NEW TRENDS IN THE RECRUITMENT OF EMPLOYEES IN CZECH ICT ORGANISATIONS

Adéla Fajčíková, Hana Urbancová, Martina Fejfarová

Abstract: All organisations are facing the challenge of attracting and retaining employees whose skills and abilities are in line with the organisation’s needs. The plan of recruitment of human resources should be flexible, differentiate between individual categories of employees and should follow new trends in this area. The main objective of this paper is to identify the methods for the recruitment and selection of employees in Czech organisations and evaluate the differences in employee recruitment in large information and communication technology organisations (ICT) compared to other organisations active in the tertiary sector of the economy. The data was obtained through quantitative (n = 288) and qualitative (n = 34) research. Results of the survey show that organisations are starting to utilise a broader scale of methods to attract employees, in particular specialists, in ICT. Most of the organisations active in this area are struggling with the low number of job candidates on the labour market; to overcome this obstacle, they are developing and training their current staff (61.8%), changing their recruitment strategy and increasing initial salaries (50%). The research also identified 5 factors that define groups of organisations based on the methods they use to acquire new employees.

Keywords: Czech Republic, Differentiation of Employees, Human Resource Management, Information and Communication Technology, Recruitment and Selection Methods.

JEL Classification: M12, M15, O15.

Introduction

In today’s fast-changing environment, all organisations need a plan for their human resources (HR) that must be flexible and follow new trends in this area (Armstrong and Taylor, 2017). Bussin (2014), as well as Schwartz, Bersin and Pelster (2014), claim that all organisations are facing the challenge of attracting and retaining employees whose skills, knowledge, experience, competencies and values are in line with the organisation’s needs. Kociánová (2012) and Isson, Harriott and Fitz-enz (2016) also point out the necessity of changing strategies and attitudes in selecting and retaining talented staff because of the needs of Generation Y which has new requirements for their potential employers. The younger generation typically expects greater support from the employer in finding the right balance between their working and personal lives and the option of flexible working hours (Wong, Wan and Gao, 2017). This is confirmed by Dubravská and Solankova (2015) who consider this, alongside the influence of globalisation, knowledge management, talent management and changes related to compensation and benefits, to be the main trends in human resource management. According to the National Cooperative Highway Research Program (NCHRP), the workforce today increasingly often emphasises continuous feedback, professional and personal development and a clearly defined career path (NCHRP, 2012).
1 Statement of a problem

Because human resources (HR), together with their skills and knowledge, represent the essential competitive advantage of any organisation (Chunping and Xi, 2011), the struggle to find the right employees intensifies and becomes a “war for talents” (Alniacik et al., 2014). In order to attract the best, organisations have started using the principles and methods of brand building, strengthening the employer’s image in human resource management (O’Malley, 2010; Alniacik and Alniacik, 2012). Jiang and Iles (2011) see the attractiveness of an employer and the reputation of an organisation as expressions of the organisation’s ability to attract potential talents and encourage current staff to remain loyal to the organisation.

Another trend that must be mentioned as something that influences the selection of methods and techniques for selecting the right candidates is modern technology and social media (El Ourdi et al., 2016), which are part of the everyday life of Generation Y (Din et al., 2015) and play an important role in the selection of new employees in information and communication technology organisations (ICT). Nikolaou (2014) and Russell and Brannan (2016) mention the importance of the internet particularly in terms of the organisation’s presentation on social media, the use of the internet when searching for suitable candidates on job portals and when advertising jobs on its website. Despite some clear benefits in using the internet to attract talent, the traditional communication channels remain important, such as advertising, presentations in educational facilities, at conferences, workshops and job fairs, use of agency workers and more (Gogolova, Ponisciakova and Ivankova, 2015). There are many methods that can be used to attract new employees, but the specific combination used depends on the size of the organisation and its field of business.

The main objective of this paper is, therefore, to identify the methods of the recruitment and selection of employees in Czech organisations and evaluate the differences in employee recruitment in large information and communication technology organisations compared to other organisations active in the tertiary sector of the economy. The results were obtained using the methodology described below.

2 Methods

The data was obtained through two subsequent surveys. The first survey was organised from 10/2016 to 06/2017 and took the form of an electronic questionnaire. The respondents were manually selected organisations active in the tertiary sector in the Czech Republic. 288 organisations took part in the survey; the questionnaires were filled out by persons responsible for HR activities in the organisation. The questionnaire contained 12 questions, 4 of which served for identification. The survey used closed and semi-open multiple choice questions concerning the hiring of new employees. 61.8% of respondents in the quantitative survey were from the private sector and 38.2% from the public sector and the sample included organisations both large and small (40.6% under 49 employees; 59.4% over 50 employees). Most of the respondents (60.7%) are active on the national or international market; the remaining organisations are focusing on a local or regional market in the Czech Republic. Slightly less than half of the respondents (48.6%) have an HR department at their organisation. In 65.3% of organisations, the person responsible for HR activities is a member of top management and 51% of organisations are part of a larger group.
The data was evaluated through descriptive statistics. The results were then also evaluated with multidimensional statistical analysis. Because this particular humanities research focused on human resource management, the used methodology was factor analysis, following the recommendations of Anderson (2009) and Pecáková (2011). In order to obtain the calculations, a correlation analysis was performed first followed by an analysis of the main components and a factor analysis using the Varimax method. The Kaiser-Guttman rule was used to select significant factors (i.e. significant factors were those with variance higher than 1). In the results of the factor analysis, significant values were those with a value exceeding 0.3 (Anderson, 2009).

The research was followed up by a second qualitative survey, implemented in the period 06/2017 to 07/2017 in the form of a structured interview in person. This survey only focused on organisations active in ICT that have more than 50 employees and are the leaders in their respective field in the Czech Republic. The total number of participants was 34 and the interviewed persons were those responsible for HR activities in the organisation. The interview used both closed and open questions aiming to identify any problems in the hiring of new employees, the communication channels used in contact with potential candidates and the methods of their selection. The structured interview contained 16 questions, 4 of which served for identification. The average duration of one interview was 30 minutes.

24 organisations who took part in the survey have 50 to 249 employees (70.6%); 10 organisations have more than 250 employees (29.4%). Most of the organisations are active on the international (18; 52.9%) or national (13; 38.2%) market. Only 3 (8.9%) organisations are focusing exclusively on a local or regional market. 32.4% of the organisations (11) are part of a larger group.

The statistical software used to evaluate the data from both surveys was IBM SPSS Statistics 24.

3 Problem solving

This chapter presents the results of both surveys.

3.1 Recruitment trends in the tertiary sector

New trends in the recruitment of new employees are related to the internet. Use of the internet in the hiring of new staff is not limited to the traditional advertising of open job positions but has expanded to the full concept of how HR marketing is set up. With the development of the internet, people have started forming communities on social networks for reasons both professional and work-related as well as social. Social networks, whether global or local, are also used today, to various degrees, to look for new employees, which is a trend that’s also typical for ICT.

The surveyed organisations active in the tertiary sector typically try to fill their specialist positions from their internal resources (65.97%). 53.82% of organisations rely on the recommendation of a suitable candidate by their employees and advertise jobs on their website (52.77%) and in other media (44.79%). 23.26% of organisations try to attract new employees by actively offering a job in person and 21.87% of the organisations have their presentations in schools and educational facilities. Organisations also try to find employees by keeping records of randomly received applications (20.83%), using notice boards (18.06%), keeping records of former staff
(15.63%) or working with an HR agency (17.71%). Only 15.28% of organisations rely on the Labour Office when hiring specialists and a mere 3.82% use employee leasing.

Based on data analysis the research determined 5 factors (Tab. 1) influencing the methods of hiring employees in the tertiary sector. The research worked with 12 variables (Tab. 2).

**Tab. 1: Variance explained by factors**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Total Variance</th>
<th>Total % of Variance</th>
<th>Cumulative % of Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2.804</td>
<td>23.370</td>
<td>23.370</td>
</tr>
<tr>
<td>2</td>
<td>1.264</td>
<td>10.533</td>
<td>33.903</td>
</tr>
<tr>
<td>3</td>
<td>1.171</td>
<td>9.759</td>
<td>43.662</td>
</tr>
<tr>
<td>4</td>
<td>1.117</td>
<td>9.308</td>
<td>52.970</td>
</tr>
<tr>
<td>5</td>
<td>1.064</td>
<td>8.869</td>
<td>61.840</td>
</tr>
</tbody>
</table>

Source: Authors

The variance of factor 1 can be considered most significant (23.370). In total, the 5 identified variables explain 61.84% of the behaviour of the sample or its characteristics. The results of the factor analysis of the questionnaire are provided in Tab. 2.

**Tab. 2: Resultant factors by the Varimax method**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
<th>Factor 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal resources</td>
<td>0.776</td>
<td>-0.208</td>
<td>0.108</td>
<td>0.055</td>
<td>0.039</td>
</tr>
<tr>
<td>Database of former employees</td>
<td>0.395</td>
<td>0.192</td>
<td>0.315</td>
<td>-0.091</td>
<td>0.547</td>
</tr>
<tr>
<td>Database of potential employees</td>
<td>0.557</td>
<td>0.389</td>
<td>0.112</td>
<td>-0.156</td>
<td>0.167</td>
</tr>
<tr>
<td>Advertising</td>
<td>0.286</td>
<td>0.542</td>
<td>-0.027</td>
<td>0.403</td>
<td>-0.018</td>
</tr>
<tr>
<td>Notice boards</td>
<td>0.223</td>
<td>0.236</td>
<td>0.165</td>
<td>-0.051</td>
<td>-0.772</td>
</tr>
<tr>
<td>Employee leasing</td>
<td>-0.119</td>
<td>0.194</td>
<td>-0.042</td>
<td>0.691</td>
<td>0.142</td>
</tr>
<tr>
<td>Website</td>
<td>0.682</td>
<td>0.268</td>
<td>0.014</td>
<td>0.175</td>
<td>-0.197</td>
</tr>
<tr>
<td>Promotion at schools</td>
<td>0.216</td>
<td>0.457</td>
<td>0.175</td>
<td>0.153</td>
<td>0.389</td>
</tr>
<tr>
<td>HR agency</td>
<td>0.196</td>
<td>-0.140</td>
<td>0.200</td>
<td>0.777</td>
<td>-0.117</td>
</tr>
<tr>
<td>Personal offers</td>
<td>-0.053</td>
<td>0.019</td>
<td>0.883</td>
<td>-0.002</td>
<td>0.015</td>
</tr>
<tr>
<td>Recommendations by employees</td>
<td>0.306</td>
<td>0.182</td>
<td>0.652</td>
<td>0.162</td>
<td>-0.015</td>
</tr>
<tr>
<td>Labour Office</td>
<td>-0.069</td>
<td>0.793</td>
<td>0.117</td>
<td>-0.039</td>
<td>-0.145</td>
</tr>
<tr>
<td><strong>Total % of Variance</strong></td>
<td><strong>23.370</strong></td>
<td><strong>10.533</strong></td>
<td><strong>9.759</strong></td>
<td><strong>9.308</strong></td>
<td><strong>8.869</strong></td>
</tr>
</tbody>
</table>

Source: Authors
The first group of analysed organisations emphasises hiring primarily from internal resources, particularly when planning the career of individual employees (vertical mobility). If there are suitable experts in the organisation, the management intentionally tries to manage their career path to ensure high-level management positions in ICT are staffed by experienced specialists. The same organisations try to use databases of potential employees and constantly update the news section on their website. This factor, which could be termed “Strategy of human resources recruitment”, has values ranging from 0.557 to 0.776, which can be considered a high quality of determined coefficients. These organisations can be recommended to focus on the long-term planning of the recruitment process with emphasis on gaining new talented employees. The organisations must effectively use social networks such as Twitter, LinkedIn, Facebook and others.

The surveyed organisations also focus on advertising (0.542), promotion (0.457) at schools (both secondary and tertiary) and rely on the Labour Office (0.793). These organisations emphasise the need to increase their visibility as potential employers; this factor could be called “External HR marketing”. These organisations should focus on presenting their activities at secondary and higher education institutions, cooperation on a joint project with universities for building the employer branding and gaining new, talented employees during their studies.

The third factor combines personal offers of a job position based on references (0.883), which is a typical method used for key positions in ICT (such as system consultants, system architects etc.) and direct recommendations by employees (0.652). The resulting group of surveyed organisations has been identified with the factor “Personal contact and recommendation”. These strategies are related to the emphasis on mentoring and coaching that are very important and effective learning methods for ICT organisations nowadays. The organisations can offer the possibilities of job shadowing, especially for junior positions.

The fourth factor, “External collaboration”, involves working with HR agencies (0.777) and using employee leasing (0.691). The final factor, “Internal HR marketing”, emphasises keeping records of former employees (0.547) who can still be contacted for specific jobs; these organisations, on the other hand, do not like to post jobs on notice boards, resulting in a relatively high but inversely proportional coefficient (-0.772). It is very important to stimulate current employees and give them opportunities for personal development and support the development of their competences.

Today, in a situation where there is a lack of high-quality employees particularly in technical fields, including ICT, all organisations try to improve their recruitment processes and want to have valuable analyses of the behaviour of job candidates and current staff. Knowledge of the behaviour and preferences of individual employees allows organisations to retain key current staff as well as find suitable new candidates.

### 3.2 Recruitment trends in ICT

The subsequent survey aimed to obtain detailed information related to hiring in ICT. The questions therefore also focused on the reasons why open positions are difficult to fill, on communication methods used to attract candidates and on the methods of their selection.

32.4% of the surveyed organisations (11) do not have an HR department responsible for HR activities in the organisation, which includes recruiting new staff and following
trends in this area. In 21 organisations (61.8%), the person in charge of HR is a member of top management, enabling strategic planning of the organisation’s HR needs. This, however, may be influenced by cases when power in the organisation is highly centralised and the owner also makes decisions on HR matters.

Most of the surveyed organisations (85.3%) have problems finding people for open job positions. 94.1% of respondents said the most difficult positions to hire for were specialists. Only 3 organisations reported difficulties in hiring for administrative or management positions. Detailed results are available in Fig. 1.

Fig. 1: Reasons for difficult job placement

![Chart showing reasons for difficult job placement]

The main reason why hiring is difficult is a lack of candidates on the job market, confirmed by 85.3% of the surveyed organisations. 50% of the respondents claim that another problem is high salary demands of the candidates, insufficient knowledge of the field or insufficient education (29.4%) or a lack of work experience (20.6%). The surveyed organisations overcome this lack of workforce by developing and training their current staff (61.8% of organisations). 50% of organisations fight the issue by changing their hiring strategy and increasing initial salaries. 35.3% of respondents have been forced to lower their requirements for new staff.

Organisations active in ICT prefer modern communication channels without personal contact when communicating with potential hires. Almost all the surveyed organisations (31; 91.2%) have their own website and use job portals (30; 88.2%). In their effort to attract new employees, 29 organisations (85.3%) have a profile on social networks; the most commonly used are LinkedIn (29; 85.3%) and Facebook (22; 64.7%). Another frequently mentioned communication channels are the friends and relatives of internal employees. Less used communication channels are those that involve personal contact, such as job fairs (12; 35.3%), conferences, seminars and workshops (8; 23.5%) or doors open days (8; 23.5%).

ICT organisations agree that the main critical category in hiring new employees are specialists. Because of this, Fig. 2 shows the differences in the use of various methods for selecting specialists in organisations in the tertiary sector in general and in ICT specifically.
Fig. 2: Methods for selecting specialists

![Graph showing the share of organisations (%)](image)

Source: Authors

Results of the research clearly show that the most commonly used methods for selecting specialists are interviews, CV analyses, use of references and proficiency tests. These methods are used most often both by large ICT organisations and by all organisations in the tertiary sector. Yet there are some differences; while the respondent ICT organisations use recruitment interviews for all of their specialist positions, the tertiary sector in general only uses this method in 83% of cases. Because of the technical nature of a specialist position in ICT, this segment much more often uses proficiency tests which are applied by almost 64.7% of the organisations, compared to less than 38.5% in the tertiary sector. Less commonly used methods for hiring in the specialist category are personality tests, intelligence tests and the use of an assessment centre. All these methods, including graphology tests, are, according to the respondents, used more often in other parts of the tertiary sector than in ICT.

4 Discussion

The decisive factor influencing the success of any organisation is its ability to find, attract and retain highly qualified employees. This field is currently experiencing major shifts caused by globalisation, changing expectations of the workforce, a dropping half-life of both skills and technical knowledge, technology and social media (Schwartz, Bersin and Pelster, 2014). In this new environment, the old ways of recruitment are no longer effective and organisations need to adapt (Bohdal-Spiegelhoff et al., 2014).

CEDEFOP (2016) has published a list of five groups of jobs which are experiencing a lack of qualified staff all across the European Union (EU), with significant impact on national economies. These groups of jobs include ICT specialists, physicians, STEM professionals (Science, Technology, Engineering and Math), nurses, midwives and teachers, with ICT specialists occupying the top spot. This was confirmed by our research which shows that 85.3% of the surveyed organisations in this field have problems finding people for open job positions. The main cause is a lack of candidates on the labour market, cited by 85.3% of organisations. 94.1% of respondents said the most difficult positions to hire for were specialist jobs because of their particularly high requirements.
Stephan, Brown and Erickson (2017) claim that competitive organisations must re-evaluate the way in which they promote their values among current and prospective staff. The authors also mention that campaigns created to attract potential job candidates may be just as important as advertisements aimed at customers. The research shows that organisations active in ICT prefer modern communication channels without personal contact when communicating with potential hires. Almost all the surveyed organisations try to find new employees through their website (91.2%), use job portals (88.2%) and have a profile on social media (85.3%).

On the basis of answers of respondents from the tertiary sector, we have identified 5 factors that influence the behaviour of the respondent organisations and can be used to classify them into groups based on which methods they use when hiring employees. These groups, depending on their preferences of which methods should be used, focus on the “Strategy of human resource recruitment”, “External HR marketing”, “Personal contact and experience”, “External collaboration” and “Internal HR marketing”, and each of them has different preferences for hiring in ICT. But there is one thing they all have in common: an emphasis on HR marketing, both internal and external. Taking into account the results of research by Love and Singh (2011), Martin, Gollan and Grigg (2011) and Elving et al. (2012), it seems clear that support of HR marketing and with it new trends in employee recruitment will be a key activity for all organisations. All organisations, including ICT organisations, should use modern technologies to influence talented students at universities, cooperate with them during their studies and promote knowledge sharing between junior and senior positions.

The paper is limited by survey samples. The analysed sample of organisations is adequate for obtaining the data and makes it possible for the authors to describe the probable general situation in the area of new trends in the recruitment process in the tertiary sector, but not to generalise the results to all organisations in the tertiary sector and in the Czech Republic. In ICT, only qualitative research was carried out. The research results were also not related to the characteristics of the organisations, such as its size or the organisation’s market. The limitation of the paper can also be considered the usage of a factor analysis, the main disadvantage of which is the space for the subjective opinion of the analyst when determining the groups of variables. However, this method is often used in human resource management surveys and, above all, sociologists consider it trustworthy. The follow-up research will focus on the effectiveness of used recruitment methods in predicting the future performance of employees and the link between the recruitment process and the characteristics of the organisations.

Conclusion

In the entire EU and its individual member states, there is an ever-growing gap between supply and demand of skills on the labour market, which in some groups of professionals leads to a significant lack of qualified workforce. Results of our quantitative and qualitative surveys show that this issue also affects organisations active in the tertiary sector of the economy in the Czech Republic, and particularly those in ICT. These organisations overcome this lack of specialists mainly by developing and training their current staff (61.8%), changing their recruitment strategy and increasing initial salaries (50%) or even by lowering their requirements (35.3%). In today’s highly competitive environment, organisations are also using different communication channels and methods to attract job candidates. A factor analysis identified 5 factors that
characterise groups of organisations based on the methods they use to acquire new employees (surveyed organisations prefer “Strategy of human resource recruitment”, “External HR marketing”, “Personal contact and experience”, “External collaboration” and “Internal HR marketing”). It has also been determined that organisations active in ICT prefer modern communication channels without personal contact when communicating with potential hires, i.e. using the internet.

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