

Patterns of Occupational Segregation by Gender in the Hospitality Industry

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Abstract

This paper investigates the different patterns of occupational gender segregation in the hospitality industry. Matched employer-employee data from a sample of 181 hotels and 121 restaurants in Andalusia were used. The methodology is based on different segregation measures. The results show that occupational segregation is a relevant problem in hotels and restaurants, but is more marked in the former. Occupational segregation increases as the age of the workers and size of the establishment increase, but decreases with level of education. Occupational segregation is less common among workers with training contracts, whereas it is greater among part-time and seasonal workers. Horizontal segregation is more marked than vertical segregation in the hotel industry, but horizontal and vertical segregation is similar in restaurants.

JEL: J16, J71

Keywords

Horizontal segregation, vertical segregation, female-dominated occupation, gender-integrated occupation, hotel, restaurant.

1. Introduction

The characteristics specific to the hospitality sector are indicative of the relevance of occupational segregation. Most jobs in this sector carry a certain stigma due to their association with servility, and are regarded in many cultures, especially in Caribbean countries, as suited to women (Bolles, 1997; Gabriel, 1988). This has led to some occupations within the hospitality industry being dominated by one gender (Greenlaw and Grubb, 1982). Jordan (1997), Chant (1997) and Sinclair (1997) consider that the characteristics specific to the sector are arguments used to perpetuate current female roles and maintain gender occupational segregation. In fact, the hospitality sector traditionally belongs to the group of gender segregated industries (Bagguley, 1991; Hicks, 1990). Finally, mass tourism often generates occupational structures based on low educational levels, which facilitates the incorporation of women with lower educational levels into these kinds of tasks (Gmelch, 2003; McLaren, 1998 and Patullo, 1996).

The classification of jobs in the hospitality sector proposed by Purcell (1996) indicates some causes of occupational segregation in this sector. First, although some jobs are performed by women, job demand is neutral to gender, and these are called gender-contingent jobs. Employers want cheap workers, and women have historically been available for employment at lower average wages than men, partly reflecting their status as a “family component” rather than as “breadwinners”. There are also jobs where sexuality or other attributes related to gender are an explicit or implicit part of their specifications; these are the so-called gender-typified jobs. It is a cliché in the hospitality industry that “the right kind of personality” is a more important employment prerequisite than formal qualifications. Personality tends to be used as a synonym for sexual attractiveness. Finally, there are those jobs where traditional patriarchal practices prescribe the gender suitable for each case, and these are known as patriarchally-prescribed jobs. Because of gender socialization and the household division of labour, caring for the comfort and welfare of others and preparing and serving food calls for the exercise of tacit skills widely assumed to reflect “inherent aptitudes” possessed by most

women. Thus, there are three main elements determining or predisposing employers to recruit women for particular types of work in the hospitality industry: labour price, sex and gender.

Following the job classification of Purcell (1996), Doherty and Manfredi (2001) draw interesting conclusions from a series of interviews with employees and employers from a sample of hotels in Italy and the United Kingdom. The jobs in bars and restaurants were contingently gendered, since employers were seeking inexpensive labour regardless of sex. Cleaning jobs were patriarchally-prescribed jobs, as employers considered that women were better at cleaning than men. Night work was classified as gender-typified, since Italian women were excluded from this type of work for safety and social reasons, especially in small establishments.

Abundant evidence suggests that women's employment in the hospitality sector is segregated both horizontally and vertically. Women are segregated into those areas of employment which require their domestic skills and their "feminine" characteristics, as shown in the works of Enloe (1989), Kinnaird, Kothari and Hall (1994), and Adkins (1992). According to Burrell, Manfredi, Rollin, Prize and Stead (1997), cleaning, and reception in hotels in the UK, France, Spain and Italy are occupational areas where women predominate. The barrier against women working in reception in small hotels is still current, due to the need for security at night or for carrying heavy suitcases, which stereotypically excludes women. On the other hand, bar jobs are dominated by men in Spain, the UK, and France, but are more evenly distributed in Italy. These authors found that there is a high proportion of men in kitchen-related jobs in France and the UK. In Spain, this proportion is more balanced, whereas women dominate in Italy. However, the women working in this area are more likely to be washing up and cleaning rather than cooking. In the Balearic Islands, Ramos-Mir, Rey-Maqueira and Tugores-Ques (2004) report that the maintenance, bar and kitchen departments in hotels are dominated by men, whereas cleaning is dominated by women. Ng and Pine (2003) show that horizontal segregation also exists at the managerial level. Women dominate in the areas of personnel, training, conferences, and banquets, whereas men predominate in the management of

areas such as security, food and beverage, control and finances. This distribution between functional areas suggests horizontal segregation.

Hicks (1990), Church and Frost (2004), and Kattara (2005) show that women have jobs with lower status than those of their male coworkers, indicating the existence of vertical segregation in the hospitality sector. Walsh (1990) and Richter (1995) show that in this sector, women are employed in subordinate positions that are worse paid. According to Burrell et al. (1997), women are in a slight majority in management and supervision jobs in the UK. McKenzie-Gentry (2007) reports that women managers only represent 3% of the total staff in hotels in Belize dedicated to mass tourism, and that this percentage is lower than that found in other types of companies. Burgess (2003) indicates that men are better represented in higher status jobs related to the financial management of hotels. On the other hand, Nebel III, Lee and Vidakovic (1995) also document the vertical segregation of women, reporting that 92.1% of managers in a hotel sample were men. In Spain, Ramos-Mir et al. (2004) present similar evidence of this problem in the hospitality industry in the Balearic Islands. All of this research reveals the glass ceiling that blocks the entry of women into highly paid jobs.

Many empirical studies have focussed on analyzing the causes of segregation in the hospitality sector. Specifically, research has been conducted on the role of attitudes and prejudice (Biswas and Cassell, 1996; Knutson and Schimdgall, 1999; Hicks, 1990), the discriminatory preferences of employers and clients (Purcell, 1996; Burrell et al., 1997; Neumark, 1996), educational levels (Burrell et al., 1997), recruitment processes (Doherty and Manfredi, 2001), patriarchal hierarchies (Bagguley, 1991; Brownell, 1994), the reconciliation of work and home life (Ng and Pine, 2003; Knutson and Schimdgall, 1999; Doherty and Manfredi, 2001; Hicks, 1990), as well as current work regulations (Doherty and Manfredi, 2001).

Despite the importance of the problem, the literature on tourism focuses on descriptive studies that analyse the distribution of men and women in different occupations. Most empirical research has

simply compared the percentage of men and women working in different occupations, or has statistically analyzed the responses and reactions of workers from the hospitality industry to gender issues. The present paper goes further in that it evaluates occupational segregation by gender in the hospitality industry in Andalusia, and measures its intensity. Despite its relevance, previous tourism research has not focussed on this kind of measurement.

The aim of this study was to obtain data on the degree of gender segregation found among hospitality workers according to age group, educational level, size of the establishment and types of contract. We also measure horizontal and vertical segregation and compare this between groups. Several methodological tools are employed: the approach proposed by Hakim (1992) and different indexes for occupational gender segregation. The first tool is used to identify gender-integrated, female-dominated and male-dominated occupations. On the other hand, segregation indexes quantitatively synthesize all the information into a single numerical value, which facilitates comparisons between different groups of workers. These measurements can be used to identify those groups in need of specific policies to address the problem, and to detect the most serious type of segregation in each group.

This paper is organised as follows: Section 2 outlines the methodology used to measure occupational segregation; Section 3 presents the descriptive analysis of the dataset used; Section 4 discusses the empirical results; Section 5 presents the conclusions.

2. Methodology

2.1. Measurement of occupational segregation

The approach adopted in this paper was to employ a variety of measures to capture different patterns of occupational segregation. Essentially, two types of measures of occupational segregation are currently used in the literature (Hakim, 1992). European researchers generally use Hakim's methodology for occupational segregation, whereas, the Duncan and Duncan index of dissimilarity is the measure most often used in North American research. One of the main advantages of the first

approach is that it enables analyzing those occupations with a greater degree of segregation. On the other hand, the Duncan and Duncan index makes it possible to obtain a quantitative measure of the size of the problem. The strengths and weaknesses of the two approaches are widely documented in the literature (Duncan and Duncan, 1955; Hakim, 1979; or Massey and Denton, 1987, among others).

Hakim (1992) proposed an approach that focused on gender-dominated and integrated occupations. Thus, the representation coefficient for each occupation is defined for both genders. The coefficients of female representation in occupation i is obtained by dividing the female share of employment in this occupation (F_i/T_i) by the female share of total employment (F/T), where F_i and T_i are the number of women and the total numbers of workers in occupation i , respectively, and F and T are the number of women and the total number of workers in the sample, that is: $[(F_i/T_i)/(F/T)]$. Similarly, the coefficient of male representation in each occupation is calculated as $[(M_i/T_i)/(M/T)]$, where M_i is the number of men in occupation i and M is the total number of men in the sample. When the coefficient for female representation is greater than the unit, females are over-represented in the given occupation. If the coefficient is lower than the unit, then they are under-represented. Following this methodology, occupations are grouped into gender-integrated, female-dominated and male-dominated occupations. This author considers that a job is integrated when the participation coefficient of women in such an occupation (F_i/T_i) lies within a range $\pm 10\%$ of the ratio of women's share of total employment (F/T). A job is female-dominated when the coefficient is higher than this range, whereas a job is male-dominated when this coefficient is lower than this range.

Hakim's approach cannot capture occupational segregation through a summarized index. Several alternative indexes have been proposed in the literature. This article proposes the use of three indexes that have been widely employed in previous research while indicating their main advantages and drawbacks. These are the dissimilarity index proposed by Duncan and Duncan (1955), the index

introduced by Karmel and Maclachlan (1988), and the Gini index proposed by Jahn, Schmid and Schrag (1947). These measures can verify the robustness of the results obtained.

The indexes proposed in the literature correlate with each other. The dissimilarity index is also called the displacement index, and indicates the percentage of people (men or women) that have to change jobs for both groups to have the same inter-job distribution. It is defined as

$$D = \frac{1}{2} \sum_{i=1}^k \left| \frac{F_i}{F} - \frac{M_i}{M} \right| \quad [1]$$

According to Karmel and Maclachlan (1988) and Watts (1992), the dissimilarity index, which is the one most widely used in the empirical literature, has two main disadvantages. On the one hand, it measures the number of people who have to change their job, expressed as a percentage of the number of people of the same sex, rather than as a percentage of the total number of workers. On the other hand, it shows the changes needed to balance the distribution of men and women by occupations, but these changes have an effect on the total number of workers in each occupation, and therefore, on the total occupational distribution.

In order to avoid such limitations, Karmel and Maclachlan (1988) proposed the following index

$$S = \frac{1}{2} \sum_{i=1}^k \left| \frac{F_i}{T} - \frac{\frac{F}{T} T_i}{T} \right| + \frac{1}{2} \sum_{i=1}^k \left| \frac{M_i}{T} - \frac{\frac{M}{T} T_i}{T} \right| = \frac{FM}{T^2} \sum_{i=1}^k \left| \frac{F_i}{F} - \frac{M_i}{M} \right| = 2 \frac{FM}{T^2} D \quad [2]$$

This index measures the percentage of people (men and women) who have to change their occupation for both groups to have the same distribution throughout occupations, but without changing the total occupational distribution. This is the main advantage of this index. Finally, we use the Gini index, proposed by Jahn et al. (1947). The Gini index is equal to

$$G = \sum_{i=1}^k X_{i-1} Y_i - \sum_{i=1}^k X_i Y_{i-1} \quad [3]$$

These indexes could also be used to quantify the relevance of vertical and horizontal segregation in the hospitality sector.

2.2. *Dataset and collection process*

One of the main advantages of this study derives from the database employed, which contains disaggregated information related to 44 occupations categories from the hospitality sector. This fact enables more precise measurement of the degree of occupational segregation in this sector compared to the results obtained from other official statistical sources which present a lower level of occupational disaggregation. The occupational disaggregation available therefore enables better identification of different types of gender segregation. Moreover, the sample provides employee data from different establishments (matched employer-employee data), and includes information on the characteristics of the workers and the establishment where they work as well as the type of job they perform. This type of information is especially relevant due to the fact that it makes it possible to study the different patterns of occupational segregation according to the different variables on which it depends, as shown in the literature review section. Variables of note include the age of the workers, their educational status, the type of activity, the size of the establishment, and the type of contract.

The database was based on a survey of workers and managers from 181 hotels and 121 restaurants in Andalusia in 2000 in which workers in hotels and restaurants with more than seven workers were interviewed. The questionnaire was based on the Living and Working Conditions Survey developed by the Spanish National Statistics Institute. A total of 3 211 face-to-face interviews were conducted in the course of several visits to each establishment. This project was developed by an interdisciplinary team from the University of Málaga, in collaboration with the Swiss Hotel Management School “Les Roches” in Marbella, different hotels and restaurants in the province of Málaga, and two major Spanish trade unions (Comisiones Obreras and Unión General de Trabajadores).

3. Data Analysis

A total of 3 211 workers were interviewed, of which 62% were men and 38% women. Table 1 shows the descriptive statistics of the variables used in this study for analyzing the patterns of occupational segregation. Using SPSS statistical software, we conducted a mean comparison test between men and women to verify the statistical significance of the mean difference of each variable between both genders (Table 1). Men earn on average 13.7% more than women. Likewise, men are older than women in the sample. Women have a higher educational level than men, but this difference is not statistically significant.

Table 1
Descriptive statistics

Variables	Mean	Men (mean)	Women (mean)	Mean comparison test ^a
Ln wage per hour	1.8851 (0.2707)	1.9341 (0.2811)	1.8060 (0.2325)	13.856**
Age	35.3210 (10.121)	36.3120 (10.389)	33.6811 (9.4301)	7.358**
Educational level (years)	9.3210 (3.9227)	9.2446 (3.6941)	9.4525 (4.2679)	-1.424
Activity				
Hotel	0.7674 (0.4225)	0.7225 (0.4478)	0.8441 (0.3629)	-8.536**
Restaurant	0.2326 (0.4225)	0.2775 (0.4478)	0.1559 (0.3629)	8.536**
Size of the establishment				
Large	0.1755 (0.3801)	0.1732 (0.3785)	0.1794 (0.3839)	-0.439
Medium	0.5595 (0.4965)	0.5587 (0.4967)	0.5610 (0.4965)	-0.124
Small	0.2651 (0.4414)	0.2681 (0.4431)	0.2596 (0.4386)	0.520
Type of contract				
Training	0.0245 (0.1544)	0.0181 (0.1332)	0.0350 (0.1839)	-2.810**
Short-term	0.2821 (0.4500)	0.2442 (0.4297)	0.3436 (0.4751)	-5.979**
Permanent	0.5040 (0.5000)	0.5577 (0.4967)	0.4161 (0.4931)	7.891**
Part-time	0.0413 (0.1986)	0.0376 (0.1903)	0.0472 (0.2122)	-1.299
Seasonal	0.1415 (0.3489)	0.1349 (0.3417)	0.1523 (0.3594)	-1.358

Standard deviations are given in brackets. ^a T- statistic assuming independent samples and unequal variances. (*) Level of significance 5%. (**) Level of significance 1%.

The analysis of the data suggests that women are segregated into certain activities, establishments, and contract categories. Women are overrepresented in hotels, whereas there are more men in restaurants (84.4% of women work in hotels, whereas 27.7% of men work in restaurants). Furthermore, it is important to point out that the differences observed in the size of the establishment where both genders worked are not significant. Female employees in this sector are more likely to be given training and short-term contracts, whereas men are more likely to have permanent contracts than their female counterparts.

4. Empirical results

In this section we present the results obtained for the hospitality sector in Andalusia using Hakim's approach and the three indexes described in the methodology section. Similarly, these indexes have been used to quantify differences in occupational segregation by age, educational level, type of activity, size of the establishment and type of contract. Finally, measures of horizontal and vertical segregation are provided to compare their quantitative relevance. The use of the three indexes enables us to obtain more robust results and highlights the relevance of occupational segregation in this sector.

4.1. Hakim's methodology

Table 2 presents an initial approach to occupational segregation using the participation and representation coefficients proposed by Hakim. In this table, column [A] shows the participation coefficient for women in each occupation. According to this ratio, women predominate in most jobs related to cleaning, customer service, management assistance and in the jobs with the lowest levels of responsibility in reception and kitchen. It should be pointed out that 100% of the room cleaning staff managers are women, and that almost 100% of chambermaids and cleaners are also women. On the other hand, more men are found in kitchen, restaurant-bar and maintenance occupations as well in posts with greater responsibility. The percentage of men is 100% for head maintenance manager

and is nearly 100% for jobs such as maitre, barman, main and second chef, and maintenance officer, among others.

Columns [B] and [C] in Table 2 show the representation coefficients of men and women, respectively, for each occupation. Occupations are grouped into female-dominated, gender-integrated, and male-dominated occupations. A job is integrated when the participation coefficient of women in such an occupation lies within a range of $\pm 10\%$ of the ratio of women's participation in total employment; in our case this is 38.1%. Thus, integrated occupations will be those where women have a participation ratio ranging from 28.1% to 48.1%. Therefore, these occupations have a female representation coefficient ranging from 0.737 to 1.262. On the other hand, if the coefficient is higher than 1.262, the occupation is dominated by females, whereas when this is lower than 0.737 it is dominated by men.

Table 2
Dominated and integrated occupations by gender

Occupations ^a	[A] (F _i /T _i)	[B] [(M _i /T _i)/(M/T)]	[C] [(F _i /T _i)/(F/T)]
Female occupations			
Room cleaning staff manager	1.000	0.000	2.625
Chambermaid	0.997	0.005	2.616
Cleaner	0.988	0.020	2.592
Secretary	0.963	0.060	2.528
Telephonist	0.909	0.147	2.387
Laundry worker	0.886	0.185	2.325
Public relations officer	0.800	0.323	2.100
Entertainment staff	0.750	0.404	1.969
Business agent	0.750	0.404	1.969
Entertainment manager	0.667	0.538	1.750
Clerk officer	0.605	0.638	1.588
Assistant receptionist	0.576	0.685	1.512
Dishwasher	0.512	0.788	1.345
Coefficient of female representation (>1.262)			
Integrated occupations			
Assistant cook	0.479	0.842	1.257
Accountant	0.432	0.918	1.134
Receptionist	0.430	0.921	1.128
Booking manager	0.412	0.950	1.081
Staff manager	0.393	0.981	1.031
Reception manager	0.357	1.038	0.938

Assistant manager	0.316	1.105	0.829
Assistant waiter	0.315	1.107	0.826
Sales manager	0.286	1.154	0.750
<u>Coefficient of female representation (0.737- 1.262)</u>			
Male occupations			
Reception manager assistant	0.280	1.163	0.735
Head of the cleaning service	0.267	1.185	0.700
Cook	0.215	1.269	0.563
Waiter	0.183	1.320	0.481
Office manager	0.176	1.330	0.463
General manager	0.173	1.336	0.454
Bar- restaurant assistant manager	0.167	1.346	0.438
Manager	0.133	1.400	0.350
Concierge	0.083	1.481	0.219
Area manager	0.083	1.481	0.219
Maintenance labourer	0.077	1.491	0.202
Store manager	0.070	1.503	0.183
Bar- restaurant manager	0.062	1.516	0.162
Maintenance officer	0.055	1.527	0.144
Confectionary manager	0.050	1.535	0.131
Main chef	0.047	1.540	0.122
Second chef	0.036	1.558	0.094
Barman	0.029	1.568	0.077
Bellboys	0.029	1.569	0.075
Food and beverage manager	0.027	1.572	0.071
Maitre d´	0.014	1.592	0.038
Head maintenance manager	0.000	1.615	0.000
<u>Coefficient of female representation (<0.737)</u>			
Total	0.38	1.000	1.000

^a Ranked according to higher coefficient of female representation.

Occupations within the area of cleaning, administrative jobs with low levels of responsibility—such as secretary, telephonist or clerk-officer—and some related to direct contact with clients—such as public relations officer, entertainment staff, entertainment manager, business agent and assistant receptionist—are dominated by women. Men predominate in the area of maintenance. The same is found in relation to jobs with greater responsibility in the areas of administration, kitchen, and catering. Jobs where both genders have a similar distribution are in the areas of reception and booking, and low-responsibility jobs in kitchen and catering. It is worth noting that 26.23% of workers perform their tasks in jobs with a predominance of women, 21.11% in integrated jobs, and

the remaining 51.66% in jobs where men predominate. These figures show that occupational segregation in the hospitality sector of Andalusia is high.

4.2. *Indexes of occupational segregation*

Table 3 includes the indexes for occupational segregation obtained for the whole sample. The three indexes show that this phenomenon is quantitatively high in the establishments under analysis. For example, the Karmel and Maclachlan index indicates that 25.69% of the employees would have to change their occupation for segregation to disappear, without changing the total occupational distribution of the sample.

Table 3
Occupational segregation indexes by worker characteristics (%)

Group	Dissimilarity	Gini	Karmel & Maclachlan
Total	54.48	72.43	25.69
Age			
< 30 years old	43.12	59.84	21.31
30 to 44 years old	59.74	78.72	27.85
> 44 years old	77.07	90.85	31.46
Educational level			
Illiterate	76.68	92.14	37.85
Compulsory education	69.12	84.04	31.71
Vocational education I	60.12	75.97	25.22
Vocational education II	55.89	74.98	24.13
Upper secondary school	44.40	62.99	20.62
Lower university degree	33.66	50.57	16.66
Higher university degree	43.86	62.30	20.73

The indexes included in Table 3 also confirm the relationship between the worker's age and segregation. If workers are split into the following age groups—young people (16 to 29 years), middle age (30 to 44 years) and older (over 44 years)—then occupational segregation increases with age. If the individuals from the older cohorts came into the labour market with a lower educational level, the pattern of occupational segregation observed might include the effect of human capital. Finally, Table 3 shows the indexes for occupational segregation by educational level. Segregation is lower the greater the educational level. However, employees with a higher university degree suffer

greater segregation than those with lower university degrees, which might suggest that promotion among women is limited by the so-called glass ceiling.

According to all the indexes in Table 4, occupational segregation is quantitatively significant in both types of hospitality establishments, but is greater in hotels than in restaurants. Table 4 also presents the indexes of segregation according to the size of the establishment and the type of contract. Employees were then classified according to the size of the establishment where they work: thus, those with less than 25 workers were classified as small; 25-100 workers, medium; and those with more than 100 people, large. The indexes included in Table 4 shows that occupational segregation is lower in small establishments than in medium and large ones, where it is very similar. In small establishments, 58% of the employees in the sample were concentrated in five generic occupations: waiter, cook, receptionist, cleaner and assistant cook. However, in medium establishments the percentage was 43.3% and 33.8% in large establishments. These percentages show that if an establishment is smaller this can limit the opportunity for its workers to specialize, which would diminish potential segregation.

Table 4
Occupational segregation indexes by establishment and job characteristics (%)

Group	Dissimilarity	Gini	Karmel & Maclachlan
Activity			
Hotels	56.37	76.75	27.43
Restaurants	37.68	51.37	14.38
Size of the establishment			
Large	57.49	78.59	27.17
Medium	60.11	79.10	28.19
Small	44.55	60.77	20.70
Type of contract			
Training	48.51	64.08	24.07
Short-term	54.03	70.85	26.88
Permanent	56.82	75.39	24.52
Part-time	60.09	80.05	29.56
Seasonal	61.78	80.39	29.89

Labour precariousness can hinder worker access to some types of jobs. In order to investigate this aspect, the individuals were classified according to the type of contract they had. The database

available allows us to distinguish between training contracts, short-term and permanent contracts, and part-time and seasonal contracts. As shown in Table 4, workers with a training contract show less occupational segregation than the rest. However, gender segregation is somewhat greater among workers with part-time and seasonal contracts. The indexes for the remaining types of contracts show intermediate levels of segregation.

4.3. *Horizontal and vertical segregation*

This section provides an analysis of horizontal and vertical segregation in the Andalusian hospitality sector. Horizontal segregation is defined as the uneven distribution of men and women in different functional areas. Vertical segregation is defined as the uneven distribution of each gender among the different levels of responsibility. For this reason, jobs have to be grouped into functional areas and levels of responsibility. Jobs are classified following the Nationwide Labour Agreement for the Hospitality Sector (SGDLM, 1996) and the Provincial Collective Agreement for the Hospitality Sector in Spain (RMETD, 2006). The Regional Agreement allows us to establish five levels of responsibility, but we have added level 0 to denote managerial jobs. We consider six functional areas following the National Agreement. This job classification allows us to identify horizontal and vertical segregation separately.

Table 5 and 6 show a first approach to analyzing the importance of horizontal and vertical segregation in this sector. Regarding horizontal segregation, the percentage of individuals of the same gender who work in each area within each responsibility level is calculated. Once these calculations are performed, a weighted mean of these percentages associated with each level are obtained for each area. The weightings used are the number of individuals of the same gender employed at each level within the reference area. For example, in the case of women, the figure of 39.28% that appears in Table 5 for the reception area is calculated in the following way. From the total number of women working in responsibility level 0, we obtain the percentage working in reception. Similarly, from all the women working in responsibility level 1, we obtain the percentage

working in the reception area. These calculations are repeated for the six responsibility levels. Once the percentages are obtained for all the levels, a weighted mean is calculated and the resulting figure is the 39.28% shown in Table 5. Therefore, the average percentage of women working in reception is 39.28%. This procedure is performed for all the functional areas and for both genders.

In the case of vertical segregation, the percentage of individuals of the same gender who work at each level of responsibility within each functional area is calculated. After these have been calculated, a weighted mean of the percentages associated with each area is obtained for each level. The weightings used are the number of individuals of the same gender employed in each area within the reference level. Therefore, the procedure is similar to the one used in horizontal segregation. For example, the value in the Table 6 cell corresponding to women and level 0 should be interpreted as follows: the average percentage of women with responsibility level 0 is 10.25%.

Table 5
Horizontal segregation (%)

Functional area	Men	Women
Reception	33.45	39.28
Administration	33.04	28.62
Kitchen	29.19	27.45
Catering	49.46	16.60
Cleaning	2.56	46.04
Maintenance	11.12	0.85

Table 6
Vertical segregation (%)

Responsibility level	Men	Women
Level 0	28.23	10.25
Level 1	14.72	12.78
Level 2	11.08	7.29
Level 3	30.28	35.50
Level 4	53.66	55.50
Level 5	20.87	37.53

Table 5 shows the functional areas where women predominate. These are strongly segregated into jobs related to cleaning and, to a lesser extent, reception. Maintenance and catering areas are

dominated by men and, to a lesser extent, administration. There are no important differences regarding the weight of each gender for the kitchen area. Table 6 shows the results for vertical segregation. It is noteworthy that women predominate in jobs with a lower level of responsibility, in relative terms, whereas men predominate in occupations of maximum and intermediate levels of responsibility.

Based on these mean percentages, we obtain the indexes of horizontal and vertical segregation, following the methodology described in Section 4. Despite the relative importance of both of them, vertical segregation contributes more to wage differences between men and women than horizontal segregation (Campos-Soria, Ortega and Roper-García, 2009). Table 7 shows the indexes for the horizontal and vertical segregation in the sample as a whole, as well as for the educational level of the worker, the business activity, and the size of the establishment. The objective is to identify the dominant type of segregation in each group. The index values included in Table 7 for the total of the sample confirm that horizontal segregation is greater.

Table 7
Horizontal and vertical segregation indexes by worker and establishment characteristics (%)

Group	Dissimilarity		Gini		Karmel & Maclachlan	
	HS ^a	VS ^b	HS ^a	VS ^b	HS ^a	VS ^b
Total	31.04	14.93	46.76	21.84	14.62	7.03
Educational level						
Up to compulsory education	65.11	21.12	74.72	27.37	30.49	9.89
Professional training:	39.92	17.32	52.52	22.16	16.84	7.31
Upper secondary school	27.82	18.97	33.59	23.73	12.98	8.85
University degree	18.46	12.30	25.58	15.50	9.05	6.03
Activity						
Hotels	51.02	15.69	66.83	17.40	24.90	7.66
Restaurants	29.34	28.82	37.57	34.46	11.30	11.10
Size of the establishment						
Large	53.97	11.73	70.55	13.96	25.56	5.55
Medium	50.10	16.50	65.71	19.91	23.58	7.77
Small	35.39	18.02	48.48	25.44	16.57	8.44

^aHorizontal segregation. ^bVertical segregation.

In relation to the educational level, horizontal segregation is in all cases greater than vertical segregation, but the difference between the two types is lower the higher the worker's level of

education (Table 7). This convergence in gender segregation is due, above all, to a greater reduction in horizontal segregation as the human capital of workers increases. Moreover, Table 7 shows that horizontal segregation is greater than vertical segregation in hotels. Nevertheless, both show similar quantitative relevance regarding restaurants. Horizontal segregation is greater in hotels than in restaurants, whereas vertical segregation is a more serious problem in restaurants than in hotels. Finally, Table 7 illustrates that horizontal segregation is again greater than vertical segregation in all types of establishments, but the difference between both becomes higher as the size increases. The index values indicate that horizontal segregation increases and vertical segregation decreases, when the size of the establishment increases. Staff departments in large firms have greater knowledge regarding the laws against discrimination than smaller ones, which allows them to pay more attention to the barriers women face in relation to accessing jobs with greater responsibility (Burrell et al., 1997). On the other hand, the promotion practices of large firms are much more formalized than those in small businesses (Burrell et al., 1997). Such practices can explain the segregation patterns observed in both types of establishments.

5. Conclusions

This article provides different measures of gender segregation in the hospitality sector in southern Spain. On the one hand, Hakim's methodology was used to classify occupations according to female-dominated, male-dominated and integrated occupations. On the other hand, three segregation indexes were used to illustrate the differences in the occupational distribution of men and women and compare the relevance of the problem between different groups. All indexes lead to similar conclusions, which support the robustness of the results presented.

The objective of this work was to deepen what is known about occupational gender segregation in two directions. First, the relative importance of the problem was compared in different groups in order to identify what should be the main focus of public policies. In more specific terms, the differences in occupational segregation are measured by the type of activity, age, educational level,

size of the establishment and type of contract. Secondly, two different types of occupational segregation were assessed: horizontal and vertical segregation. The first refers to the uneven distribution of men and women in different functional areas, whereas the second refers to the concentration of each gender at different levels of responsibility. This distinction is of interest, because each segregation pattern has different causes and consequences. Furthermore, the pattern of horizontal and vertical segregation by educational level, industry, and the size of the establishment can be identified.

Cleaning jobs, customer service and jobs with less responsibility in the area of administration are dominated by women, whereas maintenance, jobs with a high level of responsibility in the areas of kitchen, restoration, and administration are dominated by men. However, although intermediate posts in all functional areas are integrated regarding gender, they are characterised by being transition occupations toward greater responsibility posts for men, whereas they represent the upper limit regarding women's chances of promotion. These results are similar to those found in other countries with similar characteristics (Burrell et al., 1997), which means that cultural and social customs are an important explanatory factor for the existing segregation patterns.

The results obtained show that occupational segregation is an important problem in hotels and restaurants in Andalusia, although it is greater in the former. Specifically, 27.4% of workers would have to change their occupation to balance the occupational distribution of the genders in hotels, whereas this figure would only be 14.3% in restaurants. These estimations suggest that the administrative authorities must apply more resources to solve this problem in both industries, but above all, in the hotel industry. The relevance of the problem increases with the worker's age, but is reduced by educational level. Occupational segregation could decrease if workers improve their human capital and the issue of women's access to training within the establishments should be addressed.

Differences in occupational segregation were also obtained for the type of establishment and job. Thus, gender inequalities in occupational distribution are less in small establishments and training contracts. Of note is the high level of gender segregation observed for workers with part-time and seasonal contracts. The results presented show the need to evaluate how legislation against gender discrimination is enforced regarding recruitment and post assignment practices for these types of contract. Doherty and Manfredi (2001) suggest that a greater number of part-time contracts would permit women to reconcile work and family life. An improved level of reconciliation would allow women to have access to better jobs, and thus reduce occupational segregation. Nevertheless, comparing occupational segregation between countries that have different participation levels of women in part-time employment cannot isolate the effect of part-time contracts on occupational segregation.

The last set of results allows us to disaggregate gender segregation. For the sample as a whole, horizontal segregation is greater than vertical segregation. Both types of segregation decrease as educational level increases, but horizontal segregation decreases more than vertical segregation. Thus, the increased access of women to formal education and their greater presence in specific educational areas traditionally dominated by men may be a way to improve these issues. Although horizontal segregation is greater in hotels than in restaurants, the opposite applies to vertical segregation. Finally, it should be pointed out that vertical segregation decreases with the size of the establishment, whereas horizontal segregation increases. Thus, special attention should be paid to the concentration of women in specific functional areas in large hospitality establishments, whereas the promotion practices followed in smaller establishments should be monitored.

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