

Antecedents of labor shortage in the rural hospitality industry: a comparative study of employees and employers

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Johanna Innerhofer
MCI The Entrepreneurial School, Innsbruck, Austria
Luigi Nasta
John Cabot University, Rome, Italy, and
Anita Zehrer
MCI The Entrepreneurial School, Innsbruck, Austria

Abstract

Purpose – Although the role of human capital in the hospitality sector is critical, the industry faces challenges in attracting workers with a poor industry image frequently mentioned regarding labor shortages. This research paper attempts to investigate the factors influencing labor shortages by presenting the perspectives of employees and employers.

Design/methodology/approach – Precisely 232 rural hospitality industry employees ($n = 128$) and employers ($n = 104$) in Northern Italy were surveyed using a written close-ended online survey and a quantitative research design as part of a convenience sampling approach. For hypotheses testing, Spearman's rho was used.

Findings – A relationship between the shortage of professional workers and a variety of factors was found, including professional, digital, social and green skills, industry-intrinsic characteristics and symbolic image attributes of the industry. The findings show that some factors are more important for employees, while others are more significant for employers.

Practical implications – This study demonstrates several practical implications for the hospitality sector by addressing the under-researched stakeholder group of existing hospitality employees, e.g. improving working conditions, reduction of manual operations through digital technologies, realistic career planning, employer branding, identification of skill deficiencies and provision of specialized trainings.

Originality/value – Most research on labor shortages in the hospitality industry has focused on the perspective of either employees or employers. This study compares both perspectives, including the industry image, to gain a realistic picture of the relevant factors for a rural tourism destination in Northern Italy.

Keywords Industry image, Employer image, Skill shortages, Hospitality industry, Labor shortages

Paper type Research paper

1. Introduction

The labor market is becoming more competitive for qualified workers, and the hospitality sector competes with other industries that may appear more appealing at times (Ek Styvén *et al.*, 2022; King *et al.*, 2021; NTG Alliance, 2019). Finding qualified employees is difficult, and many industries experienced a labor shortage (Spiess *et al.*, 2022). However, the hospitality sector has more labor shortages than other sectors (Baum, 2015; Ferreira *et al.*, 2017; Robinson *et al.*, 2019), with poor remuneration, irregular working hours and a negative



industry image being among the main reasons (Dalkrani and Dimitriadis, 2018; King *et al.*, 2021; Majhosev and Koteski, 2020; Tfamily, 2018). The pandemic caused by the spread of COVID-19 has exacerbated these conditions (Liu-Lastres *et al.*, 2022). Such problems recruiting professionals (Elshaer and Marzouk, 2019) can affect customer service, operational costs and quality standards (Green and Owen, 2003), and because employee skills have a significant influence on productivity and performance, particularly at the company level (Majhosev and Koteski, 2020), skilled employees are critical to providing quality tourism services that meet consumer needs (Al Ababneh, 2017; Erer, 2020; Khan *et al.*, 2021). The literature has already addressed issues such as labor market trends, high turnover and the low absorption rate of tourism graduates (Anandhwanlert and Wattanasan, 2017; Dogru *et al.*, 2019; Papathanassis, 2020). However, existing studies on skill shortages have primarily focused on either the supply side of employees (Ashton, 2018; Elshaer and Marzouk, 2019; Köşker *et al.*, 2019) or the demand side of employers (Ashton, 2018; Bennett and McGuinness, 2009; Davidson *et al.*, 2011; Tfamily, 2018). To the best of our knowledge, little research has compared both perspectives (Willie *et al.*, 2017), especially in a hospitality setting that includes industry image (Spiess and Zehrer, 2020) and its potential effect on workforce behavioral intentions (Leekha *et al.*, 2014). Furthermore, rural hospitality skills have received little research (Adeyinka-Ojo, 2018). Rural tourism revitalizes the culture and heritage of rural communities while attracting tourists by linking rural areas to their cultural, historic, ethnic and geographical roots (Dimitrovski *et al.*, 2012). This paper investigates the shortage of skilled workers in the rural hospitality industry from the perspectives of employers and employees, as well as the industry's image.

2. Theoretical background and hypothesis development

2.1 Shortage of professional workers in tourism

Due to technological changes that affect tourist travel behavior (UNWTO, 2019) and the industry's employment situation, tourism employers are demanding skilled rather than unskilled labor (Lacher and Oh, 2012).

Changes in value chains, demography, work organization, consumption behavior, and technology have transformed European economies in recent decades (Bertani *et al.*, 2020; European Commission, 2020). According to the literature, the constant evolution of the labor market necessitates the development of new skills (Sondermann *et al.*, 2019; Sousa and Wilks, 2018). Technology has aided these changes and impacted skill demand, and, for these reasons, skills must adapt to compensate for imbalances (Bertani *et al.*, 2020).

The identification of skill needs enables the recognition of potential skill gaps and shortages as well as the anticipation and forecasting of needed skills to meet economic short- and long-term needs (Cedefop, 2015). Skill shortage is defined as a gap between available vacancies and unemployed workers in specific occupations or industries (Adda *et al.*, 2017; Vandeplas and Thum-Thysen, 2019). Lack of job-related specific skills results in a shortage of specific professions (Cappelli, 2015). Real shortages must be distinguished from reported shortages. Despite offering competitive wages to potential candidates, companies report shortages due to below-competitive wages (Cedefop, 2015). As a result, the following hypothesis is derived:

H1. A decrease in professional skills leads to a shortage of professional workers.

The employer's perception of shortages may be based on the employer's inability to offer adequate wages or working conditions to attract the necessary skills (McGuinness *et al.*, 2018). Employer shortages mostly refer to transversal skills, such as interpersonal skills. Rather than the hospitality industry's professional or branch-specific skills, these skills are found to be lacking in employees and candidates (Cedefop, 2020; European Commission, 2017;

Jaschik, 2016; Schooley, 2017). Soft skills, defined as an integrated set of intrapersonal and interpersonal skills (Marin-Zapata *et al.*, 2021), are positively related to employee productivity and performance and add value to an organization's success (Clarke, 2016); as such, employers are increasingly demanding such skills (Deming, 2017; Succi and Canovi, 2020).

Future hospitality will require new transversal skills. Digital, social, and green skills are identified as the most important for the industry's future in the NTG Alliance's core skills set framework (Table 1).

Alongside social media and mobile technologies, digital skills encompass using technological devices in the workplace (Carlisle *et al.*, 2021). According to Abou-Shouk *et al.* (2013), tourism is the largest online category and digital tourism services are a key online commercialization industry because global tourism has grown faster than global trade in the last five years (UNWTO, 2019). Since digital citizens use the Internet or electronic devices to research the information needed to plan and reserve their travel experiences (Amaro and Duarte, 2015; Chung and Koo, 2015; Filieri and McLeay, 2014; Suki and Suki, 2017), the emphasis on employees' ability to adapt to these trends is becoming increasingly important. As more technologically savvy tourists enter the travel industry, businesses can track their preferences over time, build strong bonds with their customers, and boost consumer loyalty (Van Asperen *et al.*, 2018). Because of rapid global changes and constant technological advancements, tourism has begun to embrace specialized methods, implying that digital skills are required (Carlisle *et al.*, 2021; Morosan and Bowen, 2022). Customers' needs and expectations have shifted as technology has advanced (Zhang *et al.*, 2022). As a result, hotels and other tourism-related industries are increasingly in need of highly skilled workers who can meet the technological demands of travelers. Thus, the following hypothesis is derived:

H2. A decrease in digital skills leads to a shortage of professional workers.

Green skills are a broader concept that encompasses unique cognitive resources that can help tourism and hospitality organizations achieve goals by minimizing eco-degradation and increasing environmental impact (Dharmesti *et al.*, 2020; Kalyar *et al.*, 2021). Employee and manager awareness and understanding of sustainability approaches are critical for the successful implementation of the sector's sustainable development (Sorin and Sivarajah, 2021). Many hospitality businesses, however, address sustainable behavior but fail to translate it into specifically required green skills (NTG Alliance, 2019; Unioncamere, 2020). Furthermore, the hospitality industry is transitioning to a more responsible and sustainable tourism experience (Ioannides and Gyimóthy, 2020). As a result of changing consumer needs, future demand for green skills will increase from a sustainable and economic standpoint (NTG Alliance, 2019). Customers, particularly younger generations, are more conscious and prefer accommodations that are environmentally, socially, and economically responsible

Skills	NTG - core skills set
Digital Skills	Computer/Mobile devices; MS Office; digital communication; online booking/reservation systems; social media/online review sites; digital security measurements; property management/electronic Point of sales systems
Social Skills	Communication skills; conflict management; collaboration; Customer care/service skills; foreign languages; intercultural sensitivity; personal skills, e.g. emotional intelligence and reliability
Green Skills	Minimization of environmental impact; recycling/waste management; responsible daily behavior; optimization of resource-usage

Note(s): Own representation, data based on Core Skills Set elaborated by NTG Alliance (NTG Alliance, 2019, pp. 31, 46, 66) for the hospitality sector

Table 1. Summary of the NTG Core Skills Set framework of digital, green, and social skills in hospitality industry

(Ivanov *et al.*, 2014; Jonckers, 2005). Waste management, energy consumption, efficient resource use, and efficient operations management are all aspects that require conscientious efforts and would not be possible without the proactive behavior of knowledgeable and skilled individuals (Saseanu *et al.*, 2020). Employees should be aware of environmental issues and able to propose solutions. Hotels and other tourism-related businesses consider the ability to recognize an environmental issue and suggest a solution or conform to sustainable standards when hiring. Therefore, the following hypothesis is derived:

H3. A decrease in green skills leads to a shortage of professional workers.

Lastly, social skills, or people skills, is the ability to effectively interact with others (Koc, 2021). More specifically, it is the ability to comprehend and persuade or influence the feelings, beliefs, and actions of others in social situations (Ferris *et al.*, 2001). Strong social skills help people cooperate by understanding others' situations and providing justifications (Ferris *et al.*, 2001). People with strong social skills are also more likely to accurately perceive others' thoughts, appropriately adjust their behaviors to situational demands, and effectively control others' responses (Foligstein, 2001). Good social skills can help employees communicate clearly, discern people's genuine intentions, and successfully manage their behavior in difficult social situations (Alhelalat, 2015). The social skills of hotel employees may vary greatly. While some people have poor social skills, others are better at understanding the thoughts and emotions of others and communicating their ideas. If social skills are how people interact with others, then the tourism industry's success depends on how actors interact with customers. Traveler maturity, expectations, and exposure to outside technological advances drive demand for personalized services. With personalized itineraries, recommendations, and lodging, the possibilities are endless. Hotels and other tourism-related businesses will need people skills (Jiang and Tu, 2022). As such, the following is derived:

H4. A decrease in social skills leads to a shortage of professional workers.

2.2 Image theories

Regarding labor, both negative and positive images influence individuals' behavior when applying for specific jobs (Ghielen *et al.*, 2021; Lievens and Highhouse, 2003). A company becomes appealing to applicants when its image matches the personality and needs of potential employees (Ghielen *et al.*, 2021; Sivertzen *et al.*, 2013). Positive perceptions of a company's performance make it more appealing (Edwards, 2009). Furthermore, a company's employer image influences job satisfaction and employees' intentions to leave (Priyadarshi, 2011).

Potential employees develop preferences for working in specific industries based on the services and products offered or the preferred tasks; additionally, employer branding and industry image are regarded as influencing factors (Wallace *et al.*, 2014; Wilden *et al.*, 2010). The image of a company or product is based on certain beliefs and individual perceptions (Collins and Stevens, 2002). This also applies to industries because people associate certain images with specific businesses or industries based on their beliefs (Wallace *et al.*, 2014). This is especially true for industries with a poor image and difficulty attracting qualified employees (Wallace *et al.*, 2014; Wilden *et al.*, 2010). The hospitality industry generally faces volatile recruiting due to unfavorable industry-specific circumstances (Ashton, 2018; Dalkrani and Dimitriadis, 2018; Ferreira *et al.*, 2017; Majhosev and Koteski, 2020), affecting the industry's perception and image as an employer (Lacher and Oh, 2012). As a result, the industry faces high turnover and labor shortages (Ferreira *et al.*, 2017; King *et al.*, 2021). Thus, we propose:

H5. An increase in the positive characteristics intrinsic to employment in the hospitality industry reduces the shortage of professional workers.

Beach's (1992) image theory provides a basic understanding of how people perceive their environment and make decisions based on that perception. The image theory was developed for both personal and organizational decisions, and it implies that images, as a collection of feelings and knowledge, play a significant role in guiding decision-making behaviors (Beach and Mitchell, 1990). Individuals choose specific organizations by selectively evaluating specific environmental aspects to form an impression and assess one's personal attraction toward it (Ehrhart and Ziegert, 2005). This results in a specific perception of an organization, resulting in different individuals having different perceptions of the same environment (Ehrhart and Ziegert, 2005). These perceptions influence individuals' employment decisions in specific sectors or companies (Ghielen *et al.*, 2021).

Lievens and Highhouse's (2003) instrumental-symbolic framework was introduced to portray the core components of employer brands from the perspective of employees and job seekers (Kumari and Saini, 2018; Lievens *et al.*, 2005; Schwaiger *et al.*, 2021; Van Hoyer and Saks, 2011). The framework is based on the basic premise of marketing literature; that people associate brands with symbolic meanings and specific objective functions (Aaker, 1997; Keller, 1993). Existing research has examined the impact of various factors on the attractiveness of organizations as potential employers (Ehrhart and Ziegert, 2005; Hoppe *et al.*, 2021; Renaud *et al.*, 2016). The instrumental-symbolic framework can be used to classify these factors (Hoppe *et al.*, 2021; Kumari and Saini, 2018; Schwaiger *et al.*, 2021).

According to the framework, images have instrumental and symbolic dimensions. First, the instrumental image is physical and has objective practical value. It refers to objective job characteristics such as benefits, compensation, and advancement opportunities, and is linked to an individual's desire to minimize costs while maximizing benefits (Highhouse *et al.*, 2003; Knox and Freeman, 2006). Second, symbolic image dimensions are comprised of subjective characteristics such as prestige, pride, competence, or innovativeness (Kumari and Saini, 2018; Lievens and Highhouse, 2003; Van Hoyer and Saks, 2011) and is concerned with how people perceive a brand and form opinions about it, rather than analyzing its objective characteristics (Keller, 1993; Knox and Freeman, 2006).

These characteristics can be viewed as important components of an employer's image. It has been discovered that both the instrumental and symbolic dimensions have a significant impact on organizations and their employer-attractiveness (Highhouse *et al.*, 2003; Kumari and Saini, 2018). If a company's image attributes meet the expectations of potential employees, they may consider the company as a potential employer (Highhouse *et al.*, 2003). However, the instrumental-symbolic framework has been applied during recruitment processes from the perspective of potential rather than current employees (Schwaiger *et al.*, 2021). Thus, the following is proposed:

H6. An increase in the poor employer image reduces the shortage of professional workers.

3. Methodology

3.1 Research instrument

Following a thorough review of the literature, 31 items were developed and classified into seven categories: the shortage of professional workers (4 items) (Cappelli, 2015; Green, 2016; Quintini, 2011), digital skills (5 items) (NTG Alliance, 2019), social skills (4 items)

(NTG Alliance, 2019), green skills (3 items) (NTG Alliance, 2019), professional skills (3 items) (Cedefop, 2020; Jaschik, 2016; Schooley, 2017), instrumental attributes of employment (6 items) (Lievens and Highhouse, 2003; Spiess and Zehrer, 2020; Zopiatis *et al.*, 2014), and symbolic image attributes (6 items) (Cavazotte *et al.*, 2012; Kusluvan and Kusluvan, 2000; Spiess and Zehrer, 2020). All the items are in Appendix. The Kaiser/Meyer/Olkin (KMO) test and Bartlett's test of sphericity were used to assess the adequacy of the component analysis for these items. The Bartlett's test, with a result of 2,455.490, df 465, significance at $p < 0.000$, supported the suitability of the factor analysis, and the KMO test provided assurance for the overall measure of sampling adequacy, which was 0.841 (>0.50). As a result of the principal component analysis, the 31 items can be classified into seven groups with eigenvalues greater than 1. The seven-factor solution accounted for 61.85% of the variation. These items were rated on a 5-point Likert scale, with 1 representing the most disagreement and 5 representing the most agreement. Two hospitality academics reviewed the survey and made grammatical and structural changes to make the claims more understandable and credible.

3.1.1 Samples and data collection. A representative sample is used to collect data (Bernhard, 2000). Employers are referred to as "demanders" in the sample, and employees are "suppliers". The rural hospitality industry in Northern Italy, specifically the capital of Bolzano in South Tyrol, is composed of 10,399 facilities such as hotels and restaurants (IDM, 2020) and employs over 38,400 people, accounting for 15% of the region's full-time equivalents (WIFO, 2019). Another distinguishing feature of the destination is its German-Italian bilingualism, which is rooted in the area's historical development. As such, data collection was done in German. The original questions were translated and modified into English using back-translation processes (Brislin, 1970). Survey participants are primarily recruited through social media platforms and through local hotel and restaurant cooperatives. Aside from the hotel and restaurant cooperatives that forwarded the survey to their members, 210 restaurants and hotels were contacted directly via Facebook and Instagram messenger.

The authors used a convenience sampling approach due to accessibility, resulting in 232 surveys of employers ($n = 104$) and employees ($n = 128$). Among the non-probability sampling approaches, the convenience sampling technique is the most used. We chose this method because of the impossibility of obtaining a complete list of all population elements. The hospitality industry is characterized by strong seasonality in employment, which complicates obtaining information on both employees and employers. A closed-ended online survey in written form was used to collect data. A pre-test was conducted with four independent people, two females and two males of different ages and with distinct roles as employees and employers. The pre-test was used to improve the survey's validity and reliability. The goal was to ensure that respondents interpreted and responded to questions appropriately, that is, in accordance with the study's intentions. The pre-test assisted in determining whether respondents understood the questions and had all the necessary information while also providing more direct proof of the survey data's validity for most of the interview items. Based on the responses, the pre-test revealed that the survey items were clear, with only a few issues with sentence structure. Following completion, the main study began on June 12, 2021, and ended on June 25, 2021.

To reduce social desirability bias and common method variance, we guaranteed participants' anonymity and researchers' confidentiality, including voluntary and uncompensated participation (Podsakoff *et al.*, 2003). We also performed the Harman single-factor test, which involves loading all of a study's measures into an exploratory factor analysis and assuming that common method variance is indicated by the emergence of a single or general factor accounting for most of the covariance among measures (Podsakoff *et al.*, 2003). Method bias was not a major issue, as the first factor explained only 26.14% of the variance. The highest intercorrelation in the discriminant validity test was 0.619 (Table 2),

	Shortage of professional workers	Professional skills	Digital skills	Green skills	Social skills	Instrumental attributes of employment	Symbolic image attributes
Shortage of professional workers	0.683						
Professional skills	-0.197	0.815					
Digital skills	-0.185	0.100	0.823				
Green skills	-0.185	0.312	0.077	0.663			
Social skills	-0.122	0.442	0.107	0.239	0.616		
Instrumental attributes of employment	0.306	0.298	0.083	0.140	0.199	0.672	
Symbolic image attributes	0.142	0.262	0.096	0.044	0.186	0.619	0.733

Table 2.
Discriminant validity

and none of them were 0.9 or higher. Analysis shows that common method variance has no effect on findings.

Our model's convergent validity is evaluated by factor loadings, Cronbach's Alpha, Composite Reliability, and Average Variance Extracted (AVE). Items with cross loadings or that don't load on a single factor (0.40) should be removed. Table 3 shows that nothing was eliminated because loadings were above 0.40. Table 3 shows that all CA values were above 0.5. A CA of 0.5 is acceptable when only a few items are used to create the construct, which is our case. Three of six constructs had CR values above 0.6 and AVE values above 0.5. (2013). AVE less than 0.5 but CR greater than 0.6 indicates adequate convergent validity.

4. Data analysis and results

Table 4 shows that 65.10% of the participants are female (34.90%). 18–61-year-olds participated. The cumulative age percentage showed the participants were young. 33% of the sample was under 25, 66% under 33, and 95% under 55. 5.2% of participants had a secondary school degree, 11.6% had a professional certificate after three years of high school, 7.3% had a professional diploma after four years, 47.80% had a high school diploma after five years, and 27.6% had a university degree.

44.80% of respondents are employers and/or owners, while 55.2% are employees. Only 15% of employers are permanent full-time, while 85% are self-employed. 28.90% of employees are full-time, and 3.90% are part-time. Seasonal and temporary employment is 45.30% full-time and 5.50% part-time. 7% work on-call, 0.8% completed an apprenticeship, and 2.30% an internship. 6.30% of employees reported being self-employed.

Nearly 60% of establishments are classified as accommodation, 21.10% as catering, and 19% as both. 93% of 215 respondents work for a family-owned business. 63% of 215 family businesses were hotels.

4.1 Hypotheses testing

The Spearman-correlation statistical test was conducted using SPSS software and to determine the relationship between the variables.

According to Table 5, the Spearman-correlation between professional skills and the shortage of professional workers yields significant results from both the employees' and

	Factor loadings	Cronbach's alpha	Composite reliability	Average variance extracted (AVE)	Labor shortage in the rural hospitality industry
<i>Shortage of professional workers</i>		0.621	0.767	0.466	
Low number of applicants with the required skills (Skill Shortage)	0.401				
Deficits between the currently available and the optimum level of skills required of the existing workforce (Skill Gap)	0.698				
Difficulty in finding skilled and qualified employees, despite the provision of attractive wages/conditions	0.776				
Lack of professional workers on the regional labor market	0.791				
<i>Professional skills</i>		0.749	0.856	0.665	
Employees are able to cope with daily tasks of their job role by using their skills	0.751				
General level of skills in hospitality industry	0.841				
Employees are able to cope with extraordinary tasks or situations of their job role	0.85				
<i>Digital skills</i>		0.883	0.913	0.678	
Using property management systems and electronic point of sales-systems	0.768				
Using MS Office	0.785				
Handling online booking and reservation systems	0.821				
Using social media and review sites for business purposes	0.831				
Handling basic digital security measures	0.904				
<i>Green skills</i>		0.514	0.687	0.439	
Minimize environmental impact in daily business	0.493				
Knowledge about digital technologies to improve the use of resources for sustainability	0.555				
Sustainable-responsible daily behavior	0.876				
<i>Social skills</i>		0.586	0.705	0.488	
Foreign language skills	0.448				
Communication skills	0.629				
Collaboration skills	0.64				
Conflict management	0.717				
<i>Instrumental attributes of employment</i>		0.838	0.867	0.526	
The work intensity and workload are adequate	0.583				
Hospitality-jobs offer an adequate work-life balance with flexible and adequate working hours	0.593				
Employment in hospitality offers job security on the long term	0.666				
Employment in hospitality provides good social security and social advantages, based on collective agreements	0.717				

(continued)

Table 3.
Convergent validity

	Factor loadings	Cronbach's alpha	Composite reliability	Average variance extracted (AVE)
Offers generally good earning opportunities	0.859			
Offers adequate and fair compensation according to individual experience, skills, and commitment	0.879			
<i>Symbolic image attributes</i>		0.841	0.87	0.537
Enjoying the social aspect of direct customer interaction with guest	0.521			
Hospitality-establishments that implement socially, environmentally, and ethically responsible measurements are more attractive in terms of employment	0.605			
Taking pride in working in hospitality industry	0.65			
Hospitality industry provides good social involvement and relations with the managers and the team	0.801			
Hospitality-jobs encourage a positive environment based on flexibility, mutual recognition, and feedback-culture	0.864			
Hospitality-establishments emphasis on acting socially, environmentally, and ethically responsible in the daily business	0.879			

Table 3.

employers' points of view. The *general level of skills in the hospitality industry* correlates moderately ($r = -0.221$) and significantly ($p < 0.024$) with the *lack of professional workers in the regional labor market* for employers. Additionally, the correlations of *general level of skills in the hospitality industry* for both groups are moderate ($r = -0.226$ for employees and $r = -0.224$ for employers) with *low number of applicants with the required skills* and significance is found for both groups ($p < 0.010$ for employees and $p < 0.022$ for employers). *General level of skills* also provides highly significant results with *deficits between current skill levels of existing workforce and the optimum level of skills required* for employees ($p < 0.000$) and employers ($p < 0.005$); the correlation for employees is strong with an r-value of -0.313 while the correlation for employers is moderate with an r-value of -0.274 . Significant results were found between the item *ability to cope with daily tasks* and *low number of applicants with the required skills* for employees ($p < 0.038$), but the correlation was moderate ($r = -0.183$). The item *deficits between current skill levels of existing workforce and the optimum level of skills required* yields highly significant results with *ability to cope with daily tasks* for employees ($p < 0.002$) and significant results for employers ($p < 0.018$); however, the correlation is moderate ($r = -0.267$ for employees and $r = -0.231$ for employers). The correlation between *ability to cope with extraordinary tasks* and *deficits between current skill levels of existing workforce and the optimal level of skills required* for the subgroup of employees is significant ($p < 0.012$) and moderate ($r = -0.221$). Similarly, the correlation is significant ($p < 0.079$) and moderate ($r = -0.173$) for the employers. Therefore, H1 is supported for both employees and employers.

The results of digital skills and the shortage of professional workers are in Table 6. The correlation between *using MS Office* and the *difficulty in finding skilled and qualified employees, despite the provision of attractive wages/conditions* is moderate ($r = 0.205$) for the

Characteristic	N	Percent	Labor shortage in the rural hospitality industry
<i>Gender</i>			
Male	81	34.90	
Female	151	65.10	
<i>Age in years</i>			
18–25	87	37.50	37
26–35	83	35.80	
36–45	35	15.09	
46–55	17	7.32	
56–60	9	3.87	
>60	1	0.42	
<i>Employment role</i>			
Employee	128	55.20	
Employer	104	44.80	
<i>Highest educational degree</i>			
Secondary School	12	5.20	
Professional certificate after 3 years of Senior School	27	11.60	
High School Diploma	17	7.30	
University degree	111	47.80	
Not applicable	64	27.60	
	1	0.40	
<i>Marital status</i>			
Single	56	24.10	
Partnership	11	50.00	
Married	59	25.40	
Widowed	1	0.40	
<i>Family status</i>			
Kids	162	69.80	
Without Kids	70	30.20	
<i>Employment situation</i>			
Self-employed	97	41.80	
Permanent Full-time	51	22.00	
Permanent Part-time	5	2.20	
Seasonal Full-time	58	25.00	
Seasonal Part-time	8	3.40	
On-call work	9	3.90	
Internship	3	1.30	
Apprenticeship	1	0.40	
<i>Hospitality sub-sector</i>			
Accommodation/Hotel	139	59.90	
Gastronomy/Catering	49	21.10	
Both	44	19.00	
<i>Company size</i>			
0–9 employees	81	34.90	
10–49 employees	102	44.00	
50+ employees	49	21.10	
<i>Ownership structure</i>			
Family business	215	92.70	
Non-family business	17	7.30	

Table 4.
Profile of respondents

Table 5.
Overview of empirical
research-results for the
Spearman-rho
correlation analysis of
professional skills on
the shortage of
professional workers

	Lack of professional workers on the regional labor market		Low number of applicants with the required skills		Deficits between current skill levels of existing workforce and the optimum level of skills required							
	Employee <i>r</i>	Employer <i>r</i> Sig.	Employee <i>r</i>	Employer <i>r</i> Sig.	Employee <i>r</i>	Employer <i>r</i> Sig.						
General level of skills in hospitality industry	-0.098	0.269	-0.221*	0.024	-0.226*	0.010	-0.222	-0.313**	0.000	-0.274**	0.005	
Ability to cope with daily tasks	-0.114	0.202	-0.094	0.341	-0.183*	0.038	-0.098	0.320	-0.267**	0.002	-0.231*	0.018
Ability to cope with extraordinary tasks	-0.035	0.697	-0.154	0.118	-0.024	0.790	-0.030	0.761	-0.221*	0.012	-0.173+	0.079

	Low number of applicants with the required skills			Deficits between the currently available and the optimum level of skills required of the existing workforce			Difficulty in finding skilled and qualified employees, despite the provision of attractive wages/conditions			
	Employee <i>r</i>	Employer <i>r</i>	Sig.	Employee <i>r</i>	Employer <i>r</i>	Sig.	Employee <i>r</i>	Employer <i>r</i>	Sig.	
Using MS Office	0.034	0.722	-0.198*	-0.097	0.307	0.535	0.205*	0.030	0.088	0.389
Handling online booking and reservation systems	-0.003	0.972	0.058	-0.154	0.109	0.482	0.152	0.112	0.141	0.170
Using social media and review sites for business purposes	0.096	0.310	-0.053	-0.007	0.941	0.913	0.195*	0.038	0.087	0.394
Handling basic digital security measures	0.048	0.619	0.055	-0.157 ⁺	0.099	0.176	0.141	0.141	0.037	0.722
Using property management systems and electronic point of sales-systems	-0.030	0.752	0.057	-0.204*	0.031	0.077	0.213*	0.024	0.118	0.249

Table 6.
Overview of empirical
research-results for the
Spearman-rho
correlation analysis of
digital skills on the
shortage of
professional workers

subgroup of employees ($p < 0.030$). *Using MS Office* also correlates significantly with *low number of applicants with the required skills* for the sub-groups of employers ($p < 0.050$ and $r = -0.198$).

Using social media and review sites for business purposes once again yields a significant result for *difficulty in finding skilled and qualified employees, despite the provision of attractive wages/conditions*; however, the significance is limited to the subgroup of employees ($p < 0.038$) at a moderate correlation ($r = 0.195$). *Using property management systems and electronic point of sales-systems* and the item *deficits between the currently available and the optimum level of skills required of the existing workforce* produce significant results for the employees ($p < 0.031$) and employers ($p < 0.077$) both with a moderate correlation ($r = -0.204$; $r = -0.179$); it also produces significant results with the subgroup of employees ($p < 0.024$) for *difficulty in finding skilled and qualified employees, despite the provision of attractive wages/conditions* and a moderate correlation ($r = 0.213$).

Handling basic digital security measures correlates significantly with *deficits between the currently available and the optimum level of skills required of the existing workforce* for the subgroup of employees ($p < 0.099$ and $r = -0.157$). Therefore, H2 is supported for both employees and employers.

Table 7 presents the empirical results of the correlation analysis of green skills. Two of the three variables, namely *sustainable-responsible daily behavior* ($p < 0.047$), *knowledge about digital technologies to improve the use of resources for sustainability* ($p < 0.036$), provide moderate correlation ($r = -0.196$; $r = -0.213$) for the variable *deficits between current skill levels of existing workforce and the optimal level of skills required*. Nonetheless, this is restricted to a subset of employers. *Minimize environmental impact on daily business* correlates significantly with *low number of applicants with the required skills*. Also, in this case, this is limited to the subgroup of employers ($p < 0.075$ and $r = 0.176$). Consequently, H3 is partially supported, as green skills do impact the shortage of professional workers for employers, but not employees.

Table 8 displays the correlation analysis results for social skills. The items *communication skills* ($p < 0.000$) with a strong correlation ($r = 0.317$), *collaboration skills* ($p < 0.030$) with a moderate correlation ($r = 0.193$), *conflict management* ($p < 0.053$) with a moderate correlation, and *foreign language skills* ($p < 0.086$) with a moderate correlation ($r = -0.152$) show significant results for the subgroup of employees with a *small number of applicants with the required skills*. Except for the variable of *foreign language skills*, all the tested variables show significant results and moderate correlations for employees with reference to the variable *deficits between the currently available and the optimum level of skills required of the existing workforce*. In particular, the item *communication skills* demonstrates a p -value of 0.000 and an r -value of -0.361 ; *conflict management* demonstrates a p -value of 0.001 and a r -value of -0.288 ; and *collaboration skills* demonstrates a p -value of 0.000 and a r -value of -0.338 . With a moderate correlation ($r = -0.224$), *foreign language skills* correlates significantly with *low number of applicants with the required skills* ($p < 0.022$) and with *deficits between the currently available and the optimum level of skills required of the existing workforce* ($p < 0.065$) from the perspective of employers. The findings support H4 for both the employees and the employers.

Table 9 shows the results for the instrumental characteristics of the industry. Three instrumental attributes provide significant results for the variable *lack of professional workers in the regional labor market: adequate work intensity and workload* ($p < 0.021$) and *good social security and social advantages based on collective agreements* ($p < 0.021$) for employees; *adequate and fair compensation according to individual experience, skills, and commitment* ($p < 0.049$) for the subgroup of employers. The correlations between the variables in question are moderate ($r = -0.204$; $r = -0.204$; $r = 0.193$). The item *deficits between the currently available and the optimum level of skills required of the existing workforce* shows significant results for employees in relation to the item *adequate work-life balance with*

flexible and adequate working hours with a p -value of 0.002 and a moderate correlation ($r = -0.270$); for *adequate work intensity and workload* the significance is very high with a p -value of 0.000 and a strong correlation ($r = -0.331$); also *adequate and fair compensation according to individual experience, skills, and commitment* is significant ($p < 0.014$) with a moderate correlation ($r = -0.217$). However, only *generally good earnings opportunities* demonstrate significant results for the subgroup of employers ($p < 0.008$) with a moderate correlation ($r = 0.257$). *Difficulty in finding skilled and qualified employees, despite the provision of attractive wages/conditions* results in statistically significant correlations with the following variables: *generally good earning opportunities* ($p < 0.002$) and *adequate and fair compensation according to individual experience, skills, and commitment* ($p < 0.005$) for the subgroup of employees; for the subset of employers *adequate work intensity and workload* ($p < 0.009$), *good social security and social advantages based on collective agreements* ($p < 0.016$), and *employment in hospitality offers job security on the long term* ($p < 0.027$) are significantly correlated with moderate strength ($r = 0.255$; $r = 236$; $r = 217$). *Generally good earning opportunities* ($p < 0.001$; $r = 0.317$) and *adequate and fair compensation according to individual experience, skills, and commitment* ($p < 0.000$; $r = 0.386$) demonstrated extremely significant results with strong correlations. Consequently, the results support H5 for both the employees and the employers.

Table 10 shows that *deficits between the currently available and optimum level of skills required of the existing workforce* demonstrate highly significant results for employees ($p < 0.005$) in terms of the variable *higher attractiveness of hospitality-establishments that implement socially, environmentally, and ethically responsible measurements* with a moderate correlation ($r = 0.246$). It also correlated significantly with the subgroup of employees with

	Low number of applicants with the required skills				Deficits between the currently available and the optimum level of skills required of the existing workforce			
	Employee		Employer		Employee		Employer	
	<i>r</i>	Sig.	<i>r</i>	Sig.	<i>r</i>	Sig.	<i>r</i>	Sig.
Minimize environmental impact in daily business	0.054	0.548	0.176 ⁺	0.075	-0.022	0.804	-0.122	0.220
Sustainable-responsible daily behavior	0.009	0.921	-0.160	0.107	-0.100	0.267	-0.196*	0.047
Knowledge about digital technologies to improve the use of resources for sustainability	0.025	0.790	-0.070	0.493	-0.068	0.463	-0.213*	0.036

Table 7. Overview of empirical research-results for the Spearman-rho correlation analysis of green skills on the shortage of professional workers

	Low number of applicants with the required skills				Deficits between the currently available and the optimum level of skills required of the existing workforce			
	Employee		Employer		Employee		Employer	
	<i>r</i>	Sig.	<i>r</i>	Sig.	<i>r</i>	Sig.	<i>r</i>	Sig.
Communication skills	-0.317**	0.000	-0.153	0.124	-0.361**	0.000	-0.154	0.122
Conflict management	-0.173	0.053	-0.091	0.366	-0.288**	0.001	-0.135	0.176
Collaboration skills	-0.193*	0.030	-0.026	0.791	-0.338**	0.000	-0.129	0.194
Foreign language skills	-0.152	0.086	-0.224*	0.022	-0.139	0.117	-0.181	0.065

Table 8. Overview of empirical research-results for the Spearman-rho correlation analysis of social skills on the shortage of professional workers

Table 9.
Overview of empirical
research-results for the
Spearman-rho
correlation analysis of
instrumental attributes of
the industry on the
shortage of
professional workers

	Lack of professional workers on the regional labor market			Deficits between the currently available and the optimum level of skills required of the existing workforce			Difficulty in finding skilled and qualified employees, despite the provision of attractive wages/ conditions							
	Employee <i>r</i>	Employer <i>r</i>	Sig.	Employee <i>r</i>	Employer <i>r</i>	Sig.	Employee <i>r</i>	Employer <i>r</i>	Sig.					
Adequate work-life balance with flexible and adequate working hours	-0.131	0.140	0.140	-0.100	0.315	0.315	-0.270**	0.002	-0.059	0.552	-0.045	0.612	0.157	0.112
Adequate work intensity and workload	-0.204*	0.021	0.021	-0.051	0.609	0.609	-0.331**	0.000	-0.030	0.763	-0.043	0.627	0.255**	0.009
Generally good earning opportunities	-0.018	0.840	0.840	0.120	0.223	0.223	-0.103	0.249	0.257**	0.008	-0.276**	0.002	0.317**	0.001
Adequate and fair compensation according to individual experience, skills, and commitment	-0.012	0.897	0.897	0.193*	0.049	0.049	-0.217*	0.014	0.098	0.325	0.249**	0.005	0.386**	0.000
Employment in hospitality offers job security on the long term	-0.088	0.321	0.321	0.043	0.664	0.664	-0.004	0.967	0.041	0.678	0.098	0.269	0.217*	0.027
Good social security and social advantages based on collective agreements	-0.204*	0.021	0.021	0.127	0.200	0.200	-0.105	0.240	0.144	0.144	0.091	0.308	0.236*	0.016

	Deficits between the currently available and the optimum level of skills required of the existing workforce				Difficulty in finding skilled and qualified employees, despite the provision of attractive wages/conditions			
	Employee <i>r</i>	Employer Sig.	Employee <i>r</i>	Employer Sig.	Employee <i>r</i>	Employer Sig.	Employee <i>r</i>	Employer Sig.
Pride in working in hospitality industry	-0.055	0.541	-0.125	0.205	0.031	0.725	0.174 ⁺	0.078
Provision of good social involvement and relations with managers and team	-0.167 ⁺	0.059	-0.039	0.698	0.162 ⁺	0.067	0.229*	0.019
Provision of positive environment based on flexibility, mutual recognition, and feedback-culture	-0.105	0.239	0.078	0.434	0.123	0.168	0.187 ⁺	0.057
Hospitality-establishments emphasis on acting socially, environmentally, and ethically responsible in the daily business	-0.159 ⁺	0.074	0.051	0.604	0.002	0.979	0.267**	0.006
Enjoying the social aspect of direct customer interaction with guest	-0.131	0.142	-0.155	0.117	0.097	0.275	0.117	0.238
Higher attractiveness of hospitality-establishments that implement socially, environmentally, and ethically responsible measurements	-0.246**	0.005	-0.019	0.845	0.043	0.631	0.105	0.288

Table 10. Overview of empirical research-results for the Spearman-rho correlation analysis of symbolic attributes of the industry on the shortage of professional workers

the provision of good social involvement and relations with managers and team ($p < 0.059$) and *hospitality-establishments emphasis on socially, environmentally, and ethically responsible daily business* ($p < 0.074$), with a moderate effect for both variables ($r = 0.167$; $r = 0.159$). *Difficulty in finding skilled and qualified employees, despite attractive wages/conditions*, correlates significantly with both employees ($p < 0.067$) and employers ($p < 0.019$) with *the provision of good social involvement and relations with managers and team* ($r = 0.162$; $r = 0.229$). It also correlates with *pride in working in the hospitality industry* ($p < 0.078$), *provision of a positive environment based on flexibility, mutual recognition, and feedback-culture* ($p < 0.057$), and *hospitality-establishments emphasis on acting socially, environmentally, and ethically responsible in daily business* ($p < 0.006$). Therefore, the results support H6 for both the employees and the employers.

5. Discussion and conclusions

5.1 Conclusions

This study seeks to determine which factors influence the shortage of professional workers in the hospitality industry, and to what extent this is impacted by the sector's image.

First, the results indicate that both skill gaps and genuine skill shortages occur, with the latter occurring when shortages occur despite the provision of competitive conditions (Cedefop, 2015). Employers have difficulty finding workers with adequate skills, and this applies to all skill levels and types (Brunello and Wruuck, 2019). Both factors were found

to contribute to the shortage. Discrepancies in required skill levels can be attributed to the theoretical concept of vertical skill mismatch in the form of skill shortages, whereas for skill types, it can be assumed that candidates do not possess the appropriate skills for the current position, which relates to horizontal mismatch (Gambin *et al.*, 2016; McGuinness *et al.*, 2018).

Our findings indicate that each of the tested hypotheses is significant. Therefore, a tendency can be inferred from the fact that the corresponding correlations for the confirmed alternative hypothesis appear to be generally moderate.

The level of professional skills is viewed favorably by both employers and employees, but challenges exist regarding the availability of the appropriate skill types in the labor market. According to our results, the level and type of professional skills (Cappelli, 2015; Green, 2016; McGuinness *et al.*, 2018; Quintini, 2011) are a factor in the shortage of professional workers.

To compensate for the lack of required skill types, individuals with varying skill levels are hired (Lacher and Oh, 2012). On the contrary, this also means that employees with inadequate qualifications and/or skills can still find attractive employment opportunities in the hospitality industry. This complements the current situation, as the hospitality industry is frequently referred to as an entry-level occupation for young people (Iorgulescu *et al.*, 2020; Strietska-Ilia and Tessaring, 2005).

Even though they are developed at different levels, the three fields of digital, green, and social skills show significant correlations with the shortage of professional workers. For digital skills, it has been discovered that they do impact the shortage of professional workers. According to the literature, SMEs, in particular, lack in digital skills (CSES, 2016; European Commission, 2017). According to the study findings, this is also true for the rural hospitality industry in Northern Italy, with digital skills falling far short of the industry's daily requirements. This could be related to the fact that SMEs, in particular, outsource social media, online marketing, and other digital measurements (Paraskevas, 2002). This is likely to apply to the hospitality industry under consideration, as there are numerous specialized marketing agencies, alongside various hotels and gastronomy associations and consortia (Eurac, 2020).

Green skills can also be considered as influencing factors in the shortage. Green skills are expected to become more important in the hospitality industry, and given the importance and urgency of sustainability, this should already be the case (Ivanov *et al.*, 2014; Jonckers, 2005; NTG Alliance, 2019; Unioncamere, 2020). Our findings confirm that some green skills are required for hospitality jobs, particularly the adoption of sustainable-responsible daily behaviors and knowledge of technologies ready to improve resource use concerning sustainability. This is especially important for employers who are already engaged in sustainability practices at various levels of their organizations, but it is also important for employees to be more appealing in hiring processes performed by hospitality firms.

Some intriguing findings can be drawn from the perceptions of employees and employers regarding social skills. Communication, conflict resolution, collaboration skills, and foreign language abilities are important social skills to employees. Foreign language ability is also a significant social skill for employers. This reflects the importance of intercultural communication skills as a tool for improving hotel service quality (Yang *et al.*, 2022). Regardless of how these skills are evaluated, the provided skill levels are found to be in line with the current requirements of today's hospitality businesses based on the responses (Jaschik, 2016; Schooley, 2017).

According to the literature, the general circumstances of employment in the hospitality industry are a strong influencing factor (Brotherton and Wood, 2008). This line of thought is supported by our findings. Work-life balance, work intensity and workload, earning opportunities, adequate compensation, job security, social security, and social benefits are all significant factors for employees' or employers' sub-groups. As a result, it can be stated that

perceived industry benefits lead to fewer shortages of professional workers (Brotherton and Wood, 2008; Brunello and Wruuck, 2019; Quintini, 2011). Although they do not share the same influencing factors regarding characteristics, both sub-groups agree on this statement.

For the hospitality industry's image, 46.60% of the total sample believes it is good or very good, whereas 36.60% believes it is poor or very poor. The descriptive analysis reveals that many of the image-variables mentioned do not provide relevant differences in perceptions between employees and employers. Employees, on average, rate the image slightly lower, which complements the findings of a similar study conducted for the hospitality industry in Bavaria, Germany (Schwaiger *et al.*, 2021).

Spearman-correlation analysis for subgroups of employees and employers shows that employees are more focused on the features of the hospitality industry that make it more appealing regarding social, environmental, and ethical measurements as a tool to reduce the gap between the currently available and optimum level of skills required of the existing workforce in the studied area. Employers, who face daily business responsibilities, see hospitality organizations' emphasis on social, environmental, and ethical responsibility as a barrier to finding and retaining skilled and qualified employees, despite attractive wages and conditions. Organizations that have begun a path of financial, social, ethical, and environmental sustainability need human resources that can integrate into these complex and new processes. Complexity of tasks requires skills that are hard to find on the job market.

5.2 Theoretical implications

Unlike previous research on skill shortages in the hospitality industry, which focused solely on the supply or demand side, this study examines both the employees' and employers' perspectives concurrently. This article determines whether there is a difference in perception among those involved in the sector with regard to the various factors that explain the shortage of professional workers. As a result, the findings support the initial hypotheses regarding the important relationship between professional, digital, green, and social skills and professional worker shortages. Discrepancies in required skill levels, i.e. vertical or horizontal skill mismatch, influence skilled worker shortages (McGuinness *et al.*, 2018), which our study confirms. Furthermore, this study is among the first to compare both perspectives while also considering the industry image, addressing a research gap. The study, in particular, distinguishes between instrumental and symbolic dimensions and attempts to apply these factors to the image of the rural hospitality industry, lending support to Lievens and Highhouse (2003), who suggested that people associate symbolic meanings, but also specific objective functions, with brands. The findings show that both dimensions can influence the shortage of professional workers, but employers and employees prioritize different factors. As a result, we supplement this limited research by discovering differences in employee and employer perceptions of instrumental and symbolic attributes. Finally, most available research focuses on urban areas, whereas this study examined skills in rural hospitality because it is critical to deepen the collective understanding of the rural hospitality industry as a viable employment option.

5.3 Practical implications

High turnover and an impending labor shortage have made recruiting new employees a priority. This study addresses the under-researched stakeholder group of existing hospitality employees, particularly skill deficiencies. In today's competitive hospitality industry, high-quality staff is crucial for providing memorable guest experiences and business success. This is especially important in rural hospitality, where employee skill sets contribute to attracting tourists (Dimitrovski *et al.*, 2012). Based on our findings,

hospitality employers can identify and implement practical solutions to mitigate the shortage of skilled workers, such as improving working conditions in general, investing in digital technologies to reduce manual operations (Carlisle *et al.*, 2021) and facilitate realistic career planning (Goh and Okumus, 2020). It is important to note that strategic human resource management focuses on allocating the right resources to meet a company's future needs in light of its structure, culture, values, and commitment to deliver long-term value to the organization and its stakeholders. As a result, businesses must invest in the development of their employees as a critical asset (King *et al.*, 2021; Omondi-Ochieng, 2018). However, strategic human resource management must allocate the appropriate human resources to meet the company's future needs.

Furthermore, employees with insufficient skills for their occupation increase the workload on the remaining staff. Thus, it is critical for the HR department to identify such skill deficiencies to achieve optimal matching between the skills provided and those required at the workplace through specialized training and workshops (Waqanimaravu and Arasanmi, 2020).

Furthermore, employers may consider how their industry's image needs to change to gain a positive perception from current and potential new employees to deal with the long-term shortage of professional workers. Employer branding as a strategic approach for companies in the industry can help to improve the overall image (Gehrels *et al.*, 2016).

Policymakers may also benefit from our findings, which may assist in identifying the best focal points for strategies promoting the hospitality sector, such as through hospitality education.

5.4 Limitations and future research

There are several limitations to the study. The first relates to the target group's selection, which is limited to current employees and employers. It may be necessary to include future and former industry employees to conduct a comprehensive and holistic evaluation.

Second, the elaborated conceptual model only applies to influencing factors from the employee's perspective; thus, the question arises as to whether qualitative research on influencing factors from the employer's perspective is still required, given that the factors derived from the literature were, with few exceptions, limited to employees (Lievens and Slaughter, 2016; Tanwar and Prasad, 2016).

Finally, some intriguing trends and findings have been identified in the rural hospitality industry in Northern Italy. However, due to the diversity of potential labor-related aspects in comparison to other rural destinations, generalizing information is not advised. Additional research with a larger sample size is required.

Furthermore, investigating additional relationships may provide insights into industry employment. These include studies on marital status and gender on employment, especially for assessing industry characteristics or comparing non-family and family businesses. In addition to the previously mentioned aspect, comparing the image of tourism among former, current and future hospitality employees can provide useful insights into identifying measures to improve the image. The shortage of professional workers can also be analyzed by education level and job position to compare executive and low-level positions. Future research could also consider hotel category to compare luxury and budget hotel employees and employers.

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Further reading

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(The Appendix follows overleaf)

Construct	Questions	Items
Shortage of professional workers	How would you assess the following statements about the Hospitality Industry? (if you are an employee, please answer according to your perception)	Lack of professional workers on the regional labor market Small number of applicants with the required skills Deficits between current skill levels of existing workforce and the optimum level of skills required Difficulty to find workers with the right skills and qualifications for some occupations, despite the provision of attractive wages and working conditions
Digital skills	How you would assess the quality of digital skills and abilities in your work environment? (if you are an employee, please answer according to your perception)	Using MS Office Handling online booking and reservation systems Using social media and review sites for business purposes Using property management systems and electronic point of sales-systems Handling basic digital security measures
Social skills	How you would assess the quality of social skills and abilities in your work environment? (if you are an employee, please answer according to your perception)	Communication skills Conflict management Collaboration skills Foreign language skills
Green skills	How you would assess the quality of green skills and abilities in your work environment? (if you are an employee, please answer according to your perception)	Minimization environmental impact Responsible daily behavior Knowledge about digital technologies to improve the use of resources
Professional skills	How would you generally assess the level of skills in the hospitality industry? If you are an employee, please reflect on your skills-level in form of a self-assessment approach	On average, the general level skills in the hospitality industry are really high Employees are able to cope with daily tasks of their job role by using their basic skills Employees are able to cope with extraordinary tasks or situations of their job role
Instrumental attributes of employment	How would you assess the following statements about the Hospitality Industry? (if you are an employee, please answer according to your perception)	Adequate work-life balance with flexible and adequate working hours The work intensity and workload are adequate Employment in hospitality offers job security on the long term Employment in hospitality provides good social security and social advantages, based on collective agreements Offers generally good earning opportunities Offers adequate and fair compensation according to individual experience, skills, and commitment

Table A1.
Construct, questions,
and items used

(continued)

Construct	Questions	Items
Symbolic Image attributes	How would you assess the following statements about the Hospitality Industry? (if you are an employee, please answer according to your perception)	Hospitality-establishments emphasis on acting socially, environmentally, and ethically responsible in the daily business Hospitality-jobs encourage a positive environment based on flexibility, mutual recognition, and feedback-culture Hospitality industry provides good social involvement and relations with the managers and the team Taking pride in working in hospitality industry Hospitality-establishments that implement socially, environmentally, and ethically responsible measurements are more attractive in terms of employment Enjoying the social aspect of direct customer interaction with guest

Labor shortage in the rural hospitality industry

Note(s): Own representation

Table A1.

Corresponding author

Anita Zehrer can be contacted at: anita.zehrer@mci.edu

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