Rent sharing in China:

Magnitude, heterogeneity and drivers*

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Abstract

Do firms in China share rents with their workers? We address this question by examining firm-level panel data covering virtually all manufacturing firms over the period 2000-2007, representing an average of 52 million workers per year. We find evidence of rent sharing (RS), with wage-profit elasticities of between 4% and 6%. These results are based on multiple instrumental variables, including firm-specific international trade shocks. We also present a number of complementary findings to understand better the nature of RS in the country: it involves an element of risk sharing, as wages also decrease when profits fall; RS is lower in regions with more latent competition from rural workers; higher minimum wages tend to reduce RS; and, while employer labour market power reduces wages, it increases RS. Overall, despite its importance, RS in China is smaller and more symmetric than in developed economies, which reflects the weaker bargaining power of its workers and the earlier stage of development of its labour market institutions.

Keywords: Wages, Bargaining, Monopsony.

JEL Codes: J31, J41, J50.

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1 Introduction

China's emergence in the world economy starting in the 1990s was underpinned by a massive process of labour reallocation delivered by the country's nascent labour market, with millions of individuals moving from agrarian, largely subsistence work to factories across the country. This paper investigates the functioning of China's labour market in the 2000s, a critical stage of this transition process, focusing on wage determination. In particular, we ask if wages in the manufacturing sector in China are essentially as predicted by a competitive model, with workers of a given skill paid their market rate, regardless of the financial situation of their firm? Or is it that workers employed at more profitable firms tend to be paid higher wage rates compared to similar workers at less profitable firms? Our study is one of the first to examine this critical aspect of the labour market of China - the extent of rent sharing - and the first to do so using comprehensive data.

Our analysis of China's labour market is important also because the far-reaching consequences of China's emergence in the world economy, including in the labour markets of developed economies (Autor et al., 2013; Cabral et al., 2021). Our study is also of particular interest given the country's particular institutional structure. Despite its impressive economic growth over the last decades, many formal labour market institutions that are common in OECD countries are at a much earlier stage of development in China (Song, 2017). These institutions include collective bargaining, independent trade unions, and employment protection law, as well as unemployment benefits and other forms of social protection. For instance, trade unions in China are indirectly controlled by the government and the ruling Communist Party, through their affiliation with the single national organisation (ACFTU), and generally led by firm managers, not blue-collar workers. Unwritten labour contracts - which can increase the flexibility in the setting and adjustment of working conditions by employers - are also common, reflecting the generally limited scope and enforcement of employment protection law.

These institutional aspects are relevant in our analysis as all of the labour market institutions above can strengthen the bargaining power of workers and explain at least part of the significant levels of rent sharing that have been documented in many OECD countries over the years, under different methodologies and data sets (Abowd and Lemieux, 1993; Blanchflower et al., 1996; Black and Strahan, 2003; Bronars and Famulari, 2001; Arai, 2003; Martins, 2009; Card et al., 2014; Dobbelaere and Mairesse, 2018). The much more limited number of studies that consider the cases of developing or emerging countries include Teal 1996, Bigsten et al. 2003, and Martins and Esteves 2006. Knight and Li 2005 consider the case of China, using two cross-section surveys conducted in 1995 and 1999, and find that workers that indicate that their firms had higher levels of profits are paid higher wages.

Our analysis draws on comprehensive panel data covering virtually all manufacturing firms in China over the critical growth period of 2000-2007, including World Trade Organisation membership and the subsequent expansion in export-oriented manufacturing and its employment. Our data set corresponds to an average of 200,000 firms and 52 million workers per year. Earlier studies in the rent sharing literature that also consider firm-level data include Van Reenen 1996, Hildreth and Oswald 1997 and, more recently, Barth et al. 2016. While one cannot fully control for changes in the profiles of the workforce of each firm over time with this type of data, our empirical analysis is based on exogenous variation in profits driven by a number of instruments: the profits of other firms of the same industry in other regions, the potentially sizable and variable subsidies awarded by the government to firms, and interactions between lagged firm-level exports and, most importantly, the weighted effective exchange rate of each firm. We also control for firm fixed effects, a number of time-varying variables, and year effects (which we allow to vary very flexibly, by province and two-digit industry pair). Moreover, we consider the robustness of our findings to multiple alternative measures of rents, such as profits before and after taxes or wages, and value added.

Our results indicate that rent sharing is an important attribute of the Chinese labour market. However, our estimates are at the lower bound of the international evidence. In our

main IV estimations, we find elasticities of about 4%. When considering alternative measures of rents (profits before the wage bill), our elasticities increase to 6%. In both cases, these elasticities are significantly smaller than the average estimate of 15% for firm-level studies that is reported by Card et al. 2018 in their review of the rent sharing literature, covering exclusively developed countries.

Furthermore, we find widespread evidence of rent sharing across the multiple sub-samples we consider as well as a small number of interesting exceptions. The only subsamples where we do not find evidence of rent sharing are foreign firms, firms with a high share of female workers, and firms with a high share of unskilled workers. These exceptions may be explained by the relevance of transfer pricing and international rent sharing between parents and affiliates of multinational firms, and the weaker bargaining power of workers potentially subject to discrimination or that can be more easily replaced.

In addition, we conduct a number of extensions that allow us to understand better the sources and nature of the significant but small rent sharing documented in our benchmark findings. First, we find that rent sharing is symmetric, in the sense that wages increase when profits increase but can also decrease when profits decrease. This suggests a relevant risk sharing dimension in wage determination. Second, we find that rent sharing is dampened by the presence of rural workers in neighbouring regions, which highlights the role of the bargaining power of workers and of differences across firms in the degree to which incumbent workers can be replaced. Third, minimum wages are found to reduce the magnitude of rent sharing. Imposing wage increases to a large percentage of workers regardless of their firms' profitability makes wages less responsive to profits, in part because such wage floors reduce the scope for risk sharing. Finally, we obtain evidence about labour market concentration (Manning, 2011), measured here by employment concentration in the local labour market (using the Herfindhal index) or, in a novel contribution, by the share of each firm's employment in total manufacturing employment in its local labour market. We find that both measures have a negative relationship with wages (Azar et al., 2017) but a generally positive relationship

with rent sharing, suggesting that employer local labour market power may allow firms to shift more risk to workers, increasing the variable component of their total pay.

In conclusion, despite the still emerging nature of many labour market institutions in China, workers' bargaining power appears to play a significant even if small role in shaping the wage distribution. Moreover, rent sharing is found to be shaped by both workers' and employers' (local labour market) bargaining power. While workers are able to extract product market surplus from their firms, firms with greater labour market power also appear to be able to pay lower and more variable wages.

The remaining of the paper is as follows: the next section describes the data used, after which Section 3 presents the main results. Sections 4 and 5 study the heterogeneity of our findings across different subsamples and present a number of extensions, respectively. Finally, Section 6 concludes.

2 Data

Our main data source is the Chinese Industry Enterprises Database (CIED). This is an annual survey of industrial firms conducted by the National Bureau of Statistics of China (NBSC), including all non-state-owned enterprises with annual sales of at least five million Chinese yuan (approximately USD 650,000) and all state-owned industrial enterprises (regardless of their size). These data have already been used in a number of studies, including Hsieh and Klenow 2009 and Bai et al. 2018.

CIED covers 40 two-digit industries, spread across all 31 mainland China provinces and all their municipalities. In our analysis, we consider the period of 2000-2007 and 28 manufacturing sectors (Upward et al., 2013).[1] According to Brandt et al. 2012, manufacturing firms in CIED in 2004 accounted for over 90% of total sales and 70% of employment of all manufacturing firms in China in that year.[2]

[1]There are 30 manufacturing sectors in total, while manufacture of Tobacco and Recycling and Disposal of Waste are not included in our sample. Manufacturing firms take up 90% of all enterprises in CIED (Nie et al., 2012).

[2]These statistics are consistent with our own calculations using population data on all manufacturing firms

The CIED data set contains two sets of information of each surveyed enterprise. One is the basic information of the enterprises, including firm's identification, name, ownership, opening year, address, number of workers, etc. The second set is the financial data from firms' balance sheets, income and cash flows statements, including gross profits, total wages, fixed assets, gross industrial output, value of inventories, etc. We use this information to follow firms over time, adopting the algorithm and program files of Brandt et al., 2012.

Total wages, which is our main dependent variable, refer to the total remuneration payments (total wage bill) for employees in each firm's possibly multiple establishments during the reporting period (the twelve months of each calendar year). Total wages consist of six parts (hourly wages, piece wages, bonuses, allowances and subsidies, overtime wages, and wages paid in particular cases), all collected into a single variable. We also consider additional information recorded in CIED in the year of 2004 alone, when China's economic census took place. For example, 2004 data reports the number of workers in each firm also by gender, education background and job titles, as well as information about the firm's trade union status, all of which we explore below.[3]

Our secondary data source is the Chinese Customs Trade Statistics (CCTS), which provides detailed monthly information on the universe of Chinese import and export transactions, conducted by the General Administration of Customs of China (GACC). CCTS records firm identification variables (name, address, postcode, telephone) and USD values of each firm's

of a Western country, Portugal (QP 2004 data set). In this case, imposing the same sales and number of workers restrictions of CIED would lead to a sample of 81.3% of total manufacturing sales and 75.7% of all manufacturing employment.

[3] A detailed description of total wages can be found at `www.stats.gov.cn/english/`. Note that, although CIED provides rich firm-level information, some variables may be subject to noise, in large part as a result of potential mis-reporting by some firms. Following Cai and Liu 2009 and Feenstra et al., 2014, and guided by the 'General Accepted Accounting Principles' document, we clean the data set and drop firm-year observations according to the following restrictions that we impose: (1) key variables (such as wages, sales, value added, gross output, income tax, net value of fixed assets and inventory) must be greater or equal to zero (and non-missing), while total profits cannot be missing either; (2) the number of workers employed by a firm must not be less than 8 (the minimum imposed by CIED); (3) a firm's identification number cannot be missing and the year must refer to the period 2000-2007; (4) total assets must be higher than or equal to liquid assets, total fixed assets and the net value of the fixed assets; (5) the ratio of value added to sales must be between zero and one; (6) paid-in capital must be greater than zero and its components cannot be less than zero; and (7) total liabilities, total current liabilities, long-term liabilities and welfare cannot be less than zero; (8) we also delete firm-year observations in the top and bottom 0.5 percentiles in wages per worker and gross profits per worker, in order to reduce the influence of outliers.

imports (exports) at the eight-digit product level, from each source (to each destination) country. (For a detailed description of this data and earlier applications, see Manova and Zhang 2012 and Manova and Yu 2017, for instance.) While each firm in the CIED and CCTS data has a unique and time-invariant number, these are not the same in the two data sets. We thus use the firms' names, which are available in the two data sets, as the main matching variable to merge these data sets (Tian and Yu, 2013). For a small group of firms with missing names, we further adopt the combination of firms' postcode or address and the last 7 digits of telephone number to identify and link firms in both data sets. We also aggregate the imports (and exports) of each firm by year.

Our final sample is an unbalanced panel ranging between 122,788 firms in 2000 and 292,708 firms in 2007. Tables B1 and B2 report additional information about the data and its size. There are on average over 200,000 firms and nearly 52 million workers per year. (This figure compares with total employment (including farming activities) of about 740 million workers per year.) There are more then 450,000 different firms in total of which 113,484 firms are present in one year only and 36,324 firms are present in all eight years covered.[4]

Nominal variables are converted to 2007 real values. We use the CPI as the price deflator of wages and labour costs, the GDP deflator for gross profits, net profits, value added, exports, imports and subsidies, and the Price Index of Investment in Fixed Assets for the average balance of net fixed assets. All these price indices are collected from the National Bureau of Statistics of China (NBSC). For gross output, we adopt the output deflator from Brandt et al. 2012. Based on firms' registered capital ownership, we group firms into four categories: state-owned firms, collective-owned firms, private firms and foreign-owned firms, the latter group including firms from Hong Kong, Macao, and Taiwan (HMT). We also consider the

[4]Total employment in the sector increased by over 59%, which is mostly driven by the growth of the number of firms (over 100%) as continuing firms increase their employment by 11%. Part of the increase in the number of firms and workers over the period is driven by the increased coverage of the data set from 2004, following the census conducted in that year. Tables B1 and B2 also describe the subsets of exporting firms, defined here as firms that export a non-zero share of their output in a given year. We find that almost one third of the workers in the data are employed by export firms although the numbers of export firms only account for 13%-22% of all firms each year.

regional distribution of firms in terms of three main geographical areas.[5]

2.1 Descriptive Statistics

Table 1 presents our key summary statistics, based on our full sample of 1.57 million firm-year observations over the period 2000-2007. The mean of our key variable, average annual wages per worker per firm-year, in thousands of yuan, is 13.9 . When including welfare payments (health, childcare and unemployment allowances provided by the firm), average labour costs increase to 15.8. 'Gross profits per worker (after the wage bill)' correspond to total profits, after subtracting wage payments but including (not subtracting) profit tax payments, divided by the number of workers. This is the main explanatory variable used in our empirical analysis. Its average in our sample is of 15.7 thousand yuan.[6]

In our sample, firms employ an average of 253 workers, although the dispersion of this variable is particularly high (standard deviation of 926). Firms' age is on average 9.3 years. Average capital per worker is 76.4 thousand yuan while average gross output per worker is 3641.4 thousand yuan. Nearly 13% of the firms receive public subsidies, which correspond to an average of one thousand yuan per worker (across all firms). As to our international trade variables, average exports (imports) per worker are 28 (15) thousand yuan.

We find that more than half of all firms in the data are private. Only 7% are State-owned,

[5]Specifically, following the standard definition of a foreign firm in China, we classify firms as foreign firms if more than 25 percent of stock shares are controlled by foreigners, and for the rest firms, we categorized them into state-owned firms, collective-owned firms, private firms according to the largest ownership share in registered capital. The provinces in each area are the following: 1) Eastern area - Beijing, Tianjin, Hebei, Liaoning, Shanghai, Jiangsu, Zhejiang, Fujian, Shandong, Guangdong, and Hainan; 2) Central area - Shanxi, Jilin, Heilongjiang, Anhui, Jiangxi, Henan, Hubei, and Huna); and 3) Western area - Chongqing, Gansu, Guangxi, Guizhou, Inner Mongolia, Ningxia, Qinghai, Shaanxi, Sichuan, Xinjiang, Tibet, and Yunnan.

[6]All variables are deflated to 2007 yuan. Using 2018 exchange rates, the average annual salary corresponds to USD 2,099. As to inequality, in 2004, the ratio of (employment-weighted) wage percentiles was 3.87 (percentile 90 divided by percentile 10), 2.09 (p90/p50) and 1.85 (p50/p10). The average of 'Gross profits per worker (before the wage bill)' is naturally higher, at 30.4 thousand yuan. (These profits may reflect a better measure of potential rents to share with workers (Martins, 2009) as they include the rents that are eventually shared with workers.) 'Net profits per worker' is equal to the 'Gross profits per worker (after...)' except that the firms' profit taxes are subtracted. In this case, the average is of 13.2 thousand yuan. Average value added per worker is much higher, at 100.4 thousand yuan. All variables have similar descriptive statistics when weighting by firm size (see the bottom of Table 1), although means tend to be slightly higher, as expected.

while 9% are collectively owned[7] and 19.6% are foreign owned.[8] Most firms are located in the Eastern Area, while only 16% and 9.6% are in the Central and Western Areas, respectively. As indicated above, we also observe an increasing number of firms over time: for instance, as many as 18.7% of firm-year observations refer to 2007 while less than 10% are observed in each year of the period 2000-2002.[9]

Before presenting our econometric results, we also examine the data visually. Figure 1 presents the mean wages and profits of all firms in each industry, considering the intermediate year of 2004 alone (Table B3 lists the industry codes used). We find evidence of a very strong positive correlation between these two variables, which is suggestive of the presence of rent sharing in the Chinese labour market. Figure 2 takes this analysis one step forward, by plotting instead the real growth rates of both variables over the period 2000-2007. Again we find evidence of a positive correlation between wages and profits, with the possible exception of the four industries with profit growth rates of over 600%. It is also noteworthy that the real growth rates of wages over this eight-year period are always above 50% and in many cases above 100%. In the particular case of profits, most industries present growth rates above 200%.

3 Main results

Following the suggestive *prima facie* evidence of rent sharing above, we now examine the relationship between wages and profits econometrically. We consider the context of a bargaining

[7]Collectively-owned firms are industrial enterprises where the means of production are owned collectively, including urban and rural enterprises invested by collectives and some enterprises which were formerly owned privately but have been registered in industrial and commercial administration agency as collective units through raising funds from the public.

[8]Table C1 presents descriptive statistics of the variables of Table 1 but comparing firms' characteristics across ownership types. Average wages are much higher in foreign firms, followed by private firms. State and collective firms come last. Average profitability follows the same ranking across these four groups.

[9]This is described in greater detail in Table B1, where we present the number of firms in each year (122,788 in 2000 and 292,708 in 2007, for instance) as well as the number of workers over the same period (41 million in 2000 and 65 million in 2007) and the average firm sizes (which decline from 330 workers in 2000 to 221 in 2007). In an appendix, Table B1 also presents the number of exporting firms and their workforce size in each year, which exhibit even higher growth over the period. Furthermore, Table B2 presents the distribution of the number of years in the data of each firm, where we find that as many as 36,324 firms are present in all eight years.

model between employers and workers (Blanchflower et al., 1996) and estimate different versions of the following equation:

$$Wage_{it} = \beta_1 Profit_{it} + \beta_2 X_{it} + \alpha_i + \gamma_{jt} + \varepsilon_{it}, \quad (1)$$

where $Wage_{it}$ is the logarithm of the average wage per worker of firm i in year t, $Profit_{it}$ is a measure of profits per worker of firm i in year t (including or not profit taxes and wages, or value added, depending on the specification), α_i is a firm fixed effect, and γ_{jt} is a set of year effects, potentially varying for each pair of (31) provinces and (28) industries. The key parameter is β_1, which indicates the semi-elasticity of wages with respect to profits.

The equation also includes a vector of control variables (X_{it}), which reflect a set of firm characteristics that may have a direct impact on wages: the logarithm of number of workers, the logarithm of capital per worker (capital intensity) - computed from the net value of fixed assets (Lu and Yu, 2015) -, the age of the firm, and a foreign-ownership dummy variable. These variables may capture differences across firms and over time in worker characteristics that may also be correlated with profits, so that their inclusion leads to more conservative estimates of rent sharing.[10]

Table 2 reports our first set of estimates, based on gross profits after the wage bill, i.e. total profits (per worker) from which wages have been subtracted but profit taxes have not. This type of profits can deliver somewhat lower estimates of rent sharing when compared to its 'before the wage bill' equivalent (Martins, 2009). The first specification considers only year fixed effects, while the second adds the control variables mentioned above (number of workers, capital, firm age, and a foreign-ownership indicator). The third specification also considers firm fixed effects, while the fourth uses (6,944) 'crossed' fixed effects, defined as a fixed effects for each combination of a year (8 dummies), a two-digit industry (28) and a province (31). These firm plus 'crossed' fixed effects models pick up all time-invariant (observed or unob-

[10]Table C2 presents the correlation coefficients (and significance levels) of the key variables used in our main specification.

served) differences across firms plus all business-cycle effects or other shocks that vary over time for each industry-province pair. Finally, specification 5 adopts the same specification as 4 except that observations are weighted using the number of workers of each firm-year. The number of observations is 1.57 million without firm fixed effects and 1.46 million with firm fixed effects (the latter drops 'singleton' observations of firms that appear only once in the data).

We find in all specifications significant and positive effects of profits upon wages. The profits coefficients range between .119 (specification 4) and .260 (specification 1). In our most detailed specification and including employment weights, we find a coefficient of .145. Using these figures, we also compute the wage-profit elasticities (by multiplying the rent sharing coefficient by mean profits) and Lester ranges (the product of the elasticity by four times the standard deviation of profits, divided by the mean profits (Lester, 1952)). The former range between 0.019 and 0.041, while the latter indicates that, in our preferred specification (5), workers that would hypothetically move from low-profit to high-profit firms (two standard deviations below and above mean profits, correspondingly) would see their wages increase by 20.8%. Even when not weighting the data we find significant Lester ranges of 17.5%.

It is also interesting to note the coefficients of some of the remaining variables: We find that firm size (number of workers) depresses average wages, particularly when accounting for firm fixed effects, while capital per worker has the opposite effect. The former result is mostly likely a composition effect, as new hires will necessarily have less experience in the firm and may be less qualified as well and thus earn lower wages than incumbent colleagues, thus driving their firms' mean wages down.[11] Foreign firms pay also significantly higher wages, although this premium is reduced to 4% or less when controlling for firm fixed effects, i.e. when focusing on foreign acquisitions or divestments (Hijzen et al., 2013).

[11]The negative impact of firm size may not be consistent with some existing research. Therefore, we investigated this further by checking if the negative effect of firm size remains after excluding the variable capital intensity: Table C3. We found that the negative effect of firm size on wages remains unchanged (and is even stronger) after excluding capital intensity (both in OLS or in IV estimates). Although there is a significant negative correlation between firm size and capital intensity (Table C2), their correlation coefficient is quite small, at only -0.048.

It is well known that the variation in profits across firms or within firms over time may not be exogenous. For instance, firms with more skilled workers may have higher profits, thus generating a positive bias in rent sharing estimates. Similarly, firms that happen to have a positive shock on their profits (with respect to their industry-province specific profile) may also then hire more skilled and expensive workers, again leading to a positive rent sharing bias. Efficiency wages, in which firms obtain higher productivity from offering higher wages, may also generate spurious rent sharing estimates. On the other hand, as profits are closely related to income tax, some firms may evade tax by under-reporting profits, which may result in lower rent sharing estimates. Moreover, the key variable that we use to measure rents, profits after the wage bill, decreases with wages, which can again underestimate rent sharing.

We seek to address these bias in opposing directions by considering different instrumental variables. The first one is the weighted average profits per worker of firms in the same four-digit industry and in the same year but in other labour markets (of the same province and of other provinces).[12] The average is weighted by each firm's employment. The rationale for this instrument, similar to the one adopted in Card et al. 2018, is that other firms in the same industry and year are likely to have similar profits, as they will be subject to similar product-market demand-side shocks. However, those external profits are not likely to influence directly the wages of an individual firm, other than through the effects of firm's own profits, due to the role of the local labour market. An exception may arise when the labour supply to the sector is strongly inelastic, in which case the labour demand shock may generate a significant equilibrium wage response (Card et al., 2018). However, this is not likely to apply to a large extent in the case of China, especially over the period covered, given the large pool of rural labour keen to take jobs in the manufacturing sector and the external shock related to WTO membership in December 2001. Again, it is important to note that, given the large pool of available rural labour (estimated over this period at between 100 to 150 million workers (Cai,

[12]In China, each province is composed of multiple cities. Each city is composed of multiple counties (*xian*, typically more rural) or districts (*qu*, typically more urban) - see Baum-Snow et al., 2017 for a detailed description. In our paper, all the districts in a city are regarded as one local labour market, whereas each county is regarded as a different local labour market.

2008)), many firms may be facing largely flat labour supply curves.

The second instrument we consider is the value of public subsidies that each firm receives in each year. Public subsidies, as an integral part of China's industrial policy, refer to the monetary assets or non-monetary assets obtained gratis by firms from the government and are allocated across various industries in China (Howell, 2017). Direct subsidies are mainly in the form of special funds allocated to enterprises for R&D and innovation, incentive funds to encourage enterprises to obtain innovation patents, etc.; indirect subsidies are mainly in the form of preferential taxation, such as tax deduction, preferential tax rate and tax rebates,etc. Defever and Riano 2017 analyze the effects of subsidies featuring export share requirements (ESR) in China on exports, the intensity of competition and welfare, and find that subsidy with ESR can boost exports, provide greater protection to low-profitability firms, compared with unconditional subsidy, while subsidy with ESR can also exacerbate the welfare loss of subsidizing exports. However, it is difficult to find any detailed information in CIED on what types of subsidies are obtained by firms. These subsidies are awarded on a largely discretionary basis by the government, although they sometimes target firms with losses, especially SOEs with losses. In any case, the subsidies will contribute positively towards the profitability of the firm - they correspond, on average, to one thousand yuan per worker per firm-year, as indicated in Table 1) - while again they should have no direct effect on wages other than through rent sharing.

Finally, our third instrument is based on international trade shocks. It is defined as the product of the shares of exports in total sales of the firm by the corresponding weighted exchange rate of that firm and year.[13]The rationale is that the higher the share of exports in

[13]The weighted effective exchange rate of firm i in year t is defined as below:

$$WER_{it} = \sum_{k=1}^{n} w_{ikt} * ln(\frac{ER_{k,t}}{ER_{k,0}}), \quad \sum_{k=1}^{n} w_{ikt} = 1$$

where w_{ikt} is the ratio of exports of firm i to country k in its total exports in year t, $ER_{k,t}$ and $ER_{k,0}$ is the bilateral nominal exchange rate between country k and China in year t and the base year, respectively (we select year 2000 as the base year and adopt the indirect quotation). Data on bilateral nominal exchange rate are from Penn World Tables 9.0, which includes nearly 210 countries' exchange rate with respect to the US dollars.

total sales of the firm, the stronger the negative (positive) impact of a domestic currency appreciation (depreciation) on the firm's profits. Again, while this international trade/exchange rate shock should influence profitability, it should have no direct effect upon wages other than through rent sharing.[14] Table 3 - bottom panel - presents our first-stage results. We find that all instruments are significant and have the expected signs. The F-statistics are always extremely high, at 775 or above, and the other standard tests of instrument validity are also passed. When considering the instrumented rent sharing estimates - upper panel -, focusing on our models with all control variables and fixed effects, we find that the rent sharing coefficients and the resulting elasticities and Lester ranges increase considerably and remain highly significant. (The number of observations is smaller in the specifications with the subsidies instrument as the lag structure implies that we lose at least the first observation of each firm.) Lester ranges are of at least 38%, increasing to 44% when considering the three instrumental variables together as well as firm and year fixed effects. Elasticities are of at least 4%.[15] By comparing Tables 2 and 3, we find a much higher degree of rent sharing in IV than OLS estimates, which is consistent with a number of earlier papers (Arai and Heyman, 2009, Martins and Yang, 2015, Kline et al., 2019) and may be driven by measurement error in the profits variable, particularly through under-reported profits and tax evasion.

We also replicate the analysis above using alternative measures of profits, namely gross profits before the wage bill. As predicted, here we find typically higher rent sharing estimates, in which Lester ranges (elasticities) are of at least 38% (7.6%) and as large as 47% (9.5%) (Table 4, first two columns). When considering a broader measure of wages, including welfare costs supported by the firm, we find similar measures of rent sharing - last two columns in Table 4. All estimates are, however, at the bottom of the range documented for developed countries.[16]

[14] See also Park et al. 2010, which uses a similar IV approach in the case of China, and Macis and Schivardi 2016 that find that exporting firms pay wage premiums, in the context of a currency devaluation episode in Italy.

[15] There are nearly 2,100 labour markets every year, with very large average sizes in terms of workers. This suggests that excluding the same province will not change our results. This is indeed what we find, in Table C5.

[16] Tables A7 and A8 present additional robustness checks, in the first case considering value added and log

4 Heterogeneity

Having established our main results, of significant levels of rent sharing in the Chinese labour market, we now test their robustness and potential drivers by considering different groups of firms, defined as a function of their characteristics of those of their workers. Our first analysis, presented in Table 5, compares unionised and non-unionised firms. As in all other results in this section, we draw on IV models (in which we focus on our main instrument, average profits per worker) and the more conservative 'gross profits after wages' measure of rents. We draw on the information about the presence or not of a trade union in the firm in 2004 (the only year in which it is available) to classify firms as unionised or non-unionised, assuming that such 2004 status is unchanged in all other earlier and later years. (As we also drop observations from firms that are not in our data in 2004, we examine a smaller data set, but even in this case with over 1,000,000 firm-year observations.)

As expected from a bargaining perspective, we find that unionised firms exhibit higher levels of rent sharing, with a bigger point estimates (0.259 vs 0.158), elasticities (0.041 vs 0.027) and Lester ranges (36% vs 24%). Only in the case of unionised firms is the coefficient significant. This is despite the relatively weak bargaining power of unions in China and their proximity to the interests of employers and government. Indeed, all unions are affiliated with the ACFTU (All China Federation of Trade Unions), which is controlled by the government. Unions are also often headed by management staff, not by (blue-collar) workers. On the other hand, the wages of employees in unionised firms in China will usually follow from collective agreements (Lu et al., 2010, Zhan and Zhang, 2017), which can be used to capture some of the rents of the firms. In the process of signing collective agreements, trade unions may increase their understanding of the firms they are bargaining with, become more aware of wage regulations and various labour laws, etc. These developments can, at the margin, lead to an increase in the degree of rent sharing, which is picked up by our estimates. In contrast, wages

added value as our measures of profits and in the second case considering a lagged specification. Again we find significant evidence of rent sharing in all cases.

in non-unionised firms may not even be subject to written contracts. Previous evidence on this issue provides contrasting views. For instance, Yao and Zhong 2013, who examine a cross section of over 1,200 firms in China in 2006, find that unionization is significantly associated with higher hourly wages (as well as lower hours and a higher likelihood of pension coverage). On the other hand, Budd et al. 2014 finds that union density does not affect average wage levels in China (Anwar and Sun 2015 finds positive effects but only in some industries). It is also important to take into account the mixed evidence from recent causal studies from developed countries on union effects, at least on productivity (Liu, 2010; Lee and Mas, 2012; Martins, 2019).

We now turn to our analysis of different samples based on worker characteristics. In Table 5 (2nd panel) we also compare firms with above or below median percentages of female workers (using again the information from 2004 data to classify firms in the remaining years). This median is of 28%, reflecting the greater share of male workers in the manufacturing sector. We find striking differences between the two groups: while rent sharing for firms with high shares of male workers is large, with an elasticity of 4.8% and a Lester range of 40%, we do not find evidence of significant rent sharing in the case of firms with above-median shares of female workers. These results are consistent with evidence for other (developed) countries (Black and Strahan, 2003, Nekby, 2003, Martins, 2009). These may reflect multiple factors, including gender discrimination, childcare, skills, mobility costs, or willingness to bargain over pay.

Table 5 (3rd and 4th panels) also considers differences in workers' skill and schooling. We expect that rent sharing will be stronger across firms with more skilled workers, which tend to be less easily replaceable and thus will have stronger bargaining power. Indeed, we find that statistically significant rent sharing can only be found for firms with above-median skilled workforces. (This median corresponds to firms in which the percentage of skilled workers, with a technical job title, is above 3.7%. This percentage reflects the low-skill-labour intensive nature of most manufacturing in China and the consequent relative low degree of

differentiation of its workforce. In the case of schooling, we consider the median of 9.4 years.) In above-median-skill firms, the wage-profit elasticity is of 4.8% and the Lester range is 42%. In firms with below-median skilled workforces, the profits coefficient is still large but imprecise enough not to be significant even at the 10% level, although with an elasticity of 2.2% and a Lester range of 20%, considerably smaller than the case of above-median skill firms.

Table 6 compares rent sharing across four types of firm ownership (State-, collective-, private- and foreign-owned firms). Here we find significant effects in all cases except foreign firms. The lack of rent sharing in the case of foreign firms may appear surprising, at least because their HRM practices could be expected to involve significant levels of variable pay. These findings may be explained by rent sharing that is a function largely of the profits of the multinational parents and not necessarily or mostly of the profits of the affiliate in China (Martins and Yang, 2015). Particularly in a context of transfer pricing, the host economy profitability of the multinational firms may be only loosely related to the actual profitability of the affiliate.

Table 7 considers the cases of capital intensity, firm size (samples split at the median of 105 workers), and firm age (median of 6 years).[17] Table 8 considers the cases of the main regions in the country. Again in most subsamples we find significant rent sharing and Lester ranges of 25% or above. The exceptions are the cases of small firms and new firms and the Central region. It is also noteworthy that the degree of rent sharing is higher in low capital intensive firms, which is contrary to Card et al. 2014, but consistent with Hendricks and Kahn 1982 and Zhan and Zhang 2017. A possible explanation is that as the proportion of skilled workers in China's manufacturing firms is far lower than that in developed countries (the median percentage of skilled workers in 2004 was only 3.7%). Therefore, in firms with high capital intensity, the strong bargaining power of highly skilled workers cannot be fully reflected, and the level of capital intensity more reflects the size of the capital substitution effect on labour

[17]Table C4 compares the results, both in OLS and IV estimates, according to the number of years that the firm is in our data set (reflecting firm entry and exit). Our findings indicate that the longer the firm is in operation, the higher its rent sharing. This is also consistent with our results on firm age.

force (Hendricks and Kahn, 1982). Higher capital intensity may lead to the decentralization of collective bargaining (Zhan and Zhang, 2017), possibly reducing the bargaining power of employees; firms with lower capital intensity rely more on labour force, possibly increasing the influence of collectively organised employees (Weiss, 1966).[18]

5 Extensions

Having established our benchmark findings of significant but relatively small levels of rent sharing in China and its limited heterogeneity across samples, we now investigates its drivers. We consider four dimensions, namely its (a)symmetry and the roles of rural labour, minimum wages and labour market power.

5.1 Asymmetric effects

In an additional analysis and contribution to the rent sharing literature, we examine rent sharing when firms experience different directions of change in their profits. While rent sharing is typically perceived as a positive mechanism for workers, as it increases their wages when profits increase, it can also be regarded as a negative contribution to their welfare if wages are cut because profits fall or become negative. For instance, Juhn et al. 2018 finds evidence that firms in the U.S. insulate workers from idiosyncratic shocks. Similarly, Guiso et al. 2005 find that firms in Italy provide insurance to their workers against temporary but not permanent shocks. Ideally from the workers' perspective, rent sharing would involve some degree of asymmetry, whereby wages increase when profits increase but wages do not decrease when profits fall. The opposite case could be regarded as that of 'risk sharing' (Bigsten et al., 2003), in which firms use their workforce for risk insurance purposes, which may apply in developing countries with less mature financial markets. The desirability of such asymmetry from the

[18] In our robustness checks, we redo our main analysis, based on the full sample and again using IV methods, but considering different net profits (i.e. subtracting taxes) and value added measures. The results are presented in Tables A1 and A2 (net profits, using OLS and IV), Table A3 (gross profits before the wage bill, using OLS), Table A4 (gross profits before the labour costs, using OLS) and Tables A5 and A6 (value added, using OLS and IV). We find in all cases estimates of rent sharing similar or above those of our main results.

workers' perspective is particularly strong taking into account the potential psychological cost from wage cuts, as discussed in the downward wage rigidity literature. Collective bargaining typically delivers such asymmetric arrangements, as wage floors are pushed up during boom periods but tend to not decline during downturns, at least in nominal terms. In other words, this asymmetric arrangement - wage increases when rents increase but wage stability when rents fall - could be regarded as a stronger form of rent sharing (of greater benefit for workers), involving wage insurance, even if the resulting rent sharing estimates are smaller than in the case of full symmetry.

We analyse this question by extending our specification to include an interaction on the role of profits on wages specifically when profits are stable or decreasing (firm-years when total gross profits are lower than the previous year). Under the case of symmetric rent sharing, we would expect a positive coefficient in this interaction. Under the case of asymmetric rent sharing, rent sharing would also be positive when firms experience increases in their profits but zero when firms undergo decreases in profits.

Table 9 presents our results. We find evidence of similar rent sharing effects, with coefficients of 0.209 in the general case and 0.19 in the specific case of firms with decreasing profits. This implies that wages would be subject to a significant decrease when profits drop as the two coefficients would have to added in that case. We therefore interpret these findings as supportive of the case of symmetric rent sharing, which can be regarded as equivalent to risk sharing. In other words, we find evidence that wages increase when profits increase but also decrease when profits fall. However, it is important to bear in mind that the percentage of workers that are exposed to firms with decreasing profits is fairly small.

5.2 Rural labour

In our second extension, we consider the role of rural labour in rent sharing. The availability of large numbers of workers in rural areas keen to take better-paying jobs in manufacturing can be an important force shaping rent sharing. Under a bargaining perspective, the greater the

number of these workers, the weaker the bargaining power of incumbent workers in factories, as they can be more easily replaced, and the smaller the rent sharing that incumbent workers would consequently enjoy.

To test the hypothesis above, we collect data on the rural employment surrounding urban areas where factories are located. We were able to obtain these data from the China Labour Statistics Yearbook for the Jiangsu province alone, during the same period of 2000-2007. We then match this information about rural employment with our main data set, considering six-digit county codes, so that we can relate wage determination in the manufacturing sector, including rent sharing, with the relevance of rural employment in each same region. As Jiangsu is the second largest province in the country in terms of employment and firms, we still obtain a large sample, with over 219,000 firm-years.

Our estimations are based on similar specifications as in our benchmark analyses, except that we add two additional regressors: the level of rural employment and an interaction between that variable and the gross profits of each firm. In both specifications considered, based on year or crossed fixed effects (the latter defined here as year dummies that can vary across two-digit industries), we find - Table 10 - that the interaction variable above is negative and significant. In other words, as expected in our discussion above, rent sharing is found to be dampened by the nearby presence of large numbers of rural workers. We interpret these results as additional evidence that at least part of the mechanism driving our estimates of rent sharing is the relative bargaining power of employers and workers.[19]

5.3 Minimum wages

Can minimum wages represent a form of mandated rent sharing and to that extent explain at least part of our evidence in Section 3? Minimum wages were first introduced in seven

[19]We also considered the potential role from the major expansion in higher education in China during this time period, another important labor force development. Specifically, we added the log of graduates in each province and year to our main specifications, using data from China's Regional Economic Database. From Table C6, we find that our results are still robust after controlling for the increased supply of university graduates. (Note that, as shown in the second and fourth columns of Table C6, we control for industry-province interaction fixed effects instead of industry-province-year interaction fixed effects because of the nature of this variable, which has no variation within within province-year pairs).

provinces in China in 1994, covering not more than 130 cities by the end of 1995 (Huang et al., 2014). Their setting sought to take into account the specific conditions faced in each labour market. Given their decentralised nature, if the setting of minimum wages is influenced by the profitability of firms in each region, then they could indeed shape rent sharing. Differentiated minimum wages could even play some of the role of collective bargaining extensions issued by governments around the world, in which non-unionised firms and workers are also required to comply with the terms of collective agreements, including their multiple minimum wages (Martins, 2021). In this case, this would apply in a context in which collective bargaining is still in its early stages of development.

To investigate this potential alternative explanation for our benchmark findings, we have been able to collect the monthly minimum wages for 2,855 counties across the country between 2004 and 2007, accounting for 96.4% of the total number of counties in China. This data collection was achieved by browsing various government web sites, policy documents, statistical bulletins and official newspapers. When collecting the data, we also took into account that, according to the minimum wage regulations issued by China's Department of Labour and Social Security, the minimum wage standard generally adopts the forms both of a monthly minimum wage and an hourly minimum wage. Moreover, as we also collected the specific dates (month and year) of the implementation of the changes in minimum wages, which may occur at different times in the year and or more than once in a year, we compute the annual average minimum wages by weighting each minimum wage by the number of months in which it was in force during the year. This (weighted) average minimum wage is then matched to our main data set using each firm's six-digit county code and year.[20]

Some descriptive statistics of the resulting data set are presented in Table 11. We find

[20]See Gan et al., 2016 and Mayneris et al., 2018 for recent studies of the impact of minimum wages in China. The wages of firms were also subject to a 'wage guidance system' determined by the labour department of each province, depending on the situation of the local economy (Holz, 2014). Under these not necessarily binding guidelines, firms were required in some cases to increase wages of their workers between lower and upper baselines (e.g. 5 and 20%), varying by province and year. Moreover, state-owned firms were subject to additional constraints in their wage setting: for instance, total wages may have to increase by between .3% and .7% per each 1% increase in the relevant performance measure (profits) of the firm, while average wages could not increase by more than the increase in labour productivity of the firm.

that the average annual real minimum wage (across counties and years) is 5.1 thousand yuan, while the average wage is 15.6 thousand yuan. The resulting average firm-level Kaitz ratio (defined as the ratio between the applicable minimum wage in the county where the firm is located and the mean wage of the firm) is 50.8%, a relatively large number. However, when weighting by firm size, this Kaitz ratio drops to only 46.1%. We also find that annual real minimum wages increased by over 27% between 2004 and 2007. This is again a large number, which underlines the potential of minimum wages to explain at least part of our benchmark results.

Table 12 presents our analysis, considering again the 2004-2007 period. All columns are based on a version of our data aggregated at the county-year level, resulting in 10,866 observations. First, we examine the responsiveness of minimum wages to local profits, which we regard as a necessary condition for minimum wages to be a source of rent sharing. In our first specification, presented in column 1, we regress the log of the minimum wage in each county and year on the (employment-weighted) average profits of the firms in the same county and year, plus county and year fixed effects. Because of the aggregation of the data, here we present estimates excluding instrumental variables, disregarding the potentially endogenous nature of profits and most likely underestimating rent sharing. We find that local minimum wages are significantly and positively associated with average gross profits per worker in each county-year, even if its coefficient can be regarded as low (0.019). This result supports the hypothesis that rent sharing could be driven at least in part by minimum wage setting. In other words, minimum wages may be increasing more in counties where firms' profits are also increasing more, resulting in a form of mandated rent sharing.

However, when considering the log of the average wage per worker in each county-year instead of the log of the minimum wages as our dependent variable, in column 2, we find that the role of average profits is much stronger, by a factor of more than 10 (0.259). Moreover, when we include the minimum wage of each county and year in the log wage specification above, we find that the resulting county-level rent sharing estimates are not affected, even

if the minimum wages coefficient is still positive. In other words, while minimum wages are associated with higher average wages, county-level firm profitability not only still appears to have an independent positive effect on wages but also exhibits a much stronger association with average wages. We also consider an additional specification, in which we add an interaction between average profits and minimum wages to our list of regressors. We find, in column 4, that rent sharing is not affected by minimum wages as the coefficient of the interaction is insignificant. In other words, in county-level analysis, there is no relation between the level of minimum wages and the extent to which wages increase following an increase in the profits of the firms in the county.

Finally, we conduct an analysis at the firm level, by extending our benchmark specification in a similar way. Table 13 presents the results: column 1 shows that the sample we consider here generates similar rent sharing as for the whole population, while column 2 shows that the inclusion of controls for minimum wages does not affect that finding. Finally, we consider the interaction between minimum wages and profits: while its coefficient is very small in an OLS specification, we find that, when instrumenting profits, minimum wages reduce the size of rent sharing. This finding is consistent with our earlier evidence of symmetric rent sharing: minimum wages act as a barrier against wage reductions or slower wage growth and can therefore reduce the scope for (downward) wage adjustments during periods of declining profits.

5.4 Employer market power

In our last extension, we consider the role of monopsony power. While employer local labour market power has received greater attention recently (Manning, 2011; Azar et al., 2017; Card et al., 2018; Martins, 2018), including in terms of its wage implications, monopsony has not been approached explicitly in the context of rent sharing before as far as we know. However, we argue here that employer labour market power can not only affect wages but also the extent to which rents are shared by firms with workers. More specifically, we put forward

and test the hypothesis that employer power may allow firms not only to lower total pay - employer power may also let firms rebalance total pay components by lowering the size of the fixed component while increasing the magnitude of the variable component, the latter related to rent (and risk) sharing. In other words, for a given total level of pay, firms with more employer market power may be able to make salaries more variable.

Before moving to our econometric study of this question, we present a number of graphical analysis that illustrate and compare the potential relevance of employer power across China's local labour markets. Figures 3 and 4 draw on 2004 data only, an intermediate year over the period covered, for illustration purposes, and present the distributions of the shares of each firm's employment in the total employment of all firms in its local labour market and of the shares of each firm's sales in its four-digit industry, respectively. This is an innovative measurement of employer market power which is only possible because of our use of population data. We find that in both cases, these shares tend to be very low, almost always below 2.5%. This is despite of our focus entirely on the manufacturing sector and the exclusion of private firms with sales below five million yuan in the data.

We also examine our data from a different perspective, by considering separately the cases of the 2,097 local labour markets and the 421 four-digit industries in 2004. Figures 5 and 6 present the Herfindhal-Hirschman Indices (HHI; the sum of the square of 100 times the employment or sales share of each firm) across local labour markets or industries, respectively. We find fairly similar distributions, somewhat more dispersed in the case of the labour market (employment) than of the product market (sales). This is consistent with the mean HHIs that we obtain: The mean labour market HHI is 2,077, when not weighting local labour markets by total employment, a figure not very far from the 2,500 value considered to be a threshold at which (product) market power may be significant; however, this measure drops significantly, to 417, when weighting by total employment of each local labour market. We also find that 24.8% of the local labour markets, corresponding to 3.03% of China's manufacturing sector workforce (1.5 million out of 50.1 million), display HHIs greater than 2,500 (519 out of 2,097).

The corresponding average HHI figures in the case of the product market are much lower, at 499 and 186, in part because of the lower number of four-digit industries considered.[21]

Our econometric evidence follows the same models of our main findings of Section 3 but extended to account for the potential role of employer market power. We do this by including in our benchmark wage equation a linear or a quadratic term of the share of the employment of the firm in the total (manufacturing) employment in the local labour market where the firm is located. Moreover, we also include interactions of this linear or quadratic term with our measure of rents (gross profits after the wage bill, as before). While the employment share will pick up the direct effect of employer market power on wages (Azar et al., 2017), the interaction of the employment share with rents will shed light on the novel role of employer market power on rent sharing that we propose here. We consider models with year effects or crossed (year-industry-province) effects as well.

The results, presented in Table 14, indicate that, first, employer market power has a negative effect on wages. This result is consistent with the limited research available, which considers so far almost exclusively the case of the U.S.. In our specifications allowing for non linear relationships, we find some moderating (U-shaped) effects but these are relevant only at very high employer market power levels and are not in any case large enough to reverse the overall negative sign of the relationship. For its most relevant range, a 10 percentage point increase in employer market power (measured as the percentage of the firm's employment in the total manufacturing employment in the local labour market) can be associated to a decline in wages of at least 3.3% (linear specification) or 11% (quadratic model). When considering the role of employer market power on rent sharing, we find, in contrast, a positive relationship, with a coefficient of about 0.3. This implies that rent sharing coefficient would increase from

[21]Figure 7 displays a scatter plot of the local labour market employment shares of the leading firms in each local labour market and their shares in total sales in their four-digit industries, with the size of the circles proportional to the employment level of each firm. Most firms do not exhibit very large product-market shares - indeed, only eight out of 2,097 local labour market leaders have product-market shares above 30% and these have been excluded from the Figure to make it clearer. Moreover, the Figure suggests a lack of a relationship between labour and product market relevance. At the same time, consistently with the differences in concentration in product and labour markets presented before, the latter dimension appears particularly relevant, even taken into account our sample construction criterion, as many firms have large shares of the employment of their local labour markets.

0.18 to about 0.21 ($= 0.18 + 0.1 * 0.29$) in the case of firms with employment shares of 10%. In the quadratic specification, this effect on rent sharing from employer labour market power is again positive and very similar, even if mildly inverted-U-shaped, with a linear coefficient of 1.4 and a quadratic term of -1.6. In other words, a 10% increase in the firm's local labour market share, while holding everything else constant, may increase the overall rent sharing effect, from 0.17 to 0.18 ($= 0.17 + 0.1 * 1.4 - 0.1^2 * 1.6$). We also consider models in which we use the HHI indices (common for all firms in a local labour market) instead of individual firm shares. Again we find that employer concentration has a negative effect on wages but a positive effect on rent sharing. At a HHI of 1000 (or 0.1 in the measurement adopted in the regression), wages would be 3.2% lower and rent sharing would increase by 0.07.

We interpret these novel results as supporting our hypothesis above that firms and workers in a context of employer labour market power, at least in the case of China, engage in a trade-off between wage levels and rent sharing effects. Higher levels of such market power appear to depress wages across the board but also make wages somewhat more responsive to firms' rents. As we have seen before, this trade-off may reflect a form of risk sharing from employers to workers, in which the latter are less insulated from the fluctuations in the product market through this interaction with the firm's power in the local labour market.

6 Conclusions

Do firms in China share rents with their workers? This question that we addressed here is important for multiple reasons. First, despite being the largest and arguably most dynamic labour market in the world, China's labour market is still relatively poorly studied, including in its critical wage determination and income inequality dimensions. Moreover, the intensity of the economic links between China and all other countries implies that a better understanding of the Chinese labour market can facilitate a better understanding of its potentially disruptive effects on labour markets elsewhere (Autor et al., 2013; Cabral et al., 2021). Second, China's

labour institutions are distinctive from those found in OECD economies, also in dimensions that may influence wage determination and workers' bargaining power (including minimum wages, trade unions, collective bargaining and unemployment benefits). At the same time, the large pools of available workers in rural areas represent another potential factor influencing rent sharing.

Our empirical analysis is based on a rich firm-level panel data set covering virtually all manufacturing firms over the critical period 2000-2007, when China joined the World Trade Organisation, including an average of about 200,000 firms and 54 million workers per year. Our data also includes information about a large number of financial and international trade variables, again at the firm level, and some workforce information. We then complement these data with additional information on rural employment and minimum wages that we collected from multiple sources. Furthermore, we exploit the population coverage of our main data set to measure each firm's significance in both its product and labour markets and to study the potential impact of these two dimensions in rent sharing. In this context, and with due attention to institutional aspects, we seek to provide a perspective as comprehensive as possible of the magnitude, heterogeneity and drivers regarding rent sharing in China.

Our main result is that rent sharing is a significant component of wage determination in China. Firms' profitability affects the wage distribution over and above any differences driven by competitive mechanisms. This result is consistent with the findings for many developed countries with very different labour market institutions. In the case of China, using instrumental variable models and a large set of firm and year-industry-province fixed effects and other control variables, we estimate wage-rent elasticities of at least 3% and Lester ranges of at least 45%. Moreover, using alternative measures of rents, these figures can nearly double. However, despite significant, these rent sharing estimates are at the lower bound of similar studies for developed economies and significantly below the average elasticity of 15% documented in Card et al. 2018. We also find that, while rent sharing is pervasive across all multiple subsamples we consider, it is lower in particular cases - including that of firms with

a higher share of women or unskilled workers and non-unionised firms - which can again be consistent with bargaining models.

Finally, we present a number of novel analyses that shed further light on the mechanics behind rent sharing and its interpretation and may be compared in the future with other countries, including both developed and emerging economies. First, rent sharing is found to be largely symmetric, in the sense that wages increase when profits increase but can also decrease when profits decrease, which is also consistent with risk sharing between firms and their workers. Second, rent sharing tends to be smaller in regions with higher numbers of rural workers, reflecting greater potential competition for incumbent workers and more limited bargaining power. Third, minimum wages reduce the degree of rent sharing in the labour market, possibly by reducing the scope for firms to engage in wage cuts, given the binding wage floors. Fourth, we find that, while employer local labour market power tends to depress wages, it also increases rent sharing, which again can be supportive of the relevance of risk sharing in our benchmark rent sharing results.

In conclusion, despite the still emerging nature of many formal labour market institutions and the large imbalances in its labour market (with large pools of available labour in rural areas), both of which can weaken the bargaining power of labour, workers in China already see their wages respond to the profitability of their firms. At the same time, while bargaining power plays an important role in shaping the wage distribution in China, rent sharing is much lower than in developed economies. Moreover, we find that bargaining power matters not only in the product market but also in the (local) labour market, a finding that would be interesting to investigate also in more developed economies.

A question that we leave for further research concerns the wider impact of the moderate levels of rent sharing documented here. Given the large labour pools available in neighbouring rural areas, the significant but limited rent sharing documented in this paper (partly shaped by policy choices) may have played a significant role in the employment growth of the China's manufacturing sector - as well as in the labour markets of other countries.

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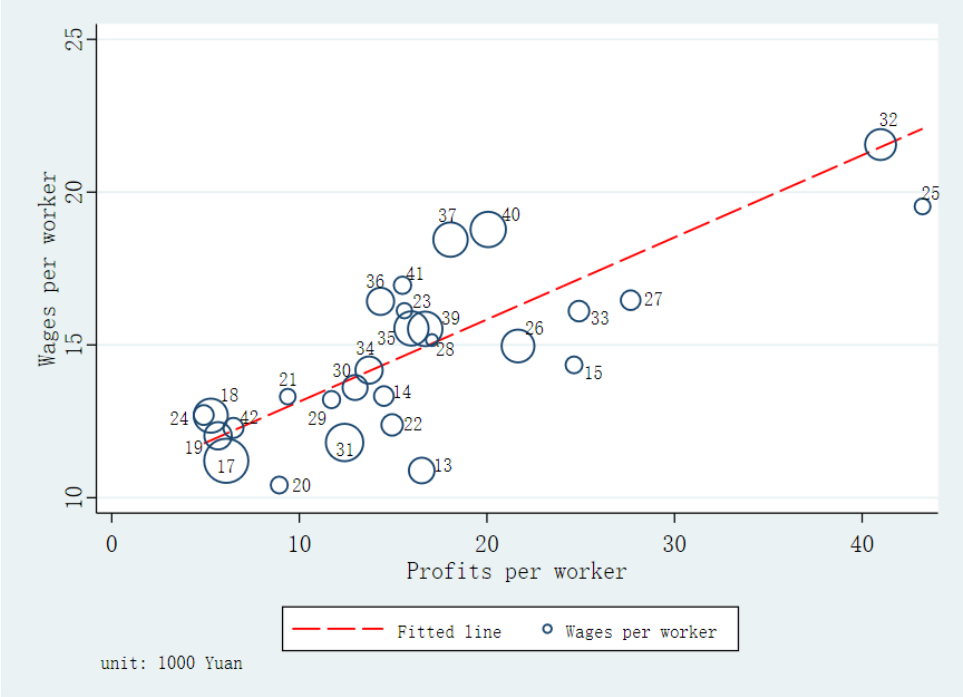

Figure 1: Wages and profits (per worker) by industry, in 2004

Notes: Own calculations based on the Chinese Industry Enterprises Database. Employment-weighted averages of wages and (gross) profits of all firms in each industry. The variables are measured in thousands of yuan per person. The names of each industry are indicated in Table B3. The sizes of the circles are proportional to the employment of the industry.

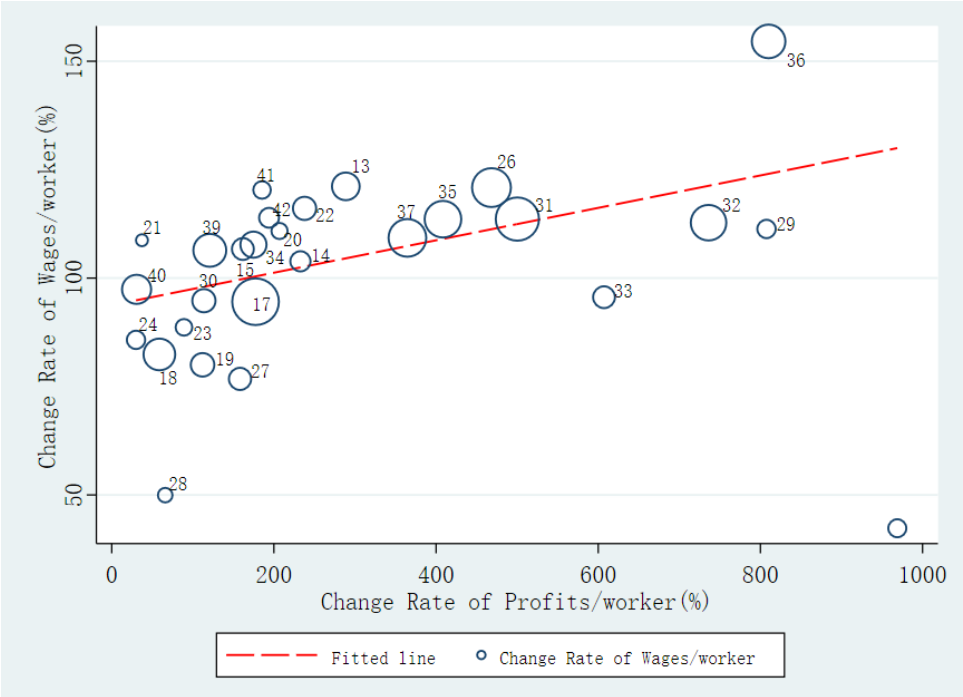

Figure 2: Real growth rates of wages and profits (per worker) by industry, 2000-2007

Notes: Own calculations based on the Chinese Industry Enterprises Database. The name of each industry are indicated in Table B3.

Table 1: Descriptive Statistics: Full Sample (2000-2007)

Variables	**Mean**	**StDev**
Wages per worker	13.91	9.564
Labour Costs per worker	15.83	11.58
Gross Profits per worker (after the wage bill)	0.157	0.371
Gross Profits per worker (before the wage bill)	0.304	0.406
Gross Profits per worker (before the labour costs)	0.325	0.416
Net Profits per worker	0.132	0.357
Added Value per worker	1.004	1.742
Firm Size	253.2	926.0
Firm Age	9.371	10.81
Capital per worker	76.40	153.0
Gross Output per worker	3.644	6.355
Export per worker	0.281	2.146
Import per worker	0.150	2.160
Subsidy Dummy	0.129	0.335
Subsidies per worker	0.009	0.314
State Firms Dummy	0.068	0.252
Collective Firms Dummy	0.092	0.288
Foreign Firms Dummy	0.196	0.397
Labour-intensive Industry	0.564	0.496
Central Area	0.160	
Western Area	0.096	
Textiles (17)	0.088	
Non-metallic Mineral products (31)	0.084	
Transport Equipment (37)	0.047	
Comms, Computers and Other Elect. Equipment (40)	0.033	
General Purpose Machinery (35)	0.079	
Year 2001	0.085	
Year 2002	0.091	
Year 2003	0.104	
Year 2004	0.142	
Year 2005	0.147	
Year 2006	0.165	
Year 2007	0.187	
Weighted analysis (number of workers per firm)		
Wages per worker	15.15	10.47
Labour Costs per worker	17.56	12.63
Gross Profits per worker (after the wage bill)	0.155	0.362
Gross Profits per worker (before the wage bill)	0.316	0.414
Gross Profits per worker (before the labour costs)	0.342	0.427
Net Profits per worker	0.129	0.322
Added Value per worker	0.883	1.364

Notes: Own calculations based on the Chinese Industry Enterprises Database. The number of firm-year observations is 1,568,866. The monetary variables 'Wages per worker', 'Labour Costs per worker', 'Capital per worker' are in thousands of Yuan (RMB). The other monetary variables 'Gross Profits per worker (after the wage bill)', 'Gross Profits per worker(before the wage bill)', 'Gross Profits per worker (before the labour costs)', 'Net Profits per worker', 'Value Added per worker', 'Gross Output per worker', 'Exports per worker', 'Imports per worker' and 'Subsidies per worker' are in 100 thousands of Yuan (RMB). 'Labour Costs per worker' is the sum of wage-, welfare- and unemployment insurance per worker. 'Gross Profits per worker (before the labour costs)' is the sum of 'Gross Profits per worker (after the wage bill)' and 'Labour Costs per worker'. 'Firm size' is the number of employees in each firm. 'Firm age' is the difference between the calendar year and the birth year.

Table 2: Rent Sharing: OLS Estimates

	(1)	(2)	(3)	(4)	(5)
Profits/worker	0.260***	0.205***	0.131***	0.119***	0.145***
	(0.002)	(0.001)	(0.002)	(0.002)	(0.004)
Log Firm Size		-0.000	-0.118***	-0.122***	-0.139***
		(0.000)	(0.001)	(0.001)	(0.004)
Log Capital/worker		0.051***	0.052***	0.052***	0.064***
		(0.000)	(0.001)	(0.001)	(0.002)
Foreign Dummy		0.327***	0.031***	0.038***	0.019***
		(0.001)	(0.003)	(0.003)	(0.005)
Constant	2.414***	2.175***	2.813***	2.828***	3.172***
	(0.000)	(0.002)	(0.007)	(0.007)	(0.025)
Year FE	Yes	Yes	Yes		
Firm FE			Yes	Yes	Yes
Industry-province-year FE				Yes	Yes
Observations	1,568,866	1,568,866	1,455,382	1,455,181	1,455,181
F statistic	27,777	30,673	4,809	4,784	998
Adj.R-squared	0.171	0.231	0.615	0.626	0.717
Elasticity	0.041	0.032	0.021	0.019	0.023
Lester's Range	0.386	0.304	0.193	0.175	0.208

Notes: Dependent variable: log annual average wage per worker. 'Profits/worker' is the gross profits ('after the wage bill') per worker per firm. In column 5, we use the number of workers in each firm-year as weights, while the remaining regressions are un-weighted. 'Industry-province-year FE' are fixed effects for each combination of a year, a two-digit industry and a province. Values in parentheses are robust standard errors. Significant levels: 0.1 (*); 0.05 (**); and 0.01 (***).

Table 3: Rent Sharing: IV Estimates

	(1)	(2)
Profits/worker	0.296***	0.255***
	(0.023)	(0.056)
Controls	Yes	Yes
Year FE	Yes	
Firm FE	Yes	Yes
Industry-province-year FE		Yes
Observations	976,035	975,805
F statistic	2,405	2,511
Adj.R-squared	0.631	0.642
Elasticity	0.050	0.043
Lester's Range	0.438	0.377
First-stage results		
Average Profits/worker	0.330***	0.174***
	(0.008)	(0.010)
Subsidies/worker(first lag)	0.003***	0.003***
	(0.001)	(0.001)
Export Share*Weighted Exchange Rate	-0.013**	-0.010*
	(0.006)	(0.005)
F statistics	995.2	775.3
Adj.R-squared	0.604	0.617
Kleibergen-Paap rk LM statistic	2,507	466.6
Kleibergen-Paap rk LM p-value	0.000	0.000
Kleibergen-Paap rk Wald F-stat	640.8	113.8
Hansen J statistic	0.850	2.461
Hansen J p-value	0.654	0.292

Notes: Dependent variable: log annual average wage per worker. 'Profits/worker' is the gross profits ('after the wage bill') per worker per firm. 'Industry-province-year FE' are fixed effects for each combination of a year, a two-digit industry and a province. The first instrument 'Average Profits/worker' is the average gross profits ('after the wage bill') per worker of firms in the same four-digit industry and in the same year but in other labour markets (of the same province and of other provinces). The second instrument 'Subsidies/worker(first lag)' is firm's annual average subsidies per worker one year before. The third instrument 'Export Share*Weighted Exchange Rate' is the interaction between the share of export in sales and the weighted nominal effective exchange rate in the current year, and both variables are at firm level. Values in parentheses are robust standard errors. Significant levels: 0.1 (*); 0.05 (**); and 0.01 (***).

Table 4: Rent Sharing, gross profits before the wage bill or before the labour costs, IV Estimates

	Gross profits before the wage bill		Gross profits before labour costs	
	(1)	(2)	(3)	(4)
Profits/worker	0.293***	0.236***	0.278***	0.200***
	(0.022)	(0.052)	(0.022)	(0.052)
Controls	Yes	Yes	Yes	Yes
Year FE	Yes		Yes	
Firm FE	Yes	Yes	Yes	Yes
Industry-province-year FE		Yes		Yes
Observations	976,035	975,805	976,035	975,805
F statistic	2,637	2,712	2,703	2,802
Adj.R-squared	0.663	0.669	0.665	0.669
Elasticity	0.095	0.076	0.096	0.069
Lester's Range	0.474	0.382	0.461	0.330
First-stage results				
Average Profits/worker	0.293***	0.157***	0.287***	0.152***
	(0.007)	(0.009)	(0.007)	(0.009)
Subsidies/worker(first lag)	0.003***	0.003***	0.003***	0.003***
	(0.001)	(0.001)	(0.001)	(0.001)
Export Share*Weighted Exchange Rate	-0.014*	-0.012*	-0.013*	-0.011*
	(0.007)	(0.006)	(0.007)	(0.006)
F statistics	1,446	1,279	1,498	1,345
Adj.R-squared	0.626	0.639	0.626	0.639
Kleibergen-Paap rk LM statistic	2,408	465.7	2,368	445
Kleibergen-Paap rk LM p-value	0.000	0.000	0.000	0.000
Kleibergen-Paap rk Wald F-stat	615.8	113.1	606.2	109.4
Hansen J statistic	0.764	2.464	0.395	1.768
Hansen J p-value	0.682	0.292	0.821	0.413

Notes: In the columns 1-2, the dependent variable is log annual average wage per worker, and 'Profits/worker' is the gross profits ('before the wage bill') per worker per firm. The first instrument 'Average Profits/worker' in columns 1-2 is the average gross profits ('before the wage bill') per worker of firms in the same four-digit industry and in the same year but in other labour markets (of the same province and of other provinces). In columns 3-4, the dependent variable is log annual average labour costs per worker, and 'Profits/worker' is the gross profits ('before the labour costs') per worker per firm, then the first instrument 'Average Profits/worker' is the average gross profits ('before the labour costs') per worker of firms in the same four-digit industry and in the same year but in other labour markets (of the same province and of other provinces). The second instrument 'Subsidies/worker(first lag)' and the third instrument 'Export Share*Weighted Exchange Rate' are the same as those in Table 3. 'Industry-province-year FE' are fixed effects for each combination of a year, a two-digit industry and a province. Values in parentheses are robust standard errors. Significant levels: 0.1 (*); 0.05 (**); and 0.01 (***).

Table 5: Rent Sharing by worker characteristics, IV estimates

	By unionisation type		By female share	
	Non-Unionized Firms	Unionized Firms	Low Share	High Share
	(1)	(2)	(3)	(4)
Profits/worker	0.158	0.259***	0.237***	0.096
	(0.110)	(0.053)	(0.054)	(0.150)
Observations	525,936	537,505	522,846	540,537
F statistic	1,321	1,562	1,238	1,598
Adj.R-squared	0.563	0.642	0.619	0.582
Elasticity	0.027	0.041	0.048	0.012
Lester's Range	0.239	0.367	0.400	0.113
First-stage results				
Average Profits/worker	0.131***	0.216***	0.210***	0.099***
	(0.013)	(0.012)	(0.012)	(0.011)
F statistic	682.6	571.8	663.2	566.9
Adj.R-squared	0.541	0.578	0.553	0.556
Kleibergen-Paap rk LM statistic	131.6	419.3	380.9	92.96
Kleibergen-Paap rk LM p-value	0.000	0.000	0.000	0.000
Kleibergen-Paap rk Wald F-stat	102.8	350	308.7	74.48

	By skilled worker share		By workers' schooling	
	Low Share	High Share	Low Schooling	High Schooling
	(5)	(6)	(7)	(8)
Profits/worker	0.154	0.265***	0.144	0.252***
	(0.116)	(0.054)	(0.115)	(0.056)
Observations	513,949	549,502	533,007	530,488
F statistic	1,399	1,432	1,285	1,541
Adj.R-squared	0.564	0.632	0.548	0.632
Elasticity	0.022	0.048	0.019	0.050
Lester's Range	0.203	0.421	0.166	0.430
First-stage results				
Average Profits/worker	0.134***	0.205***	0.122***	0.210***
	(0.013)	(0.011)	(0.011)	(0.012)
F statistic	650.8	606.9	685.3	600.9
Adj.R-squared	0.560	0.558	0.555	0.555
Kleibergen-Paap rk LM statistic	135.3	400.6	156.1	365
Kleibergen-Paap rk LM p-value	0.000	0.000	0.000	0.000
Kleibergen-Paap rk Wald F-stat	107.1	329.2	125.2	296.7

Notes: Dependent variable: log annual average wage per worker. 'Profits/worker' is the gross profits ('after the wage bill') per worker per firm. All specifications include firm and Industry-province-year fixed effects and firm controls. Instrument 'Average Profits/worker' is the same as the first instrument in Table 3. In columns 1-2, the sample is split into 'Non-Unionized Firms' and 'Unionized Firms' considering the 2004 variable on whether a union was established in the firm at the time. In columns 3-8, firms are classified as having high or low female share (or skilled workers share or workers' schooling) if their proportions of female employees (or skilled workers share or workers' schooling) in year 2004 is above or low the median for all firms. Skilled workers are defined as workers with technical titles, including workers with senior, middle and junior technical titles. We consider the proportion of employees with different academic qualifications in each firm in 2004 to calculate the average years of schooling of employees in each firms. Years of schooling for different academic qualifications: Junior high school and below, 7.5; High school, 12; College, 15; University, 16; Graduate, 19. Values in parentheses are robust standard errors. Significance levels: 0.1 (*); 0.05 (**); and 0.01 (***).

Table 6: Rent sharing by ownership type, IV Estimates

	State Firms	Collective Firms	Private Firms	Foreign Firms
	(1)	(2)	(3)	(4)
Profits/worker	0.403*	1.250*	0.174**	0.075
	(0.206)	(0.756)	(0.082)	(0.061)
Observations	89,695	112,281	908,233	284,123
F statistic	614.6	340.7	2,454	986.3
Adj.R-squared	0.740	0.485	0.564	0.630
Elasticity	0.014	0.190	0.028	0.015
Lester's Range	0.389	1.680	0.241	0.139
First-stage results				
Average Profits/worker	0.173***	0.063**	0.129***	0.324***
	(0.025)	(0.026)	(0.009)	(0.025)
F statistic	18.58	171.7	1,455	178
Adj.R-squared	0.610	0.622	0.557	0.598
Kleibergen-Paap rk LM statistic	65.39	8.586	259.3	226.7
Kleibergen-Paap rk LM p-value	0.000	0.003	0.000	0.000
Kleibergen-Paap rk Wald F-stat	46.04	5.674	191.9	170.8

Notes: Dependent variable: log average wage per worker per firm. 'Profits/worker' is the gross profits ('after the wage bill') per worker per firm.All specifications include firm and Industry-province-year fixed effects and firm controls. Instrument 'Average Profits/worker' is the same as the first instrument in Table 3. Values in parentheses are robust standard errors. Significance levels: 0.1 (*); 0.05 (**); and 0.01 (***).

Table 7: Rent sharing by firm characteristics, IV Estimates

	By capital intensity		By firm size		By firm age	
	Low K/L	High K/L	Small Firms	Large Firms	New Firms	Old Firms
	(1)	(2)	(3)	(4)	(5)	(6)
Profits/worker	0.394*	0.118**	0.099	0.183***	0.052	0.299***
	(0.231)	(0.049)	(0.127)	(0.048)	(0.076)	(0.073)
Observations	680,176	690,389	677,541	716,500	720,268	672,857
F statistic	1,465	1,462	1,415	1,565	1,664	2,019
Adj.R-squared	0.622	0.646	0.605	0.673	0.584	0.679
Elasticity	0.036	0.027	0.019	0.024	0.009	0.043
Lester's Range	0.359	0.218	0.161	0.241	0.079	0.420
First-stage results						
Average Profits/worker	0.061***	0.230***	0.098***	0.243***	0.184***	0.163***
	(0.009)	(0.013)	(0.012)	(0.011)	(0.013)	(0.011)
F statistic	364.1	615.5	592.8	521.8	662.8	637.4
Adj.R-squared	0.580	0.572	0.553	0.613	0.554	0.622
Kleibergen-Paap rk LM statistic	67.9	428.9	88.73	575	276.9	295
Kleibergen-Paap rk LM p-value	0.000	0.000	0.000	0.000	0.000	0.000
Kleibergen-Paap rk Wald F-stat	49.25	317	62.66	451.9	191.2	224.5

Notes: Dependent variable: log average wage per worker per firm. 'Profits/worker' is the gross profits ('after the wage bill') per worker per firm. All specifications include firm and Industry-province-year fixed effects and firm controls. Instrument 'Average Profits/worker' is the same as the first instrument in Table 3. Firms are classified as different groups based on the median of their ratio of capital per worker, number of workers and ages for all firms.Values in parentheses are robust standard errors. Significance levels: 0.1 (*); 0.05 (**); and 0.01 (***).

Table 8: Rent sharing by firm location, IV Estimates

	Eastern Area	Central Area	Western Area
	(1)	(2)	(3)
Profits/worker	0.211***	0.154	0.189**
	(0.060)	(0.114)	(0.089)
Observations	1,088,107	228,922	138,129
F statistic	2,893	602.4	427.4
Adj.R-squared	0.598	0.591	0.624
Elasticity	0.035	0.023	0.018
Lester's Range	0.314	0.230	0.246
First-stage results			
Average Profits/worker	0.162***	0.185***	0.266***
	(0.009)	(0.020)	(0.025)
F statistic	1,098	311.3	77.01
Adj.R-squared	0.566	0.558	0.523
Kleibergen-Paap rk LM statistic	398.4	111.1	145.3
Kleibergen-Paap rk LM p-value	0.000	0.000	0.000
Kleibergen-Paap rk Wald F-stat	306.8	85.09	114.2

Notes: Dependent variable: log average wage per worker per firm. 'Profits/worker' is the gross profits ('after the wage bill') per worker per firm. All specifications include firm and Industry-province-year fixed effects and firm controls. Instrument 'Average Profits/worker' is the same as the first instrument in Table 3. Values in parentheses are robust standard errors. Significance levels: 0.1 (*); 0.05 (**); and 0.01 (***).

Table 9: Rent sharing by changes in profits

	OLS	IV
	(1)	(2)
Profits/worker	0.103***	0.209***
	(0.002)	(0.044)
Dummy (Profits decreasing)	-0.011***	-0.011***
	(0.001)	(0.002)
Profits/worker * Dummy (Profits decreasing)	0.034***	0.190**
	(0.003)	(0.080)
Controls	Yes	Yes
Firm FE	Yes	Yes
Industry-province-year FE	Yes	Yes
Observations	975,812	975,805
F statistic	2,174	1,889
Adj.R-squared	0.646	0.642
First-stage results		
	Dependent variable	
	Profits/worker	Interaction
Average Profits/worker	0.377***	-0.089***
	(0.010)	(0.006)
Average Profits/worker * Dummy (Profits decreasing)	-0.539***	0.307***
	(0.006)	(0.005)
F statistic	8,745	6,255
Adj.R-squared	0.652	0.274
Kleibergen-Paap rk LM statistic	268.7	
Kleibergen-Paap rk LM p-value	0.000	
Kleibergen-Paap rk Wald F-stat	100.2	

Notes: Dependent variable: log average wage per worker per firm. 'Profits/worker' is the gross profits ('after the wage bill') per worker per firm. 'Dummy (Profits decreasing) ' is equal to 1 if the firm's gross profits are less than in the previous year (and 0 otherwise). Instrument 'Average Profits/worker' is the same as the first instrument in Table 3. Values in parentheses are robust standard errors. Significance levels: 0.1 (*); 0.05 (**); and 0.01 (***).

Table 10: Rent sharing: the role of rural labour (Jiangsu Province)

	OLS	IV
	(1)	(2)
Profits/worker	0.180***	0.623***
	(0.031)	(0.220)
Log Rural Employees	-0.040**	-0.035*
	(0.020)	(0.020)
Profits/worker * Log Rural Employees	-0.015*	-0.103*
	(0.008)	(0.056)
Controls	Yes	Yes
Firm FE	Yes	Yes
Year FE	Yes	Yes
Industry-Region FE	Yes	Yes
Observations	202,398	202,398
F statistic	528.5	427.1
Adj.R-squared	0.615	0.613
Elasticity	0.018	0.035
Lester's Range	0.168	0.322
First-stage results		
	Dependent variable	
	Profits/worker	Interaction
Average Profits/worker	0.365***	-0.320
	(0.103)	(0.345)
Average Profits/worker * Log Rural Employees	-0.012	0.404***
	(0.027)	(0.095)
F statistic	149.5	149.5
Adj.R-squared	0.560	0.560
Kleibergen-Paap rk LM statistic	503.8	
Kleibergen-Paap rk LM p-value	0.000	
Kleibergen-Paap rk Wald F-stat	198.8	

Notes: Dependent variable: log average wage per worker per firm in Jiangsu province. 'Profits/worker' is the gross profits ('after the wage bill') per worker per firm of Jiangsu province. 'Log rural employees' is the logarithm of the number of employees employed in rural areas in each labour market and year. 'Industry-Region FE' are fixed effects for each combination of a two-digit industry and a labour market. Instrument 'Average Profits/worker' is the same as the first instrument in Table 3. Values in parentheses are robust standard errors. Significance levels: 0.1 (*); 0.05 (**); and 0.01 (***).

Table 11: Descriptive Statistics: Year 2004-2007

Variables	**Mean**	**StDev**
Firm characteristics (N=1,005,562)		
Wages per worker	15.64	10.15
Gross Profits per worker (after the wage bill)	0.185	0.412
Gross Profits per worker (before the wage bill)	0.347	0.445
Net Profits per worker	0.156	0.370
Added Value per worker	1.155	1.998
Firm Size	228.3	843.2
Firm Age	8.068	9.061
Capital per worker	79.631	160.084
Foreign Firms Dummy	0.199	0.399
Minimum Wages/Wages per worker	0.508	0.218
Weighted analysis(number of workers per firms)		
Wages per worker	17.68	11.45
Gross Profits per worker (after the wage bill)	0.198	0.417
Gross Profits per worker (before the wage bill)	0.380	0.471
Net Profits per worker	0.166	0.367
Added Value per worker	1.067	1.604
Minimum Wages / Wages per worker	0.461	0.219
County characteristics (N=10,866)		
Minimum Wages	5.117	1.215
Average Wages per worker	13.85	6.451
Minimum Wages / Wages per worker	0.414	0.138
Average Gross Profits per worker	0.163	0.228
Number of workers	21,127	63,036

Notes: Own calculations based on the Chinese Industry Enterprises Database. The definitions and units of variables that reflect firm characteristics are the same as in Table 1. The monetary variables 'Minimum Wages, County' and 'Average wages per worker, County' are in thousands of Yuan (RMB). The monetary variable 'Average Profits per worker, County' is in 100 thousands of Yuan (RMB). 'Number of workers' is the number of total workers in each district or county.

Table 12: Rent sharing: the role of minimum wages at county level

	Log minimum wages	Log(average wages/worker)		
	(1)	(2)	(3)	(4)
Average Profits/worker	0.019***	0.259***	0.258***	0.349***
	(0.007)	(0.024)	(0.024)	(0.091)
Minimum Wages			0.014**	0.017***
			(0.006)	(0.007)
Average Profits/worker * Minimum Wages				-0.018
				(0.017)
County FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Observations	10,834	10,834	10,834	10,834
F statistic	7.859	117	61.93	42.31
Adj.R-squared	0.874	0.759	0.759	0.759
Elasticity	0.003	0.042	0.042	0.042
Lester's Range	0.017	0.235	0.234	0.234

Notes: Values in parentheses are robust standard errors. Significance levels: 0.1 (*); 0.05 (**); and 0.01 (***).

Table 13: Rent sharing: the role of minimum wages at firm level

	OLS	OLS	OLS	IV
	(1)	(2)	(3)	(4)
Profits/worker	0.094***	0.094***	0.075***	0.450***
	(0.002)	(0.002)	(0.008)	(0.093)
Minimum Wages		0.012***	0.011***	0.022***
		(0.002)	(0.002)	(0.003)
Profits/worker * Minimum Wages			0.003***	-0.045***
			(0.001)	(0.010)
Controls	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Industry-province-year FE	Yes	Yes	Yes	Yes
Observations	912,470	912,470	912,470	912,470
F statistic	2,186	1,828	1,572	1,285
Adj.R-squared	0.604	0.604	0.604	0.601
Elasticity	0.018	0.018	0.018	0.030
Lester's Range	0.154	0.154	0.153	0.264
First-stage results				
		Dependent variable		
		Profits/worker	Interaction	
Average Profits/worker		0.223***	-1.456***	
		(0.036)	(0.233)	
Average Profits/worker * Minimum Wages		-0.006	0.416***	
		(0.005)	(0.036)	
F statistic		686	625.4	
Adj.R-squared		0.605	0.608	
Kleibergen-Paap rk LM statistic		371.2		
Kleibergen-Paap rk LM p-value		0.000		
Kleibergen-Paap rk Wald F-stat		128.6		

Notes: Dependent variable: log average wage per worker per firm. 'Profits/worker' is the gross profits ('after the wage bill') per worker per firm. Instrument 'Average Profits/worker' is the same as the first instrument in Table 3. Values in parentheses are robust standard errors. Significance levels: 0.1 (*); 0.05 (**); and 0.01 (***).

Table 14: Rent sharing: the role of labour market concentration

	(1)	(2)	(3)	(4)	(5)	(6)
Profits/worker	0.249***	0.207***	0.276***	0.184***	0.243***	0.169***
	(0.021)	(0.046)	(0.020)	(0.048)	(0.021)	(0.048)
HHI	-0.319***	-0.104***				
	(0.021)	(0.022)				
Firm Employment Share			-0.327***	-0.221***	-1.116***	-0.754***
			(0.028)	(0.028)	(0.059)	(0.059)
Firm Employment Share^2					1.092***	0.718***
					(0.067)	(0.067)
Profits/worker * HHI	0.747***	-0.258**				
	(0.128)	(0.130)				
Profits/worker * Firm Employment Share			0.513***	0.295***	2.651***	1.422***
			(0.111)	(0.110)	(0.276)	(0.270)
Profits/worker * Firm Employment Share^2					-3.261***	-1.665***
					(0.367)	(0.341)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes		Yes		Yes	
Industry-province-year FE		Yes		Yes		Yes
Observations	1,455,369	1,455,168	1,455,369	1,455,168	1,455,369	1,455,168
F statistic	2,737	2,802	2,699	2,798	2,125	2,183
Adj.R-squared	0.611	0.625	0.611	0.625	0.613	0.626
Elasticity	0.044	0.031	0.045	0.030	0.043	0.029
Lester's Range	0.407	0.292	0.416	0.276	0.401	0.272
Kleibergen-Paap rk LM statistic	3,542	646.4	3,576	614.4	3,448	611.2
Kleibergen-Paap rk LM p-value	0.000	0.000	0.000	0.000	0.000	0.000
Kleibergen-Paap rk Wald F-stat	1,393	249.4	1,402	236.9	897.5	157.1

Notes: Dependent variable: log average wage per worker per firm. 'Profits/worker' is the gross profits ('after the wage bill') per worker per firm. 'Firm Employment Share' is the proportion of the firm's employment in total employment in each municipal district and county per year. 'Firm Employment Share^2' is the square of 'Firm Employment Share'. 'HHI' is calculated at the district or county level as the sum of 'Firm Employment Share^2' in the district(county)-year level. Instrument is the same as the first instrument in Table 3. Values in parentheses are robust standard errors. Significance levels: 0.1 (*); 0.05 (**); and 0.01 (***).

A Appendix: Robustness: alternative measures of rents (net profits; gross profits before the wage bill; gross profits before the labour costs;value added)

Table A1: Rent Sharing, net profits, OLS Estimates

	(1)	(2)	(3)	(4)	(5)
Profits/worker	0.239***	0.181***	0.099***	0.087***	0.139***
	(0.027)	(0.021)	(0.019)	(0.018)	(0.008)
Log Firm Size		-0.001	-0.119***	-0.123***	-0.140***
		(0.001)	(0.001)	(0.001)	(0.004)
Log Capital/worker		0.053***	0.053***	0.054***	0.065***
		(0.001)	(0.001)	(0.001)	(0.002)
Firm Age		0.000***	-0.000	0.000***	0.000***
		(0.000)	(0.000)	(0.000)	(0.000)
Foreign Dummy		0.327***	0.031***	0.039***	0.019***
		(0.002)	(0.003)	(0.003)	(0.005)
Constant	2.424***	2.178***	2.820***	2.836***	3.178***
	(0.004)	(0.002)	(0.008)	(0.008)	(0.025)
Year FE	Yes	Yes	Yes		
Firm FE			Yes	Yes	Yes
Industry-province-year FE				Yes	Yes
Observations	1,568,866	1,568,866	1,455,382	1,455,181	1,455,181
F statistic	79	26,807	3,740	3,915	783.5
Adj.R-squared	0.165	0.227	0.614	0.625	0.717
Elasticity	0.031	0.024	0.013	0.012	0.018
Lester's Range	0.341	0.259	0.141	0.125	0.178

Notes: Dependent variable: log annual average wage per worker. 'Profits/worker' is the net profits (gross profits after subtracting profits taxes and wage bills) per worker per firm. In column 5, we use the number of workers in each firm-year as weights, while the remaining regressions are un-weighted. 'Industry-province-year FE' are fixed effects for each combination of a year, a two-digit industry and a province. Values in parentheses are robust standard errors. Significant levels: 0.1 (*); 0.05 (**); and 0.01 (***).

Table A2: Rent sharing, net profits, IV Estimates

	(1)	(2)
Profits/worker	0.347***	0.310***
	(0.028)	(0.068)
Controls	Yes	Yes
Year FE	Yes	
Firm FE	Yes	Yes
Industry-province-year FE		Yes
Observations	976,035	975,805
F statistic	2,389	2,496
Adj.R-squared	0.627	0.638
Elasticity	0.049	0.044
Lester's Range	0.466	0.416
First-stage results		
Average Profits/worker	0.332***	0.167***
	(0.009)	(0.010)
Subsidies/worker(first lag)	0.001	0.001
	(0.001)	(0.001)
Export Share*Weighted Exchange Rate	-0.011**	-0.009*
	(0.006)	(0.005)
F statistics	823.9	651.3
Adj.R-squared	0.556	0.569
Kleibergen-Paap rk LM statistic	1,766	368.2
Kleibergen-Paap rk LM p-value	0.000	0.000
Kleibergen-Paap rk Wald F-stat	439.5	86.55
Hansen J statistic	1.444	2.894
Hansen J p-value	0.486	0.235

Notes: Dependent variable: log annual average wage per worker. 'Profits/worker' is the net profits (gross profits after subtracting profits taxes and wage bills) per worker per firm. 'Industry-province-year FE' are fixed effects for each combination of a year, a two-digit industry and a province. The first instrument 'Average Profits/worker' is the average net profits per worker of firms in the same four-digit industry and in the same year but in other labour markets (of the same province and of other provinces). The other instruments are the same as those in Table 3. Values in parentheses are robust standard errors. Significance levels: 0.1 (*); 0.05 (**); and 0.01(***).

Table A3: Rent sharing, gross profits before the wage bill, OLS Estimates

	(1)	(2)	(3)	(4)	(5)
Profits/worker	0.511***	0.459***	0.408***	0.401***	0.432***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.005)
Log Firm Size		0.005***	-0.104***	-0.107***	-0.124***
		(0.000)	(0.001)	(0.001)	(0.003)
Log Capital/worker		0.030***	0.039***	0.040***	0.051***
		(0.000)	(0.001)	(0.001)	(0.002)
Firm Age		0.001***	0.000	0.000***	0.001***
		(0.000)	(0.000)	(0.000)	(0.000)
Foreign Dummy		0.291***	0.026***	0.032***	0.011**
		(0.001)	(0.003)	(0.003)	(0.005)
Constant	2.300***	2.119***	2.690***	2.696***	3.010***
	(0.001)	(0.002)	(0.007)	(0.007)	(0.024)
Year FE	Yes	Yes	Yes		
Firm FE			Yes	Yes	Yes
Industry-province-year FE				Yes	Yes
Observations	1,568,866	1,568,866	1,455,382	1,455,181	1,455,181
F statistic	81,015	42,692	10,248	10,250	2,003
Adj.R-squared	0.262	0.304	0.645	0.654	0.740
Elasticity	0.155	0.140	0.125	0.123	0.137
Lester's Range	0.830	0.747	0.659	0.648	0.711

Notes: Dependent variable: log annual average wage per worker. 'Profits/worker' is the gross profits ('before the wage bill') per worker per firm. 'Industry-province-year FE' are fixed effects for each combination of a year, a two-digit industry and a province. In column 5, we use the number of workers in each firm-year as weights (the remaining regressions are un-weighted). Values in parentheses are robust standard errors. Significant levels: 0.1 (*); 0.05 (**); and 0.01 (***).

Table A4: Rent sharing, gross profits before the labour costs, OLS Estimates

	(1)	(2)	(3)	(4)	(5)
Profits/worker	0.553***	0.508***	0.458***	0.450***	0.469***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.006)
Log Firm Size		0.010***	-0.098***	-0.101***	-0.115***
		(0.000)	(0.001)	(0.001)	(0.003)
Log Capital/worker		0.033***	0.040***	0.042***	0.054***
		(0.000)	(0.001)	(0.001)	(0.002)
Firm Age		0.002***	0.000***	0.001***	0.001***
		(0.000)	(0.000)	(0.000)	(0.000)
Foreign Dummy		0.253***	0.017***	0.024***	0.006
		(0.001)	(0.003)	(0.003)	(0.005)
Constant	2.398***	2.180***	2.749***	2.761***	3.056***
	(0.001)	(0.002)	(0.007)	(0.007)	(0.023)
Year FE	Yes	Yes	Yes		
Firm FE			Yes	Yes	Yes
Industry-province-year FE				Yes	Yes
Observations	1,568,866	1,568,866	1,455,382	1,455,181	1,455,181
F statistic	82,817	40,353	10,511	10,637	2,151
Adj.R-squared	0.267	0.302	0.650	0.660	0.748
Elasticity	0.180	0.165	0.150	0.147	0.161
Lester's Range	0.921	0.845	0.758	0.744	0.797

Notes: Dependent variable: log annual average wage per worker. 'Profits/worker' is the gross profits ('before the labour costs') per worker per firm. 'Industry-province-year FE' are fixed effects for each combination of a year, a two-digit industry and a province. In column 5, we use the number of workers in each firm-year as weights (the remaining regressions are un-weighted). Values in parentheses are robust standard errors. Significant levels: 0.1 (*); 0.05 (**); and 0.01 (***).

Table A5: Rent sharing, added value, OLS Estimates

	(1)	(2)	(3)	(4)	(5)
Value Added/worker	0.088***	0.073***	0.061***	0.058***	0.070***
	(0.000)	(0.000)	(0.001)	(0.001)	(0.002)
Log Firm Size		0.008***	-0.100***	-0.105***	-0.125***
		(0.000)	(0.001)	(0.001)	(0.004)
Log Capital/worker		0.043***	0.047***	0.048***	0.058***
		(0.000)	(0.001)	(0.001)	(0.002)
Firm Age		0.001***	-0.000	0.000**	0.000***
		(0.000)	(0.000)	(0.000)	(0.000)
Foreign Dummy		0.327***	0.031***	0.038***	0.022***
		(0.001)	(0.003)	(0.003)	(0.005)
Constant	2.374***	2.131***	2.710***	2.728***	3.069***
	(0.001)	(0.002)	(0.007)	(0.007)	(0.025)
Year FE	Yes	Yes	Yes		
Firm FE			Yes	Yes	Yes
Industry-province-year FE				Yes	Yes
Observations	1,553,187	1,553,187	1,439,378	1,439,178	1,439,178
F statistic	30,963	30,128	5,512	5,440	1,102
Adj.R-squared	0.174	0.233	0.617	0.627	0.717
Elasticity	0.082	0.068	0.058	0.054	0.060
Lester's Range	0.409	0.339	0.285	0.269	0.300

Notes: Dependent variable: log annual average wage per worker. 'Value added' is the value added per worker per firm. 'Industry-province-year FE' are fixed effects for each combination of a year, a two-digit industry and a province. In column 5, we use the number of workers in each firm-year as weights (the remaining regressions are un-weighted). Values in parentheses are robust standard errors. Significant levels: 0.1 (*); 0.05 (**); and 0.01 (***).

Table A6: Rent sharing, added value, IV Estimates

	(1)	(2)
Value Added/worker	0.067***	0.062***
	(0.008)	(0.024)
Controls	Yes	Yes
Year FE	Yes	
Firm FE	Yes	Yes
Industry-province-year FE		Yes
Observations	960,900	960,656
F statistic	2,351	2,463
Adj.R-squared	0.637	0.647
Elasticity	0.064	0.060
Lester's Range	0.308	0.285
First-stage results		
Average Sales/worker	0.078***	0.033***
	(0.002)	(0.002)
Subsidies/worker(first lag)	0.012***	0.012***
	(0.002)	(0.002)
Export Share*Weighted Exchange Rate	-0.049**	-0.036**
	(0.024)	(0.018)
F statistics	3,357	3,052
Adj.R-squared	0.646	0.658
Kleibergen-Paap rk LM statistic	3,162	409.8
Kleibergen-Paap rk LM p-value	0.000	0.000
Kleibergen-Paap rk Wald F-stat	766.6	106.8
Hansen J statistic	0.802	2.582
Hansen J p-value	0.670	0.275

Notes: Dependent variable: log annual average wage per worker. 'Value added' is the value added per worker per firm. 'Industry-province-year FE' are fixed effects for each combination of a year, a two-digit industry and a province. The first instrument 'Average sales per worker' is the average sales per worker of firms in the same four-digit industry and in the same year but in other labour markets (of the same province and of other provinces). The other instruments are the same as those in Table 3. Values in parentheses are robust standard errors. Significance levels: 0.1 (*); 0.05 (**); and 0.01(***).

Table A7: Rent sharing, added value or ln added value, IV Estimates

	Wages/worker		Log Wages/worker	
	(1)	(2)	(3)	(4)
Value Added/worker	1.561***	2.511***		
	(0.141)	(0.440)		
Log Value Added/worker			0.140***	0.161***
			(0.017)	(0.050)
Controls	Yes	Yes	Yes	Yes
Year FE	Yes		Yes	
Firm FE	Yes	Yes	Yes	Yes
Industry-province-year FE		Yes		Yes
Observations	960,900	960,656	960,900	960,656
F statistic	1,588	1,710	2,483	2,608
Adj.R-squared	0.578	0.578	0.646	0.654
Elasticity	0.105	0.169	0.140	0.161
Lester's Range	0.525	0.844	0.700	0.804
First-stage results				
Average Sales/worker	0.078***	0.033***		
	(0.002)	(0.002)		
Log Average Sales/worker			0.159***	0.056***
			(0.004)	(0.005)
Subsidies/worker(first lag)	0.012***	0.012***	0.002*	0.002*
	(0.002)	(0.002)	(0.001)	(0.001)
Export Share*Weighted Exchange Rate	-0.049**	-0.036**	-0.062**	-0.057**
	(0.024)	(0.018)	(0.027)	(0.025)
F statistics	3,357	3,052	6,209	5,938
Adj.R-squared	0.646	0.658	0.713	0.723
Kleibergen-Paap rk LM statistic	3,162	409.8	1,959	216.3
Kleibergen-Paap rk LM p-value	0.000	0.000	0.000	0.000
Kleibergen-Paap rk Wald F-stat	766.6	106.8	470.6	40.81
Hansen J statistic	0.662	2.987	1.116	0.931
Hansen J p-value	0.718	0.225	0.572	0.628

Notes: Dependent variable: log annual average wage per worker. 'Value added' is the value added per worker per firm. 'Industry-province-year FE' are fixed effects for each combination of a year, a two-digit industry and a province. The first instrument 'Average sales per worker' is the average sales per worker of firms in the same four-digit industry and in the same year but in other labour markets (of the same province and of other provinces). The other instruments are the same as those in Table 3. Values in parentheses are robust standard errors. Significance levels: 0.1 (*); 0.05 (**); and 0.01(***).

Table A8: Rent sharing,timing, IV Estimates

	IV	
Profits/worker	0.161*	
	(0.086)	
Profits/worker (L1.)	0.187**	
	(0.090)	
Controls	Yes	
Firm FE	Yes	
Industry-province-year FE	Yes	
Observations	630,786	
F statistic	1,165	
Adj.R-squared	0.648	
First-stage results		
	Dependent variable	
	Profits/worker	Profits/worker (L1.)
Average Profits/worker	0.182***	0.022*
	(0.014)	(0.012)
Subsidies/worker(L1.)	0.002**	0.005*
	(0.001)	(0.003)
Export Share*Weighted Exchange Rate	-0.008	-0.008**
	(0.005)	(0.004)
Average Profits/worker (L1.)	-0.004	0.161***
	(0.016)	(0.014)
Subsidies/worker(L2.)	-0.008	0.006
	(0.006)	(0.005)
Export Share*Weighted Exchange Rate (L1.)	0.003	-0.003
	(0.005)	(0.003)
Adj.R-squared	319.6	111.9
F statistics	0.648	0.640
Kleibergen-Paap rk LM statistic	158.1	
Kleibergen-Paap rk LM p-value	0.000	
Kleibergen-Paap rk Wald F-stat	17.48	
Hansen J statistic	11.674	
Hansen J p-value	0.020	

B Appendix: Additional descriptives and robustness checks

Table B1: Number of firms and workers per year

Year	ALL Firms			Exporting Firms		
	Firms	Workers	Workers/Firm	Firms	Workers	Workers/Firm
2000	122,788	40,521,501	330	16,126	9,201,398	571
2001	133,907	40,439,478	302	18,631	9,738,275	523
2002	143,347	41,414,757	289	21,404	11,072,058	517
2003	163,262	45,258,357	277	25,565	12,611,375	493
2004	223,511	50,111,976	224	38,470	16,320,028	424
2005	230,909	55,298,076	239	40,246	17,656,552	439
2006	258,434	59,548,901	230	45,556	18,729,060	411
2007	292,708	64,603,947	221	65,960	23,531,479	357
Annual	214,138	52,257,674	253	41,347	17,035,741	437

Notes: Own calculations based on the Chinese Industry Enterprises Database.

Table B2: Distribution of firms per years in the data

Year	All Firms	Exporting Firms
1	113,484	37,208
2	77,723	17,520
3	61,909	12,297
4	80,541	12,079
5	32,692	5,931
6	25,139	4,529
7	26,737	4,150
8	36,324	3,578

Notes: Own calculations based on the Chinese Industry Enterprises Database. Numbers of firms (all firms, firms that export) that are present in the data in each number of years.

Table B3: Chinese Industry Classification

Labour-intensive Industry		Capital-intensive Industry	
code	name	code	name
17	Manufacture of Textile	13	Processing of Food from Agricultural Products
18	Manufacture of Textile Wearing Apparel, Footwear, and Caps	14	Manufacture of Foods
19	Manufacture of Leather, Fur, Feather and Related Products	15	Manufacture of Beverages
20	Processing of Timber, Manufacture of Wood, Bamboo, Rattan, Palm, and Straw Products	22	Manufacture of Paper and Paper Products
21	Manufacture of Furniture	23	Printing, Reproduction of Recording Media
24	Manufacture of Articles for Culture, Education and Sport Activity	25	Processing of Petroleum, Coking, Processing of Nuclear Fuel
29	Manufacture of Rubber	26	Manufacture of Raw Chemical Materials and Chemical Products
34	Manufacture of Metal Products	27	Manufacture of Medicines
35	Manufacture of General Purpose Machinery	28	Manufacture of Chemical Fibers
37	Manufacture of Transport Equipment	30	Manufacture of Plastics
39	Manufacture of Electrical Machinery and Equipment	31	Manufacture of Non-metallic Mineral Products
40	Manufacture of Communication Equipment, Computers and Other Electronic Equipment	32	Smelting and Pressing of Ferrous Metals
41	Manufacture of Measuring Instruments and Machinery for Cultural Activity and Office Work	33	Smelting and Pressing of Non-ferrous Metals
42	Manufacture of Artwork and Other Manufacturing	36	Manufacture of Special Purpose Machinery

Notes: According to the median capital-labour ratio of enterprises in each 2-digit industry, the industries are sorted into labor-intensive industries and capital-intensive industries. Specifically, following Lu, 2010,Dai et al., 2014, we take the median capital-labor ratio of all enterprises in each 2-digit industry as the capital-labor ratio of the industry, and then take the median capital-labour ratio of industries as the dividing point, the industries are sorted into labor-intensive and capital-intensive industries. The median capital-labour ratio of industry is 38.54 thousands Yuan/perosn.

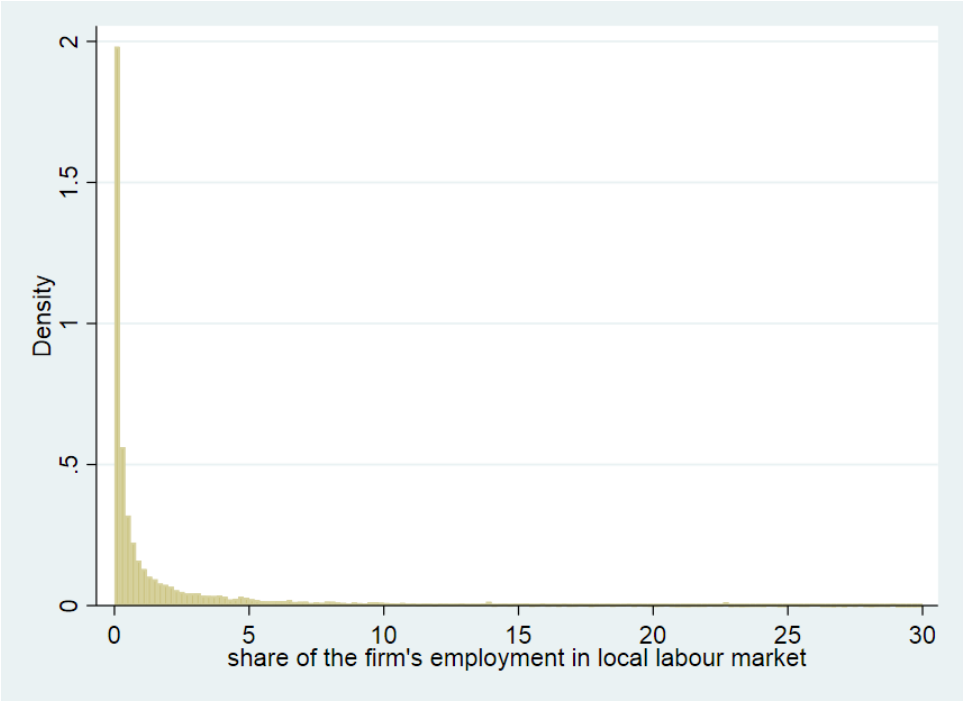

Figure 3: Distribution of the share of each firm's employment in its local labour market in 2004

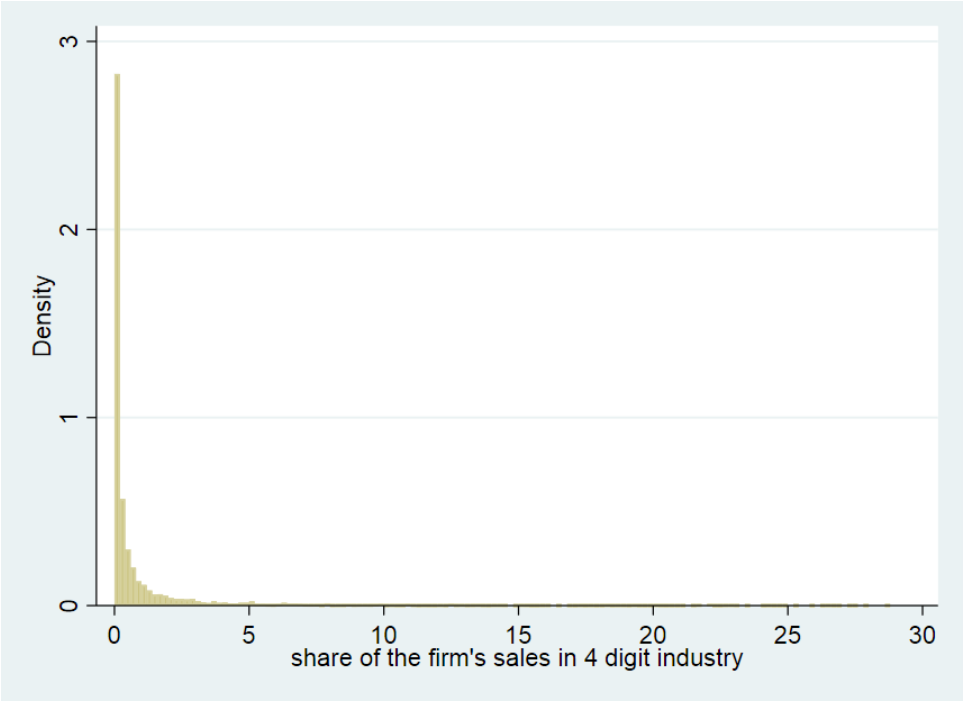

Figure 4: Distribution of the share of each firm's sales in its four-digit industry in 2004

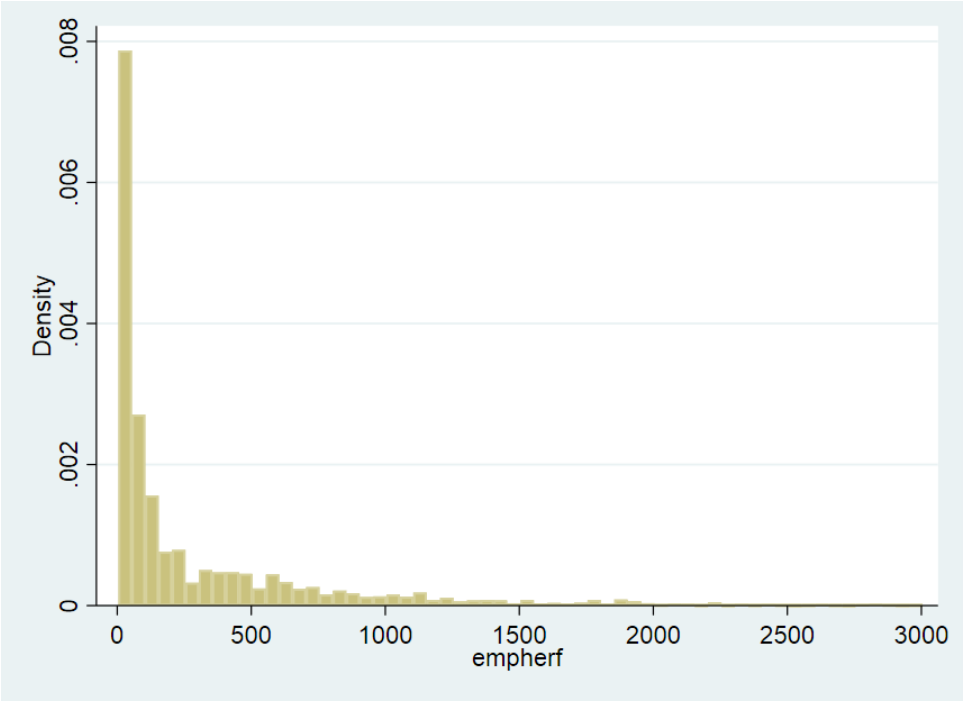

Figure 5: Herfindahl index (local labour market employment shares) in 2004

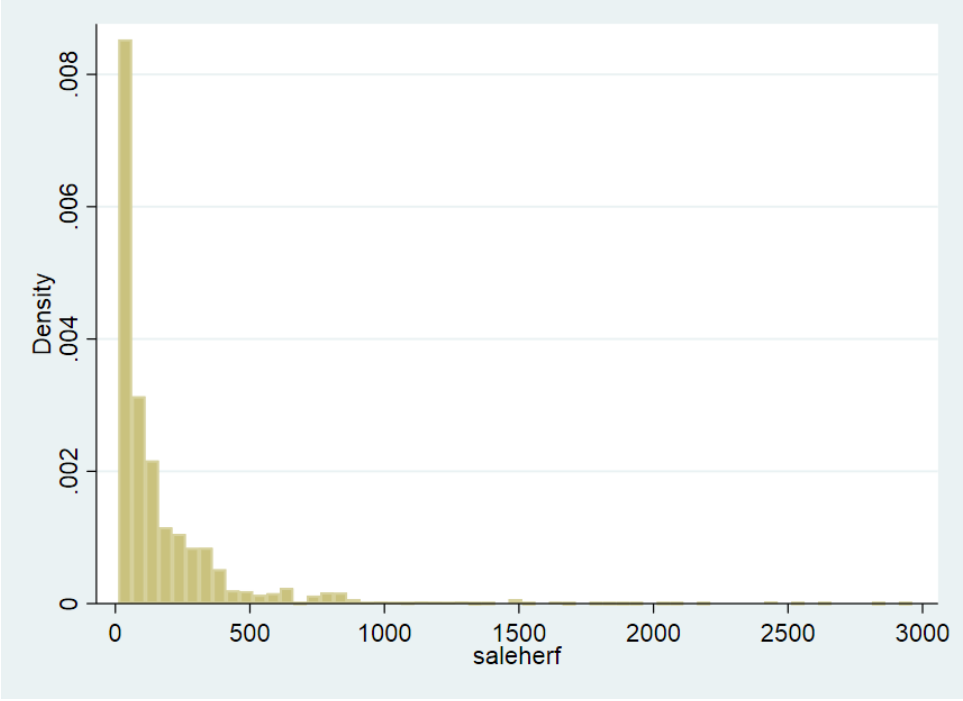

Figure 6: Herfindahl index (four-digit industry sales share) in 2004

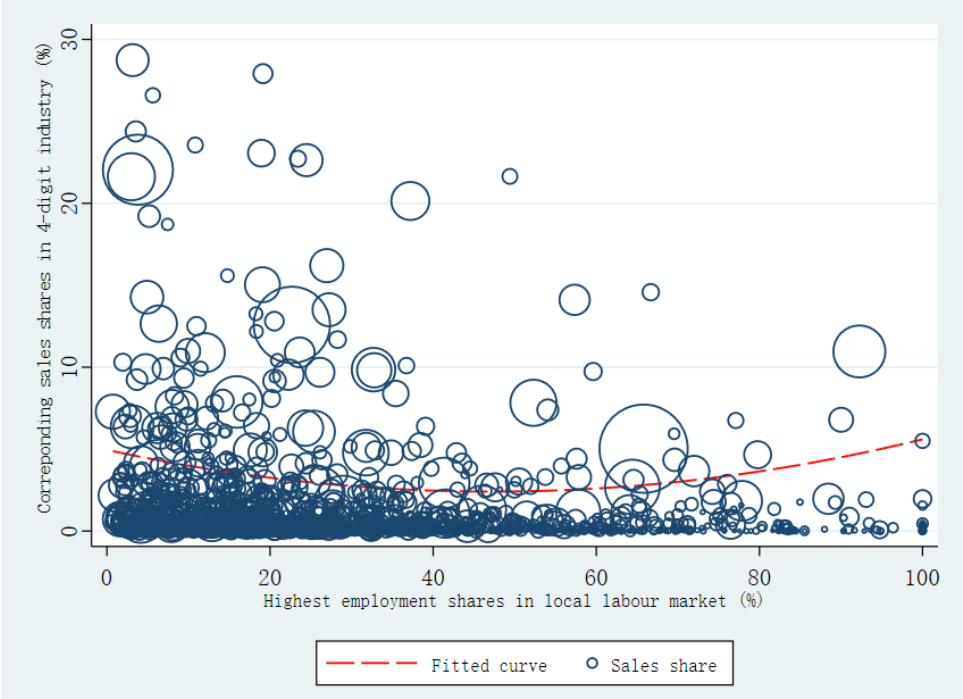

Figure 7: Firm's labour market employment and four-digit industry sales in 2004

C Supplementary Data

Table C1: Descriptive Statistics by Ownership: Mean and [Standard Deviation] for Full Sample (2000-2007)

Variables	**State**	**Collective**	**Private**	**Foreign**	**Total**
Wages per worker	11.38	10.93	13.26	18.31	13.91
	[9.177]	[7.600]	[8.483]	[12.11]	[9.564]
Labour Costs per worker	13.83	12.63	15.13	20.32	15.83
	[12.13]	[10.49]	[10.28]	[14.38]	[11.58]
Gross Profits per worker (after the wage bill)	0.0379	0.147	0.160	0.194	0.157
	[0.255]	[0.334]	[0.348]	[0.473]	[0.371]
Gross Profits per worker (before the wage bill)	0.162	0.266	0.299	0.388	0.304
	[0.300]	[0.358]	[0.373]	[0.528]	[0.406]
Gross Profits per worker (before the labour costs)	0.189	0.284	0.319	0.409	0.325
	[0.316]	[0.368]	[0.381]	[0.541]	[0.416]
Net Profits per worker	0.0256	0.118	0.132	0.172	0.132
	[0.224]	[0.334]	[0.309]	[0.511]	[0.357]
Added Value per worker	0.567	0.894	1.042	1.081	1.004
	[1.679]	[1.566]	[1.702]	[1.934]	[1.742]
Firm Size	606.6	224.8	190.2	350.0	253.2
	[2519.1]	[617.2]	[556.3]	[949.7]	[926.0]
Firm Age	24.53	14.24	7.789	7.020	9.371
	[17.87]	[12.18]	[9.273]	[5.306]	[10.81]
Capital per worker	90.68	56.94	69.54	103.0	76.39
	[184.9]	[96.38]	[124.2]	[226.6]	[153.0]
Gross Output per worker	1.911	3.249	3.813	3.878	3.644
	[4.596]	[5.952]	[6.279]	[7.164]	[6.355]
Export per worker	0.041	0.056	0.125	0.983	0.281
	[0.821]	[1.494]	[1.717]	[3.448]	[2.146]
Import per worker	0.024	0.020	0.033	0.639	0.150
	[1.043]	[1.731]	[1.026]	[4.271]	[2.160]
Subsidy Dummy	0.182	0.167	0.115	0.140	0.129
	[0.386]	[0.373]	[0.318]	[0.347]	[0.335]
Subsidies per worker	0.0094	0.0210	0.0088	0.0041	0.0090
	[0.070]	[0.144]	[0.385]	[0.057]	[0.314]
Labour-intensive Industry	0.365	0.472	0.521	0.664	0.534
Central Area	0.306	0.211	0.171	0.049	0.160
Western Area	0.248	0.108	0.098	0.029	0.096
Year 2001	0.181	0.170	0.064	0.083	0.085
Year 2002	0.155	0.144	0.078	0.089	0.091
Year 2003	0.129	0.119	0.099	0.104	0.104
Year 2004	0.105	0.118	0.148	0.149	0.142
Year 2005	0.084	0.090	0.160	0.153	0.147
Year 2006	0.071	0.084	0.186	0.165	0.165
Year 2007	0.056	0.079	0.217	0.182	0.187
Observations	107,135	143,554	1,010,338	307,839	1,568,866
Weighted analysis (number of workers per firm)					
Wages per worker	15.26	10.66	13.94	18.59	15.15
	[11.18]	[7.489]	[9.155]	[11.92]	[10.47]
Labour Costs per worker	19.14	12.35	16.19	20.63	17.56
	[13.98]	[9.151]	[11.25]	[14.04]	[12.63]
Gross Profits per worker (after the wage bill)	0.109	0.120	0.157	0.191	0.155
	[0.330]	[0.279]	[0.334]	[0.438]	[0.362]
Gross Profits per worker (before the wage bill)	0.275	0.236	0.304	0.387	0.316
	[0.404]	[0.310]	[0.373]	[0.497]	[0.414]
Gross Profits per worker (before the labour costs)	0.318	0.255	0.328	0.409	0.342
	[0.422]	[0.318]	[0.384]	[0.513]	[0.427]
Net Profits per worker	0.0797	0.0969	0.128	0.170	0.129
	[0.270]	[0.263]	[0.289]	[0.405]	[0.322]
Added Value per worker	0.750	0.707	0.908	0.973	0.883
	[1.057]	[1.156]	[1.317]	[1.631]	[1.364]

Table C2: Correlation Coefficients of Main Variables

	Log Wages/worker	Profits/worker	Log Firm Size	Log Capital/worker	Firm Age
Log Wages/worker	1				
Profits/worker	0.206***	1			
Log Firm Size	-0.0126***	-0.0765***	1		
Log Capital/worker	0.169***	0.217***	-0.0479***	1	
Firm Age	-0.0798***	-0.0792***	0.239***	0.0307***	1

Notes: Significant levels: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table C3: Robustness: OLS and IV Estimates

	OLS Estimates		IV Estimates	
	(1)	(2)	(3)	(4)
Profits/worker	0.119***	0.128***	0.255***	0.258***
	(0.002)	(0.002)	(0.056)	(0.056)
Log Firm Size	-0.122***	-0.151***	-0.129***	-0.155***
	(0.001)	(0.001)	(0.003)	(0.004)
Log Capital/worker	0.052***		0.045***	
	(0.001)		(0.002)	
Foreign Dummy	0.038***	0.041***	0.032***	0.034***
	(0.003)	(0.003)	(0.003)	(0.003)
Firm FE	Yes	Yes	Yes	Yes
Industry-province-year FE	Yes	Yes	Yes	Yes
Observations	1,455,181	1,455,181	975,805	975,805
Adj.R-squared	0.626	0.623	0.642	0.640
Elasticity	0.019	0.020	0.043	0.044
Lester's Range	0.175	0.190	0.377	0.382
First-stage results				
Average Profits/worker			0.174***	0.174***
			(0.010)	(0.010)
Subsidies/worker(first lag)			0.003***	0.003***
			(0.001)	(0.001)
Export Share*Weighted Exchange Rate			-0.010*	-0.010*
			(0.005)	(0.005)
Adj.R-squared			0.617	0.615
Kleibergen-Paap rk LM statistic			466.6	465.5
Kleibergen-Paap rk LM p-value			0.000	0.000
Kleibergen-Paap rk Wald F-stat			113.8	113.7
Hansen J statistic			2.461	2.638
Hansen J p-value			0.292	0.267

Notes: Dependent variable: log annual average wage per worker. 'Profits/worker' is the gross profits ('after the wage bill') per worker per firm. All specifications include firm and Industry-province-year fixed effects and firm controls. The first instrument 'Average Profits/worker' is the average gross profits ('after the wage bill') per worker of firms in the same four-digit industry and in the same year but in other labour markets (of the same province and of other provinces). The second instrument 'Subsidies/worker(first lag)' is firm's annual average subsidies per worker one year before. The third instrument 'Export Share*Weighted Exchange Rate' is the interaction between the share of export in sales and the weighted nominal effective exchange rate in the current year, and both variables are at firm level. Values in parentheses are robust standard errors. Significant levels: 0.1 (*); 0.05 (**); and 0.01 (***).

Table C4: Robustness by the No. of Years Firms Exist: OLS and IV Estimates

	OLS Estimates			IV Estimates		
	All Firms	Years>=5	Years=8	All Firms	Years>=5	Years=8
	(1)	(2)	(3)	(4)	(5)	(6)
Profits/worker	0.119***	0.132***	0.147***	0.255***	0.291***	0.430***
	(0.002)	(0.002)	(0.004)	(0.056)	(0.062)	(0.083)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry-province-year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,455,181	791,776	290,162	975,805	643,388	253,852
Adj.R-squared	0.626	0.615	0.639	0.642	0.629	0.631
Elasticity	0.019	0.021	0.023	0.043	0.048	0.070
Lester's Range	0.175	0.186	0.191	0.377	0.416	0.573
First-stage results						
Average Profits/worker				0.174***	0.155***	0.149***
				(0.010)	(0.010)	(0.013)
Subsidies/worker(first lag)				0.003***	0.003***	0.014
				(0.001)	(0.001)	(0.009)
Export Share*Weighted Exchange Rate				-0.010*	-0.009*	-0.029***
				(0.005)	(0.005)	(0.010)
Adj.R-squared				0.617	0.593	0.593
Kleibergen-Paap rk LM statistic				466.6	342.6	151.5
Kleibergen-Paap rk LM p-value				0.000	0.000	0.000
Kleibergen-Paap rk Wald F-stat				113.8	92.52	44.36
Hansen J statistic				2.461	2.191	3.402
Hansen J p-value				0.292	0.334	0.183

Notes: Dependent variable: log annual average wage per worker. 'Profits/worker' is the gross profits ('after the wage bill') per worker per firm. All specifications include firm and Industry-province-year fixed effects and firm controls. These three instruments are the same as those in Table C3. Values in parentheses are robust standard errors. Significant levels: 0.1 (*); 0.05 (**); and 0.01 (***).

Table C5: Robustness: IV Estimates

	(1)	(2)
Profits/worker	0.255***	0.273***
	(0.056)	(0.058)
Controls	Yes	Yes
Firm FE	Yes	Yes
Industry-province-year FE	Yes	Yes
Observations	975,805	975,803
Adj.R-squared	0.642	0.641
Elasticity	0.043	0.046
Lester's Range	0.377	0.405
First-stage results		
Average Profits/worker	0.174***	
	(0.010)	
Average Profits/worker(other provinces)		0.162***
		(0.009)
Subsidies/worker(first lag)	0.003***	0.003***
	(0.001)	(0.001)
Export Share*Weighted Exchange Rate	-0.010*	-0.010*
	(0.005)	(0.005)
Adj.R-squared	0.617	0.617
Kleibergen-Paap rk LM statistic	466.6	446.5
Kleibergen-Paap rk LM p-value	0.000	0.000
Kleibergen-Paap rk Wald F-stat	113.8	108.4
Hansen J statistic	2.461	2.302
Hansen J p-value	0.292	0.316

Notes: Dependent variable: log annual average wage per worker. 'Profits/worker' is the gross profits ('after the wage bill') per worker per firm. All specifications include firm and Industry-province-year fixed effects and firm controls. The first instrument 'Average Profits/worker' is the average gross profits ('after the wage bill') per worker of firms in the same four-digit industry and in the same year but in other labour markets (of the same province and of other provinces). 'Average Profits/worker(other provinces)' is the average gross profits ('after the wage bill') per worker of firms in the same four-digit industry and in the same year but in other provinces. The second and third instruments are the same as those in Table C3. Values in parentheses are robust standard errors. Significant levels: 0.1 (*); 0.05 (**); and 0.01 (***).

Table C6: Robustness: OLS and IV Estimates

	OLS Estimates		IV Estimates	
	(1)	(2)	(3)	(4)
Profits/worker	0.119***	0.129***	0.255***	0.293***
	(0.002)	(0.002)	(0.056)	(0.024)
Log Graduates		0.082***		0.044***
		(0.004)		(0.006)
Controls	Yes	Yes	Yes	Yes
Year FE	No	Yes	No	Yes
Firm FE	Yes	Yes	Yes	Yes
Industry-province-year FE	Yes	No	Yes	No
Industry-province FE	No	Yes	No	Yes
Observations	1,455,181	1,455,378	975,805	976,034
Adj.R-squared	0.626	0.616	0.642	0.631
Elasticity	0.019	0.020	0.043	0.050
Lester's Range	0.175	0.191	0.377	0.433
First-stage results				
Average Profits/worker			0.174***	0.335***
			(0.010)	(0.008)
Subsidies/worker(first lag)			0.003***	0.003***
			(0.001)	(0.001)
Export Share*Weighted Exchange Rate			-0.010*	-0.014**
			(0.005)	(0.007)
Adj.R-squared			0.617	0.605
Kleibergen-Paap rk LM statistic			466.6	2,440
Kleibergen-Paap rk LM p-value			0.000	0.000
Kleibergen-Paap rk Wald F-stat			113.8	623
Hansen J statistic			2.461	0.924
Hansen J p-value			0.292	0.630

Notes: Notes: Dependent variable: log annual average wage per worker. 'Profits/worker' is the gross profits ('after the wage bill') per worker per firm. All specifications include firm fixed effects and firm controls. In column 1 and 3, we control the interacted Industry, province and year fixed effects, while in column 2 and 4, we control year and the interacted industry, province fixed effects. Three instruments are the same as those in Table C3. Values in parentheses are robust standard errors. Significant levels: 0.1 (*); 0.05 (**); and 0.01 (***).