

# Mapping the landscape of online job vacancies

## Background report: Romania

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

**Contract:** AO/DSL/VKVET-GRUSSO/Real-time\_LMI\_2/009/16

prepared for Cedefop by Ciprian Panzaru

**Date of release:** 19 January 2018

While the original text has been thoroughly revised by Cedefop experts, it did not go through the official publication process (peer review, language editing and formatting)

**Please cite this report as:**

Cedefop (2018). Mapping the landscape of online job vacancies. Background country report: Romania, <http://www.cedefop.europa.eu/en/events-and-projects/projects/big-data-analysis-online-vacancies/publications>

© Cedefop, 2018

## **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.

## Index

|  |    |
|--|----|
| Introduction .....   | 6  |
| 1. Methodology .....   | 7  |
| 1.1. Search Paths .....  | 7  |
| 1.2. Data Sources .....  | 10 |
| 1.2.1. Public Data/Academic Research .....                                     | 10 |
| 1.2.2. Research/Surveys of Interest Group.....                                 | 10 |
| 1.2.3. Expert Opinions.....  | 11 |
| 2. Labour Market Dynamics and Impact on the OJV Market.....                    | 15 |
| 3. Context and Characteristics of the Online Job-portal Market.....            | 18 |
| 3.1. PES Online Job-portal(s).....   | 18 |
| 3.1.1. Legal/Regulatory Framework .....  | 18 |
| 3.1.2. Organisational Structure of the PES Online Job-portal(s).....           | 18 |
| 3.1.3. Focus of the PES Online Job-portal(s) .....                             | 19 |
| 3.1.4. Outreach of the PES Online Job-portal(s) .....                          | 20 |
| 3.1.5. Posting of PES Vacancies on EURES.....                                  | 20 |
| 3.2. Private Online Job-portals .....  | 20 |
| 3.2.1. Legal/Regulatory Framework .....  | 20 |
| 3.2.2. Dominant Online Job-Portals and Their Business Models .....             | 20 |
| 3.2.3. Focus of the Private Online Job-portals.....                            | 21 |
| 3.2.4. Outreach of the Private Online Job-portals.....                         | 22 |
| 3.3. Co-operation between Public and Private Online Job- portals.....          | 22 |
| 3.4. Role of other Recruitment and Job-search Channels .....                   | 23 |
| 3.5. Expected Trends in the Online Job-portal Market.....                      | 25 |
| 4. Use OJVs in Recruitment and Job-search.....                                 | 26 |
| 4.1. Use of OJVs in the Recruitment of Labour .....                            | 26 |
| 4.2. Use of OJVs in Job-search.....  | 27 |
| 4.3. Expected Trends in the Use of OJVs in Recruitment and Job-search.....     | 27 |
| 5. Identifying Online Job-portals for Web-crawling.....                        | 27 |
| 5.1. Documentation of the Job-portal Research Process.....                     | 28 |
| 5.1.1. Identifying the Online Job-portals Through Google Search.....           | 28 |
| 5.1.2. Identifying the Online Job-portals Through Expert Interviews .....      | 29 |
| 5.1.3. Validating the Selection of Online Job-portals .....                    | 29 |
| 5.2. Conditions for Drafting and Posting OJVs in the Selected Job-portals..... | 30 |
| 5.2.1. Drafting and Posting an OJV on the PES Online Job-portal .....          | 30 |

|   |    |
|---|----|
| 5.2.2. Drafting and Posting an OJV on a Private Online Job-portal .....       | 31 |
| 5.3. Contacting the Online Job-portal Owners .....                            | 32 |
| 6. Format and Content of OJVs .....   | 33 |
| 6.1. Legal/Regulatory Framework .....   | 33 |
| 6.2. Format of OJVs .....   | 33 |
| 6.3. Content of OJVs .....  | 34 |
| 6.4. Main Differences between the Public and Private Online Job-portals ..... | 36 |
| 6.5. Expected Trends in the Format and Content of OJVs .....                  | 36 |
| References .....  | 38 |

## List of Abbreviations

|                  |   |
|------------------|---|
| <b>ANAF/NAFA</b> | National Agency for Fiscal Administration (Agenția Națională de Administrare Fiscală) |
| <b>ANOFM</b>     | Public Employment Service (Agenția Națională pentru Ocuparea Forței de Muncă)         |
| <b>COR</b>       | Romanian Classification of Occupations  |
| <b>EPC</b>       | European Professional Card  |
| <b>EURES</b>     | European Employment Services  |
| <b>HR</b>        | Human Resources   |
| <b>IAEWS</b>     | International Association of Employment Web Sites                                     |
| <b>ICT</b>       | Information and Communication Technology  |
| <b>INS</b>       | National Institute of Statistics (Institutul Național de Statistică)                  |
| <b>ISCO</b>      | International Standard Classification of Occupations                                  |
| <b>JVS</b>       | Job Vacancy Survey  |
| <b>LFS</b>       | Labour Force Survey   |
| <b>NACE</b>      | Nomenclature des Activités Économiques dans la Communauté Européenne                  |
| <b>NEA</b>       | National Employment Agency (NEA)  |
| <b>NIS</b>       | National Institute of Statistics  |

---

|             |  |
|-------------|--|
| <b>NUTS</b> | Nomenclature of Territorial Units for Statistics |
| <b>OJVs</b> | Online Job Vacancies                             |
| <b>PES</b>  | Public Employment Services                       |
| <b>VET</b>  | Vocational Education and Training                |

---

# 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 develop 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 Romania. It is based on desk research of available data sources in Romania (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 Romanian 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 Romania 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 Romania 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

The desk research consisted of searching and analysing data, reports and surveys about job vacancies and online job vacancies in Romania. The analysis was focused on studies, reports and data surveys conducted by recruitment agencies, job portals and HR associations, as well as datasets from the National Institute of Statistics and the National Employment Agency. Reports and studies were searched on the web using specific keywords. Only reports and studies published in the last three years were selected.

Various keywords and combinations of keywords were used:

| Keywords in Romanian           | Keywords in English           | Search platforms | No. of hits | Short description of the results   |
|--------------------------------|-------------------------------|------------------|-------------|--|
| <b>anunturi de angajare</b>    | job announcements             | Google           | 547,000     | <ol style="list-style-type: none"> <li>List with the main job portals, including many business ads.</li> <li>The last job ads published by public institutions company websites and newspaper.</li> <li>No scientific work.</li> </ol> <p><i>Relevant results about OJVs</i></p>   |
| <b>locuri de munca</b>         | workplaces [job] announcement | Google           | 12,700,000  | <ol style="list-style-type: none"> <li>List with the main job portals, including many business ads.</li> <li>The last job ads published by public institutions company websites and newspaper.</li> <li>No scientific work (in the first ten showed pages).</li> </ol> <p><i>Relevant results about OJVs</i></p>   |
| <b>locuri de munca vacante</b> | workplaces [job] vacancies    | Google           | 434,000     | <ol style="list-style-type: none"> <li>Various information from PES website.</li> <li>General website ads.</li> <li>Job portals.</li> </ol> <p><i>Relevant results about OJVs</i></p>  |
| <b>portaluri de angajare</b>   | job [hiring] portals          | Google           | 63,100      | <ol style="list-style-type: none"> <li>Newspaper articles about online recruitment.</li> <li>Blogs about online recruitment.</li> <li>Some job portals (not well-known, except websites displayed through business ads).</li> <li>Announcements with public job vacancies from public websites.</li> <li>Reports/Study on job portals about recruitment</li> </ol> <p><i>Relevant results about OJVs</i></p> |
| <b>site-uri de angajare</b>    | job [web]sites                | Google           | 142,000     | <ol style="list-style-type: none"> <li>Job portals.</li> <li>Newspaper articles about online recruitment.</li> </ol>   |

|                                     |                                |                |           |  |
|-------------------------------------|--------------------------------|----------------|-----------|--|
|                                     |                                |                |           | 3. EURES website<br>4. Reports/Study on job portals about recruitment<br><i>Relevant results about OJVs</i>  |
| <b>reglementare anunturi online</b> | online announcement regulation | Google         | 236,000   | Irrelevant content about online or OJV market regulation (results consist of laws and regulations in various sectors: e.g. energy, public acquisitions etc.)<br><i>No relevant results about OJVs</i>  |
| <b>anunturi angajare online</b>     | online job announcement        | Google         | 275,000   | 1. Job announcements in online newspapers.<br>2. Job announcements on general ad websites<br><i>No relevant results about OJVs</i>   |
| <b>angajare</b>                     | hiring, employability          | Google         | 3,720,000 | 1. List with Job portals<br>2. Job announcement in online newspapers<br>3. Job announcement in general ad websites<br>4. Job announcement on companies websites<br>5. Companies and public institutions websites<br><i>Low relevant results about OJVs</i> |
| <b>caut de lucru</b>                | looking for job                | Google         | 463,000   | 1. Announcements from general ad websites<br>2. Job portals (mainly from the second page on)<br><i>No relevant results about OJVs</i>  |
| <b>vreau sa ma angajez</b>          | I want to be hired             | Google         | 69,500    | 1. Announcements from general ad websites<br>2. Reports/studies on various blogs, job portals<br>3. Newspaper articles<br><i>Low relevant results about OJVs</i>   |
| <b>piata fortei de munca+raport</b> | labour market+report           | Google         | 247,000   | 1. Study/Reports about labour market (most of them out of date or irrelevant for OJV issue)<br>2. Few Study/Report useful for OJV research (job portals reports, PES reports)<br><i>Low relevant results about OJVs</i>                                    |
| <b>piata fortei de munca+raport</b> | labour market+report           | Google Scholar | 7,810     | <i>No relevant results about OJVs</i>  |
| <b>sondaj angajare online</b>       | online job [ads] survey        | Google         | 427,000   | 1. Survey operator jobs<br>2. Political surveys<br>3. Newspaper articles<br><i>Low relevant results about OJVs</i>   |
| <b>raport site angajare</b>         | report job website             | Google         | 776,000   | 1. Newspaper articles (political investigation)<br>2. Hiring regulation<br>3. PES Reports<br><i>No relevant results about OJVs</i>   |
| <b>studiu angaja-</b>               | employers study                | Google         | 589,000   | 1. Study/reports about labour market (mainly   |



|                                |                         |                        |           |  |
|--------------------------------|-------------------------|------------------------|-----------|--|
| <b>tori</b>                    |                         |                        |           | focused on hiring)<br>2. Newspaper articles on labour market<br><i>Relevant results about OJVs</i>   |
| <b>piata fortei de munca</b>   | labour market           | BibNat [www.bibnat.ro] | 27        | <i>No relevant results about OJVs</i>  |
| <b>sondaj angajare online</b>  | online job [ads] survey | Google Scholar         | 581       | <i>No relevant results about OJVs</i>  |
| <b>raport site angajare</b>    | report job website      | Google Scholar         | 2,690     | 1. Theoretical paper<br><i>No relevant results about OJVs</i>  |
| <b>studiu angajatori</b>       | employers study         | Google Scholar         | 7,160     | 1. Scientific paper on labour market<br><i>No relevant results about OJVs</i>  |
| <b>recrutare online</b>        | online recruitment      | Google                 | 1,950,000 | 1. Reports/Studies about recruitment and online recruitment (newspaper, job portals, companies websites, HR associations websites)<br>2. Job portals<br><i>Relevant results about OJVs</i> |
| <b>canale de recrutare</b>     | recruitment channel     | Google                 | 81,600    | 1. Reports/Studies about recruitment and online recruitment (newspaper, job portals, companies websites, HR associations websites)<br><i>Relevant results about OJVs</i>                   |
| <b>joburi vacante</b>          | job vacancies           | Google                 | 392,000   | 1. Job vacancies on private job portals<br>2. Job vacancies on public institutions websites<br><i>No relevant results about OJVs</i>   |
| <b>portaluri de joburi</b>     | job portal              | Google                 | 8,350     | 1. Reports/Studies about recruitment and online recruitment (newspaper, job portals, companies websites, HR associations websites)<br><i>Relevant results about OJVs</i>                   |
| <b>joburi publicate online</b> | online jobs             | Google                 | 689,000   | 1. Job portals articles about online recruitment (how to hire)<br>2. Newspaper articles<br>3. Job vacancies (third page on)<br><i>Low relevant results about OJVs</i>                      |

In some cases, the search results included Romanian-language websites from the Republic of Moldavia. However, their numbers are fairly small.

In the table above we only listed the keywords used in the first stage of research. It should be noted that the location settings were turned off and the search was done in incognito mode in order to limit customisation of searching.

In order to determine the most fitting results, the following filter criteria were applied:

- **Relevance:** Only results connected to the OJV issue were analysed. This excluded reports about the labour market in general, as well as scientific papers and research about the labour market without any connection to OJVs.
- **Recentness:** Most results from before 2013/2014 were eliminated. Old reports about OJVs made by a few job portals were used to help locate updated reports on similar subjects.

- Reliability: Some sources that were totally unknown and sources with little information were omitted.

The representativeness, validity and reliability of the studies was assessed based on the existence of specific criteria:

1. How the sample was selected;
2. How data was collected or generated;
3. How data was analysed;
4. What methods and instruments were used;
5. Prestige of the source (e.g. experience, image, professional statue).

If (1) & (2) were clearly explained & based on a scientific approach, then the research was considered representative. If (3) & (4) were clearly explained & based on a scientific approach, then the research was considered valid. If (5) was available, then the research was considered reliable.

## 1.2. Data Sources

### 1.2.1. Public Data/Academic Research

In Romania, no public data is available on OJVs. Similarly, the topic is not covered by academic research. The only official data about vacancies is provided by the National Institute of Statistics through the Job Vacancies Survey. This research does not cover the online job vacancies.

The job vacancy survey is carried out quarterly. Data is collected through a statistical sample survey, using the middle month of the quarter as the reference period. Military staff are excluded (Ministry of National Defence, Ministry of Administration and Interior, Romanian Intelligence Service, etc.) According to the territorial distribution, data are available by total economy, macro-regions and regions (level 0, 1, and 2 of the Nomenclature of Territorial Units for Statistics (NUTS<sup>1</sup>)).

The survey characterises job vacancies as posts designated for persons outside the enterprise (but for which persons from inside the enterprise can also compete), irrespective of whether the posts are for an indefinite or definite duration or for full-time or part-time contracts. The following types of jobs are not considered job vacancies:

- Positions exclusively designated for hierarchical promotions within the enterprise or institution;
- Positions from public administration bodies blocked by a legal act.

Positions occupied by persons who are absent for a certain period of time (e.g. maternity leave, leave for child care, sick leave, unpaid leave, other absences) are considered vacancies, if the employer will hire a substitute for a definite period (temporary) and takes active steps in finding the candidates.

### 1.2.2. Research/Surveys of Interest Group

There was abundant information on the online job-portal market as well as recruitment and job-search behaviours published by interest groups, most prominently online job-portal owners and providers of personnel services. The most important studies by job-portals include “Using Social Media in Recruitment” by MyHRLab.ro (2016), “Where the Romanians Looking for a Job. The Most

---

<sup>1</sup> In Romanian “Nomenclatura Unităților Teritoriale pentru Statistică”.

Visited Job Sites”, by Gemius.ro, “Labour Market in 2017” by HIPO.ro or “Recommendation-based recruitment” by BestJobs.ro.

For example, the questionnaire addressing employers designed by MyHRLab, mentions the importance of online advertising in recruitment (see Section 3.4.). The same aspect is highlighted in Gemius Romania’s study (see Sections 2 and 4.2.). This research found that the job seekers who use the Internet are focused on job-portals and specialised social media (e.g. LinkedIn). Research from HIPO and BestJobs point out the importance of the Internet, making recommendations to employers and job seekers to post their profile and advertisements on social media and job-portals.

However, these studies cover only some aspects of the use of OJVs and do not provide a comprehensive picture of the online job-portal landscape. Therefore, they can only be taken as a starting point for the analyses and assessments.

### **1.2.3. Expert Opinions**

The selected interview partners are stakeholders who actively take part in the OJV market. They were selected based on their collective ability to give a representative account of the entire OJV market in Romania. We initially planned to interview one representative of the National Institute of Statistics who is responsible for the ESSNet. When that individual decided against being interviewed, we found another expert from the same institution. Altogether, seven persons were interviewed.

In addition to the interview with a representative of the National Institute of Statistics (INS)<sup>2</sup> (responsible for the Job Vacancy Survey) we also interviewed an expert from the National Employment Agency (responsible for the Labour Market Analysis and VET); a representative of the HR Club Romania (one of the most representative Romanian HR Associations); two employers, a representative from a job portal and a representative of a National Trade Union.

The employers, HR association respondent and job portal respondent were selected based on:

- Representativeness (e.g. employers from sectors with labour shortages and intensive recruitment activity);
- Geographical location (e.g. employers from different areas, employers with many employment sites across the country);
- Dimension (e.g. big employers with over 50 employees);
- Accessibility (previous collaborations).

The interviewed employers cover two significant sectors of the Romanian industry: logistics/transport and automotive, both of which are also well-known for labour shortages. The PES representative was chosen based on the suggestion of the regional director of the National Employment Agency who also arranged the meeting. Moreover, we spoke with a representative of the National Trade Union because trade unions are one of the key stakeholders in the labour market. Because there are usually no studies or reports issued by trade unions on the subject of job vacancies, it seemed particularly important to evaluate their knowledge in this area.

It was very difficult to contact representatives of job portals due to the lack of available contact details (email addresses or phone numbers). When possible, we contacted the parent company (e.g. Ringier, Neogen etc.). Finally, a representative of eJobs answered by email, and we arranged an interview by phone.

---

<sup>2</sup> In Romanian “Institutul Național de Statistică” (INS).

A short analysis of the research results, sorted by sources, is presented in Table 1.

**Table 1: Overview of the different sources used in the Landscaping Activity<sup>3</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 2:<br/>Research/surveys<br/>of interest groups</b> | European Professional Card (2017)  | National Employment Agency                                 | Only vacancies reported by employers                            | Cover all sectors/occupation/qualification level/ region      |  | Low quality  |
|  | Fondazione Giacomo Brodolini and Obiettivo Lavoro (2014): The JobWatch Survey: Job outlook and the employment needs of Romanian businesses | Fondazione Giacomo Brodolini and Obiettivo Lavoro          | 40.4% (2014)  | Cover some sectors/occupation/qualification level/ region     | n/a  | High quality   |
|  | MyHRLab (2016): Cum foloseste HR-ul Social Media in recrutare? [Using Social Media in Recruitment]   | MyHRLab  | 80% (2016)  | n/a   | n/a  | High quality   |
|  | BestJobs (2017): Recrutarea online prin recomandări [Recommendation-based recruitment]   | BestJobs   | n/a   | Cover all sectors/occupation/qualification level/ region      | n/a  | High quality   |
| <b>Source 3:<br/>Expert opinions<sup>4</sup></b>             | Trade Union  | The National Confederation of Free Trade Unions of Romania | PES – 100%<br>Private – 100%                                    | No  | Depends on sectors. Generally: seriously person, pro-active etc. | Medium quality - Expert interviewed is member of National Board of Free Trade Union of Romania |

<sup>3</sup> Source 1 (public data/academic research) 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.

<sup>4</sup> As the quality of the expert interviews varied strongly, differentiated information is provided here for single interviews.

|  |                              |                                  |  |  |             |   |
|--|------------------------------|----------------------------------|--|--|-------------|---|
|  |                              | - "Brotherhood"                  |  |  |             | "Brotherhood".  |
|  | HR Manager                   | Employer                         | Private – 100%                                     | Cover some sector/occupation/qualification level/ region | Soft skills | High quality - Expert interviewed is HR manager in one of the most important logistic company     |
|  | Vice-president (West Region) | HR association                   | Private – over 90%                                 | Cover some sector/occupation/qualification level/ region | Soft skills | High quality - Expert is member in one of the most important HR Association in Romania            |
|  | HR Manager                   | Employer                         | PES – n/a<br>Private – 100%                        | Cover some sector/occupation/qualification level/ region | Soft skills | High quality – HR manager automotive company  |
|  | Marketing Manager            | Private online job-portal        |  | Cover some sector/occupation/qualification level/ region | Soft skills | High quality – Opinions from a representative of the biggest job portal                           |
|  | Division Vice-director       | National Employment Agency       | PES – 100%<br>Private – 100%                       | Cover all sector/occupation/qualification level/ region  | No          | Medium quality – Opinions from Vice-director, Labour Market, Employment and VET Programs Division |
|  | Division Director            | National Institute of Statistics | PES – 100% of reported vacancies<br>Private – 100% | No   | No          | Medium quality – Opinions from Director, Labour Market Statistics Division                        |

Source: Panzaru (2017).

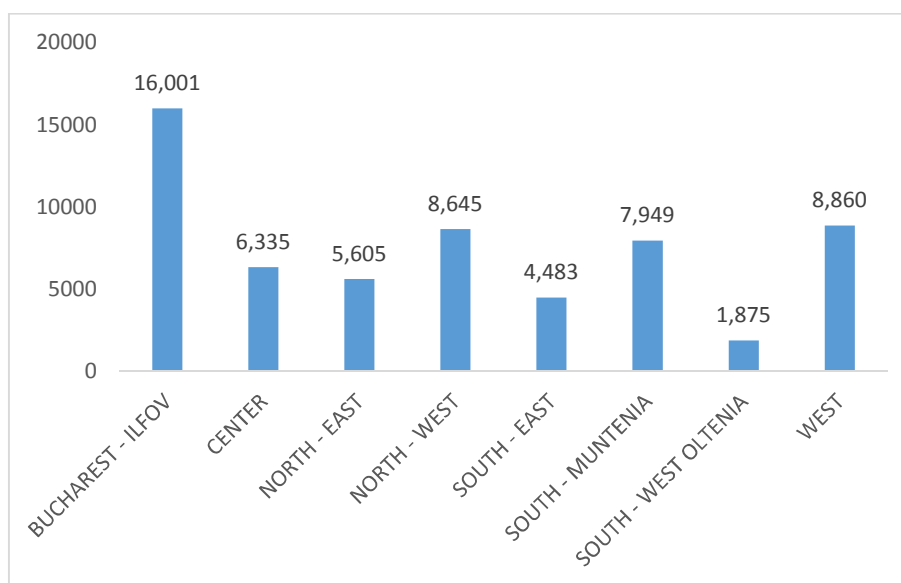
## 2. Labour Market Dynamics and Impact on the OJV Market

The Romanian labour market is characterised by a low unemployment rate and a major labour shortage. The situation is generated by three strongly connected phenomena: ageing, migration and industrial development. Ageing and migration strongly affect the size of the economically active population. In addition, the recent growth of certain sectors, like manufacturing, transport and services requires more workers with specific skills and qualifications. Thus, in the last three years, there has been an asymmetric development between demand and supply on the labour market. The result has been an increase in the number of overall job vacancies, including more PES job vacancies and more private online job vacancies.

According to a job vacancy survey (JVS) made by the INS, the stock of vacancies in 2016 climbed to 59,753. The data is provided quarterly and contains information about the vacancy rate and the number of unoccupied positions, sorted at the ISCO 1-digit level and NACE. According to the JVS, in 2016 there was an increase of 17% in the number of unoccupied positions in Romania compared to 2015 (49,952 OJVs) and an increase of 35% compared to 2014 (from 38,523).

Figures 1 and 2 show the vacancies by development regions and occupations, according to ISCO-08.

**Figure 1: Vacancies by development regions (2016)**



Source: National Institute of Statistics, Job vacancies survey.

**Figure 2: Vacancies by groups of occupations (2016)**

| Groups of occupations  | BU-CHAREST - ILFOV | CENTER       | NORTH - EAST | NORTH - WEST | SOUTH - EAST | SOUTH - MUNTE-NIA | SOUTH - WEST OLTE-NIA | WEST         | Total         |
|--|--------------------|--------------|--------------|--------------|--------------|-------------------|-----------------------|--------------|---------------|
| Administrative clerks  | 1,318              | 258          | 255          | 710          | 210          | 264               | 98                    | 577          | 3,690         |
| Experts in various fields of activity  | 6,631              | 1,255        | 1,925        | 2,172        | 1,080        | 1,808             | 587                   | 2,273        | 17,731        |
| Installations and machinery operators; machinery and equipment builders                                      | 759                | 975          | 889          | 1,220        | 242          | 1,655             | 181                   | 1,114        | 7,035         |
| Members of legislative body of executive high officials of public administration managers and high officials | 1,149              | 227          | 207          | 272          | 182          | 328               | 95                    | 288          | 2,748         |
| Skilled workers and similar  | 1,023              | 947          | 552          | 909          | 994          | 1,119             | 183                   | 1,177        | 6,904         |
| Technicians and other experts from technical field   | 1,637              | 665          | 440          | 643          | 371          | 701               | 125                   | 637          | 5,219         |
| Unskilled workers  | 1,205              | 1,196        | 566          | 1,510        | 682          | 1,047             | 354                   | 1,539        | 8,099         |
| Workers in the field of services   | 2,247              | 800          | 754          | 1,185        | 709          | 1,011             | 248                   | 1,251        | 8,205         |
| Workers skilled in agriculture forestry and fishing  | 32                 | 12           | 17           | 24           | 13           | 16                | 4                     | 4            | 122           |
| <b>TOTAL</b>   | <b>16,001</b>      | <b>6,335</b> | <b>5,605</b> | <b>8,645</b> | <b>4,483</b> | <b>7,949</b>      | <b>1,875</b>          | <b>8,860</b> | <b>59,753</b> |

Source: National Institute of Statistics, Job vacancies survey.

The increase of unfilled vacancies is indicative of the fact that the Romanian economy is growing; it had the largest economic growth in the EU-28 in 2016 with 4.8% (<http://www.business-review.eu/featured/companies-in-romania-facing-major-staff-shortage-says-study-136874>). As a result, more new jobs are being generated. For example, in May 2017, the PES<sup>5</sup> reported 25,745 job vacancies, but in October 2017 the number of vacancies published increase to about 32,000, in response to the fast-growing economy.

However, the growth in vacancies also indicates that companies are having a difficult time filling available positions with qualified candidates, and they are therefore facing staffing shortages.

<sup>5</sup> All job vacancies in Romania have to be reported by employers to the PES.



While the shortages affect skilled and unskilled positions, the unfilled vacancies are most noticeable in certain occupations and sectors. The shortage of specialists (17,731 vacancies), particularly engineers and ICT workers, is double that of manual workers. Sectors with particularly high numbers of vacancies were manufacturing (15,793 vacancies), healthcare (8,461 vacancies) and commerce (5,216 vacancies) <http://www.romaniajournal.ro/romania-close-to-an-acute-crisis-of-skilled-workers-and-specialists/>. Workforce demand is also differentiated by region, with the highest demand for workers expectedly in the capital and largest city, Bucharest, where there were 16,000 unfilled vacancies, followed by the second largest city, Cluj-Napoca. In 2016, more than 72% of companies encountered difficulties filling their job vacancies (Manpower 2017), an increase compared to 2014, when only 41% of companies reported difficulties filling their vacancies (Job-Watch 2014).

The shortages of qualified workers is a result of several factors. One is the massive migration out of Romania, which increased after Romania joined the EU in 2007. Between 2008 and 2015 an average of 205,311 individuals migrated out of Romania each year (Dumitru 2017). It is also a response to the low birth rate, which has been on the decline since 1990, meaning there are fewer young people entering the workforce to replace the older generation. Additionally, with the rise of digitalisation, employers are noticing skills mismatches with the available candidate pools.

As a reaction to the labour shortage and skills mismatch, employers are making more use of online job-portals. In 2016, the job portal 'eJobs' reported that more than 420,000 OJVss were posted to its site over the course of the year, 70% more than the previous year. While this dramatic increase in the use of eJobs cannot be extrapolated to the rest of the OJV market, it does indicate that as the number of staffing shortages increases, employers are using all possible recruitment channels to improve their chances of finding qualified candidates. Job seekers on eJobs are mostly searching for jobs in industries such as IT, finance, sales and HR.

In addition to the development of job-portals (PES and private) it should be noted that there are many vacancies published on general advertisement websites, most of which have a special section for job announcements. These websites often have a lot of older advertisements. Some advertisements are as old as six months, but websites prefer to keep them in order to have more content, thereby increasing their chances of being indexed by search engines.

The development of job portals is supported by the increasing number of job seekers. According to a study by Gemius Romania (2016), approximately 1.5 million Romanians search online for a job each month. That is 21% of the overall number of internet users above 14 years of age in Romania.

The increase in hiring perspectives is a proxy for the development of the online labour market. For example, a study conducted by Manpower (2017) shows that Romanian employers report positive perspectives for hiring for 2017. Thus, 19% of the employers anticipate an increase in the overall number of employees, while 13% of employers anticipate a decrease in hiring and 66% do not anticipate any change whatsoever. This represents a net hiring anticipation of +6%.

There are not many longitudinal OJV surveys or data about the number of job vacancies published on private specialised websites, but the dynamics of OJVs from the PES give a picture of the evolution, showing that the OJV market is experiencing growth.

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

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

#### 3.1.1. Legal/Regulatory Framework

Employers are legally required to report all vacant positions to the local PES<sup>6</sup> office within five working days from the date on which they become vacant. They also have to announce that a position has been filled within a day of hiring a new worker.

Employers report vacant positions using the Romanian Classification of Occupations (COR)<sup>7</sup>, similar to the ISCO – 08. The report is submitted through a form (hard-copy or electronic copy) which contains the following fields:

- Occupation (COR/ISCO – 6 digits);
- Vacant or newly created position;
- Validity for EU citizens;
- Location (city, county);
- Minimum requirements (years of experience, studies, other conditions);
- Type of contract (full time or part-time);
- Working time (hours);
- Salary and other benefits (transport, accommodation, etc.).

According to the PES, information is published to their portal in real time, as soon as an employer reports a vacancy. The employers also have the option to publish vacancies directly on the PES job portal, in this case they need a username and a password provided by the PES.

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

The PES online job portal<sup>8</sup> is managed by the National Employment Agency. This portal has national coverage, and it is the only official job portal that the PES uses. The current PES job portal was developed as part of a project financed by the EU through the Sectoral Operational Programme Human Resources Development.

The first page of the PES online job portal shows the number of vacancies and a ranking of vacancies and job searches by the type of occupation at the COR/ISCO 6-digits level. Additional data is also available on the PES website ([www.anofm.ro](http://www.anofm.ro)), but only in pdf or word format. Data about job vacancies by ISCO code is also available through PES monthly press releases. However, the press releases only contain some of the more numerous categories of job vacancies sorted by occupation.

The PES job portal allows users to search for vacancies by occupation, sector, type of contract etc., but these sorting options do not always function correctly. Another problem concerns the frequent changing of the website design and layout. Data from the PES website is difficult to obtain,

<sup>6</sup> In Romanian “Agenția Națională pentru Ocuparea Forței de Muncă” (ANOFM).

<sup>7</sup> In Romanian “Clasificarea Ocupațiilor din România” (COR).

<sup>8</sup> <http://www2.card-profesional.ro>.

because it is sometimes difficult to locate. Some of the data is available in a format that is difficult to process (e.g. .jpg).

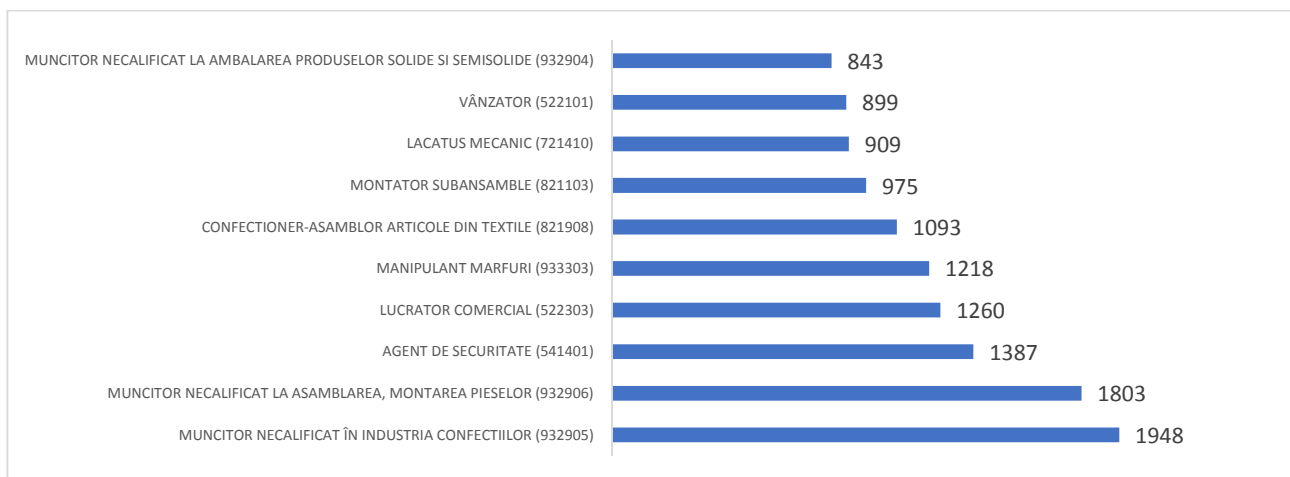
### 3.1.3. Focus of the PES Online Job-portal(s)

The content of the PES job portal is provided by employers, through compulsory reports about vacancies, and by the job seekers, who post their CVs to the portal using the European standardised document, Europass CV, which allows job seekers to list competencies as well as hard and soft skills. This information can be automatically matched with vacancies in the database. Thus, the targeted public for the PES job portal are all job seekers (whether unemployed or looking for a new position) and employers who have vacant positions. The PES job portal should comprise all vacancies from Romania, but even though it is compulsory, not all employers report their vacancies to the PES.

The information about who uses the PES job portal is very poor. The website search engine and filters do not work properly, so it is very difficult to analyse the characteristics of users/members.

Figure 3 displays information about the first ten occupation categories which contain the most vacancies. The COR/ISCO code is shown in parentheses.

**Figure 3: Primary occupation categories on the PES job portal (by COR/ISCO 6/4 digits)<sup>9</sup> and number of vacancies**



Source: Panzaru based on data extracted from PES job portal (extracted on 15 October 2017).

The vacancies on the PES job portal are published according to the six-digit Romanian Classification of Occupations.

The website also presents data about the number of job seekers by occupation, however, the accuracy of this data is unknown. For example, in August 2017 there were 4,862,200 employed people (NIS) in Romania and only 366,497 unemployed people, at the end of the second quarter (NIS). The PES claims to have 3.4 million registered job seekers, a number which seems somewhat unrealistic.

<sup>9</sup> COR and ISCO are interchangeable until the unit groups level.

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

In October 2017, there were 5,379 active employers, 32,447 vacancies and 140,591 job seekers (based on the number of active CV's), according to the information displayed on the first page of the PES job portal. It is difficult to assess the share of OJVs published on the PES job portal compared to the total number of all vacancies in Romania. However, taking into account that the INS reports about 64,000 vacancies (LFS Q2, 2017) and the fact that, according to the experts interviewed, almost all vacancies are published online, we can assume that about 50% of vacancies are published on the PES website.

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

The PES is responsible for communicating data to EURES. All vacant positions are published daily to the EURES portal through a web-service provided by the European Commission, which also removes vacancies from EURES, which have been removed from the PES portal. Web-services generally synchronises the portal with EURES once every 24 hours. The IT department from the ANOFM is responsible for supporting this service.

Employers (e.g. HR representatives) and job portal representatives do not consider the EURES platform relevant to the process of recruiting labour. According to them the information published on EURES is very poor and contain only vacancies reported by employers to PES. The employers prefer to use job portals or social media.

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

### **3.2.1. Legal/Regulatory Framework**

There are no specific regulations regarding the operation of private online job-portals. However, there are specific IT laws that affect the activity of online job portals, e.g. 'Law on the processing of personal data and the protection of privacy in the electronic communications sector', 'Law on electronic commerce', etc. Online job portals must also be authorised by the Authority for Personal Data Processing.

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

In Romania, the OJV market is comprised of several dozen specialised websites. There are also a few portals that aggregate data from other primary job portals. In addition, an important segment on the OJV market is dominated by general advertisement portals, which also have special sections of job advertisements.

The market analysis and the feedback of expert interviews indicates that from the overall websites, only a few are significant, both quantitatively (number of job advertisements and CVs) and qualitatively (geographical, types of professions, domains etc.).

In the category of primary job portals, the most important are eJobs and BestJobs. These are websites with thousands of advertisements offering candidates a vast range of jobs. These portals do not focus on a specific sector or type of employer. Apart from these general sites, there are niche websites focused only on job vacancies from certain sectors. One example is the HiPo.ro portal. Compared to the others, this portal targets candidates with higher education. Vacancies in public

administration and public institutions are published separately on [www.posturi.gov.ro](http://www.posturi.gov.ro), a portal managed by Romanian Government.

The eJobs portal was launched in 1999 as the first online recruitment service in Romania. It has approximately 2,000,000 unique visitors per month. According to eJobs, more than 200,000 client companies publish job offers and make personnel selections on this portal. The market share for eJobs is approximately 60%, with more than 3,000,000 active CVs in the database. It is the only website from Romania that is a member of the International Association of Employment Websites. (IAEWS). In Romania, eJobs is also an exclusive partner of Monster.com, and the eJobs Group is part of the Ringier Romania media group, a member of Ringier AG. In May 2017, the eJobs portal advertised 40,000 jobs. Most of these were in sales (approximately 11%), client services/call centres (6%), transportation (6%) and the hospitality industry (5%). OJVs can also be filtered by location, sector, level of career experience and type of contract. The majority of jobs (approximately 80%) request entry level candidates (less than two years of experience) and/or mid-level candidates (two to five years of experience).

The BestJobs portal was set up in 2000 and is owned by the Romanian company Neogen. The investment fund TigerGlobal Management and the Dutch fund Wouwer hold 20% and 7% of Neogen, respectively. In May 2017, the BestJobs portal included approximately 39,000 job offers. Recently, the BestJobs portal launched a recruitment service.

Both eJobs and BestJobs cover all sectors and regions. Advertisements for positions abroad are also advertised.

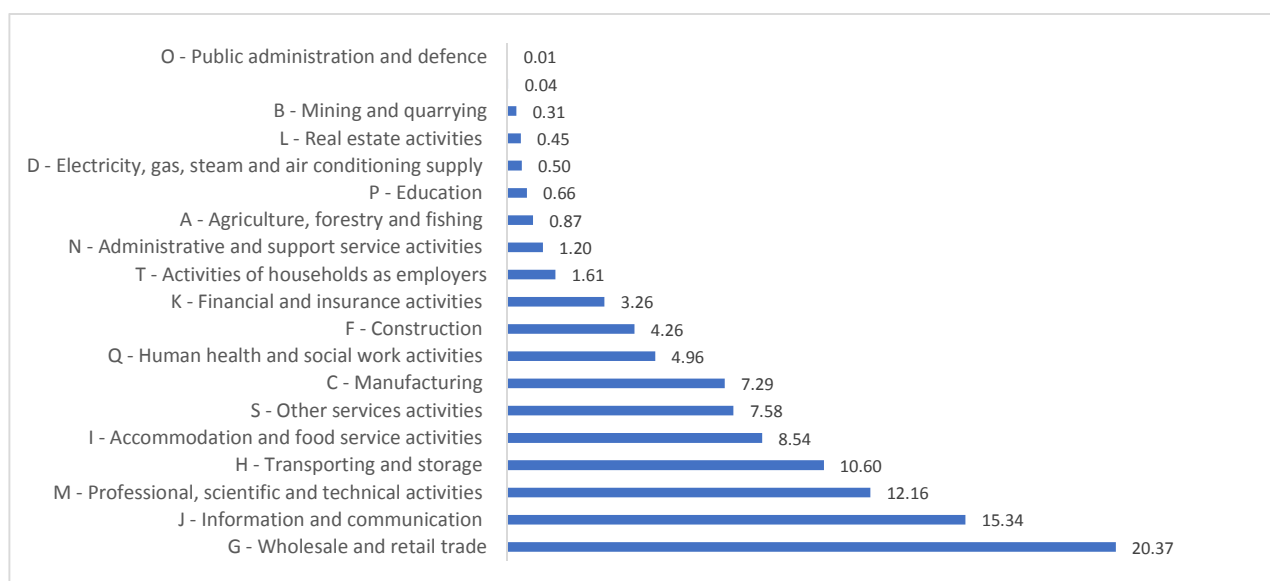
HiPo.ro was launched in 2006 and is owned by the Catalyst Solutions Company, a full-service company specialising in recruitment. The HiPo.ro portal is dedicated to young professionals who have one to five years of experience. The last information published by HiPo.ro concerning the number of registered CVs dates back to 2013. At that time, HiPo.ro had more than 320,000 CVs, and 350 major employers used the HiPo CV database.

Apart from these websites, there are also job search engines. These websites offer the candidate the possibility of accessing a massive selection of jobs gathered online. The best known websites are indeed, [joooble](http://joooble.com) and [findjob](http://findjob.ro). These are international portals that have local websites in the Romanian language.

Besides the job portals, the OJV market is also comprised of a few general advertisement portals. The dominant portal of this segment is OLX. OLX Romania is part of the multinational company OLX. In Romania, OLX is the biggest platform for general advertisements, with an average of more than 10 million unique visitors and more than 1.5 million new advertisements published each month. However, only about 3% of these advertisements are job offers (see Section 5.1.3.).

### **3.2.3. Focus of the Private Online Job-portals**

In the last years, the OJV market grew considerably. The first step a company must take in the recruitment process is to publish its vacancies on the Internet, in which job portals have an important place. The vacancies published on private job portals are organised in Figure 4 by sector. The data were extracted from eJobs portal and classified by NACE.

**Figure 4: Percentage of OJVs in each Sector according to NACE on eJobs Portal**

Source: Panzaru, based on data extracted from [www.ejobs.ro](http://www.ejobs.ro) (extracted on 15 October 2017).

The classification is approximate due to semantics challenges. However, the data shows the distribution of vacancies along NACE groups on a private job portal. As the eJobs portal is fairly representative of the regions and sectors in Romania, this distribution can be used to understand the general trends across the country.

### 3.2.4. Outreach of the Private Online Job-portals

Due to the labour shortages, private companies use multiple recruitment channels. The employers and representatives of job portals assess that over 90% of vacancies are published online, either on specialised job portals or other websites. Recent research (HR Lab 2016) indicated that over 80% of companies use job portals to advertise their vacancies.

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

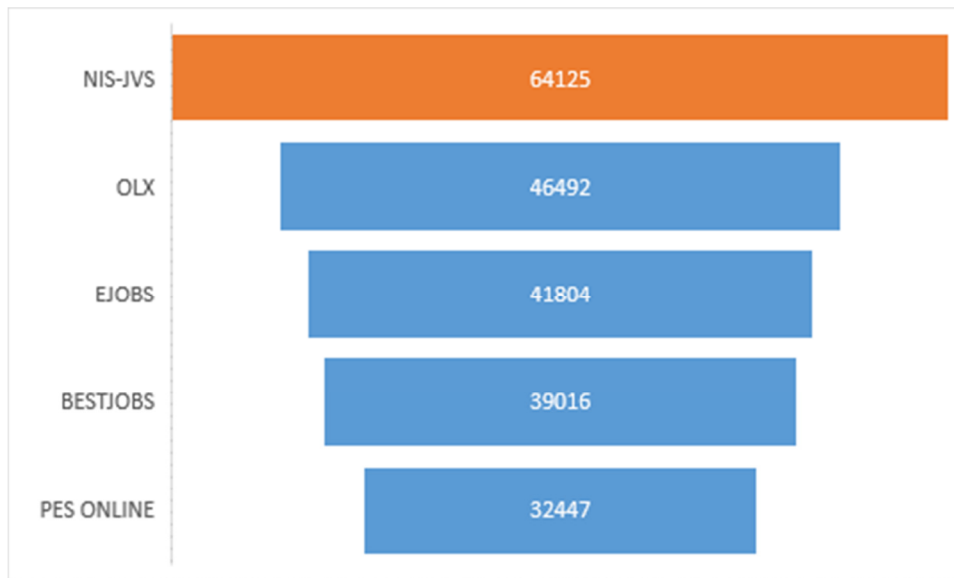
There is no official relationship between the job-portals of the PES and private portals. However, legal regulations require all employers to make the PES aware of their vacancies. As a result, all jobs available on private portals should also be located on the PES portal. However, this is not the case. Not all vacancies are reported by companies to PES, even though this is compulsory. On the other hand, on private job portals, announcements for “non-vacancies,” roles that do not actually exist, are sometimes published in order to attract potential future candidate pools.

On the PES job portal there are mainly announcements for low and medium skilled jobs. These are also usually advertised on general advertisements websites (e.g. OLX).

The share of OJVs placed on the public online job-portal(s) and on the private online job-portals is difficult to assess. However, considering the number of vacancies registered in the Job Vacancy Survey and the number of vacancies published on public and private job portals (see Figure 4), we can estimate that about 50% of vacancies are published on the public job portal and about 70% of vacancies are published on private job portals. Of course, some of these are the same vacancies.

Based on the opinions of the experts in HR, the job portal representatives and certain studies, it is also possible that the percent of vacancies published on private job portals is higher.

**Figure 5: Number of online vacancies in different websites and number of vacancies according to NIS-JVS**



Source: Panzaru (2017), based on data from INS, PES, private job portals (extracted on 23 October 2017).

Moreover, the vacancies published on social media like Facebook or LinkedIn should also be taken into account.

### 3.4. Role of other Recruitment and Job-search Channels

Desk research and interviews show that companies use multiple online (e.g. job websites, social media) and offline recruitment channels (e.g. career fairs and events, databases, direct searches, hackathons and other contests). A significant orientation towards social media can be observed lately. The interview respondents indicated that social media is better suited to recruiting specialists for top management positions, while job websites are more suitable for entry-level, junior or medium positions.

In 2014, 46.4% of companies used print newspapers as a prevalent channel for advertising their vacancies, and only 40.4% of companies used specialised websites (JobWatch Survey). There is no data for 2015, but according to a survey from 2016 (HRLab), the percentage of companies that prefer to post their vacancies on specialised websites increased to 80%. In addition, social networks like LinkedIn or Facebook are also used by a significant percent of companies (approximately 75%) while few companies used Google+, Instagram or Pinterest.

Overall, newspapers are used for advertising vacancies in sectors such as manufacturing, construction, accommodation and transportation, while vacancies in the sectors of trade and ICT, which generally demand more complex professional profiles, are advertised on specialised websites.

A company's field of activity determines the type of channels through which it prefers to advertise vacancies. Research conducted in 2014 (JobWatch Survey) shows that for management and quali-

ty certification vacancies, companies use advertisements on job portals (61.2% for management and 60.8% for quality certification), while administrative and equipment maintenance-related vacancies prefer private agencies (43.1% for administrative and 40.4% for equipment maintenance). For quality control jobs, personal networks and advertisements on the company's own website are of equal importance, while in the accounting field, recruitment seems to be carried out equally by private and public agencies and advertisements on company's website. Public employment agencies are not employed for recruitment in areas such as quality certification, communication, management or human resources, however, they seem to be used for jobs in manufacturing, hospitality industry and agriculture.

The decision to choose job portals for recruitment depends on the job level (executive/management, higher/medium education, and highly specialised positions), the advertising costs, the website traffic and the length of the publishing process (time constraints). When recruiting for an executive/management position, employers tend to use job portals with significant traffic. Most job portals do not publish information about traffic, so the employers choose well-known portals which are sure to have a good traffic. This frequently excludes the option of choosing small, new or niche websites. When recruiting semi-qualified personnel, a frequent option is that of general advertisement websites. However, this channel is rarely used by major employers, and is more common among small employers with regional coverage.

On the other hand, it is important to consider that most of the unemployed come from rural areas, where most of the population have low skills and limited economic opportunities. These people have less access to job portals, but they are active on the social media platforms (e.g. Facebook) or on general job advertising websites, which have a less complex interface. To reach these audiences, employers adapt their offer. Often employers avoid online platforms when recruiting in rural areas, preferring career fairs, posters, flyers or announcements in the local media.

The most recent study on this matter was conducted by HR Lab (2016) on a sample of 190 companies. According to this study, 83% of the participants said they were using social media<sup>10</sup> in recruitment, 80% admitted that their recruitment advertisements are most frequently posted on job websites, and 75% said they posted the advertisements on LinkedIn and in the career section on their own site. Facebook, Google+, Instagram and Pinterest held a fairly small percentage of the OJV market share. The survey also indicates that 93% of the participating companies have social media pages (93% have Facebook, 88% have LinkedIn, 24% have Twitter and 16% have Google+).

Respondents mentioned LinkedIn as the most frequently used platform in social media recruitment (66%), followed by Facebook (30%).

Recently, a new type of recruitment, based on recommendations<sup>11</sup>, has begun. A study conducted by BestJobs (2017) on a sample of approximately 1000 companies, showed that 55.83% of the respondents are actively using recommendation-based recruitment. Among these, there are companies with 1-10 or 11-50 employees, as well as companies having over 100 as well as over 500 employees. This recruitment channel is used for positions of sales (19.74%), production (15.02%),

---

<sup>10</sup> The survey asked about the general use of any social media site. It found that the most popular sites for recruitment were LinkedIn, Bestjobs, eJobs and Facebook.

<sup>11</sup> Recommendations or referral-based recruiting rewards current employees or even people external to the company for referring individuals. Companies may remunerate the person who gave the referral with cash or other gifts, which are generally awarded after the hired individual completes a probationary period. The portal BestJobs launched a referral recruitment service that pays the recommender EUR 300 when a participating company hired the recommended candidate.



software (14.59%), services (8.58%), client services (7.30%), human resources (5.15%), engineering (4.29%), logistics (4.29%), finance/accounting (3.86%) and marketing (3.86%).

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

The online job portal market in Romania is growing. However, it is an extremely segmented market, based on region and demographics. The segmentation is a result of the differentiated access to the Internet by areas (rural-urban), age groups and regions.

Currently, the OJV market is shifting from job portals towards social media or less conventional platforms, such as web forums. The job vacancies currently published in newspapers will gradually migrate to job portals. At the same time, top vacancies will migrate towards social media and web specialised forums. This is due to an increased rate of internet penetration. We also consider that word-of-mouth recruitment and recommendation-based recruitment will increase in the coming years.

## 4. Use OJVs in Recruitment and Job-search

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

There are no comparative studies regarding the relevance of OJVs compared to other channels of recruitment. However, an eJobs study conducted in the first half of 2017, based on data from their own portal, indicated a ratio of more than 1:50 between jobs advertised online and applications received. Thus, companies from the retail sector have advertised 700 jobs and gathered more than 45,000 applications on eJobs. In the distribution sector, there were 15,000 applications for 110 open positions. In the automotive sector, there were 500 opened positions and 7,500 applications. Similar numbers were also recorded for the pharmaceutical sector. By contrast, for the first four months of 2017, the PES reported mediating the hiring of 90,287 people. However, they do not mention how many of those hires were successfully matched following the advertisement of job vacancies on their own portal.

Naturally, the use of OJVs involves differentiation according to occupation or sector. As mentioned in the previous chapters, there are occupations for which vacant positions are published on the Internet but not necessarily on job portals. Many employers are using social media, with LinkedIn as one of the most frequently used channels, especially for executive positions such as managers or team leaders. For example, employers such as Microsoft, Vodafone, Google or IBM are very active on LinkedIn.

According to our interview with HR representatives, it appears that job advertisements are not always connected to actual vacant positions. For HR representatives, developing a pool of candidates is important, and “non-vacancies” allow HR personnel to survey general interest in the company. However, job portals are used less frequently for this secondary purpose. These “non-vacancies” are generally posted to advertisement websites posting classified ads, company websites or media campaigns such as outdoor advertising. These advertisements also have the role of promoting the company’s image. These media campaigns always invite interested individuals to apply for a job.

Deciding to use a job portal for recruitment depends on the level of the advertised position, the portal’s facilities and time constraints. Thus, for entry-level or mid-level positions, job portals are preferred. Employers tend to prefer platforms that allow for customisation of the OJV. Employers prefer to have flexibility in terms of text and graphic design, since these branding aspects can have a major impact in the process of attracting candidates.

The choice of whether to advertise online also depends on sector and company size. Experts consider that most major companies prefer specialised websites, where the number of job seekers is larger. Recommendations are the second option taken into account. For small and medium sized companies, the rate of recommendation-based recruitment is increasing, as they hope to identify a person who would meet the exact requirements for the respective job more rapidly.

However, some companies, even in sectors where there is high labour demand, do not prefer specialised portals. They would rather use direct announcement or word of mouth. For example, companies in the IT sector prefer to post job vacancies at Universities, for instance through advertising or e-mails to students.

There are different ways of using OJV portals for recruitment of labour. Job portals are extremely interested in increasing the number of CVs posted online. HR representatives indicated that in

many cases, they review existing CVs, even if they do not intend on recruiting anyone. Also, they indicated that they review jobs advertised by other companies, whether they are rivals or not. Thus, they try to stay up-to-date with the labour demand and supply.

In the same context, there is a growing trend toward video CVs. For applicants, the video CV has become a new way to illustrate their abilities. The video CV is even more appreciated when the targeted job requires presentation skills, especially in fields such as sales, public relations, marketing, PR or advertising.

## 4.2. Use of OJVs in Job-search

The use of OJVs by job seekers depends on socio-demographic characteristics. The socio-demographic profile of job seekers is highlighted in a study conducted by Gemius Romania in 2015. According to this study, people aged 19 to 24 years and 45 to 49 years, respectively, are accessing job portals to a larger extent. In 2015, there were more than 250,000 unique visitors per month for the age segment 19 to 24 and approximately 213,000 unique visitors per month for the age segment of 45 to 49.

The socio-demographic profile, depending on the occupation and education level of people accessing job sites, shows that the people who are more interested in finding a job are specialists, freelancers and users with higher education. They represent 45% of the overall population searching for job offers, primarily using the LinkedIn platform. The ranking continues with employees who carry out non-manual work in a position that does not require higher education, but who work in an office. Most of these individuals are searching on job portals.

The study also shows that, the most active job seekers have higher education, are between 19 and 24 years old and are at the beginning of their careers. Users aged 45 to 49 and over 55 years are searching for jobs in order to progress in their careers.

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

Representatives of job portals and HR specialists think that job portals will become more important as a strategic option for HR departments in their search for a higher number of candidates. It is estimated that in the following years, job portals will develop even more, taking over more and more job offers that are currently advertised through classical channels. This will also be influenced by the annual growth of internet users. On the other hand, specialised positions are expected to be recruited through social media, interaction via specific web forums and recommendations.

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

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

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

The selection of job portals has been made based on their ranking in the Google search results, suggestions made by employers during the interviews and the desk research. The geographical coverage of the job portals, the sector diversity of the OJVs and the volume of OJVs were also considered. However, selecting job portals based on their ranking in the Google search results seemed to ensure a good representation regarding regional coverage and sector diversity.

Table 3 shows the search terms used in the Google search and the number of results.

**Table 3: Grid for documenting the Google search for job-portals**

|                  |                                   |                               |
|------------------|-----------------------------------|-------------------------------|
| <b>Search 1</b>  | <b>anunturi de angajare</b>       | <b>job announcements</b>      |
|                  | Number of results per search term | 547,000                       |
| <b>Search 2</b>  | locuri de munca                   | workplaces [job] announcement |
|                  | Number of results per search term | 12,700,000                    |
| <b>Search 3</b>  | locuri de munca vacante           | workplaces [job] vacancies    |
|                  | Number of results per search term | 434,000                       |
| <b>Search 4</b>  | portaluri de angajare             | job [hiring] portals          |
|                  | Number of results per search term | 63,100                        |
| <b>Search 5</b>  | site-uri de angajare              | job [web]sites                |
|                  | Number of results per search term | 142,000                       |
| <b>Search 6</b>  | anunturi angajare online          | online job announcement       |
|                  | Number of results per search term | 275,000                       |
| <b>Search 7</b>  | angajare                          | hiring, employability         |
|                  | Number of results per search term | 3,720,000                     |
| <b>Search 8</b>  | caut de lucru                     | looking for job               |
|                  | Number of results per search term | 463,000                       |
| <b>Search 9</b>  | vreau sa ma angajez               | I want to be hired            |
|                  | Number of results per search term | 69,500                        |
| <b>Search 10</b> | recrutare online                  | online recruitment            |
|                  | Number of results per search term | 1,950,000                     |
| <b>Search 11</b> | joburi publicate online           | online jobs                   |
|                  | Number of results per search term | 689,000                       |
| <b>Search 12</b> | joburi vacante                    | job vacancies                 |

|                  |                                   |                      |
|------------------|-----------------------------------|----------------------|
|                  | Number of results per search term | 392,000              |
| <b>Search 13</b> | canale de recrutare               | recruitment channels |
|                  | Number of results per search term | 81,600               |
| <b>Search 14</b> | portaluri de joburi               | job portal           |
|                  | Number of results per search term | 8,350                |

Source: Panzaru (2017).

Due to linguistic similarities, during the research process, results included websites from Moldova. The number of results per search term includes these also. However, only Romanian portals were analysed.

I recommend that the scraping activity focus on the following portals: eJobs or BestJobs<sup>12</sup> (as job portals), OLX (as a general portal) and the PES portal.

### 5.1.2. Identifying the Online Job-portals Through Expert Interviews

According to HR representatives, the most important job portals are eJobs and BestJobs and the most important general ad portal is OLX. These portals are so important due to the fact that they are up to date and offer a high number of OJVs.

### 5.1.3. Validating the Selection of Online Job-portals

According to INS, Romania has almost 60,000 job vacancies (according to the Job Vacancies Survey). The identified portals, eJobs and BestJobs, cover approximately 40,000 job vacancies each, including professional and skilled positions. The general advertising portal OLX contains approximately 46,000 advertisements, mostly for skilled vacancies. The PES portal holds approximately 32,000 job vacancies. These are precisely the job vacancies for which employers have already started recruitment processes. Once the position has been declared filled, the job vacancy is automatically deleted from the website, at least in theory.

Due to labour shortages, employers publish job advertisements on as many websites as possible (both job portals and general advertisement portals). Thus, the same OJVs can be found on several portals. All experts interviewed (except PES and INS) indicated eJobs, OLX and BestJobs are the main job portals used for advertising job vacancies. INS and PES representatives avoided discussing job portals in too much detail. PES representatives admitted that the market of private job portals is well developed and contains “probably all vacancies”

I suggest including eJobs or BestJobs, OLX and PES in the scraping activity to ensure a good cover of OJVs for Romania.

<sup>12</sup> BestJobs and eJobs tend to cover the same advertisements, as employers often post to both portals.

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

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

The PES job portal can be accessed at <http://www2.card-profesional.ro>. Through this portal, employers can report their job vacancies online, as well as through a hard copy format. Employers can also access information concerning the CVs of European Professional Card (EPC) holders, and they can publish offers for professional trainings.

- **Workflow of drafting an OJV:** The uploading of a job vacancy is completed through a pre-defined template.
- **The OJV template** includes the following fields:
  - Occupation (main domain - ISCO 1 digit): structured;
  - Occupation (main subdomain - ISCO 2 digits): structured;
  - Occupation (secondary subdomain - ISCO 3 digits): structured;
  - Occupation (professional category - ISCO 4 digits): structured;
  - County: structured;
  - Contract time (Permanent/Temporary): structured;
  - Type of contract (according to Romanian legislation - author's rights contract, military, temporary, permanent, contract of cooperative membership, civil convention, child care, disabled child care): structured;
  - Education (Elementary, Secondary, Professional, Special, High School, Post-High School, Higher Education, No education): structured;
  - Apprentice (Yes/No): structured;
  - Stage (Yes/No): structured.
- **Workflow of posting an OJV:** In order to post an OJV, employers must have a username and a password. These credentials can be obtained from the PES (NEA). There is also the possibility of online registration, where the following issues are required:
  - Company fiscal code;
  - Email address;
  - Personal identification number of the employee
  - Index D112 ANAF<sup>13</sup> (this is a National Agency for Fiscal Administration (ANAF/NAFA) declaration which is only valid for companies having employees – *this hampers the registration of companies that do not yet have employees*).

The contact with the operator (PES) is only allowed through an e-mail address ([anofm@anofm.ro](mailto:anofm@anofm.ro)). The registration of job vacancies is free.

The PES portal is also addressed to job-seekers. They cannot complete their profiles independently. In order to appear on the website, the job seeker must contact the PES. He or she receives an EPC from the PES, as well as a password and a username in order to log into the website. After being registered, the job-seeker will find information on his account concerning the CV and job offers which meet his/her profile. After the candidate applies for the desired job offer, the mediation agent will see the application in the system and facilitate the meeting between the employer and the employee. The employer can only access the system to see the personal and professional data of the applicant shortly before the interview.

<sup>13</sup> In Romanian "Agenția Națională de Administrare Fiscală" (ANAF).

The EPC and the CV of the applicant are saved in a Europass format. It contains last name, first name, physical address, email address, nationality, date of birth, gender and most recent job as well as current occupation (including an ISCO code). In the case of unemployment, this information is transferred from the hard copy folder of the unemployed to his card, by the agent from PES.

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

This section contains a description of the process of drafting and posting an OJV on the **eJobs** portal ([www.ejobs.ro](http://www.ejobs.ro)). It was chosen because in the interviews and desk research it was identified as one of the most important job portals in Romania. To upload an OJV to eJobs, an employer must fill out a template containing both structures and free text fields. The fields and characteristics of the OJV template include the following information:

- Company name: compulsory, structured;
- Job title: compulsory, structured;
- Number of vacancies: structured (numeric);
- Department: compulsory, structured;
- Experience: not compulsory, structured [Yes/No. If “yes”, the period can be indicated (1 month to 10 years, split in experience in the selected department or overall experience)];
- Industry: not compulsory, structured;
- Location (city): structured;
- Job type: compulsory, structured;
- Career level: compulsory, structured, (without high school, entry-level, mid-level, manager/executive position);
- Foreign languages: not compulsory, structured;
- Driving license: not compulsory, structured, (Yes/No, if “yes” – choose category);
- Wage: not compulsory, structured, (implicit is set to “not specified”);
- Ideal candidate (description): compulsory, text;
- Job description, responsibilities and benefits: compulsory, text;
- Description of the company: compulsory, text;
- Language to view CV (Romanian or English): not compulsory, structured;
- Validity (days): not compulsory, structured;
- Company logo: not compulsory; only image file can be uploaded (max 6MB).

Once the necessary information has been provided, there are two main steps required to complete publication of an OJV: creating an account, where data about the company is required, and paying a fee.

EJobs offers four types of advertisements (Standard, Business, Business Plus and Premium). Each of these has various advantages, such as listings on the first page, daily or weekly updates, inclusion in newsletters sent to candidates, etc. The upgrade includes being featured on the weekly advertisement in the newsletter sent to candidates. Advertisement updates mean that on the day of the update the OJV (which may have been published days or weeks earlier) appears as if it was published within the last 24 hours and will appear on searches just below newly posted OJVs.

Costs vary depending on the number of published advertisements (e.g. EUR 119 for 1-3 Standard advertisements, up to EUR 459 for 1-3 Premium advertisements with a daily update). For more than 11 advertisements, costs are reduced by 50%. There is also a so-called “Freemium” advertisement. This is a minimum priority advertisement which only grants access to the first five applicants. Three Freemium advertisements can be published during a month, but multiple Freemium advertisement may not be posted for the same position over a period of 30 days. When registering on the website, each user receives a bonus of EUR 357 (three free Standard advertisements).

Employers receive access to the CV database based on a fee system. The cost varies from EUR 600 (1 week, 150 CVs per day) to EUR 3,500 (3 months, 150 CVs per day). Moreover, people have the option of only accessing contact data from the CVs. Here, costs vary from EUR 180 (20 CVs) to EUR 2,300 (1000 CVs). Communication is very easy, as the portal has a client assistance service, which can be contacted by phone or e-mail.

### 5.3. Contacting the Online Job-portal Owners

Twenty-eight portals were identified through desk research. In the next stage, we contacted 20 of these portals to inform them about the planned scraping activities. Only Hipo.ro job portal answered positively. They agreed to allow access through API. However, they do not cover a representative share of OJV. The HiPo.ro portal is dedicated to young professionals with between one and five years of experience. The most recent information about the number of registered CVs on HiPo.ro dates back to 2013. At that time, HiPo.ro had more than 320,000 CVs, and 350 major employers used the HiPo CV database. The PES job portal also answered, but they declined access to their OJVs because of technical restrictions. We did not receive responses from any of the other portals.



## 6.Format and Content of OJVs

### 6.1. Legal/Regulatory Framework

In Romania, there are no specific legal regulations regarding the way in which a job announcement should be designated.

Companies are obliged by law to treat candidates for a vacant position equally, regardless of race, ethnicity, age, religion or sexual orientation. The law (202/2002) regarding the equality of opportunities between men and women prohibits discrimination which disadvantage persons of a certain sex when announcing or organising contests or exams, as well as during candidate selection for the filling of vacant positions in the public or private sector. The regulation is also applied to job vacancies published on the Internet.

Additionally, employers are required to inform the PES about all job vacancies. The employers must share details about the occupation, sector, type of the contract, required competencies, etc. Then, the PES posts the job vacancies on their portal. Job vacancies in public administration also have to be published in the Romanian Official Monitor. As of June 2017, access to content on the website of the Official Monitor is free. This means that these job vacancy advertisements are also searchable online. However, they should already be available via another government portal, [www.posturi.gov.ro](http://www.posturi.gov.ro). Nonetheless, there is no regulation concerning the exact content that should be published on the Internet.

### 6.2. Format of OJVs

Since no legal regulations exist, there are other factors which influence the format of the advertisements. These can be divided into two categories: ideas from human resources management theories and influences from the job portals business model.

HR management theories consist of guidelines and suggestions concerning the way in which a job advertisement should be designed in order to enhance the possibility of attracting the best candidates. These theories became evident in practice during the desk research, when we considered a few HR textbooks, job portals recommendations or suggestions from HR specialists published in various newspapers. They were also confirmed by the interviewed experts. For example, a frequent recommendation is to mention the specific tasks of the job. Another is to use words that are easy to search on search engines. Thus, most of the job advertisements use very general and common terms to define occupations (e.g. sales person, qualified/unqualified worker, trade worker etc.).

Job portals usually request specific information from employers in order to successfully post a job: the occupation (not necessarily in a standardised format), the type of job, the description of the ideal candidate, the job description, the company description, the salary. Not all employers provide information concerning all of these aspects.

Usually larger companies prefer to pay extra in order to have a customised ad. The details included in the job announcements depend on the company's sector of activity, geographical area and the profile of desired candidates. Companies that provide jobs abroad usually mention the salary from the beginning, because it is generally higher than salaries offered in Romania. They also of-

ten mention if foreign language abilities are required or if transport abroad is covered. Sometimes, the OJV indicates if the work contract is with a foreign employer or with a Romanian company.

For internal offers, especially in the Centre, West and North-West of the country, where there are significant fluctuations of personnel and labour shortages, an emphasis is given to extra benefits.

Most advertisements are published in Romanian, although some are published in English, particularly in advertisements for executive positions. Advertisements are published in a foreign language when the primary language of the employer is not Romanian. Apart from English, there are also advertisements in German and French. On portals with international coverage, advertisements in languages other than Romanian are more frequent.

### 6.3. Content of OJVs

There is no general pattern concerning the content of OJVs. The configuration of the advertisement depends on the employer. Usually, the advertisement is published using the format of the portal. Thus, the employer can choose to offer details by filling in some structured fields, mostly referring to occupation and location, and by describing in free text sections other aspects such as experience, years of service, studies etc.

Many companies do not mention salaries in advertisements published on job portals. According to job portal representatives, no more than 10% of published job advertisements include salary information. The HR experts and employers we spoke with consider that the percentage is somewhat higher. There are multiple arguments from employers, but most frequently, they do not want to disclose information on the salary, as they can sometimes obtain a specialist for less money than expected. Other companies would rather keep their salaries confidential, because that would save them the effort of explaining salary differences to employees, especially if these differences occur between two employees with similar profiles and positions. The lack of information on salaries is most frequent for top or middle management positions. Salaries are not generally mentioned for high-skilled jobs, such as executive roles, however, opportunities for personal development are often mentioned instead. Information on salaries is generally mentioned for positions in production, commerce or for entry level positions. In many cases, employers use general expressions such as attractive salary offered.

OJVs often do not reveal whether the job is full time or part-time. Romania does not have a well-developed part-time labour market, so not indicating the hours automatically implies a full-time job.

Similarly, the working time is also often omitted. In the working culture of Romania, employees are used to working 40 hours per week (8 hours daily, 5 days per week). However, in many companies, this schedule is changing, as employees also have to work on Saturdays. In order to avoid a clash with the existing cultural model, as well as to avoid discouraging applicants, many companies would rather not indicate the work schedule in the advertisements.

Many OJVs include very general references to competencies. These are meant to provide brief information regarding the context of the job and the professional orientation. It has almost become a stereotype that job advertisements contain indications such as the capacity to learn together, the capacity to efficiently organise time and activities, orientation towards results or problem solving. However, some competencies also indicate characteristics of the job. For example, for jobs where the working time is over the usual limit of 40 hours per week, they may indicate that they are looking for a "flexible person". When recruiting in sales the OJV may request people with skills in "persuasion". However, HR specialists say that competencies listed in OJVs are not meant to restrict candidates, and that in the context of labour shortages, any candidate is welcome.

References to the so-called digital competencies such as e-mail, spreadsheet, word processing, etc. are becoming more and more frequent.

References to personality traits are encountered in most advertisements. Employers' representatives consider it important to mention personality traits, considering that these increase the chances to recruit the best candidates. On the other hand, job portal representatives recommend distinguishing between compulsory and desirable traits. Some advertisements contain long lists of personality traits, but these have nothing to do with the real job requirements. They are only used to provide more content to the advertisement. The most frequently mentioned personality traits in job advertisements are keen, trustworthy, confident and reliable. Personality traits appear in job advertisements due to HR theories of recruitment and companies' wishes to find the most adequate candidates. However, in most situations, candidates do not pay attention to these requirements, and employers only use them as evaluation criteria for positions where they are really important, for instance for executive positions.

Based on the information collected, we cannot determine specific expressions which employers use to indicate their search for specific skills. Despite the lack of standardisation, the words used are generally clear to all candidates. The choice of expressions depends on the companies' imaginations.

Discriminatory expressions often appear on OJVs. To avoid using bluntly discriminatory phrases, some employers use various "hidden code words". Terms such as "dynamic" may indicate a preference for young candidates, while "reliable" and "wise" may indicate a preference for older candidates. Code words are also used to indicate which gender is preferred. "Dexterous" is used to suggest that employer would like to hire a female candidate, especially in the clothing sector. The hospitality industry may use the term "neat physical appearance" to indicate that a female candidate is preferred. By contrast a "strong person" indicates that the employer is looking for a male candidate, especially in the constructions sector. Sometimes the female form of a job title in the Romanian language is used to indicate that an employer prefers a female employee (e.g. *lucratoare*, meaning female worker).

Code words can also be used to discreetly reveal information about illegal or black market jobs. These ads are not published by official companies, so they cannot be posted in the PES. They are also not generally found on the portals, but rather in the job sections of many general advertisement portals. They may have titles that sound like above board jobs, but some of the wording in the descriptions or in the desired traits indicate the true nature of the jobs. For example, an advertisement claiming to be recruiting for the position of a secretary might read: natural blonde lady, blue eyes, supple, educated for special opportunity, seriousness (*serioasa*, in the Romanian language, meaning conscientious person reliable and discreet).

Customised advertisements may include photos which allude to the atmosphere inside the organisation or try to persuade candidates to apply (e.g. "We want you in our team!", "Come in our team!" or "We need a colleague").

For jobs which require a high level of creativity (publicity, public relations, design etc.), the advertisements contain terms meant to make the reader intrigued or curious through their originality. These advertisements provide more than just the responsibilities associated with the job; they describe the mission and spirit of the organisation.

Companies that are less well-known, but which wish to transmit the image that they are important companies use terms such as "multinational company", "market leader in the X domain". For the desired position, they use terms such as "responsible for development", "project managers", "responsible for the implementation".

The excessive use of expressions referring only to personal requirements, without illustrating professional requirements, such as “communication skills” “a desire for professional achievement” is most common in less known companies and most common in OJVs posted on general advertisement websites.

Requests concerning qualifications are not very common in OJVs. Qualifications are only indicated for specialised jobs such as welder, crane operator, etc. These occupations are very rare and much sought after. Most job portals have a section for the level of education and not for the level of qualification. Thus, requirements concerning the level of qualification are replaced by details concerning the “level of education or career level” (e.g. entry/0-2 years, middle/2-5 years, senior/5-10 years, executive/>10 years). Advertisements containing references to the level of experience (in years) are frequent. The significant number of job offers in which previous experience is required is justified by economic reasons such as the employer’s effort to avoid hiring an inexperienced person.

There are various OJVs which indicate conditions of age or gender instead of qualification. From this point of view, they have a discriminatory character (e.g. security guard of maximum 35 years old). Interviewed experts admitted that this sort of advertisements is discriminatory. Moreover, some of the experts, described cases in which job seekers complained because of the discriminatory content of the advertisements. However, the complaints are rare. Generally, according to the experts, job seekers find these details helpful.

There are situations in which certain companies gain access to government funds for hiring people of various categories (unemployed, disabled etc.), and in these cases, the OJVs are only targeted towards these groups. These advertisements are rare and appear mainly on general ad portals.

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

Since the PES job portal has a lot of malfunctions, it is very difficult to make comparisons between the PES and private job portals. Moreover, between May 2017 and October 2017 the PES portal underwent many changes in its functionality:

- Online registration for new companies was suspended (companies must contact their local PES office);
- Search engine only allows searches using the exact COR/ISCO code (not free terms).

Beyond that, both types of portals generally required information about occupation, type of contract, working time, sector, location, qualification and job level, experience and education level. On the PES job portal these types of information are required in a standardised form.

PES job portal advertisements usually don’t cover professional or management positions. Even though is compulsory for employers to report vacancies to PES, for these positions they prefer to use other channels (e.g. private job portals). Frequently, there are reported vacancies in the sectors with high shortages (e.g. automotive, construction) from less developed area (South and North-East).

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

Regarding the changes in the format and content of OJVs, the experts predict that companies will use less restrictive language in OJVs. This is because of the deep labour shortages. Companies

are in a desperate search for employees and are willing to hire almost anyone. For example, in the field of IT, where the crisis of personnel is extreme, companies hire 100% of IT graduates, regardless of their school performance. The company then provides courses to supplement the skills that the new graduates do not yet have. In the automotive industry, the situation is similar, especially in the western part of the country, where most of these companies are located. The labour force is recruited from other parts of the country where there is a higher unemployment rate. Recruitment advertisements for these jobs regularly reference benefits such as “free accommodation” and “free transport”.

It is estimated that in the future, job advertisements will contain fewer references to professional competencies. Rather, they will indicate a general occupation, such as IT specialist, engineer etc. Likewise, a candidate’s experience level will likely become less important. Because the applicants are sought after, the companies will do more to emphasise the opportunities for personal development that are available and the friendliness of the work environment. Job portal representatives predict that an increasing number of companies will want to customise job advertisements to include elements of company branding.

Also, according to interviews with job portal representatives, in the future, portals will refine their platforms to create a more user-friendly and intuitive interfaces that can help match applicants to positions.

## References

### Statistics

Institutul National de Statistica [National Institute of Statistics] (2017): LMV102B - Locuri de munca vacante pe macroregiuni, regiuni de dezvoltare si activitati ale economiei nationale (sectiuni) CAEN Rev.2 [Vacancies by macro-regions, development regions, activity of national economy at level of CANE Rev.2 section], <http://statistici.insse.ro/shop/index.jsp?page=tempo3&lang=ro&ind=LMV102> (last accessed on 28 May 2017).

Institutul National de Statistica [National Institute of Statistics] (2017): AMG157E - AMIGO - Rata somajului BIM pe grupe de varsta, medii de rezidenta, macroregiuni si regiuni de dezvoltare [AMG157E - AMIGO - ILO unemployment rate by age group and urban/rural area, by macro-regions and development regions], <http://statistici.insse.ro/shop/index.jsp?page=tempo3&lang=en&ind=AMG157E> (last accessed on 05 June 2017.)

Institutul National de Statistica [National Institute of Statistics] (2017): Press Release, [http://www.insse.ro/cms/ro/comunicate-de-presa-view?created=8&field\\_cuvinte\\_cheie\\_value=&items\\_per\\_page=10](http://www.insse.ro/cms/ro/comunicate-de-presa-view?created=8&field_cuvinte_cheie_value=&items_per_page=10) (last accessed on 28 May 2017).

Agenția Națională pentru Ocuparea Forței de Muncă (2017) [National Employment Agency (2017)]: Locuri de munca vacante [Job Vacancies], Press Release, <http://www.anofm.ro/> (last accessed on 26 May 2017).

Agenția Națională pentru Ocuparea Forței de Muncă (2017) [National Employment Agency (2017)]: Cardul Profesional European [European Professional Card], <http://www2.card-profesional.ro/> (last accessed on 26 May 2017).

### Reports and Surveys

Adecco (2015): Adecco Work Trends, <http://www.adecco.ro/studiul-adecco-work-trends/> (last accessed on 24 October 2017).

Agenția Națională pentru Ocuparea Forței de Muncă (2017) [National Employment Agency (2017)]: Formulare utile [Useful Forms], <http://www.bucuresti.anofm.ro/formulare.htm> (last accessed on 24 October 2017).

BestJobs (2017): Recrutarea online prin recomandări [Recommendation-based recruitment], <http://blog.bestjobs.eu/index.php/recrutarea-pe-baza-de-recomandari/?lang=ro> (last accessed on 24 October 2017).

Consiliul Economic și Social (2015): Rolul actorilor sociali in dezvoltarea unei piete a muncii inclusive in Romania [The Social and Economic Council (2015): The Role of Social Actors in the Development of an Inclusive Labour Market in Romania], <http://www.ces.ro/newlib/studii-ces/STUDIUI-PIATA-MUNCII-2013.pdf> (last accessed on 24 October 2017).

Dumitru, Cornelia (2017): Migration and (Macro) Economic Risks – Romania's Case, <http://globalization.rais.education/wp-content/uploads/2017/04/8.pdf> (last accessed on 29 January 2018).

eJobs (2017): Motivul real pentru care companiile nu dezvăluie salariile [The real reasons for not publishing the salaries on online job announcements], <https://cariera.ejobs.ro/anunturi-de-joburi-motivul-real-pentru-care-companiile-nu-dezvaluie-salariile/> (last accessed on 24 October 2017).

eJobs (2016): eJobs Review & Trends, <http://www.outsourcing-today.ro/articol.php?id=6932> and <https://cariera.ejobs.ro/andrei-frunza-ceo-ejobs-fiecare-candidat-devine-o-companie/>.

Facebrands (2015), (2017): <http://www.facebrands.ro/demografice.html>.

Fondazione Giacomo Brodolini and Obiettivo Lavoro (2014): The JobWatch Survey: Job outlook and the employment needs of Romanian businesses.

Gemius Romania (2016): Unde isi cauta romanii de munca. Cele mai accesate site-uri de joburi [Where the Romanians Looking for a Job. The Most Visited Job Sites], <http://www.gemius.ro/stiri-despre-publisher/unde-isi-cauta-romanii-de-munca-cele-mai-accesate-site-uri-de-joburi.html> (last accessed on 24 October 2017).

HiPo (2017): HiPo.ro Report: Piata fortei de munca in 2017 [Labour Market in 2017], <https://www.hipo.ro/locuri-de-munca/raporthipo> (last accessed on 24 October 2017).

Manpower (2017): Studiul Manpower privind deficitul de talente 2016/2017 [Manpower Talent Shortage Survey 2016/2017], <http://www.capital.ro/deficit-urias-de-talente-se-plang-angajatorii.html> (last accessed on 24 October 2017).

Manpower (2017): Studiul Manpower privind perspectivele angajării de forță de muncă România (Q1 2017) [The Manpower Employment Outlook Survey on Romania] [http://www.manpowergroup.com/wps/wcm/connect/631ee927-073b-4a0e-bfcb-6e61d89857c3/RO\\_RO\\_MEOS\\_1Q2017.pdf?MOD=AJPERES&CACHEID=631ee927-073b-4a0e-bfcb-6e61d89857c3](http://www.manpowergroup.com/wps/wcm/connect/631ee927-073b-4a0e-bfcb-6e61d89857c3/RO_RO_MEOS_1Q2017.pdf?MOD=AJPERES&CACHEID=631ee927-073b-4a0e-bfcb-6e61d89857c3) (last accessed on 24 October 2017).

Ministerul Muncii si protectiei Sociale (2014): Strategia Națională pentru Ocuparea Forței de Muncă 2014-2020 [Minister of Labour and Social Justice (2014): National Strategy for Employment], [http://www.mmuncii.ro/j33/images/Documente/Munca/2014-DOES/2014-01-31\\_Anexa1\\_Strategia\\_de\\_Ocupare.pdf](http://www.mmuncii.ro/j33/images/Documente/Munca/2014-DOES/2014-01-31_Anexa1_Strategia_de_Ocupare.pdf) (last accessed on 24 October 2017).

Monitorul Oficial (2017). Official Journal of Romania, Part III, Competitions for public office vacancies, [http://www.monitoruloficial.ro/article--For\\_public\\_office\\_vacancies--123.html](http://www.monitoruloficial.ro/article--For_public_office_vacancies--123.html).

MyHRLab (2016): Cum foloseste HR-ul Social Media in recrutare? [Using Social Media in Recruitment], <http://myhrlab.ro/infographics/cum-foloseste-hr-ul-din-romania-social-media-in-recrutare/> (last accessed on 24 October 2017).

MyHRLab (2016): Recruiteri pe Facebook [Facebook Recruitment], <http://myhrlab.ro/cool-hr-studies/recruiteri-pe-facebook/> (last accessed on 24 October 2017).

Posturi.gov.ro (2017): Posturile vacante in administratia publica din Romania [Job vacancies in Romanian public administration sector], <http://posturi.gov.ro/> (last accessed on 24 October 2017).

RedLine: Social media Blog (2015): LinkedIn - trend ascendent pentru 2016 [LinkedIn – ascending trend for 2016], <https://www.linkedin.com/pulse/linkedin-trend-ascendent-pentru-2016-cristian-rosu> (last accessed on 24 October 2017).

Romanian Parliament (2002): Lege Nr. 202 din 19 aprilie 2002 privind egalitatea de sanse intre femei si barbati [The Law No. 202 from the 19th of April 2002 regarding the equality of opportunities between men and women], [http://www.cdep.ro/pls/legis/legis\\_pck.htp\\_act?ida=36206](http://www.cdep.ro/pls/legis/legis_pck.htp_act?ida=36206) (last accessed on 24 October 2017).

## Expert Interviews

| Name of organisation  | Type of organisation       | Expert's position  | Interview date |
|---|----------------------------|--|----------------|
| <b>The National Confederation of Free Trade Unions of Romania - "Brotherhood"</b> | Trade Union                | Member of National Board, Coordinator of Labour Market Division    | 10 May 2017    |
| <b>Private company</b>  | Employer                   | HR Manager   | 12 May 2017    |
| <b>HR Club Romania</b>  | HR Association             | Vice-president (West Region)                                       | 17 May 2017    |
| <b>MNC</b>  | Employer                   | HR Manager   | 18 May 2017    |
| <b>Private online job-portal</b>  | Labour market intermediary | Marketing Manager  | 23 May 2017    |
| <b>National Employment Agency</b>   | Public Employment Service  | Vice-director, Labour Market, Employment and VET Programs Division | 25 May 2017    |
| <b>National Institute of Statistics</b>   | Statistical Office         | Director, Labour Market Statistics Division                        | 26 May 2017    |