

DECOMPOSING THE GENDER WAGE-GAP IN THE HOSPITALITY INDUSTRY: A QUANTILE APPROACH.

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Abstract

This paper discusses the factors that determine the wage differences between men and women in the Spanish hospitality industry across the wage distribution. In general, previous studies have analysed the gender wage gap from a global perspective, without taking into account the heterogeneity across the wage distribution. It has also shown that there are factors such as vertical segregation, labour mobility or “glass ceilings” that it have a special impact on specific occupational groups (Burguess, 2003; Skalpe, 2007; Baum, 2013; Carvalho, Costa, Lykke, Torres, 2019); thus, it would be of interest to the state of the art to look more closely at the main factors that determining the gender wage gap, and in particular its discriminatory component across wage distribution. Using matched employer-employee data from a sample of 4,991 workers, we propose different wage decompositions based on quantile regressions, under the assumption of equal and different returns. Our results show that the wage advantage of men presents an increasing profile along the wage distribution, being particularly relevant in the higher wage group. Furthermore, its shown the existence of a high degree of gender wage discrimination in the sector, although it is decreasing across the wage distribution. Differences in returns of human capital and vertical segregation are the main causes that explain the discriminatory component. In addition, there is evidence of the possible existence of the so-called “glass ceiling”.

Purpose

This paper helps to examine the differences in the determinants of the gender wage gap across the wage distribution in the hospitality sector. This analysis allows us to deepen the extent to which these determinants heterogeneously affect to the gender wage-gap decomposition. Among the determinants analyzed, special attention is paid to the contribution of vertical gender segregation and the so-called “glass ceiling”.

Data

The data used for this study are the latest data available from the Wage Structure Survey (WSS-2014) carried out by the National Institute of Statistics. This survey contained matched employer-employee microdata, including information about 27,339 establishments and a sample size of 227,830 workers. The present paper uses information from the hospitality industry, which corresponds to Section I of NACE-09 nomenclature. A total of 4,991 workers were used. The WSS-2014 contains detailed information on wages, personal characteristics (gender, education, tenure, nationality); establishment characteristics (size of the establishment, market, type of agreement); and job characteristics (type of contract, type of working day, vertical segregation). The vertical segregation variable is based on the dissimilarity index proposed by Duncan & Duncan (1955):

$$D = \frac{1}{2} \sum_{i=1}^k \frac{F_i}{F} - \frac{M_i}{M}$$

In our case, this index has been used to measure the degree of vertical segregation, which would measure the degree of occupational inequality between men and women in each of the seven levels of responsibility analysed, where k contains the occupations belonging to each level of responsibility, F_i and M_i is the number of women and men working in the occupation (i) and F and M is the total number of women and men in each level.

Results

- Gender wage-gap decomposition by quartiles. The results obtained with the equal returns model shows that 50.94% of the wage gap is due to gender discrimination, while in each of the quartiles this component represents 102.42% in the first quartile, 95.31% in the second quartile, and 93.78% in the third quartile and 87.62% in the fourth quartile. The results obtained by assuming different returns for women and men allows us to deepen the causes of such discrimination across the wage distribution (Table 1). The results for the hospitality industry as a whole show that the differences in returns explain 68.96% of the wage gap. When the contribution of the gender dummy is added, the discriminatory component represents 84.77% of the pay gap. Only 15.33% is due to differences in productivity. Analyzing the discriminatory component along the distribution of wages, it is noteworthy that the whole differential is explained by this component. As wages increase, there is a decreasing tendency in the discriminatory component. In the second quartile it explains 97.52% of the wage gap, reducing to 96.30% and 91.17% in the third and fourth quartiles, respectively. The determinants of wages that have the greatest impact on explaining the gender wage differential, human capital and vertical segregation should be highlighted. In relation to human capital characteristics, it is observed that they have greater impact on the wage gap as wages increase. However, this effect is not due to differences in productivity between men and women, but it is due to differences in returns, because education and tenure increase women's wages less than those of men. This penalty in returns grows in quartiles with higher salaries. Similarly, the positive impact of vertical segregation on the gender-wage gap is mainly explained by differences in returns between both genders. This implies that professional promotion of women increases their wages less than men's. However, unlike what happens with human capital variables, the contribution of vertical segregation decreases as wage distribution progresses to higher quartiles. Regarding the contribution of productivity differences of vertical segregation, it reaches its highest value, 2.83% in the fourth quartile. Thus men predominate in jobs with better-paid levels of responsibility, mainly in the higher wage quartiles. In short, the overrepresentation of men in higher wage jobs and the penalty in returns suffered by women compared to men when promoting, could show the existence of the so-called “glass ceiling” in the hospitality industry.

Table 1. Relative contribution to the gender wage gap along the wage distribution.

| | Global | | | Quartile 1 | | | Quartile 2 | | | Quartile 3 | | | Quartile 4 | | |
|--------------------------------------|--------------|--------------|---------------|--------------|--------------|---------------|--------------|--------------|---------------|--------------|--------------|---------------|--------------|--------------|---------------|
| | Dif. Prodv. | Dif. Returns | Total | Dif. Prodv. | Dif. Returns | Total | Dif. Prodv. | Dif. Returns | Total | Dif. Prodv. | Dif. Returns | Total | Dif. Prodv. | Dif. Returns | Total |
| Personal characteristics | | | | | | | | | | | | | | | |
| Personal characteristics | -0.37 | -0.51 | -0.87 | 0.00 | 0.00 | 0.00 | 0.44 | 0.64 | 1.08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Human capital | 2.88 | 42.87 | 45.75 | 0.00 | -8.94 | -8.94 | 0.00 | 12.87 | 12.87 | 1.30 | 24.22 | 25.52 | 3.56 | 39.72 | 43.28 |
| Job characteristics | | | | | | | | | | | | | | | |
| Job characteristics | 4.13 | -9.94 | -5.81 | 3.35 | -14.21 | -10.86 | 0.00 | -2.70 | -2.70 | 1.10 | -6.06 | -4.95 | 0.00 | 1.51 | 1.51 |
| Vertical Segregation | 7.04 | 12.45 | 15.81 | 0.00 | 0.00 | 0.00 | 0.96 | 35.71 | 36.67 | 1.30 | 18.73 | 20.04 | 2.83 | 6.63 | 9.46 |
| Establishment characteristics | | | | | | | | | | | | | | | |
| Size | -0.54 | 8.28 | 0.96 | 0.00 | -15.43 | -15.43 | 0.21 | 2.29 | 2.50 | 0.00 | 3.62 | 3.62 | 0.00 | -12.28 | -12.28 |
| Market | 2.95 | -3.37 | 2.30 | 1.67 | 4.69 | 6.36 | 0.87 | -1.82 | -0.95 | 0.00 | 0.00 | 0.00 | 2.43 | -6.86 | -4.43 |
| Agreement | -0.86 | 19.18 | 37.82 | -6.02 | 92.79 | 86.77 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Gender | 15.81 | - | 15.81 | 42.11 | - | 42.11 | 50.52 | - | 50.52 | 55.78 | - | 55.78 | 62.45 | - | 62.45 |
| Total | 31.04 | 68.96 | 100.00 | 41.11 | 58.89 | 100.00 | 53.00 | 47.00 | 100.00 | 59.48 | 40.52 | 100.00 | 71.28 | 28.72 | 100.00 |
| Discrimination | | | 84.77 | | | 100.95 | | | 97.52 | | | 96.30 | | | 91.17 |

Methodology

Following the quantile regression model proposed by García, Hernández & Lopez-Nicolas (2001), we used a Mincer semilogarithmic equation of wages in order to analyze their determinants between both genders across the wage distribution (Equations [1] and [2]). This specification makes it possible to compare the wages between women and men, with the same observable characteristics, X_i , who earn below a reference wage that leaves behind a fraction θ of women and men, respectively, where θ represents the quantile of the wage density function conditioned on X_i .

$$Q_\theta(\ln W_{hi}|X_i) = \ln W_{hi}^\theta = X'_{hi}\beta_\theta + \varepsilon_{\theta i} \quad [1]$$

$$Q_\theta(\ln W_{mi}|X_i) = \ln W_{mi}^\theta = X'_{mi}\beta_\theta + \varepsilon_{\theta i} \quad [2]$$

We propose two types of empirical specification for decomposing the gender-wage gap, following the proposal by Oaxaca and Ramson (1994). Firstly, we assume equal returns of the observable variables (Equation [3]):

$$Q_\theta(\ln \bar{w}_h|\bar{x}_h) - Q_\theta(\ln \bar{w}_m|\bar{x}_m) = \ln(\bar{w}_h^\theta) - \ln(\bar{w}_m^\theta) = (\bar{x}_h^\theta - \bar{x}_m^\theta)\hat{\beta}_\theta + \hat{\phi}_\theta \quad [3]$$

where $\hat{\phi}_\theta$ is the parameter that measures the contribution of gender discrimination on the wage-gap for the quartile θ . Secondly, we assume different returns of the observable variables between women and men, (Equation [4]).

$$Q_\theta(\ln \bar{w}_h|\bar{x}_h) - Q_\theta(\ln \bar{w}_m|\bar{x}_m) = \ln(\bar{w}_h^\theta) - \ln(\bar{w}_m^\theta) = (\bar{x}_h^\theta - \bar{x}_m^\theta)\beta_\theta + \bar{x}_h^\theta(\beta_{oh} - \beta_o) - \bar{x}_m^\theta(\beta_{om} - \beta_o) \quad [4]$$

For the quartile θ , the first component on the right side measures the wage difference due to productivity differences between both genders. The discriminatory component is explained by the second and third members of the right side, who measure the salary advantage or disadvantage of men and women, respectively, both in reference to the non-discrimination wage structure, estimated by β_o .

Conclusions

This paper analyzes the determinants of the gender wage gap in the hospitality across the wage distribution, using a quantile approach. Two empirical specifications have been used: equal returns model and different returns model.

- Under the assumption of equal returns, the results show that the discriminatory component takes the highest values in the low wage levels of the distribution, diminishing its impact as we progress through the distribution of wages. Even so, in all the quartiles analyzed, gender discrimination always represent around 90% of the wage gap, which demonstrate that women's wage discrimination is a reality in the hospitality sector.
- The model of different returns allows to corroborate the previous result, showing a decreasing tendency of the discriminatory component. With regard to the determinants of the gender wage gap, a differential pattern is observed across the wage distribution.
- The effect of the human capital variables increases the wage gap in the higher quartiles, because education and tenure returns for women are less than men's.
- Special attention also requires vertical segregation, which contributes to increase the gender-wage gap. Men are overrepresented in better-paid responsibility levels, and additionally, women are worse paid when promoting to higher levels compared to men. Both effects show that in the hospitality industry the so called “glass ceiling”.