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Abstract

Although an increasing body of literature has examined the relationship between firms' profitability and wage inequality in the context of a diverse workforce, the role of rent sharing in explaining origin-based wage differentials has yet to be explored. Our paper aims to fill this gap using detailed Belgian matched employer-employee data from 1999 to 2016. After controlling for a wide range of covariates and addressing endogeneity issues, our estimates show that the wage-profit elasticity equals approximately 3% and does not differ statistically between native and immigrant workers, be they first or second generation. It therefore appears that firms share their profits equally with their employees, regardless of their origin. However, Oaxaca-Blinder decompositions suggest that rent sharing has a significant influence on immigrants' wages through labour market segregation. Specifically, first-generation immigrants are found to earn lower wages than natives because of their higher concentration in firms with lower profit margins. The same is true for second-generation immigrants, but almost half as much. These findings, corroborated and refined by heterogeneity tests according to gender, educational attainment and level of collective bargaining, support the hypothesis of a segmented assimilation process for immigrants.

JEL classification:
C26, J15, J16, J31, J61.

Keywords:
Rent sharing, natives, first- and second-generation immigrants, matched employer-employee data, wage decompositions, instrumental variables.

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1. Introduction

Since the 1980s, the ratio of total labour compensation to GDP has decreased in most developed countries, thereby widening income inequalities, as capital tends to be more concentrated at the top of the income distribution (OECD, 2019; Rodriguez and Jayadev, 2013). This decline in labour income shares is generally associated with globalisation, institutional reforms and technological changes (European Commission, 2007; IMF, 2007; Piketty and Saez, 2003). However, recent empirical research has begun to place more emphasis on the role of firms, especially through the mechanism of rent sharing (i.e., a situation where firms share their profits, at least in part, with their employees). Bell et al. (2024), for example, state that the pass-through of profits to wages in American and European firms has declined over time, contributing to a significant reduction in labour compensation.

Moreover, firm-level studies show that rent sharing fuels overall wage dispersion in the presence of heterogeneous labour. Specifically, they suggest that: i) firms employing a more skilled workforce display greater wage-profit elasticity (Card et al., 2018; Duan and Martins, 2022); ii) firms covered by firm-level collective agreements allocate a larger share of profits to employees (Gürtzgen, 2009; Rusinek and Rycx, 2013); iii) the proportion of profits reflected in employee compensation depends on workers' relative position within the wage distribution (Cho and Krueger, 2022; Matano and Naticchioni, 2017); and iv) female employees capture a smaller share of firm profits than their male counterparts and/or are disproportionately concentrated in firms generating lower profits (Fukao et al., 2023; Martins, 2009; Nekby, 2003; Pineda-Hernández et al., 2026; Rycx and Tojerow, 2004). However, the relationship between rent sharing and native-immigrant wage gaps remains unexplored.[1] Further research is therefore needed on the extent to which firms share their profits equally with workers of different origins and, more generally, on the on role of rent sharing in shaping origin-based wage differentials. Hence the objective of our paper, which aims to provide first evidence on these issues by leveraging access to rich, linked employer-employee data for Belgium.

[1] Unless mentioned otherwise, this paper henceforth uses the words i) 'immigrants' for first- and second-generation immigrants; ii) 'first-generation immigrants' for people born abroad; iii) 'second-generation immigrants' for people born in the host country with at least one foreign-born parent; and iv) 'natives' for people born in the host country with both parents born in the host country.

The labour market outcomes of immigrants from developing countries[2] have been extensively investigated in recent decades, as their integration represents an increasing economic and social concern for Western countries (OECD, 2023). With regard to wages, several studies indicate that first-generation (F-G) immigrants born in developing countries earn less than natives, mainly due to the imperfect transferability of their human capital, their lower levels of education, and the employment segregation they face (e.g., Barth et al., 2012; Christl et al., 2020; Guzi et al., 2021). However, immigrant-native wage gaps are also significantly driven by an unexplained component. Although there is broad consensus that this unexplained component is reflective of unobservable worker characteristics (e.g., language skills) and/or wage discrimination (Fays et al., 2021; Ingwersen and Thomsen, 2021), other unexplored factors stemming from the firm may also play a role, most notably rent sharing.

In addition, a growing body of literature provides empirical evidence on immigrant-native wage gaps across two generations (e.g., Algan et al., 2010; Belfi et al., 2022; Pineda-Hernández et al., 2025a). Most studies show that, although second-generation (S-G) immigrants receive higher wages than their F-G peers, they generally remain less well paid than natives. The fact that S-G immigrants catch up, albeit partially, with native workers in terms of wages can be explained by their higher level of human capital (e.g., education and language proficiency) and their better working conditions (e.g., occupation and union coverage) compared to their F-G counterparts. As the literature shows that firms' propensity to share profits with their employees depends on their level of education, the type of job they do and collective bargaining characteristics, the contribution of rent sharing to the native-immigrant wage gap is likely to evolve across generations.

Two theoretical mechanisms can be identified as linking rent sharing to origin-based wage differentials. First, since natives typically have higher human capital, are more likely to be unionised and possess better knowledge of the domestic labour market than immigrants (Cools et al., 2021), we can expect them to have greater bargaining power and, consequently, to benefit more from firm profits. However, origin-based differences in bargaining power may also result from discrimination. Indeed, employers may share a smaller portion of their profits with immigrants due to ethnic preferences (i.e., taste-based discrimination (Becker, 1957)),

[2] By 'developing countries', we refer to either transition or developing countries listed in the United Nations' (2019) classification and/or emerging market and developing economies listed in the IMF's (2019) classification. See Appendix 1 for a chart of developed and developing countries.

imperfect information about the true productivity of immigrants (i.e., statistical discrimination (Phelps, 1972)) and/or knowledge of the greater difficulties immigrants face in accessing the labour market, which they could take advantage of (i.e., monopsonistic discrimination (Hirsch and Jahn, 2015; Manning, 2003)). In short, several factors can lead to differential bargaining power depending on origin and explain why firms may distribute their profits unevenly between natives and immigrants (i.e., give rise to a price effect).

The second theoretical mechanism posits that, in labour markets segregated by origin, immigrants will be more concentrated in less profitable firms than native workers. Indeed, jobs usually held by immigrants (e.g., cleaners, taxi drivers, fast-food cooks, nurses, builders) not only tend to be at the lower end of the wage distribution, but also belong to firms (and sectors) that make less profits and are less inclined to share these profits with their staff (e.g., agriculture, construction, healthcare, catering) (Bursell and Bygren, 2026; Glitz, 2014). Moreover, evidence suggests that although S-G immigrants have higher-quality jobs than their F-G peers, they generally continue to experience employment segregation (Algan et al., 2010; Pineda-Hernández et al., 2025a). Therefore, rent sharing may fuel immigrant-native wage gaps over two generations through the channel of labour segregation, particularly through differences in the profitability of firms employing native and immigrant workers, respectively (i.e., a composition effect).

This paper empirically tests the above two mechanisms using a rich, matched employer-employee database comprising more than 900.000 workers employed in around 16,400 firms in the Belgian private sector between 1999 and 2016. The richness of this database lies in the detailed cross-sectional information it contains on the characteristics of workers (e.g., age, gender, place of birth of the worker and her/his parents, level of education), their jobs (e.g., gross hourly wage, years of tenure, working hours, employment contract, occupation) and the firms that employ them (e.g., size, sector, region, level of collective agreement, type of financial and economic control, gross operating surplus, gross investments in tangible assets). It is worth

noting that this paper focuses exclusively on immigrants from developing countries, as they represent the most vulnerable group of foreign origin in Belgium.[3,4]

Our empirical strategy first relies on log-log regressions to determine whether the elasticity between wages and profits differs for natives and immigrants (first and second generation, respectively) while controlling for a wide range of covariates. To account for the endogeneity of profits (which may notably arise because of a simultaneity issue), we use an instrumental variable approach, i.e., a two-stage least squares (2SLS) estimator.[5] Next, we decompose native-immigrants wage gaps, using the Oaxaca-Blinder (1973) technique, to assess which proportion can be attributed to rent sharing, respectively through: i) the composition effect (i.e., differences in the average profits of the firms in which natives and immigrants are employed), and ii) the price effect (i.e., origin-based differences in 2SLS wage-profit elasticities).

Finally, we run a series of heterogeneity tests to examine the moderating role of gender, human capital (i.e., being tertiary educated or at most graduated from secondary education), and union coverage (i.e., being covered by a firm-level collective agreement or only by an industry-level agreement). Given that workers' ability to extract rents and find employment in profitable firms likely depends not only on their origin but also on these three moderating variables, we seek to determine whether there might be any significant interaction effects. In particular, we aim to answer the following questions: Do immigrant women face a double penalty because they work for less profitable firms and/or benefit less from their firms' profits than their male counterparts? Similarly, does rent sharing lead to a double wage disadvantage for less educated immigrants and those who are covered only by an industry-specific collective agreement? Finally, do the outcomes differ between F-G and S-G immigrants depending on these moderating variables? Put differently, do S-G immigrants achieve outcomes closer to those of

[3] We do not focus on the situation of (F-G and S-G) immigrants from developed countries, as numerous studies have shown that they do not encounter significant integration problems in Western countries (e.g., Abramitzky et al. (2021), Algan et al. (2010), Fays et al. (2021) and Pineda-Hernández et al., 2025a). Our data also corroborate this observation. Indeed, our descriptive statistics and regressions – available on request – indicate that the wages of immigrants from developed countries (both F-G and S-G) are similar to those of natives.

[4] We identify workers' origin using information on their own country of birth and the countries of birth of their parents. In line with most previous studies (e.g., Algan et al., 2010; Athari et al., 2019; Duncan and Trejo, 2018; Pineda-Hernández et al., 2025a,b), our analysis does not estimate the intergenerational evolution of immigrant-native wage gaps using parent-child pairs. Instead, it compares the wage gaps of F-G immigrants with those of their S-G peers at a given point in time.

[5] Given the repeated cross-sectional nature of our data set, workers cannot be tracked over time, which prevents us from implementing panel data estimation techniques.

natives, and if so, does the extent of this catch-up process depend on their gender, educational level, and union coverage?

Our 2SLS estimates show that the wage-profit elasticity in the Belgian private sector is approximately equal to 3%, which is slightly below the range of 5 to 15% found in most studies conducted on other advanced economies (Card et al., 2018), but consistent with previous evidence for Belgium (du Caju et al., 2011; Rusinek and Rycx, 2013; Pineda-Hernández et al., 2026). Moreover, we find that this elasticity is not statistical different for native and immigrant workers, regardless of whether they are of the first or second generation.[6] This suggests that companies share their profits equally with their employees, irrespective of their origin. However, Oaxaca-Blinder decompositions suggest that labour market segregation significantly influences immigrants' wages. Specifically, F-G immigrants are found to earn lower wages than natives due to their greater concentration in firms whose profit margins are lower. This is also the case for S-G migrants, but by nearly half as much. These findings support the hypothesis of a segmented assimilation process for immigrants. Heterogeneity tests refine this conclusion. Indeed, they show that the concentration of F-G immigrants in less profitable firms accounts for a much larger share of the wage gap with natives among the low educated and to a lesser extent among women and workers covered by a company-level collective agreement. Next, regarding the reduction in segregation between F-G and S-G immigrants, they indicate that it is more pronounced among low-educated individuals and women, and fairly similar across bargaining levels. That said, regardless of the moderator considered, S-G immigrants still tend to be more concentrated in less profitable firms than natives. For those with tertiary education, however, this segregation effect appears to be negligeable in quantitative terms.

The remainder of this paper is organised as follows. Section 2 describes the key features of the country under study, Belgium. Section 3 introduces our empirical strategy, and Section 4 provides an insight on our data set and descriptive statistics. Section 5 and 6 present our benchmark results and heterogeneity tests. Finally, Section 7 concludes.

[6] The Lester's (1952) 'range of pay' associated to our 2SLS estimates varies between 18 and 24% depending on workers' origin.

2. Belgian context

Within the OECD, Belgium is one of the countries with the largest immigrant population. According to the 2021 Labour Force Survey (Statbel, 2021), F-G immigrants accounted for 21.4% of the total population aged 20-64 in Belgium, while S-G immigrants represented 13.3%. Among this immigrant population, 44.7% had an EU background, while 55.3% came from non-EU economies, primarily developing countries. This demographic context makes Belgium an interesting case study for assessing the labour market integration of immigrants over two generations.

People of non-EU origin face significant barriers when looking for work in Belgium. In 2021, the employment rate of natives was 76.2%, while that of F-G immigrants born in developing countries barely reached 53% (Statbel, 2021). This employment gap with natives also affects S-G immigrants from developing countries, whose employment rate was only around 60%. Controlling for demographics, Corluy et al. (2015), De Cuyper et al. (2018), and Piton and Rycx (2021) show that F-G immigrants born in developing countries and their S-G peers face a substantial ethnic penalty in accessing the Belgian labour market.

Focusing on the employed population in Belgium, Fays et al. (2021), Kampelmann and Rycx (2016) and Grinza et al. (2020) find that *ceteris paribus* F-G immigrants born in developing countries earn less than natives and face wage discrimination. Turning to the second generation, the results of Pineda-Hernández et al. (2025a) suggest that, although S-G immigrants from developing also receive lower wages than natives, there is no evidence of wage discrimination. Furthermore, Jacobs et al. (2021) and Pineda-Hernández et al. (2025b) show that, unlike their F-G peers, S-G immigrants from developing countries are just as likely to be overeducated as natives. Put differently, immigrant overeducation (i.e., having a level of education higher than that required for a specific job because of the worker's foreign origin) disappears over two generations. However, to the best of our knowledge, the impact of rent sharing on native-immigrant wage gaps has not yet been studied, either in Belgium or elsewhere.

3. Empirical strategy

This paper examines whether and to what extent private firms in Belgium share their profits with natives and immigrants, both first and second generation. Our empirical strategy relies on

log-log regressions to estimate wage-profit elasticities by origin and according to various moderators likely to influence the ability of natives and immigrants to extract firm rents (i.e., level of education, gender and type of wage agreement). The full benchmark specification is written as follows:

$$log(wage_{ijt}) = \beta_0 + \beta_1 log(profits_{jt}) + \underline{\mathbf{k}_{ijt}}\underline{\boldsymbol{\vartheta}} + \underline{\mathbf{g}_{ijt}}\underline{\boldsymbol{\lambda}} + \underline{\mathbf{f}_{ijt}}\underline{\boldsymbol{\xi}} + \delta_t + \varepsilon_{ijt} \quad (1)$$

where the dependent variable is the logarithm of the real gross hourly wage of worker *i* in firm *j* at year *t*. The main explanatory variable is the logarithm of the profit per hour worked in firm *j* at year *t*. Equation (1) also includes the vector $\underline{\mathbf{k}_{ijt}}$ which contains a set of covariates for worker characteristics. More precisely, it comprises a dummy for gender (set equal to 1 if the worker is a woman, and 0 otherwise), the age of the worker (measured in years) and its square, and the worker's tenure (measured in years) and its square, and 2 dummies for the worker's highest completed level of education (i.e., at most a degree from upper secondary and tertiary education, respectively; lower secondary education being the reference category). The vector $\underline{\mathbf{g}_{ijt}}$, also part of equation (1), provides control variables for job characteristics. It contains a dummy respectively for part-time, fixed-term and overtime work, and occupation fixed effects at the ISCO three-digit level. The vector $\underline{\mathbf{f}_{ijt}}$ includes firm characteristics, in particular firm size (i.e., the logarithm of the full-time equivalent number of employees), 2 dummies for the region where the firm is located (i.e., Flanders and Wallonia, respectively; Brussels being the reference category), a dummy indicating whether wages are collectively renegotiated at the firm level, and sector fixed effects at a NACE two-digit level. δ_t is a set of year dummies (17 dummies), and ε_{ijt} is the error term.

We first estimate equation (1) using the ordinary least squares (OLS) estimator, with standard errors clustered at the firm level.[7] However, this estimator is likely to suffer from an econometric issue, namely the endogeneity of profits. Reverse causality may be at the root of this issue. Indeed, from a strict accounting standpoint, any increase in workers' wages should automatically lead to a reduction in firm profits (i.e., value added minus labour costs). However,

[7] Clustering at the firm level is required because of the simultaneous use of grouped observations and individual data. Indeed, the 'hourly profit' variable takes the same value in each period for all workers employed in the same firm, which may bias the standard error (and therefore the significance) of our main explanatory variable. Moreover, clustering is done at the firm level rather than at the firm-year level to account for potential serial correlation within firms.

according to the efficiency wage theory, higher wages should lead workers to be more productive, so the relationship between wages and profits could turn out to be positive (Arai and Heyman, 2009). Endogeneity could also result from an unobserved external shock that affects both wages and firm profits, thereby creating a spurious correlation between these two variables. Empirical evidence suggests that when endogeneity is not controlled for, this generally leads to a lower estimate of rent sharing (e.g., Estevão and Tevlin, 2003). OLS estimates are therefore likely to be downward biased and inconsistent. To address this issue, we use a two-stage least squares (2SLS) estimator with instrumental variables (Z) as follows:

First stage

$$log(profits_{jt}) = \alpha_0 + \alpha_1 Z_{1j,t} + \alpha_2 Z_{2j,t} + \alpha_3 Z_{3j,t} + \underline{\mathbf{k}_{ijt}\boldsymbol{\vartheta}} + \underline{\mathbf{g}_{ijt}\boldsymbol{\lambda}} + \underline{\mathbf{f}_{ijt}\boldsymbol{\xi}} + \delta_t + \nu_{ijt} \quad (2)$$

Second stage

$$log(wage_{ijt}) = \beta_0 + \beta_1 \log(\widehat{profits_{jt}}) + \underline{\mathbf{k}_{ijt}\boldsymbol{\vartheta}} + \underline{\mathbf{g}_{ijt}\boldsymbol{\lambda}} + \underline{\mathbf{f}_{ijt}\boldsymbol{\xi}} + \delta_t + \varepsilon_{ijt} \quad (3)$$

where $\log(\widehat{profits_{jt}})$ in equation (3) represents the instrumented log hourly profit in firm *j* at year *t*.

The instrumented profit is the result of a first-stage regression, as shown in equation (2), where the first instrument $Z_{1j,t}$ is the gross investment in tangible assets per hour worked in firm *j* at year *t*. The assumption underlying the choice of this first instrument is that investments in tangible assets are likely to have a direct impact on firm profits through an increase in productivity due to the acquisition of new machinery, but not directly on wages. Indeed, one can imagine different scenarios where new tangible assets do not require workers to have new skills, so that their wages remain unchanged. For example, the acquisition of new computers with faster processors, but running the same operating system, is likely to increase workers' productivity without affecting their pay, thereby boosting firm profits.

The second instrument $Z_{2j,t}$ is a dummy variable indicating the type of firm's financial and economic control (i.e., whether more than 50% of the firm is privately owned). The idea behind

this instrument is that private-sector companies[8] that are mainly held by private actors are more likely to adopt a strict profit maximising approach. In contrast, those controlled primarily by public actors may face a trade-off between social goals and profit maximisation. However, when it comes to the explanatory variable, any private-sector company controlled by public or private capital is compelled to offer the salaries in force on its market (or close to it) in order to be able to attract, motivate and retain competent staff.

For the third instrument $Z_{3j,t}$, we follow an empirical strategy similar to that of Matano and Naticchioni (2017), Card *et al.* (2018) and Duan and Martins (2022). More precisely, for each year, we use the average log hourly profits of firms belonging to the same sector (at the NACE two-digit level), but which are located in the other two regions of the country. The rationality of this instrument is that firms operating in the same sector of activity but in other regions are likely to experience the same demand and productivity shocks and therefore have profits that will be positively correlated to those of the company in question. However, a firm is unlikely to consider the profits of geographically distant competitors when setting wages. In addition, the specific characteristics of each local labour market may impede external profits from having a significant influence on an individual firm's wages. It is indeed very likely that a company based in Brussels (the region with the highest cost of living and wages in the country) will have to offer comparatively higher wages in order to be able to manage its human resources effectively, even if the profits of its competitors in the other two regions are relatively low. And the reverse is arguably true for companies located in Wallonia (the region with the lowest cost of living and wages in the country).

Next, our empirical strategy draws on the Oaxaca-Blinder (OB) decomposition technique to assess the extent to which rent sharing contributes to explaining the wage gap between natives and immigrants (first- and second-generation respectively). More precisely, this technique enables us to estimate the share of the origin-based wage gap that can be attributed to: i) differences in 2SLS wage-profit elasticities for natives and immigrants (i.e., the price effect), and ii) differences in average profits of firms in which natives and immigrants are employed (i.e., the composition effect).

[8] As explained in Section 4, our data cover NACE codes B to N. We are therefore only considering the private sector. However, companies in this sector may be more than 50% owned by public or private capital. For example, in the parcel post sector, some companies are mainly public (e.g., Bpost) and others private (e.g., DHL).

Finally, we run a series of heterogeneity tests to examine the role of three moderating variables: workers' level of education (i.e., being tertiary educated or at most graduated from secondary education), gender and union coverage (i.e., being covered by a firm-level collective agreement or only by an industry-level agreement). Using 2SLS regressions and OB decompositions, we therefore seek to determine whether the contribution of rent sharing to wage differentials between natives and immigrants (first- and second-generation), through both price and composition effects, is amplified or, conversely, mitigated when we focus on workers based on their qualifications, gender and union coverage.

4. Data and descriptive statistics

The database used in this empirical study stems from Statistics Belgium, which merged three large-scale datasets. The first dataset is the Structure of Earnings Survey (SES). The SES covers all firms that are operating in Belgium, employ at least 10 workers and have economic activities between sections B to S (excluding O) of the NACE nomenclature.[9] It contains a wealth of information provided by the HR departments of firms, both on their characteristics (e.g., firm size, sector of activity, region where the firm is located, type of financial and economic control and level of collective bargaining) and on those of their workers (e.g., gender, age, education, tenure, occupation, working time, employment contract, and wages). Our dependent variable is the worker's real gross hourly wage. It is computed by dividing the individual's gross wage, including premia for overtime, weekend or night work, bonuses and other premia, by the total

[9] The SES is a stratified sample. The stratification criteria refer to the region (NUTS-groups), the main economic activity (NACE-groups) and the size of the firm. The sample size in each stratum depends on the size of the firm. The sampling percentages of firms are equal to 10%, 50% and 100% when the number of workers is between 10 and 50, between 50 and 99, and above 100, respectively. Within a firm, the sampling percentages of employees also depend on the size of the firm. The sampling percentages of employees are equal to 100%, 50%, 25%, 14.3% and 10% when the number of workers is between 10 and 20, between 20 and 50, between 50 and 99, between 100 and 199, and between 200 and 299, respectively. Firms employing at least 300 workers are required to report information for an absolute number of employees, which ranges from 30 (for firms with 300-349 workers) to 200 (for firms with 12,000 workers or more). To guarantee that firms report information on a representative sample of their workers, they are asked to follow a specific procedure. First, they have to rank their employees in alphabetical order. Next, Statistics Belgium gives them a random letter (e.g., the letter O) from which they have to start when reporting information on their employees (following the alphabetical order of the workers' names in their list). If they reach the letter Z and still have to provide information on some of their employees, then they have to continue from the letter A in their list. Moreover, firms that employ different categories of workers, namely managers, blue- and/or white-collar workers, have to set up separate lists in alphabetical order for each of these categories and to report information on a number of workers in these categories that is proportional to their share in total firm employment. For example, a firm with 300 employees (namely 60 managers, 180 white-collar workers and 60 blue-collar workers) will have to report information on 30 workers (namely 6 managers, 18 white-collar workers and 6 blue-collar workers). For an extended discussion, see Demunter (2000).

number of paid hours.[10] The SES has been merged with a second data set, the so-called Structure of Business Survey (SBS), which contains financial information about firms, such as value added, gross operating surplus and gross investments in tangible assets. The coverage of the SBS differs from the SES in that it solely covers the non-financial business economy. More precisely, it covers industry (NACE B-E), construction (NACE F), trade (NACE G) and market services (NACE H-N). Moreover, it only covers a small and specific part of the financial sector (NACE K), namely some auxiliary financial services (i.e., NACE codes 66.19, 66.29 and partially 66.30). Our main explanatory variable, i.e., hourly profits at the firm level, is computed as the gross operating surplus divided by the total number of hours paid in each company. The third set of data is the Population Register (PR), which provides precise information on workers' country of birth and that of their parents, and enables us to group workers into three categories according to whether they are natives (i.e., workers born in Belgium whose parents were also born in Belgium), F-G immigrants (workers born in developing countries) or S-G immigrants (workers born in Belgium with at least 1 parent born in a developing country).[11]

The initial SES sample, covering the period 1999-2016, contains 1,609,543 individual observations across 20,735 firms. Several filters were applied to this sample. First, given the coverage of the SBS, merging this database with the SES and the variables from the PR has restricted our sample to employees working in non-financial business companies, i.e., in sectors B to N of the NACE nomenclature, excluding sector K, apart from auxiliary financial services (45,425 observation were deleted).[12] Next, we dropped firms that did not have strictly positive profits (149,034 observation deleted) as we rely on a double-log model, and those for which information on profits was missing (137,197 observations deleted). Similarly, workers whose wages or number of paid hours were reported as zero were excluded to avoid any statistical bias

[10] Gross hourly wages, as well as all other nominal variables used in our analysis, have been deflated to 2013 prices.

[11] To determine the origin of S-G immigrants, in line with common practice (Corluy et al., 2015; FPS Employment and Unia, 2019; Pineda-Hernández et al., 2025a,b; Piton and Rycx, 2021), the order of priority is based on the father's country of birth. Put differently, the father's country of birth is used to define the origin of a S-G immigrant, except if the father was born in Belgium and the mother abroad. In that case, the mother's country of birth is retained. Therefore, in this study, S-G immigrants from developing countries include workers born in Belgium: i) whose father was born in a developing country, and ii) those whose father was born in Belgium, but whose mother was born in a developing country.

[12] More precisely, our final sample covers the following sectors: (B) mining and quarrying, (C) manufacturing, (D) electricity, gas, steam and air conditioning supply, (E) water supply, sewerage, waste management and remediation, (F) construction, (G) wholesale and retail trade, repair of motor vehicles and motorcycles, (H) transportation and storage, (I) accommodation and food service activities, (J) information and communication, (L) real estate activities, (M) professional, scientific and technical activities, and (N) administrative and support service activities. Financial and insurance activities (K) are not covered by our sample, apart from auxiliary financial services (i.e., NACE 66.19, 66.29 and part of 66.30).

in the wage regressions (3,235 observations deleted). In addition, workers for whom information on their country of birth or that of at least one of their parents was missing were dropped to avoid them being misclassified according to their origin and generation (164,823 observations deleted). As we focus exclusively on immigrants from developing countries, we also excluded immigrants from developed countries and immigrants with both parents born in Belgium (e.g., expatriates)[13] (179,386 observations deleted). Finally, we removed companies for which no information on 'gross investments in tangible fixed assets per hour worked' was available in our data, as this is one of the instruments used in our econometric analysis to account for endogeneity (14,529 observations deleted).[14] After applying these filters, the final SES-SBS-PR sample comprises 916,409 observations from 16,433 firms over the period 1999-2016. It is representative of all workers employed in firms with at least 10 employees in the Belgian private sector, i.e., NACE codes B to N, with the exception of (nearly all) the financial sector (K).

[Insert Table 1 here]

The breakdown of our sample by worker origin is presented at the top of Table 1. Natives make up 88.4% of the sample, while immigrants from developing countries account for 11.6%. Most workers with an immigration background originate from the Maghreb, Sub-Saharan Africa and the Near and Middle East, which aligns with the distribution of the working-age population by geographical origin in Belgium (FPS Employment and Unia, 2019).

Table 1 also shows the statistical profiles of these three groups of workers. On average, natives earn 20.1 euros per hour, while S-G immigrants and their F-G peers make respectively around 17.2 and 16.8 euros per hour. Women represent around one-third of the sample, regardless of the origin and generation. On average, immigrants have been working for their current employer for 4 to 5 years, compared with around 9 years for natives. For S-G immigrants, this

[13] Our results (available on request) show that workers born in developing countries with both parents born in Belgium earn more than any other group of origin and have better working conditions and employment characteristics than immigrants from developing countries. One might expect these workers to be the children of expatriates, who are generally highly educated and have a high socio-economic status. Consequently, considering these workers as F-G immigrants born in developing countries would lead to misleading conclusions. This is also why, in line with the literature (e.g., FPS Employment and Unia, 2019; Pineda-Hernández et al., 2025a,b), they are excluded from our analysis.

[14] Thanks to this filter, our OLS and 2SLS regressions will be performed using identical samples (of equal size), which will make it easier to compare the results. It should be noted, however, that this filter has virtually no effect on our descriptive statistics and leaves our OLS estimates unchanged.

difference in seniority may be related to their younger age (30 compared with 38 for natives). For F-G immigrants (who have the same average age as natives), the explanation probably has more to do with their arrival in Belgium at a later age and/or greater occupational instability. Table 1 further shows that F-G immigrants have a much lower level of education than the natives. The proportion of workers with a tertiary education, for example, is only 12.6% among F-G immigrants, compared with 28.4% among natives. However, the difference between F-G and S-G immigrants is also notable in this respect. Nearly 25% of S-G immigrants have a tertiary education, almost as many as among natives.

In terms of employment characteristics, descriptive statistics show that immigrants (slightly less so among the second generation) are significantly more likely to work part-time or on temporary contracts. The proportion of immigrants in elementary occupations is also much higher than among natives (almost 4 times higher among F-G immigrants and still 70% higher among the second generation). Conversely, the proportion of natives in managerial positions is almost 3 times higher than among F-G immigrants and around 60% higher than among S-G generation immigrants.[15]

Regarding company characteristics, results indicate that S-G immigrants work for firms that make on average significantly higher hourly profits than those employing F-G immigrants (19.7 versus 14.7 EUR). However, natives are found to work in companies that are even more profitable (23.2 EUR), which highlights that workplace segregation – measured by means of average firm profits – is being reduced from the first to the second generation, but also that the catching-up process of the second generation vis-à-vis the natives is far from complete. This segregation phenomenon is also illustrated by the sectoral distribution of employment according to origin. The results show, for example, that while F-G immigrant workers are overrepresented in sectors I (accommodation and food service activities) and N (administrative and support service activities), they are unrepresented in sectors C (manufacturing) and G (wholesale and retail trade). Here too, the gap with the natives is reduced for the second generation, but only in part. In terms of location, we find that immigrants (first and second generation) are more likely than natives to work in the capital (i.e., the Brussels region) and less so in the other two regions. Natives work in larger companies than those employing F-G immigrants, but the reverse is true for S-G generation immigrants. Similarly, natives are more

[15] For the sake of brevity, Table 1 presents descriptive statistics at the ISCO and NACE one-digit levels. More disaggregated statistics are available on request.

often covered by a firm-level collective agreement than F-G immigrants, but the incidence is about the same for S-G immigrants.

5. Benchmark results

5.1. Wage regressions

We first estimate equation (1) according to workers' origin, using a pooled OLS estimator with clustered standard errors at the firm level. Controlling only for the business cycle (i.e., year fixed effects), results – presented in column (1) of Table 2 – show that individual wages are significantly and positively related to firm profits. More precisely, they suggest that a doubling of hourly profits is associated with an increase in gross hourly wages of between 6.7 and 8%, depending on workers' origin. However, the test for equality of regression coefficients (see bottom of Table 2) indicates that these wage-profit elasticities are not significantly different from each other (since all *p*-values are strictly greater than 0.10).

[Insert Table 2 here]

Although interesting, these estimates do not account for the strong heterogeneity in the characteristics of workers, the jobs they hold and the companies they work for. By adding numerous covariates to capture this heterogeneity (as described in Section 3), the wage-profit elasticity falls to 2.4% for natives and to 1.9% and 1.8% for F-G and S-G immigrants respectively (see column (2) of Table 2). The test for equality of coefficients now indicates that the wage-profit elasticity is significantly greater for natives than for immigrants (*p*-values = 0.00), and not statistically different for F-G and S-G immigrants (*p*-value = 0.78).

Nevertheless, caution is still required as OLS estimates are likely to be biased and inconsistent due to the endogeneity of profits. To address this issue, we apply a 2SLS estimation technique using three specific instruments (as described in Section 3). The results based on these instrumental variables are displayed in column (3) of Table 2. The instrumented wage profit-elasticity ranges from 3.1 to 3.5%, depending on workers' origin. However, differences in these elasticities are found to be non-significant (*p*-values of between 0.36 and 0.90).

[Insert Table 3 here]

Various diagnostic tests have been performed to assess the soundness of our 2SLS approach. The results of these tests, as well as the first-stage estimates, are reported in Table 3. For all three samples, the *p*-value associated with the Kleibergen-Paap rk LM statistic is equal to 0.00, so that the null hypothesis of under-identification can be rejected. Results also show that the Cragg Donald Wald *F* statistic is systematically higher than 10, which suggests that our instruments are not weak.[16] As for the quality of our instruments, the *p*-value associated with the Hansen's *J* over-identification test is always greater than 0.10. We therefore do not reject the null hypothesis that our instruments are valid.[17] Next, turning to the first-stage regressions, we find that our three instruments are highly significant with the expected positive sign. More precisely, results show that the elasticity between firms' profits and their investments in tangible assets is approximately equal to 0.4 and significant at the 1% level in all three regressions. The coefficients of the second instrument indicate that companies that are more than 50% privately owned generate profits that are between 16.5 and 23.6% higher than those of companies that are at least half publicly owned.[18] The last instrument (i.e., the average hourly profit of firms operating in the same NACE 2-digit sector, but located in other regions) displays coefficients between 0.116 and 0.186, which are significant at the 1% level. These coefficients indicate that the profitability of firms is positively related to that of their competitors in other regions, due to common economic conditions across the sector.

Comparing columns (2) and (3) of Table 2, we find that the use of instrumental variables increases the elasticity between wages and firm-level profits in all three samples. In line with existing studies (e.g., Duan and Martins, 2022; Martins and Yang, 2015), this suggests that OLS estimates of rent sharing are downward biased. The Lester's (1952) range of pay associated to our 2SLS estimates fluctuates between 18 and 24% according to workers' origin. This statistic is obtained by multiplying the wage-profit elasticity by four times the ratio between the standard deviation of profits and the mean profits.[19] It suggests that *ceteris paribus* the wage of a native (immigrant) worker would increase by 18% (22-24%) if s/he switched jobs from a firm whose

[16] As suggested by van Ours and Stoeldraijer (2011), we rely on the standard "rule of thumb" that weak identification is problematic for *F* statistics smaller than 10.
[17] Note that the *p*-value associated with the Chi-squared statistic from the Durbin-Wu-Hausman endogeneity test ranges between 0.00 and 0.04 across the three samples. As expected, the null hypothesis of no endogeneity is therefore always rejected (at the 5% level). This suggests that our main explanatory variable (i.e., hourly profits) is endogenous and that 2SLS estimates should be preferred to those obtained by OLS when estimating rent sharing.
[18] However, this second instrument, although positive, is not significant in the first-stage regression for F-G immigrants (see column (3) of Table 3).
[19] The standard deviation of hourly profits is 32.9 for natives, 32.1 for S-G immigrants and 24.8 for F-G immigrants. Mean hourly profits by worker origin are shown in Table 1.

profits are two standard deviations below the mean level of profits to another firm whose profits are two standard deviations above the mean.

5.2. Wage decompositions

Estimates presented so far do not support the hypothesis of different wage-profit elasticities by origin. However, rent sharing can also shape immigrant-native wage gaps through the segregation channel, i.e., the concentration of immigrants into less profitable firms. Descriptive statistics (in Table 1) show indeed that the origin of workers is strongly correlated with the average profits of the companies that employ them. To test empirically the role of this segregation (i.e., composition) effect, we ran Oaxaca-Blinder (OB) decompositions, the results of which are presented in Table 4.[20]

[Insert Table 4 here]

The overall wage gap between natives and F-G immigrants (i.e., measured as the difference between mean log wages of these two groups of workers) stands at 0.163. This means that the average F-G immigrant earns 83,7% of the mean native wage. Results indicate that 0.02 (i.e., 12.3%) of this wage gap can be explained by the fact that, on average, F-G immigrants are employed in firms where hourly profits are lower. As expected, we also find that the price effect associated with rent sharing (i.e., the share of the wage gap that results from differences in wage-profit elasticities by origin) is close to zero and statistically insignificant.

The gap is smaller for S-G immigrants, but not by much. Indeed, results show that they earn on average 85.8% of the native wage (the overall gap being 0.142). The composition effect associated with rent sharing accounts for 7% (i.e., 0.011) of this gap. The concentration of S-G immigrants in less profitable firms thus plays a significant role in explaining why they earn less than natives, but almost half as much as for F-G immigrants. As regards the price effect, not surprisingly, we find again that it is very small and statistically insignificant.

[20] To do so, we relied on 2SLS estimates discussed in Section 5.1 and assumed that the non-discriminatory wage structure is that of natives. Accordingly, the composition effect associated with rent sharing corresponds to the difference between the average hourly profits of firms employing natives and immigrants (either first or second generation) respectively, multiplied by the 2SLS wage-profit elasticity for natives. As for the price effect, it is obtained by multiplying the difference between 2SLS wage-profit elasticities for natives and immigrants (either first or second generation) by the average hourly profits of the firms in which natives are employed.

6. Heterogeneity tests

In this section, we examine the extent to which the results presented so far vary according to three moderators, i.e., gender, level of education and type of collective agreement. Descriptive statistics, presented in Appendix 2, show that the hierarchy of wages and company profits by origin is fairly stable across moderators. Indeed, for a given gender, level of education or type of collective agreement, we find that natives earn consistently more (and work in more profitable companies) than F-G immigrants. As for the second generation, they generally outperform their F-G peers (in terms of salaries and profits made by their companies), but the gap with natives is never closed.[21,22]

[Insert Table 5 here]

To determine whether the answer to our question 'Do firms share profits equally with natives and immigrants?' depends on our moderators, we re-estimated our benchmark equations using 2SLS (as described in Section 3), first separately for women and men. Results presented in columns (1) and (2) of Table 5, show that the instrumented wage-profit elasticity is always significantly positive ranging between 0.33 and 0.039 for men and between 0.024 and 0.29 for women. The test for equality of coefficients, however, indicates that the differences in elasticities according to origin are not statistically significant, either for women or for men (see bottom of Table 5).[23] Next, we replicated this analysis for: i) workers with or without tertiary education, and ii) those covered or not by a firm agreement. For all these categories of workers, the wage-profit elasticity turns out to be significantly positive (see columns (3) to (6) of Table 5). Moreover, although the size of the coefficients varies somewhat according to origin, the

[21] The main exception concerns the wages of tertiary-educated immigrants, which are on average lower for the second generation than for the first. For a discussion of the causes of this outcome, see Pineda-Hernández et al. (2025a, section 4.3).

[22] Regardless of origin, we also find that men, tertiary-educated workers and those covered by a firm-level agreement earn systematically more (and work in more profitable firms) than women, the less educated or those just covered by an industry agreement.

[23] It should be noted that differences in wage-profit elasticities between women and men (at given origin) are also found to be insignificant, the *p*-value always being well above 0.10. This result is consistent with those of Rycx and Tojerow (2004) and Pineda-Hernández et al. (2026), who found that the elasticity between wages and profits does not differ for women and men in the Belgian economy (though they did not take origin into account).

differences are again non-significant.[24,25] All in all, we can therefore conclude that our moderating variables do not alter our conclusion that the wage-profit elasticity does not depend on the origin of the workers.

That said, our moderating variables could influence the size of the composition effect associated with rent sharing. To verify this, we used the OB method to decompose the wage gap between natives and immigrants (first and second generation, respectively) by gender, level of education, and type of collective agreement. Results, presented in Table 6, first reinforce the main conclusion of our benchmark decomposition, i.e., that the segregation of F-G immigrants (regardless of their gender, education and bargaining coverage) in less profitable companies explains a significant part of their wage gap compared with natives, and that this is also true for the second generation, but to a lesser extent. However, heterogeneity tests also provide additional insight. Indeed, they show that the higher concentration of F-G immigrants in less profitable firms accounts for a much larger share of the wage gap with natives among the low educated (20.6% compared to 4.3% among the highly educated) and to a lesser extent among women (14.7% compared to 9.7% among men) and workers covered by a company-level collective agreement (13.5% compared to 11% when there is only an industry agreement).[26]

[Insert Table 6 here]

Next, regarding the reduction in segregation between F-G and S-G immigrants, they indicate that it is more pronounced among low-educated individuals (than among tertiary educated ones), among women (than among men), and fairly similar across bargaining levels.[27] This

[24] Differences in elasticities are also insignificant between workers with different levels of education but the same origin. In contrast, we find that company agreements increase significantly the elasticity between wages and company profits for workers of the same origin (and in particular for natives and F-G immigrants). This finding is in line with Rusinek and Rycx (2013), who showed that workers in the Belgian private sector benefit more from rent sharing when covered by a firm-level agreement. Yet, their study did not take workers' origin into account.

[25] The first-stage estimates of these 2SLS regressions and the associated diagnoses tests are reported in Appendices 3 to 5. In all cases, we find that at least two out of the three instruments are statistically significant, and all have the expected positive sign (except one, which is actually not significant). Moreover, the diagnosis tests also support the soundness of our 2SLS approach.

[26] A similar conclusion is reached if we focus on the composition effect expressed in log points. Specifically, this effect is estimated at 0.022 and 0.003, respectively, among the low and high-educated workers; at 0.022 and 0.017 for women and men; and at 0.021 and 0.017 for those covered either by a firm-level collective agreement or solely by an industry agreement.

[27] More precisely, we find that the double disadvantage faced by low-educated F-G immigrants is significantly reduced among the second generation, but that it still persists (i.e., it remains significantly higher than that of their highly educated S-G counterparts). We also observe some persistence in the (slightly) higher segregation-driven pay penalty experienced by F-G and S-G immigrants covered by a firm-level agreement (compared to those

being said, regardless of the moderator considered, we still find that S-G immigrants are more concentrated in less profitable firms than natives (and that this still accounts for between 7.1 et 11.9% of the wage penalty with respect to natives). For those with tertiary education, however, this segregation effect appears to be negligeable in quantitative terms (it only account for 2.6% – or 0.004 log points – of their wage gap with natives). Furthermore, as expected, OB decompositions show that the price effect (i.e., differences in wage-profit elasticities according to workers' origin) are never statistically significant. This again support the hypothesis that firms share their profits equally with workers of different origins (regardless of their gender, level of education, and bargaining coverage).

7. Conclusion

The renewed interest in the nexus between rent sharing and wage inequality has been materialised by a growing body of empirical research (e.g., Card et al., 2018; Cho and Krueger, 2021; Duan and Martins, 2021; Fukao et al., 2023). However, the question of how and to what extent rent sharing influences the wage gaps between immigrants and natives remains to be explored. We therefore contribute to the literature by providing the first study devoted to the relationship between rent sharing and origin-based wage inequalities, with a particular focus on immigrants from developing countries. In addition, we analyse whether results differ for first- and second-generation immigrants and conduct a series of heterogeneity tests to examine the moderating role of gender, educational attainment (i.e., being tertiary educated or at most graduated from secondary education) and union coverage (i.e., being covered by a firm-level collective agreement or only by an industry-level agreement). Put differently, we seek to assess whether the contribution of rent sharing to wage differentials between natives and (first- and second-generation) immigrants, through both price and composition effects, is accentuated or, on the contrary, attenuated when we focus on workers with different qualifications, gender and union coverage. To do so, we use a rich, matched employer-employee database for Belgium covering the period 1999 to 2016, along with a comprehensive econometric approach (e.g., two-stage least squares regressions and Oaxaca-Blinder decompositions).

covered only by a sector-level agreement). In contrast, the double penalty faced by female F-G immigrants vanishes among the second generation (i.e., the composition effect estimated for female S-G immigrants is similar to that of their male S-G counterparts).

Controlling for a wide range of covariates and addressing endogeneity issues, we find a wage-profit elasticity of approximately 3%, with no statistically significant differences between natives and first- or second-generation immigrants. The absence of differing elasticities indicates that firms share their profits equally with their employees, irrespective of their origin. It also implies that the price effect associated with rent sharing does not significantly contribute to explaining the origin-based wage gap, which we estimate at 16.3% and 14.2%, respectively, for first- and second-generation immigrants relative to natives.

Heterogeneity tests further strengthen this conclusion. They show that differences in wage-profit elasticities remain statistically insignificant between origin groups, regardless of workers' education, gender, or union coverage. Among the three moderators under investigation, in line with previous evidence for Belgium (Pineda-Hernández et al., 2026; Rusinek and Rycx, 2013; Rycx and Tojerow, 2004), only union coverage is found to exert a significant effect on the wage-profit elasticity: workers covered by firm-level collective agreements capture a larger share of firm profits than those covered solely by an industry agreement. However, as this pattern holds true for all three origin groups, the price effect likewise remains statistically insignificant for explaining native-immigrant wage gaps at a given bargaining level (sectoral or firm-level).

Our findings, suggesting the absence of any significant price effect associated with rent sharing, can be understood in light of the institutional and legislative features of the Belgian labour market. Over the past three decades, Belgium has maintained a highly centralised and coordinated collective bargaining system that covers the entire salaried workforce, alongside relatively powerful unions whose membership has remained at 48% since the mid-1980s (OECD, 2026). This institutional architecture has produced well-defined wage grids, detailed job classifications, and tight control over wage adjustments – most notably through automatic wage indexation and the legally binding 'wage norm' (which sets the maximum margin for wage increases). Together, these mechanisms substantially limit employers' discretion to offer different wages to native and immigrant workers performing the same tasks and possessing comparable characteristics, particularly in terms of education and tenure (Kampelmann and Rycx, 2013).

Moreover, wage setting – and labour relations more broadly – is explicitly governed by Belgium's anti-discrimination framework. The Anti-Racism Act of 30 July 1981 and the Anti-

Discrimination Act of 10 May 2007, both aligned with EU directives, prohibit any difference in pay based on race, ethnic origin, or national origin. These laws ban both direct and indirect discrimination in remuneration, ensuring that workers carrying out comparable tasks under similar conditions must receive equal pay regardless of their origin. This legal environment, layered on top of the institutional features described above, further constrains origin-based wage disparities and thus helps explain the absence of any significant price effects in our results.

That said, Oaxaca-Blinder decompositions show that rent sharing has a significant influence on immigrants' wages through labour market segregation. Specifically, first-generation immigrants are found to earn lower wages than natives because they are disproportionately employed in firms with lower profit margins. The same is true for second-generation immigrants, but to a degree that is nearly half as great. The composition effect related to rent sharing accounts for 12.3% of the wage gap between natives and first-generation immigrants, and only 7% of that between natives and second-generation immigrants. These findings support the hypothesis of a segmented assimilation process for immigrants.

Moderating variables refine this conclusion. More precisely, they show that: i) among first-generation immigrants, profit-based segregation is markedly more detrimental to low-educated workers, and, to a lesser extent, to women and to those covered by a company-level collective agreement; ii) the reduction in segregation related to firm profitability between first- and second-generation immigrants is observed across all moderators, but it is more pronounced among low-educated workers and women; iii) second-generation immigrants only partially close the gap with natives, regardless of their educational level, gender, or union coverage; iv) for highly educated immigrants, this segregation effect, although significant, is negligible in quantitative terms.

These findings – which, in essence, show that immigrant workers (first-generation and, to a lesser extent, second-generation) earn lower wages than natives because they are disproportionately concentrated in less profitable firms – spark debate over how this specific form of employment segregation should be interpreted from a normative perspective. The standard approach in the literature regarding wage inequalities is to interpret employment segregation as a sorting mechanism occurring prior to labour-market entry (e.g., an immigrant may choose to work in a low-profit firm near his or her home because it offers a better work-life balance). However, employment segregation may also arise from pre-labour-market

inequalities (e.g., immigrants may be disproportionately employed in firms with lower profits or facing greater financial difficulties because they encounter additional barriers to accessing the primary segments of the labour market). This possibility, in turn, raises questions about the effectiveness of the legal framework and public policies aimed at combating labour market inequalities based on origin, particularly regarding access to employment and inter-firm labour mobility. Indeed, our results suggest that these regulations (alongside wage-setting institutions) are relatively effective in ensuring that workers performing comparable tasks under similar conditions benefit equally from firm-level profits, regardless of their origin, but that they are less successful at preventing profit-based employment segregation across origin groups. A more in-depth investigation of segregation patterns by firm profitability, complemented by granular data on individual choices and constraints, therefore represents a promising avenue for future research. Moreover, our findings underscore the importance of accounting for rent sharing into future analyses of the determinants of wage gaps between natives and immigrants.

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Table 1: Descriptive statistics by origin – means and percentages, 1999-2016

	Natives	Immigrants from developing countries[a]	
		Second generation	First generation
Share of the sample by origin (%)	88.4	3.8	7.8
Immigrant's region of origin (%)			
Maghreb countries		41.5	36.6
Sub-Saharan African countries		25.5	18.5
Near and Middle East countries		21.4	19.6
Other Eastern European countries		6.6	11.1
Emerging and developing Asian countries		3.2	8.6
Latin American and Caribbean countries		1.8	5.7
Worker characteristics			
Real gross hourly wage (in EUR)[b]	20.1	17.2	16.8
Age (in years)	38.0	30.2	38.2
Women (%)	31.3	32.9	28.4
Tenure (in years)	9.2	4.0	5.1
Education (%):			
At most lower secondary	28.0	29.6	51.2
Upper secondary	43.6	45.9	36.2
Tertiary	28.4	24.5	12.6
Employment characteristics			
Part-time (%)	9.3	16.9	18.8
Overtime (%)	4.7	4.6	4.9
Permanent contract (%)	94.2	87.1	84.0
Occupational categories - ISCO1 (%):			
Managers	4.1	2.5	1.5
Professionals	11.9	10.5	5.2
Technicians and associate professionals	10.2	9.3	4.3
Clerical support	19.1	16.6	10.5
Service and sales workers	10.4	16.1	10.0
Craft and related trades workers	18.3	13.7	19.0
Plant and machine operators and assemblers	17.3	16.6	15.9
Elementary occupations	8.6	14.7	33.6
Firm characteristics			
Profits per hour worked (in EUR)[b]	23.2	19.7	14.7
Sector of activity - NACE1 (%):			
B - Mining and Quarrying	0.2	0.1	0.1
C - Manufacturing	38.4	27.0	26.4
D - Electricity, gas, steam and air conditioning supply	1.5	1.1	0.2
E - Water supply, sewerage, waste management and remediation activities	1.0	0.7	0.8
F - Construction	8.8	6.1	8.9
G - Wholesale and retail trade, repair of motor vehicles and motorcycles	20.9	18.8	12.9
H - Transportation and storage	8.7	10.2	8.5
I - Accommodation and food service activities	2.0	5.3	8.3
J - Information and communication	4.5	5.0	2.4
K - Financial and insurance activities	0.9	1.3	0.7
L - Real Estate activities	0.2	0.3	0.2
M - Professional, scientific and technical activities	4.3	4.4	2.4
N - Administrative and support service activities	8.7	19.8	28.3
Size of the firm (FTE number of employees)	471.5	522.3	444,1
Firm-level collective agreement (yes) (%)	28.2	28.1	21.7
Region where the firm is located (%):			
Brussels	10.3	26.7	24.5
Flanders	70.7	51.6	58.5
Wallonia	19.0	21.7	16.9
Number of observations	809,918	34,623	71,868

Notes: [a] By 'developing countries', we refer to either transition and developing countries listed in the United Nations' (2019) classification and/or emerging market and developing economies listed in the IMF's (2019) classification (see Appendix 1).
[b] All nominal variables have been deflated to 2013 prices.

Table 2: Rent sharing and workers' origin, OLS and 2SLS estimates

	Dependent variable: log (real gross hourly wage)		
	(1)	(2)	(3)
	OLS		**2SLS**
Panel A: Natives			
Log (profits per hour worked) [1]	0.080***	0.024***	0.031***
	(0.006)	(0.002)	(0.004)
Observations	809,918	809,918	809,918
Adjusted R-squared	0.10	0.65	/
Model sign. (p-value of F test)	0.00	0.00	0.00
Panel B: Second-generation immigrants from developing countries			
Log (profits per hour worked) [3]	0.067***	0.018***	0.035***
	(0.007)	(0.003)	(0.007)
Observations	34,623	34,623	34,623
Adjusted R-squared	0.11	0.62	/
Model sign. (p-value of F test)	0.00	0.00	0.00
Panel C: First-generation immigrants born in developing countries			
Log (profits per hour worked) [2]	0.068***	0.019***	0.034***
	(0.005)	(0.002)	(0.007)
Observations	71,868	71,868	71,868
Adjusted R-squared	0.12	0.60	/
Model sign. (p-value of F test)	0.00	0.00	0.00
Control variables			
Year fixed effects[a]	Yes	Yes	Yes
Worker characteristics[b]	No	Yes	Yes
Employment characteristics[c]	No	Yes	Yes
Firm characteristics[d]	No	Yes	Yes
Test for equality of coefficients (p-value)[e]			
[1] = [2]	0.16	0.00	0.62
[1] = [3]	0.12	0.00	0.36
[2] = [3]	0.91	0.78	0.90

Notes: [a] 17 year dummies. [b] Age (in level and squared), tenure (in level and squared), gender and education. [c] Type of contract, part-time work, overtime work and occupations (ISCO 3 digits). [d] Region, size of the firm (FTE number of workers in log), sector of activity (NACE 2 digits) and level of collective agreement. [e] The null hypothesis of the test specifies that the estimates are not statistically different from each other. Robust standard errors, clustered at the firm level, are reported between brackets. *** p<0.01, ** p<0.05, * p<0.1.

Table 3: First-stage results – Rent sharing and workers' origin

	Dependent variable: log (profits per hour worked)		
	(1)	(2)	(3)
	Natives	**Second-generation immigrants**	**First-generation immigrants**
Log (gross investments in tangible assets per hour worked)	0.423***	0.409***	0.411***
	(0.021)	(0.032)	(0.030)
More than 50% privately owned	0.200**	0.236*	0.165
	(0.090)	(0.145)	(0.152)
Log (average hourly profits in same NACE 2-digit sector but different region)	0.153***	0.186***	0.116***
	(0.022)	(0.030)	(0.027)
Year fixed effects[a]	Yes	Yes	Yes
Worker characteristics[b]	Yes	Yes	Yes
Employment characteristics[c]	Yes	Yes	Yes
Firm characteristics[d]	Yes	Yes	Yes
Model significance (p-value of F test):	0.00	0.00	0.00
Observations	809,918	34,623	71,868
Underidentification test (p-value of Kleibergen-Paap rk LM statistic):	0.00	0.00	0.00
Weak identification test (Cragg Donald Wald F statistic):	189.4	84.1	79.2
Overidentification test (p-value of Hansen J statistic):	0.69	0.11	0.28

Notes: [a] 17 year dummies. [b] Age (in level and squared), tenure (in level and squared), gender and education. [c] Type of contract, part-time work, overtime work and occupations (ISCO 3 digits). [d] Region, size of the firm (FTE number of workers in log), sector of activity (NACE 2 digits) and level of collective agreement. Robust standard errors, clustered at the firm level, are reported between brackets. *** p<0.01, ** p<0.05, * p<0.1.

Table 4 - Oaxaca-Blinder decompositions, based on 2SLS estimates

	Total wage gap	*Contribution of rent sharing through the:*			
		Composition effect	% of total wage gap	Price effect	% of total wage gap
Natives vs. F-G immigrants[a]	0.163***	0.020***	12.3%	-0.005	-3.1%
	(0.007)	(0.003)		(0.009)	
Natives vs. S-G immigrants[b]	0.142***	0.011***	7.0%	-0.007	-4.9%
	(0.007)	(0.002)		(0.011)	

Notes: [a] F-G immigrants stands for first-generation immigrants. [b] S-G immigrants stands for second-generation immigrants. *** p<0.01, ** p<0.05, * p<0.1.

Table 5: Rent sharing and workers' origin, 2SLS estimates by gender, education and collective bargaining level

	Dependent variable: log (real gross hourly wage)					
	(1)	(2)	(3)	(4)	(5)	(6)
	Men	**Women**	**At most secondary education**	**Tertiary education**	**Industry agreement**	**Firm agreement**
Natives						
Log (profits per hour worked) [1]	0.033***	0.024***	0.033***	0.027***	0.028***	0.044***
	(0.004)	(0.005)	(0.005)	(0.005)	(0.004)	(0.007)
Obs.	557,735	252,183	572,924	236,991	594,327	215,588
Second-generation immigrants						
Log (profits per hour worked) [2]	0.039***	0.029***	0.036***	0.029***	0.034***	0.040***
	(0.009)	(0.007)	(0.009)	(0.007)	(0.006)	(0.014)
Obs.	22,909	11,706	25,524	9,087	25,718	8,893
First-generation immigrants						
Log (profits per hour worked) [3]	0.035***	0.026***	0.033***	0.039***	0.023***	0.062***
	(0.007)	(0.010)	(0.007)	(0.012)	(0.006)	(0.012)
Obs.	53,307	18,555	62,173	9,676	57,061	14,807
Test for equality of coefficients (p-value)[a]						
[1] = [2]	0.54	0.56	0.77	0.82	0.41	0.79
[1] = [3]	0.80	0.86	1.00	0.36	0.56	0.19
[2] = [3]	0.72	0.80	0.79	0.47	0.19	0.23

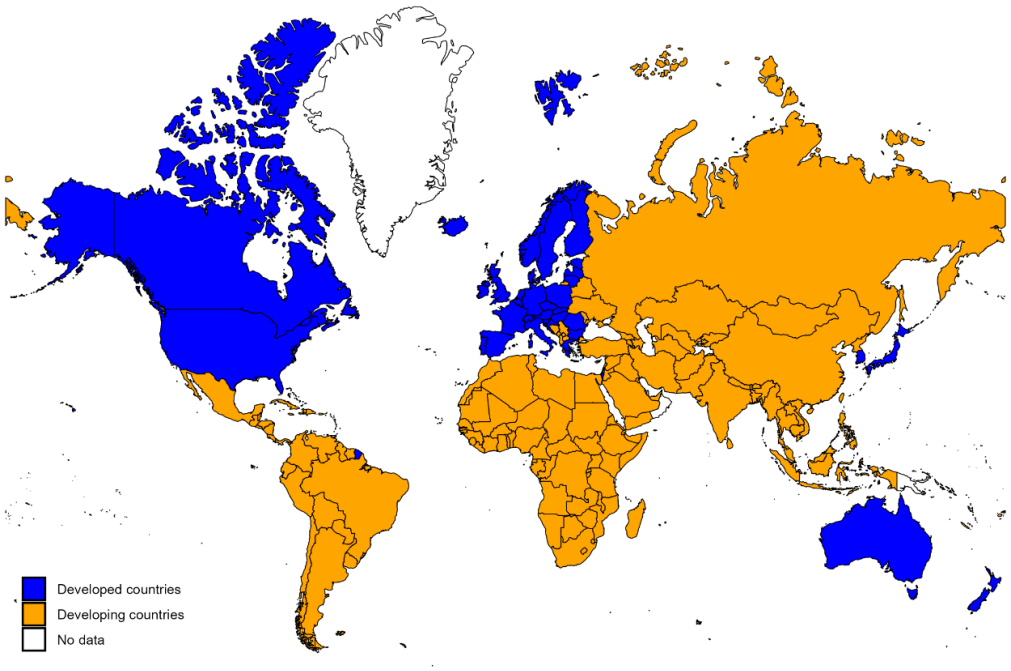
Note: This table presents the 2SLS regression coefficients associated with the logarithm of hourly profits. They have been obtained by estimating our reference wage equation (with the complete set of covariates) by gender, education and collective bargaining level, respectively. The instrumental variables (IVs) used are the same as those in our benchmark 2SLS regression. However, in a few cases, we relied on 2 IVs instead of 3, as they led to a better specification (as shown by our diagnoses tests). Results of the 1st-stage regressions and of the associated diagnoses tests are reported in Appendices 3 to 5. Robust standard errors, clustered at the firm level, are reported between brackets [a] The null hypothesis of the test specifies that the estimates are not statistically different from each other. *** p<0.01, ** p<0.05, * p<0.1.

Table 6: Oaxaca-Blinder decompositions (based on 2SLS estimates) by gender, education and bargaining level

		Total wage gap	*Contribution of rent sharing through the:*			
			Composition effect	% of total wage gap	Price effect	% of total wage gap
Men	Natives vs. F-G immigrants[a]	0.175***	0.017***	9.7%	-0.005	-2.9%
		(0.007)	(0.003)		(0.011)	
	Natives vs. S-G immigrants[b]	0.152***	0.012***	7.9%	-0.006	-3.9%
		(0.008)	(0.003)		(0.014)	
Women	Natives vs. F-G immigrants[a]	0.150***	0.022***	14.7%	-0.003	-2.0%
		(0.007)	(0.004)		(0.010)	
	Natives vs. S-G immigrants[b]	0.112***	0.008***	7.1%	-0.010	-8.9%
		(0.008)	(0.002)		(0.013)	
At most secondary education	Natives vs. F-G immigrants[a]	0.107***	0.022***	20.6%	0.004	3.7%
		(0.006)	(0.003)		(0.008)	
	Natives vs. S-G immigrantsb	0.118***	0.014***	11.9%	-0.001	-1.0%
		(0.008)	(0.003)		(0.012)	
Tertiary education	Natives vs. F-G immigrants[a]	0.070***	0.003*	4.3%	-0.034	-48.6%
		(0.012)	(0.002)		(0.031)	
	Natives vs. S-G immigrants[b]	0.151***	0.004**	2.6%	-0.005	-3.3%
		(0.008)	(0.002)		(0.019)	
Industry agreement	Natives vs. F-G immigrants[a]	0.154***	0.017***	11.0%	0.007	4.5%
		(0.006)	(0.003)		(0.007)	
	Natives vs. S-G immigrants[b]	0.137***	0.010***	7.3%	-0.012	-8.8%
		(0.007)	(0.002)		(0.009)	
Firm agreement	Natives vs. F-G immigrants[a]	0.155***	0.021***	13.5%	-0.039	-25.2%
		(0.015)	(0.005)		(0.025)	
	Natives vs. S-G immigrants[b]	0.153***	0.015**	9.8%	0.024	15.6%
		(0.012)	(0.006)		(0.028)	

Notes: [a] F-G immigrants stands for first-generation immigrants. [b] S-G immigrants stands for second-generation immigrants. *** p<0.01, ** p<0.05, * p<0.1.

Appendix 1: Chart of countries (IMF, 2019; United Nations, 2019)



Notes: Overseas territories are classified according to their neighbouring countries.

Appendix 2: Average hourly wages and profits by origin interacted with moderators (in EUR [c]), 1999-2016

	Natives	Second-generation immigrants	First-generation immigrants
Men			
Hourly wage[a]	21.1	17.8	17.3
Hourly profits[b]	24.0	19.9	15.6
Obs.	557,735	22,909	53,309
Women			
Hourly wage[a]	18.0	16.1	15.3
Hourly profits[b]	21.5	19.2	12.4
Obs.	252,183	11,714	18,559
At most secondary education			
Hourly wage[a]	17.5	15.4	15.5
Hourly profits[b]	19.9	15.8	12.2
Obs.	572,926	25,528	62,181
Tertiary education			
Hourly wage[a]	26.8	22.7	25.6
Hourly profits[b]	31.7	31.7	31.3
Obs.	236,992	9,095	9,687
Industry agreement			
Hourly wage[a]	19.3	16.6	16.2
Hourly profits[b]	20.5	17.2	12.8
Obs.	594,327	25,721	57,058
Firm agreement			
Hourly wage[a]	22.3	18.8	18.9
Hourly profits[b]	30.1	26.0	21.5
Obs.	215,591	8,902	14,810

Notes: [a] Hourly wage stands for real gross hourly wage. [b] Hourly profits stands for firm-level profit per hour worked.[c] All nominal variables have been deflated to 2013 prices.

Appendix 3: First-stage estimates – Rent sharing and workers' origin by gender

Dependent variable: log (profits per hour worked)

	Men			Women		
	Natives	Second-generation immigrants	First-generation immigrants	Natives	Second-generation immigrants	First-generation immigrants
	(1)	(2)	(3)	(4)	(5)	(6)
Log (gross investments in tangible assets per hour worked)	0.420*** (0.01)	0.390*** (0.035)	0.402*** (0.026)	0.425*** (0.024)	0.438*** (0.036)	0.438*** (0.049)
More than 50% privately owned	0.229*** (0.087)	/	0.204 (0.172)	0.112 (0.104)	0.084 (0.104)	-0.019 (0.121)
Log (average hourly profits in same NACE 2-digit sector but different region)	0.147*** (0.024)	0.155*** (0.033)	0.108*** (0.027)	0.151*** (0.021)	0.250*** (0.040)	0.117*** (0.038)
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Worker characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Employment characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Firm characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Sig. Model (p-value of F test):	0.00	0.00	0.00	0.00	0.00	0.00
Observations	557,735	22,909	53,307	252,183	11,706	18,555
Underidentification test (p-value of Kleibergen-Paap rk LM statistic):	0.00	0.00	0.00	0.00	0.00	0.00
Weak identification test (Cragg Donald Wald F statistic):	194.3	74.3	103.8	130.4	62.0	30.7
Overidentification test (p-value of Hansen J statistic):	0.51	0.75	0.49	0.85	0.74	0.24

Notes: [a] For more details concerning the control variables see Table 3. Robust standard errors, clustered at the firm level, are reported between brackets. *** p<0.01, ** p<0.05, * p<0.1.

Appendix 4: First-stage estimates – Rent sharing and workers' origin by education

Dependent variable: log (profits per hour worked)

	At most secondary education			Tertiary education		
	Natives	Second-generation immigrants	First-generation immigrants	Natives	Second-generation immigrants	First-generation immigrants
	(1)	(2)	(3)	(4)	(5)	(6)
Log (gross investments in tangible assets per hour worked)	0.425*** (0.020)	0.396*** (0.038)	0.413*** (0.033)	0.416*** (0.026)	0.431*** (0.029)	0.397*** (0.027)
More than 50% privately owned	0.160* (0.085)	0.231 (0.170)	0.178 (0.172)	0.268** (0.115)	0.180* (0.107)	/
Log (average hourly profits in same NACE 2-digit sector but different region)	0.146*** (0.023)	0.152*** (0.034)	0.104*** (0.029)	0.165*** (0.026)	0.275*** (0.040)	0.179*** (0.039)
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Worker characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Employment characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Firm characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Sig. Model (p-value of F test):	0.00	0.00	0.00	0.00	0.00	0.00
Observations	572,924	25,524	62,173	236,991	9,087	9,676
Underidentification test (p-value of Kleibergen-Paap rk LM statistic):	0.00	0.00	0.00	0.00	0.00	0.00
Weak identification test (Cragg Donald Wald F statistic):	192.3	53.7	63.4	139.6	85.9	117.0
Overidentification test (p-value of Hansen J statistic):	0.15	0.44	0.16	0.36	0.14	0.58

Notes: [a] For more details concerning the control variables see Table 3. Robust standard errors, clustered at the firm level, are reported between brackets. *** p<0.01, ** p<0.05, * p<0.1.

Appendix 5: First-stage estimates – Rent sharing and workers' origin by collective bargaining level

	Dependent variable: log (profits per hour worked)					
	Industry agreement			**Firm agreement**		
	Natives	Second-generation immigrants	First-generation immigrants	Natives	Second-generation immigrants	First-generation immigrants
	(1)	(2)	(3)	(4)	(5)	(6)
Log (gross investments in tangible assets per hour worked)	0.437*** (0.020)	0.445*** (0.029)	0.439*** (0.031)	0.390*** (0.036)	0.356*** (0.051)	0.339*** (0.037)
More than 50% privately owned	0.118 (0.103)	-0.005 (0.091)	/	0.429*** (0.157)	/	0.690*** (0.187)
Log (average hourly profits in same NACE 2-digit sector but different region)	0.154*** (0.021)	0.202*** (0.031)	0.123*** (0.026)	0.152*** (0.039)	0.162*** (0.053)	0.087 (0.059)
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Worker characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Employment characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Firm characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Sig. Model (p-value of F test):	0.00	0.00	0.00	0.00	0.00	0.00
Observations	594,327	25,718	57,057	215,588	8,893	14,807
Underidentification test (p-value of Kleibergen-Paap rk LM statistic):	0.00	0.00	0.00	0.00	0.00	0.00
Weak identification test (Cragg Donald Wald F statistic):	185.3	79.4	99.9	50.8	30.8	49.1
Overidentification test (p-value of Hansen J statistic):	0.49	0.73	0.47	0.96	0.75	0.57

Notes: [a] For more details concerning the control variables see Table 3. Robust standard errors, clustered at the firm level, are reported between brackets. *** p<0.01, ** p<0.05, * p<0.1.

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