Industry-specific upskilling of seasonal tourism workers: Does occupational gender inequality matter?

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Abstract
Due to technological change and growing digitalization of the workplaces, the post-pandemic economic recovery offers opportunities for workers to upgrade their industry-specific skills in different sectors, including tourism, where an increasing shortage in the seasonal tier of the labor market is emerging. Various barriers have been identified as key factors preventing both tourism firms from implementing skill development interventions, and workers from co-investing in training. An under-investigated possible barrier is women's occupational segregation, both horizontal and vertical. This paper looks at the former type of segregation, the most frequent in the tourism industry, by showing that this condition penalizes women's willingness to invest in specific training. Data come from a dedicated survey administered to a sample of seasonal employees who worked in the Rimini Province (Italy) during the summer of 2019 and applies a twofold regression analysis followed by an Oaxaca-Blinder decomposition. Our findings contribute to the debate on gender equality in the tourism industry and on the gendered impact of COVID-19 on workers' careers.

Introduction

Tourism and hospitality industries, together with performing arts, entertainment, and events, have suffered the worst impact of the COVID-19 pandemic with long-lasting shutdowns and massive job losses (e.g., Han et al., 2022). Moreover, because of lockdown restrictions, businesses of these

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sectors adjusted the way in which they provide products and services, along with substantial changes to employees' roles and duties (O'Dwyer, 2021).

With the end of COVID-19 restrictions, the post-pandemic economic recovery will be highly challenging for the tourism industry, which is struggling to fill a growing number of vacancies, especially in seasonal destinations (O'Dwyer, 2021) while facing the need of upskilling the workforce, given that the nature of new technologies, such as artificial intelligence, is likely to be skill-biased (Felten et al., 2019). New jobs are appearing, requiring new skills with the implication that education and training systems have to be adapted (Bianchi et al., 2021). Thus, a demand for new skills will clearly emerge (White and Rittie, 2022) further to the combined effect of post-COVID recovery and increasing digitalization of the industry. This demand, in turn, requires adequate training investments; employers are expected to deeply review their training interventions, especially large firms. It has been reported, indeed, that the industries mostly hit by the pandemic, such as accommodation and food services, had the highest proportions of employers with new training requirements (NCVER, 2021) to keep pace with the changed composition of the workforce and the new skill demand (Thomas and Long, 2001). In the tourism industry, where seasonal activities are relevant, however, this new trend faces some additional problems related to both managers' reluctance to upgrade workers' skills because of frequent turnover (Poulston, 2008), and poor employees' expectations of career development that may inhibit their incentives to acquire industry-related competences (Ainsworth and Purss, 2009). In presence of seasonal employment, therefore, firm-provided training is not sufficient: workers should train themselves outside the workplace as they are experiencing a fragmented career characterized by frequent changes of employers (Pham et al., 2022). To support this process, understanding the determinants of workers' willingness to autonomously acquire industry-related skills through additional training appears crucial. Workers' willingness to invest in specific training (WTTS), in fact, could be driven by different factors. The extant literature has identified many of these factors, notably educational attainment and non-specific skills endowment (e.g., Brunello, 2001). A still unexplored one, on the contrary, is gender segregation, such as the diffusion of women working in female-dominated occupations. In this vein, inasmuch mass tourism sector is considered to belong to the group of gender-segregated industries (Bagguley, 1991; Hicks, 1990; Campos-Soria et al., 2011), in terms of unequal distribution of men and women among different occupational areas, WTTS determinants should be also analyzed—for a better understanding—through the lens of gender equality.

Further to this preamble, this paper aims to contribute to the comprehension of the determinants that may influence workers' WTTS, and their inclination to stay in the sector once reskilled, by focusing on the potential role of gender occupational segregation. The underlying research question are therefore the following ones: how gender segregation may affect women's propensity to further invest in training which in turn can be positively related to the perception of seasonal employment in the tourism industry as a proper career opportunity?

This question is extremely timely in the hospitality industry in which the traditional problem of women willing to leave the sector (Karatepe and Uludag, 2008) combines with the increasing workforce shortages occurring during the post-COVID recovery. Moreover, employees are calling for innovative work-life balance solutions, such as working-from-home, and consequently for a re-assessment of the existing industry-level collective agreements formalizing new paradigms of workplace organization (e.g., Barrero et al., 2021).

To address this issue, we use primary data from a dedicated survey administered during the summer of 2019 to a sample of 537 seasonal employees in Rimini Province (Italy). This case study is particularly interesting for our research because of the relevance of the tourism sector in that economy and for the presence of seasonal workers.

The paper proceeds as follows. The next section illustrates the background and the literature review. The third Section describes the empirical setting and the dataset, while the fourth one introduces the method. The fifth Section shows the main findings. The sixth Section provides the discussion, while the seventh Section draws the conclusions.

Theoretical background and literature review

Professional enhancement and workers' qualification are particularly relevant in the service industries where the contribution of human capital is likely to directly influence customer satisfaction via service quality (Lundberg et al., 2009). This feature fully applies to the tourism industry, where firms' success depends on their ability to overcome skill deficits, and to promote workforce improvement (Dwyer et al., 2009). Seasonality is intertwined with these features, penalizing several aspects of employment conditions, such as training and career progression (Haven-Tang and Jones, 2008), despite the relatively high number of jobs created each year (Jameson, 2000). Nowadays, this issue is even more crucial for the post-pandemic economic recovery (Türkcan, 2022; White and Rittie, 2022).

In this scenario, Sanchez-Ollero et al. (2014) synthesize that previous education affects the cost of workers' training to enter directly into the production process and refer to three different economic theoretical models to frame all the different contributions on these topics: the "Human Capital Theory (HCT)" (Becker, 1964), the "Job Screening Model (JSM)" (Arrow, 1973; Spence, 1973), and the "Job Competition Model (JCM)" (Thurow, 1975). HCT posits that "educational level of workers provides an incomplete measure of the human capital these workers offer to the market" and assumes the existence of complementary relationships between the constituents of human capital, such as training and education (Acemoglu and Pischke, 1999). JSM shows how education can be "used as a sign to identify the more able and productive workers, as it considers the existence of market incentives for workers to increase their level of education independently of the required educational level of the job they aspire to obtain." JCM emphasizes how new workers "come into the labor market with a variety of background skills and characteristics" and compete for jobs on the basis of their trainability as measured by the expected cost born by the employer to assign workers to the specific and well-defined job positions, they apply for (Thurow, 1975). Even in the "Job Search Theory (JST)" (McCall, 1970; Mortensen, 1970; Pissarides, 1984), the labor market is assumed to be segmented along skill lines, which in turn are associated with different levels of education (Mortensen and Pissarides, 1999). The peculiarity of JST, at microeconomic level, is that worker's educational attainment directly affects her likelihood to receive a job offer, whereas it influences her willingness to accept an offer only indirectly, via the reservation wage (Faggian, 2021).

Consistently with these models, several studies also emphasize how low-educated workers, often employed in seasonal jobs, participate less than high-educated ones in further training (e.g., Brunello, 2001). In particular, under the HCT, the expected wage premium enjoyed by low-educated workers could be insufficient to induce them to participate in training programs outside the employing firm. On the other hand, according to JCM a lower level of education would be attached to higher training costs, inhibiting the worker to successfully enter the queue for highly rewarded job positions. Indeed, the lack of basic skills could not be counterbalanced by the participation in industry-related training programs. Some form of education before training would thus be required to achieve acceptable expected wage levels or to be satisfactorily placed in the workers' queue. Such essential education could be also vocational education, whose attainment would induce a higher participation in industry-related training as it provides workers with technical skills that could accompany them through a less uncertain career path (Torun and Tumen, 2019).

Another theoretical implication on workers' WTTS deals with the condition of women working in female-dominated occupations (Dolado et al., 2003) or subject to vertical segregation (Campos-Soria et al., 2009). Such conditions, in fact, increase the gender pay gap, which has been decomposed by Card et al. (2016) into a sorting (between-firm) effect and bargaining power (within-firm) channels effect via an Oaxaca-style decomposition. According to the HCT and the JCM, the evidence that both effects are in place indicates that part of the gender wage gap stems from discrimination and not from human capital (reflecting productivity or lower training costs). As far as JSM is concerned, Kuhn and Shen (2013) developed a specific model based on gender preferences in job recruiting, positing that the female share of job applicants will depend on the extent to which seekers believe that the hiring firm has a gender preference. If the employer expresses a preference for one gender, implicitly or explicitly, people of the other gender will not apply to fill the job vacancy no matter whether an actual productivity gap between men and women exist or not. Therefore, if a widespread gender preference favors the recruitment of men in better-paid jobs, one should the expected not only a gender-based occupational segregation, both vertical and horizontal, but also a lower propensity of women to apply for those jobs and, in turn to acquire further education and training in order to signal their productivity level to the employer. Finally, the JST allows for the existence of gender-segregated labor markets due to differences between men and women in terms of bargaining power. Namely, if women's bargaining power is less than men's one, female labor force will be smaller than that of men (Atal. et al., 2022). In turn, this would imply a lower women's WTTS due to their lower propensity to offer work after the training period. Unsurprisingly, there is strong evidence of gender segregation across different countries. Mumford and Smith (2009) address female occupational segregation in the UK and show how this segregation contributes to the gender earnings gap among part-time employees but not among full-time workers. Hellerstein et al. (2008) investigate the issue of workplace segregation in the US, providing evidence of a persistent gender occupational segregation in the service industry. Gerard et al. (2018) effectively use gender as a classifying characteristic to explore racial pay differences in firm's employment and wage-setting policies in Brazil. Santos and Varejao (2007) prove the existence of gender wage discrimination in Portugal using the Blinder-Oaxaca decomposition (Oaxaca, 1973). Using the same technique, Akhmedjonov (2012) show that the gender wage gap in Turkey is basically explained by discrimination against women.

This issue is particularly relevant in the tourism industry (Guimaraes and Silva, 2016), in which this type of occupational segregation has been specifically observed (Campos-Soria et al., 2011). Burrell et al. (1997), for instance, show how cleaning and reception in hotels in the UK, France, Spain, and Italy are jobs where women predominate. Other analyses focus on the association between occupational segregation and poor career outcomes of women (Reskin and Bielby, 2005), with the former being regarded a major structural barrier to women's occupational mobility in the hospitality industry (Hong Li et al., 1998). The lack of opportunities for career progression, in turn, partly arises from the lower incentives to invest in training (Burrell et al., 1997). To move out from female-dominated occupations, in fact, a wide set of skills would, in fact, be needed, including horizontal ones such as foreign languages, computer skills, and management/administration (Hong-Li et al., 1998, 2000). A combination of education, horizontal skills, and specific training for a new occupation ("retraining") could thus be a channel through which women may exit from female-dominated occupations. Other barriers of carrier progression in the tourism sector may come from cultural, economic, and political influences Baum (2013) and by the intersectionality associated with these barriers (Hutchings et al., 2020).

Another critical driver of WTTS is age. Booyens (2020) emphasizes that young workers typically have low-skills and do not continue their education or training because of the perception of few

career opportunities inside the industry. Moreover, cost, time, and business location (Beeton and Graetz, 2001; Dewhurst et al., 2007) often characterize real or perceived barriers to the development of accurate training programs able to balance the need for external sources of knowledge, such as the achievement of appropriate levels of education and the participation in training courses and/or the on-the-job training (Park et al., 2016). As a result, different obstacles have been identified as key factors preventing both tourism firms from implementing skill development interventions (Lyons et al., 2016) and workers from co-investing in training. Accordingly, the role of both employers and employees in respectively promoting or obtaining new qualifications should be investigated. Other research (e.g., Fouarge et al., 2013) shows that WTTS is driven by economic preferences and personal traits of the workers. Additional factors deal with the objective characteristics of the workplace, with the worker's interaction with colleagues, supervisors, and clients, and with her enjoyment to live in a tourism destination and engage in a wide variety of leisure activities (Guidetti et al., 2021). Finally, the attributes of job holders may also matter in shaping their willingness to be trained in the future and continue working in the tourism sector (Knox et al., 2015). Indeed, although some seasonal jobs present bad conditions for employers from an objective point of view, there can be substantial differences in how they are experienced by employees (Kalleberg, 2011).

The call for additional training investments is even stronger in the presence of a long-lasting recession, such as the one following the COVID-19 pandemic. Economic pressure may heighten the need for short-term, quick-fix, solutions while the benefits of training usually arise in the medium-long run (Felstead et al., 2012). This forces the firm to finance its training expenditures only through internal profits, which are usually higher during recovery periods rather than during downturns. In this respect, as already stated, recent studies have shown that COVID-19 restrictions forced employers to swiftly transition training to online forms of delivery. O'Dwyer (2021) stresses that after the pandemic the delivery of "online" training is recognized as a time- and cost-effective way for delivering it. However, there are concerns over whether it could be as effective as face-to-face delivery. Hume and Griffin (2021) found that most of the employers providing face-to-face training prior to COVID-19 transferred at least some of their training and assessment to the online environment in response to the pandemic. Similar to O'Dwyer (2021), Hume and Griffin identified the main barriers to transitioning to online training and assessment. This literature also highlights that, although gender segregation in the tourism industry is not a recent phenomenon, the emergence of COVID-19 made it more remarkable, especially in the perspective of gender equality. A comprehensive review on gender segregation in the tourism industry before and after the pandemic, however, showed that reliable data and thorough analysis about gender segregation in the post-COVID tourism industry are not yet sufficient to achieve conclusive findings (Türkcan, 2022). Collins et al. (2021), for instance, analyzed gender gap in working hours emphasizing how the pandemic has reduced women's working hours, but they did not distinguish between different sectors.

Lastly, it is worth noticing that the new context also offers opportunities for women. If female workers are trained in line with new market needs, they can replace part of male labor force that has been dismissed during the pandemic. Enhancing women's acquisition of technology-related skills through training seems thus a right policy option for the post-COVID era (Türkcan, 2022): it could contribute to overcome major gender-related barriers and to achieve gender equality in the tourism industry while promoting all sources of women's talent.

Empirical setting and dataset

The empirical analysis focuses on the case study of the Rimini Province (Italy), one of the most important Italian seasonal destinations. According to ISTAT (2020a), in the last year before the

pandemic, Rimini area reached a number of more than seven million of overnight stays obtaining the fifth place in the ranking of the major destinations in Italy. Since Rimini is the smallest municipalities within the 50 preeminent Italian destinations, its ranking in terms of the percentage of overnight stays compared to the number of inhabitants of the area is even higher, reaching the second place in Italy. Rimini also report a remarkable density and concentration of hotel and non-hotel accommodations. With a total of 2227 hotels and other types of accommodation, the tourism industry is the leading sector of the local economy representing a source of income for residents, a source of attraction for many immigrants, and a driver of the relatively high employment rate among females (59.0% compared to a national average of 50.2% in 2019) (ISTAT, 2020b). Moreover, differently from the other main tourism destinations, a high seasonality characterizes the tourism demand, given that more than 90% of the overnight stays concentrate during the period "April–September" with a peak in the summer season (July–August). In 2019 the Statistics Office of the Emilia-Romagna Region observed a rate of 92.4% of presences in that period and a rate of 54.3% in the summer peak (Statistics Office of the Emilia-Romagna Region, 2020). Unsurprisingly, tourism is the first employing sector in the area, accounting for 22.3% (34,128 FTEs) of the workforce employed in private firms operating in the province in 2019 (Chamber of Commerce of Forlì-Rimini-Cesena, 2019). In parallel, the seasonality of the demand favors a remarkable diffusion of temporary employment: in 2019 76.5% of all new employment contracts in the area (94,499) were temporary with the majority being in the tourism industry (Emilia-Romagna Region, 2019).

The noteworthy number of workers hired every year by firms operating in the industry, mainly to cover seasonal positions, couples with a substantial difficulty expressed by the firms in finding workers matching the competences required by the job vacancies. A recent survey on labor shortages in the province reported that 17% of the job applicants do not possess the required characteristics to accomplish the constituent task of the vacancy. Such share is the highest one compared to the other macro-sectors considered by the survey. Moreover, within this share of qualitative shortage, it is worthwhile noticing that a substantial component (27.3%) referred to the lack of female workers, whereas the unmatched demand for trained workers was much lower (4%) among men.

Data come from a survey administered in the summer of 2019 to a sample of 537 seasonal workers employed in the tourism industry in the province. The interviewed sample was not randomly selected, but its main characteristics are not dissimilar from the ones of the population of reference. Women are 50.1% of the sample and 51.7% of the population. Sample average age is slightly lower (22) than the one of the population (29), but the sample prevalence of young workers is basically in line with the age distribution of the population. Secondary school degree is the main educational attainment of the sample (80%), which is the one that tourism firms operating in the area usually demand (Unioncamere, 2021).

The survey is divided into five sections. The first section deals with the features of the employer in terms of size and sub-sector. The second section described the main job characteristics and delivers information on the previous career of the interviewee. The third section focuses on workers' endowment of some horizontal skills, training needs, willingness to participate in further industry-specific training programs, and to continue working as a seasonal employee in the future. The fourth section looks at the motivations underlying the worker's choice to seek a seasonal job, describes the amount of workload suffered by the worker, and contains information on the relationship with the employer, such as the degree of worker's satisfaction, her organizational commitment, and customer orientation. All the items of this section are assessed through a 7-point Likert scale and report a reliability coefficient (Cronbach's alpha) that ranges between 0.804 and 0.917 which is usually regarded as acceptable. From this section, we derived synthetic variables extracted from selected

groups of the above-mentioned Likert-scale items (see Table A.1 in the on-line Appendix) after having run a polychoric principal component analysis (PPCAs)[1] and excluded those components having an eigenvalue lower than 1. The fifth section provides the personal characteristics of the interviewee (gender, age, nationality, marital status) as well as her educational attainment. From the information about the occupational status, we also identified two female-dominated occupations following the methodology proposed by Hakim (1992): waiters and shop assistants.[2]

Table 1 reports the descriptive statistics about the main variables of interest drawn from the 349 questionnaires entirely completed by the interviewees. Most workers are Italian (89.8%), but the share of foreign workers (10.2%) is noteworthy and in line with the share of foreign population living in the area (10.6%). Respondents have previously worked with seasonal contracts at least for 1 year, with an average experience of 1.2 seasons before the ongoing job. High school diploma is the most frequent educational attainment, while a high percentage (51%) of workers with such diploma are also studying at the university, seeking a seasonal job during the summer and then returning to classes during winter. Only a small share of the sample (9%) took a tourism-related vocational diploma at the high school. This indicates that most of the interviewees started their job with a low level of industry-specific skills compared to their endowment of general skills, as shown not only by their educational attainment but also by the high percentage of workers with computer skills (92%) and knowing at least one foreign language (93.5%). The most common sub-sector is the hotel industry, which employs 54% of the sample. As far as jobs are concerned, 34% of the workers are employed in female-dominated occupations, more frequently as waiters. Moving to training-related variables, we observe that 64.3% of the interviewees are willing to participate in training courses after their work experience and that most of them are also available to pay for them (58%). Moreover, the demanded training courses should primarily provide specific skills, as 38.2% of the interviewees are willing to acquire such skills through training. Finally, most of the workers declare that current seasonal job cob could be a valid option also for the future (58.3%).

When separately analyzing women and men, we notice interesting and statistically significant differences in descriptive statistics. Although female-dominated occupations are associated with low-skilled jobs, women report a higher educational attainment than men, on average, and a higher frequency of vocational diplomas. Consistently with the idea of complementarity between training and education, the share of women declaring to be interested in acquiring further specific training is equal to 69.3%, compared to a 58.9% share among men. As expected, job characteristics are also substantially gendered; besides the different incidence of female-dominated occupation, which is 15.3% higher among women, the diffusion of part-time is strongly biased towards women (50.4% compared to 35.6% among males). Finally, we observe a slightly larger presence of female workers in the hotels +4%), reasonably due to the higher demand for female-dominated occupations that characterizes this sub-sector.

Empirical strategy and method

The first step of our empirical analysis looks at the determinant of the willingness to bear an own investment in training by attending tourism-related training programs focused on industry-specific skills (WTTS). The analysis focuses on the relationship between worker's occupation, namely its female-dominated nature[3], to identify potential sources of gender-related discriminations, and compares such relationship with the one between education and WTTS, theoretically underpinned by the logic of complementarity between human capital and training in a seasonal context where employers have less incentives to invest in the human capital of their flexible workforce (e.g., Casas-Arce, 2004). Control variables include a large set of individuals (i.e., gender, age, nationality,

Table 1. Main descriptive statistics.

Label	Variable	Entire sample					Women			Men			Mean difference women-men
		N	Mean	SD	Min	Max	N	Mean	SD	N	Mean	SD	
Gender	Gender: male	349	0.475	0.500	0	1	183			166			
Age	Age	349	22.020	6.217	16	64	183	22.617	7.006	166	21.362	5.149	1.255*
Italian	Italian citizenship	349	0.898	0.303	0	1	183	0.883	0.322	166	0.914	0.281	−0.031***
res_prov	Residence in province	349	0.716	0.451	0	1	183	0.705	0.4571	166	0.728	0.446	−0.023
Married	Married	349	0.041	0.198	0	1	183	0.044	0.207	166	0.037	0.189	0.007
Edu	Educational attainment	349	3.012	0.47	1	4	183	3.056	0.457	166	2.963	0.414	0.093*
ed_tour	Tourism-related educational programs	349	0.090	0.287	0	1	183	0.111	0.315	166	0.067	0.252	0.044*
knowl_forlan	Knowledge of foreign languages	349	0.935	0.255	0	1	183	0.967	0.180	166	0.890	0.314	0.077***
comp_skills	Computer skills	349	0.918	0.274	0	1	183	0.928	0.260	166	0.908	0.290	0.02
seas_exp	Number of seasons of experience	349	2.230	1.19	1	4	183	2.189	1.176	166	2.276	1.244	−0.087
Hotel	Hotel	349	0.542	0.499	0	1	183	0.561	0.498	166	0.521	0.501	0.04*
female_dominated	Female-dominated occupation	349	0.341	0.475	0	1	183	0.417	0.494	166	0.258	0.439	0.159***
full_time	Full-time job	349	0.566	0.496	0	1	183	0.494	0.501	166	0.644	0.480	−0.15***
Weekend	Weekend shifts	349	0.965	0.184	0	1	183	0.961	0.194	166	0.969	0.173	−0.008
Night	Night shifts	349	0.345	0.476	0	1	183	0.366	0.483	166	0.323	0.469	0.043
currjob_future	Current job is a valid option for the future	349	0.583	0.494	0	1	183	0.578	0.495	166	0.589	0.494	−0.011
Wtt	Willingness to invest in training (any type)	349	0.643	0.480	0	1	183	0.693	0.463	166	0.589	0.494	0.104*
wtt_money	Willingness to invest in training—money	349	0.564	0.497	0	1	183	0.574	0.496	166	0.553	0.499	0.021
wtt_spec	Willingness to invest in specific training	349	0.382	0.487	0	1	183	0.411	0.493	166	0.350	0.478	0.061
job_sat	Job satisfaction	349	0.848	0.359	0	1	183	0.867	0.341	166	0.828	0.378	0.039
wage_sat	Wage satisfaction	349	0.718	0.450	0	1	183	0.708	0.456	166	0.730	0.445	−0.022
winter_stud	Studying during winter	349	0.554	0.498	0	1	183	0.572	0.496	166	0.534	0.500	0.038
winter_empl	Employed during winter	349	0.404	0.491	0	1	183	0.375	0.485	166	0.434	0.497	−0.059

For each variable we conducted a pairwise comparisons of means over gender.
The significance of the difference of the means is reported as follows: *$p < .10$; **$p < .05$; ***$p < .01$.

marital status, vocational diplomas, knowledge of foreign languages, and computer skills), and job characteristics (i.e., part-time/full-time work).

Since the dependent variable is binary, our estimation strategy consists of estimating a logit regression, which makes it possible to calculate the variation of *WTTS* associated with each variable included in the model, after calculating partial effects. Assuming that no selection occurs, the model assumes that the probability of a positive outcome, in terms of *WTTS*, is determined by the following functional form:

$$P(WTTS = 1|x) = \exp(X_i'\beta_1 + Z_i'\beta_2) / (1 + \exp(X_i'\beta_1 + Z_i'\beta_2)) \quad (1)$$

where *WTTS* equals 1 if the worker *i* is willing to acquire additional tourism-related training at the end of the season, and 0 otherwise; X_i' is the vector of explanatory variables (female-dominated occupations and education), while Z'_i is the vector of the above-mentioned control variables. The estimate is conducted for the entire sample and separately by gender in order to disentangle the gap between men and women for each covariate.

Moreover, as WTTS is observed during the working experience, which may therefore influence WTTS, we also estimate a second specification of the model that include another set of control variables related to the motivations underlying the worker's choice to look for a seasonal job, the subjective perception of the job characteristic, and the relationship between the employer and the employee. Such variables are standardized and semi-continuous by construction, as they derive from the PPCA on the different blocks of items based on a Likert 1–7 scale. Each variable identifies respectively: (i) motivational macro-areas, such as income needs and personal growth, (ii) perceived job strain, (iii) the degree of organizational commitment. We assume, in fact, that the associated individual attitudes and perception may also enter the decision-making process shaping WTTS. Therefore, we add a further vector of control variables (*W*') to equation (1), as follows:

$$P(WTTS = 1|x) = \exp(X_i'\beta_1 + Z_i'\beta_2 + W_i'\beta_3) / (1 + \exp(X_i'\beta_1 + Z_i'\beta_2 + W_i'\beta_3)) \quad (2)$$

The second step of the analysis is to compare the determinants of WTTS with the ones of the worker's appraisal of seasonal employment as an opportunity for her future career (OPP), which is also binary, while keeping the same set of covariates as those included in equations (1) and (2). Such estimate enables us to analyze whether the perception of a seasonal job as an opportunity relies on a pattern that is similar to the one of WTTS or, on the contrary, they such perception is more strongly affected by working conditions, both subjective and objective (including the type of occupation), than by individual characteristics. Such analysis is complemented by constructing a synthetic categorical variable (WTTS_OPP) that combine WTTS and OPP and takes the following values:

$$WTTS\_OPP \begin{cases} 0 \ if \ WTTS = 0 \ AND \ OPP = 0 \\ 1 \ if \ EITHER \ WTTS = 1 \ OR \ OPP = 1 \\ 2 \ if \ WTTS = 1 \ AND \ OPP = 1 \end{cases} \quad (3)$$

As WTTS_OPP can be considered an ordered response variable, an ordered logit model can be derived from a latent variable model with y = 0 and y = 1 as cut points, under the parallel regression assumption that each β is equal across cut point equations (McCullagh, 1980).

In all the models we also catch the combined role of occupation and foreign language skills in shaping WTTS and OPP, by interacting female-dominated occupational condition with the endowment of such horizontal skills.

Then, since we face a significant decay in the sample size (from 537 to 349) due to the presence of missing values, we address this limitation by applying a sampling weight based on personal characteristics (gender, education, age, and nationality) to all the regressions. In this way, we test the sensitivity of the results to the potential distortion caused by the non-response bias associated with the survey design.

Finally, we use the Oaxaca-Blinder decomposition method to divide the differential in WTTP and OPP between occupations (female-dominated vs non-female-dominated) into a component that is "explained" by differences in observed characteristics, such as education and age, and a residual part that, by regrouping the unobserved characteristic differences and the outcome differentials for equal characteristics, can be considered as a measure for occupational-based discrimination, although this residual part may also capture all potential effects of differences in unobserved variables (Jann, 2008). Through this method, therefore, we separately calculate the part of the "female-dominated effect" on WTTP and OPP that is due to differences in the distribution of Z' and W', and the residual part representing the portion of such "effect" that is due to differences in unobserved characteristics or to occupational discrimination. Since we are not applying the Oaxaca-Blinder decomposition to a linear regression model with a continuous dependent variable, as in the original method, we use an extension of the decomposition specifically developed for binary dependent variables (Fairlie, 2005). The decomposition is also separately calculated for men and women.

Findings

Table 2 presents the result of the logit regression associated with equation (1), divided in three specifications, and equation (2), estimated in its full specification. All estimates are separately run for men and women. At a first glance, one can stress that WTTS determinants are highly gendered. While men's WTTS is not significantly affected by the selected variables, except for motivational one, women's WTTS marginally correlates with at least one variable for each category (except for demographic variables): educational- and skill-related, occupational, and motivational. From the first specification, the role of education in favoring women's WTTS. In particular, the educational attainment is the only covariate showing a positive and significant coefficient (marginal effect at mean = 0.23). This result is basically in line with the idea of complementarity between general and specific human capital among women. As far as skill-related measures are concerned (third column), including the attendance of vocational programs at school, estimated coefficients are significant for vocational education ("tourism-related educational programs") and knowledge of foreign languages. The former is positive, indicating that women attending vocational programs increase their propensity to be willing to engage in specific training by 22.5%, all other controls being equal. The latter is negative (−32.3%), meaning that the knowledge of foreign languages penalize WTTS. When adding occupational-related variables (fifth column), one of our focal regressors, that is, female-dominated occupations, emerges as a key factor of women's WTTS: being employed in a female-dominated occupation penalizes WTTS by 21.06% ($p < .01$). Horizontal segregation (i.e., if a female worker works as a waiter or shop assistant) may thus hamper WTTS in a more intense way than the stimulation coming from educational attainment, whose coefficient falls to 17.3% in the third specification. This penalization, however, substantially drops if the occupationally segregated female workers have a satisfactory knowledge of foreign languages (seventh column). Finally, when including subjective variables (ninth column), we observe a negatively significant, but low, correlation between income-related motivations and WTTS for women. This result could be linked with the financial constraints suffered by these workers, who would find problematic to bear training opportunity costs (and the monetary costs as well if the course is self-financed). Subjective variables

Table 2. Predicted probabilities of the willingness to invest in specific training in the future. Logit estimates. Marginal effects.

	(1) (f)	(1) (m)	(2) (f)	(2) (m)	(3) (f)	(3) (m)	(4) (f)	(4) (m)	(5) (f)	(5) (m)	(6) (f)	(6) (m)
	WTTS	WTTS	WTTS	WTTS	WTTS	WTTS	WTTS	WTTS	WTTS	WTTS	WTTS	WTTS
Age	0.0031 (0.0051)	0.0039 (0.0074)	0.0031 (0.0048)	0.0054 (0.0072)	−0.0002 (0.0047)	0.0060 (0.0071)	−0.0003 (0.0047)	0.0061 (0.0072)	0.0008 (0.0050)	0.0074 (0.0067)	0.0009 (0.0050)	0.0077 (0.0069)
Italian	0.0997 (0.1153)	−0.0567 (0.1245)	0.0479 (0.1125)	−0.0614 (0.1233)	0.0688 (0.1100)	−0.0668 (0.1193)	0.0676 (0.1088)	−0.0733 (0.1199)	0.0733 (0.1107)	−0.0496 (0.1212)	0.0743 (0.1089)	−0.0535 (0.1227)
Married	0.0807 (0.1638)	−0.2550 (0.2640)	0.0557 (0.1518)	−0.2831 (0.2915)	0.1483 (0.1513)	−0.2672 (0.2950)	0.1431 (0.1506)	−0.2677 (0.2890)	0.1490 (0.1564)	−0.2452 (0.2754)	0.1483 (0.1558)	−0.2471 (0.2680)
Education	0.2303*** (0.0779)	−0.0175 (0.0824)	0.1897** (0.0839)	−0.0227 (0.0834)	0.1729** (0.0765)	−0.0171 (0.0817)	0.1756** (0.0774)	−0.0145 (0.0836)	0.1692** (0.0751)	−0.0261 (0.0829)	0.1723** (0.0754)	−0.0306 (0.0845)
Tourism-related education			0.2259* (0.1177)	0.1041 (0.1427)	0.2071* (0.1204)	0.1058 (0.1406)	0.2018* (0.1189)	0.0933 (0.1393)	0.1620 (0.1166)	0.0731 (0.1395)	0.1583 (0.1164)	0.0591 (0.1373)
Knowledge of foreign languages			−0.3229* (0.1827)	0.1016 (0.1196)	−0.2561 (0.1584)	0.0940 (0.1180)	−0.3860* (0.2055)	0.0209 (0.1371)	−0.3254** (0.1577)	0.1274 (0.1203)	−0.4230** (0.2097)	0.0336 (0.1390)
Computer skills			0.0894 (0.1210)	−0.1668 (0.1260)	0.0802 (0.1249)	−0.1744 (0.1262)	0.0909 (0.1258)	−0.1508 (0.1255)	0.0562 (0.1221)	−0.1067 (0.1370)	0.0643 (0.1230)	−0.0803 (0.1338)
Female					−0.2106*** (0.0663)	−0.0256 (0.0837)	−3.4030*** (0.3347)	−0.2412 (0.2709)	−0.1803*** (0.0651)	−0.0231 (0.0845)	−3.0378*** (0.3749)	−0.2884 (0.2644)
Dominated							3.2074*** (0.3586)	0.2417 (0.2845)				
Fem_dom											2.8670*** (0.3901)	0.2988 (0.2759)
Xknow_for_lan												
Full-time job					0.0382 (0.0683)	−0.0595 (0.0775)	0.0450 (0.0677)	−0.0620 (0.0772)	0.0031 (0.0755)	−0.0758 (0.0764)	0.0079 (0.0748)	−0.0793 (0.0765)
Motivation personal growth									−0.0035 (0.0157)	0.0274* (0.0165)	−0.0060 (0.0157)	0.0264 (0.0164)
Motivation income									−0.0397** (0.0184)	−0.0229 (0.0202)	−0.0374** (0.0184)	−0.0222 (0.0202)
Motivation relational needs									−0.0137 (0.0326)	−0.0622** (0.0296)	−0.0166 (0.0327)	−0.0660** (0.0291)
Job strain									0.0103 (0.0244)	−0.0413* (0.0246)	0.0078 (0.0243)	−0.0447* (0.0247)
Customer orientation									0.0238 (0.0178)	−0.0129 (0.0182)	0.0220 (0.0177)	−0.0123 (0.0180)
Observations	183	166	183	166	183	166	183	166	183	166	183	166
Pseudo R^2	0.042	0.007	0.069	0.019	0.106	0.022	0.114	0.026	0.126	0.071	0.131	0.077

Marginal effects. Standard errrors in parentheses. * $p<.10$, ** $p<.05$, *** $p<.01$

are significant among men, who, however, are relatively affected by other motivations compared to women, namely personal growth and relational needs (tenth column). This confirms the existence of a gender gap in terms of perceptions and expectations about seasonal jobs. The last specification also removes the significance of vocational education, whose role is thus partially dismissed with regard to WTTS. On the contrary, the capability of foreign language skills in mitigating women's horizontal segregation is confirmed when the full model is taken into account (11th column).

When changing the dependent variable (OPP), and estimating the same models, our evidence is partially different (Table 3). None of the coefficients of the first specification (first two columns), including educational attainment, is significant, except for the nationality among men. Thus, differently from WTTS, the intention to continue working is not influenced by the level of schooling. This does not mean, however, that other skills do not matter. In the second specification (third and fourth columns), in fact, vocational education turns out to be positively related to OPP for both women and men (marginal effect at mean are equal to 0.50 and 0.42, respectively). Such relationship is more robust than the one linking vocational education and WTTS, while, partially in line with previous findings, the coefficient is higher for women than for men (third and fourth columns). The third specification (fifth column), instead, does not report any statistically significant coefficient of occupational-related controls on WTTS. In particular, as standing-alone variable, female-dominated occupations do not influence women's OPP; only among men, the coefficient of this variable is slightly significant, taking a positive value (sixth column). Nevertheless, foreign language skills are associated with a significant increase of OPP among occupationally segregated women (seventh column), like in the previous estimates (WTTS as dependent variable). Finally, the fourth specification (ninth and tenth columns) reveals a sizable role of subjective variables for both men and women: all types of motivations matter, not only income-related ones. Personal growth reports a positive and significant coefficient, whereas the presence of relational needs dampens the attitude towards seasonal job in a long run perspective. This latter result, however, is in contrast with the positive coefficient attached to customer orientation, making the interpretation of this last finding quite fuzzy. Among men, moreover, job strain exerts a negative pressure on worker's perception of seasonal employment as a career opportunity.

When aggregating the two dependent variables (WTTS and OPP), and repeating the estimates (see Table A.2 in the on-line Appendix), we find that demographic characteristics and education do not play any role, except for women's level of schooling in the first specification (column one). Conversely, in the subsequent estimates, two covariates confirm their sign and significance: (i) vocational education, which positively influence the willingness to be further trained of those ones reporting a positive attitude toward seasonal employment, especially women (third column); (ii) female-dominated occupations, which again emerge as a major obstacle to the potential upskilling of female workers in the perspective of participating in the seasonal local labor market in the future (fifth column), unless combined with foreign language knowledge (seventh column). As far as subjective variables are concerned, these new estimates remove any ambiguity concerning relational needs and customer orientation among women. In this further analysis, in fact, only customer orientation shows a positive and significant coefficient, whereas relational need is not significant any more (ninth column). The role of other motivational components is instead confirmed: income-related motivations are negatively related to WTTS_OPP whereas personal growth is expected to improve the probability that the value of WTTS_OPP increases. This result hold for both men and women, but the magnitude of the estimated coefficients is different between genders. Personal growth accounts more for men, whereas the opposite is true for income needs.

Moving to the results of the weighted regressions, they show very similar coefficients of the variable "female-dominated occupation" on WTTS (Table A.3 in the on-line Appendix) compared

Table 3. Predicted probabilities of the willingness to work in the same job in the future. Logit estimates. Marginal effects.

	(1) (f)	(1) (m)	(2) (f)	(2) (m)	(3) (f)	(3) (m)	(4) (f)	(4) (m)	(5) (f)	(5) (m)	(6) (f)	(6) (m)
	OPP	OPP	OPP	OPP	OPP	OPP	OPP	OPP	OPP	OPP	OPP	OPP
Age	0.0064 (0.0062)	−0.0016 (0.0077)	0.0072 (0.0061)	−0.0044 (0.0078)	0.0065 (0.0061)	−0.0023 (0.0077)	0.0064 (0.0060)	−0.0023 (0.0076)	0.0137** (0.0055)	−0.0050 (0.0067)	0.0136** (0.0055)	−0.0050 (0.0067)
Italian	0.0307 (0.1132)	−0.3792** (0.1746)	−0.0218 (0.1079)	−0.3410** (0.1678)	−0.0210 (0.1102)	−0.3345** (0.1601)	−0.0209 (0.1093)	−0.3336** (0.1604)	−0.1049 (0.0910)	−0.1868 (0.1161)	−0.1046 (0.0910)	−0.1879 (0.1199)
Married	0.1376 (0.2104)	0.0978 (0.2253)	0.0745 (0.2071)	0.1516 (0.2361)	0.0978 (0.2037)	0.1686 (0.2190)	0.0945 (0.2025)	0.1689 (0.2183)	0.0959 (0.1232)	0.2739 (0.1822)	0.0960 (0.1232)	0.2735 (0.1818)
Education	−0.0115 (0.0723)	−0.0443 (0.0883)	−0.1017 (0.0797)	−0.0251 (0.0875)	−0.0979 (0.0802)	−0.0310 (0.0872)	−0.0945 (0.0794)	−0.0316 (0.0881)	−0.1018 (0.0775)	−0.0573 (0.0850)	−0.1016 (0.0775)	−0.0567 (0.0880)
Tourism-related education			0.5008*** (0.1690)	0.4280* (0.2294)	0.4912*** (0.1674)	0.4347* (0.2297)	0.4874*** (0.1668)	0.4368* (0.2307)	0.3621** (0.1485)	0.2978 (0.2072)	0.3620** (0.1484)	0.2975 (0.2075)
Knowledge of foreign languages			0.0606 (0.1746)	−0.2226* (0.1249)	0.0748 (0.1748)	−0.2070 (0.1272)	−0.0051 (0.1984)	−0.1909 (0.1569)	−0.0595 (0.1523)	−0.1917 (0.1288)	−0.0616 (0.1546)	−0.1968 (0.1499)
Computer skills			−0.0020 (0.1353)	0.1617 (0.1220)	−0.0011 (0.1348)	0.1400 (0.1245)	0.0063 (0.1352)	0.1349 (0.1260)	−0.1094 (0.1024)	0.1715 (0.1129)	−0.1090 (0.1024)	0.1728 (0.1109)
Female-dominated					−0.0590 (0.0719)	0.1353* (0.0815)	−3.6856*** (0.3367)	0.1866 (0.2857)	0.0195 (0.0677)	0.1144 (0.0767)	−1.3317*** (0.3239)	0.1000 (0.2895)
Full-time job					−0.0256 (0.0715)	−0.0724 (0.0777)	−0.0208 (0.0713)	−0.0717 (0.0781)	−0.1455** (0.0707)	−0.0467 (0.0718)	−0.1453** (0.0707)	−0.0469 (0.0722)
Fem_dom Xknow_for_lan							3.6359*** (0.3068)	−0.0568 (0.3000)			1.3513*** (0.3219)	0.0160 (0.2983)
Motivation personal growth									0.0534*** (0.0124)	0.0388** (0.0155)	0.0533*** (0.0124)	0.0389** (0.0155)
Motivation income									−0.0837*** (0.0174)	−0.0339** (0.0170)	−0.0836*** (0.0170)	−0.0339** (0.0170)
Motivation relational needs									−0.0709** (0.0321)	−0.0152 (0.0324)	−0.0710** (0.0320)	−0.0152 (0.0318)
Job strain									−0.0166 (0.0209)	−0.0636*** (0.0232)	−0.0166 (0.0209)	−0.0635*** (0.0234)
Customer orientation									0.0376** (0.0155)	0.0358** (0.0162)	0.0375** (0.0155)	0.0358** (0.0161)
Observations	183	166	183	166	183	166	183	166	183	166	183	166
Pseudo R^2	0.009	0.029	0.057	0.072	0.060	0.085	0.065	0.086	0.296	0.231	0.296	0.231

Marginal effects. Standard errors in parentheses.
*$p < .10$, **$p < .05$, ***$p < .01$.

to the corresponding unweighted regression. On the contrary, it emerges that the coefficient attached to the educational attainment is not significant any more, with consequent doubts on the robustness of the previous findings. As far as the relationship between vocational education and OPP is concerned (Table A.4 in the on-line Appendix), its positive sign is confirmed, although its size is smaller than in the unweighted estimates. When using WTTS_OPP as dependent variable (Table A.5 in the on-line Appendix), moreover, the weighted estimates validate the relationship between vocational education and WTTS_OPP, whereas the penalization attached to female-dominated occupations is only confirmed when this occupational condition is interacted with the knowledge of foreign languages. Finally, most of the coefficients of subjective variables are very close to the corresponding ones obtained in the unweighted regressions, in particular for the female subsample.

Results of the Oaxaca-Blinder decomposition are then presented (Table 4). To further disentangle the influence of female-dominated onto WTTS and WTTS_OPP, we divided it into a component that is explained by the model and an unexplained component. Results show that the gap in WTTS is associated with the occupational condition (female-dominated vs other occupations) much more for women (23.5%) than for men (4.4%). This confirms the existence of a gender gap in female-dominated occupations with respect to WTTS. Moreover, the decomposition shows that if women had the same observable characteristics (i.e., the control variables of the regression) as men, most of this gap would still be noteworthy (15.8%). Similar results are obtained when applying the decomposition to WTTP_OPP, but in this case, the unexplained part is substantially lower (3.7%) than before.

Discussion

Understanding worker's voluntary upskilling, reskilling, and participation in seasonal labor market and identifying actions and policies to sustain skills development in view of the current changes has become a topical issue during post-Covid recovery.

Tourism industry, in particular, appears under pressure. Not only it is characterized by substantial labor shortages, but it is also highly affected by the ongoing technological transformations, further to which it is expected to experience an increasing demand of digital and IT profiles in the next future. To face all these changes, updating sector's skills through education, labor relations, and other enabling factors of career progression, such as industry-related training courses, becomes crucial. In many countries, including Italy, these considerations are particularly true if one focuses on women, in view of their lower labor force participation rate and occupational segregation: increasing women's participation rate in non-female-dominated occupations would be a possible solution to fill job vacancies and to promote a more gender equal society. The recent pandemic crisis, in fact, had a substantial impacted on gender equality. In contrast to previous shocks, at the peak of the diffusion of the Coronavirus, sectors—like tourism—where the share of female employees is higher have experienced a large effect because of social distancing measures. This has penalized working mothers, for instance, because of their increasing need to assist children and keep houses in order for remote working. Yet, the response to COVID-19 pandemic also generates opportunities: a recent study (Alon et al., 2020) states that beyond the immediate crisis, there will be chances to promote gender equality in the labor market by adopting flexible work arrangements and also stimulating changes in the social norms through a greater responsibility of fathers in childcare.

Our research addresses all these topics showing that WTTS is higher among more educated women in the majority of the estimates, especially if they have attended a vocational educational program in the past. This means that, in line with the hypothesis of complementarity between

Table 4. Oaxaca decomposition. Other occupations versus female-dominated occupations.

Dependent variable	Gender	Difference	Explained part	Unexplained part
WTTS	Males	0.0443	0.0364	0.0079
	Females	0.2355	0.0695	0.1659
WTTS_OPP	Males	−0.0804	−0.0064	−0.0740
	Females	0.1304	0.1012	0.0292

The decomposition has been calculated by applying the methodology proposed by Fairlie (2005).

education and training (Brunello, 2001), workers having experienced an educational premium (either in monetary or in non-monetary terms) should be more inclined to pursuit a better or new qualification through training. In other words, more educated women are more likely to be willing to engage in specific training courses after their seasonal experience, especially if she has obtained a tourism-related diploma at school. Overall, this indicates that organizations having paid attention in recruiting more educated women are placed in a better position to face this challenging period. Interestingly, such complementarity also applies to language skills, but only among women working in female-dominated occupations. Knowledge of foreign languages, in fact, seems to play a contrasting role among seasonal workers, as it penalizes WTTS of the average worker, but it substantially stimulates women's WTTS within female-dominated occupations. Accordingly, language skills may not stimulate WTTS per se because such skills could be perceived as sufficient for employability and future career advancement in a seaside destination attracting foreign tourists and in this specific tier of the labor market. However, in line with the literature (Hong-Li et al., 1998, 2000), such skills seem to complement specific training in providing women with an opportunity to move from female-dominated occupations to integrated or male-dominated ones.

Results also confirms that the seasonal labor market in the tourism sector is highly gendered (Baum, 2013), with a relatively strong component of female workers combined with substantial horizontal segregation (Campos-Soria et al., 2011), and shows that this factor can hamper women's WTTS. In particular, we find that being employed in a female-dominated occupation penalizes women's WTTS and, therefore, that the positive role of education could be offset by horizontal segregation. This penalization may thus trigger a vicious circle: women working in female-dominated occupations are less willing to attend tourism-related training courses that could help them to move to other occupations, but the absence of specific human capital may increase the probability that they will be hired in a female-dominated occupation in the future, if searching for a seasonal job ("locked-in" effect). The employers, indeed, are expected to be more inclined to assign non-trained women to the same low-skilled occupation they had in the past, contributing to perpetuate the image of "suitable" jobs for a given gender (Purcell, 1996).

A negatively reinforcing role, with regard to women's WTTS, is played by income-related motivations. This means that gender pay gap could lead to stronger income needs that, in turn, may block WTTS. This represents a key barrier to women professional development that adds to the difficulty to move towards more qualified and better-paid positions. In this sense, results are in line with the well-known debate on gender equality that consider "equal pay and equal access to responsibilities" as the most important dimensions of the phenomenon that still remains unsolved in the sector (Coron, 2020). Evidence on motivational aspects also confirms the existence of a gender gap in terms of perceptions and expectations between men and women (e.g., Gneezy et al., 2003; Saccardo et al., 2018) that also applies to seasonal jobs. Men's WTTS, in fact, is affected by other motivations compared to women, namely personal growth and relational needs.

As previously remarked, in contrast with the findings on WTTS, the intention to continue working in the same industry (i.e., OPP variable) is not influenced by level of schooling, unless schooling has been obtained through vocational programs. Consequently, to improve the willingness to obtain a seasonal job in the tourism sector having already acquired specific human capital is crucial, especially for women. As far as occupational characteristics are concerned, on the contrary, the gender gap is observed only indirectly. Women penalization does not emerge from the female sample, but, indirectly, from the premium enjoyed by men employed in female-dominated occupations. Overall, one can state that the determinants of OPP significantly diverge from the ones of WTTS, although both variables share similar antecedents when focusing on the motivations underlying the worker's choice to look for a seasonal job.

Finally, the joint analysis of both dependent variables (i.e., WTTS and OPP) confirms that female-dominated occupations are a major obstacle to the potential upskilling of female workers in the perspective of participating in the seasonal local labor market in the future.

Conclusions

Tourism industry is coping with a constantly evolving competitive environment in which the major challenges for businesses currently refer to the shortage of staff, in particular in seasonal destinations, and to the rapid change of skill needs with the consequent increasing skills gaps. In such a context, a continuous reskilling and upskilling of the workforce in the perspective of life-long education should involve all the stakeholders, that is, firms, education centers, and governmental institutions.

This paper focuses on seasonal workers and on their willingness to invest in specific training and continue working in the tourism industry, showing that gender segregation remains a persistent issue in this regard. Notably, horizontal occupational segregation is a major barrier to women's intention to retrain themselves and start a potential career path in the tourism industry. Such barrier counteracts the traditional positive complementarity between education and training. Different types of education, in fact, positively contributes to worker's propensity to invest in training and continue working in the industry, but such contribution is lower than the penalty suffered by occupationally segregated women.

If one tries to summarize some implications for the industry, starting from our study, it seems necessary to support the process of adaptation to the new forms of work in all the areas related to workforce management. Specific human capital, recruiting, and training are at breaking-point. Increasing the share of educated women in the workforce, adopting a hiring process that ensure gender neutrality, through informational campaigns and guidelines, and financing industrial-related training (or making paid time off more flexible), could be valuable actions in this regard.

More in general, an effort to build more agile and flexible organizations able to manage and face societal changes is needed. As supposed at the beginning of our research, in a context in which a new demand for innovative work-life balance solutions is emerging, this effort should lead to the formalization of a different organization of seasonal workforce organization through a re-assessment of the existing industry-level collective agreements.

From the policy-maker standpoint, public policies should identify what industry-specific training programs could attract seasonal workers and, in perspective, improve the skill matching in the labor market of tourism destinations while filling the increasing shortages reported by the tourism industry during the post-COVID recovery. From our results it emerges that such programs should be primarily targeted to women employed in female-dominated occupations. Subsidizing training, especially for women, also seems fundamental in order to retain staff at all levels in a context in

which sudden shocks could boost the churning rate in this secondary, but relevant, segment of the labor market. Moreover, a stable program of incentives for upskilling workers and boosting their productivity could be beneficial in the perspective of continuous enhancement of the quality of the tourism product. Indeed, making women more willing to invest in specific training could also induce them to continue working in the industry, to actively participate in the seasonal labor market, and eventually to contribute to a structural increase of labor market supply that may open room to a reduction of those post-pandemic shortages currently reported by tourism firms.

In synthesis, in this new scenario, industry-specific policies are strictly intertwined with policy-maker actions and social programs. Nowadays, policy interventions must not only act directly on the sector, but also on the whole social environment. When looking to social aspects, in particular, a crucial issue for the next future is to provide social services to households (such as: public transport, infant-day center, low-cost housing, and so on) not only to increase women participation in the labor market and in industry-specific training.

Concerning the main limitations of the study we emphasize the need for a more comprehensive sample and the analysis of more destinations also in different countries. Also, the availability of an up-to-date dataset to the post-Covid period could improve this stream of research by showing how the presented framework changed during pandemic and whether workers' WTTS has been penalized by the uncertainties related to the post-pandemic economic recovery.

For the future, it could be useful to analyze the relevance of supplementary variables, the effects of the phenomenon along firm life-cycle, and analyze meaningful sub-samples referring, for instance, to innovative, internationalized, or small and large firms. As the involved cohorts of workers are mainly composed by young individuals, further research may also include those ones undertaking an internship in tourism firms, and compare the WTTS of seasonal workers with one of their peers undertaking an internship.

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Notes

1. We choose to run a polychoric principal component analysis because it has been associated with a more accurate estimation of the proportion of explained variance in presence of categorical variables (Kolenikov and Angeles, 2009).

2. According to this definition, a job is considered to be female-dominated when the women's share in an occupation exceeds women's share of total employment by at least 10%.

3. It is worthwhile noticing that tourism seasonal jobs reported in the survey are quite homogeneous with regard to the other usual discriminant occupational characteristics. In particular, all jobs fall in the same major occupational group ("Services and sales workers") according to the International Standard Classification of Occupations (ISCO), with a similar skills content (most of these occupations are considered low-skilled ones). In addition, the size of the employing firms is usually small while the industry they belong to is homogeneous by definition (all the employers belong to the HoReCa sector).

References

Acemoglu D and Pischke JS (1999) The structure of wages and investment in general training. *Journal of Political Economy* 107(3): 539–572.

Alon T, Doepke M, Olmstead-Rumsey J, et al. (2020) The impact of COVID-19 on gender equality. Working Paper Series, National Bureau of Economic Research, April.

Ainsworth S and Purss A (2009) Same time, next year? Human resource management and seasonal workers. *Personnel Review* 38(3): 217–235.

Akhmedjonov A (2012) New evidence on pay gap between men and women in Turkey. *Economics Letters* 117: 32–34.

Arrow KJ (1973) Higher education as a filter. *Journal of Public Economics* 2: 193–216.

Atal V, Gharehgozli O and San Vicente Portes L (2022) Higher labour market bargaining power, higher unemployment in recessions. *Applied Economics Letters* in press. DOI: 10.1080/13504851.2022.2092591

Bagguley P (1991) The patriarchal restructuring of gender segregation: a case study of the hotel and catering industry. *Sociology* 25(4): 607–625.

Barrero JM, Bloom N and Davis SJ (2021) Why working from home will stick. National Bureau of economic research. Working Paper N. 28731.

Baum T (2013) *International Perspectives on Women and Work in Hotels, Catering and Tourism*. Geneva: International Labour Office. Bureau for Gender Equality Working Paper 1/2013, Sectoral Activities Department Working Paper No. 289.

Beeton S and Graetz B (2001) Small business–small minded? Training attitudes and needs of the tourism and hospitality industry. *International Journal of Tourism Research* 3: 105–113.

Becker G (1964) *Human Capital*. New York, NY: National Bureau of Economic Research.

Bianchi P, Giardino R, Labory S, et al. (2021) Regional resilience: lessons from a historical analysis of the Emilia-Romagna region in Italy. *Business History* in press. DOI: 10.1080/00076791.2021.1945034

Booyens I (2020) Education and skills in tourism: implications for youth employment in South Africa. *Development Southern Africa* 37(5): 825–839.

Brunello G (2001) On the Complementarity between Education and Training in Europe. IZA Discussion Paper, N. 309.

Burrell J, Manfredi S, Rollin H, et al. (1997) Equal opportunities for women employees in the hospitality industry: a comparison between France, Italy, Spain and the UK. *International Journal of Hospitality Management* 16(2): 161–179.

Campos-Soria JA, Marchante-Mera A and Ropero-García MA (2011) Patterns of occupational segregation by gender in the hospitality industry. *International Journal of Hospitality Management* 30(1): 91–102.

Campos-Soria JA, Ortega-Aguaza B and Ropero-Garcia MA (2009) Gender segregation and wage difference in the hospitality industry. *Tourism Economics* 15(4): 847–866.

Card D, Cardoso AR and Kline P (2016) Bargaining, sorting, and the gender wage gap: quantifying the impact of firms on the relative pay of women. *The Quarterly Journal of Economics* 131(2): 633–686.

Casas-Arce P (2004) Firm provision of general training and specific human capital acquisition. University of Oxford. Department of Economics Discussion Papers, N. 198.

Chamber of Commerce of Forlì-Rimini-Cesena (2019) I Numeri dell'Economia. Rimini.

Collins C, Landivar LC, Ruppanner L, et al. (2021) Covid-19 and the gender gap in work hours, Gender. *Work & Organization* 28(S1): 101–112.

Coron C (2020) What does "gender equality" mean? Social representations of gender equality in the workplace among French workers. *Equality, Diversity and Inclusion: An International Journal* 39(8): 825–847.

Dewhurst H, Dewhurst P and Livesey R (2007) Tourism and hospitality SME training needs and provision: a sub-regional analysis. *Tourism and Hospitality Research* 7(2): 131–143.

Dolado JJ, Felgueroso F and Jimeno JF (2003) Where do women work? Analysing patterns in occupational segregation by gender. *Annales d'Economie et Statistique* 71/72: 293–315.

Dwyer L, Edwards D, Mistilis N, et al. (2009) Destination and enterprise management for a tourism future. *Tourism Management* 30: 63–74.

Emilia-Romagna Region (2019) *Il Mercato del Lavoro in Provincia di Rimini [trans. The Labor Market in the province of Rimini*. Bologna: Regione Emilia-Romagna.

Faggian A (2021) Job search theory. In: Fisher MM and Nijkamp P (eds) *Handbook of Regional Science*. New York, NY: Springer, 481–495.

Fairlie RW (2005) An extension of the Blinder–Oaxaca decomposition technique to logit and probit models. *Journal of Economic and Social Measurement* 30: 305–316.

Felten EW, Raj M and Seamans R (2019) The occupational impact of artificial intelligence: labor, skills, and polarization. *NYU Stern School of Business* on-line working paper. DOI: 10.2139/ssrn.3368605

Felstead A, Green F and Jewson N (2012) An analysis of the impact of the 2008–9 recession on the provision of training in the UK. *Work, Employment and Society* 26(6): 968–986.

Fouarge D, Schils T and de Grip A (2013) Why do low-educated workers invest less in further training? *Applied Economics* 45(18): 2587–2601.

Gerard F, Lagos L, Severnini E, et al. (2018) *Assortative Matching or Exclusionary Hiring? The Impact of Firm Policies on Racial Wage Differences in Brazil*. Cambridge (MA): National Bureau of Economic Research, Inc, NBER Working Papers 25176.

Gneezy U, Niederle M and Rustichini A (2003) Performance in competitive environments: gender differences. *Quarterly Journal of Economics* 118(3): 1049–1074.

Guidetti G, Pedrini G and Zamparini L (2021) Assessing perceived job quality among seasonal tourism workers: the case of Rimini, Italy. *Tourism Economics* 27(8): 1629–1649.

Guimarães CRFF and Silva JR (2016) Pay gap by gender in the tourism industry of Brazil. *Tourism Management* 52: 440–450.

Hakim C (1992) Explaining trends in occupational segregation: the measurement, causes, and consequences of the sexual division of labour. *European Sociological Review* 8(2): 127–152.

Han L, Goetz SJ, Eades D, et al. (2022) An early assessment of COVID-19's impact on tourism in US counties. *Tourism Economics* in press: 13548166221107814.

Haven-Tang C and Jones E (2008) Labour market and skills needs of the tourism and related sectors in Wales. *International Journal of Tourism Research* 10: 353–363.

Hellerstein J, Neumark D and McInerney M (2008) Changes in workplace segregation in the United States between 1990 and 2000: evidence from matched employer-employee data. In: *The Analysis of Firms and Employees: Quantitative and Qualitative Approaches, NBER Chapters*. Cambridge (MA): National Bureau of Economic Research, Inc, 163–195.

Hicks L (1990) Excluded women: how can this happen in the hotel world. *The Service Industries Journal* 4(4): 44–62.

Hong Li J, Buchmann M, König M, et al. (1998) Patterns of mobility for women in female-dominated occupations: an event-history analysis of two birth cohorts of Swiss women. *European Sociological Review* 14(1): 49–67.

Hong Li J, König M, Buchmann M, et al. (2000) The influence of further education on occupational mobility in Switzerland. *European Sociological Review* 16(1): 43–65.

Hume S and Griffin T (2021) *The Online Delivery of VET during COVID-19: Part 1*. Adelaide: National Centre for Vocational Education Research.

Hutchings K, Moyle C, Chai A, et al. (2020) Segregation of women in tourism employment in the APEC region. *Tourism Management Perspectives* 34: 100655.

ISTAT (2020a) *Turismo. Movimento dei clienti negli esercizi ricettivi (transl. "Tourism. Tourists' movements in hospitality services")*. Rome: ISTAT. https://www.istat.it/it/files//2020/12/C19.pdf

ISTAT (2020b) *Annuario Statistico Italiano. (Transl. Annual Report of the Italian National Institute of Statistics")*. Rome: ISTAT.

Jameson S (2000) Recruitment and training in small firms. *Journal of European Industrial Training* 24(1) : 43–49

Jann B (2008) The Blinder–Oaxaca decomposition for linear regression models. *STATA Journal* 8: 453–479.

Kalleberg A (2011) *Good Jobs, Bad Job*. New York, NY: Russell SAGE Foundation

Karatepe OM and Uludag O (2008) Role stress, burnout and their effects on frontline hotel employees' job performance: evidence from Northern Cypruss. *International Journal of Tourism Research* 10(2): 111–126.

Knox A, Warhurst C, Nickson D, et al. (2015) More than a feeling: using hotel room attendants to improve understanding of job quality. *International Journal of Human Resource Management* 26(12): 1547–1567.

Kolenikov S and Angeles G (2009) Socioeconomic status measurement with discrete proxy variables: is Principal Component Analysis a reliable answer? *Review of Income and Wealth* 55(1): 128–165.

Kuhn P and Shen K (2013) Gender discrimination in job ads: evidence from China. *The Quarterly Journal of Economics* 128(1): 287–336.

Lyons KD, Young T, Hanley J, et al. (2016) Professional development barriers and benefits in a tourism knowledge economy. *International Journal of Tourism Research* 18(4): 319–326.

Lundberg C, Gudmundson A and Andersson TD (2009) Herzberg's two-factor theory of work motivation tested empirically on seasonal workers in hospitality and tourism. *Tourism Management* 30(6): 890–899.

McCall JJ (1970) Economics of information and job search. *The Quarterly Journal of Economics*: 113–126.

McCullagh P (1980) Regression models for ordinal data. *Journal of the Royal Statistical Society Series B* 42(2): 109–142.

Mortensen DT (1970) Job search, the duration of unemployment, and the Phillips curve. *The American Economic Review* 60(5): 847–862.

Mortensen DT and Pissarides CA (1999) Job reallocation, employment fluctuations and unemployment. In: Taylor JB and Woodford M (eds) *Handbook of Macroeconomics*. Amsterdam: Elsevier, Vol. 1, 1171–1228.

Mumford K and Smith PN (2009) What determines the part-time and gender earnings gaps in Britain: evidence from the workplace. *Oxford Economic Papers* 61: i56–i75.

NCVER (National Centre for Vocational Education Research) (2021) *Employers' Use and Views of the VET System*. Adelaide: National Centre for Vocational Education Research.

O'Dwyer L (2021) *The Impact of COVID on Industry Innovation, Skills and the Need for Training*. Adelaide: NCVER.

Oaxaca R (1973) Male-female wage differentials in urban labor markets. *International Economic Review* ■■■: 693–709.

Park S, Yaduma N, Lockwood AJ, et al. (2016) Demand fluctuations, labour flexibility and productivity. *Annals of Tourism Research* 59: 93–112.

Peck JA (2021) The disproportionate impact of COVID-19 on women relative to men: a conservation of resources perspective. *Gender, Work and Organization* 28: 484–497.

Pham NT, Jabbour CJC, Usman M, et al. (2022) How does training boost employees' intention to implement environmental activities? An empirical study in Vietnam. *International Journal of Manpower* 43(8). DOI: 10.1108/IJM-04-2021-0238

Pissarides CA (1984) Search intensity, job advertising and efficiency. *Journal of Labor Economics* 2(1): 128–143.

Poulston J (2008) Hospitality workplace problems and poor training: a close relationship. *International Journal of Contemporary Hospitality Management* 20(4): 412–427.

Purcell K (1996) The relationship between career and job opportunities: women's employment in the hospitality industry as a microcosm of women's employment. *Women in Management Review* 11(5): 17–24.

Reskin BF and Bielby DD (2005) A sociological perspective on gender and career outcomes. *The Journal of Economic Perspectives* 19(1): 71–86.

Saccardo S, Pietrasz A and Gneezy A (2018) On the size of the gender difference in competitiveness. *Management Science* 64(4): 1541–1554.

Sanchez-Ollero JL, Campos-Soria JA and García-Pozo A (2014) The labor market in the Spanish hospitality industry: an overview from a gender perspective.

Santos LD and Varejão J (2007) Employment, pay and discrimination in the tourism industry. *Tourism Economics* 13(2): 225–240.

Spence M (1973) Job market signaling. *Quarterly Journal of Economics* 87: 355–374.

Statistics Office of the Emilia-Romagna Region (2020) *Rapporto annuale sul movimento turistico e la consistenza ricettiva alberghiera e complementare in Emilia-Romagna. (transl. The annual report of tourism movements, stock of hotels and other services of accommodation in Emilia-Romagna)*. Bologna: Statistics Office of the Emilia-Romagna Region. https://statistica.regione.emilia-romagna.it/documentazione/pubblicazioni/documenti_catalogati/rapporto-annuale-turismo-2019

Thomas R and Long J (2001) Tourism and economic regeneration: the role of skills development. *International Journal of Tourism Research* 3(3): 229–240.

Thurow L (1975) *Generating Inequality*. New York, NY: Basic Books.

Torun H and Tumen S (2019) Do vocational high school graduates have better employment outcomes than general high school graduates? *International Journal of Manpower* 40(8): 1364–1388.

Türkcan B (2022) Gender segregation in tourism: a comprehensive literature survey and policy recommendations for the post-COVID era. *Journal of International Women's Studies* 23(4): 71–87. Available at: https://vc.bridgew.edu/jiws/vol23/iss4/5

Unioncamere–ANPAL (2021) Sistema informativo Excelsior. Available at: https://excelsior.unioncamere.net/index.php?option=com_content&view=article&id=282

White I and Rittie T (2022) *Upskilling and Reskilling: The Impact of the COVID-19 Pandemic on Employers and Their Training Choices*. Adelaide: NCVER.

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