

# Mapping the landscape of online job vacancies

## Background report: Austria

**Study:** Real-time labour market information on skills requirements: Setting up the EU system for online vacancy analysis

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## **Preface**

Over the last decades, online job portals have become important features of the job market. The Internet offers a rich source of live and real-time labour market information for almost all of occupations. It can provide insight on job-specific skills required in particular occupations in different regions, combined with information on the characteristics of the job offered – i.e. much more than is available using conventional sources. However, consistent and comparative information on the use of the internet and online job market by job-seekers and employers in Europe is rather scarce.

To tap the potential of online labour market information, Cedefop started to investigate the possibility to develop a system for gathering and analysing data from online job portals in the EU to complement the centre's toolkit of skills intelligence instruments. While this is feasible, drawing meaningful conclusions from these data requires a good understanding of the features of national online job markets. Therefore, Cedefop has mapped the landscape of the online job market in all EU Member States. This publication presents one of the background country reports developed in the project - 'Real-time labour market information on skills requirements: Setting up the EU system for online vacancy analysis' (AO/DSL/VKVET-GRUSSO/Real-time LMI 2/009/16). Its findings will inform the cross country comparison published in the upcoming synthesis report.

The work was undertaken by a consortium of external contractors: CRISP (Milano/IT), Tabulaex (Milano/IT) and IWAK (Frankfurt/DE) and their network of country experts (see annex 1 for detailed list) and closely supervised by Cedefop. It presents authors' analysis of the landscape of the online job portal market in the country using a methodology developed for the purpose of the project.

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## List of Abbreviations

<b>AMS</b>	Austrian Labour Market Service (Arbeitsmarktservice)
<b>IBW</b>	Research Institute for Austrian Businesses (Institut der Bildungsforschung der Wirtschaft)
<b>LFS</b>	Labour Force Survey
<b>PES</b>	Public Employment Service
<b>OJV</b>	Online Job-Vacancy

# Introduction

With the project “Real-time Labour Market Information on Skill Requirements: Setting up the EU System for Online Vacancy Analysis”, Cedefop explores online job-vacancies (OJVs) as a new source of real-time Labour Market Information. By crawling the most important online job-portals of the 28 EU Member States, Cedefop will further its understanding of the changing skills demand in different sectors and occupations. A systematic overview of the online job-portal landscape in each of the 28 EU Member States will identify the most relevant online job-portals and provide context for the data scraped from them. With the Landscaping Activity, Cedefop seeks to acquire insights into the structure of online job-portal markets and the extent to which online job-portals are used in recruitment and job-search. Furthermore, it aims to better understand which factors cause variation in the formats and content of OJVs in different countries.

This Country Report was compiled between April and October 2017 and constitutes a first overview of the online job-portal landscape in Austria. It is based on desk research of available data sources in Austria (e.g. public data, academic research and publications of interest groups) and expert opinions. Chapter 1 describes the methodology used for compiling the report in terms of the relevant search paths and data sources. Chapter 2 gives an overview of the main drivers for the use of online job-portals in recruitment and job-search, while Chapter 3 concentrates on the characteristics of the online job-portal market and lists the most important players. Moreover, it seeks to understand to what extent OJVs published on the online job-portals provide adequate information on the developments in the Austrian labour market in terms of the number of vacancies and representation of sectors/occupations. Furthermore, it elaborates on the legal and regulatory framework guiding the activities of the job-portal owners and employers, highlights the differences between the public versus private online job-portals and delineates their relationships with one another. Chapter 4 covers the use of online job-portals in recruitment and job-search. It focuses on the differences in the behaviour of employers and job-seekers across sectors, occupations, qualification levels and regions. Chapter 5 presents the most important online job-portals in Austria for web-crawling and describes a step by step process of the OJV drafting and posting on select private and public online job portals. Chapter 6 concludes the Country Report by describing the main features of OJVs in Austria in terms of format and content. In particular, it explores to what extent OJVs contain information pertaining to hard and soft skills required for the job, how these skills are characterised and what they reveal about the nature of the job.

# 1. Methodology

## 1.1. Search Paths

Desk research concerning the OJV market in Austria took place from 15 April to 15 May 2017. The main source of the desk research was the Internet, using keywords on Google. The English translations of these keywords are: “Job Offers”, “Jobs Austria”, “Career Austria”, “Job search”, “online Job-portal”, “Job offers Austria”, “Job search Austria” and “Job-Portal(s) Austria”. Google scholar was also consulted, but provided no useful information.

The results were mainly private portals containing OJVs, as well as recruitment websites and personnel management firms. Furthermore, we looked for research articles and reports on websites of research organisations, like AMS-Forschungsnetzwerk<sup>1</sup>, Austrian Institute of Economic Research<sup>2</sup>, Institute for Advanced Studies<sup>3</sup> or Vienna University of Economics and Business<sup>4</sup>, but we found few useful results.

## 1.2. Data Sources

### 1.2.1. Public Data/Academic Research and Research/Surveys of Interest Groups

An article published by the public employment office on the subject of Big Data as an information source for regional labour market monitoring turned out to be the best and most recent scientific source of online advertisement analysis (Plaimauer 2016). This highly relevant scientific article was published in 2016 and is important, as online job-advertisements are the main object of this investigation. The paper was published as part of a scientific publication series of the Public Employment Service (PES) of Austria (AMS)<sup>5</sup>, which regularly covers up-to-date labour market issues. The methodology of the Big-Data analysis uses an approved technical concept, which was developed and tested in the Netherlands and subsequently used in countries like France, Germany, Belgium, Great Britain and Italy.

### 1.2.2. Expert Opinions

Because of the limited information in published material on OJVs in Austria, we had to focus on the opinions of experts. However, our efforts to find an expert at the Official Statistical Office of Austria were not successful. We wrote detailed e-mails to potential interviewees suggested by IWAK, but nobody felt confident in their ability to cover the topic of OJVs. Thus, in agreement with IWAK, and after checking again with the Statistical Office, we decided to forego this interview.

In total we completed six expert interviews: we spoke to one representative of the Public Employment Service, two representatives of private online job-portals and three representatives of Human Resources/Personnel Management/Consulting/Head Hunting. We approached other potential ex-

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<sup>1</sup> <http://www.ams-forschungsnetzwerk.at/deutsch/publikationen/amspub.asp?jahr=2016&first=0&sid=559055>

<sup>2</sup> <http://www.wifo.ac.at/en>

<sup>3</sup> <https://www.ihs.ac.at/>

<sup>4</sup> <https://www.wu.ac.at/en/research/research-at-wu/>

<sup>5</sup> In German “Arbeitsmarktservice Österreich“ (AMS).

perts from specific occupations and sectors, but they seemed to know much less than people engaged in personnel management. In the case of the PES, we spoke with the head of the Service for Companies & EURES, who is also deeply involved in the use of the online job-portal of AMS, called eJob-Room.

Even though there were hardly any studies, reports or articles on the situation of job-portals or OJV-use in Austria, the information collected through Google search and the expert interviews offered good insight into the job-portal landscape.

**Table 1: Overview of the different sources used in the Landscaping Activity<sup>6</sup>**

Type of source	Title/year	Provider	Information on			Quality
			Share of existing vacancies on online job-portals (PES/private)	Use of OJVs per sector/occupation/qualification level/ region	Skills requirements in OJVs	
<b>Source 1: Public data/academic research</b>	Plaimauer, Claudia (2016): Big Data als Informationsquelle für regionales Arbeitsmarkt-Monitoring: Online-Stellenanzeigen analysieren mittels "Jobfeed"	PES, AMS Info 339	Sound estimation of the total number of OJVs in 2015: 700.000-840.000	No concrete data, but explanations that Jobfeed offers the possibilities to investigate all OJVs according to certain criteria (e.g. region, occupation, skills etc.)	See comment on the left	Scientific article of good quality
<b>Source 3: Expert opinions</b>	Expert Opinions 2017	Expert interviews 1-7	Rough estimation: 80% of all firms use OJVs	No sound information	Rather high skill demand in the private sector	Rather superficial
			eJob-Room of PES covers all OJVs officially reported to PES by companies; approx. 75,000 ads); in addition a Job-Roboter links from PES to private OJVs	Information on some specialised sectoral job-portals; skill-demand declines from private to public sector	Rather high skill demand in the private sector; in PES: skill requirements rather below average; confirmed by the other experts)	Very good and helpful for PES, less information on private sector
			Stresses the importance of OJVs for any kind of company (with only rare & special exceptions) for the future of the labour market; new technological developments (social media, matching apps) are a growing sector	Rather a lot of information on different technological & creative approaches in using OJVs than on differences between sectors, etc.	Rather high skill demand in the private sector	Very good and helpful (for private sector)
			OJVs are the dominantly used tools for companies; specialisations for certain branches can be detected	Information on some specialised sectoral job-portals	Rather high skill demand in the private sector	Very good and helpful (for private sector)
			As a player logically convinced of the importance & dominant role of job-	Little information provided	Rather high skill demand in the private sector	Good (for private sector)

<sup>6</sup> Source 2 (research/surveys of interest groups) did not provide information on the share of existing vacancies on online job-portals, use of OJVs per sector/occupation/qualification level/region or skills requirements of OJVs.

			platforms			
			As a player logically convinced of the importance & dominant role of job-platforms; pointing out that job-platforms develop to a full-service-offer for companies	Rather a lot of information on the development processes of job-portals than on differences between sectors, etc.	Rather high skills demand in the private sector	Very good and helpful (for private sector)

Source: Bittner (2017).

## 2. Labour Market Dynamics and Impact on the Online Job-portal Market

At the end of January 2016, 424,989 persons were registered as unemployed in Austria. According to EUROSTAT, the current unemployment rate in Austria is 5.8%, signifying a rise of 0.2 percentage points compared to the previous year's figure. In terms of persons, this signifies 18,750 or 4.6% more individuals than a year ago. Including those on training courses, 490,246 persons were unemployed, an increase of 17,707 or 3.7% compared to the previous year. However, in the past months, the number of employed people also increased. At the end of January, 3,480,000 persons in Austria were employed. There were 34,000 or 1% more employed people than a year ago (Federal Ministry of Labour, Social Affairs and Consumer Protection 2016).

The unemployment rate is decreasing most significantly in the following sectors: construction, production, tourism and trade. In spite of this positive development, some groups are having more difficulty on the labour market, namely persons older than 50, long-term unemployed persons and disabled persons.

The relatively good economic situation in Austria is also demonstrated by the development of job-vacancies: the number of registered vacancies amounts to approximately 60,000, which is an increase of more than 40% compared to the previous year (Arbeitsmarktservice Österreich 2017). As a result of the growth in vacancies, companies may see increased benefit from using online job-portals to find and attract job candidates.

The EU Skills Panorama shows that at the moment, the largest share of employment in Austria can be found in the following sectors: manufacturing (16%) and wholesale & retail trade (14%). The highest rates of employment change until 2025 are expected in real estate, wholesale & retail sale, education and information/communication (EU Skills Panorama 2017).

The job vacancy rate in Austria is slightly above the EU-average and has been constant in the period from 2013 to 2015, with a slight increase in 2015. The sector with the highest job vacancy rate is accommodation and food service activities (4%) (CRISP 2016).

The Statistical Office of Austria (Statistik Austria) carried out its first Job Vacancy Survey in the first quarter of 2009. In 2016, 72,800 vacancies were reported, representing an increase of 9.3% compared to 2015, when there were 66,600 vacancies. Service and sales workers accounted for 25.4% of all vacancies, while technicians and associate professionals accounted for 17.2% and craft and related trade workers accounted for 15.5% and 8% of all vacancies were for elementary occupations. Compulsory education was required for 37% of all vacancies, whereas 21.3% of all vacancies required secondary school certificates or a higher degree. For 42% of all vacancies, the expected gross income was below EUR 1,700 and for 27.1% it was between EUR 1,700 and EUR 2,400. Part-time jobs represented 14.4% of all vacancies, while 2.9% are vacancies for minors. Nearly one out of ten vacancies were for seasonal work (Statistik Austria). The survey contains no information on recruitment channels.

The occupations with the largest shares in employment in Austria in 2015 were "Business & administration associate professions" (>8%), "Sales Workers" (7.7%) and "Personal Service workers" (approximately 6%). "Service and sales work" is the occupation where most of the currently unemployed people used to work before they became unemployed.

Austria has a high rate of newly employed people (16% in 2015), which is well above the EU-average and a sign of high fluctuation on the Austrian labour market (Eurostat LFS). However, when it comes to projected job-openings until 2025, “skilled agricultural workers” is anticipated to have to most new openings, with need for more than 140,000 people, followed by “Sales workers” and “Business & administration associate professions” (EU Skills Panorama 2017).

A typical feature of the Austrian labour market is the relatively high share of part-time employment, which affects women more than men. Moreover, the service sector is growing, with a high rate of small, very often one-person, enterprises, which leads to precarious working and income conditions.

Austria also faces the problem of having to hire less-skilled workers for highly-specialised job vacancies. Besides an insufficient motivation for work in Austria, the education system is another factor that seems to be lagging behind economic developments, which leads to a great demand for foreign workers to fill highly specialised jobs, especially in IT (Fink et al. 2015). The most common approaches to recruiting for hard-to-fill specialised vacancies are offering higher wages and social benefits through international recruitment or using head hunting agencies. Specialised social networks focused on specific sectors or occupations are also used. As the experts state, the interest in and the quantity of online-job advertisements is higher in sectors with a higher labour force demand, although this cannot be confirmed by statistics.

Very low-skilled workers are replaced more and more by automation, especially in construction and manufacturing. They are the group most prone to unemployment and have low chances of being reintegrated into the labour market. As a recent study of the Institute for Higher Studies shows, 30% of the current low-skilled positions have the potential to be replaced within 10 to 20 years due to digitalisation and automation processes (der Standard.at 2017).

In 2013, approximately 30% of the enterprises in Austria provided advertisements of open job positions or online job-applications on their company websites, which is far above the EU-average, but below the level in Germany. Large enterprises used social media to recruit employees at a rate of over 40%, medium enterprises at 30% and small enterprises at just below 20% (Eurostat ICT survey).

## 3. Context and Characteristics of the Online Job-portal Market

### 3.1. PES Online Job-portal(s)

#### 3.1.1. Legal/Regulatory Framework

In Austria, online job advertisements, regardless of whether they are public or private, have to fulfil criteria related to the Law for Equal Treatment (GIBG), which states that job-advertisements always have to address both sexes (i.e. job titles must use the masculine and feminine forms). Characteristics such as skin colour, sexual orientation, age, religion or a handicap may not be taken into consideration and no incitements to illegal action are allowed. The AMS has the public mandate to post job-advertisements on its job-portal, eJob-Room. The portal strictly sticks to this procedure, as do most private sector employers, although some private job-portals might not mind paying the relatively low fine for a violation (i.e. for withholding OJVs from eJob-Room).

#### 3.1.2. Organisational Structure of the PES Online Job-portal(s)

The Austrian Public Employment Service (AMS) offers a comprehensive Austrian job-database (eJob-Room) to assist in the job-seeking process, as well as a detailed list of links to public and private resources. The database is open to all job seekers in Austria. The PES also offers advisors for job-seekers. All clients of the PES have access to the eJob database through access terminals located at the PES-offices, in case they do not have Internet at home. Nowadays, due to the high rate of Internet penetration in Austria, nearly everyone can check eJob-Room for OJVs outside of the PES offices as well. Companies who want to place OJVs on eJob-Room have to register with the PES and report their OJVs using criteria defined by the PES.

The Dutch company Textkernel has collaborated with the Austrian PES to develop a version of its tool, Jobfeed, for the Austrian labour market. Jobfeed offers an overview of online jobs. It is also a valuable source of information and a unique analytical tool for recruitment agencies, job boards and mobility and research organisations. Jobfeed collects jobs from the Internet and structures, classifies and enriches the information, making the labour market searchable and more transparent. It is the leading Big Data tool for jobs in Germany, France, the Netherlands and Belgium and has been available in Austria since March 2015. According to our findings, this project might be of some relevance for this project.

One feature of Jobfeed is the ability to analyse skills appearing in OJVs. On the Austrian Jobfeed portal, skills and competences are extracted from jobs and made searchable. This allows users to research which skills are most desired in certain professions. This Big Data platform for Austrian OJVs, initiated by the PES and executed in co-operation with the Austrian company, 3s Consultancy, is currently in a test phase. This platform mines OJVs from many sources and transforms them into a standardised format, so they can be analysed. For instance, one could enter the query “Which profession had the highest number of OJVs in the third quarter of 2015 in Vienna?” The PES may also use these findings to adapt expected qualification requirements for specific occupations or to improve the quality of its OJV-offers.

Below are several of the specific features of the Jobfeed Big Data platform:

- Spidering (“Wild-Spider” and scripts) from websites;

- Classification of the formats;
- Extraction of information;
- Normalisation & Matching;
- Re-Duplication;
- Monitoring & Quality control;
- The process runs 24/7.

Jobfeed Austria currently mines approximately 4,000 websites and extracted nearly 700,000 unique job advertisements in 2015, which is a large proportion of all nationally advertised jobs (Plaimauer 2016).

### **3.1.3. Focus of the PES Online Job-portal(s)**

The official online job-portal of the public employment service, eJob-Room, which covers a high number of vacancies in close cooperation with recruiting companies (which have to register before using the services - see Section 5.2.1), is especially important for low-qualified jobs. That is why companies looking for high-qualified workers seldom use the services of eJob-Room. The users of eJob-Room are predominantly registered unemployed persons. The eJob-Room covers all sectors, offers its services to companies of any size and acts nationally, even though no publications or data could be found on the shares or patterns concerning sectors, firm size or regional aspects. Also our experts could not provide sound information on that subject.

### **3.1.4. Outreach of the PES Online Job-portal(s)**

At the moment, more than 73,000 jobs are listed on eJob-Room. All open jobs reported to the PES are available via eJob-Room, which is why the total number of OJVs is rather high compared to private portals.

On average in 2016 more than 260,000 applications and more than 110,000 job offers were available. On average more than every third unemployed person had an eAMS-account (16% more than the year before). The AMS-Job-App was installed on approximately 130,000 smartphones und tablets.

### **3.1.5. Posting of PES Vacancies on EURES**

The PES regularly feeds nearly all OJVs on its database into the EURES platform with the exception of apprenticeship positions and jobs with the Federal Armed Forces. The EURES platform itself is of rather low relevance for employers when recruiting, as all expert interviews confirmed.

## **3.2. Private Online Job-portals**

### **3.2.3. Legal/Regulatory Framework**

For details on legal and regulatory framework see Section 3.1.1.

### **3.2.4. Dominant Online Job-Portals and Their Business Models**

For many years, **Jobfinder.at** was the leading private OJV portal in Austria, but it was overtaken by **Stepstone.at** in 2006. **Stepstone** is an international company, founded 1996 in Norway. It covers all kinds of positions and qualifications, which are divided into specific categories on the site, such as managers, Pharma, etc. It covers the whole country, and more than 8,600 OJVs were counted in April 2017. It offers three general categories of job ads. The starter package costs EUR 490; it includes an OJV that will be posted for 30 days on the portal as well as on partner websites.

The Professional model costs EUR 690. Ads are posted for 60 days, including to partner websites. Additional perks include targeted emails to suitable candidates and individual ad layout. The Premium model includes the same features as the Professional model, with the added benefits of 30 days of publication on Stepstone.de.

Since 2007, **Monster.at** has had a very high presence, with more than 2.6 million searches each month. Austria benefits from the international Monster-network, because Monster is active in more than 60 countries around the world and can transfer technological developments to all participating countries and also provide good opportunities for transnational job- and employee-search. Unfortunately due to the search methods used by Monster, the total number of OJVs cannot be assessed.

The daily newspaper **Der Standard** launched its online job-portal in 1996 and is an important player as well. It offers more than 3,500 job advertisements and continues to offer printed job-advertisements each Saturday. Postings ads ranges in price from EUR 650 for a single posting to packages of up to 15 ads totalling EUR 8,100. Prices are also differentiated based on how many positions are advertised within an individual ad. This site also charges for branding opportunities and banner ads on its webpage, as well as media packages that advertise job vacancies in various other regional or national online news sites as well as sector specific media sites. Additional options are available to post ads to Facebook.

**Karriere.at** is relatively young portal founded in 2004, and it is currently the most important online job-platform in Austria, with more than 16,000 job offers. This portal's business model has options to pay for job ads, CV searches in the candidate databank and employer branding opportunities. A standard OJV costs EUR 580 for 60 days of posting. The price increases to EUR 680 if the employer is interested in an individualised layout and design.

**Job.at** is another important online job-portal with approximately 4,000 job-offers.

**Willhaben.at**, which was initially an Austrian online market place, like eBay, became an important player in the OJV market, with nearly 12,000 OJVs. It uses innovative technology, like personal and content-related job-advertisements for registered users, and seems to be attractive to companies and job-seekers alike.

**Absolventen.at** is a portal with approximately 2,800 jobs, which are specifically focused on attracting recent graduates.

Another portal, which has become important in a very short period of time, is **meinjob.at**. It offers more than 6,000 jobs. This job-portal is part of one of Austria's largest media groups, OE24<sup>7</sup>.

It is also important to mention **at.indeed.com/Online** and **at.indeed.com/Österreich**, which function as international/national aggregators searching for and collecting OJVs on job-platforms, associations and company websites. Hence, this portal is able to present nearly 30,000 in Austria. **Meta-jobs.at** functions similarly and offers more than 140,000 job advertisements.

In addition to the PES the Republic of Austria also operates **Jobboerse.gv.at**, which hosts jobs in public service and with institutions of the EU.

All of the mentioned private online job-portals have a national presence, are active across sectors and offer search by keywords. There are no statistics available about the types of companies that

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<sup>7</sup> OE24 is a newspaper with more than 5 to 7 million unique clients per month, which explains the immediate success of its portal after market entry

most frequently advertise online. Due to the relatively low costs of posting OJVs on online job-portals, smaller and larger companies alike use these portals.

Almost all online job-advertisements are tied to a specific vacancy. In rare cases, internships, which do not necessarily correspond to a specific vacancy, may be posted. Private platforms mainly recruit specialists and skilled workers. For low-skilled jobs, private portals are less important than the PES job-portal.

### **3.2.5. Outreach of the Private Online Job-portals**

Private online job-portals are the main source for recruiting personnel in Austria, regardless of sector or company size. For some sectors, such as gastronomy, the public sector or student jobs, there are specialised job-portals. According to the interviewed experts, 80% of all companies use OJVs.

## **3.2. Co-operation between Public and Private Online Job-portals**

OJVs posted to the PES (eJob-Room), can also be reposted by private job-portals, but only if they clearly state that the OJV originated with the PES. The PES expert gave this information with no details about the concrete processes by which PES OJVs are shared with private portals. As far as we understood, the private portal can just copy and paste the PES OJV to its site, but we were told this rarely happens.

We did not receive sound information on the share of OJVs placed on the PES portal or on the private online job-portals.

## **3.3. Role of other Recruitment and Job-search Channels**

Job-advertisements are rarely found in print newspapers. However, there are two interesting aspects concerning printed advertisements. Firstly, printed advertisements are more common in the western regions of Austria, where the population is less dense. Secondly, printed advertisements are sometimes used to draw more attention to a certain job vacancy by making it distinct from OJVs, and therefore, print sources can function as a special marketing or branding asset (i.e. added value) for some companies.

In 2015, there were 230,000 printed job-advertisements, with the sectors "Trade/wholesale/marketing", "Tourism/gastronomy" and "Office/Business" most likely to use this channel. From 2014 to 2015 printed advertisements declined by more than 5% (Lavrencic 2016).

Social Media is another important and growing aspect in online recruiting, using platforms such as Xing, LinkedIn and Facebook. Recently so-called profile matching tools or apps like Hokify have become increasingly important.

Word of mouth is still a common method of recruitment. In general, companies first attempt to fill a vacancy through networking to avoid having to post an advertisement. If they are not successful, they move to online job-advertisements on their company website, on portals, as well as on social media. This is particularly true for more rural areas and smaller companies.

Other methods of recruiting include job fairs or hiring directly through educational institutions. When it comes to leading positions, the companies often try to build up a pool of promising, young candidates, who are then trained for many years within the company in the hopes of grooming them for future leadership roles. The other option is to use head-hunters to fill top-positions.

### 3.4. Expected Trends in the Online Job-portal Market

Customised solutions for certain sectors will become more important. One example is Stackoverflow, the international online-forum for IT-specialists, which developed into the biggest job-portal for IT specialists. Other specialised job-portals in Austria are absolventen.at for graduates and Uni-jobs.at for student jobs.

Social media will be increasingly used for employer branding, i.e. promoting a company as the employer of choice to a desired target group. The company will only attract future employees if it has an identity that is true, credible, relevant, distinctive and aspirational. Communication and marketing will have to focus on achieving both a credible and desirable branding position. Well-developed branding of companies in social media like Xing, Linked-in, Facebook or Instagram will become more important tools, because they can present the social attitudes of a company. Companies may continue to use large, printed job-advertisements to show the company's willingness to spend money to search for employees.

Online job-portals will incorporate additional services that allow them to actively search for the right candidates using databases. In the coming years, it will be important that job-portals become the gateway to many additional aspects of job search and the overall career experience.

## 4. Use OJVs in Recruitment and Job Search

### 4.2. Use of OJVs in the Recruitment of Labour

As stated before, private online job-portals are the main source for personnel recruitment in Austria. This is due to a good cost-benefit-ratio, which makes online job-posting useful for smaller firms with a smaller HR-budget.

The PES online job-portal is a frequently used portal for companies, especially when recruiting staff for low-skilled positions. Based on the interviews conducted, it seems that a very high percentage of all vacancies in Austria are available as OJVs, and this will continue to increase. All other ways to seek personnel, as described in chapter 3.5, are used to a much lesser extent.

A study by *ibw*<sup>8</sup>, the research institute of Austrian businesses, explains that the PES has information on jobs requiring low or average skills, whereas the private portals tend to contain OJVs for the higher qualified positions (Schneeberger et al. 2010). In printed job-advertisements, all kinds of skill levels can be found. In 2010, in online job-advertisements, the formal qualification required for a position was rarely documented, but as further analyses show, this does not mean that the skill requirements are lower: the openness of employers for applicants with a broad variety of education levels is pointed out by the authors (Schneeberger et al. 2010).

### 4.3. Use of OJVs in Job-search

Job-seekers use OJVs as their primary job search tool, with the exception of very low qualified persons, who also have low Internet literacy. This group still searches using printed advertisements and relies more on the advisers provided by the public employment service.

### 4.4. Expected Trends in the Use of OJVs in Recruitment and Job-search

As more than 50% of the use of online job-portals is now through mobile devices, such as smartphones, the design of job-advertisements will have to be better optimised for all devices. OJVs will have to be short, clear and compact and may therefore be reduced to highlighted headlines. The number of apps or portals using the function of matching profiles of job-candidates and companies, like [www.hokify.at](http://www.hokify.at), is likely to increase. Some experts say that the use of Google-algorithms on a meta-layer and crawler-platforms will eventually replace the classic online job-portals as we know them.

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<sup>8</sup>In German "Institut der Bildungsforschung der Wirtschaft", <https://ibw.at/resources/files/2017/3/29/1129/ibw-folder-en.pdf>.

## 5. Identifying Online Job-portals for Web-crawling

### 5.2. Documentation of the Job-portal Research Process

#### 3.2.6. Identifying the Online Job-portals Through Google Search

**Table 2: Grid for documenting the Google search for job-portals**

Search 1	“Stellenangebote”	“Job Offers”
	37,000,000 results	
Search 2	“Jobs Österreich”	“Job Austria”
	26,600,000 results	
Search 3	“Karriere Österreich”	“Career Austria”
	24,800,000 results	
Search 4	“Jobsuche”	“Job search”
	9,750,000 results	
Search 5	“online Jobportal”	“online Job-portal”
	1,300,000 results	
Search 6	“Stellenangebote Österreich”	“Job offers Austria”
	816,000 results	
Search 7	“Jobsuche Österreich”	“Job search Austria”
	504,000 results	
Search 8	“Jobbörse Österreich”	“Job-Portal Austria”
	483,000 results	

Source: Bittner 2017.

Based on the Google-search, we identified several important job-portals, which appeared on nearly every Google search:

- [www.karriere.at](http://www.karriere.at);
- [www.stepstone.at](http://www.stepstone.at);
- [www.job.at](http://www.job.at);
- [at.indeed.com](http://at.indeed.com);
- [www.meinjob.at](http://www.meinjob.at);
- [www.monster.at](http://www.monster.at);
- [www.metajob.at](http://www.metajob.at);
- [www.ams.at/jobroom](http://www.ams.at/jobroom);

- <http://derstandard.at/karriere/jobsuche>.

All of these job-platforms act across sectors and, with the exception of metajob.at, all platforms are primary platforms.

### **3.2.7. Identifying the Online Job-portals Through Expert Interviews**

The platforms identified by Google-search were confirmed by the experts, who additionally recommended some specialised platforms:

- [www.willhaben.at/jobs](http://www.willhaben.at/jobs): a subpage of an Austrian online market place, similar to eBay;
- [www.absolventen.at](http://www.absolventen.at): portal specialising in university graduates;
- [www.unijobs.at](http://www.unijobs.at): offers jobs for students;
- [gastrojobs.at](http://gastrojobs.at): offers jobs in the gastronomy sector;
- <https://stackoverflow.com>: specialises in highly qualified IT-jobs;
- [www.hokify.at](http://www.hokify.at): a smartphone-app.

The experts also named networking platforms like XING or LinkedIn as well as Facebook and Instagram as important players in the online job-market landscape.

### **3.2.8. Validating the Selection of Online Job-portals**

The validation of the selected job-portals was based on cross-checking the results of Google-search with expert opinions, followed by additional Google-searches to check the information provided by the experts.

## **5.3. Conditions for Drafting and Posting OJVs in the Selected Job-portals**

### **3.2.9. Drafting and Posting an OJV on the PES Online Job-portal**

When using eJob-Room, the company first has to register with the official enterprise-ID, which is checked by the PES and includes all information about the company, such as address, contact information, etc. The company selects a user-ID and password. Afterwards the company receives a confirmation by PES that they can use the eJob-Room services for free.

#### **Workflow and characteristics of posting an OJV:**

- Select the type of contract (tick boxes) and confirm that no costs arise for the employee if he/she takes the job;
- Select the occupation from a drop down list (using ISCO-08 classification);
- Enter the postal code of the place of work, the type of employment such as full-time/part-time (tick boxes) and the education (drop-down list);
- Enter the start date, the number of vacancies and the position (drop-down list);
- Indicate the minimum wage and the possibility of higher pay (drop-down list). A monthly payment is the default, but it can be changed to weekly, daily, etc. Additional benefits can be described in the text;
- List the prerequisites:
  - Qualifications (tick boxes, multi-response);
  - Education & courses (drop-down and additional description as text);
  - Job-experience (text);
  - Driver's license (tick boxes);

- Accessibility (description of details of the job-offer, which assure accessibility; text up to 1,000 characters);
- List other desired traits: 1. Experience abroad (drop-down list) and 2. Willingness to travel (drop-down list);
- Characterisation of the open job (text up to 4.000 characters) including a job description and desired skills, competences and benefits;
- Characterisation of the enterprise (text up to 4.000 characters);
- Finally, the employer can upload documents (in the formats: .gif, .jpg, .pdf) such as pictures, company presentations, etc.; maximum of ten documents with the total maximum size of 2 MB.

### **3.2.10. Drafting and Posting an OJV on a Private Online Job-portal**

The process of drafting and posting an OJV on a private job-portal could not be tested, because posting on every important private job-portal is fee-based, with costs starting at EUR 250. Nevertheless, in Section 6.3. we describe in detail which sections and what content typical OJVs contain. For this section we mainly focused on private job-portals, so implicitly it mirrors the sections an employer would have to fill in when posting an OJV on a private portal.

## **5.4. Contacting the Online Job-portal Owners**

We contacted all selected job-portals about the web-crawling, according to the request of Cedefop, CRISP and IWAK. All sent emails are saved as pdf files, which were also sent to IWAK. Only two representatives answered to our emails, both telling us that is not possible for them to participate in the project.

## 6. Format and Content of OJVs

### 6.2. Legal/Regulatory Framework

In Austria, OJVs posted by public or private entities have to fulfil the criteria established by the Law for Equal Treatment<sup>9</sup> (see Section 3.1.1 for further information).

### 6.3. Format of OJVs

In Austria, it is mandatory to state the expected minimum wage in every job-advertisement. In most cases, the employers indicate that the minimum wage is related to the collective agreement for certain sectors and add the phrase "higher payment possible", implying that the ultimate wage is dependent on qualifications and/or experience.

The statement of contract duration, number of working hours and type of contract are also usually mentioned, although the latter is only stated for internships or freelance contracts. Besides the public platform eJob-Room, which covers all vacancies reported to the PES, the PES also offers a Job-Robot online tool, which collects and displays vacancies from other sources beyond the stock of the PES.

### 6.4. Content of OJVs

We could not detect any clear factors influencing formats and content of OJVs. However, we assume that a stronger need for qualified employees in sectors affected by shortages might lead to more detailed information about the financial and social benefits of the job.

International and/or large firms tend to reinforce the international orientation and size of their companies as reasons to apply for jobs, implying that they can offer stable jobs and career opportunities.

On the other hand, small and regional firms sometimes stress a "familial" atmosphere and the importance of every single employee for the success of a growing company.

The selection of a specific online job-portal by an employer depends on the desired level of qualification for the position in question. When it comes to low-skilled workers, the eJob-Room of the Austrian PES is used more frequently, whereas high-skilled, specialised workers tend to be recruited via private job-portals. In special cases, such as cooks for seasonal work in certain regions or IT-specialists with a certain education and experience, employers tend to use specialised portals, such as [gastrojobs.at](http://gastrojobs.at) or [stackoverflow.com](http://stackoverflow.com). The occupation is listed on PES OJVs according to ISCO-08 classification, which maps to the ESCO system.

Because of the rather low cost of online job-advertisements, companies often use more than one portal when placing an advertisement, sometimes posting to several private portals and the PES. Among the private portals, there are some that are used more often, such as "karriere.at", "monster.at", "stepstone.at", "derstandard.at/jobs" and "willhaben.at".

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<sup>9</sup> In German "Bundesgesetz über die Gleichbehandlung" (Gleichbehandlungsgesetz, GIBG).

The technical language used in online job-advertisements is generally German, with English as a rare exception used by international firms hiring employees in Austria for an international team or for a workplace situated in a different country.

The experts said that the title of the job offer is not generally too elaborate or creative. The subtitle offers the chance for the employer to be more creative and to make the applicant curious about the opportunity. Nevertheless, it is important to adapt to the "language" of the aspiring applicant, which depends on the sector. In the creative industry, companies might be more successful by using a more youthful choice of words or by addressing the applicants informally (the informal 'Du' rather than the formal 'Sie') or by catching a candidate's attention by opening or closing with questions addressing the prospective candidate directly. In the manufacturing industry or in accounting, for instance, formal and traditional language tends to prevail.

Abstract wording is generally avoided when explaining the profile or requirements (i.e. "resilient", "flexible", etc.). It is considered better to give concrete examples of expected situations that may arise in the job and that the applicants will be expected to handle.

Gender neutrality also has to be taken into consideration when wording the job-advertisement. Based on our research and the expert interviews, the companies in Austria appear to act in strict accordance to the rules.

At the conclusion of a job-advertisement, companies often use a "call to action" to psychologically encourage the applicant to contact the company and send their application documents by using phrases like, "Are you interested? Then get in touch".

Across occupations and sectors, few differences could be detected. When it comes to low-skilled work that requires financial transactions (i.e. cashier at a supermarket), sometimes a certificate of good conduct<sup>10</sup> is desired. For low-skilled jobs, job-advertisements tend to be shorter, reduced to the basic tasks, with only a few remarks concerning soft skills.

Online job-advertisements always contain a long or short description of the hiring company focusing on the core task of the firm its portfolio, its focus and its most important traits. This section may also indicate the location of the headquarters and information about the department that is seeking employees. This section is often placed at the beginning of a job-advertisement and in rare cases at the end.

In every job-advertisement, there is also a section with a list of the "offers" from the company, including information on wage payment, a description of the atmosphere in the team or the "philosophy" of the company. This information is part of the strategy to present the company as attractive in comparison to other companies in the same sector and to increase the chances of a high number of applicants.

Another important section is the description of concrete tasks and the requirements necessary to be able to fulfil these tasks. Deviations from these categories are rare. What may vary is the introduction (i.e. the eye-catcher) of the advertisement. While most of the advertisements follow a traditional and functional structure, using a very formal approach (e.g. "Key account manager (male/female)" or "We are looking for a waiter/waitress".), some online job-advertisements start with questions (e.g. "Do you want to part of [...] team?" or "Are you looking for new challenges?" or commanding phrases (e.g. "Be part of a winning team!" or "Put your strength and energy into our company!").

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<sup>10</sup> In German "Leumundszeugnis".

Soft skills, such as competencies and personal attitudes, are often placed at the end of online-job advertisements. They tend to be seen as a desired added value to the formal skills. If not listed separately, soft skills can also be found in the section often called “your profile”. Sometimes there are hints to the importance of soft skills at the beginning of a job-advertisement, for instance when a company asks the question, “Do you want to part of a flexible and responsible team, developing our services together for a brighter future?”

In most cases, online job-advertisements contain sections describing what the hiring firm expects from an applicant. One focus is on the concrete tasks that have to be performed. The titles of sections dealing with this are “your tasks” or “(your) challenges” followed by a list of tasks.

Furthermore, the job-advertisements describe the qualifications the applicant needs to have when applying for the job. The titles of sections dealing with this are “your profile” or “requirements”; they describe formal education, formal skills, general job-experiences and experiences with specific software, etc., and in addition, they sometimes include personal traits like resilience or reliability.

At the end of every job-advertisement, the contact details are given, often with a web-link to an online application-form. Advertisements rarely stress opportunities for career development. We have no findings concerning the use of hidden code words.

## 6.5. Main Differences between the Public and Private Online Job-portals

Advertisements on private portals usually have a more modern look, using creative graphic elements or photos, whereas the information on OJVs provided by PES online tend to be more text-based and less visually attractive for the users.

## 6.6. Expected Trends in the Format and Content of OJVs

The main trend stated by the experts was narrowing down the OJV ads to the bare essentials and reducing the amount of free text, because the growing use of smartphones by job seekers makes it necessary to send out short and clear messages to attract the attention of the jobseekers. It is also important to provide a simple and instant way of responding to a job ad directly via smartphone, which should not require much time and has to be optimised for smart phone behaviour (e.g. available on apps and through social media platforms). For further information on expected trends in the format and content of OJVs, see also Section 3.5.

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## Expert Interviews

Name of organisation	Type of organisation	Expert's position	Interview date
Personnel management company	Recruiting, HR	CEO	27 April 2017
Arbeitsmarktservice Österreich	PES	Head of Service for Companies & EURES"	11 May 2017
Consulting Company	HR, headhunting etc.	Senior Consultant	15 May 2017
Personnel management company	Recruiting, HR	Head-hunter, recruiter	16 May 2017
Private online job-portal (relatively new player in the market)	Labour market intermediary	Head of Marketing and Sales	19 May 2017
Most important private online job-portal in Austria	Labour market Intermediary	Lead Corporate Communications	31 May 2017