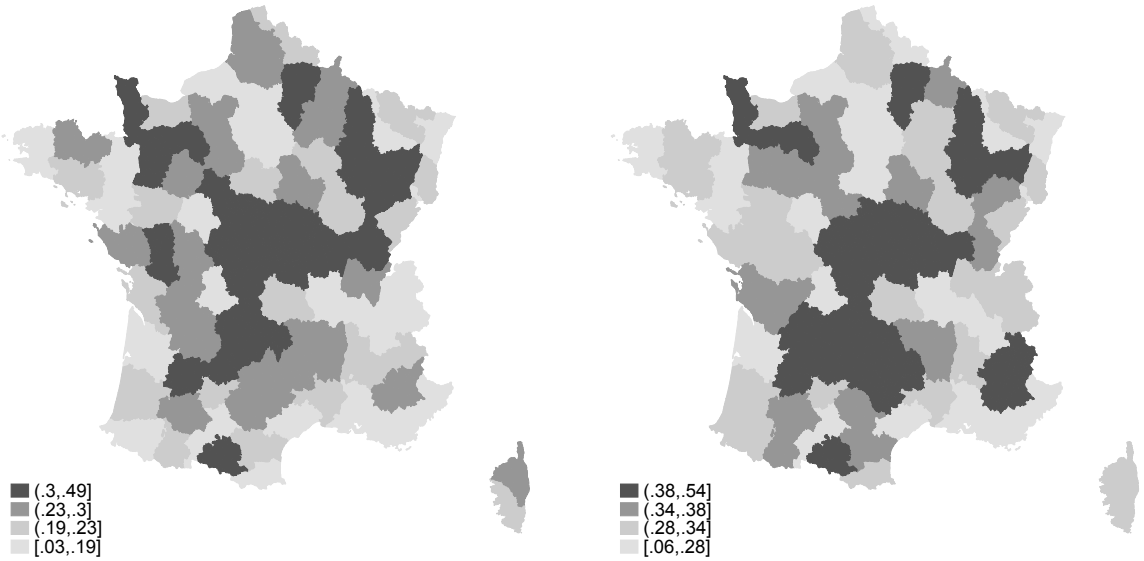
Monopsony Theory (Boal and Ransom, 1997; Manning, 2011; Robinson, 1969) predicts that both employment and hourly wages should fall as a result of a rise in labor market concentration (Azar et al., 2019). Indeed, the key intuition for monopsony power is by analogy with monopoly power: profit-maximizing employers with monopsony power keep both wages and employment below the competitive equilibrium. The presence of concentration in the product market (monopoly power) reduces output, which should result in fewer workers employed. On the other hand, the impact of product market concentration on wages is unclear (Qiu and Sojourner, 2019). In the presence of rent sharing, one would expect greater product market concentration to increase wages to the extent that profits increase. Table 2 summarizes the predicted effects.

	Employment	**Hourly Wage**
Product Market HHI	-	+ ?
Labor Market HHI	-	-

Table 2: Expected Effects of Labor and Product Market Concentration

3.1 Descriptive Evidence

Our goal is to assess these predicted effects of labor and product market concentration in the French labor market. Concentration varies systematically across the French territory. Maps 4(a) and 4(b) display the mean labor market and product market HHI per *département* during 2015. The product market HHI is calculated on the basis of the identity of firms that hire in a worker's industry in the same geographic market. The labor market HHI is calculated on the basis of the identity of the firms that hire in the same occupation as the worker and same geographic market. Even though sales *shares* come from national sales, this way of calculating the product and labor market HHIs will yield relatively high levels of concentration in less populated areas where fewer firms hire, whether that is within an occupation or within an industry. We see (i) that areas with high product and labor market concentration overlap, (ii) low population density areas have high concentration market structures, and (iii) given that low population density areas have low wages, one could be led to believe that the (presumably) negative impact of labor market concentration on wages dominates the (presumably) positive impact of product market concentration.

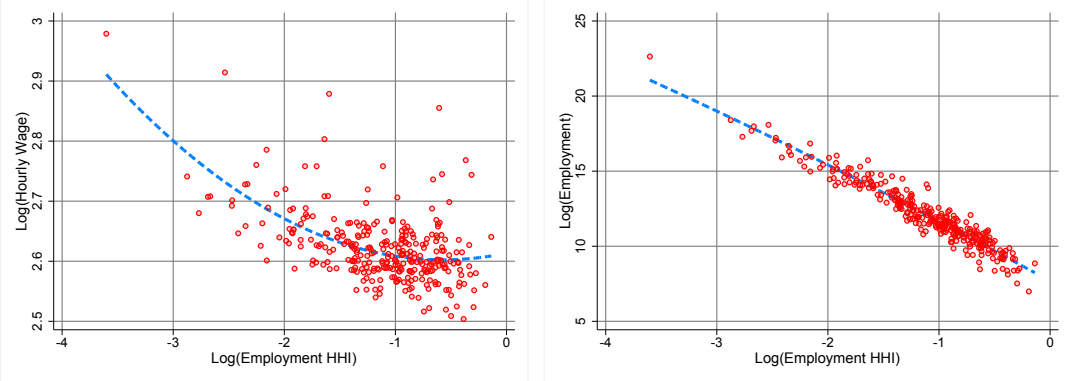


(a) (b)

Figure 4: Map of Labor Market HHI and Product Market HHI

Note: This figure was constructed using individual level data. Each worker has both a measure of labor market concentration and product market concentration. These measures are aggregated at the *département* level across 2015. Source: DADS, FARE, and authors' calculations.

Figure 5(a) depicts the log of the average hourly wage against the log labor market HHI by commuting zone in 2015. There is a clear negative relationship between hourly wages and labor market concentration. Figure 5(b) shows a strong negative relationship between market size (in terms of recruitment flows) and labor market concentration. Both of these observations are consistent with the core predictions of the monopsony model. Of course, the negative relationship between concentration and hires is somewhat mechanical since fewer hires also typically entails fewer firms hiring. Our regression analysis will address this issue by using an instrument for labor market concentration based on the concentration in *other* markets.



(a) (b)

Figure 5: Hourly Wage and Employment Against Labor Market Concentration

Note: Each point represents a commuting zone through its average level of labor market concentration across 2015.
Source: DADS, FARE, and authors' calculations.

To test the predictions of the Monopsony Theory, we first estimate two sets of linear regressions. The first set of regressions concern the log(Hourly Wage) observed at the individual worker level. The second set aggregates market characteristics and studies their relationship with the log(Number of Recruited Workers) in a given market.

Regression analysis allows us to better disentangle fixed area effects from evolving market structure effects. Using a large linked employer-employee dataset, we are able to account for many potential sources of endogeneity which could threaten identification. This is done by using a rich set of control variables at the market, firm, and worker level.

3.2 Impact on Hourly Wages

We let workers indexed by i be collected in a set $\mathscr{I}$, firms indexed by j in $\mathscr{J}$ and the market m in $\mathscr{M}$. Time is denoted by t at the quarter level. With the maximal set of controls, we estimate an equation of the form:

$$\log(w_{i,j,o,m,t}) = \alpha_l \log(\text{Labor HHI}_{o,m,t}) + \alpha_p \log(\text{Product HHI}_{o,m,t}) + \Psi_j + \Omega_i + X'_{i,j,t}\lambda + \zeta_{o,m,i} + \Xi_t + \epsilon_{i,j,o,m,t}$$

where $w_{i,j,o,m,t}$ is the gross hourly wage of worker i in firm j in occupation o, geographic market m at quarter t. α_l is the elasticity of the hourly wage with respect to the labor market concentration, α_p is the elasticity of the hourly wage with respect to the product market concentration, Ψ_j are firm fixed effects, Ω_i are individual fixed effects, the vector $X_{i,j,t}$ collects control variables such as gender, age, log(average value added per capita in the firm), and the log(firm size). $\zeta_{o,m,i}$ are commuting zone by occupation fixed effects and Ξ_t are time fixed effects. $\epsilon_{i,j,o,m,t}$ is an idiosyncratic error term.

The key threat to identification of the wage effect in our OLS regression is that there is a time-varying market-specific variable that we did not control for, and that is correlated with HHI and drives wages. According to search and matching theory, wages are determined by labor market tightness, productivity and the worker's out-of-work benefit (Rogerson et al., 2005). We already control for productivity through the value added per worker at the firm level, as well as firm fixed effects in some specifications. Since unemployment benefits are determined nationally, we are able to control for workers' out-of-work benefits by controlling for time fixed effects. Therefore, the main threat to identification is time-varying changes in labor market tightness at the market level.

To further address the issue of the endogeneity of the HHI, we follow the strategy in Azar et al. (2017); Martins (2018); Qiu and Sojourner (2019) and instrument the HHI with the average of $\log(1/N)$ in other commuting zones for the same occupation and time period (where N refers to the number of firms in the market). That is, for each commuting zone-occupation-time period combination, we calculate the average of $\log(1/N)$ for the same occupation for every other commuting zone. This provides us with variation in market concentration that is driven by national-level changes in the occupation, and not by changes in the occupation in that particular local market. For example, if the labor market tightness for cleaners (the most common occupation) falls in the Paris area, this could both decrease wages and increase concentration, since fewer firms would likely be recruiting. By instrumenting with the number of firms posting vacancies for cleaners in other areas, we rule out a direct effect of labor market tightness in Paris on the HHI.

This type of instrumental variables strategy is commonly used in industrial organization to address the endogeneity of prices in a local product market. For example, Nevo (2001) uses prices in other geographic markets to instrument for city-level prices of various products in the ready-to-eat cereal industry.

The main threat to identification for the instrumental variable strategy is that labor market tightness shocks could be correlated across areas. Therefore, the instrument protects us against a spurious correlation between concentration and outcomes that is due to local changes in labor market tightness, but not against national-level changes in labor market tightness (for an occupation relative to other occupations) that influence both concentration and other labor market outcomes [4].

Results for the ordinary least squares estimation are reported in Table 3. Five specifications are proposed with increasingly demanding fixed effects. The first provides only time and occupation fixed effects. The second adds commuting zone fixed effects. The third combines the two previous ones by including market fixed effects (Occupation by Commuting Zone). Finally, the

[4]The worker fixed effects are estimated using the *ident_s* variable from the data file *Déclaration Annuelle des Données Sociales (DADS) - fichier salarié*. This variable includes significant measurement error. However, the worker fixed effects estimates are all very similar to those using only firm fixed effects.

last two adds firm and worker fixed effects.

Table 3: Ordinary Least Squares Estimates for Hourly Wages

	(1)	(2)	(3)	(4)	(5)
	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)
Log(Labor HHI)	-0.0148***	-0.00970***	-0.00432***	-0.00329***	-0.00309***
	(0.0000817)	(0.000113)	(0.000156)	(0.000157)	(0.000507)
Log(Product HHI)	0.00436***	0.0106***	0.0135***	0.00434***	0.00532***
	(0.0000981)	(0.000113)	(0.000125)	(0.000197)	(0.000658)
Gender: Male Dummy	0.0327***	0.0318***	0.0318***	0.0279***	
	(0.000161)	(0.000162)	(0.000162)	(0.000162)	
Age (in years)	0.00516***	0.00510***	0.00506***	0.00463***	0.00456***
	(0.00000611)	(0.00000615)	(0.00000615)	(0.00000644)	(0.0000210)
Log(Value Added per Worker)	0.0154***	0.0151***	0.0141***	-0.00122***	-0.00228***
	(0.0000576)	(0.0000580)	(0.0000598)	(0.000216)	(0.000727)
Log(Number of Employees)	0.0111***	0.0109***	0.0104***	-0.00774***	-0.00807***
	(0.0000263)	(0.0000267)	(0.0000274)	(0.000251)	(0.000833)
Time FE	Yes	Yes	Yes	Yes	Yes
4-Digit Occupation FE	Yes	Yes	No	No	No
Commuting Zone FE	No	Yes	No	No	No
Commuting Zone x 4-Digit Occupation FE	No	No	Yes	Yes	Yes
Firm FE	No	No	No	Yes	Yes
Worker FE	No	No	No	No	Yes
R^2	0.469	0.470	0.493	0.596	0.827
Adjusted R^2	0.469	0.470	0.490	0.569	0.567
F	162537.9	152712.5	147657.3	90672.5	8251.2
Observations	12623293	12296892	12286905	11970511	2670367

Standard errors in parentheses

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

Note: This table presents the regression output from an ordinary least squares regression using the Log(Hourly Wage) as a dependent variable. Each observation is an employment contract. Log(Labor HHI) is the logarithm of the Herfindahl-Hirschman index for the labor market, as described in equation 2.2. A labor market is defined over a commuting zone, a 4-digit occupation, and through time quarters. Log(Product HHI) is the logarithm of the Herfindahl-Hirschman index for the product market. It is defined as described in equation 2.4. The product market is defined over a commuting zone and at the industry level. There are two individual level control variables: gender (equal to one if the worker is a man, zero otherwise) and age (in years). There are two firm level control variables: Log(Value Added per Worker) and Log(Number of Employees). The latter is the number of reported full-time equivalent number of workers in the firm over the year. The former is the log of total value added (revenues minus intermediary costs) over a year divided by the number of full-time equivalent employees. The gender fixed-effect cannot be identified in specification (v). The log-log specification was used because the data presents a linear relationship under this form. The log-log specification lends itself to the following interpretation of the main coefficient of interest in column (v): *ceteris paribus*, a 10% increase in labor market concentration lowers wages by approximately $-0.00309 \times 0.01 = 0.03\%$.
Source: DADS, FARE, and authors' calculations.

We find results consistent with monopsony: labor market concentration is negatively associated with the wage. Product market concentration is positively associated with the wage. This is true across specifications and, although the magnitudes are small, all coefficients are statistically significant at the 1% level. The most negative coefficient is in column (1), which controls for time and occupation fixed effects: a rise of 10% in labor market concentration lowers hourly wages by 0.15%. This suggests that the partial correlation of concentration and wages is fairly strong across geographic labor markets: at a given point in time and for a given occupation, geographic labor markets with higher concentration have lower wages for new hires. The effect is quantitatively weaker when we rely on across time variation by controlling for market fixed effects (col. 3). The effect that is closest to zero is in column (5), which includes worker and firm fixed effects along with market fixed effects: an increase by 10% in labor market

concentration lowers hourly wages by 0.03%. We find that the size of the coefficients falls as more rigorous fixed effects are added. On the product market side, estimated effects are also small. They range from an estimated elasticity of 0.13% in column (3) to 0.04% in column (4), once firm fixed effects are added. Estimates for age and gender appear to be in the usual range, providing credence to our analysis. Perhaps more surprising is to find a negative coefficient for the value added per worker. Overall, the adjusted R^2 stays constant, rising slightly when firm fixed effects are introduced.

Table 4: Instrumental Variable Estimates for Hourly Wages

	(1)	(2)	(3)	(4)	(5)
	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)
Log(Labor HHI)	-0.162***	-0.134***	-0.112***	-0.0829***	-0.0947***
	(0.00202)	(0.00146)	(0.00152)	(0.00159)	(0.00544)
Log(Product HHI)	0.0648***	0.0472***	0.0427***	0.0830***	0.0896***
	(0.000440)	(0.000244)	(0.000239)	(0.00116)	(0.00377)
Gender: Male Dummy	0.0212***	0.0309***	0.0309***	0.0275***	
	(0.000270)	(0.000171)	(0.000166)	(0.000164)	
Age (in years)	0.00531***	0.00522***	0.00513***	0.00466***	0.00461***
	(0.00000754)	(0.00000677)	(0.00000645)	(0.00000660)	(0.0000217)
Log(Value Added per Worker)	0.0144***	0.0141***	0.0134***	-0.00243***	-0.00241***
	(0.0000659)	(0.0000611)	(0.0000616)	(0.000220)	(0.000745)
Log(Number of Employees)	0.0139***	0.0133***	0.0117***	-0.00787***	-0.00782***
	(0.0000489)	(0.0000410)	(0.0000352)	(0.000256)	(0.000853)
Time FE	Yes	Yes	Yes	Yes	Yes
4-Digit Occupation FE	Yes	Yes	No	No	No
Commuting Zone FE	No	Yes	No	No	No
Commuting Zone x 4-Digit Occupation FE	No	No	Yes	Yes	Yes
Firm FE	No	No	No	Yes	Yes
Worker FE	No	No	No	No	Yes
F	124649.9	143341.3	145703.5	88455.9	8002.8
Observations	12623293	12296892	12286905	11970511	2670367

Standard errors in parentheses

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

Note: This table presents the regression output from a two stage least squares regression using the Log(Hourly Wage) as a dependent variable. The instrument is described in section 3.2. Each observation is an employment contract. Log(Labor HHI) is the logarithm of the Herfindalh-Hirschman index for the labor market, as described in equation 2.2. A labor market is defined over a commuting zone, a 4-digit occupation, and through time quarters. Log(Product HHI) is the logarithm of the Herfindalh-Hirschman index for the product market. It is defined as described in equation 2.4. The product market is defined over a commuting zone and through at the industry level. There are two individual level control variables: gender (equal to one if the worker is a man, zero otherwise) and age (in years). There are two firm level control variables: Log(Value Added per Worker) and Log(Number of Employees). The latter is the number of reported full-time equivalent number of workers in the firm over the year. The former is the log of total value added (revenues minus intermediary costs) over a year divided by the number of full-time equivalent employees. The gender fixed-effect cannot be identified in specification (v). The log-log specification was used because the data presents a linear relationship under this form. The log-log specification lends itself to the following interpretation of the main coefficient of interest in column (5): *ceteris paribus*, a 10% increase in labor market concentration lowers wages by approximately $-0.0947 \times 0.01 = 0.947\%$. As the model is just identified – with two endogenous variables and two instruments, over-identification tests cannot be performed.
Source: DADS, FARE, and authors' calculations.

Next, we consider the two stage least squares estimates provided in Table 4. We see that the signs of the coefficients are in accord with the basic predictions of the monopsony model across specifications, the magnitudes have increased compared to the OLS estimates, and all coefficients of interest are statistically significant at the 1% level. In terms of labor market concentration, at one extreme, one finds that a 10% increase in the HHI index leads to a 1.6%

fall in hourly wages (column (1)). At the other extreme, in column (4), parameter estimates suggest that a 10% in labor market concentration lowers hourly wages by 0.8%. Whilst firm and worker fixed effects appears to lower the magnitude of the coefficient on labor market concentration, they seem to enhance the role attributed to product market concentration. Indeed, column (5) suggests that a 10% increase in the Product HHI would lead to a 0.9% increase in hourly wages, while this effect is only half as large in column (2). For comparison, in column 5, a 10% increase in the Labor HHI is associated with a 0.9% decline in hourly wages. Column 5 will be considered as our preferred specification because it is a conservative estimate within the class of instrumental variables estimates and can be said to be robust to both firm, individual, and market fixed effects.

Overall, these last two tables provide robust evidence that labor market concentration has a negative impact on hourly wages. We now run two additional sets of regressions which will allow us to explore some of the underlying heterogeneity and thereby learn more about potential mechanisms through which concentration affects wages.

First, we document a relationship between unionization and the impact of labor market concentration. We interact our measures for labor and product market concentration with the industry unionization rate observed in the *Enquête Réponse* (2011). Results for the second stage IV specification are provided in Table 5. There appears to be a positive impact of unionization on hourly wages, as made clear by the coefficient denoted *Industry Unionization Rate* which reports positive coefficients across specifications[5]. This is in line with expectations and the literature on wages and unionization patterns (e.g, Barth et al. (2017)). The interaction coefficient between labor market concentration and unionization rate is positive and statistically significant (at the 10% level) across all specifications. To provide interpretation, one may consider that the average unionization rate is 12%. The impact of labor market concentration on wages is positive with a unionization rate above 23.7%. Similarly, we find a positive interaction between product market concentration and unionization, across all specifications. These results on unionization are consistent with those of Benmelech et al. (2018) and Qiu and Sojourner (2019). All in all, this suggests that institutional factors moderate the impact of labor market concentration on wages.

Second, we find that labor market concentration can have very negative effects for workers operating outside standard full-time contracts. In particular, Table 10 in Appendix B.2 documents a strong negative relationship between labor market concentration and hourly wages for the subpopulation of workers in part-time, temporary, or on-call work arrangements. Indeed, the least square estimators are nearly ten times larger than in the overall population. Table B.2 which provides the two stage least squares estimates finds even larger effects. However, the restricted sample size leads to statistically insignificant results. Overall, these results suggest that

[5]Ordinary Least Squares estimates are available in Appendix B.1.

workers who are less protected by institutions (such as unions) are more likely to be negatively affected by labor market concentration.

Table 5: Instrumental Variables Estimates for Hourly Wages using Unionization Rates

	(1)	(2)	(3)	(4)	(5)
	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)
Log(Labor HHI)	-0.0993***	-0.0816***	-0.0708***	-0.0136***	-0.00387
	(0.00230)	(0.00154)	(0.00171)	(0.00196)	(0.00921)
Log(Labor HHI) x Unionization Rate	0.000577***	0.000589***	0.000969***	0.000746***	0.00129***
	(0.0000405)	(0.0000397)	(0.0000427)	(0.0000504)	(0.000213)
Log(Product HHI)	-0.000247	-0.00567***	-0.00408***	-0.0177***	-0.0203**
	(0.000574)	(0.000517)	(0.000514)	(0.00192)	(0.00796)
Log(Product HHI) x Unionization Rate	0.00567***	0.00512***	0.00489***	0.000359*	0.00163**
	(0.0000588)	(0.0000506)	(0.0000505)	(0.000203)	(0.000817)
Gender: Male Dummy	0.0307***	0.0343***	0.0334***	0.0290***	
	(0.000288)	(0.000190)	(0.000187)	(0.000189)	
Age (in years)	0.00582***	0.00569***	0.00561***	0.00531***	0.00533***
	(0.00000971)	(0.00000770)	(0.00000741)	(0.00000772)	(0.0000321)
Log(Value Added per Worker)	0.0365***	0.0383***	0.0363***	0.00427***	0.00482***
	(0.000203)	(0.000120)	(0.000116)	(0.000255)	(0.00109)
Log(Number of Employees)	0.0161***	0.0163***	0.0150***	-0.00785***	-0.00583***
	(0.0000406)	(0.0000525)	(0.0000448)	(0.000329)	(0.00138)
Industry Unionization Rate	0.00888***	0.00813***	0.00895***	0.00275***	0.00629***
	(0.0000959)	(0.0000936)	(0.000112)	(0.000331)	(0.00141)
Time FE	Yes	Yes	Yes	Yes	Yes
4-Digit Occupation FE	Yes	Yes	No	No	No
Commuting Zone FE	No	Yes	No	No	No
Commuting Zone x 4-Digit Occupation FE	No	No	Yes	Yes	Yes
Firm FE	No	No	No	Yes	Yes
Worker FE	No	No	No	No	Yes
F	104925.3	105328.5	101984.4	57481.1	3484.1
Observations	10050132	9781929	9771281	9455312	1537423

Standard errors in parentheses

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

Note: This table presents the regression output from a two stage least squares regression using the Log(Hourly Wage) as a dependent variable. The instrument is described in section 3.2. Each observation is an employment contract. Log(Labor HHI) is the logarithm of the Herfindalh-Hirschman index for the labor market, as described in equation 2.2. A labor market is defined over a commuting zone, a 4-digit occupation, and through time quarters. Log(Product HHI) is the logarithm of the Herfindalh-Hirschman index for the product market. It is defined as described in equation 2.4. The product market is defined over a commuting zone and through at the industry level. There are two individual level control variables: gender (equal to one if the worker is a man, zero otherwise) and age (in years). There are two firm level control variables: Log(Value Added per Worker) and Log(Number of Employees). The latter is the number of reported full-time equivalent number of workers in the firm over the year. The former is the log of total value added (revenues minus intermediary costs) over a year divided by the number of full-time equivalent employees. The gender fixed-effect cannot be identified in specification (v). Labor and product market concentration is interacted with the mean industry unionization rate, recovered from the *Enquête Réponse, 2011*. The Temporary-Employment Industry was dropped because the reported unionization rate was only relevant to the permanent administrative staff of the temp agencies. The log-log specification was used because the data presents a linear relationship under this form. The log-log specification lends itself to the following interpretation of the main coefficient of interest in column (5): *ceteris paribus* and given a 10% unionization rate, a 10% increase in labor market concentration increases wages by approximately $(-0.00387 + 0.00129 \times 10) \times 0.01 = 0.0903\%$. As the model is just identified – with four endogenous variables and four instruments, over-identification tests cannot be performed.
Source: DADS, FARE, and authors' calculations.

3.3 Employment Effects

We now consider the impact of market structure on employment. We measure employment as a flow : the number of labor contracts signed in a market (occupation by commuting zone) during a quarter and denoted by $E_{o,m,t}$. This means we estimate equations of the form:

$$\log(E_{o,m,t}) = \beta_l \log(\text{Labor HHI }_{o,m,t}) + \beta_p \log(\text{Product HHI}_{o,m,t}) + X'_{o,m,t}\lambda + \zeta_m + \Xi_t + \epsilon_{o,m,t}$$

This equation is at the market level rather than at the individual worker level. So, β_l will be interpreted as the elasticity of employment with respect to labor market concentration and β_p as the elasticity of employment with respect to the product market concentration. $X_{o,m,t}$ will now include as control variable the average age and share of men in market o, m, t.

Table 6: Ordinary Least Squares Estimates for Employment

	(1)	(2)	(3)
	Log(Nb. Recruits)	Log(Nb. Recruits)	Log(Nb. Recruits)
Log(Labor HHI)	-0.963***	-0.801***	-0.666***
	(0.000988)	(0.00123)	(0.00130)
Log(Revenue HHI)	-0.169***	-0.0519***	-0.0204***
	(0.00119)	(0.00128)	(0.00129)
(Mean) Sex	-0.0385***	-0.0446***	-0.0169***
	(0.00251)	(0.00243)	(0.00223)
(Mean) Age	-0.00141***	-0.00118***	-0.0000729
	(0.0000786)	(0.0000760)	(0.0000690)
(Mean) Log(Value Added per Worker)	-0.0117***	-0.0188***	-0.0117***
	(0.00126)	(0.00123)	(0.00114)
(Mean) Log(Number of Employees)	0.0793***	0.0726***	0.0417***
	(0.000413)	(0.000407)	(0.000403)
Time FE	Yes	Yes	Yes
Commuting Zone FE	No	Yes	No
Commuting Zone x 4-Digit Occupation FE	No	No	Yes
4-Digit Occupation FE	Yes	Yes	No
R^2	0.765	0.780	0.869
Adjusted R^2	0.765	0.779	0.855
F	250922.7	77918.7	45077.1
Observations	805670	804173	792757

Standard errors in parentheses

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

Note: This table presents the regression output from an ordinary least squares regression using the Log(Number of New Jobs) as a dependent variable. Each observation corresponds to a market (a time quarter by a commuting zone by an occupation). Mean Log(Labor HHI) is the mean of the logarithm of the Herfindalh-Hirschman index for the labor market, as described in equation 2.2. A labor market is defined over a commuting zone, a 4-digit occupation, and through time quarters. Mean Log(Product HHI) is the mean of the logarithm of the Herfindalh-Hirschman index for the product market. It is defined as described in equation 2.4. The product market is defined over a commuting zone and at the industry level. There are two population level control variables: the mean gender (equal to one if all workers are men, zero if all workers are female) and the mean age (in years). There are two firm population level control variables: the Mean Log(Value Added per Worker) and the Mean Log(Number of Employees). These variables are constructed by weighting the characteristics of the recruiting firms by their current labor market share. The log(Number of Employees) is the number of reported full-time equivalent number of workers in the firm over the year. The Log(Value Added per Worker) is the log of total value added (revenues minus intermediary costs) over a year divided by the number of full-time equivalent employees. The log-log specification was used because the data presents a natural linear relationship under this form. The log-log specification lends itself to the following interpretation of the main coefficient of interest in column (3): ceteris paribus, a 10% increase in labor market concentration lowers new recruits by approximately $0.666 \times 0.01 = 6.66\%$
Source: DADS, FARE, and authors' calculations.

In order to weight markets containing more workers with more strength, Appendix C provides the estimation results for additional regressions where we weight each market according to (i) the mean number of different firms recruiting in that market and (ii) the mean number of positions filled in that market across time. Given that the estimated parameters point in the same direction as those presented in the unweighted case, we focus our analysis on the unweighted case presented below in Table 6 and Table 7. We provide three specifications. The first column provides fixed effects for time and occupation, the second column adds a commuting zone fixed effect, and the last column has a market fixed effect (occupation by commuting zone).

The results presented in Table 6 are in line with the basic predictions of theory. We find that both labor market and product market concentration are negatively related with the number of recruited workers. This can be seen across the three specifications where all relevant coefficients are statistically significant at the 1% level. However, magnitudes vary greatly across specifications. Column (1) suggests that a 10% increase in labor market concentration would lead to a 9.6% fall in employment. This effect falls to 6.6% in column (3) where market fixed effects are included. For the product market, our results suggest that a 10% increase in the product market can lower employment by up to 1.7% (column 1), or, more conservatively, by 0.2% (column 3). The impact of labor market concentration on employment could be biased by the mechanical effect that when fewer firms recruit, HHI tends to be higher. This is why it is especially important to use an instrument to check the validity of these results.

Using instrumental variables confirms the negative effect of labor and product market concentration on employment flows. With instruments (Table 7), the impact of labor market concentration appears to be even greater. Indeed, a 10% increase in labor market concentration leads to a 27% fall in employment (column (3)). However, the impact of product market concentration has stayed the same or weakened as evidenced by column (3) which reports a negative but statistically insignificant coefficient. Overall, this suggests that labor market concentration has a stronger negative effect on employment than product market concentration. This result is sensible because the relationship between labor market concentration and employment is direct, while product market concentration decreases employment indirectly by depressing output.

Table 7: Instrumental Variables Estimates for Employment

	(1) Log(Nb. Recruits)	(2) Log(Nb. Recruits)	(3) Log(Nb. Recruits)
Log(Labor HHI)	-1.283***	-1.255***	-1.278***
	(0.0197)	(0.0113)	(0.00858)
Log(Product HHI)	-0.0255***	-0.0302***	-0.00373
	(0.00520)	(0.00405)	(0.00400)
(Mean) Sex	-0.0436***	-0.0437***	-0.0209***
	(0.00272)	(0.00263)	(0.00255)
(Mean) Age	-0.000737***	-0.000901***	0.000221***
	(0.0000990)	(0.0000826)	(0.0000791)
(Mean) Log(Value Added per Worker)	-0.0226***	-0.0245***	-0.0133***
	(0.00149)	(0.00133)	(0.00131)
(Mean) Log(Number of Employees)	0.0716***	0.0742***	0.0526***
	(0.000657)	(0.000446)	(0.000491)
Time FE	Yes	Yes	Yes
Commuting Zone FE	No	Yes	No
Commuting Zone x 4-Digit Occupation FE	No	No	Yes
4-Digit Occupation FE	Yes	Yes	No
F	12139.0	6346.9	4399.7
Observations	805670	804173	792757

Standard errors in parentheses

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

Note: This table presents the regression output from a two stage least squares regression using the Log(Number of New Jobs) as a dependent variable. The instrument is described in section 3.2. Each observation corresponds to a market (a time quarter by a commuting zone by an occupation). Mean Log(Labor HHI) is the mean of the logarithm of the Herfindalh-Hirschman index for the labor market, as described in equation 2.2. A labor market is defined over a commuting zone, a 4-digit occupation, and through time quarters. Mean Log(Product HHI) is the mean of the logarithm of the Herfindalh-Hirschman index for the product market. It is defined as described in equation 2.4. The product market is defined over a commuting zone and at the industry level. There are two population level control variables: the mean gender (equal to one if all workers are men, zero if all workers are female) and the mean age (in years). There are two firm population level control variables: the Mean Log(Value Added per Worker) and the Mean Log(Number of Employees). These variables are constructed by weighting the characteristics of the recruiting firms by their current labor market share. The log(Number of Employees) is the number of reported full-time equivalent number of workers in the firm over the year. The Log(Value Added per Worker) is the log of total value added (revenues minus intermediary costs) over a year divided by the number of full-time equivalent employees. The log-log specification was used because the data presents a natural linear relationship under this form. The log-log specification lends itself to the following interpretation of the main coefficient of interest in column (3): *ceteris paribus*, a 10% increase in labor market concentration lowers new recruits by approximately $-1.278 \times 0.01 = 12.78\%$. As the model is just identified – with two endogenous variables and two instruments, over-identification tests cannot be performed.
Source: DADS, FARE, and authors' calculations.

Overall, our analysis shows that wages are lower when labor market concentration increases, while wages are higher when product market concentration increases. Hires decrease with labor market concentration, while product market concentration has a negative but not always significant relationship with new hires.

4 Merger Simulation

In this section, we simulate counter-factual horizontal mergers to identify the workers most vulnerable to corporate consolidation. Although a rough approximation of the effect of a merger on the labor market, we believe this exercise to be informative to the Competition Authority and provide predictions that can be tested in future research.

To run these counter-factuals horizontal mergers, we assume that, in turn, the two largest firms in each industry (in terms of headcount) merge[6]. We then recalculate our labor market HHI and predict the wage and hires effects using our prior estimates of the impact of labor market concentration on wages and employment; the elasticity estimates are found in Table 4 (column 5) and Table 7 (column 3). That is, we calculate the yearly income and employment loss for newly hired workers by assuming an elasticity of hourly wages and hires with respect to labor market concentration of, respectively, -0.09 and -1.278.

To do so, we make several assumptions. First, we keep the product market and firm characteristics fixed. Second, we neglect the wage effects for workers who are already in employment. Indeed, we expect effects on workers already in employment to be small given that French wages are often considered to be rigid. Third, we also keep levels of product market concentration constant and thus assume no impact on wages from changes in product market concentration.

We only use the coefficient on labor market HHI for three reasons. First, the product market HHI is not well measured. Second, the regressions with just the labor market HHI yield essentially the same coefficient as when we also include the product market HHI[7]. Third, from a policy perspective, the potentially positive effects of the product market HHI occur by an anticompetitive mechanism, so should not be taken into account as offsets.

The annual loss in euros for worker i, $\mathscr{L}_i$, is imputed as follows[8]:

$$\mathscr{L}_i = 1607 \times \text{Observed Hourly Wage}_i \times \Big[\exp(-0.0947 \log(\text{New HHI}/\text{Observed HHI})) - 1 \Big] \tag{4.1}$$

For each simulated industry merger, we recalculate the new level of labor market concentration per market (a quarter by commuting zone by occupation) and calculate the job loss $\mathscr{E}_m$ for each market according to the change in labor market concentration. The results below will then sum

[6] This is in contrast to Jarosch et al. (2019) who simulate mergers by selecting the two largest employers within each of their areas. We take our approach as more indicative of the situation faced by Antitrust Authorities.

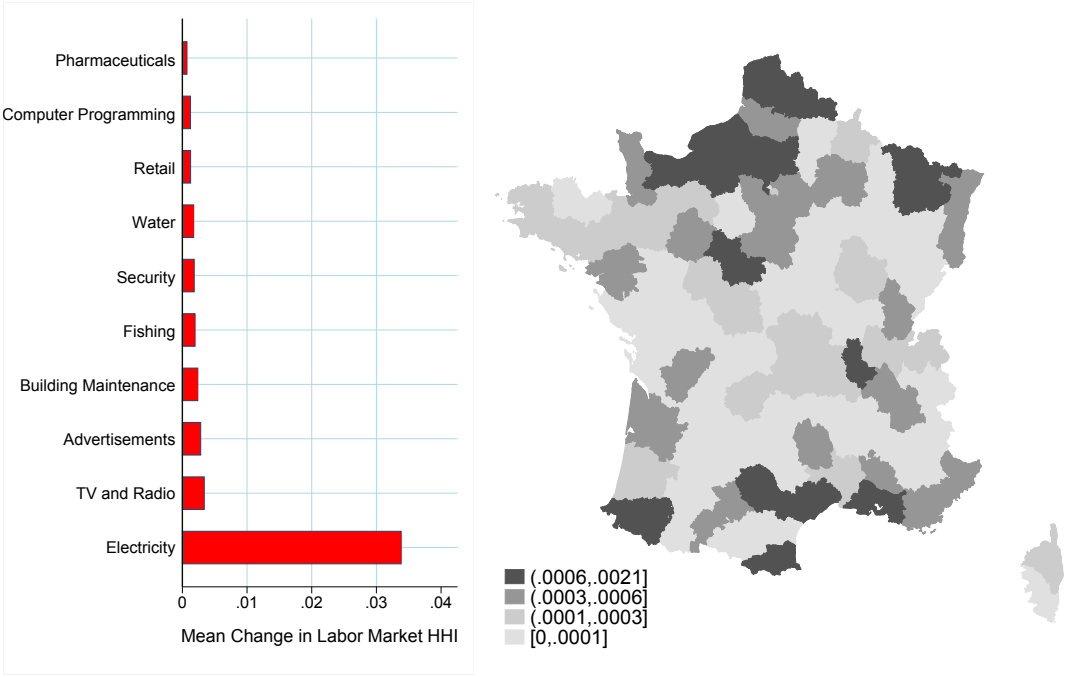
[7] See Appendix for alternative regression specifications which exclude the product market concentration or include the product market concentration index defined with national sales shares.

[8] French full-time work is equivalent to 1607 hours of labor per year. The logic behind the formula is this: the new wage is the old wage times a growth rate. The loss we want is the difference between the new wage and the old wage. So the loss is the old wage time the growth rate minus one.

the losses across labor markets. We use the following formula :

$$\mathscr{E}_m = \text{Observed Nb. Jobs}_m \times \Big[\exp(-1.278 \log(\text{New HHI}/\text{Observed HHI})) - 1 \Big] \tag{4.2}$$

Table 47 in Appendix G reports descriptive statistics for the simulation. It shows that, after the merger of the two largest employers in each industry, labor market concentration would increase on average (weighted by industry employment) by 0.01 percentage points, that is, if a worker is in industry x, a merger between the top two employers in industry x would modify the average HHI of workers in industry x by 0.01 percentage points (this includes markets where the merger did not affect HHI because only one or none of the merging employers was present).



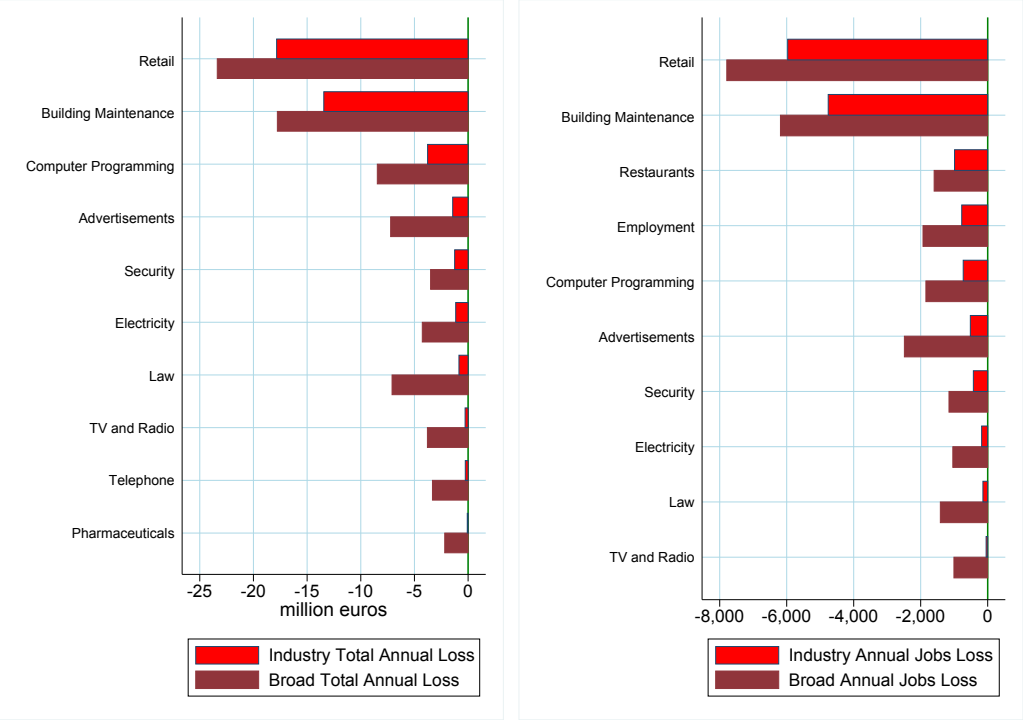
(a) (b)

Figure 6: Distribution of labor market concentration variation

Note: Figure 6(a) presents the top 10 greatest average percentage point change in level of labor market concentration per employee in a given industry as a result of the simulated merger in this same industry, over 2015. Figure 6(b): the average change in levels of labor market concentration described above are now averaged across French *départements*.
Source: DADS, FARE, and authors' calculations.

The distribution of these merger effects on concentration is highly skewed across industries and geographies. In Figure 6(a), we graph the average change in labor market HHI induced by the merger in the industry on the workers of that industry. The electricity industry has the highest mean change in labor market concentration for new hires following a merger of the

top two players. TV and radio has the second highest increase in HHI. Figure 6(b) displays the geographical location of the most affected workers. Workers most vulnerable to concentration increases from mergers appear to be in the rather disadvantaged areas of France, in the North and South of the country.



(a) (b)

Figure 7: Total Wage and Employment Effects

Figure 7(a) : Each line represents the sum of annual expected wage loss for workers across France induced from a merger. It is calculated based on equation 4.1. Industry Total Annual Loss is calculated so as to include the loss to workers in the industry that merged (i.e, the impact on car repairers of a merger in the car repair industry). So, the merger in the retail industry would lead to a 18 million euro annual income loss to workers in the retail industry. Broad Total Annual Loss is calculated so as to include the loss to all workers in the economy, including those in the industry that merged. So, the merger in the retail industry would lead to 23 million euros in annual income loss across the economy.
Figure 7(b): Each line in light red represents the annual expected new jobs lost for workers in *that* industry (i.e, a merger in the Building Maintenance industry would reduce annual recruitment by 4200 jobs in the Building Maintenance industry). It is calculated based on equation 4.2 and implicitly assumes that the wages of old workers (in the stock) are not impacted. Each line in dark red represents the annual expected new jobs lost for workers across France induced from a merger in *that* industry (i.e, a merger in the Building Maintenance industry would reduce annual recruitment by 5100 jobs across France). It is calculated based on equation 4.2 and implicitly assumes that the wages of incumbent workers (in the stock) are not impacted.
Source: DADS, FARE, and authors' calculations.

We now turn to the wage and employment impact of the simulated mergers. Figure 7(a) shows the loss in income to newly hired workers in the industry that merged (in light red) and across all industries (in dark red). Mergers in Retail, Building Maintenance, and Computer program-

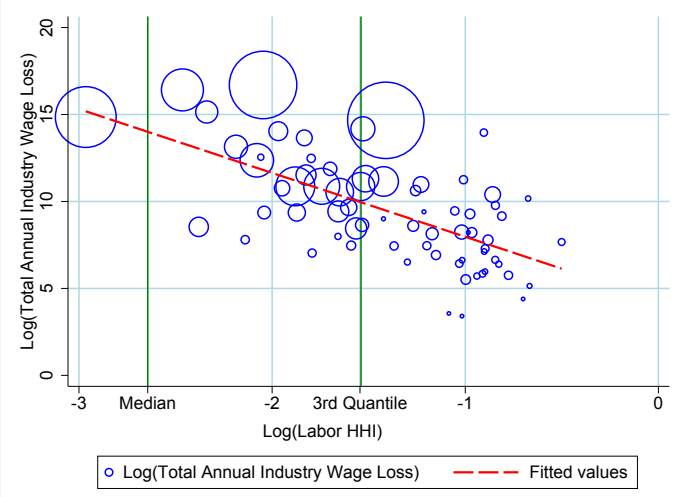
ming appear to be most harmful: a merger by the top two players in the retail industry would lead to a yearly loss of over 15 million euros for workers in the industry, and almost 23 million euros when workers in all industries are taken into account.

There are also significant employment losses due to increases in labor market concentration from the horizontal merger of the two top firms in each industry. Figure 7(b) displays the loss of new hires in a given industry when there is a merger in that industry (e.g. the loss of jobs in the car repair industry induced by a merger by the car repair industry leaders) in light red. It also displays the overall loss from a merger in a given industry on all jobs in the economy (e.g. the loss of jobs induced by a merger in the car repair industry on all jobs in the French economy) in dark red. Retail and building maintenance appear at top the list, with the largest job losses, at almost 8,000 and over 6,000 jobs respectively.

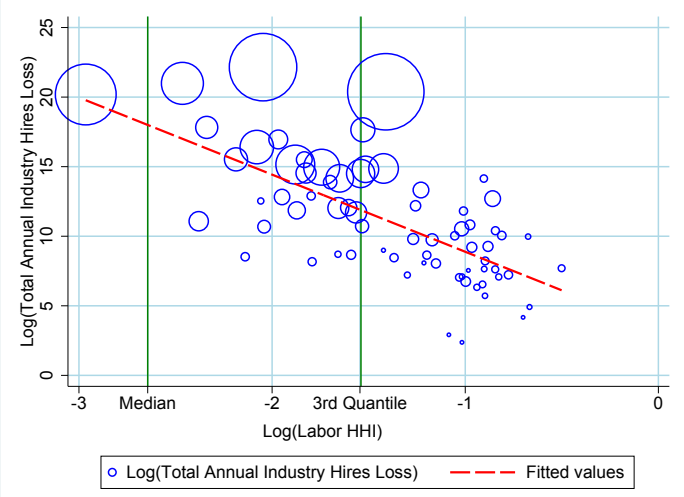
How are workers with different occupations affected by employment losses from mergers? Appendix G Figures 9(a) and 9(b) display the job loss across the economy induced by industry mergers according to the workers' occupation. Blue collar jobs (i.e, manual and non-manual workers) are most threatened by a merger in the retail and building maintenance industry. White collar (i.e, managers) job loss is, as expected, smaller and mainly associated to a merger in the computer programming and legal industry.

Do these effects correlate with workers in labor markets with high levels of labor market concentration? To answer this question, we plotted in Figure 8(a) the total damage to workers in the merging industry against the mean level of labor market concentration of the workers in that industry prior to the merger. Figure 8(b) displays the counterpart for industry employment loss. We let the size of the indicator be proportional to the number of workers hired in that industry to distinguish size from intensity. These plots reveal that there can be significant losses for workers operating in areas of low labor market concentration. Industries with workers in highly concentrated labor markets have few hires to start with and, so, an increase in concentration does not scale up to large aggregate losses. Indeed, the best fit line is downward sloping, suggesting that losses are more pronounced in industries with workers from less concentrated labor markets. This can be explained in light of the log-log regression specification which emphasizes variations in the markets with initially low levels of labor market concentration.

While our simulation depends on a number of assumptions that may not always hold, our results offer a cautionary tale for antitrust enforcers. Once we add up effects in all markets, mergers in the industries with the highest levels of concentration are not necessarily the most damaging for workers' wages and for employment.



(a)



(b)

Figure 8: Total Wage and Employment Effects against Labor Market HHI

Figure 8(a) is constructed in the following way. Using equation 4.1, we calculate the total expected annual wage loss to new hires induced by the horizontal merger between the two largest employers of that industry. We associate to this value (on the x-axis) the log of the mean level of labor market concentration for new hires in the industry. Finally, we size the marker for this observation such that it is proportional to the number of new hires in the industry across 2015. The green lines represent the median and 75th percentile of the log labor market concentration levels.
Figure 8(b): Figure 8(b) is constructed in the same way. Using equation 4.2, we calculate the total expected annual hires loss in the industry in which we simulate the horizontal merger between the two largest employers of that industry. We associate to this value (on the x-axis) the log of the mean level of labor market concentration for new hires in the industry. Finally, we size the marker for this observation such that it is proportional to the number of new hires in the industry across 2015. The green lines represent the median and 75th percentile of the log labor market concentration levels.

Source: DADS, FARE, and authors' calculations.

5 Conclusion

What are the labor market effects of labor and product market concentration? We leverage detailed French administrative data to show that labor market concentration decreases both the number of hires and the wages of new hires, as hypothesized by Monopsony Theory. Based on our instrumental variable estimates with worker and firm fixed effects, a 10% increase in labor market concentration decreases hires by about 12.4% and the wages of new hires by nearly 0.9%, with less negative effects in more unionized industries. A 10% increase in product market concentration increases wages by 0.9%, with more positive effects in more unionized industries. The impact of product market concentration on wages is consistent with rent sharing. Product market concentration also has a negative but not always significant impact on the number of new hires.

Based on our estimate of the impact of labor market concentration on wages and the number

of new hires, we can simulate the labor market impact of horizontal mergers between the two largest employers in each industry. We find that a horizontal merger has an impact not only on workers in the affected industry, but also on workers in other industries that share the same occupation: for a merger between the top two employers in the retail industry, about 25% of the impacts affect workers outside the retail industry. Compared to mergers in other industries, a merger between the top two employers in the retail industry would be the most damaging overall, with about 24 million annual decrease in the wages of new hires, and about an 8000 decrease in annual hires.

Our comprehensive data allows us to show that employer market power has a substantial effect on labor market outcomes even in countries like France where union coverage is high and labor market institutions are protective of workers. Our findings suggest that antitrust and competition authorities should further scrutinize the effects of competition policy on workers.

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Table 8: Summary Statistics for Top 5 Occupations

	count	min	max	p50	mean	sd
Commerce Employee						
Hourly Wage	631906	3	60.21622	11.1087	11.48	2.304
Product HHI (Firm Level)	635170	0	1	.1188923	0.169	0.147
Labor HHI(Group Level)	635170	.0191664	1	.0762025	0.110	0.0963
Labor HHI (Firm Level)	635170	.0143594	1	.0603538	0.0940	0.0938
Age (in years)	635170	18	67	21	25.30	9.401
Gender: Male Dummy	635170	0	1	0	0.477	0.499
Industry Unionization Rate	635089	0	25	7.93	10.37	6.173
Number of Full-Time Employees	630024	.0166667	232723.8	220.25	6942.5	13227.0
Value Added per Worker	630024	-7989.103	290387.8	51.67696	293.2	2363.3
Restaurant Server						
Hourly Wage	550209	3	60	11.24292	11.54	2.007
HHI Revenues (Firm Level)	552251	0	1	.1252955	0.206	0.219
Labor HHI(Group Level)	552251	.0023363	1	.0185156	0.0366	0.0618
Labor HHI (Firm Level)	552251	.0014077	1	.0135841	0.0310	0.0595
Age (in years)	552251	18	67	23	27.20	10.64
Gender: Male Dummy	552251	0	1	0	0.412	0.492
Industry Unionization Rate	552116	0	29.82	10.32	10.67	2.128
Number of Full-Time Employees	536482	.0155921	48799	6	380.4	1470.1
Value Added per Worker	536482	-1497.708	255673.2	44.72503	82.22	1040.7
Kitchen Clerk						
Hourly Wage	643742	3	59.66667	10.98	11.23	1.918
HHI Revenues (Firm Level)	646239	0	1	.1200214	0.193	0.205
Labor HHI(Group Level)	646239	.0048275	1	.0384909	0.0648	0.0766
Labor HHI (Firm Level)	646239	.0023827	1	.0206703	0.0435	0.0707
Age (in years)	646239	18	67	22	26.44	10.34
Gender: Male Dummy	646239	0	1	1	0.512	0.500
Industry Unionization Rate	646072	0	25	10.32	10.95	2.960
Number of Full-Time Employees	626143	.0155921	48217	19.5	523.3	1714.6
Value Added per Worker	626143	-4863.774	255673.2	41.86664	93.84	1009.5
Low Skill Manual Worker						
Hourly Wage	431205	3	58.18667	11.65714	11.94	1.812
HHI Revenues (Firm Level)	432062	0	1	.2131808	0.249	0.157
Labor HHI(Group Level)	432062	.0124863	1	.0901813	0.122	0.109
Labor HHI (Firm Level)	432062	.0089066	1	.077686	0.107	0.104
Age (in years)	432062	18	67	22	26.59	10.02
Gender: Male Dummy	432062	0	1	1	0.775	0.417
Industry Unionization Rate	431740	0	45.71	25	20.36	7.902
Number of Full-Time Employees	419625	.0100503	233911.5	50.5	1021.5	2235.7
Value Added per Worker	419625	-918.141	443262	822.933	1849.3	11364.5
Cleaner						
Hourly Wage	862137	3	59.5	11	11.36	2.341
HHI Revenues (Firm Level)	866707	0	1	.184382	0.259	0.226
Labor HHI(Group Level)	866707	.007677	1	.0475839	0.0757	0.0915
Labor HHI (Firm Level)	866707	.0046054	1	.0426843	0.0685	0.0881
Age (in years)	866707	18	67	33	35.10	12.95
Gender: Male Dummy	866707	0	1	0	0.321	0.467
Industry Unionization Rate	865465	0	45.71	13.77	13.98	4.125
Number of Full-Time Employees	809062	.00625	233911.5	190	2971.1	6031.0
Value Added per Worker	809062	-5031.172	443262	30.95681	159.1	2026.2

A Descriptive Statistics

B Hourly Wage

B.1 Unionization

Table 9: Ordinary Least Squares Estimates for Hourly Wages using Unionization Rates

	(1)	(2)	(3)	(4)	(5)
	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)
Log(Labor HHI)	-0.00945***	-0.00765***	-0.00391***	0.000464	0.00123
	(0.000196)	(0.000219)	(0.000269)	(0.000306)	(0.00126)
Log(Labor HHI) x Unionization Rate	-0.0000269	-0.0000227	0.000120***	-0.000101***	-0.0000402
	(0.0000186)	(0.0000190)	(0.0000216)	(0.0000259)	(0.000106)
Log(Product HHI) - Local	-0.0111***	-0.00662***	-0.00358***	-0.00408***	-0.00289
	(0.000242)	(0.000252)	(0.000272)	(0.000439)	(0.00183)
Log(Product HHI) x Unionization Rate	0.00130***	0.00126***	0.00129***	0.000340***	0.000236
	(0.0000239)	(0.0000242)	(0.0000266)	(0.0000442)	(0.000179)
Industry Unionization Rate	0.00255***	0.00236***	0.00253***	-0.0000422	0.000371
	(0.0000467)	(0.0000472)	(0.0000591)	(0.000174)	(0.000703)
Gender: Male Dummy	0.0351***	0.0344***	0.0338***	0.0290***	
	(0.000184)	(0.000186)	(0.000185)	(0.000189)	
Age (in years)	0.00566***	0.00560***	0.00557***	0.00531***	0.00534***
	(0.00000692)	(0.00000698)	(0.00000700)	(0.00000755)	(0.0000308)
Log(Value Added per Worker)	0.0422***	0.0412***	0.0377***	0.00436***	0.00461***
	(0.000111)	(0.000112)	(0.000114)	(0.000254)	(0.00108)
Log(Number of Employees)	0.0147***	0.0146***	0.0143***	-0.00762***	-0.00574***
	(0.0000328)	(0.0000336)	(0.0000345)	(0.000329)	(0.00138)
Time FE	Yes	Yes	Yes	Yes	Yes
4-Digit Occupation FE	Yes	Yes	No	No	No
Commuting Zone FE	No	Yes	No	No	No
Commuting Zone x 4-Digit Occupation FE	No	No	Yes	Yes	Yes
Firm FE	No	No	No	Yes	Yes
Worker FE	No	No	No	No	Yes
R^2	0.511	0.512	0.532	0.631	0.859
Adjusted R^2	0.511	0.512	0.529	0.600	0.600
F	113225.4	106579.3	101177.0	57481.4	3481.9
Observations	10050132	9781929	9771281	9455312	1537423

Standard errors in parentheses

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

Note: This table presents the regression output the ordinary least squares regression using the Log(Hourly Wage) as a dependent variable. Each observation is an employment contract. Log(Labor HHI) is the logarithm of the Herfindalh-Hirschman index for the labor market, as described in equation 2.2. A labor market is defined over a commuting zone, a 4-digit occupation, and through time quarters. Log(Product HHI) is the logarithm of the Herfindalh-Hirschman index for the product market. It is defined as described in equation 2.4. The product market is defined over a commuting zone and at the industry level. There are two individual level control variables: gender (equal to one if the worker is a man, zero otherwise) and age (in years). There are two firm level control variables: Log(Value Added per Worker) and Log(Number of Employees). The latter is the number of reported full-time equivalent number of workers in the firm over the year. The former is the log of total value added (revenues minus intermediary costs) over a year divided by the number of full-time equivalent employees. The gender fixed-effect cannot be identified in specification (v). Labor and product market concentration is interacted with the mean industry unionization rate, recovered from the *Enquête Réponse, 2011*. The Temporary-Employment Industry was dropped because the reported unionization rate was only relevant to the permanent administrative staff of the temp agencies. The log-log specification was used because the data presents a linear relationship under this form. The log-log specification lends itself to the following interpretation of the main coefficient of interest in column (5): *ceteris paribus* and given a 10% unionization rate, a 10% increase in labor market concentration increases wages by approximately $(0.00123 - 0.0000402 \times 10) \times 0.01 = 0.00828\%$.

B.2 Heterogeneity : non-permanent employees

Table 10: Ordinary Least Squares Estimates on Wages for Non-Permanent Employees

	(1)	(2)	(3)	(4)	(5)
	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)
Log(Labor HHI)	-0.0244***	-0.0191***	-0.0254***	-0.0109***	-0.0202
	(0.000416)	(0.000565)	(0.000798)	(0.000747)	(0.0376)
Log(Product HHI)	0.00845***	0.0192***	0.0254***	0.00459***	0.0375
	(0.000499)	(0.000579)	(0.000681)	(0.00112)	(0.0645)
Gender: Male Dummy	0.0260***	0.0239***	0.0226***	0.0296***	0.0183
	(0.000779)	(0.000788)	(0.000772)	(0.000696)	(0.0336)
Age (in years)	0.00296***	0.00286***	0.00268***	0.00241***	0.00309**
	(0.0000270)	(0.0000273)	(0.0000273)	(0.0000263)	(0.00139)
Log(Value Added per Worker)	0.00177***	0.00251***	0.00296***	-0.00378***	0.0919
	(0.000259)	(0.000262)	(0.000274)	(0.000882)	(0.0704)
Log(Number of Employees)	0.000412***	0.00115***	0.000327**	-0.00717***	0.106
	(0.000132)	(0.000134)	(0.000141)	(0.000986)	(0.0747)
Time FE	Yes	Yes	Yes	Yes	Yes
4-Digit Occupation FE	Yes	Yes	No	No	No
Commuting Zone FE	No	Yes	No	No	No
Commuting Zone x 4-Digit Occupation FE	No	No	Yes	Yes	Yes
Firm FE	No	No	No	Yes	Yes
Worker FE	No	No	No	No	Yes
R^2	0.367	0.371	0.444	0.660	0.944
Adjusted R^2	0.367	0.370	0.427	0.625	0.520
F	2896.5	2325.2	2160.5	1734.4	1.241
Observations	969650	928619	914604	829731	2388

Standard errors in parentheses

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

Note: This table presents the regression output from an ordinary least squares regression using the Log(Hourly Wage) as a dependent variable. Each observation is an employment contract. The sample only includes non-permanent workers (Temp workers, part-time work, on-call workers). Log(Labor HHI) is the logarithm of the Herfindalh-Hirschman index for the labor market, as described in equation 2.2. A labor market is defined over a commuting zone, a 4-digit occupation, and through time quarters. Log(Product HHI) is the logarithm of the Herfindalh-Hirschman index for the product market. It is defined as described in equation 2.4. The product market is defined over a commuting zone and at the industry level. There are two individual level control variables: gender (equal to one if the worker is a man, zero otherwise) and age (in years). There are two firm level control variables: Log(Value Added per Worker) and Log(Number of Employees). The latter is the number of reported full-time equivalent number of workers in the firm over the year. The former is the log of total value added (revenues minus intermediary costs) over a year divided by the number of full-time equivalent employees. The gender fixed-effect cannot be identified in specification (v). The log-log specification was used because the data presents a linear relationship under this form. The log-log specification lends itself to the following interpretation of the main coefficient of interest in column (5): *ceteris paribus*, a 10% increase in labor market concentration lowers wages by approximately $-0.0202 \times 0.01 = 0.2\%$.

Table 11: Instrumental Variables Estimates on Wages for Non-Permanent Employees

	(1)	(2)	(3)	(4)	(5)
	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)
Log(Labor HHI)	-0.185***	-0.160***	-0.106***	-0.128***	-0.507
	(0.00877)	(0.00971)	(0.00986)	(0.00976)	(1.491)
Log(Product HHI)	0.0810***	0.0754***	0.0616***	0.0969***	0.224
	(0.00168)	(0.00141)	(0.00126)	(0.00748)	(1.853)
Gender: Male Dummy	0.0101***	0.0232***	0.0225***	0.0289***	-0.0187
	(0.00145)	(0.000818)	(0.000780)	(0.000711)	(0.0673)
Age (in years)	0.00319***	0.00281***	0.00265***	0.00241***	0.00402*
	(0.0000374)	(0.0000283)	(0.0000275)	(0.0000268)	(0.00212)
Log(Value Added per Worker)	0.00330***	0.000947***	0.00157***	-0.00241***	0.203
	(0.000363)	(0.000274)	(0.000280)	(0.000904)	(0.131)
Log(Number of Employees)	0.00394***	0.00321***	0.000446***	-0.00559***	0.182
	(0.000274)	(0.000215)	(0.000173)	(0.00102)	(0.243)
Time FE	Yes	Yes	Yes	Yes	Yes
4-Digit Occupation	Yes	Yes	No	No	No
Commuting Zone FE	No	Yes	No	No	No
Commuting Zone FE x 4-Digit Occupation FE	No	No	Yes	Yes	Yes
Firm FE	No	No	No	Yes	Yes
Worker FE	No	No	No	No	Yes
F	2289.7	2376.9	2165.9	1680.4	0.986
Observations	969650	928619	914604	829731	2388

Standard errors in parentheses

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

Note: This table presents the regression output from a two stage least squares regression using the Log(Hourly Wage) as a dependent variable. The instrument is described in section 3.2. Each observation is an employment contract. The sample only includes non-permanent workers (Temp workers, part-time work, on-call workers). Log(Labor HHI) is the logarithm of the Herfindalh-Hirschman index for the labor market, as described in equation 2.2. A labor market is defined over a commuting zone, a 4-digit occupation, and through time quarters. Log(Product HHI) is the logarithm of the Herfindalh-Hirschman index for the product market. It is defined as described in equation 2.4. The product market is defined over a commuting zone and at the industry level. There are two individual level control variables: gender (equal to one if the worker is a man, zero otherwise) and age (in years). There are two firm level control variables: Log(Value Added per Worker) and Log(Number of Employees). The latter is the number of reported full-time equivalent number of workers in the firm over the year. The former is the log of total value added (revenues minus intermediary costs) over a year divided by the number of full-time equivalent employees. The gender fixed-effect cannot be identified in specification (v).. The log-log specification was used because the data presents a linear relationship under this form. The log-log specification lends itself to the following interpretation of the main coefficient of interest in column (5): *ceteris paribus*, a 10% increase in labor market concentration lowers wages by approximately $-0.507 \times 0.01 = 5\%$.

C Employment

C.1 Weighted by Number of Workers Recruited

Table 12: Ordinary Least Squares Estimates for Employment, weighted by Mean Market Size

	(1)	(2)	(3)
	Log(Nb. Recruits)	Log(Nb. Recruits)	Log(Nb. Recruits)
Log(Labor HHI)	-0.743***	-0.380***	-0.302***
	(0.000315)	(0.000323)	(0.000319)
Log(Product HHI)	-0.813***	-0.239***	-0.186***
	(0.000416)	(0.000452)	(0.000445)
(Mean) Sex	0.0186***	-0.165***	-0.0570***
	(0.00150)	(0.00126)	(0.00106)
(Mean) Age (in years)	-0.00297***	-0.00578***	-0.00329***
	(0.0000469)	(0.0000394)	(0.0000322)
(Mean) Log(Value Added per Worker)	0.0234***	0.0195***	0.00380***
	(0.000681)	(0.000579)	(0.000498)
(Mean) Log(Number of Employees)	0.216***	0.172***	0.106***
	(0.000202)	(0.000176)	(0.000168)
Time FE	Yes	Yes	Yes
Commuting Zone FE	No	Yes	No
Commuting Zone x 4-Digit Occupation FE	No	No	Yes
4-Digit Occupation FE	Yes	Yes	No
R^2	0.878	0.915	0.955
Adjusted R^2	0.878	0.915	0.954
F	7378312.9	466203.4	237822.6
Observations	11423271	11138856	11129066

Standard errors in parentheses

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

Note: This table presents the regression output from a weighted ordinary least squares regression using the Log(Number of New Jobs) as a dependent variable. Each observation corresponds to a market (a time quarter by a commuting zone by an occupation). Each observation is weighted according to the mean number of workers recruited across time in the relevant labor market (the commuting zone by an occupation). Mean Log(Labor HHI) is the mean of the logarithm of the Herfindalh-Hirschman index for the labor market, as described in equation 2.2. A labor market is defined over a commuting zone, a 4-digit occupation, and through time quarters. Mean Log(Product HHI) is the mean of the logarithm of the Herfindalh-Hirschman index for the product market. It is defined as described in equation 2.4. The product market is defined over a commuting zone and at the industry level. There are two population level control variables: the mean gender (equal to one if all workers are men, zero if all workers are female) and the mean age (in years). There are two firm population level control variables: the Mean Log(Value Added per Worker) and the Mean Log(Number of Employees). These variables are constructed by weighting the characteristics of the recruiting firms by their current labor market share. The log(Number of Employees) is the number of reported full-time equivalent number of workers in the firm over the year. The Log(Value Added per Worker) is the log of total value added (revenues minus intermediary costs) over a year divided by the number of full-time equivalent employees. The log-log specification was used because the data presents a natural linear relationship under this form. The log-log specification lends itself to the following interpretation of the main coefficient of interest in column (3): ceteris paribus, a 10% increase in labor market concentration lowers new recruits by approximately $0.302 \times 0.01 = 3.02\%$

Table 13: Instrumental Variables Estimates for Employment, weighted by Mean Market Size

	(1)	(2)	(3)
	Log(Nb. Recruits)	Log(Nb. Recruits)	Log(Nb. Recruits)
Log(Labor HHI)	-4.561***	-2.437***	-2.226***
	(0.0452)	(0.00656)	(0.00397)
Log(Product HHI)	1.666***	-0.0157***	-0.190***
	(0.0258)	(0.00334)	(0.00288)
(Mean) Sex	-1.366***	-0.114***	-0.216***
	(0.0199)	(0.00275)	(0.00224)
(Mean) Age (in years)	0.0358***	0.00696***	0.00768***
	(0.000532)	(0.0000947)	(0.0000706)
(Mean) Log(Value Added per Worker)	-0.591***	-0.181***	-0.0700***
	(0.00848)	(0.00141)	(0.00105)
(Mean) Log(Number of Employees)	0.365***	0.347***	0.306***
	(0.00166)	(0.000674)	(0.000533)
Time FE	Yes	Yes	Yes
Commuting Zone FE	No	Yes	No
Commuting Zone x 4-Digit Occupation FE	No	No	Yes
4-Digit Occupation FE	Yes	Yes	No
Observations	11423271	11138856	11129066

Standard errors in parentheses

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

Note: This table presents the regression output from a two stage least squares regression using the Log(Number of New Jobs) as a dependent variable. The instrument is described in section 3.2. Each observation corresponds to a market (a time quarter by a commuting zone by an occupation) and is weighted according to the mean number of workers recruited across time in the relevant labor market (the commuting zone by an occupation). Mean Log(Labor HHI) is the mean of the logarithm of the Herfindalh-Hirschman index for the labor market, as described in equation 2.2. A labor market is defined over a commuting zone, a 4-digit occupation, and through time quarters. Mean Log(Product HHI) is the mean of the logarithm of the Herfindalh-Hirschman index for the product market. It is defined as described in equation 2.4. The product market is defined over a commuting zone and at the industry level. There are two population level control variables: the mean gender (equal to one if all workers are men, zero if all workers are female) and the mean age (in years). There are two firm population level control variables: the Mean Log(Value Added per Worker) and the Mean Log(Number of Employees). These variables are constructed by weighting the characteristics of the recruiting firms by their current labor market share. The log(Number of Employees) is the number of reported full-time equivalent number of workers in the firm over the year. The Log(Value Added per Worker) is the log of total value added (revenues minus intermediary costs) over a year divided by the number of full-time equivalent employees. The log-log specification was used because the data presents a natural linear relationship under this form. The log-log specification lends itself to the following interpretation of the main coefficient of interest in column (3): *ceteris paribus*, a 10% increase in labor market concentration lowers new recruits by approximately $-2.226 \times 0.01 = 22.26\%$.

C.2 Weighted by Number of Firms Recruiting

Table 14: Ordinary Least Squares Estimates for Employment, weighted by Number of Recruiting Firms

	(1)	(2)	(3)
	Log(Nb. Recruits)	Log(Nb. Recruits)	Log(Nb. Recruits)
Log(Labor HHI)	-0.814***	-0.437***	-0.308***
	(0.000381)	(0.000398)	(0.000398)
Log(Product HHI)	-0.697***	-0.212***	-0.116***
	(0.000506)	(0.000536)	(0.000523)
(Mean) Sex	0.0230***	-0.105***	-0.0272***
	(0.00190)	(0.00158)	(0.00131)
(Mean) Age (in years)	-0.00299***	-0.00499***	-0.00230***
	(0.0000595)	(0.0000495)	(0.0000396)
(Mean) log_productivity	0.0316***	0.0366***	-0.00840***
	(0.000875)	(0.000732)	(0.000605)
(Mean) log_firm_size	0.194***	0.156***	0.0939***
	(0.000261)	(0.000226)	(0.000210)
Time FE	Yes	Yes	Yes
Commuting Zone FE	No	Yes	No
Commuting Zone x 4-Digit Occupation FE	No	No	Yes
PCS	Yes	Yes	No
R^2	0.894	0.928	0.964
Adjusted R^2	0.894	0.928	0.963
F	4820387.7	325667.6	131437.2
Observations	5916965	5916964	5906298

Standard errors in parentheses

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

Note: This table presents the regression output from a weighted ordinary least squares regression using the Log(Number of New Jobs) as a dependent variable. Each observation corresponds to a market (a time quarter by a commuting zone by an occupation). Each observation is weighted according to the mean number of different firms recruiting across time in the relevant labor market (the commuting zone by an occupation). Mean Log(Labor HHI) is the mean of the logarithm of the Herfindalh-Hirschman index for the labor market, as described in equation 2.2. A labor market is defined over a commuting zone, a 4-digit occupation, and through time quarters. Mean Log(Product HHI) is the mean of the logarithm of the Herfindalh-Hirschman index for the product market. It is defined as described in equation 2.4. The product market is defined over a commuting zone and at the industry level. There are two population level control variables: the mean gender (equal to one if all workers are men, zero if all workers are female) and the mean age (in years). There are two firm population level control variables: the Mean Log(Value Added per Worker) and the Mean Log(Number of Employees). These variables are constructed by weighting the characteristics of the recruiting firms by their current labor market share. The log(Number of Employees) is the number of reported full-time equivalent number of workers in the firm over the year. The Log(Value Added per Worker) is the log of total value added (revenues minus intermediary costs) over a year divided by the number of full-time equivalent employees. The log-log specification was used because the data presents a natural linear relationship under this form. The log-log specification lends itself to the following interpretation of the main coefficient of interest in column (3): ceteris paribus, a 10% increase in labor market concentration lowers new recruits by approximately $0.302 \times 0.01 = 3.08\%$

Table 15: Instrumental Variable Estimates, weighted by Number of Recruiting Firms

	(1)	(2)	(3)
	Log(Nb. Recruits)	Log(Nb. Recruits)	Log(Nb. Recruits)
Log(Labor HHI)	-2.070***	-1.847***	-2.038***
	(0.00903)	(0.00517)	(0.00472)
Log(Product HHI)	0.331***	-0.102***	-0.126***
	(0.00636)	(0.00335)	(0.00354)
(Mean) Sex	-0.280***	-0.0834***	-0.129***
	(0.00445)	(0.00280)	(0.00272)
(Mean) Age (in years)	0.00743***	0.00280***	0.00623***
	(0.000135)	(0.0000924)	(0.0000848)
(Mean) Log(Value Added per Worker)	-0.211***	-0.141***	-0.0598***
	(0.00255)	(0.00145)	(0.00126)
(Mean) Log(Number of Employees)	0.240***	0.266***	0.264***
	(0.000533)	(0.000567)	(0.000627)
Time FE	Yes	Yes	Yes
Commuting Zone FE	No	Yes	No
Commuting Zone x 4-Digit Occupation FE	No	No	Yes
4-Digit Occupation FE	Yes	Yes	No
Observations	5916965	5916964	5906298

Standard errors in parentheses

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

Note: This table presents the regression output from a two stage least squares regression using the Log(Number of New Jobs) as a dependent variable. The instrument is described in section 3.2. Each observation corresponds to a market (a time quarter by a commuting zone by an occupation) and is weighted according to the mean number of different firms recruiting across time in the relevant labor market (the commuting zone by an occupation). Mean Log(Labor HHI) is the mean of the logarithm of the Herfindalh-Hirschman index for the labor market, as described in equation 2.2. A labor market is defined over a commuting zone, a 4-digit occupation, and through time quarters. Mean Log(Product HHI) is the mean of the logarithm of the Herfindalh-Hirschman index for the product market. It is defined as described in equation 2.4. The product market is defined over a commuting zone and at the industry level. There are two population level control variables: the mean gender (equal to one if all workers are men, zero if all workers are female) and the mean age (in years). There are two firm population level control variables: the Mean Log(Value Added per Worker) and the Mean Log(Number of Employees). These variables are constructed by weighting the characteristics of the recruiting firms by their current labor market share. The log(Number of Employees) is the number of reported full-time equivalent number of workers in the firm over the year. The Log(Value Added per Worker) is the log of total value added (revenues minus intermediary costs) over a year divided by the number of full-time equivalent employees. The log-log specification was used because the data presents a natural linear relationship under this form. The log-log specification lends itself to the following interpretation of the main coefficient of interest in column (3): *ceteris paribus*, a 10% increase in labor market concentration lowers new recruits by approximately $-2.038 \times 0.01 = 20.38\%$.

D Stock Based Labor Market Concentration

D.1 Hourly Wages: Occupation Based Labor Market Concentration

Table 16: Ordinary Least Squares Estimates for Wages, using the Employment Stock

	(1)	(2)	(3)	(4)	(5)
	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)
Log(Labor HHI)	-0.0173***	-0.00621***	-0.00511***	-0.00317***	-0.00329***
	(0.0000724)	(0.0000956)	(0.000270)	(0.000238)	(0.000706)
Log(Product HHI)	-0.0121***	-0.000553***	-0.00151***	-0.00760***	-0.00723***
	(0.0000698)	(0.0000799)	(0.0000889)	(0.000198)	(0.000579)
Gender: Male Dummy	0.106***	0.105***	0.104***	0.0930***	
	(0.000151)	(0.000150)	(0.000150)	(0.000140)	
Age (in years)	0.00692***	0.00692***	0.00693***	0.00644***	0.00648***
	(0.00000544)	(0.00000540)	(0.00000536)	(0.00000512)	(0.0000149)
Log(Value Added per Worker)	0.0941***	0.0894***	0.0853***	0.0127***	0.0119***
	(0.0000872)	(0.0000872)	(0.0000886)	(0.000350)	(0.00107)
Log(Number of Employees)	0.0211***	0.0202***	0.0195***	-0.0210***	-0.0171***
	(0.0000256)	(0.0000260)	(0.0000264)	(0.000518)	(0.00159)
Time FE	Yes	Yes	Yes	Yes	Yes
4-Digit Occupation FE	Yes	Yes	No	No	No
Commuting Zone FE	No	Yes	No	No	No
Commuting Zone x 4-Digit Occupation FE	No	No	Yes	Yes	Yes
Firm FE	No	No	No	Yes	Yes
Worker FE	No	No	No	No	Yes
R^2	0.643	0.648	0.664	0.766	0.897
Adjusted R^2	0.643	0.648	0.663	0.754	0.746
F	692641.2	629200.0	601937.9	335249.9	37780.3
Observations	20506462	20506462	20500096	20367963	5762738

Standard errors in parentheses

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

Note: This table presents the regression output from an ordinary least squares regression using the Log(Hourly Wage) as a dependent variable. Each observation is an employment contract. The sample includes all workers employed in 2014 and 2015 on January 1st (i.e, the employment stock). Log(Labor HHI) is the logarithm of the Herfindalh-Hirschman index for the labor market, as described in equation 2.2. A labor market is defined over a commuting zone, a 4-digit occupation, and through the year. Log(Product HHI) is the logarithm of the Herfindalh-Hirschman index for the product market. It is defined as described in equation 2.4. The product market is defined over a commuting zone and at the industry level. There are two individual level control variables: gender (equal to one if the worker is a man, zero otherwise) and age (in years). There are two firm level control variables: Log(Value Added per Worker) and Log(Number of Employees). The latter is the number of reported full-time equivalent number of workers in the firm over the year. The former is the log of total value added (revenues minus intermediary costs) over a year divided by the number of full-time equivalent employees. The gender fixed-effect cannot be identified in specification (v). The log-log specification was used because the data presents a linear relationship under this form. The log-log specification lends itself to the following interpretation of the main coefficient of interest in column (5): *ceteris paribus*, a 10% increase in labor market concentration lowers wages by approximately $-0.00329 \times 0.01 = 0.03\%$.

Table 17: Instrumental Variables Estimates for Wages, using the Employment Stock

	(1)	(2)	(3)	(4)	(5)
	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)
Log(Labor HHI)	-0.0520***	-0.0227***	-0.0111***	-0.0303***	-0.0223***
	(0.000703)	(0.00276)	(0.00371)	(0.00282)	(0.00697)
Log(Product HHI)	0.0219***	0.0239***	0.0224***	-0.000725	0.00381
	(0.000177)	(0.000149)	(0.000142)	(0.00129)	(0.00379)
Gender: Male Dummy	0.107***	0.106***	0.105***	0.0930***	
	(0.000154)	(0.000151)	(0.000151)	(0.000140)	
Age (in years)	0.00689***	0.00689***	0.00692***	0.00644***	0.00648***
	(0.00000562)	(0.00000551)	(0.00000537)	(0.00000512)	(0.0000149)
Log(Value Added per Worker)	0.0908***	0.0870***	0.0830***	0.0128***	0.0120***
	(0.000114)	(0.0000916)	(0.0000894)	(0.000351)	(0.00108)
Log(Number of Employees)	0.0210***	0.0198***	0.0185***	-0.0205***	-0.0166***
	(0.0000278)	(0.0000986)	(0.0000276)	(0.000523)	(0.00160)
Time FE	Yes	Yes	Yes	Yes	Yes
4-Digit Occupation FE	Yes	Yes	No	No	No
Commuting Zone FE	No	Yes	No	No	No
Commuting Zone x 4-Digit Occupation FE	No	No	Yes	Yes	Yes
Firm FE	No	No	No	Yes	Yes
Worker FE	No	No	No	No	Yes
Observations	20506462	20506462	20500096	20367963	5762738

Standard errors in parentheses

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

Note: This table presents the regression output from a two stage least squares regression using the Log(Hourly Wage) as a dependent variable. The instrument is described in section 3.2. Each observation is an employment contract. The sample includes all workers employed in 2014 and 2015 on January 1st (i.e, the employment stock). Log(Labor HHI) is the logarithm of the Herfindalh-Hirschman index for the labor market, as described in equation 2.2. A labor market is defined over a commuting zone, a 4-digit occupation, and through time quarters. Log(Product HHI) is the logarithm of the Herfindalh-Hirschman index for the product market. It is defined as described in equation 2.4. The product market is defined over a commuting zone and at the industry level. There are two individual level control variables: gender (equal to one if the worker is a man, zero otherwise) and age (in years). There are two firm level control variables: Log(Value Added per Worker) and Log(Number of Employees). The latter is the number of reported full-time equivalent number of workers in the firm over the year. The former is the log of total value added (revenues minus intermediary costs) over a year divided by the number of full-time equivalent employees. The gender fixed-effect cannot be identified in specification (v). The log-log specification was used because the data presents a linear relationship under this form. The log-log specification lends itself to the following interpretation of the main coefficient of interest in column (5): *ceteris paribus*, a 10% increase in labor market concentration lowers wages by approximately $-0.0223 \times 0.01 = 0.223\%$.

D.2 Hourly Wages: Industry Based Labor Market Concentration

Table 18: Ordinary Least Squares Estimates for Wages, using the Employment Stock and Industry Based Labor Market Concentration

	(1)	(2)	(3)	(4)	(5)
	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)
Log(Labor HHI)	0.0123***	0.0137***	0.0167***	0.00434***	0.00518***
	(0.0000749)	(0.0000775)	(0.0000872)	(0.000198)	(0.000568)
Log(Revenue HHI)	-0.0334***	-0.0126***	-0.0171***	-0.00920***	-0.00924***
	(0.0000883)	(0.000103)	(0.000121)	(0.000211)	(0.000619)
Gender: Male Dummy	0.106***	0.105***	0.104***	0.0930***	
	(0.000151)	(0.000150)	(0.000150)	(0.000140)	
Age (in years)	0.00690***	0.00690***	0.00691***	0.00644***	0.00648***
	(0.00000544)	(0.00000540)	(0.00000536)	(0.00000512)	(0.0000149)
Log(Value Added per Worker)	0.0949***	0.0884***	0.0841***	0.0126***	0.0119***
	(0.0000872)	(0.0000874)	(0.0000887)	(0.000350)	(0.00107)
Log(Number of Employees)	0.0202***	0.0190***	0.0185***	-0.0211***	-0.0172***
	(0.0000261)	(0.0000263)	(0.0000268)	(0.000518)	(0.00159)
Time FE	Yes	Yes	Yes	Yes	Yes
4-Digit Occupation FE	Yes	Yes	No	No	No
Commuting Zone FE	No	Yes	No	No	No
Commuting Zone x 4-Digit Occupation FE	No	No	Yes	Yes	Yes
Firm FE	No	No	No	Yes	Yes
Worker FE	No	No	No	No	Yes
R^2	0.642	0.649	0.665	0.766	0.897
Adjusted R^2	0.642	0.649	0.663	0.754	0.746
F	686628.1	634495.5	609015.0	335305.7	37793.6
Observations	20506462	20506462	20500096	20367963	5762738

Standard errors in parentheses

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

Note: This table presents the regression output from an ordinary least squares regression using the Log(Hourly Wage) as a dependent variable. Each observation is an employment contract. The sample includes all workers employed in 2014 and 2015 on January 1st (i.e, the employment stock). Log(Labor HHI) is the logarithm of the Herfindalh-Hirschman index for the labor market, as described in equation 2.2. A labor market is here defined over a commuting zone, an industry, and through the year. Log(Product HHI) is the logarithm of the Herfindalh-Hirschman index for the product market. It is defined as described in equation 2.4. The product market is defined over a commuting zone and at the industry level. There are two individual level control variables: gender (equal to one if the worker is a man, zero otherwise) and age (in years). There are two firm level control variables: Log(Value Added per Worker) and Log(Number of Employees). The latter is the number of reported full-time equivalent number of workers in the firm over the year. The former is the log of total value added (revenues minus intermediary costs) over a year divided by the number of full-time equivalent employees. The gender fixed-effect cannot be identified in specification (v). The log-log specification was used because the data presents a linear relationship under this form. The log-log specification lends itself to the following interpretation of the main coefficient of interest in column (5): *ceteris paribus*, a 10% increase in labor market concentration lowers wages by approximately $-0.00924 \times 0.01 = 0.009\%$.

Table 19: Instrumental Variables Estimates for Wages, using the Employment Stock and Industry Based Labor Market Concentration

	(1)	(2)	(3)	(4)	(5)
	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)
Log(Labor HHI)	0.109***	0.240***	-0.156***	-1.077***	-0.481**
	(0.00153)	(0.0374)	(0.0593)	(0.220)	(0.199)
Log(Product HHI) - Local	-0.157***	-0.376***	0.284***	1.691***	0.767**
	(0.00239)	(0.0622)	(0.0996)	(0.345)	(0.316)
Gender: Male Dummy	0.106***	0.104***	0.107***	0.0908***	
	(0.000163)	(0.000296)	(0.000877)	(0.000534)	
Age (in years)	0.00686***	0.00672***	0.00705***	0.00644***	0.00647***
	(0.00000578)	(0.0000290)	(0.0000508)	(0.0000112)	(0.0000199)
Log(Value Added per Worker)	0.0871***	0.0853***	0.0834***	0.00684***	0.00824***
	(0.000157)	(0.000322)	(0.000177)	(0.00140)	(0.00206)
Log(Number of Employees)	0.0144***	0.00984***	0.0225***	-0.0357***	-0.0210***
	(0.0000859)	(0.00143)	(0.00151)	(0.00317)	(0.00262)
Time FE	Yes	Yes	Yes	Yes	Yes
4-Digit Occupation FE	Yes	Yes	No	No	No
Commuting Zone FE	No	Yes	No	No	No
Commuting Zone x 4-Digit Occupation FE	No	No	Yes	Yes	Yes
Firm FE	No	No	No	Yes	Yes
Worker FE	No	No	No	No	Yes
Observations	20506462	20506462	20500096	20367963	5762738

Standard errors in parentheses

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

Note: This table presents the regression output from an instrumental variables regression using the Log(Hourly Wage) as a dependent variable. Each observation is an employment contract. The sample includes all workers employed in 2014 and 2015 on January 1st (i.e, the employment stock). Log(Labor HHI) is the logarithm of the Herfindalh-Hirschman index for the labor market, as described in equation 2.2. A labor market is here defined over a commuting zone, an industry, and through the year. Log(Product HHI) is the logarithm of the Herfindalh-Hirschman index for the product market. It is defined as described in equation 2.4. The product market is defined over a commuting zone and at the industry level. There are two individual level control variables: gender (equal to one if the worker is a man, zero otherwise) and age (in years). There are two firm level control variables: Log(Value Added per Worker) and Log(Number of Employees). The latter is the number of reported full-time equivalent number of workers in the firm over the year. The former is the log of total value added (revenues minus intermediary costs) over a year divided by the number of full-time equivalent employees. The gender fixed-effect cannot be identified in specification (v). The log-log specification was used because the data presents a linear relationship under this form. The log-log specification lends itself to the following interpretation of the main coefficient of interest in column (5): *ceteris paribus*, a 10% increase in labor market concentration lowers wages by approximately $-0.481 \times 0.01 = 4\%$.

D.3 Employment Stock: Industry Based Labor Market Concentration

D.3.1 No Weights

Table 20: Ordinary Least Squares Estimates for Employment Stock

	(1)	(2)	(3)
	Log(Nb. Recruits)	Log(Nb. Recruits)	Log(Nb. Recruits)
Log(Labor HHI)	-0.950***	-0.421***	-0.370***
	(0.00287)	(0.00329)	(0.00360)
Log(Product HHI)	-0.349***	-0.0165***	0.000717
	(0.00374)	(0.00361)	(0.00373)
(Mean) Sex	-0.374***	-0.350***	-0.111***
	(0.0117)	(0.0101)	(0.00972)
(Mean) Age (in years)	-0.00293***	0.000695*	-0.00337***
	(0.000434)	(0.000376)	(0.000337)
(Mean) Log(Value Added per Worker)	-0.114***	-0.117***	-0.0209***
	(0.00466)	(0.00406)	(0.00344)
(Mean) Log(Number of Employees)	0.343***	0.228***	0.0690***
	(0.00164)	(0.00152)	(0.00158)
Year FE	Yes	Yes	Yes
4-Digit Occupation FE	Yes	Yes	No
Commuting Zone FE	No	Yes	No
Commuting Zone x 4-Digit Occupation FE	No	No	Yes
R^2	0.753	0.817	0.986
Adjusted R^2	0.752	0.817	0.972
F	41771.6	5785.3	1947.8
Observations	185450	185450	176448

Standard errors in parentheses

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

Note: This table presents the regression output from an ordinary least squares regression using the Log(Number of Employees) as a dependent variable (i.e, the employment stock) over 2014-2015. Each observation corresponds to a market (a year by a commuting zone by an occupation). Mean Log(Labor HHI) is the mean of the logarithm of the Herfindalh-Hirschman index for the labor market, as described in equation 2.2. A labor market is defined over a commuting zone, a 4-digit occupation, and through a year. Mean Log(Product HHI) is the mean of the logarithm of the Herfindalh-Hirschman index for the product market. It is defined as described in equation 2.4. The product market is defined over a commuting zone and at the industry level. There are two population level control variables: the mean gender (equal to one if all workers are men, zero if all workers are female) and the mean age (in years). There are two firm population level control variables: the Mean Log(Value Added per Worker) and the Mean Log(Number of Employees). These variables are constructed by weighting the characteristics of the recruiting firms by their current labor market share. The log(Number of Employees) is the number of reported full-time equivalent number of workers in the firm over the year. The Log(Value Added per Worker) is the log of total value added (revenues minus intermediary costs) over a year divided by the number of full-time equivalent employees. The log-log specification was used because the data presents a natural linear relationship under this form. The log-log specification lends itself to the following interpretation of the main coefficient of interest in column (3): ceteris paribus, a 10% increase in labor market concentration lowers new recruits by approximately $0.370 \times 0.01 = 3.70\%$
Source: DADS, FARE, and authors' calculations.

Table 21: Instrumental Variables Estimates for Employment Stock

	(1)	(2)	(3)
	Log(Nb. Recruits)	Log(Nb. Recruits)	Log(Nb. Recruits)
Log(Labor HHI)	-102.1	-1.182***	-1.333***
	(1606.2)	(0.118)	(0.0345)
Log(Product HHI)	32.03	0.381***	0.0699***
	(506.9)	(0.0144)	(0.0156)
(Mean) Sex	-2.490	-0.350***	-0.194***
	(34.01)	(0.0120)	(0.0135)
(Mean) Age (in years)	0.321	-0.00130***	-0.00318***
	(5.192)	(0.000485)	(0.000455)
(Mean) Log(Value Added per Worker)	-4.231	-0.143***	-0.0512***
	(65.38)	(0.00575)	(0.00476)
(Mean) Log(Number of Employees)	-1.509	0.274***	0.124***
	(29.46)	(0.00969)	(0.00292)
Year FE	Yes	Yes	Yes
4-Digit Occupation FE	Yes	Yes	No
Commuting Zone FE	No	Yes	No
Commuting Zone x 4-Digit Occupation FE	No	No	Yes
Observations	185450	185450	176448

Standard errors in parentheses

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

Note: This table presents the regression output from a two stage least squares regression using the Log(Number of Employees) as a dependent variable (i.e, the employment stock) over 2014-2015. The instrument is described in section 3.2. Each observation corresponds to a market (a year by a commuting zone by an occupation). Mean Log(Labor HHI) is the mean of the logarithm of the Herfindalh-Hirschman index for the labor market, as described in equation 2.2. A labor market is defined over a commuting zone, a 4-digit occupation, and through a year. Mean Log(Product HHI) is the mean of the logarithm of the Herfindalh-Hirschman index for the product market. It is defined as described in equation 2.4. The product market is defined over a commuting zone and at the industry level. There are two population level control variables: the mean gender (equal to one if all workers are men, zero if all workers are female) and the mean age (in years). There are two firm population level control variables: the Mean Log(Value Added per Worker) and the Mean Log(Number of Employees). These variables are constructed by weighting the characteristics of the recruiting firms by their current labor market share. The log(Number of Employees) is the number of reported full-time equivalent number of workers in the firm over the year. The Log(Value Added per Worker) is the log of total value added (revenues minus intermediary costs) over a year divided by the number of full-time equivalent employees. The log-log specification was used because the data presents a natural linear relationship under this form. The log-log specification lends itself to the following interpretation of the main coefficient of interest in column (3): *ceteris paribus*, a 10% increase in labor market concentration lowers new recruits by approximately $-1.333 \times 0.01 = 13.33\%$.
Source: DADS, FARE, and authors' calculations.

D.3.2 Weighted by Number of Workers

Table 22: Ordinary Least Squares Estimates for Employment Stock, Weighted by Mean Number of Workers

	(1)	(2)	(3)
	Log(Nb. Recruits)	Log(Nb. Recruits)	Log(Nb. Recruits)
Log(Labor HHI)	-0.476***	-0.112***	0.0448***
	(0.000231)	(0.000198)	(0.000109)
Log(Product HHI)	-1.081***	-0.281***	-0.0191***
	(0.000281)	(0.000289)	(0.000147)
(Mean) Sex	-0.385***	-0.934***	-0.606***
	(0.00182)	(0.00137)	(0.00109)
(Mean) Age (in years)	-0.0271***	-0.0202***	-0.00487***
	(0.0000792)	(0.0000598)	(0.0000396)
(Mean) Log(Value Added per Worker)	0.337***	0.0389***	-0.0390***
	(0.000697)	(0.000535)	(0.000271)
(Mean) Log(Number of Employees)	0.594***	0.393***	0.140***
	(0.000207)	(0.000173)	(0.000127)
Year FE	Yes	Yes	Yes
4-Digit Occupation FE	Yes	Yes	No
Commuting Zone FE	No	Yes	No
Commuting Zone x 4-Digit Occupation FE	No	No	Yes
R^2	0.872	0.931	0.997
Adjusted R^2	0.872	0.931	0.997
F	15588977.2	1190363.0	354680.1
Observations	22648867	22648867	22643519

Standard errors in parentheses

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

Note: This table presents the regression output from a weighted ordinary least squares regression using the Log(Number of Employees) as a dependent variable (i.e, the employment stock) over 2014-2015. Each observation corresponds to a market (a year by a commuting zone by an occupation). Each observation is weighted according to the mean number of workers recruited across time in the relevant labor market (the commuting zone by an occupation). Mean Log(Labor HHI) is the mean of the logarithm of the Herfindalh-Hirschman index for the labor market, as described in equation 2.2. A labor market is defined over a commuting zone, a 4-digit occupation, and through a year. Log(Product HHI) is the logarithm of the Herfindalh-Hirschman index for the product market. It is defined as described in equation 2.4. The product market is defined over a commuting zone and at the industry level. There are two population level control variables: the mean gender (equal to one if all workers are men, zero if all workers are female) and the mean age (in years). There are two firm population level control variables: the Mean Log(Value Added per Worker) and the Mean Log(Number of Employees). These variables are constructed by weighting the characteristics of the recruiting firms by their current labor market share. The log(Number of Employees) is the number of reported full-time equivalent number of workers in the firm over the year. The Log(Value Added per Worker) is the log of total value added (revenues minus intermediary costs) over a year divided by the number of full-time equivalent employees. The log-log specification was used because the data presents a natural linear relationship under this form. The log-log specification lends itself to the following interpretation of the main coefficient of interest in column (3): ceteris paribus, a 10% increase in labor market concentration increases new recruits by approximately $0.0448 \times 0.01 = 0.0448\%$

Table 23: Instrumental Variables Estimates for Employment Stock, Weighted by Mean Number of Workers

	(1)	(2)	(3)
	Log(Nb. Recruits)	Log(Nb. Recruits)	Log(Nb. Recruits)
Log(Labor HHI)	-0.486***	1.143***	1.778***
	(0.00371)	(0.00761)	(0.00476)
Log(Product HHI)	-0.763***	-0.457***	-0.615***
	(0.00318)	(0.00348)	(0.00261)
(Mean) Sex	-0.191***	-1.014***	0.907***
	(0.00247)	(0.00231)	(0.00562)
(Mean) Age (in year)	-0.0476***	-0.0144***	0.00338***
	(0.000103)	(0.000112)	(0.000145)
(Mean) Log(Value Added per Worker)	0.598***	0.200***	-0.0576***
	(0.00129)	(0.00137)	(0.000988)
(Mean) Log(Number of Employees)	0.623***	-0.0510***	-0.286***
	(0.000938)	(0.00263)	(0.00132)
Year FE	Yes	Yes	Yes
4-Digit Occupation FE	Yes	Yes	No
Commuting Zone FE	No	Yes	No
Commuting Zone x 4-Digit Occupation FE	No	No	Yes
Observations	22648867	22648867	22643519

Standard errors in parentheses

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

Note: This table presents the regression output from a two stage least squares regression using the Log(Number of Employees) as a dependent variable (i.e, the employment stock) over 2014-2015. The instrument is described in section 3.2. Each observation corresponds to a market (a year by a commuting zone by an occupation) and is weighted according to the mean number of workers recruited across the year in the relevant labor market (the commuting zone by an occupation). Mean Log(Labor HHI) is the mean of the logarithm of the Herfindalh-Hirschman index for the labor market, as described in equation 2.2. A labor market is defined over a commuting zone, a 4-digit occupation, and through a year. Log(Product HHI) is the logarithm of the Herfindalh-Hirschman index for the product market. It is defined as described in equation 2.4. The product market is defined over a commuting zone and at the industry level. There are two population level control variables: the mean gender (equal to one if all workers are men, zero if all workers are female) and the mean age (in years). There are two firm population level control variables: the Mean Log(Value Added per Worker) and the Mean Log(Number of Employees). These variables are constructed by weighting the characteristics of the recruiting firms by their current labor market share. The log(Number of Employees) is the number of reported full-time equivalent number of workers in the firm over the year. The Log(Value Added per Worker) is the log of total value added (revenues minus intermediary costs) over a year divided by the number of full-time equivalent employees. The log-log specification was used because the data presents a natural linear relationship under this form. The log-log specification lends itself to the following interpretation of the main coefficient of interest in column (3): *ceteris paribus*, a 10% increase in labor market concentration increases new recruits by approximately $1.778 \times 0.01 = 17.78\%$.

D.3.3 Weighted by Number of Firms

Table 24: Ordinary Least Squares Estimates for Employment Stock, Weighted by Number of Recruiting Firms

	(1)	(2)	(3)
	Log(Nb. Recruits)	Log(Nb. Recruits)	Log(Nb. Recruits)
Log(Labor HHI)	-0.539***	-0.151***	-0.000191
	(0.000369)	(0.000323)	(0.000163)
Log(Product HHI)	-1.073***	-0.281***	-0.0252***
	(0.000478)	(0.000502)	(0.000277)
(Mean) Sex	-0.467***	-0.855***	-0.224***
	(0.00312)	(0.00230)	(0.00161)
(Mean) Age (in years)	-0.0309***	-0.0216***	-0.00547***
	(0.000128)	(0.0000960)	(0.0000561)
(Mean) Log(Value Added per Worker)	0.280***	0.0472***	-0.0387***
	(0.00125)	(0.000952)	(0.000472)
(Mean) Log(Number of Employees)	0.560***	0.352***	0.0924***
	(0.000361)	(0.000304)	(0.000214)
Year FE	Yes	Yes	Yes
4-Digit Occupation FE	Yes	Yes	No
Commuting Zone FE	No	Yes	No
Commuting Zone x 4-Digit Occupation FE	No	No	Yes
R^2	0.893	0.944	0.998
Adjusted R^2	0.893	0.944	0.998
F	6704243.4	340895.5	38852.1
Observations	7252052	7252052	7245994

Standard errors in parentheses

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

Note: This table presents the regression output from a weighted ordinary least squares regression using the Log(Number of Employees) as a dependent variable (i.e, the employment stock) over 2014-2015. Each observation corresponds to a market (a year by a commuting zone by an occupation). Each observation is weighted according to the mean number of different firms recruiting across time in the relevant labor market (the commuting zone by an occupation). Mean Log(Labor HHI) is the mean of the logarithm of the Herfindalh-Hirschman index for the labor market, as described in equation 2.2. A labor market is defined over a commuting zone, a 4-digit occupation, and through a year. Log(Product HHI) is the logarithm of the Herfindalh-Hirschman index for the product market. It is defined as described in equation 2.4. The product market is defined over a commuting zone and at the industry level. There are two population level control variables: the mean gender (equal to one if all workers are men, zero if all workers are female) and the mean age (in years). There are two firm population level control variables: the Mean Log(Value Added per Worker) and the Mean Log(Number of Employees). These variables are constructed by weighting the characteristics of the recruiting firms by their current labor market share. The log(Number of Employees) is the number of reported full-time equivalent number of workers in the firm over the year. The Log(Value Added per Worker) is the log of total value added (revenues minus intermediary costs) over a year divided by the number of full-time equivalent employees. The log-log specification was used because the data presents a natural linear relationship under this form. The log-log specification lends itself to the following interpretation of the main coefficient of interest in column (3): ceteris paribus, a 10% increase in labor market concentration lowers new recruits by approximately $0.000191 \times 0.01 = 0.0000191\%$

Table 25: Instrumental Variable Estimates for Employment Stock, Weighted by Number of Firms

	(1)	(2)	(3)
	Log(Nb. Recruits)	Log(Nb. Recruits)	Log(Nb. Recruits)
Log(Labor HHI)	-0.186***	2.261***	4.013***
	(0.00798)	(0.0393)	(0.0399)
Log(Product HHI)	-1.213***	-0.671***	-0.883***
	(0.00698)	(0.0103)	(0.0128)
(Mean) Sex	-0.236***	-1.139***	1.738***
	(0.00411)	(0.00821)	(0.0246)
(Mean) Age (in years)	-0.0468***	0.000827*	0.0321***
	(0.000180)	(0.000483)	(0.000639)
(Mean) Log(Value Added per Worker)	0.567***	0.429***	-0.125***
	(0.00309)	(0.00684)	(0.00451)
(Mean) Log(Number of Employees)	0.520***	-0.510***	-0.933***
	(0.00169)	(0.0141)	(0.0106)
Year FE	Yes	Yes	Yes
4-Digit Occupation FE	Yes	Yes	No
Commuting Zone FE	No	Yes	No
Commuting Zone x 4-Digit Occupation FE	No	No	Yes
Observations	7252052	7252052	7245994

Standard errors in parentheses

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

Note: This table presents the regression output from a two stage least squares regression using the Log(Number of Employees) as a dependent variable (i.e, the employment stock) over 2014-2015. The instrument is described in section 3.2. Each observation corresponds to a market (a year by a commuting zone by an occupation) and is weighted according to the mean number of different firms recruiting across time in the relevant labor market (the commuting zone by an occupation). Mean Log(Labor HHI) is the mean of the logarithm of the Herfindalh-Hirschman index for the labor market, as described in equation 2.2. A labor market is defined over a commuting zone, a 4-digit occupation, and through a year. Log(Product HHI) is the logarithm of the Herfindalh-Hirschman index for the product market. It is defined as described in equation 2.4. The product market is defined over a commuting zone and at the industry level. There are two population level control variables: the mean gender (equal to one if all workers are men, zero if all workers are female) and the mean age (in years). There are two firm population level control variables: the Mean Log(Value Added per Worker) and the Mean Log(Number of Employees). These variables are constructed by weighting the characteristics of the recruiting firms by their current labor market share. The log(Number of Employees) is the number of reported full-time equivalent number of workers in the firm over the year. The Log(Value Added per Worker) is the log of total value added (revenues minus intermediary costs) over a year divided by the number of full-time equivalent employees. The log-log specification was used because the data presents a natural linear relationship under this form. The log-log specification lends itself to the following interpretation of the main coefficient of interest in column (3): *ceteris paribus*, a 10% increase in labor market concentration increases new recruits by approximately $4.013 \times 0.01 = 40.13\%$.

E Labor Market Concentration Only

E.1 Wages

E.1.1 No covariates

Table 26: Ordinary Least Squares Estimates on Wages (Only HHI)

	(1)	(2)	(3)	(4)	(5)
	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)
Log(Labor HHI)	-0.0114***	-0.00279***	0.00324***	-0.00220***	-0.00198***
	(0.0000617)	(0.000112)	(0.000155)	(0.000155)	(0.000480)
Time FE	Yes	Yes	Yes	Yes	Yes
4-Digit Occupation FE	Yes	Yes	No	No	No
Commuting Zone FE	No	Yes	No	No	No
Commuting Zone x 4-Digit Occupation FE	No	No	Yes	Yes	Yes
Firm FE	No	No	No	Yes	Yes
Worker FE	No	No	No	No	Yes
R^2	0.448	0.449	0.473	0.590	0.823
Adjusted R^2	0.448	0.449	0.470	0.563	0.561
F	34137.6	621.8	434.8	200.2	17.09
Observations	13779629	13410864	13401253	13034013	3168503

Standard errors in parentheses

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

Note: This table presents the regression output from an ordinary least squares regression using the Log(Hourly Wage) as a dependent variable. Each observation is an employment contract. Log(Labor HHI) is the logarithm of the Herfindalh-Hirschman index for the labor market, as described in equation 2.2. A labor market is defined over a commuting zone, a 4-digit occupation, and through time quarters. The log-log specification was used because the data presents a natural linear relationship under this form. The log-log specification lends itself to the following interpretation of the main coefficient of interest in column (5): *ceteris paribus*, a 10% increase in labor market concentration lowers wages by approximately $-0.00198 \times 0.01 = 0.01\%$.

Table 27: Instrumental Variables Estimates on Wages (Only HHI)

	(1)	(2)	(3)	(4)	(5)
	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)
Log(Labor HHI)	-0.0911***	-0.0878***	-0.0781***	-0.0263***	-0.0285***
	(0.00131)	(0.00121)	(0.00139)	(0.00140)	(0.00462)
Time FE	Yes	Yes	Yes	Yes	Yes
4-Digit Occupation FE	Yes	Yes	No	No	No
Commuting Zone FE	No	Yes	No	No	No
Commuting Zone x 4-Digit Occupation FE	No	No	Yes	Yes	Yes
Firm FE	No	No	No	Yes	Yes
Worker FE	No	No	No	No	Yes
Observations	13779629	13410864	13401253	13034013	3168503

Standard errors in parentheses

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

Note: This table presents the regression output from a two stage least squares regression using the Log(Hourly Wage) as a dependent variable. The instrument is described in section 3.2. Each observation is an employment contract. Log(Labor HHI) is the logarithm of the Herfindalh-Hirschman index for the labor market, as described in equation 2.2. A labor market is defined over a commuting zone, a 4-digit occupation, and through time quarters. The log-log specification was used because the data presents a natural linear relationship under this form. The log-log specification lends itself to the following interpretation of the main coefficient of interest in column (5): *ceteris paribus*, a 10% increase in labor market concentration lowers wages by approximately $-0.0285 \times 0.01 = 0.285\%$.

Table 28: First Stage Estimates on Labor HHI

	(1)	(2)	(3)	(4)	(5)
	Log(Labor HHI)	Log(Labor HHI)	Log(Labor HHI)	Log(Labor HHI)	Log(Labor HHI)
Instrument	0.331***	0.346***	0.302***	0.295***	0.279***
	(0.00178)	(0.00101)	(0.000734)	(0.000762)	(0.00238)
Time FE	Yes	Yes	Yes	Yes	Yes
4-Digit Occupation FE	Yes	Yes	No	No	No
Commuting Zone FE	No	Yes	No	No	No
Commuting Zone x 4-Digit Occupation FE	No	No	Yes	Yes	Yes
Firm FE	No	No	No	Yes	Yes
Worker FE	No	No	No	No	Yes
R^2	0.428	0.820	0.910	0.924	0.966
Adjusted R^2	0.427	0.820	0.910	0.919	0.917
F	34427.4	118028.3	169033.7	150079.2	13822.4
Observations	13850416	13479515	13469916	13102760	3204763

Standard errors in parentheses.

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

Note: This table presents the regression output from the ordinary least squares regression of the log(Labor HHI) on the instrument, to be interpreted as the first stage of a two stage least squares regression of log(Hourly wages) on log(Labor HHI). The instrument is described in section 3.2. Each observation is an employment contract. Log(Labor HHI) is the logarithm of the Herfindalh-Hirschman index for the labor market, as described in equation 2.2. A labor market is defined over a commuting zone, a 4-digit occupation, and through time quarters.

E.1.2 With covariates

Table 29: Ordinary Least Squares Estimates for Wages, excluding Product Market HHI

	(1)	(2)	(3)	(4)	(5)
	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)
Log(Firm-HHI)	-0.0124***	-0.00819***	-0.00356***	-0.00303***	-0.00285***
	(0.0000617)	(0.000113)	(0.000156)	(0.000157)	(0.000506)
Gender: Male Dummy	0.0326***	0.0317***	0.0316***	0.0279***	
	(0.000161)	(0.000162)	(0.000162)	(0.000162)	
Age (in years)	0.00517***	0.00511***	0.00507***	0.00463***	0.00456***
	(0.00000611)	(0.00000615)	(0.00000615)	(0.00000644)	(0.0000210)
Log(Value Added per Worker)	0.0155***	0.0154***	0.0145***	-0.00125***	-0.00231***
	(0.0000575)	(0.0000580)	(0.0000597)	(0.000216)	(0.000727)
Log(Number of Employees)	0.0110***	0.0109***	0.0105***	-0.00780***	-0.00814***
	(0.0000262)	(0.0000267)	(0.0000274)	(0.000251)	(0.000832)
Time FE	Yes	Yes	Yes	Yes	Yes
4-Digit Occupation FE	Yes	Yes	No	No	No
Commuting Zone FE	No	Yes	No	No	No
Commuting Zone x 4-Digit Occupation FE	No	No	Yes	Yes	Yes
Firm FE	No	No	No	Yes	Yes
Worker FE	No	No	No	No	Yes
R^2	0.469	0.470	0.493	0.596	0.827
Adjusted R^2	0.469	0.470	0.489	0.569	0.567
F	194608.6	181362.1	174706.9	108714.3	9890.5
Observations	12623737	12297336	12287352	11970918	2670536

Standard errors in parentheses

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

Note: This table presents the regression output from an ordinary least squares regression using the Log(Hourly Wage) as a dependent variable. Each observation is an employment contract. Log(Labor HHI) is the logarithm of the Herfindahl-Hirschman index for the labor market, as described in equation 2.2. A labor market is defined over a commuting zone, a 4-digit occupation, and through time quarters. There are two individual level control variables: gender (equal to one if the worker is a man, zero otherwise) and age (in years). There are two firm level control variables: Log(Value Added per Worker) and Log(Number of Employees). The latter is the number of reported full-time equivalent number of workers in the firm over the year. The former is the log of total value added (revenues minus intermediary costs) over a year divided by the number of full-time equivalent employees. The gender fixed-effect cannot be identified in specification (v). The log-log specification was used because the data presents a linear relationship under this form. The log-log specification lends itself to the following interpretation of the main coefficient of interest in column (v): *ceteris paribus*, a 10% increase in labor market concentration lowers wages by approximately $-0.00285 \times 0.01 = 0.02\%$.
Source: DADS, FARE, and authors' calculations.

Table 30: Instrumental Variables Estimates for Wages, excluding Product Market HHI

	(1)	(2)	(3)	(4)	(5)
	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)
Log(Firm-HHI)	-0.134***	-0.114***	-0.0959***	-0.0499***	-0.0559***
	(0.00194)	(0.00147)	(0.00157)	(0.00154)	(0.00529)
Gender: Male Dummy	0.0187***	0.0306***	0.0306***	0.0277***	
	(0.000287)	(0.000169)	(0.000165)	(0.000162)	
Age (in years)	0.00538***	0.00526***	0.00516***	0.00465***	0.00459***
	(0.00000779)	(0.00000671)	(0.00000641)	(0.00000651)	(0.0000213)
Log(Value Added per Worker)	0.0162***	0.0152***	0.0148***	-0.00153***	-0.00269***
	(0.0000667)	(0.0000601)	(0.0000607)	(0.000218)	(0.000732)
Log(Number of Employees)	0.0134***	0.0131***	0.0119***	-0.00817***	-0.00868***
	(0.0000478)	(0.0000412)	(0.0000356)	(0.000253)	(0.000838)
Time FE	Yes	Yes	Yes	Yes	Yes
4-Digit Occupation FE	Yes	Yes	No	No	No
Commuting Zone FE	No	Yes	No	No	No
Commuting Zone x 4-Digit Occupation FE	No	No	Yes	Yes	Yes
Firm FE	No	No	No	Yes	Yes
Worker FE	No	No	No	No	Yes
Observations	12623737	12297336	12287352	11970918	2670536

Standard errors in parentheses

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

Note: This table presents the regression output from a two stage least squares regression using the Log(Hourly Wage) as a dependent variable. The instrument is described in section 3.2. Each observation is an employment contract. The sample only includes non-permanent workers (Temp workers, part-time work, on-call workers). Log(Labor HHI) is the logarithm of the Herfindalh-Hirschman index for the labor market, as described in equation 2.2. A labor market is defined over a commuting zone, a 4-digit occupation, and through time quarters. There are two individual level control variables: gender (equal to one if the worker is a man, zero otherwise) and age (in years). There are two firm level control variables: Log(Value Added per Worker) and Log(Number of Employees). The latter is the number of reported full-time equivalent number of workers in the firm over the year. The former is the log of total value added (revenues minus intermediary costs) over a year divided by the number of full-time equivalent employees. The gender fixed-effect cannot be identified in specification (v). The log-log specification was used because the data presents a linear relationship under this form. The log-log specification lends itself to the following interpretation of the main coefficient of interest in column (5): *ceteris paribus*, a 10% increase in labor market concentration lowers wages by approximately $-0.0559 \times 0.01 = 0.559\%$.

E.2 Employment

E.2.1 No Weights

Table 31: Ordinary Least Squares Estimates for Employment, no product HHI

	(1)	(2)	(3)
	Log(Nb. Recruits)	Log(Nb. Recruits)	Log(Nb. Recruits)
Log(Labor HHI)	-1.035***	-0.815***	-0.678***
	(0.000871)	(0.00121)	(0.00129)
(Mean) Sex	-0.0350***	-0.0440***	-0.0168***
	(0.00253)	(0.00242)	(0.00222)
(Mean) Age (in years)	-0.00158***	-0.00121***	-0.0000840
	(0.0000790)	(0.0000756)	(0.0000686)
(Mean) Log(Value Added per Worker)	-0.0141***	-0.0198***	-0.0120***
	(0.00127)	(0.00122)	(0.00114)
(Mean) Log(Number of Employees)	0.0777***	0.0717***	0.0417***
	(0.000415)	(0.000404)	(0.000400)
Time FE	Yes	Yes	Yes
4-Digit Occupation FE	Yes	Yes	No
Commuting Zone FE	No	Yes	No
Commuting Zone x 4-Digit Occupation FE	No	No	Yes
R^2	0.763	0.782	0.870
Adjusted R^2	0.763	0.782	0.857
F	296431.1	96109.7	56359.0
Observations	805786	804289	792876

Standard errors in parentheses

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

Note: This table presents the regression output from an ordinary least squares regression using the Log(Number of New Jobs) as a dependent variable. Each observation corresponds to a market (a time quarter by a commuting zone by an occupation). Mean Log(Labor HHI) is the mean of the logarithm of the Herfindalh-Hirschman index for the labor market, as described in equation 2.2. A labor market is defined over a commuting zone, a 4-digit occupation, and through time quarters. There are two population level control variables: the mean gender (equal to one if all workers are men, zero if all workers are female) and the mean age (in years). There are two firm population level control variables: the Mean Log(Value Added per Worker) and the Mean Log(Number of Employees). These variables are constructed by weighting the characteristics of the recruiting firms by their current labor market share. The log(Number of Employees) is the number of reported full-time equivalent number of workers in the firm over the year. The Log(Value Added per Worker) is the log of total value added (revenues minus intermediary costs) over a year divided by the number of full-time equivalent employees. The log-log specification was used because the data presents a natural linear relationship under this form. The log-log specification lends itself to the following interpretation of the main coefficient of interest in column (3): ceteris paribus, a 10% increase in labor market concentration lowers new recruits by approximately $0.678 \times 0.01 = 6.78\%$
Source: DADS, FARE, and authors' calculations.

Table 32: Instrumental Variables Estimates for Employment, No Product HHI

	(1)	(2)	(3)
	Log(Nb. Recruits)	Log(Nb. Recruits)	Log(Nb. Recruits)
Log(Labor HHI)	-1.320***	-1.283***	-1.298***
	(0.0218)	(0.0116)	(0.00880)
(Mean) Sex	-0.0440***	-0.0434***	-0.0211***
	(0.00277)	(0.00263)	(0.00255)
(Mean) Age	-0.000705***	-0.000921***	0.000207***
	(0.000108)	(0.0000826)	(0.0000790)
(Mean) Log(Value Added per Worker)	-0.0232***	-0.0249***	-0.0131***
	(0.00152)	(0.00133)	(0.00131)
(Mean) Log(Number of Employees)	0.0704***	0.0736***	0.0530***
	(0.000712)	(0.000442)	(0.000486)
Time FE	Yes	Yes	Yes
4-Digit Occupation FE	Yes	Yes	No
Commuting Zone FE	No	Yes	No
Commuting Zone x 4-Digit Occupation FE	No	No	Yes
Observations	805786	804289	792876

Standard errors in parentheses

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

Note: This table presents the regression output from a two stage least squares regression using the Log(Number of New Jobs) as a dependent variable. The instrument is described in section 3.2. Each observation corresponds to a market (a time quarter by a commuting zone by an occupation). Mean Log(Labor HHI) is the mean of the logarithm of the Herfindalh-Hirschman index for the labor market, as described in equation 2.2. A labor market is defined over a commuting zone, a 4-digit occupation, and through time quarters. There are two population level control variables: the mean gender (equal to one if all workers are men, zero if all workers are female) and the mean age (in years). There are two firm population level control variables: the Mean Log(Value Added per Worker) and the Mean Log(Number of Employees). These variables are constructed by weighting the characteristics of the recruiting firms by their current labor market share. The log(Number of Employees) is the number of reported full-time equivalent number of workers in the firm over the year. The Log(Value Added per Worker) is the log of total value added (revenues minus intermediary costs) over a year divided by the number of full-time equivalent employees. The log-log specification was used because the data presents a natural linear relationship under this form. The log-log specification lends itself to the following interpretation of the main coefficient of interest in column (3): *ceteris paribus*, a 10% increase in labor market concentration lowers new recruits by approximately $-1.283 \times 0.01 = 12.83\%$.
Source: DADS, FARE, and authors' calculations.

E.2.2 Weighted by Number of Workers Recruited

Table 33: Ordinary Least Squares Estimates for Employment, no product HHI and weighted by Mean Number of Workers Recruited

	(1)	(2)	(3)
	Log(Nb. Recruits)	Log(Nb. Recruits)	Log(Nb. Recruits)
Log(Labor HHI)	-1.218***	-0.420***	-0.324***
	(0.000231)	(0.000320)	(0.000319)
(Mean) Sex	0.158***	-0.165***	-0.0565***
	(0.00172)	(0.00128)	(0.00107)
(Mean) Age	-0.00305***	-0.00598***	-0.00340***
	(0.0000540)	(0.0000398)	(0.0000324)
(Mean) Log(Value Added per Worker)	0.0398***	0.0189***	0.000606
	(0.000784)	(0.000586)	(0.000502)
(Mean) Log(Number of Employees)	0.281***	0.177***	0.105***
	(0.000230)	(0.000178)	(0.000169)
Time FE	Yes	Yes	Yes
4-Digit Occupation FE	Yes	Yes	No
Commuting Zone FE	No	Yes	No
Commuting Zone FE x 4-Digit Occupation FE	No	No	Yes
R^2	0.838	0.913	0.954
Adjusted R^2	0.838	0.913	0.954
F	6118878.8	499690.7	250949.1
Observations	11423567	11139152	11129362

Standard errors in parentheses

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

Note: This table presents the regression output from a weighted ordinary least squares regression using the Log(Number of New Jobs) as a dependent variable. Each observation corresponds to a market (a time quarter by a commuting zone by an occupation). Each observation is weighted according to the mean number of workers recruited across time in the relevant labor market (the commuting zone by an occupation). Mean Log(Labor HHI) is the mean of the logarithm of the Herfindalh-Hirschman index for the labor market, as described in equation 2.2. A labor market is defined over a commuting zone, a 4-digit occupation, and through time quarters. There are two population level control variables: the mean gender (equal to one if all workers are men, zero if all workers are female) and the mean age (in years). There are two firm population level control variables: the Mean Log(Value Added per Worker) and the Mean Log(Number of Employees). These variables are constructed by weighting the characteristics of the recruiting firms by their current labor market share. The log(Number of Employees) is the number of reported full-time equivalent number of workers in the firm over the year. The Log(Value Added per Worker) is the log of total value added (revenues minus intermediary costs) over a year divided by the number of full-time equivalent employees. The log-log specification was used because the data presents a natural linear relationship under this form. The log-log specification lends itself to the following interpretation of the main coefficient of interest in column (3): ceteris paribus, a 10% increase in labor market concentration lowers new recruits by approximately $0.324 \times 0.01 = 3.24\%$

Table 34: Instrumental Variables Estimates for Employment, no product HHI and weighted by Mean Number of Workers Recruited

	(1)	(2)	(3)
	Log(Nb. Recruits)	Log(Nb. Recruits)	Log(Nb. Recruits)
Log(Labor HHI)	-7.789***	-2.476***	-2.317***
	(0.225)	(0.00664)	(0.00413)
(Mean) Sex	-4.897***	-0.115***	-0.223***
	(0.174)	(0.00278)	(0.00230)
(Mean) Age (in years)	0.104***	0.00696***	0.00774***
	(0.00369)	(0.0000958)	(0.0000726)
(Mean) Log(Value Added per Worker)	-1.796***	-0.183***	-0.0770***
	(0.0632)	(0.00143)	(0.00108)
(Mean) Log(Number of Employees)	0.134***	0.350***	0.313***
	(0.00540)	(0.000676)	(0.000557)
Time FE	Yes	Yes	Yes
4-Digit Occupation FE	Yes	Yes	No
Commuting Zone FE	No	Yes	No
Commuting Zone x 4-Digit Occupation FE	No	No	Yes
Observations	11423567	11139152	11129362

Standard errors in parentheses

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

Note: This table presents the regression output from a two stage least squares regression using the Log(Number of New Jobs) as a dependent variable. The instrument is described in section 3.2. Each observation corresponds to a market (a time quarter by a commuting zone by an occupation) and is weighted according to the mean number of workers recruited across time in the relevant labor market (the commuting zone by an occupation). Mean Log(Labor HHI) is the mean of the logarithm of the Herfindalh-Hirschman index for the labor market, as described in equation 2.2. A labor market is defined over a commuting zone, a 4-digit occupation, and through time quarters.There are two population level control variables: the mean gender (equal to one if all workers are men, zero if all workers are female) and the mean age (in years). There are two firm population level control variables: the Mean Log(Value Added per Worker) and the Mean Log(Number of Employees). These variables are constructed by weighting the characteristics of the recruiting firms by their current labor market share. The log(Number of Employees) is the number of reported full-time equivalent number of workers in the firm over the year. The Log(Value Added per Worker) is the log of total value added (revenues minus intermediary costs) over a year divided by the number of full-time equivalent employees. The log-log specification was used because the data presents a natural linear relationship under this form. The log-log specification lends itself to the following interpretation of the main coefficient of interest in column (3): *ceteris paribus*, a 10% increase in labor market concentration lowers new recruits by approximately $-2.317 \times 0.01 = 23.17\%$.

E.2.3 Weighted by Number of Firms Recruiting

Table 35: Ordinary Least Squares Estimates for Employment,no product HHI and weighted by Number of Recruiting Firms

	(1)	(2)	(3)
	Log(Nb. Recruits)	Log(Nb. Recruits)	Log(Nb. Recruits)
Log(Labor HHI)	-1.216***	-0.469***	-0.320***
	(0.000281)	(0.000397)	(0.000398)
(Mean) Sex	0.115***	-0.103***	-0.0263***
	(0.00217)	(0.00160)	(0.00131)
(Mean) Age (in years)	-0.00314***	-0.00521***	-0.00240***
	(0.0000680)	(0.0000500)	(0.0000397)
(Mean) Log(Value Added per Worker)	0.0336***	0.0380***	-0.0102***
	(0.00100)	(0.000740)	(0.000606)
(Mean) Log(Number of Employees)	0.257***	0.162***	0.0936***
	(0.000294)	(0.000228)	(0.000210)
Time FE	Yes	Yes	Yes
4-Digit Occupation FE	Yes	Yes	No
Commuting Zone FE	No	Yes	No
Commuting Zone x 4-Digit Occupation FE	No	No	Yes
R^2	0.862	0.926	0.964
Adjusted R^2	0.862	0.926	0.963
F	4137292.0	356572.3	150254.0
Observations	5917085	5917084	5906421

Standard errors in parentheses

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

Note: This table presents the regression output from a weighted ordinary least squares regression using the Log(Number of New Jobs) as a dependent variable. Each observation corresponds to a market (a time quarter by a commuting zone by an occupation). Each observation is weighted according to the mean number of different firms recruiting across time in the relevant labor market (the commuting zone by an occupation). Mean Log(Labor HHI) is the mean of the logarithm of the Herfindalh-Hirschman index for the labor market, as described in equation 2.2. A labor market is defined over a commuting zone, a 4-digit occupation, and through time quarters.There are two population level control variables: the mean gender (equal to one if all workers are men, zero if all workers are female) and the mean age (in years). There are two firm population level control variables: the Mean Log(Value Added per Worker) and the Mean Log(Number of Employees). These variables are constructed by weighting the characteristics of the recruiting firms by their current labor market share. The log(Number of Employees) is the number of reported full-time equivalent number of workers in the firm over the year. The Log(Value Added per Worker) is the log of total value added (revenues minus intermediary costs) over a year divided by the number of full-time equivalent employees. The log-log specification was used because the data presents a natural linear relationship under this form. The log-log specification lends itself to the following interpretation of the main coefficient of interest in column (3): ceteris paribus, a 10% increase in labor market concentration lowers new recruits by approximately $0.320 \times 0.01 = 3.20\%$

Table 36: Instrumental Variable Estimates for Employment, no product HHI and weighted by Number of Recruiting Firms

	(1)	(2)	(3)
	Log(Nb. Recruits)	Log(Nb. Recruits)	Log(Nb. Recruits)
Log(Labor HHI)	-2.107***	-1.878***	-2.082***
	(0.0105)	(0.00524)	(0.00481)
(Mean) Sex	-0.481***	-0.0832***	-0.131***
	(0.00786)	(0.00282)	(0.00275)
(Mean) Age (in years)	0.0109***	0.00262***	0.00609***
	(0.000200)	(0.0000931)	(0.0000859)
(Mean) Log(Value Added per Worker)	-0.295***	-0.142***	-0.0625***
	(0.00420)	(0.00147)	(0.00127)
(Mean) Log(Number of Employees)	0.193***	0.270***	0.269***
	(0.000890)	(0.000566)	(0.000644)
Time FE	Yes	Yes	Yes
4-Digit Occupation FE	Yes	Yes	No
Commuting Zone FE	No	Yes	No
Commuting Zone x 4-Digit Occupation FE	No	No	Yes
Observations	5917085	5917084	5906421

Standard errors in parentheses

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

Note: This table presents the regression output from a two stage least squares regression using the Log(Number of New Jobs) as a dependent variable. The instrument is described in section 3.2. Each observation corresponds to a market (a time quarter by a commuting zone by an occupation) and is weighted according to the mean number of different firms recruiting across time in the relevant labor market (the commuting zone by an occupation). Mean Log(Labor HHI) is the mean of the logarithm of the Herfindalh-Hirschman index for the labor market, as described in equation 2.2. A labor market is defined over a commuting zone, a 4-digit occupation, and through time quarters. There are two population level control variables: the mean gender (equal to one if all workers are men, zero if all workers are female) and the mean age (in years). There are two firm population level control variables: the Mean Log(Value Added per Worker) and the Mean Log(Number of Employees). These variables are constructed by weighting the characteristics of the recruiting firms by their current labor market share. The log(Number of Employees) is the number of reported full-time equivalent number of workers in the firm over the year. The Log(Value Added per Worker) is the log of total value added (revenues minus intermediary costs) over a year divided by the number of full-time equivalent employees. The log-log specification was used because the data presents a natural linear relationship under this form. The log-log specification lends itself to the following interpretation of the main coefficient of interest in column (3): *ceteris paribus*, a 10% increase in labor market concentration lowers new recruits by approximately $-2.082 \times 0.01 = 20.82\%$.

F Global Product HHI

F.1 Global Without Industry Control

Table 37: Ordinary Least Squares Estimates for Wages, including Global (economy wide) Product Market HHI but excluding Industry Controls

	(1)	(2)	(3)	(4)	(5)
	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)
Log(Firm-HHI)	-0.0116***	-0.00729***	-0.00263***	-0.00284***	-0.00255***
	(0.0000615)	(0.000112)	(0.000156)	(0.000157)	(0.000507)
Log(Product HHI (Global))	0.00850***	0.00836***	0.00790***	0.00423***	0.00491***
	(0.0000258)	(0.0000260)	(0.0000268)	(0.0000964)	(0.000318)
Gender: Male Dummy	0.0321***	0.0313***	0.0313***	0.0279***	
	(0.000160)	(0.000162)	(0.000161)	(0.000162)	
Age (in years)	0.00509***	0.00504***	0.00501***	0.00463***	0.00456***
	(0.00000609)	(0.00000613)	(0.00000614)	(0.00000644)	(0.0000210)
Log(Value Added per Worker)	0.0297***	0.0293***	0.0274***	-0.00111***	-0.00214***
	(0.0000716)	(0.0000723)	(0.0000737)	(0.000216)	(0.000727)
Log(Number of Employees)	0.0125***	0.0124***	0.0120***	-0.00757***	-0.00789***
	(0.0000265)	(0.0000270)	(0.0000278)	(0.000251)	(0.000833)
Time FE	Yes	Yes	Yes	Yes	Yes
4-Digit Occupation FE	Yes	Yes	No	No	No
Commuting Zone FE	No	Yes	No	No	No
Commuting Zone x 4-Digit Occupation FE	No	No	Yes	Yes	Yes
Firm FE	No	No	No	Yes	Yes
Worker FE	No	No	No	No	Yes
R^2	0.474	0.474	0.496	0.596	0.827
Adjusted R^2	0.474	0.474	0.493	0.569	0.567
F	181723.9	169552.9	161099.5	90931.8	8283.6
Observations	12623736	12297335	12287351	11970916	2670536

Standard errors in parentheses

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

Note: This table presents the regression output from an ordinary least squares regression using the Log(Hourly Wage) as a dependent variable. Each observation is an employment contract. Log(Labor HHI) is the logarithm of the Herfindahl-Hirschman index for the labor market, as described in equation 2.2. A labor market is defined over a commuting zone, a 4-digit occupation, and through time quarters. Log(Product HHI (Global)) is the logarithm of the Herfindahl-Hirschman index for the product market defined at the national level using industry revenues. There are two individual level control variables: gender (equal to one if the worker is a man, zero otherwise) and age (in years). There are two firm level control variables: Log(Value Added per Worker) and Log(Number of Employees). The latter is the number of reported full-time equivalent number of workers in the firm over the year. The former is the log of total value added (revenues minus intermediary costs) over a year divided by the number of full-time equivalent employees. The gender fixed-effect cannot be identified in specification (v). The log-log specification was used because the data presents a linear relationship under this form. The log-log specification lends itself to the following interpretation of the main coefficient of interest in column (v): *ceteris paribus*, a 10% increase in labor market concentration lowers wages by approximately $-0.00309 \times 0.01 = 0.03\%$.
Source: DADS, FARE, and authors' calculations.

Table 38: Instrumental Variables Estimates for Wages, including Global (economy wide) Product Market HHI but excluding Industry Controls

	(1)	(2)	(3)	(4)	(5)
	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)
Log(Labor HHI)	-0.142***	-0.122***	-0.106***	-0.0587***	-0.0657***
	(0.00193)	(0.00147)	(0.00156)	(0.00146)	(0.00488)
Log(Product HHI (Global))	0.00653***	0.00769***	0.00754***	0.00325***	0.00338***
	(0.0000418)	(0.0000284)	(0.0000278)	(0.000100)	(0.000341)
Gender: Male Dummy	0.0174***	0.0302***	0.0302***	0.0277***	
	(0.000286)	(0.000169)	(0.000165)	(0.000163)	
Age (in years)	0.00534***	0.00521***	0.00511***	0.00465***	0.00460***
	(0.00000798)	(0.00000675)	(0.00000642)	(0.00000652)	(0.0000214)
Log(Value Added per Worker)	0.0272***	0.0280***	0.0271***	-0.00148***	-0.00265***
	(0.0000914)	(0.0000770)	(0.0000751)	(0.000218)	(0.000734)
Log(Number of Employees)	0.0147***	0.0147***	0.0134***	-0.00806***	-0.00860***
	(0.0000444)	(0.0000403)	(0.0000353)	(0.000253)	(0.000840)
Time FE	Yes	Yes	Yes	Yes	Yes
4-Digit Occupation FE	Yes	Yes	No	No	No
Commuting Zone FE	No	Yes	No	No	No
Commuting Zone x 4-Digit Occupation FE	No	No	Yes	Yes	Yes
Firm FE	No	No	No	Yes	Yes
Worker FE	No	No	No	No	Yes
Observations	12623736	12297335	12287351	11970916	2670536

Standard errors in parentheses

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

Note: This table presents the regression output from a two stage least squares regression using the Log(Hourly Wage) as a dependent variable. The instrument is described in section 3.2. Each observation is an employment contract. The sample only includes non-permanent workers (Temp workers, part-time work, on-call workers). Log(Labor HHI) is the logarithm of the Herfindalh-Hirschman index for the labor market, as described in equation 2.2. A labor market is defined over a commuting zone, a 4-digit occupation, and through time quarters. Log(Product Product HHI (Global)) is the logarithm of the Herfindahl-Hirschman index for the product market defined at the national level using industry revenues. There are two individual level control variables: gender (equal to one if the worker is a man, zero otherwise) and age (in years). There are two firm level control variables: Log(Value Added per Worker) and Log(Number of Employees). The latter is the number of reported full-time equivalent number of workers in the firm over the year. The former is the log of total value added (revenues minus intermediary costs) over a year divided by the number of full-time equivalent employees. The gender fixed-effect cannot be identified in specification (v). The log-log specification was used because the data presents a linear relationship under this form. The log-log specification lends itself to the following interpretation of the main coefficient of interest in column (5): *ceteris paribus*, a 10% increase in labor market concentration lowers wages by approximately $-0.0657 \times 0.01 = 0.657\%$.

F.2 Global With Industry Controls

Table 39: Ordinary Least Squares Estimates for Wages, including Global (economy wide) Product Market HHI and Industry Controls

	(1)	(2)	(3)	(4)	(5)
	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)
Log(Firm-HHI)	-0.0118***	-0.00683***	-0.00252***	-0.00281***	-0.00252***
	(0.0000617)	(0.000112)	(0.000155)	(0.000157)	(0.000507)
Gender: Male Dummy	0.0315***	0.0306***	0.0307***	0.0279***	
	(0.000160)	(0.000161)	(0.000161)	(0.000162)	
Age (in years)	0.00507***	0.00502***	0.00500***	0.00462***	0.00456***
	(0.00000607)	(0.00000611)	(0.00000612)	(0.00000644)	(0.0000210)
Log(Value Added per Worker)	0.0289***	0.0284***	0.0264***	-0.00114***	-0.00219***
	(0.0000862)	(0.0000871)	(0.0000888)	(0.000217)	(0.000728)
Log(Number of Employees)	0.0113***	0.0111***	0.0109***	-0.00757***	-0.00793***
	(0.0000273)	(0.0000277)	(0.0000285)	(0.000252)	(0.000834)
Log(Product HHI (Global))	-0.000707***	-0.00120***	0.000431***	0.00514***	0.00595***
	(0.000102)	(0.000103)	(0.000103)	(0.000107)	(0.000356)
Time FE	Yes	Yes	Yes	Yes	Yes
4-Digit Occupation FE	Yes	Yes	No	No	No
Industry FE	Yes	Yes	Yes	Yes	Yes
Commuting Zone FE	No	Yes	No	No	No
Commuting Zone FE x 4-Digit Occupation FE	No	No	Yes	Yes	Yes
Firm FE	No	No	No	Yes	Yes
Worker FE	No	No	No	No	Yes
R^2	0.480	0.481	0.501	0.596	0.827
Adjusted R^2	0.480	0.481	0.498	0.569	0.567
F	163730.5	151804.2	145976.0	90988.3	8291.7
Observations	12623726	12297325	12287340	11970906	2670534

Standard errors in parentheses

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

Note: This table presents the regression output from an ordinary least squares regression using the Log(Hourly Wage) as a dependent variable. Each observation is an employment contract. Log(Labor HHI) is the logarithm of the Herfindahl-Hirschman index for the labor market, as described in equation 2.2. A labor market is defined over a commuting zone, a 4-digit occupation, and through time quarters. Log(Product HHI Revenues (Global)) is the logarithm of the Herfindahl-Hirschman index for the product market defined at the national level using industry revenues. There are two individual level control variables: gender (equal to one if the worker is a man, zero otherwise) and age (in years). There are two firm level control variables: Log(Value Added per Worker) and Log(Number of Employees). The latter is the number of reported full-time equivalent number of workers in the firm over the year. The former is the log of total value added (revenues minus intermediary costs) over a year divided by the number of full-time equivalent employees. The log-log specification was used because the data presents a linear relationship under this form. The log-log specification lends itself to the following interpretation of the main coefficient of interest in column (v): *ceteris paribus*, a 10% increase in labor market concentration lowers wages by approximately $-0.00252 \times 0.01 = 0.02\%$.
Source: DADS, FARE, and authors' calculations.

Table 40: Instrumental Variables Estimates for Wages, including Global (economy wide) Product Market HHI and Industry Controls

	(1)	(2)	(3)	(4)	(5)
	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)	Log(Hourly Wage)
Log(Labor HHI)	-0.102***	-0.0889***	-0.0771***	-0.0607***	-0.0679***
	(0.00163)	(0.00135)	(0.00143)	(0.00143)	(0.00478)
Log(Product HHI (Global))	-0.00437***	-0.00326***	-0.00144***	0.00388***	0.00399***
	(0.000128)	(0.000111)	(0.000110)	(0.000112)	(0.000386)
Gender: Male Dummy	0.0210***	0.0301***	0.0300***	0.0277***	
	(0.000257)	(0.000165)	(0.000163)	(0.000163)	
Age (in years)	0.00521***	0.00512***	0.00506***	0.00465***	0.00460***
	(0.00000702)	(0.00000649)	(0.00000631)	(0.00000652)	(0.0000214)
Log(Value Added per Worker)	0.0260***	0.0275***	0.0265***	-0.00150***	-0.00269***
	(0.000107)	(0.0000902)	(0.0000897)	(0.000218)	(0.000735)
Log(Number of Employees)	0.0125***	0.0126***	0.0118***	-0.00806***	-0.00865***
	(0.0000364)	(0.0000376)	(0.0000342)	(0.000254)	(0.000842)
Time FE	Yes	Yes	Yes	Yes	Yes
4-Digit Occupation FE	Yes	Yes	No	No	No
Industry FE	Yes	Yes	Yes	Yes	Yes
Commuting Zone FE	No	Yes	No	No	No
Commuting Zone FE x 4-Digit Occupation FE	No	No	Yes	Yes	Yes
Firm FE	No	No	No	Yes	Yes
Worker FE	No	No	No	No	Yes
Observations	12623726	12297325	12287340	11970906	2670534

Standard errors in parentheses

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

Note: This table presents the regression output from a two stage least squares regression using the Log(Hourly Wage) as a dependent variable. The instrument is described in section 3.2. Each observation is an employment contract. The sample only includes non-permanent workers (Temp workers, part-time work, on-call workers). Log(Labor HHI) is the logarithm of the Herfindalh-Hirschman index for the labor market, as described in equation 2.2. A labor market is defined over a commuting zone, a 4-digit occupation, and through time quarters. Log(Product HHI Revenues (Global)) is the logarithm of the Herfindahl-Hirschman index for the product market defined at the national level using industry revenues. There are two individual level control variables: gender (equal to one if the worker is a man, zero otherwise) and age (in years). There are two firm level control variables: Log(Value Added per Worker) and Log(Number of Employees). The latter is the number of reported full-time equivalent number of workers in the firm over the year. The former is the log of total value added (revenues minus intermediary costs) over a year divided by the number of full-time equivalent employees. The gender fixed-effect cannot be identified in specification (v). The log-log specification was used because the data presents a linear relationship under this form. The log-log specification lends itself to the following interpretation of the main coefficient of interest in column (5): *ceteris paribus*, a 10% increase in labor market concentration lowers wages by approximately $-0.0679 \times 0.01 = 0.6\%$.

F.3 Employment

F.3.1 No Weights

Table 41: Ordinary Least Squares Estimates for Employment, including Global (economy wide) Product Market HHI, No Weights

	(1)	(2)	(3)
	Log(Nb. Recruits)	Log(Nb. Recruits)	Log(Nb. Recruits)
Log(Labor HHI)	-0.969***	-0.810***	-0.677***
	(0.000982)	(0.00122)	(0.00129)
Log(Global Revenue HHI)	-0.166***	-0.0508***	-0.0197***
	(0.00119)	(0.00127)	(0.00128)
(Mean) Sex	-0.0387***	-0.0446***	-0.0171***
	(0.00250)	(0.00242)	(0.00222)
(Mean) Age	-0.00142***	-0.00119***	-0.0000810
	(0.0000780)	(0.0000755)	(0.0000686)
(Mean) Log(Value Added Per Worker)	-0.0113***	-0.0185***	-0.0115***
	(0.00125)	(0.00122)	(0.00114)
(Mean) Log(Number of Employees)	0.0790***	0.0725***	0.0420***
	(0.000410)	(0.000404)	(0.000401)
Time FE	Yes	Yes	Yes
Commuting Zone FE	No	Yes	No
Commuting Zone x 4-Digit Occupation FE	No	No	Yes
4-Digit Occupation FE	Yes	Yes	No
R^2	0.768	0.782	0.870
Adjusted R^2	0.768	0.782	0.857
F	256212.6	80503.9	47019.3
Observations	805670	804173	792757

Standard errors in parentheses

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

Note: This table presents the regression output from an ordinary least squares regression using the Log(Number of New Jobs) as a dependent variable. Each observation corresponds to a market (a time quarter by a commuting zone by an occupation). Mean Log(Labor HHI) is the mean of the logarithm of the Herfindalh-Hirschman index for the labor market, as described in equation 2.2. A labor market is defined over a commuting zone, a 4-digit occupation, and through time quarters. Mean Log(Global Product HHI) is the mean of the logarithm of the Herfindalh-Hirschman index for the product market. It is defined over revenues at the industry level. There are two population level control variables: the mean gender (equal to one if all workers are men, zero if all workers are female) and the mean age (in years). There are two firm population level control variables: the Mean Log(Value Added per Worker) and the Mean Log(Number of Employees). These variables are constructed by weighting the characteristics of the recruiting firms by their current labor market share. The log(Number of Employees) is the number of reported full-time equivalent number of workers in the firm over the year. The Log(Value Added per Worker) is the log of total value added (revenues minus intermediary costs) over a year divided by the number of full-time equivalent employees. The log-log specification was used because the data presents a natural linear relationship under this form. The log-log specification lends itself to the following interpretation of the main coefficient of interest in column (3): ceteris paribus, a 10% increase in labor market concentration lowers new recruits by approximately $0.677 \times 0.01 = 6.77\%$
Source: DADS, FARE, and authors' calculations.

Table 42: Instrumental Variables Estimates for Employment, including Global (economy wide) Product Market HHI, No Weights

	(1)	(2)	(3)
	Log(Nb. Recruits)	Log(Nb. Recruits)	Log(Nb. Recruits)
Log(Labor HHI)	-1.324***	-1.278***	-1.297***
	(0.0208)	(0.0116)	(0.00879)
Log(Global Revenue HHI)	-0.0177***	-0.0316***	-0.00525
	(0.00538)	(0.00404)	(0.00399)
(Mean) Sex	-0.0447***	-0.0438***	-0.0212***
	(0.00275)	(0.00263)	(0.00255)
(Mean) Age	-0.000654***	-0.000910***	0.000205***
	(0.000101)	(0.0000825)	(0.0000790)
(Mean) Log(Value Added per Worker)	-0.0232***	-0.0241***	-0.0129***
	(0.00151)	(0.00133)	(0.00131)
(Mean) Log(Number of Employees)	0.0703***	0.0741***	0.0531***
	(0.000683)	(0.000446)	(0.000492)
Time FE	Yes	Yes	Yes
Commuting Zone FE	No	Yes	No
Commuting Zone x 4-Digit Occupation FE	No	No	Yes
4-Digit Occupation FE	Yes	Yes	No
Observations	805670	804173	792757

Standard errors in parentheses

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

Note: This table presents the regression output from a two stage least squares regression using the Log(Number of New Jobs) as a dependent variable. The instrument is described in section 3.2. Each observation corresponds to a market (a time quarter by a commuting zone by an occupation). Mean Log(Labor HHI) is the mean of the logarithm of the Herfindalh-Hirschman index for the labor market, as described in equation 2.2. A labor market is defined over a commuting zone, a 4-digit occupation, and through time quarters. Mean Log(Global Product HHI) is the mean of the logarithm of the Herfindalh-Hirschman index for the product market. It is defined over an industry and year There are two population level control variables: the mean gender (equal to one if all workers are mean, zero if all workers are female) and the men age (in years). There are two firm population level control variables: the Mean Log(Value Added per Worker) and the Mean Log(Number of Employees). These variables are constructed by weighting the characteristics of the recruiting firms by their current labor market share. The log(Number of Employees) is the number of reported full-time equivalent number of workers in the firm over the year. The Log(Value Added per Worker) is the log of total value added (revenues minus intermediary costs) over a year divided by the number of full-time equivalent employees. The log-log specification was used because the data presents a natural linear relationship under this form. The log-log specification lends itself to the following interpretation of the main coefficient of interest in column (3): *ceteris paribus*, a 10% increase in labor market concentration lowers new recruits by approximately $-1.297 \times 0.01 = 12.97\%$.
Source: DADS, FARE, and authors' calculations.

F.4 Weighted by Number of Workers Recruited

Table 43: Ordinary Least Squares Estimates for Employment, including Global (economy wide) Product Market HHI, Weighted by Mean Number of Workers Recruited

	(1)	(2)	(3)
	Log(Nb. Recruits)	Log(Nb. Recruits)	Log(Nb. Recruits)
Log(HHI - Labor)	-0.747***	-0.385***	-0.306***
	(0.000314)	(0.000323)	(0.000319)
Log(HHI Global Revenue)	-0.808***	-0.237***	-0.186***
	(0.000415)	(0.000451)	(0.000445)
(mean) sex	0.0172***	-0.166***	-0.0576***
	(0.00149)	(0.00126)	(0.00106)
(mean) age	-0.00300***	-0.00579***	-0.00330***
	(0.0000468)	(0.0000393)	(0.0000321)
(mean) log_productivity	0.0235***	0.0193***	0.00348***
	(0.000679)	(0.000578)	(0.000498)
(mean) log_firm_size	0.216***	0.172***	0.107***
	(0.000202)	(0.000176)	(0.000168)
Time FE	Yes	Yes	Yes
Commuting Zone FE	No	Yes	No
Commuting Zone x 4-Digit Occupation FE	No	No	Yes
4-Digit Occupation FE	Yes	Yes	No
R^2	0.878	0.915	0.955
Adjusted R^2	0.878	0.915	0.954
F	7419742.7	472891.7	241559.4
Observations	11423271	11138856	11129066

Standard errors in parentheses

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

Note: This table presents the regression output from a weighted ordinary least squares regression using the Log(Number of New Jobs) as a dependent variable. Each observation corresponds to a market (a time quarter by a commuting zone by an occupation). Each observation is weighted according to the mean number of workers recruited across time in the relevant labor market (the commuting zone by an occupation). Mean Log(Labor HHI) is the mean of the logarithm of the Herfindalh-Hirschman index for the labor market, as described in equation 2.2. A labor market is defined over a commuting zone, a 4-digit occupation, and through time quarters. Mean Log(Global Product HHI) is the mean of the logarithm of the Herfindalh-Hirschman index for the product market. It is defined over an industry and year. There are two population level control variables: the mean gender (equal to one if all workers are men, zero if all workers are female) and the mean age (in years). There are two firm population level control variables: the Mean Log(Value Added per Worker) and the Mean Log(Number of Employees). These variables are constructed by weighting the characteristics of the recruiting firms by their current labor market share. The log(Number of Employees) is the number of reported full-time equivalent number of workers in the firm over the year. The Log(Value Added per Worker) is the log of total value added (revenues minus intermediary costs) over a year divided by the number of full-time equivalent employees. The log-log specification was used because the data presents a natural linear relationship under this form. The log-log specification lends itself to the following interpretation of the main coefficient of interest in column (3): ceteris paribus, a 10% increase in labor market concentration lowers wages by approximately $0.306 \times 0.01 = 3.06\%$

Table 44: Instrumental Variables Estimates for Employment, including Global (economy wide) Product Market HHI, Weighted by Mean Number of Workers Recruited

	(1)	(2)	(3)
	Log(Nb. Recruits)	Log(Nb. Recruits)	Log(Nb. Recruits)
Log(Labor HHI)	-4.763***	-2.468***	-2.246***
	(0.0498)	(0.00674)	(0.00404)
Log(Global Revenue HHI)	1.780***	-0.0232***	-0.204***
	(0.0284)	(0.00337)	(0.00289)
(Mean) Sex	-1.461***	-0.116***	-0.220***
	(0.0220)	(0.00277)	(0.00225)
(Mean) Age	0.0377***	0.00694***	0.00756***
	(0.000581)	(0.0000956)	(0.0000710)
(Mean) Log(Value Added per Worker)	-0.625***	-0.183***	-0.0718***
	(0.00928)	(0.00143)	(0.00106)
(Mean) Log(Number of Employees)	0.369***	0.349***	0.310***
	(0.00179)	(0.000688)	(0.000543)
Time FE	Yes	Yes	Yes
Commuting Zone FE	No	Yes	No
Commuting Zone x 4-Digit Occupation FE	No	No	Yes
4-Digit Occupation FE	Yes	Yes	No
Observations	11423271	11138856	11129066

Standard errors in parentheses

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

Note: This table presents the regression output from a two stage least squares regression using the Log(Number of New Jobs) as a dependent variable. The instrument is described in section 3.2. Each observation corresponds to a market (a time quarter by a commuting zone by an occupation) and is weighted according to the mean number of workers recruited across time in the relevant labor market (the commuting zone by an occupation). Mean Log(Labor HHI) is the mean of the logarithm of the Herfindalh-Hirschman index for the labor market, as described in equation 2.2. A labor market is defined over a commuting zone, a 4-digit occupation, and through time quarters. Mean Log(Global Product HHI) is the mean of the logarithm of the Herfindalh-Hirschman index for the product market. It is defined over a year and industry. There are two population level control variables: the mean gender (equal to one if all workers are men, zero if all workers are female) and the mean age (in years). There are two firm population level control variables: the Mean Log(Value Added per Worker) and the Mean Log(Number of Employees). These variables are constructed by weighting the characteristics of the recruiting firms by their current labor market share. The log(Number of Employees) is the number of reported full-time equivalent number of workers in the firm over the year. The Log(Value Added per Worker) is the log of total value added (revenues minus intermediary costs) over a year divided by the number of full-time equivalent employees. The log-log specification was used because the data presents a natural linear relationship under this form. The log-log specification lends itself to the following interpretation of the main coefficient of interest in column (3): *ceteris paribus*, a 10% increase in labor market concentration lowers new recruits by approximately $-2.246 \times 0.01 = 22.46\%$.

F.4.1 Weighted by Number of Firms Recruiting

Table 45: Ordinary Least Squares Estimates for Employment, including Global (economy wide) Product Market HHI, Weighted by Number of Recruiting Firms

	(1)	(2)	(3)
	Log(Nb. Recruits)	Log(Nb. Recruits)	Log(Nb. Recruits)
Log(Labor HHI)	-0.817***	-0.441***	-0.312***
	(0.000381)	(0.000398)	(0.000398)
Log(Global Revenue HHI)	-0.692***	-0.211***	-0.116***
	(0.000505)	(0.000535)	(0.000523)
(Mean) Sex	0.0217***	-0.106***	-0.0276***
	(0.00189)	(0.00158)	(0.00131)
(Mean) Age	-0.00303***	-0.00501***	-0.00231***
	(0.0000593)	(0.0000494)	(0.0000395)
(Mean) Log(Value Added per Worker)	0.0318***	0.0363***	-0.00849***
	(0.000873)	(0.000730)	(0.000604)
(Mean) Log(Number of Employees)	0.194***	0.157***	0.0946***
	(0.000260)	(0.000226)	(0.000210)
Time FE	Yes	Yes	Yes
Commuting Zone FE	No	Yes	No
Commuting Zone x 4-Digit Occupation FE	No	No	Yes
4-Digit Occupation FE	Yes	Yes	No
R^2	0.895	0.928	0.964
Adjusted R^2	0.895	0.928	0.963
F	4853383.9	330682.3	134410.0
Observations	5916965	5916964	5906298

Robust Standard errors in parentheses

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

Note: This table presents the regression output from a weighted ordinary least squares regression using the Log(Number of New Jobs) as a dependent variable. Each observation corresponds to a market (a time quarter by a commuting zone by an occupation). Each observation is weighted according to the mean number of different firms recruiting across time in the relevant labor market (the commuting zone by an occupation). Mean Log(Labor HHI) is the mean of the logarithm of the Herfindalh-Hirschman index for the labor market, as described in equation 2.2. A labor market is defined over a commuting zone, a 4-digit occupation, and through time quarters. Mean Log(Global Product HHI) is the mean of the logarithm of the Herfindalh-Hirschman index for the product market. It is defined over an industry and year. There are two population level control variables: the mean gender (equal to one if all workers are men, zero if all workers are female) and the mean age (in years). There are two firm population level control variables: the Mean Log(Value Added per Worker) and the Mean Log(Number of Employees). These variables are constructed by weighting the characteristics of the recruiting firms by their current labor market share. The log(Number of Employees) is the number of reported full-time equivalent number of workers in the firm over the year. The Log(Value Added per Worker) is the log of total value added (revenues minus intermediary costs) over a year divided by the number of full-time equivalent employees. The log-log specification was used because the data presents a natural linear relationship under this form. The log-log specification lends itself to the following interpretation of the main coefficient of interest in column (3): ceteris paribus, a 10% increase in labor market concentration lowers new recruits by approximately $0.312 \times 0.01 = 3.12\%$

Table 46: Instrumental Variables Estimates for Employment, including Global (economy wide) Product Market HHI, Weighted by Number of Recruiting Firms

	(1)	(2)	(3)
	Log(Nb. Recruits)	Log(Nb. Recruits)	Log(Nb. Recruits)
Log(Labor HHI)	-2.083***	-1.854***	-2.047***
	(0.00915)	(0.00522)	(0.00477)
Log(Global Revenue HHI)	0.339***	-0.106***	-0.133***
	(0.00643)	(0.00335)	(0.00355)
(Mean) Sex	-0.288***	-0.0849***	-0.131***
	(0.00449)	(0.00280)	(0.00272)
(Mean) Age	0.00740***	0.00266***	0.00608***
	(0.000136)	(0.0000924)	(0.0000849)
(Mean) Log(Value Added per Worker)	-0.213***	-0.141***	-0.0597***
	(0.00258)	(0.00146)	(0.00126)
(Mean) Log(Number of Employees)	0.240***	0.267***	0.267***
	(0.000535)	(0.000570)	(0.000635)
Time FE	Yes	Yes	Yes
Commuting Zone FE	No	Yes	No
Commuting Zone x 4-Digit Occupation FE	No	No	Yes
4-Digit Occupation FE	Yes	Yes	No
Observations	5916965	5916964	5906298

Robust Standard errors in parentheses

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

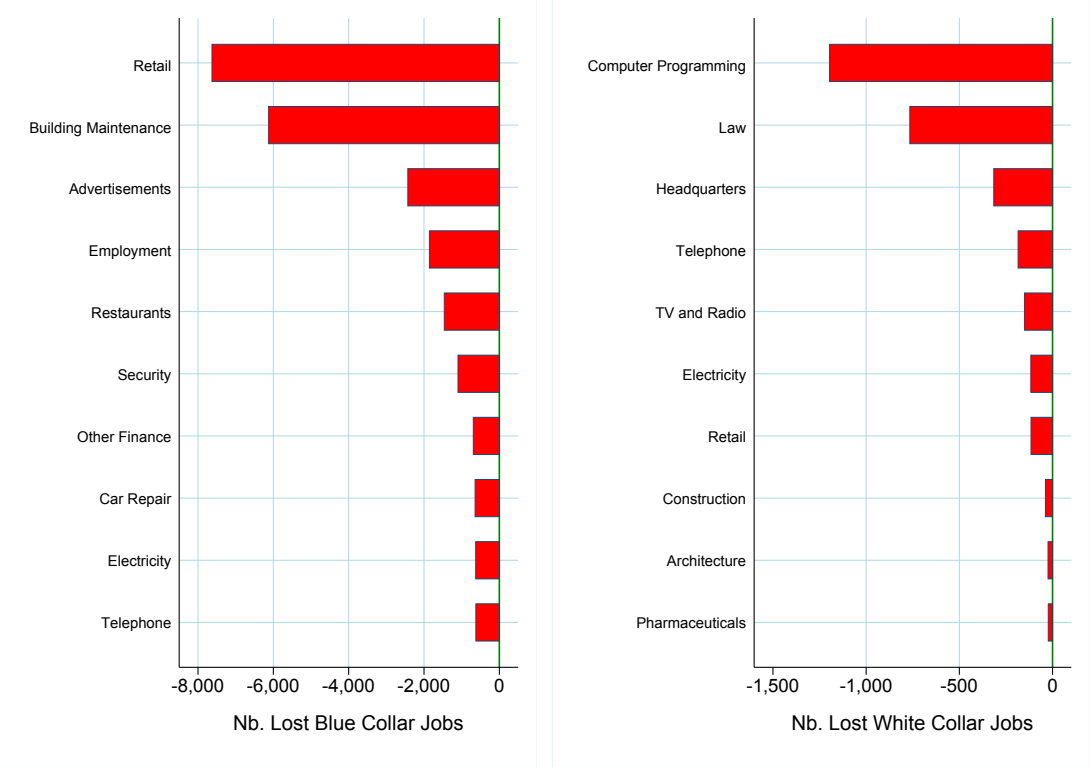
Note: This table presents the regression output from a two stage least squares regression using the Log(Number of New Jobs) as a dependent variable. The instrument is described in section 3.2. Each observation corresponds to a market (a time quarter by a commuting zone by an occupation) and is weighted according to the mean number of different firms recruiting across time in the relevant labor market (the commuting zone by an occupation). Mean Log(Labor HHI) is the mean of the logarithm of the Herfindalh-Hirschman index for the labor market, as described in equation 2.2. A labor market is defined over a commuting zone, a 4-digit occupation, and through time quarters. Mean Log(Global Product HHI) is the mean of the logarithm of the Herfindalh-Hirschman index for the product market. It is defined an industry and year. The product market is defined over a commuting zone and at the industry level. There are two population level control variables: the mean gender (equal to one if all workers are men, zero if all workers are female) and the mean age (in years). There are two firm population level control variables: the Mean Log(Value Added per Worker) and the Mean Log(Number of Employees). These variables are constructed by weighting the characteristics of the recruiting firms by their current labor market share. The log(Number of Employees) is the number of reported full-time equivalent number of workers in the firm over the year. The Log(Value Added per Worker) is the log of total value added (revenues minus intermediary costs) over a year divided by the number of full-time equivalent employees. The log-log specification was used because the data presents a natural linear relationship under this form. The log-log specification lends itself to the following interpretation of the main coefficient of interest in column (3): *ceteris paribus*, a 10% increase in labor market concentration lowers new recruits by approximately $-2.047 \times 0.01 = 20.47\%$.

G Simulation

Table 47: Simulation Summary Statistics (2015)

	count	min	max	p25	p50	p75	mean	sd
Original Labor Market HHI	2640456	.000638	1	.025	.071079	.2132964	0.176	0.246
Post Merger Labor Market HHI	2640456	.000638	1	.0257633	.0722399	.2137724	0.177	0.246
Change in Labor Market HHI	2640456	0	.5	0	0	0	0.000563	0.00594
Income Loss (in industry)	2640456	-255.3077	0	-29.27955	-4.711514	-.7678794	-17.90	27.75
Income Loss (in industry, conditional)	2640028	-762.8877	-1.836012	-152.7229	-50.956	-15.96773	-76.89	85.23

Note: The line *Original Labor Market HHI* presents the descriptive statistics for the observed level of labor market concentration for each individual. The line *Post Merger Labor Market HHI* presents the descriptive statistics for the level of labor market concentration for a worker after simulating the merger in her own industry (i.e,if a worker is in the car repair industry, then the reported HHI is the one this individual would have after the two largest companies in the car repair industry merge). The line *Change in Labor Market HHI* concerns the difference between the first two lines. The line *Income Loss (in industry)* presents the descriptive statistics for the loss of income of workers when there is a merger in their own industry (i.e, when there is a merger in the car repair industry when the worker is employed in the car repair industry).
Source: DADS, FARE, and authors' calculations.



(a) (b)

Figure 9: Industry Employment Loss in Blue and White Collar Jobs

Graph 9(a) : Each line represents the annual expected new blue collar jobs lost for workers across France induced from a merger in *that* industry (i.e, a merger in the Retail industry would reduce annual recruitment of blue collars by 7500 jobs across France). It is calculated based on equation 4.2 and implicitly assumes that the wages of old workers (in the stock) are not impacted. A white collar job is defined as having an occupation number starting with 5 and 6 in the French *Professions et catégories socioprofessionnelles* occupation classification system.
Graph 9(b): Each line represents the annual expected new white collar jobs lost for workers across France induced from a merger in *that* industry (i.e, a merger in the Computer Programming industry would reduce annual recruitment of white collar workers by 1200 jobs across France). It is calculated based on equation 4.2 and implicitly assumes that the wages of old workers (in the stock) are not impacted. A white collar job is defined as having an occupation number starting with 3 in the French *Professions et catégories socioprofessionnelles* occupation classification system.