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in France: A cross-country
perspective

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The role of bargaining and discrimination in the gender wage gap in France: A cross-country perspective

Abstract

The objective of this paper is to contribute to a better understanding of the role of bargaining and discrimination in the gender wage gap in France and four selected European countries (Denmark, Hungary, Portugal, and Sweden) using comprehensive linked employer-employee data. The role of bargaining and discrimination is analysed by focusing on systematic differences in wage-setting practices between men and women in the same firm through the estimation of gender-specific firm wage premia. The paper provides three key insights. First, bargaining and discrimination account for only a small part of the gender wage gap in France: 1.3 percentage points or 10% of the total gap. Second, the component of the gender wage gap that can be attributed to bargaining and discrimination is higher in high-wage or high-productivity firms in all countries considered. Third, cross-country differences in the importance of bargaining and discrimination in the gender wage gap reflect both systematic differences in wage-setting practices within firms and imperfections in the product market that generate persistent rents.

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In Brief

[French version below]

Background and objective

The gender wage gap remains a stubborn obstacle to gender equality in France as well as most other OECD countries. According to the official OECD gender statistics, the gender wage gap in 2022 stood at 12% in France, the same as for the OECD on average. This means that at the median a woman working full-time makes 88 cents for every euro earned by a man working full-time. The gender wage gap mainly reflects pay differences within firms due to differences in tasks and responsibilities or differences in pay for work of equal value. To a limited extent, it also reflects the tendency of women to work in low-wage firms and industries. It does not reflect differences in qualifications since women today tend to be better qualified than men.

To tackle gender wage gaps within firms, France introduced an ambitious pay transparency reform in 2019. This requires firms with 50 or more employees to conduct regular equal pay audits and report information on the gender pay gap (the Professional Equality Index or *l'Index de l'Égalité Professionnelle Entre les Femmes et les Hommes*). Similar measures have recently been introduced in several other countries. Such measures play a useful role in making gender pay gaps more visible and stimulating debate on its causes. However, their implementation has sometimes been complicated by the difficulty of establishing whether gender pay differences in a given firm are due to systematic differences in tasks and responsibilities or differences in pay for work equal value, driven by differences in bargaining position or discrimination by employers.

The objective of this paper is to contribute to a better understanding of the gender wage gap within firms in France and the extent to which it reflects differences in pay for work of equal value (bargaining and discrimination). To put the analysis in perspective, the results for France are systematically compared with those for 4 selected European countries with high quality information on hourly wages (Denmark, Hungary, Portugal, Sweden). The role of bargaining and discrimination is analysed by focusing on systematic differences in wage-setting practices between men and women in the same firm through the estimation of gender-specific firm wage premia, i.e. the average wage of men and women in a firm after taking into account differences in their characteristics.

The analysis is carried out using comprehensive linked employer-employee data. The data are based on administrative records related to the social security or tax system or mandatory employer surveys, cover the universe or near universe of workers and firms in a country and provide high-quality information on hourly wages. The analysis is restricted to dependent employees in the private sector during the period from 2010 to 2019. It therefore does not capture the effects of the recent pay transparency reform in France or those of the COVID-19 crisis.

Main findings

Bargaining and discrimination account for only a small part of the overall gender wage gap in France: 1.3 percentage points or 10% of the overall gap. The component related to bargaining and discrimination – as measured by the estimated gap in wage premia within firms – is consistently the highest in Hungary, where it represents 3.5 percentage points, accounting for more than a quarter of the overall gap. The component due to bargaining and discrimination is the lowest in Sweden (0.8 percentage points or 10%

of the overall gap) and between 2.2 and 2.5 percentage points in Denmark and Portugal (about 15% of the overall gap).

The gender wage gap that can be attributed to bargaining and discrimination is higher for high-wage workers in all countries considered. In France, the gap is 2 percentage points higher for among workers in the top 20% of the distribution of worker wages than those in the bottom 20% of the wage distribution. On average across the benchmark countries, the difference is 6 percentage points. Moreover, the increase in the gender gap due to bargaining and discrimination along the distribution of worker wages accounts for 10% in France (35% in the benchmark countries) of the increase in the overall gender wage gap between the bottom and the top quintile of the distribution of worker wages. The greater importance of differences in pay due to bargaining and discrimination for high-wage workers may to some extent reflect the possibility that it is more common for high-wage workers to negotiate their wages, while statutory or collectively agreed wage floors are more relevant for low-wage workers. There is no systematic relationship between the gap in wage premia between firms and worker wages.

Another reason why wage gaps due to bargaining and discrimination tend to be higher for high-wage workers is that such workers are more likely to work in high-wage firms. Indeed, the gender wage gap that can be attributed to bargaining and discrimination is not only higher for high-work workers but also in high-wage (or high-productivity) firms and industries. This is likely to reflect the possibility that the scope for bargaining and discrimination is greater in firms (and industries) with higher rents. Such firms tend to be larger and more productive. The gender wage gap that can be attributed to bargaining and discrimination also tends to be small in low-rent industries, such as restaurants and hotels, whereas it tends to be high in industries where rents are high such as media. This may indicate that a higher gap in wage premia within firms reflects not only the characteristics of firms but also those of the market in which they operate.

Cross-country differences in the importance of bargaining and discrimination for the gender wage gap partly reflect systematic differences in wage-setting practices within firms, but also product market imperfections that generate persistent rents. The main insight for France is that differential rent-sharing explains very little of the difference in the component due to bargaining and discrimination with respect to Sweden (only 6%). Indeed, most of the difference is accounted for by differences in the availability of persistent rents, as measured by the degree of productivity dispersion (94%). In the benchmark countries, the availability of rents also tends to be the main factor in explaining differences in the gender gap due to bargaining and discrimination with respect to Sweden.

Policy discussion

In general, the role of bargaining and discrimination in the gender wage gap is less important in countries with well-functioning product and labour markets. More competitive product and labour markets limit the scope for wage differentials between men and women for work of equal value by limiting rents. This also suggests that the role of bargaining and discrimination in the gender wage gap tends to be more important in protected industries that are shielded from competition (e.g. energy, transport) or local labour markets that are more concentrated (e.g. rural areas).

Systematic pay differences between men and women for work of equal value within firms for a given level of rents reflect differences in the bargaining position of men and women or the role of employer discrimination. In practice, the line between differences in bargaining and discrimination is not always clear in practice. For example, when women have a weaker bargaining position than men because they have fewer outside options, firms can use their wage-setting power to increase profits by differentiating wages between men and women (monopsonistic discrimination). Moreover, differences in pay for work of equal value may or may not be intentional. This is true when differences in pay for work of equal value

result from discrimination (e.g. unconscious biases) or bargaining (e.g. different outcomes may arise even when bargaining takes place in good faith).

Reducing the wage gap for work of equal value requires policies that focus on workers and their families as well as policies that focus on firms. Family policies can play a key role in promoting a more equal sharing of family responsibilities, thereby supporting women's bargaining power. This includes for example promoting a more equal uptake of parental leave, investing in childcare and early childhood education and removing financial disincentives for second earners to work. Pay transparency policies can further complement equal pay and anti-discrimination laws by promoting awareness of systematic pay gaps within firms and stimulating debate about their causes. They can also help to strengthen the bargaining position of women. Policies that promote competition in product and labour markets are key as they limit the scope for differential wage-setting practices between men and women within firms by reducing rents.

En bref

Contexte et objectif

L'écart salarial entre les hommes et les femmes reste un obstacle tenace à l'égalité entre les sexes en France et dans la plupart des autres pays de l'OCDE. Selon les statistiques officielles de l'OCDE sur le genre, l'écart salarial entre les hommes et les femmes en 2022 s'élevait à 12 % en France, soit le même niveau que la moyenne des pays de l'OCDE. Cela signifie qu'en moyenne, une femme travaillant à temps plein gagne 88 centimes pour chaque euro gagné par un homme travaillant à temps plein. L'écart salarial entre les hommes et les femmes reflète principalement les différences de rémunération au sein des entreprises en raison des différences de tâches et de responsabilités ou des différences de rémunération pour un travail de valeur égale. Dans une certaine mesure, il reflète également la tendance des femmes à travailler dans des entreprises et des secteurs à bas salaires. Il ne reflète pas les différences de qualifications, puisque les femmes tendent aujourd'hui à être plus qualifiées que les hommes.

Pour s'attaquer aux écarts salariaux entre hommes et femmes au sein des entreprises, la France a introduit une réforme ambitieuse de la transparence des rémunérations en 2019. Cette réforme oblige les entreprises de 50 salariés ou plus à réaliser régulièrement des audits sur l'égalité salariale et à communiquer des informations sur l'écart de rémunération entre les femmes et les hommes (l'Index de l'Égalité Professionnelle Entre les Femmes et les Hommes). Des mesures similaires ont récemment été introduites dans plusieurs autres pays. Ces mesures jouent un rôle utile en rendant les écarts de rémunération entre les femmes et les hommes plus visibles et en stimulant le débat sur leurs causes. Toutefois, leur mise en œuvre a parfois été compliquée par la difficulté d'établir si les différences de rémunération entre les hommes et les femmes dans une entreprise donnée sont dues à des différences systématiques dans les tâches et les responsabilités ou à des différences de rémunération pour un travail de valeur égale, dues à des différences dans la position de négociation ou à une discrimination de la part des employeurs.

L'objectif de ce document est de contribuer à une meilleure compréhension de l'écart salarial entre les hommes et les femmes au sein des entreprises en France et de la mesure dans laquelle il reflète des différences de rémunération pour un travail de valeur égale (négociation et discrimination). Pour mettre l'analyse en perspective, les résultats pour la France sont systématiquement comparés à ceux de quatre pays européens sélectionnés disposant d'informations de qualité sur les salaires horaires (Danemark, Hongrie, Portugal, Suède). Le rôle de la négociation et de la discrimination est analysé en se concentrant sur les différences systématiques dans les pratiques de fixation des salaires entre les hommes et les femmes dans la même entreprise par l'estimation des primes salariales d'entreprise spécifiques au genre, c'est-à-dire le salaire moyen des hommes et des femmes dans une entreprise après avoir pris en compte les différences dans leurs caractéristiques.

L'analyse est réalisée à l'aide de données complètes et couplées sur les employeurs et les employés. Ces données sont basées sur des dossiers administratifs liés à la sécurité sociale ou au système fiscal, ou sur des enquêtes obligatoires auprès des employeurs. Elles couvrent l'univers ou le quasi-univers des travailleurs et des entreprises d'un pays et fournissent des informations de haute qualité sur les salaires horaires. L'analyse se limite aux salariés du secteur privé au cours de la période 2010-2019. Elle ne tient donc pas compte des effets de la récente réforme sur la transparence des salaires en France ni de ceux de la crise COVID-19.

Principaux résultats

Les négociations et la discrimination ne représentent qu'une petite partie de l'écart salarial global entre les hommes et les femmes en France : 1,3 point de pourcentage, soit 10 % de l'écart global. La composante liée aux négociations et à la discrimination - mesurée par l'écart estimé des primes salariales au sein des entreprises - est systématiquement la plus élevée en Hongrie, où elle représente 3,5 points de pourcentage, soit plus d'un quart de l'écart global. La composante due aux négociations et à la discrimination est la plus faible en Suède (0,8 point de pourcentage ou 10 % de l'écart global) et se situe entre 2,2 et 2,5 points de pourcentage au Danemark et au Portugal (environ 15 % de l'écart global).

L'écart salarial entre hommes et femmes qui peut être attribué à la négociation et à la discrimination est plus élevé pour les travailleurs à hauts salaires dans tous les pays considérés. En France, l'écart est de 2 points de pourcentage plus élevé pour les travailleurs situés dans les 20 % supérieurs de la distribution des salaires que pour ceux situés dans les 20 % inférieurs de la distribution des salaires. En moyenne, dans les pays de référence, la différence est de 6 points de pourcentage. En outre, l'augmentation de l'écart entre les sexes due à la négociation et à la discrimination le long de la distribution des salaires des travailleurs représente 10 % en France (35 % dans les pays de référence) de l'augmentation de l'écart salarial global entre les sexes entre le quintile inférieur et le quintile supérieur de la distribution des salaires des travailleurs. L'importance plus grande des différences salariales dues à la négociation et à la discrimination pour les travailleurs à hauts salaires peut, dans une certaine mesure, refléter le fait qu'il est plus courant pour les travailleurs à hauts salaires de négocier leurs salaires, tandis que les planchers salariaux légaux ou conventionnels sont plus pertinents pour les travailleurs à bas salaires. Il n'y a pas de relation systématique entre l'écart des primes salariales entre les entreprises et les salaires des travailleurs.

Une autre raison pour laquelle les écarts salariaux dus à la négociation et à la discrimination tendent à être plus élevés pour les travailleurs à hauts salaires est que ces derniers sont plus susceptibles de travailler dans des entreprises à hauts salaires. En effet, l'écart salarial entre les hommes et les femmes qui peut être attribué à la négociation et à la discrimination n'est pas seulement plus élevé pour les travailleurs à haut salaire, mais aussi dans les entreprises et les secteurs à haut salaire (ou à haute productivité). Cela reflète probablement l'hypothèse que les possibilités de négociation et de discrimination soient plus grandes dans les entreprises (et les industries) où les rentes sont plus élevées. Ces entreprises ont tendance à être plus grandes et plus productives. L'écart salarial entre les hommes et les femmes qui peut être attribué à la négociation et à la discrimination tend également à être faible dans les secteurs à faible loyer tels que les restaurants et les hôtels, alors qu'il tend à être élevé dans les secteurs où les loyers sont élevés, tels que les médias. Cela peut indiquer qu'un écart plus important dans les primes salariales au sein des entreprises reflète non seulement les caractéristiques des entreprises, mais aussi celles du marché sur lequel elles opèrent.

Les différences entre pays en ce qui concerne l'importance de la négociation et de la discrimination dans l'écart salarial entre les hommes et les femmes reflètent en partie des différences systématiques dans les pratiques de fixation des salaires au sein des entreprises, mais aussi des imperfections du marché des produits qui génèrent des rentes persistantes. Le principal enseignement pour la France est que le partage différentiel des rentes explique très peu la différence de la composante due à la négociation et à la discrimination par rapport à la Suède (seulement 6 %). En effet, la majeure partie de la différence est expliquée par les différences dans la disponibilité des rentes persistantes, mesurée par le degré de dispersion de la productivité (94 %). Dans les pays de référence, la disponibilité des rentes tend également à être le principal facteur expliquant les différences dans l'écart entre les hommes et les femmes dû à la négociation et à la discrimination par rapport à la Suède.

Discussion politique

En général, le rôle de la négociation et de la discrimination dans l'écart salarial entre les hommes et les femmes est moins important dans les pays où les marchés des produits et du travail fonctionnent bien. Des marchés de produits et du travail plus compétitifs limitent l'ampleur des écarts salariaux entre les hommes et les femmes pour un travail de valeur égale en limitant les rentes. Cela suggère également que le rôle de la négociation et de la discrimination dans l'écart salarial entre les hommes et les femmes tend à être plus important dans les industries protégées qui sont à l'abri de la concurrence (par exemple, l'énergie, les transports) ou sur les marchés du travail locaux qui sont plus concentrés (par exemple, les zones rurales).

Les différences salariales systématiques entre les hommes et les femmes pour un travail de valeur égale au sein des entreprises, pour un niveau de rente donné, reflètent des différences dans la position de négociation des hommes et des femmes ou le rôle de la discrimination de l'employeur. Dans la pratique, la frontière entre les différences de négociation et la discrimination n'est pas toujours claire. Par exemple, lorsque les femmes ont une position de négociation plus faible que les hommes parce qu'elles ont moins d'options extérieures, les entreprises peuvent utiliser leur pouvoir de fixation des salaires pour augmenter leurs profits en différenciant les salaires entre les hommes et les femmes (discrimination monopsonique). En outre, les différences de rémunération pour un travail de valeur égale peuvent être intentionnelles ou non. C'est le cas lorsque les différences de rémunération pour un travail de valeur égale résultent d'une discrimination (par exemple, de préjugés inconscients) ou d'une négociation (par exemple, des résultats différents peuvent survenir même lorsque la négociation est menée de bonne foi).

La réduction de l'écart salarial pour un travail de valeur égale nécessite des politiques axées sur les travailleurs et leurs familles, ainsi que des politiques axées sur les entreprises. Les politiques familiales peuvent jouer un rôle clé dans la promotion d'un partage plus équitable des responsabilités familiales, renforçant ainsi le pouvoir de négociation des femmes. Il s'agit par exemple de promouvoir un recours plus équitable au congé parental, d'investir dans les services de garde d'enfants et l'éducation de la petite enfance et de supprimer les obstacles financiers qui empêchent les seconds salariés de travailler. Les politiques de transparence salariale peuvent compléter les lois sur l'égalité de rémunération et la lutte contre la discrimination en favorisant la prise de conscience des écarts de rémunération systématiques au sein des entreprises et en stimulant le débat sur leurs causes. Elles peuvent également contribuer à renforcer la position de négociation des femmes. La grande hétérogénéité des écarts de rémunération pour un travail de valeur égale dans les différents secteurs d'activité suggère que les initiatives sectorielles peuvent compléter les initiatives nationales visant à combler l'écart salarial entre les hommes et les femmes.

1. Introduction

The gender wage gap remains a stubborn obstacle to gender equality (Goldin, 2014^[1]). According to the official OECD gender statistics, the gender wage gap in 2022 stood at 12% in France similar to the OECD average. When controlling for differences in qualifications and experience the gaps tends to become even larger as women nowadays tend to have better qualifications than men (Blau and Kahn, 2017^[2]). Consequently, the gap reflects differences in the work men and women do and the way they are remunerated for this. While this reflects to some extent the fact that women are more likely to be employed in low-wage firms and industries, the bulk of the gap is concentrated within firms (OECD, 2021^[3]).

To tackle the gender wage gap within firms, several countries recently introduced pay transparency measures. For example, France introduced an ambitious gender pay transparency law in 2019 that requires firms with more than 50 employees to report detailed statistics on the gender wage gap in their firm. Similar measures have recently been introduced in several other countries (OECD, 2023^[4]; Cullen, 2023^[5]; OECD, 2021^[6]). Such measures play a useful role in making gender pay gaps more visible and stimulating the debate on its causes. However, their implementation has sometimes been complicated by the difficulty of establishing whether gender pay differences in a given firm are due to systematic differences in the work that men and women do (differences in tasks and responsibilities) or systematic differences in the way they are remunerated for it (differences in pay for work equal value) due to differences in bargaining position or discrimination by employers.

The academic literature on the sources of the gender wage gap within firms, and particularly the component related to differences in pay for work of equal value, tends to provide rather different answers depending on the approach used. Until recently most studies have tended to focus on the unexplained component of the gender wage gap after controlling for differences in observed characteristics (Oaxaca, Oaxaca and Ronald, 1971^[7]; Blinder, Blinder and Alan, 1973^[8]), as well as firm and occupation fixed effects (Heinze and Wolf, 2010^[9]; Bayard et al., 2003^[10]). This is usually interpreted as a measure of the difference in pay for work of equal value and typically accounts for a sizable part of the overall gender wage gap. The main limitation of such studies is that there may be important differences in unobserved worker productivity even within firms and occupations. More recent studies have instead tended to focus on systematic differences in wage-setting practices between men and women within firms (Card, Cardoso and Kline, 2016^[11]; Casarico et al., 2019^[12]; Coudin, Maillard and Tô, 2018^[13]; Bruns, 2019^[14]; OECD, 2021^[3]; Morchio and Moser, 2023^[15]; Sorkin, 2017^[16]). Such studies typically find that the component associated with discrimination is rather small with the notable exception of Estonia (Masso, Meriküll and Vahter, 2020^[17]).¹

The principal objective of this paper is to enhance our understanding of the gender wage gaps within firms and notably differences in pay for work of equal value due to bargaining or discrimination in France. It makes two contributions:

- It provides the first cross-country estimates of the gender gap in pay for work of equal value in five selected European countries (France as well as Denmark, Hungary, Portugal, Sweden) using linked employer-employee data. The international comparison not only provides an indication of how France is doing, but also provides useful insights into the potential role of policies and institutions. The selection of countries is driven partly by data requirements (high quality information on hourly wages), and partly by the desire to cover countries that differ substantially in the gender wage gap as well as their policies and institutions. The linked employer-employee data used in this paper are based either on administrative records related to the social security or tax system or on mandatory employer surveys. They consistently cover the universe or near universe of workers

¹ A closely related literature in the form of “correspondence studies” focuses on discrimination in hiring based on fictitious applications by men and women (Neumark, 2012^[31]).

and firms in a country and provide high-quality information on hourly wages. The analysis is restricted to dependent employees in the private sector during the period from 2010 to 2019. It therefore does not capture the effects of the recent pay transparency reform in France or those of the COVID-19 crisis. The results show that bargaining and discrimination account for only a small part of the gender wage gap in France: 1.3 percentage points or 10% of the total gap. This is only slightly higher than in Sweden, but substantially lower than in Hungary and also lower than in Denmark and Portugal.

- The paper provides new insights into the drivers of gender pay gaps due to bargaining and discrimination. To this end, the paper starts by providing a detailed portrait of the gap across different workers, firms and industries. This shows that the gap is consistently higher for high-wage workers as well as in high-wage firms and industries. These results suggest that the presence of rents is a major determinant of the gender wage gap. It then proceeds by estimating rent-sharing models that explicitly relate the gender wage gap within firms due to bargaining and discrimination to firm productivity. The analysis confirms that gaps are consistently higher in more productive firms due to differences in rent-sharing within firms in all countries observed, but also that there are important differences in the extent to which higher productivity is associated with larger gaps. Using a simple decomposition framework, it analyses the relative importance of differential rent-sharing within firms and firm composition as measured by importance of rents in explaining the cross-country variation in the gaps. The results show that both components are important.

The remainder of this paper is organised as follows. Section 2 discusses the methodology while section 3 presents the data. Section 4 documents the cross-country evidence on the gender gap in pay with an emphasis on the component that can be attributed to bargaining and discrimination. Section 5 documents the within-country variation in the gender gap in wage premia within firms (and where appropriate between firms) across workers, firms and industries. Section 6 examines the role of differential wage-setting within firms and productivity dispersion in explaining cross-country differences in the importance of bargaining and discrimination in gender wage gap. Section 7 concludes.

2. Methodology

2.1 Empirical model

The empirical analysis makes extensive use of wage models with two-sided heterogeneity in the form of worker and firm fixed effects, so-called “AKM” models (Abowd, Kramarz and Margolis, 1999_[18]). Given the present interest in gender-specific firm effects, AKM models estimated separately for male and female workers following Card, Cardoso and Kline (2016_[11]). Formally, the empirical model can be represented as follows:

$$(1) \quad w_{it} = \alpha_i + \Psi_{J(i,t)}^{G(i)} + X'_{it} \beta^{G(i)} + \delta_t + r_{it}$$

where w_{it} denotes the log wage of worker i and firm j at time t , α_i denotes a worker fixed effect for worker i which controls for unobserved time-invariant factors, such as ability, $\Psi_{J(i,t)}^{G(i)}$ denotes a firm fixed effect for firm j and gender G , which captures firm and gender-specific differences in wage premia or wage-setting practices within firms, X'_{it} denotes age and age squared, with gender-specific returns $\beta^{G(i)}$, δ denote year fixed effects and r_{it} denotes a random error term. In practice, equation (1) is estimated separately by gender and country.

The main interest in this paper is with the gender-specific firm fixed effects and their contribution to the gender gap. This can be analysed formally by decomposing the gender gap in firm wage premia in a between-firm component and a within-firm component as follows:²

$$(2) E[\Psi_{J(i,t)}^M] - E[\Psi_{J(i,t)}^F] = E[\Psi_{J(i,t)}^M - \Psi_{J(i,t)}^F | g = M] + E[\Psi_{J(i,t)}^F | g = M] - E[\Psi_{J(i,t)}^F | g = F]$$

where the first term on the right-hand side represents the between-firm component of the gender gap in firm wage premia and the second term the within-firm component. The between-firm component in wage premia shows what women would be paid if they worked at the firms where men work. This captures the role of differential sorting of men and women across firms with different wage-setting practices. The within-firm component instead reflects what women would be paid in their firm firms if they were men. This captures of the role of differential wage-setting between men and women within firms due to differences in bargaining position or the role of employer discrimination.

2.2 Identification

The econometric model is based on three key assumptions. First, it assumes that worker and firm fixed effects are log additive, i.e. there are no complementarities between firm type and worker types. Consequently, the wage premium will be the same for all men (women) in the firm regardless of their other characteristics. Second, it assumes exogenous mobility, meaning that the time-varying residual component of wages r_{it} is uncorrelated with the probability of moving. Third, the model is static, and hence rules out the presence of dynamic factors in the realization of firm wage premia.

Although these assumptions may seem strong, they have withstood scrutiny from recent research. Bonhomme, Lamadon and Manresa (2019^[19]) found only slight deviations from the additive model. Card et al. (2013^[20]) further show that exogenous mobility conditional on worker and firm fixed effects describes the data well. The wage effects of movements from low to high wage firms and those from high to low wage firms are more or less symmetric. Di Addario et al. (2023^[21]) developed an extension of the model to include two firm fixed effects and found that firm “destination” effects are much more variable than “origin” effects. In other words, a dynamic specification would not increase much the explanatory power of the model.

The model is identified from the sample of firms and workers that are connected through worker mobility by both men and women. In line with previous literature, we focus on the so-called dual connected set, i.e. the overlapping part of the connected set for female and male workers. If there are only a few movers per firm, then this creates a bias known as the “limited mobility bias”. This bias leads to an overestimate of the share of the variance of earnings explained by firms and an underestimate of the share explained by the covariance between worker and firm effects (Andrews et al., 2008^[22]). Since the evidence in this paper is entirely built on averages, there is no need to correct firm effect estimates for this bias. Indeed, the fixed effect estimates are under the usual assumptions of AKM models (Bonhomme et al., 2023^[23]). Moreover, the average number of male and female movers is relatively high in all countries, at least 20, further alleviating concerns about limited mobility bias.

² Alternatively, one can rewrite the formula above holding the distribution of women across firms as fixed instead of that of men for the within-firm channel and using the male premium for the between-firm channel. Using men as the benchmark shows how much women would earn if they worked where men work and how much they would earn at these places if they were men. This seems like a more natural comparison because it is easier to change where women work through policies, like offering more public childcare or job protection (Bruns, 2019^[14]).

2.3 Normalization

When using these types of models, it is only possible to identify the wage premium of a given firm relative to a reference firm or group. Therefore, comparing the fixed effects of male and female firms requires normalization. Consistent with the theoretical framework that underlies these models (Card et al., 2018^[24]), the idea is to identify “low-surplus” firms and set their (gender-specific) firm fixed effects to zero with the assumption that those firms pay zero rents on average for both genders (Card, Cardoso and Kline, 2016^[11]).

Previous studies have used two different methods to address these issues in practice (Card, Cardoso and Kline, 2016^[11]). The first uses balance sheet information to document that firm effects tend to be similar for low value-added firms and then increase linearly with value added per worker. To account for this “kinked” relationship, prior research has calculated the employment-weighted average firm fixed effect for low-value added firms below the kink for each gender and then adjusted all firm effects by subtracting this constant value. The second approach is to normalize all firm effects relative to the average employment-weighted firm fixed effects in the hotel and restaurant sector, which is consistently shown to be the industry with the least surplus to share on average (OECD, 2022^[25]).

In the present paper, we adopt a modified version of the second approach since this method can be applied consistently across countries. Consequently, we assume that the gender wage gap in the reference industry is due to differences in worker productivity as measured by the worker fixed effects. More specifically, we use the restaurant industry as the reference in France, Hungary, and Portugal, where it has the lowest average rents (as measured by male firm fixed effects), and in Sweden and Denmark, we use a composite that includes the restaurant sector as well as all other sectors with lower average rents.

3. Data

This section discusses the national data sources used in the analysis, the estimation samples, and how the estimated gender wage gap based on national sources compares with those obtained from international datasets.

3.1 Sources

The decomposition of the gender wage gap within and between firms is implemented based on a harmonised data treatment and methodology using linked employer-employee data for France as well as four selected European countries (e.g. Denmark, Hungary, Portugal, Sweden). The selection of countries is driven partly by data requirements and partly by the desire to cover countries that differ substantially in the gender wage gap as well as their policies and institutions.

The data requirements driving the selection of countries relate to i) high coverage, which is important for the estimation of gender-specific firm wage premia, ii) high quality information on working time, which is crucial for the measurement of gender wage gaps, iii) detailed information on occupations to take account of the role of occupational segregation within firms, and iv) information on value added per worker, which is needed for the analysis of rent-sharing in Section 6. The linked employer-employee data used in this paper are based either on administrative records related to the social security or tax system or on mandatory employer surveys. They consistently contain the universe or near-universe of firms and workers, covering at least 50% of the workforce in a country, provide high-quality information on hourly wages and 3-digit occupations. The data also provide information on age, gender and 3-digit industry. A summary of the data sources used is provided in Table 1.

Table 1. Data sources

	Name	Earnings data source	Sample structure	Time coverage
Denmark	Integrated Database for Labour Market Research (IDA), IDAN, FIRM	Tax administration combined with register data	Universe	2010-19
France	Déclaration annuelle des données sociales unifiée (DADS) panel linked with FARE/FICUS	Social security administration	Universe	2010-19
Hungary	ADMIN II - Panel of administrative data (OEP, ONYF, NAV, NMH, OH)	Social security administration	50% random sample of workers	2010-17
Portugal	Quadros de Pessoal	Mandatory employer survey	Universe	2010-19
Sweden	Wage structure statistics (SES)	Tax administration	Stratified sample covering 50% of private sector employees	2010-19

The countries considered in this paper vary considerably in terms of their gender wage gaps, economic structure as well as their policies and institutions. The gender wage gap is the lowest in Sweden, at intermediate levels in Denmark, France and Hungary and relatively high in Portugal (see Section 4). Differences in gender wage gaps across countries may reflect many different factors including the structural characteristics of labour markets and the nature of family policies and social norms. The countries considered in this paper exhibit many important differences along each of these dimensions. For example, there are important differences in the structure of wages and productivity across firms (Section 6). Wage and productivity dispersion are much higher in Hungary and Portugal than in the other three countries. There are also important differences in family policies. Family policies in Nordic countries as well as Portugal actively seek to promote a more equal sharing of household responsibilities between men and women, while in Hungary and until recently also France the focus has been more on support for traditional family structures (e.g. financial incentives for larger families). However, France now also has many policies that seek to promote gender equality.

3.2 Sample and variable construction

To harmonise the sample across countries, the analysis is restricted to dependent employees, excluding the self-employed, in the private sector during the period from 2010 to 2019. It therefore does not capture the effects of the recent pay transparency reform in France or those of the COVID-19 crisis. The analysis is further restricted to individuals aged 20-60 and excludes workers in marginal jobs earning less than 80% of the full-time minimum wage or, if no minimum wage exists, 10% of the full-time median.

To allow for meaningful comparisons of the gender wage gap across countries, it is consistently measured in terms of hourly wages or monthly full-time equivalent earnings in the main job. Earnings are defined in gross terms, and hence exclude employer social security contributions and include bonuses and overtime payments. The main job is defined as the job with the highest earnings in the year. To allow defining the gender wage gap in each firm, the sample is further restricted to firms that employ at least one woman and one man. The resulting harmonised dataset is referred to as the “raw sample” in Table 3 below.

Since the identification of worker and gender-specific firm fixed effects relies on worker mobility, the actual analysis is effectively restricted to the dual connected set, i.e. the set of firms that is connected to at least one other firm through the movement of one man and one woman during the sample period. As a result, the core analysis covers between 76% of the workforce in the initial sample in Hungary and 98% in Sweden

(Table 2). When focusing on the role of labour productivity in the gender wage gap, coverage further declines but remains high between 63 and 82%. In Denmark and Sweden, the decline in coverage is most pronounced as value-added information is not available for all firms. However, coverage remains similar to that in the other three countries since initial coverage in the dual connected set is particularly high in Denmark and Sweden.

Table 2. Summary statistics

Share of population in the raw data covered in the estimation sample (%)

	Dual connected set	Dual connected set + VA
Denmark	88.0	65.4
France	92.2	76.0
Hungary	75.8	63.2
Portugal	79.6	76.3
Sweden	98.0	82.0

High coverage in the dual connected set, even after restricting the analysis to firms with information on labour productivity, means that the data remain highly representative of the raw sample and by extension the true population. To provide an indication of the representativeness of the data, Table 3 compares average earnings and hourly wages by gender in the raw sample, the dual connected set, and the dual connected set with firm-level information on labour productivity. This shows that average earnings and hourly wages for men and women in the dual connected set are very similar to those in the raw data in each of the five countries considered. The same is true when comparing average earnings and hourly wages by gender between the connected set with information on labour productivity and the raw data.

Table 3. Descriptives statistics

	Raw sample (universe)			
	Annual earnings	Hourly wages	Hourly wages for men	Hourly wages for women
Denmark	53 151	30.60	32.54	27.81
France	25 837	18.44	19.77	16.75
Hungary	6 911	2.82	3.01	2.60
Portugal	11 306	6.24	6.78	5.64
Sweden	37 671	19.96	20.71	18.86
	Dual connected set			
	Annual earnings	Hourly wages	Hourly wages for men	Hourly wages for women
Denmark	53 602	30.78	32.80	27.92
France	26 264	18.68	20.10	16.91
Hungary	7 726	3.11	3.37	2.80
Portugal	12 094	6.67	7.32	5.95
Sweden	37 769	20.02	20.78	18.90
	Dual connected set + labour productivity (sales or value-added per worker)			
	Annual earnings	Hourly wages	Hourly wages for men	Hourly wages for women
Denmark	53 260	30.66	32.62	27.64
France	26 343	18.57	19.83	16.74
Hungary	7 852	3.14	3.41	2.82
Portugal	12 084	6.67	7.31	5.95
Sweden	37 504	19.84	20.59	18.72

All currencies are converted into euros using the latest nominal exchange rate.

Source: Authors' calculations based on national sources (see Table 1)

3.3 Validation

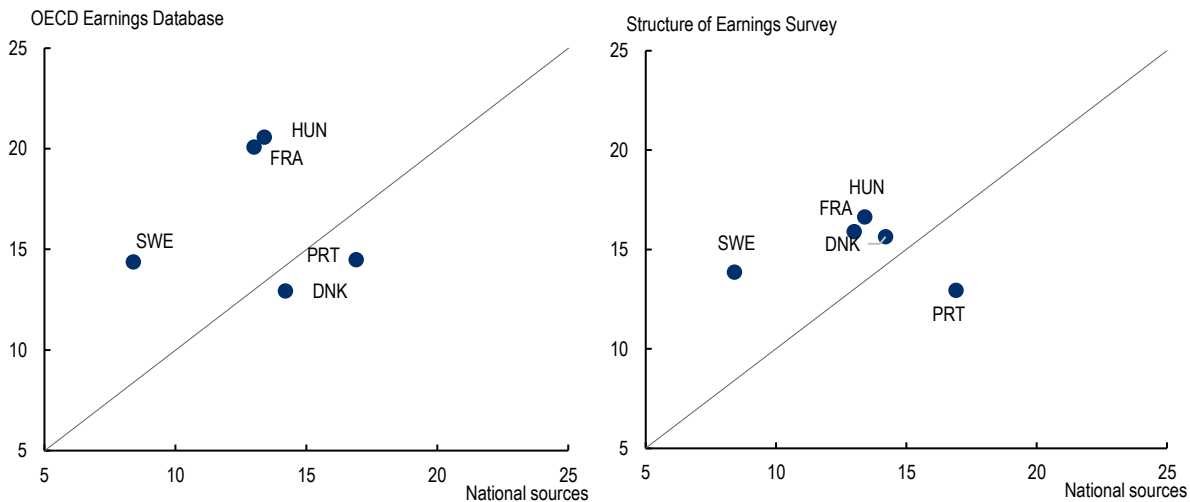
The gender wage gaps in the harmonised national data (raw data) are generally close to those contained in harmonised international datasets such as the OECD Earnings Distribution database and the of the Structure of Earnings Survey (Figure 1).³ Note that the OECD Earnings Distribution database focuses on full-time workers, whereas the measure of the gender wage gap used in this paper also comprises part-time workers, who typically receive lower wages and are more likely to be female. Another difference is that the OECD Earnings Distribution focuses on differences in base wages and does not take account of bonuses and overtime payments, which tend to be more important for men, understating the true gender wage gap. The Structure of Earnings Survey in principle should be more comparable since this is based on both full-time and part-time workers and the earnings concept is similar. However, it tends to exclude firms with less than 10 employees. The gender wage gaps based on the national sources used for this paper tend to be close to those based on the SES for approximately the same period. The larger gender

³ The OECD Earnings Distribution database allows defining the gender wage gap in terms of average wages as well as median wages. The gender gap in median wages is used for the official OECD measure of the gender wage gap.

gap in the national data may reflect the importance of small firms in Portugal, which tend to disproportionately employ women and pay lower wages. Differences with the OECD Earnings Distribution Database tend to be slightly more pronounced. This may be not surprising given the more important differences in the sample definition and the concept of earnings.

Figure 11. Comparing different measures of the gender wage gap

Difference in average hourly wages between women and men as a share of the average hourly wage of men



Source: OECD Earning database, Structure of Earning Survey, Eurostat (https://ec.europa.eu/eurostat/web/products-datasets/-/sdg_05_20) and national sources (see Table 1).

4. The role of bargaining and discrimination in the gender wage gap across countries

The main results are summarised in Figure 2 which relates the component of the gender wage gap that may be attributed to bargaining and discrimination to the overall gender wage gap and the average gender wage gap within firm. For completeness, it also reports the gender gap in wage premia between firms (which corresponds to the difference in the overall gender wage and the average gender wage gap within firms).

The gender wage gap is overwhelmingly concentrated within firms in all countries considered. On average across the countries considered, 86% of the gender wage gap reflects differences in pay within firms and 14% differences between firms. Wage gaps within firms in principle may reflect differences in worker skills, tasks and responsibilities as well as differences in pay for work of equal value (bargaining and discrimination). Wage gaps between firms reflect the sorting of firms in low-wage firms and industries. In France, 88% of the overall gap is concentrated within firms, and 12% between firms. In Hungary and Portugal, the between component is relatively more important whereas in Denmark the between component is negligible.

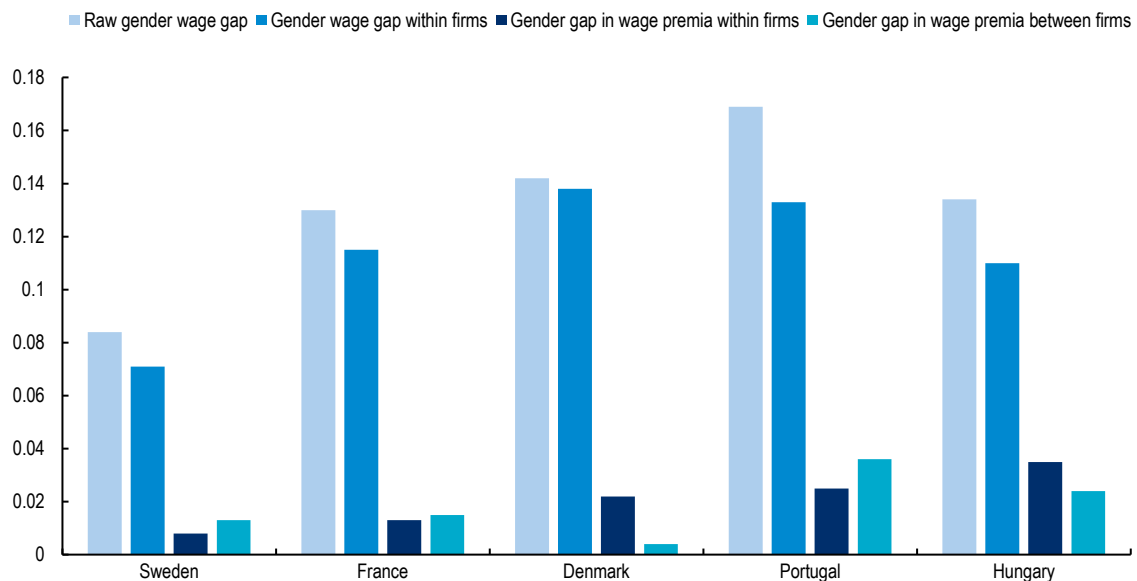
The role of bargaining and discrimination in the overall gender wage gap is relatively low in France. On average across the countries considered, bargaining and discrimination account for 15% of the overall gender wage gap. In France and Sweden, the component attributed to bargaining and discrimination is relatively small, 1.3 percentage points, amounting to about 10% of the overall gender wage gap. In

Denmark and Portugal, it is close to the cross-country average of 15%. In Hungary, it is substantially higher at 3.5 percentage points and accounts for more than a quarter of the overall gender wage gap.

The results are robust with respect to wide number of robustness checks as discussed in detailed in Palladino et al. (2024). While we are not particularly concerned about the role of limited mobility bias in the present context given the present focus on averages, we show that the results change little when restricting the analysis with at least ten movers of each gender as in Bonhomme et al. (2023). To assess whether occupational segregation could bias the estimation of the gender-specific fixed effects we conduct robustness tests that explicitly control for occupation in the empirical model. This has important implications for the estimation of the worker fixed effects but only limited consequences for the estimated gender-specific firm fixed effects. This suggests that occupational segregation is effectively controlled for in our baseline specification through the inclusion of worker fixed effects.

The present estimates of the gap in wage premia between and within firms tend to be similar to those for countries for which previous estimates are available, i.e. Card et al. (2016^[11]) for Portugal, Coudin et al. (2018^[13]) and Palladino et al (2022^[26]) for France, and Gallen et al (2019^[27]) for Denmark. To the best of our knowledge, there are no comparable previous estimates published for Hungary and Sweden.

Figure 2. The role of bargaining and discrimination in the gender wage gap



Source: Authors' calculations based on national sources (see Table 1)

5 The role of bargaining and discrimination in the gender wage gap across workers, firms and industries

This section focuses on within-country heterogeneity across workers, firms and industries in the gender gap in wage premia within firms (bargaining and discrimination) and, where appropriate, the gender gap in wage premia between firms (sorting).⁴

⁴ Since the focus is on within-country differences, the results do not depend on the normalisation assumption.

5.1 Results along the distribution of worker wages

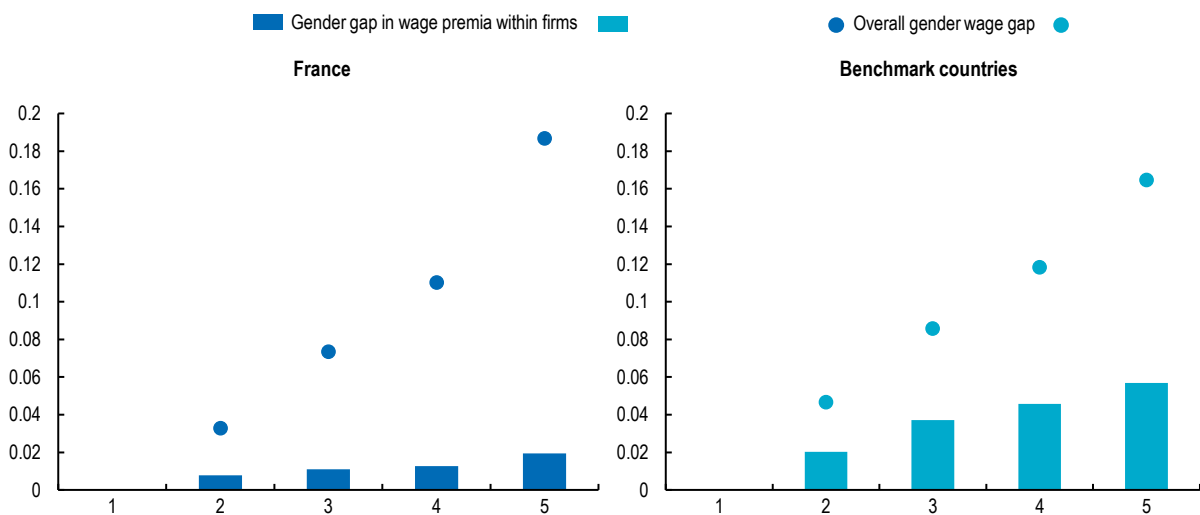
The component of the gender wage gap that can be attributed to bargaining and discrimination is larger for high wage workers in France as well as in the benchmark countries (Figure 3). The gender gap in wage premia within firms among workers in the top quintile of the distribution of worker wages is 2%-points higher than for workers in the bottom quintile in France, while it is 6%-points higher on average across the benchmark countries. In general, the increase in the gender gap in wage premia along the distribution of worker wages is stronger in countries where bargaining and discrimination play a greater role in the gender wage gap on average (see Section 4). Moreover, the increase in the within-firm gender gap in wage premia between the bottom and the top quintile of the wage distribution of workers accounts for 10% of the increase in the total gender wage gap in France and 35% on average in the benchmark countries.

The increasing importance of gender gaps in wage premia within firms along the distribution of worker wages may reflect the greater importance of individual wage bargaining in high-wage jobs as well as the declining role of wage-setting institutions (e.g. minimum wages and collective bargaining) along the distribution of workers' wages. This is consistent with previous work by Lachowska et al. (2022^[28]), who find that wage bargaining rather than wage posting is more important for high-wage workers than for low-wage workers. At the same time, wage-setting institutions in the form of statutory minimum wages and collectively agreed wage floors tend to be more binding for low-wage workers.

In principle, it is also possible that the increase in the gender gap in wage premia within firms along the distribution of worker wages is driven by the characteristics of firms. Indeed, high-wage workers are more likely to work in high-wage firms and high-wage firms may differ in the way they remunerate men and women compared to low-wage firms. This is discussed in the next sub-section.

Figure 3. Bargaining and discrimination is more important for the gender wage gap among high-wage workers

The gender gap in wage premia within firms by quintile of the distribution of worker wages relative to the first quintile, France and benchmark countries

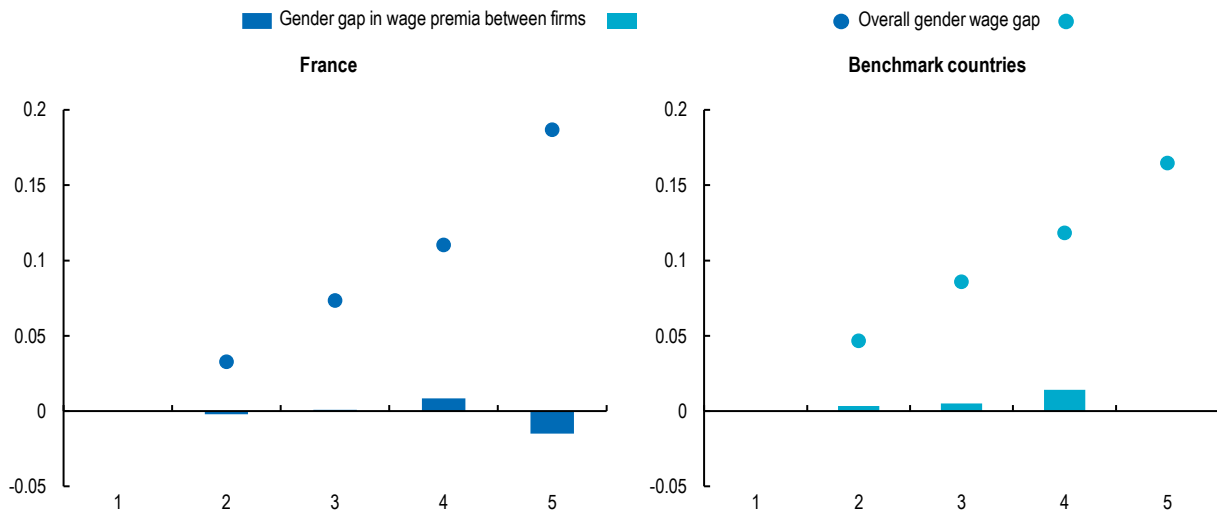


Note: Estimates of the gender gap in firm wage premia within firms based on Card et al. (2016) relative to the first decile.
 Source: Authors' calculations based on national sources (see Table 1)

The contribution of sorting to the gender wage gap along the distribution of worker wages does not reveal a clear pattern. Indeed, the gap in wage premia between firms is broadly similar across quintiles (Figure 4).

Figure 4. Sorting does little to explain differences in the gender wage gap between high and low wage workers

The gender gap in wage premia between firms by quintile of the distribution of worker wages relative to the first quintile, France and benchmark countries



Note: Estimates of the gender gap in firm wage premia between firms based on Card et al. (2016) relative to the first decile.
Source: Authors' calculations based on national sources (see Table 1)

5.2 Results along the distribution of firm wages

The component of the gender wage gap that can be attributed to bargaining and discrimination is larger for high-wage firms in France as well as the benchmark countries (Figure 5).⁵ The difference in the gender gap in wage premia within firms between the top and bottom quintile of the firm fixed effects distribution for men is 2.9%-points for France and 7.3%-points for the benchmark countries.

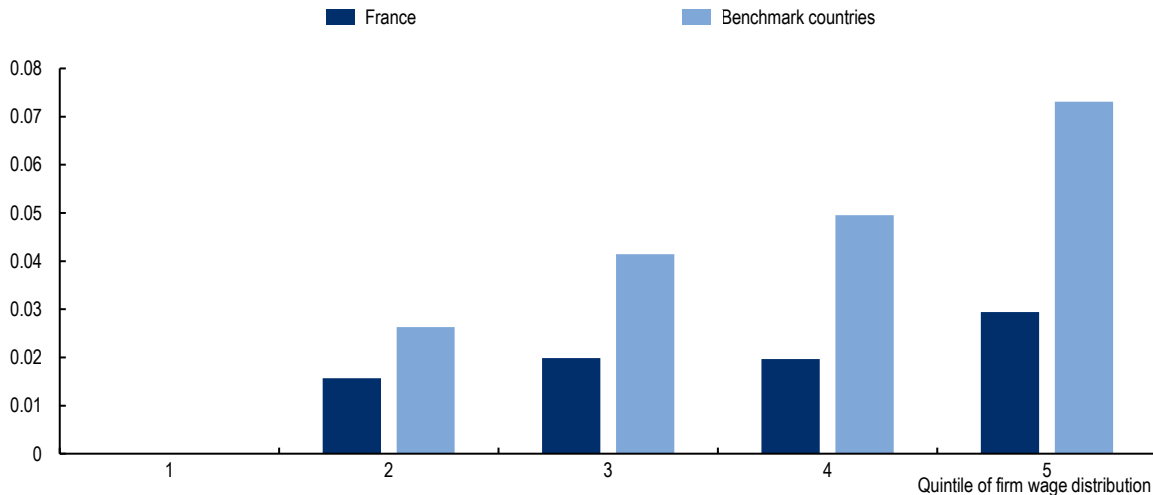
Since the gradient is somewhat stronger along the distribution of firm premia than the distribution of worker wages, this suggests that the increase in the gap along the distribution of worker wages is driven by the fact that high-wage workers tend to work in high-wage firms and vice versa. One reason why the pattern is attenuated when looking at the distribution of worker wages may be that sorting of workers across firms is not perfect.

These results are consistent with a rent-sharing model in which women capture less rent than men within the same firm. Consequently, the gap in wage premia will be larger in firms with high levels of rents. This can be rationalised in monopsony model where women labour supply is less responsive (elastic) to firms' wage premia. The relationship between rents and the gender wage gap will be explored more directly in Section 6.

⁵ We use a composite measure to obtain a single firm effect for each firm. We retrieve it by calculating an average of the estimated firm effect for men and women, weighted by the gender-specific share of employment in the firm.

Figure 5. The gender gap in wage premia within firms is higher in high-wage firms

The gender gap in wage premia within firms by quintile of the firm fixed effects distribution for men relative to the first quintile, France and average across benchmark countries

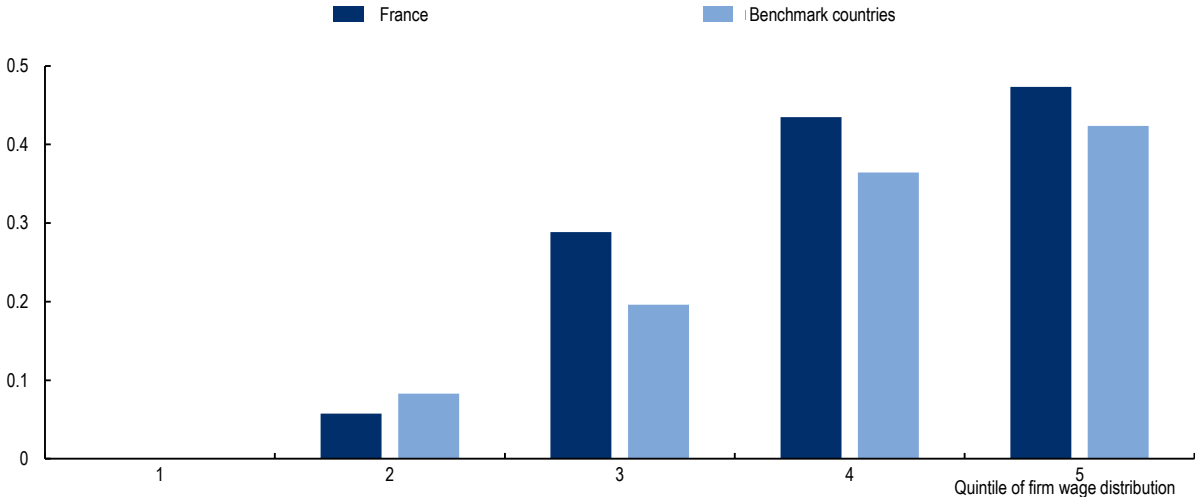


Note: Estimates of the gender gap in firm wage premia within firms based on Card et al. (2016) relative to the first decile.
Source: Authors' calculations based on national sources (see Table 1)

Female employment is strongly concentrated in low-wage firms in France as well as the benchmark countries (Figure 6). The gender gap in employment in the top quintile of the firm fixed effects distribution is 47%-points higher than in the bottom quintile in France, and 42%-points on average in the benchmark countries. The gender gap in employment in the bottom quintile tends to be small or negative, suggesting that women are over-represented in low-wage firms. The only exception is Hungary where the gender gap in employment is positive and significant also in the bottom quintile. All in all, the results are consistent with the point made in the previous section that a modest but negligible fraction of the overall gender wage gap reflects the sorting of women across firms.

Figure 6. Women are concentrated in low-wage firms

The gender employment gap within firms by quintile of the firm fixed effects distribution for men, France and average across benchmark countries

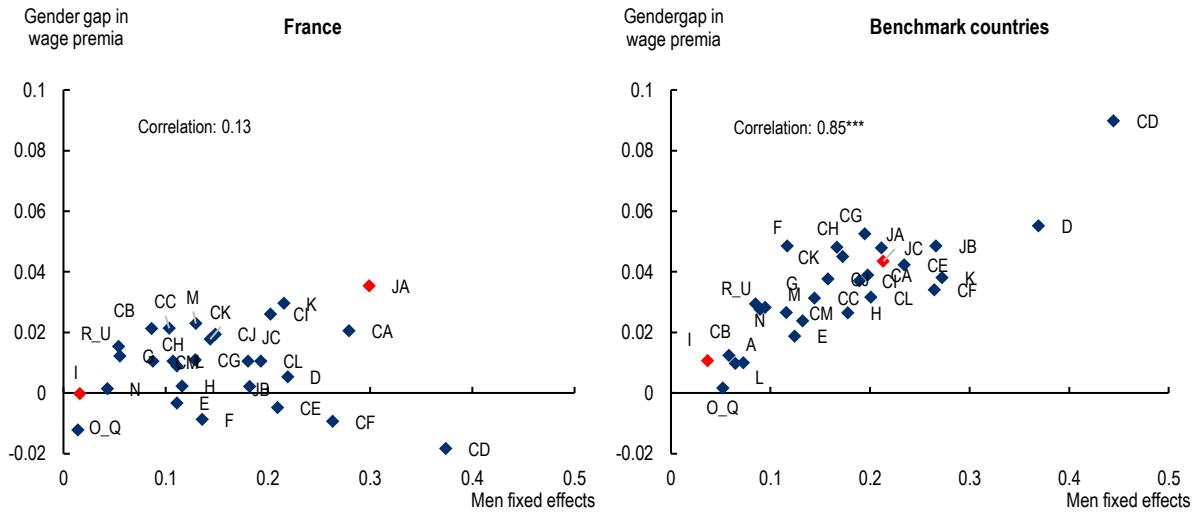


Note: Estimates of the firm wage premia based on Card et al. (2016) relative to the first decile.
Source: Authors' calculations based on national sources (see Table 1)

5.3 Results by industry

The gap in wage premia within firms is larger in high-wage industries in both France and the benchmark countries (Figure 7). There is a positive correlation between the gap in wage premia within industries and the average premium of men of 0.13 in France and 0.85 in the benchmark countries. The gender wage gap that can be attributed to bargaining and discrimination also tends to be low in low-rent industries such as restaurants and hotels (industry I), whereas it tends to be high in industries where rents are high such as media (industry JA). This suggests that a significant component of the variation in wage premia between firms reflects differences in wage premia between different industries. It also suggests that the higher gap in wage premia within firms reflects not only the characteristics of specific firms but also those of the market in which they operate (e.g. competition, technology).

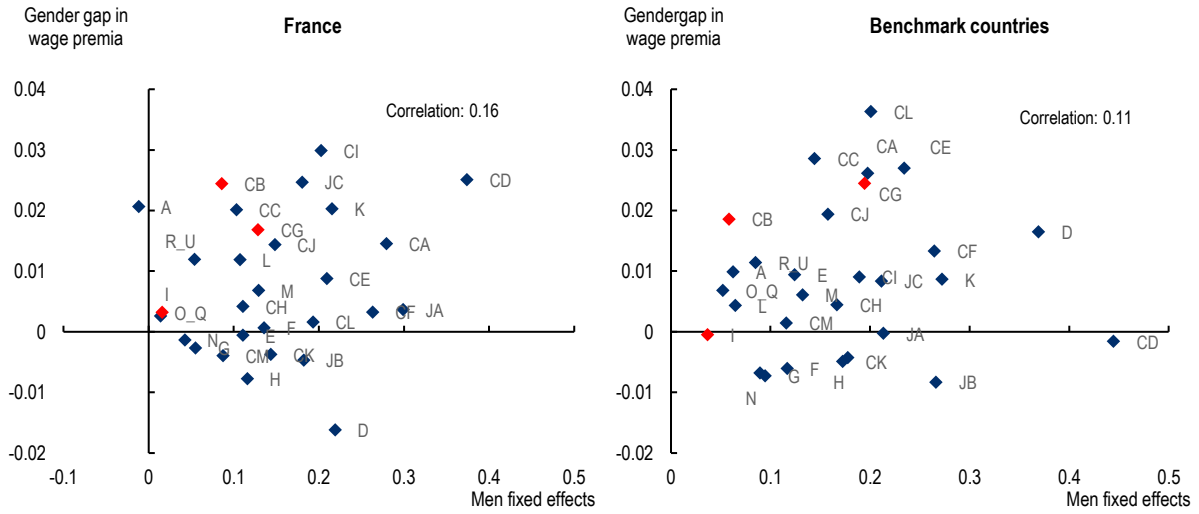
Figure 7. The gap in wage premia within firms tends to be larger in high-wage industries



Note: Mining industry is not shown. *** Significant at the 1% level.
 Source: Authors' calculations based on national sources (see Table 1)

The gap in wage premia between firms is not systematically larger in high-wage industries countries (Figure 8). While there is a weak positive correlation between the gap in wage premia within industries and the average premium of men of 0.16 in France and 0.11 in the benchmark countries, neither is statistically significant. There is a stronger correlation between the gap in wage premia between firms across industries between France and the benchmark countries. This suggests that the sorting of women tends to be stronger in industries with certain characteristics. In textiles and apparel (industry CB) and rubber, plastic and minerals (industry CG), the gap in wage premia tends to be relatively high in both France and the benchmark countries. While in rubber, plastic and minerals rents are relatively high, this is not the case in textiles and apparel. In industries with low rents, such as restaurants and hotels (industry I), the wage gap between firms tends to be small.

Figure 8. The gap in wage premia between firms tends to be larger in high-wage industries



Note: Mining industry is not shown.
 Source: Authors' calculations based on national sources (see Table 1)

6. Drivers of bargaining and discrimination

This section seeks to explain the cross-country variation in gender gaps in wage premia within firms as documented in Section 4. It first presents a simple accounting framework for explaining cross-country differences in within-firm gaps in wage premia, then estimates the importance of firm-level productivity pass-through to wage premia and the extent to which there are systematic gender differences in pass-through within firms, and finally concludes with a basic accounting exercise to explain cross-country differences in within-firm gender gaps in wage premia.

6.1 Framework

In order to shed light on the cross-country differences in within-firm gaps in wage premia, we propose a simple framework. It starts from the observation that a standard rent-sharing model is consistent with the stylised facts presented in Section 5. Consequently, we write the difference in the within-firm gender gap in wage premia in country A, $\bar{w}_{FA} - \bar{w}_{MA}$, and B, $\bar{w}_{FB} - \bar{w}_{MB}$, as the difference in the extent to which productivity differences between firms, φ_j , are passed-through onto wage premia between men and women in the same firm in country A, captured by γ , minus the difference in pass-through between men and women in the same firm in country B:

$$(3) (\bar{w}_{FA} - \bar{w}_{MA}) - (\bar{w}_{FB} - \bar{w}_{MB}) = \sum_j (\gamma_{FA} - \gamma_{MA}) \varphi_{jA} - \sum_j (\gamma_{FB} - \gamma_{MB}) \varphi_{jB}$$

After rearranging, the within-firm gender gap in wage premia can be expressed as the average difference in productivity between country B and A weighted by the differential pass-through in country A and the difference in pass-through by gender between country A and B weighted by average productivity in country B as follows:

$$(4) (\bar{w}_{FA} - \bar{w}_{MA}) - (\bar{w}_{FB} - \bar{w}_{MB}) = \sum_j (\gamma_{FA} - \gamma_{MA})(\varphi_{jB} - \varphi_{jA}) - \sum_j [(\gamma_{FA} - \gamma_{MA}) - (\gamma_{FB} - \gamma_{MB})]\varphi_{jB}$$

The decomposition effectively assumes that the relationship between productivity and wage premia across firms is linear, as also reflected in the empirical model, and hence that there is a linear relationship between the average level of productivity and productivity dispersion, after abstracting from the level of productivity in the reference sector (when productivity pass-through is zero by definition). For implementation purposes, we normalise productivity with respect to Sweden, as it is the country where both differential rent sharing and the size of the within-firm gender gap are minimal. In practice, we set φ_{SWE} equal to one in Sweden and rescale everything else accordingly. In other words, we effectively focus on the relative degree of productivity dispersion between countries.

6.2 Firm-level productivity pass-through

We proceed by estimating the degree of firm-level productivity pass-through to wage premia, γ , as well as the differential pass-through by gender, $\gamma_F - \gamma_M$. In practice, this is done by regressing wage premia of men on log value added per worker (log revenue per worker in Portugal) and the difference in wage premia between men and women within firms on log labour productivity. The results are reported in

Table 4.

Firm-level productivity pass-through to wage premia for men is close to 0.1 on average across countries (columns 1 and 2). In other words, a 1 percent increase in labour productivity is associated with a 0.1 percent increase in wage premia. This is consistent with the central estimates in the literature on rent-sharing as discussed in Card et al. (2018^[29]). A significant relationship between wage premia and labour productivity is a sign that labour markets are not perfectly competitive. In perfectly competitive labour markets, there would be no statistically significant relationship between productivity and wage premia. Productivity pass-through is considerably higher in Hungary where it is 0.18, whereas it is considerably lower in Sweden where it is 0.04. Productivity pass-through is at intermediate levels in Denmark, France and Portugal (between 0.07 and 0.08). The results are very similar when controlling for industry fixed effects, which suggests that the link between productivity and wages is mainly driven by differences between firms within industries.⁶

Having confirmed that our estimates of firm-level productivity pass-through are broadly consistent with those reported in the literature, we now turn to the differential pass-through between men and women (columns 3 and 4). The results indicate that there are systematic differences in pass-through between men and women in all countries. The estimates range from about 0.01 to 0.03 across countries. In other words, if pass-through for men is about 0.1, it is about 0.09 for women. Again, these magnitudes line up well with estimates in the literature. As in the case of pass-through for men, the differential pass-through between men and women is much higher in Hungary and much lower in Sweden.

⁶ That said, there also tends to be a positive and statistically significant relationship between labour productivity and wage premia at the industry level.

Table 4. Firm-level productivity pass-through to wage premia and within-firm gaps in wage premia

Regression results of log labour productivity on wage premia and within-firm gaps in wage premia

	Wage premia (Men)	Wage premia (Men)	Within-firm gap in wage premia	Within-firm gap in wage premia
Denmark	0.0712***	0.0718***	0.0028	0.0095
	-0.0055	-0.045	-0.0057	-0.0043
France	0.0754***	0.0649***	0.0069***	0.0040***
	-0.034	-0.0025	-0.0006	-0.0006
Hungary	0.1840***	0.1619***	0.0262***	0.0219***
	0.0044	-0.0052	-0.0022	-0.0025
Portugal	0.0766***	0.0778***	0.0078***	0.0075***
	-0.005	-0.0028	-0.002	-0.0018
Sweden	0.0361***	0.0236***	0.0074***	0.0057***
	-0.0047	-0.0034	-0.0019	-0.0023
Industries FE		✓		✓

Firm-Level regressions weighted by male employment, robust standard errors in parentheses, * p<0.10, ** p<0.05, *** p<0.01

6.3 Accounting for cross-country differences in within firm gaps in wage premia

Having estimated differential pass-through between men and women, we can now implement the accounting framework presented in Section 6.1 to analyse the sources behind cross-country differences in within firm-gender gaps in wage premia. For the purposes of the decomposition, Sweden is used as a reference since this is the country where within-firm gaps in wage premia are the lowest. The results are reported in Table 5 and visualised in Figure 9.

The difference in the gender gap in wage premia within firms between France and Sweden amounts to 0.5 percentage point. The contribution of differential rent-sharing is 0.03 percentage points, and accounts for just 6% of the difference with Sweden. The remaining 94% of the differences in the gender gap in wage premia between France and Sweden reflects differences in the importance of rents related to the degree of productivity dispersion. The cross-country analysis suggests that to better understand aggregate gender differences in pay for work in equal value, it is particularly important to take account of the broader economic context since this determines the scope of differential wage-setting practices between men and women within firms for the overall gender wage gap.

For Denmark, Hungary and Portugal, the results are qualitatively similar to those for France. In all three countries, differences in the gender gap in wage premia with respect to Sweden mainly reflect the availability of rents (dispersion in productivity) rather than differential rent-sharing. If anything, the importance of differential rent-sharing is somewhat larger, ranging from 10% in Portugal, to 29% in Denmark and 40% in Hungary.

Table 5. Accounting for cross-country differences in within-firm gaps in wage premia

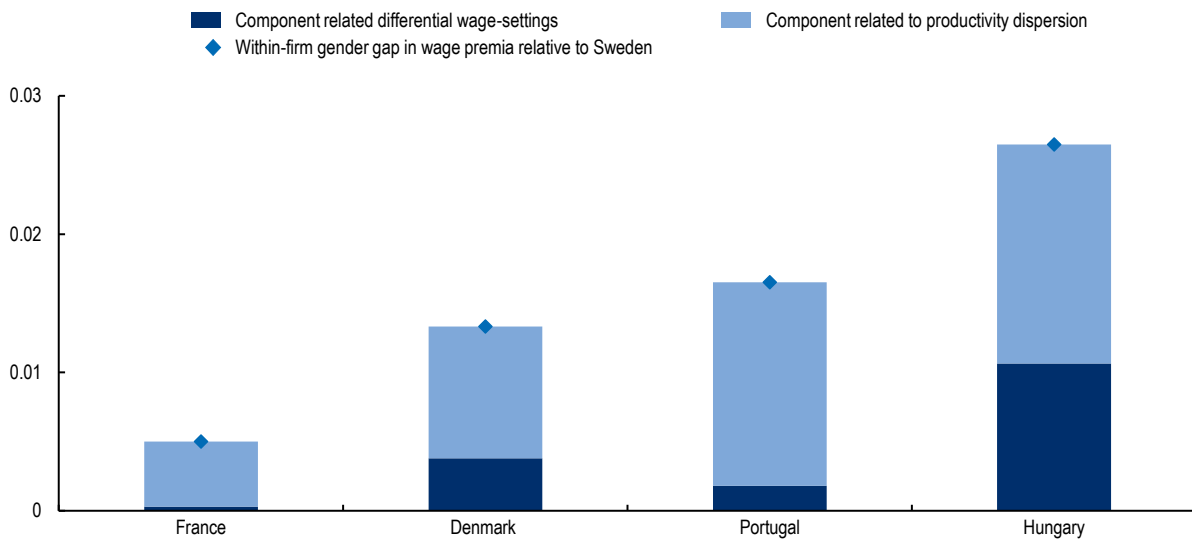
Differences relative to Sweden

	(1)	(2)	(3)	(4)	(5)
	Observed difference in within-firm gender gap in wage premia	Component related to differential wage-setting (level)	Component related to productivity dispersion (level)	Component related to differential wage-setting (share) (2)/(2+3)	Component related to productivity dispersion (share) (3)/(2+3)
Denmark	0.0133	0.0038	0.0095	0.2854	0.7146
France	0.0050	0.0003	0.0047	0.0600	0.9400
Hungary	0.0265	0.0107	0.0158	0.4022	0.5978
Portugal	0.0165	0.0018	0.0147	0.1089	0.8911

Source: Authors' calculations based on national sources (see Table 1)

Figure 9. Rents are key for understanding cross-country differences in within gaps in wage premia

Differences relative to Sweden



Source: Based on Estimates in Table 5.

7. Concluding remarks

This paper presents the first cross-country evidence on the role of bargaining and discrimination in the gender wage gap with a specific focus on France. The role of bargaining and discrimination is analysed by focusing on systematic differences in wage-setting practices between men and women in the same firm through the estimation of gender-specific firm wage premia using comprehensive linked employer-employee data.

The paper provides three key insights. First, bargaining and discrimination account for 1.3 percentage points of the gender wage gap in France, slightly more than in Sweden, but less than in the other benchmark countries (Denmark, Hungary and Portugal). Second, the gender wage gap that can be attributed to bargaining and discrimination is higher in high-wage or high-productivity firms in all countries considered. Third, cross-country differences in the importance of bargaining and discrimination in the gender wage gap reflect in systematic differences in wage-setting practices within firms, but particularly imperfections in the product market that generate persistent rents.

To reduce differences in pay for work of equal value, there is a need for policies that focus on workers and their families as well as policies that focus on firms. Family policies can play a key role in promoting a more equal sharing of family responsibilities and in doing so support the bargaining position of women. Pay transparency policies can complement equal pay and anti-discrimination laws by raising awareness of systematic pay gaps within firms and stimulating debate about their causes.

But the role of bargaining and discrimination in the gender wage gap is more important in countries with imperfectly competitive product and labour markets. More competitive product and labour markets limit the scope for wage differentials between men and women for work of equal value by reducing rents. As a result, the role of bargaining and discrimination in the gender wage gap is likely to be more important in protected industries that are shielded from competition (e.g. energy, transport) or local labour markets that are highly concentrated (e.g. rural areas).

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