

CURRENT USE OF PERSONNEL MARKETING IN CZECH COMPANIES

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Abstract: Personnel marketing is a new scientific discipline combining two classic fields – personnel management and marketing. The main idea of personnel marketing is the perception of the employee as a customer and the satisfaction of their needs and wishes. The article takes an in-depth look at current personnel marketing in the Czech Republic. Primary research is employed to identify thirteen tools of personnel marketing, and the effectiveness and frequency of use of these tools is empirically demonstrated. The relationship between the effectiveness and frequency of the tools is then statistically investigated. Differential analysis was used to establish that the frequency of use is lower than the perceived effectiveness. Regression analysis demonstrated the linear relationship between effectiveness and frequency of the use of these tools. Factor analysis was used to identify latent factors of personnel marketing tools.

Keywords: marketing, human resources, personnel marketing, human capital

1 Introduction

The situation on the labour market in the Czech Republic has changed dramatically over the past decade. In June 2008, unemployment was at the lowest level of 5%. After the onset of the economic recession, unemployment rose in February 2010 to 10%. Since then, unemployment has plunged almost continuously to 3.5% in March 2018 (Czech Statistical Office, 2018). Taking into consideration that roughly 2% of people aren't interested in working and about 2% are temporarily unemployed due to intentional job changes, it can be reasonably argued that demand exceeds supply on the Czech labour market. This situation in which firms are seeking employees and trying to attract them with offers of various benefits has led to great pressure on HR, and personnel managers have responded by implementing new approaches to HR management. Among these are personnel marketing, which is the subject of the research presented in this article. Personnel marketing as an Independent field combining marketing and HR emerged in Germany. Due to the strong capital link between Czech and Germany industry, processes and management are influenced by Germany. As a result, the lack of human capital on one hand and the connection with Germany has led to the introduction of personnel marketing in Czech firms. Due to the lack of clarity surrounding personnel marketing tools, a project was designed to identify these tools and determine their effectiveness and frequency of use in the Czech Republic. The aim of the first part was to identify the tools of personnel marketing. The second part focused on an empirical demonstration of the effectiveness of these tools and the current use in the Czech Republic. The choice of the research approach was based on the definition of research goals. There are three goals addressed in this paper:

- Goal 1. To determine the effectiveness of personnel marketing tools and their frequency of use in the Czech Republic.
- Goal 2. To identify the relationship between the frequency of personnel marketing tools and their effectiveness.
- Goal 3. To uncover latent factors behind determined attributes that are not obvious.

2 Personnel marketing

Establishment of the project has been the current relevance of this relatively new field, which is significant as far as competitiveness is concerned, because it focuses on acquiring and retaining quality employees as a key focus of the company. Forming the foundation of the research was a review of domestic and foreign sources. These sources serve as an information base. The basic topics of the overview of literature are the management of human capital and personnel marketing.

2.1 Human capital

Schultz (1993) states that human capital is a key element for increasing a company's wealth. Dzinkowski (2000) more

specifically and perceives human capital as the sum of knowledge, skills, innovation and capacity of employees for achieving the company's objectives. Chen and associates (2004) perceive human capital as a combination of employee competence, positions and creativity.

It is also possible in the Czech Republic to consider the influence of human capital on the quality of industrial companies as provable, and this is in accordance with current opinions expressed in foreign literature. Štamfestová (2014) conducted research, the aim of which was to verify the effect of human capital on the quality of industrial companies. In all four defined sections (innovative potential of employees, education, satisfaction and motivation for work performance) the research confirms that human capital has a positive impact on the perceived quality of production by the company. It has been shown that management employees directly via human capital, specifically through support of their innovation and satisfaction with their work, can both influence the quality and be interested in maximum motivation of them for work performance.

Current personnel staff no longer perceive employees only as one of the basic sources of their existence, but they also examine current and potential employees from the point of view of marketing, meaning as their customers. Milite (1999) states that until recently companies attention was focused on competition to win over customers and to fulfil their expectations, which is a traditional marketing matter. Currently however the attention of companies and employers has shifted to employees and to the traditional areas focused on by HR managers. These are employees, and their performance which fulfils customers' expectations in the end makes them satisfied and makes the company competitive (Wong, 2008). The labour market is getting better and companies must find ways to attract the most quality employees, and when they are employed they will seek ways to fight against fluctuations (Tillman, 2013). Modern companies are increasingly dependent on the qualifications, skills and efforts of their employees. At the same time employees are showing greater capability of changing their employers. This situation is leading to the fact that companies to a much greater extent are focused on personnel marketing, which combines two major concepts, on one hand marketing and on the other hand HR. (Schultz, 1993, Dzinkowski, 2000, Štamfestová, 2014).

2.2 Evolution of personnel marketing

The concept of personnel marketing is often perceived in very different ways. These differences are also apparent in the perception of personnel marketing in the Czech Republic and abroad. For this reason, the development and characteristics of personnel marketing are divided between the domestic and foreign markets.

In the Czech Republic, the term personnel marketing was first defined by Koubek (2015), who says that it involved the use of a marketing approach in the field of human resources, especially in efforts to form and maintain the necessary workforce in an organisation. Retaining employees is based on creating a reputation as a good employer and labour market research, i.e. on drawing attention to the organisation's employment qualities. Antošová (2005) describes personnel marketing as an activity focussed on the targeted formation, development and use of human potential consistent with the strategic goals of the company. These activities are realised in the company through the use of a personnel marketing mix. Another current of opinions among certain authors is the division of personnel marketing into internal and external, just like personnel management. The diversity of opinions regarding categorization of personnel marketing in publications demonstrates that the boundary between external and internal personnel marketing address potential employees (Luhan, W. J., et. Al, 2009). From a narrower point of view personnel marketing can be understood

as long-term acquisition of human resources from the external labour market and creation of a positive image of the employer on the labour market. More broadly they can be understood as measures focused on increasing the stability of current employees, specifically on solving problems with work motivation, management of staff, personnel development, rewarding and taking care of employees. In all of the mentioned terms and/or activities he has identified a fundamental difference. He claims that personnel marketing is done by a large number of companies, but only some of them are focused on actual employer branding. The author characterizes personnel marketing as everything that a company does in relation to current, future or former employees. These include for example personnel ads in print media or on the Internet, career columns, open house events, the hiring process, entering into an employment relationship, the means of management and remuneration, the style of internal communication, company events etc. In this case the company mainly communicates: who it is, what it does, and to whom it is seeking. Should this involve targeted employer branding, then according to the author the company would communicate: why it exists, what the purpose of its activities is and where the organization is heading, meaning its vision and mission (Menšík, 2015). Kociánová (2010) defines personnel marketing as follows: "Personnel marketing tracks the acquisition of skilled people, strengthens their bond with the organisation while simultaneously strengthening their stabilisation in the organisation". A key task of personnel marketing is the creation of a good employer reputation for the organisation that positively influences the interest of potential employees. The perception of personnel marketing in the Czech Republic can therefore be summarised in this manner. Today's personnel managers no longer view employees as just one of the basic sources of their existence; rather, they look at current and potential employees from the perspective of marketing, i.e. as their clients.

The first mention of personnel marketing in the world comes from Germany in the mid-1960s. This concept expressed the way employees were recruited after shortages of qualified workers emerged (Meier, 1991). The field of personnel marketing was divided into internal and external in the 1980s. External personnel marketing is focused on acquiring new employees, while internal personnel marketing is aimed at the stabilisation of the existing workforce (George, 2015). Grönroos (1981) expand internal personnel marketing to include the notion that it isn't enough to motivate your employees to perform better, but that it is necessary to awaken the business spirit in each and every employee. This approach aims to shape employees as businessmen who are even able to sell to customers. At the turn of the millennium, personnel marketing was already defined as a tool for satisfying the needs and values of existing employees, but also as a tool for building the good name of the employer (Barrow and Mosley, 2005). Another view or opinion regarding personnel marketing which is not entirely clear from available professional literature and which cannot be found in all characteristics/definitions from professional authors is that the terms personnel marketing and employer branding are nearly equal and that the main objective of personnel marketing is to develop the employer's good reputation. An example can be the definition of personnel marketing objectives according to Wimmers (2009) – the aim of personnel marketing is on one hand "to build a positive effect on everyone interested in the organization or who could be interested in it and mainly to build attractiveness of the organization for ambitious and motivated future employees, who are key to the sustainability of the organization." Szarková in her contribution does not divide personnel marketing into internal and external categories, and it is entirely clear from her definition that personnel marketing is a tool that leads to effectiveness in work with human resources. The author states that personnel marketing has been formed as a reflection of an organization's needs to sell a job most effectively, in other words to sell it to a qualified job applicant at the lowest costs for presentation of the job on the labour market and at the lowest costs for overall realization of the selection process (Szarková, 2015). Hence, personnel marketing tools are viewed in a wide variety of ways. According to Bednář (2013),

personnel marketing tools can be divided into product, place, price, promotion and personality. The author also says that the use of personnel marketing shouldn't be solely based on the company but should also take into consideration the view of the employee. On the other hand, some authors do not specify the tools, stating that marketing tools are those that serve for better satisfaction of the wishes and needs of employees or potential employees (Spielmann, 2015).

Therefore, personnel marketing can be described in general as a set of activities linked to the creation of a good reputation for the employer, directed both at their own employees and to potential job applicants. The primary goal of personnel marketing is the creation of prerequisites for securing qualified and motivated employee in the long-term. A summarising definition of personnel marketing: the application of a marketing approach in work with human capital in which the employee or potential employee is viewed as a customer.

3 Research methodology

The project whose results are presented here was composed of two primary studies combining qualitative and quantitative research. While both approaches have their own advantages and disadvantages, neither is superior to the other. To the contrary: they can be used in complementary fashion, as is often the case today. When both research methods are used, this type of data collection is called mixed research (Hendl, 2016). Due to its synergetic effect, this mixed research was also used for the personnel marketing study presented in this work. Qualitative research has served for a new understanding of the subject of research, which is personnel marketing (Disman, 2002).

The selection of respondents for the qualitative research was conducted using multistage random sampling, with the basic set being further divided into four groups based on the applied enterprise culture. A representative was chosen from each category for a subsequent in-depth interview. A total of twelve interviews were conducted with representatives of global firms presenting the use of personnel marketing. The study was conducted according to a pre-established scenario in which each interview was recorded and subsequently evaluated. Interview transcription was conducted collectively by marketing and HR experts. The aim of the reduction was to eliminate repetitive responses, to integrate similar responses, to capture internal relationships and preserve central, significant responses scattered throughout the text. Following the final synthesis, a list was compiled of personnel marketing tools (Tab. 1) as they are viewed by global corporations doing business in the Czech Republic.

Table 1: Personnel marketing tools

1. Analysis of competitors' recruitment strategy
2. Research focused on the identification of applicants' decision-making criteria
3. Career sites for display on mobile phones
4. Career profiles on social media
5. Incorporating game elements into the recruiting process and communication
6. Recruitment at universities
7. Targeted recruitment campaign for a specific position
8. Separate career website
9. Plan for building the company culture of the employer
10. Video presentation of company culture
11. Welcome package for new employees
12. Tools supporting employee satisfaction
13. Big data

Source: own

A detailed description of identified personnel marketing tools was compiled in an article for a scientific journal and is included

in the Scopus abstract and citation database (Myslívová and Ungerma 2018).

The results of the qualitative research were used for the related quantitative study in which the effectiveness and frequency of determined tools were evaluated using Matrix questions on a six-point scale. This work is primarily focused on the results of this quantitative study. The logic of quantitative research has been deductive. Quantitative research requires strong standardization which ensures high reliability. The purpose of quantitative research has been to determine the frequency of variables (Molnár, 2012). In view of work objectives, an exploration and descriptive purpose can be identified in research. The descriptive purpose directly examines the degree of frequency and effectiveness. The descriptive purpose, which maps the current situation and monitors the frequency and degree of association, was used for prediction of the occurrence of the phenomenon (Saunders 2002).

Respondent selection method: Simple random sampling was chosen for the quantitative study, with each unit of the basic set having the same probability that it will be selected (Mc Givern, 2013). The basic set was composed of companies with an internal SBU specialising in HR. A databank of companies was used for the study, with micro-enterprises and small firms being excluded due to an assumption supported by research that these companies do not have their own activities in the field of HR. The research plan included 100 controlled valid responses. This plan was completely fulfilled in 2018.

Data collection methods: More than one-thousand two hundred firms were addressed by means of electronic survey. To ensure the validity of responses, a contact to the human resources manager was determined for each respondent. The return rate was 8.4%, with several surveys being excluded for failing inspections.

Data evaluation methods: The SPSS Statistics program and Microsoft Excel were used statistical analysis. The evaluation methods correspond to the established goals:

- The descriptive statistic* determines and summarises information, processes it in the form of graphs and tables and calculates their numerical characteristics. Data processing methods were used in research: average, standard deviation, modus, median. (Bencko, 2002)
- Differential analysis* compares the effectiveness score with the frequency score. The point evaluation of frequency is measure on a scale. This analytical method says that effectiveness is a substitute unit for the customer's expectations of how the company should fare for each quality. The qualities with the greatest differences are then designated as those requiring the most attention.
- Regression analysis* Linear regression was chosen for constructing the regression function. Linear regression is the relationship between two variables, with y as the dependent variable and x as the independent variable. The independent variable is the cause, the dependent variable the effect. This relationship can be described with the equation $y = a \cdot x + b$. It can be stated that if the dependence is drawn, the result is a straight line.
- Factor analysis* has focused on analysis of the structure of internal relationships between a large number of variables and the use of the compilation of a smaller number of latent variables, known as factors. The aim has been to summarize and reduce variables with minimal loss of information. For factor analysis to be conducted, Bartlett's spheric test and the Kaiser – Meyer – Olkinov (KMO) condition must be fulfilled. For better interpretation of data, a rotation of factors was carried out (redivision of the explained variance for individual factors). For rotation the orthogonal rotation method varimax was selected, since the aim was to reduce the number of original variables, and it has been empirically proved that varimax will create burden which can be easily explained (Churchill, 1987). During interpretation of factors, factor burden was examined, which was represented

by a correlation coefficient between the original variable and the factor. Correlations greater than ± 0.5 were considered significant. If any variables did not reach the specified values, they were excluded, and the analysis was carried out again and may have been carried out several more times, until the correlation coefficients of all variables reached the minimum value of ± 0.5 . The purpose of this approach was to obtain an optimal number of variables. The obtained factors were named based on the composition of the variables (Meloun, Militký, 2006).

4 Research evaluation

This chapter presents the results of the studies obtained by primary data collection using the qualitative method. The evaluation of the primary study is divided into four connected parts. The first part is devoted to a presentation of the results using descriptive statistics, especially the results of the effectiveness of personnel marketing tools and the frequency of the use of these tools. The second part involves a differential analysis in which the arithmetic means of effectiveness and frequency are compared. The third part is a regression analysis for both studied variables. At the end, a factor analysis is used to identify the latent factors.

4.1 Identifikace atributů personálního marketingu

This involves comparison of objective use and subjective perception. Therefore the questioning included the most important companies from the Czech Republic across all sectors. In order to obtain relevant responses, the companies were first contacted in person or by phone. This helped establish cooperation with the company's personnel department and helped gain consent for provision of information. The motivation for companies was provision of research results. Most heavily represented among respondents were companies in the automotive industry, which is very widespread in the Czech Republic. A current characteristic of these companies is a shortage of workers and major fluctuation, mainly in the area of production. This shortage is most apparent in regions with high employment. This situation is forcing companies to implement personnel marketing in order to ensure quality human capital.

4.1.1 The effectiveness of the use of attributes of personnel marketing

Table 2: Overview of the effectiveness of personnel marketing attributes

PM tools	Modus	Median	Mean	Sd
7. Targeted recruitment campaigns for specific positions	1	1	1.9	1.428
12. Tools supporting employee satisfaction	1	1	2	1.235
9. Plan for building an employer's corporate culture	1	2	2.6	1.448
11. Welcome package for new employees	1.2	2	2.8	1.757
6. Recruitment at universities	2	2	2.9	1.620
4. Career profiles on social media	1	3	3.2	1.626
8. Separate career WWW pages	2	2	3.3	1.601
2. Research focused on identification of decisive criteria of applicants	3	4	3.4	1.746
1. Analysis of the competition's recruitment strategy	3	3	3.6	1.355
5. Inclusion of game play elements in the recruitment process and communication	2	3	3.9	1.543
10. Video presenting company culture	3	3	3.9	1.252
3. Personal www mobiles	6	4	4.1	1.636
13. BigData	6	4	4.5	1.318

Source: own (1 = maximum effectiveness, 6 = non-effectiveness)

Table 2 presents responses by personnel managers to the question: *How to you rate the effectiveness of individual personnel marketing tools?* This question was scalable, and responses could be assigned values on a scale of 1 to 6, with 1 indicating maximum effectiveness and 6 meaning ineffectiveness. The evaluation included a calculation of the arithmetic mean, variance, mode and median. The evaluation involved all thirteen personnel marketing tools identified in the qualitative study. The tools are arranged by mean, from the most effective tools to the least effective.

For the evaluation, the tools were divided into homogenous groups differentiated by colour. In the evaluation of mode, eight tools were assessed as highly effective, three as moderately effective and two as ineffective. The evaluation is similar for the median, though no tools belong to the third group with values in the <5;6> interval. According to the median, all tools are highly or moderately important. The mean was divided into two parts by the value of 3.5. The first group of effective tools is made up of the first eight tools, while the other five tools rank among the less effective. The standard deviation values indicate that there is great consensus among the respondents. In evaluating effectiveness, only two tools can be labelled as less effective; respondents designate the others as effective.

4.1.2 The frequency of the use of attributes of personnel marketing

Table 3 presents responses by personnel managers to the question: *How often do you use individual personnel marketing tools in your firm?* The evaluated tools were the same as with the question of effectiveness to enable a comparison of the evaluation. The responses were again on the same scale of 1 to 6, with 1 indicating maximum use and 6 meaning that the tool is not used. Descriptive statistics in the form of mean, variance, mode and median were also used for the evaluation. The attributes are arranged by mean, from the most frequently used tools to the least used.

Table 3: Overview of the frequency of use of personnel marketing

PM tools	Modus	Median	Mean	Sd
7. Targeted recruitment campaigns for specific positions	1	1	2.2	1.62 2
12. Tools supporting employee satisfaction	1	2	2.5	1.70 1
9. Plan for building an employer's corporate culture	1; 3	3	3.2	1.81 5
11. Welcome package for new employees	6	3	3.3	2.02 1
6. Recruitment at universities	1; 3	4	3.4	1.79 9
8. Separate career WWW pages	6	6	4.1	2.16 8
2. Research focused on identification of decisive criteria of applicants	6	5	4.2	1.81 1
4. Career profiles on social media	6	4	4.2	1.90 3
1. Analysis of the competition's recruitment strategy	6	4	4.3	1.50 9
10. Video presenting company culture	6	6	4.9	1.60 1
5. Inclusion of game play elements in the recruitment process and communication	6	6	4.9	1.71 1
3. Personal www mobiles	6	6	5.2	1.51 3
13. BigData	6	6	5.4	1.35 5

Source: own (1 = maximum use, 6 = non-use)

The results of the descriptive statistics are divided in the table into homogenous groups, which are again differentiated by colour. Mode was the first to be evaluated, and the results are extremely contradictory. On one hand, four tools are used to the maximum extent, while nine are almost not used at all. The resulting median is with the two tools used the most, while five tools are used moderately and six tools are not used. The arithmetic mean can be used to divide the tools into two groups. The first five are used with a mean of 3.5, and eight tools are used less with a higher mean. The results of the standard deviation showed that respondents do not agree much on the evaluation of two tools. In general, it can be said that the first five tools are used much more often than the other eight.

A comparison of the descriptive evaluations of frequency and effectiveness indicates that respondents give the effectiveness of personnel marketing tools a better rating. If the order of frequency and effectiveness is compared, there is a slight difference only with tool 4. There is consensus in both evaluations that the weakest tools are 3 and 13. In contrast, the best evaluations for tools 7 and 12 are again identical for both evaluation variables.

4.2 Differential analysis

The evaluation of the differential analysis is presented in Table 4. The basic independent variable is the effectiveness of tools, while the dependent variable is the frequency of the use of personnel marketing tools. The resulting means determined for individual tools are used for the evaluation.

Table 4: Results of differential analysis

Personnel marketing tools	Difference
3. Career sites for display on mobile phones	-1.1
4. Career profiles on social media	-1
5. Incorporating game elements into the recruiting process and communication	-1
10. Video presentation of company culture	-1
13. Big data	-0.9
8. Separate career website	-0.8
2. Research focused on the identification of applicants' decision-making criteria	-0.8
1. Analysis of competitors' recruitment strategy	-0.7
9. Plan for building the company culture of the employer	-0.6
12. Tools supporting employee satisfaction	-0.5
11. Welcome package for new employees	-0.5
6. Recruitment at universities	-0.5
7. Targeted recruitment campaign for a specific position	-0.3

Source: own

The difference is negative for all tools, which means that according to responses from businesses, all tools are used less than their actual effectiveness. A significant difference is when the resulting values are in the <-1; -2> interval. Four tools – 3, 4, 5 and 10 – fall into this interval. The greatest difference is with tool 3. The (0; -1) interval is designated as a slight difference, and the rest of the tools are placed in this interval. In general, it can be said that all of the tools have a negative difference ranging from slight to significant, which is in favour of the effectiveness of the use of the studied tools.

4.3 Regression analysis

The regression analysis was used due to the establishment of the hypothesis: Businesses use personnel marketing tools based on their effectiveness. This hypothesis suggests that independent

variable x is effectiveness and dependent variable y is the frequency of the use of personnel marketing.

Or, the use of personnel marketing tools = a * effectiveness + b. To choose the type of regression analysis, a line graph was compiled to reveal the shape of the regression function. The linear regression function was unequivocally chosen for compiling the line graph. The line graph shows a rising trend for the regression line. The model type is additive, with added components. From the perspective of parameters, the choice of the type of regression function is a straight line $\eta = \beta_0 + \beta_1x$, where β the constants are unknown. This is a simple linear regression with just one independent variable x. The statistical evaluation was conducted in Excel, and the data analysis was regression. Figure 1 shows the resulting values.

Figure 1: Regression analysis values

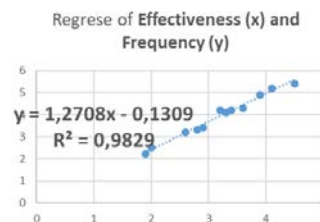
Regressní statistika							
Násobné R	0,982269						
Hodnota spolehlivosti R	0,984528						
Nastavená hodnota spolehlivosti R	0,983058						
Chyba stř. hodnoty	0,136341						
Pozorování	12						
ANOVA							
	Rozdíl	SS	MS	F	Významnost F		
Regrese	1	11,88327878	11,88327878	639,2712972	2,14672E-10		
Rezidua	10	0,185887883	0,0185887883				
Celkem	11	12,06916667					
Koefficienty, Chyba stř. hodnoty, t Stat, Hodnota P, Dolní 95%, Horní 95%							
Hranice	-0,14376	0,166947482	-0,861096433	0,409350882	-0,515740053	0,22822429	
	3,6	1,278574	0,050568867	25,28381492	2,14672E-10	1,165899427	1,391248343

Source: own

According to the table, the presentation of the results can be divided into three parts:

1. The strength of dependence (tightness): the values of the correlation index, determination coefficient, modified determination coefficient, standard error and number of observations are progressively entered in the table named 'Regression Statistics'. According to the value of the correlation coefficient, this is a very strong positive dependency, i.e. the greater the effectiveness, the higher the utilisation rate. According to the determination coefficient, this regression model explains 98% of the variance of the frequency dependent variable.
2. Test of model significance: a single-factor analysis of the variance is used for linear regression to determine the suitability of the model. The results indicate that the model as a whole is statistically significant because significance F (p value $2.14672 \cdot 10^{-10}$) is less than the level of significance $\alpha=0.05$. Hypothesis H1 that the linear regression model is statistically significant can be accepted.
3. Regression model parameters: the table contains regression coefficients, a test criterion for testing the reliability of regression coefficients and regression coefficient reliability interval boundaries. The evaluation shows that the point estimate of an absolute member is -0.1437, and its parameter is not statistically significant because its p value = 0.4093 is greater than the level of significance. The absolute member is therefore not significant and can be eliminated from the model. The point estimate of the regression member is 1.28, and this parameter is, in contrast, statistically significant because its p value is less than the level of significance $\alpha=0.05$, value $p = 2.14672 \cdot 10^{-10}$. An error of the median value, which is the standard deviation of both parameters is the degree of reliability of the estimate. Both values are very low, which means that variability is very low and the reliability of the estimate high. The interval estimate of the absolute member is $\langle -0.515740053; 0.22822429 \rangle$, and the interval estimate of the regression member is $\langle 1.391248343; 1.165899427 \rangle$. In the basic set, the given parameter can take on an value within this interval. The resulting graph, equation and reliability value are presented in Figure 2.

Figure 2: Regression line and regression equation



Source: own

The resulting equation can be interpreted such that by multiplying effectiveness by the value 1.3 and roughly the value 0.13 is subtracted, the estimated frequency of the use of personnel marketing in companies is obtained. It was shown that there is a linear dependency between effectiveness and the frequency of use of personnel marketing. The value of test reliability or the determination coefficient R^2 was very high at 0.98. The result is very close to the value 1, which indicates that the equation is very appropriated for extrapolation. In conclusion, it can be stated that personnel managers are aware of the effectiveness of individual personnel marketing tools and that the established hypothesis can be accepted: *Businesses use personnel marketing tools based on their effectiveness.*

5 Factor analysis

This chapter resolves the third defined objective, which is to uncover latent factors hidden behind discovered attributes with the aid of multi dimensional analysis. For this purpose factor analysis was used, which reduces the dimensionality of data by combining correlated variables into a smaller number of factor variables. The calculation includes attributes stemming from qualitative research, and the resulting variables are referred to as factors. The evaluation of factor analysis is carried out only for effectiveness. The reason is that the evaluation of the effectiveness of attributes can also be perceived as evaluation of importance for which factor analysis is used. However processing and evaluation of frequency based on factor analysis is not suitable and the results would not cover latent factors but would only combine attributes with the same frequency of use. The factor analysis was carried out into rotations. The resulting values are specified in table 5.

Table 5: Factor analysis results

	1st phase	2nd phase	
Cronbach's alpha	0.835	0.702	
95% confidence interval	0.757;0.913	0.545;0.859	
Kaiser-Meyer-Olkinov level	0.722	0.626	
Bartlett's sphericity test	Chi-square tests	193.8	48.53
	Degrees of freedom	78	6
	Importance level	0.0	0.0
The number of variables entering the FA	13	8	
The number of factors	8	2	
Cumulative percentage of variability	0.803	0.587	

Source: own

During the evaluation of effectiveness, Cronbach's alpha has been securely fulfilled, and in both phases it exceeds the value of 0.7 with values 0.835 and 0.702. The structure of the confidence interval involves identifying the interval into which random variables fall with pre-selected high probability $1 - \alpha$, which has been confirmed, since the interval in the first phase amounts to (0.810;0.939) and in the second phase amounts to (0.743;0.928). The condition for achievement of the Kaiser-Meyer-Olkinov (KMO) level is a limit of 0.5 or higher. In the first phase the evaluation is 0.705, and the second phase has a value of 0.714. Bartlett's test of sphericity was also fulfilled in both phases. The

resulting table 5 after two rotations has been added to by a cumulated variable.

Table 6: Resulting matrix of Varimax analysis

Attributes of effectiveness	Factor 1	Factor 2
4. Career profiles on social media	0.386	0.566
5. Inclusion of game play elements in the recruitment process and communication	0.049	0.996
6. Recruitment at universities	0.579	0.334
7. Targeted recruitment campaigns for specific positions	0.880	0.083
9. Plan for building an employer's corporate culture	0.820	0.162
12. Attribute supporting employee satisfaction	0.968	0.242
The cumulated variability	0.478	0.731

Source: own

In the factor analysis, attribute 10 was removed (since it does not have a statistically significant burden), as were attributes 1, 2, 3, 8, 11 and 13 (which have statistically important burdens in factors where there are no other variables). The result was six attributes divided into two factors, which ensured 73.1% cumulative variability. Following evaluation of factor analysis, the factors were renamed. The names of the factors were based on group evaluation, which was participated in by specialists in marketing and HR professionals.

Factor 1: Existence of personnel strategy

Factor 2: Recruitment of top management

The calculations made it possible to identify and name two factors and thus uncover latent factors hidden behind discovered attributes, which was the third aim of the contribution. These two factors explain 73 % of the variability, which for presentation of results is a very good condition. This is followed by an explanation of individual identified factors.

The first factor, which is the existence of a personnel strategy, consists of four attributes and from overall variability of effectiveness it explains 47.8 %. The factor can be explained as follows: *The personnel strategy makes it possible to plan and direct all work with human resources with consideration for the company's overall strategy in the long-term.* The personnel strategy includes all processes, programs and measures related to employment of persons, the acquisition, selection and stabilization of employees, their further training and, rewarding and career growth. This is followed by an explanation of the connection of the factor with individual attributes from which the factor is comprised:

The first attribute is *recruitment at universities*, which is a mean of obtaining employees from external sources. This attribute has a long-term impact on the quality of human capital in a company and is clearly part of the personnel strategy.

The second attribute, *targeted recruitment campaigns for specific positions*, was evaluated in the research as the most effective attribute. Targeted recruitment campaigns are part of the process of acquiring workers for positions on the labour market. These recruitment campaigns have a long-term character and because of their contents they belong to this factor.

The third attribute, *the plan for building company culture of an employer*, consists of decision processes, problem solving in the organization and behaviour in a superior's relationship with a subordinate. The creation of company culture has a long-term impact and is part of the long-term personnel strategy.

The fourth attribute, *tools supporting customer satisfaction*, defines the method of management of work performance, motivation and rewarding of people, social programs and employee benefits. If a company focuses on tools supporting

satisfaction over the long-term, they will become part of the personnel strategy.

The second factor, which is the recruitment of top management, consists of four attributes and from overall variability of effectiveness it explains 25.3 %. The factor can be explained as follows: *In each company there are key work positions which are different from each other based on the sector in which the company does business. For all companies with the traditional organizational structure however top management is a key work position, and the persons in it make strategic decisions. Recruitment for top management is usually a multi-round process which involves thorough verification of information.* This is followed by an explanation of the connection of the factor with individual attributes from which the factor is comprised:

The first attribute, *career profiles on social media*, is currently most often connected with the professional social network LinkedIn, which is connected with the terms e-recruitment and headhunting. Places appropriate for searching for potential employees include professional social networks such as LinkedIn and ResearchGate and at present also personal social media such as Facebook, Google plus and Twitter.

The second attribute, *inclusion of game play elements in the recruitment process and communication*, is most often applied during recruitment of top management. The use of game play elements during the selection of employees ("gamification") has many forms and combines findings from game design, traditional marketing and behavioural psychology. It uses the principles of acquiring points, overcoming challenges, and it encourages competition and motivates for continuation. It is the implementation of the gaming system in practice which has major importance for recruitment of employees for key positions in top management.

6 Discussion

As Bednár (2013) states, personnel marketing tools can be divided into five groups. The conducted study did not confirm this division. Personnel managers do not need to divide tools in this manner and prefer dividing them into those that are effective and those that are ineffective. It is possible instead to agree with the opinion of Vysekalová, Stýblo and Urban (2011) that personnel marketing tools are all those that lead to the retention or recruitment of employees that have high personal quality and are loyal to the employer. Armstrong (2015) and other authors claim that the foundation of any activity in the company is achieving strategic compliance, i.e. the agreement of the overall company strategy and the HR strategy. This hypothesis was confirmed by the study thanks to a factor analysis in which the 'existence of a personnel strategy' was the strongest factor explaining nearly 48% of variability. Koubek (2015) states that in work with human capital it is necessary to focus on key positions in the company. The study identified that personnel managers view top management as key positions in contemporary companies. This fact was revealed by a factor analysis in which social media, both professional and personal, were included among personnel marketing tools. Game elements that the study included in personnel marketing could also be used to recruit these key employees. In his work on personnel marketing, Menšík, (2015) states that the most effective tools are want ads in print or on the internet, career micro-sites, open houses, the hiring process, the internal communication style and company events. The presented study refutes this opinion and lists completely different personnel marketing tools. This difference is the result of the changing perception of personnel marketing by HR workers.

Conclusion

The article is part of a project that addresses the current use of personnel marketing in the Czech Republic. Three objectives were established, and these were accomplished by a primary study and a statistical evaluation.

The first goal was to determine the effectiveness of personnel marketing tools and their frequency of use. The goal was accomplished by the primary study followed by a detailed statistical evaluation using descriptive statistics. From the perspective of the effectiveness of tools, it can be asserted that the first seven tools are rated as very effective by companies. On the other hand, two tools are rated as ineffective. The evaluation of the frequency of use of personnel marketing showed that only two tools are used to the maximum extent in all surveyed companies. In contrast, there are considerably more personnel marketing tools that are not used. All together, there are nine tools that are virtually unused in the area of personnel management today. In general, it can be said that the first goal was accomplished and the results can be used primarily in practice. Personnel managers can introduce the most effective tools into their HR strategy.

The second goal was to investigate the relationship between the frequency of use of personnel marketing tools and their effectiveness due to the incongruence between both indicators. The study employed two evaluation methods – differential analysis and regression analysis. Differential analysis showed a significant difference with four personnel marketing tools. Higher effectiveness than frequency of use was found with all personnel marketing tools. Since differences between the effectiveness and frequency of use of personnel marketing were identified, a regression analysis was conducted. This clearly showed that personnel marketing tools identified by companies are assigned a higher effectiveness than their current use. A linear dependency between effectiveness and the frequency of use of personnel marketing was also demonstrated. The final response for the second goal is that companies and their HR departments are aware of the great effectiveness of the determined personnel marketing tools but they have not yet been implemented for indefinite reasons. Although companies use personnel marketing tools correctly according to their effectiveness, their use is not as frequent as HR workers would imagine. There are multiple reasons for this, including fear of introducing innovative marketing approaches in the HR department or a lack of knowledge and fear of new trends. In any case, there is an assumption that the determined personnel marketing tools will be used more often due to the increasing difficulty in recruiting employees in a period of economic growth with labour shortages. Low unemployment rates cause competition for employees among companies. Personnel marketing tools are a possible solution to these problems.

The third goal was uncovering latent personnel marketing tools. A factor analysis with two rotations was conducted to accomplish this goal. The result was two factors named after the tools from which the factor was composed. While these two tools, the 'existence of a personnel strategy' and 'recruitment of top management', are of a more general nature, they are absolutely essential. Factor 1, the existence of a personnel strategy, is essential for the implementation of personnel marketing and should include the determined personnel marketing tools. The second determined factor is also comprehensive and recommends the use of identified personnel marketing tools for the recruitment of key employees. The study showed that personnel managers using personnel marketing rank top management as key employees.

There are two main benefits of the work: the first is purely practical, i.e. the possibility to offer a complex solution to companies and their HR departments in the form of introducing personnel marketing. Today, when the lack of quality human capital hampers the economy, personnel marketing offers a possibility for dealing with this situation on the labour market. While it is not possible to claim that personnel marketing is the only remedy for stabilising employees or for recruiting new employees, it is certainly an appropriate supplement. Personnel marketing is different in that it views employees as customers, thus changing the role in traditional HR work.

The second benefit of the presented work is theoretical: it is the first in the Czech Republic to present specific personnel marketing tools as perceived by personnel managers. The work also evaluates these tools from the perspective of effectiveness and their frequency of use, and even uncovers latent factors. There is great space in the theoretical area for additional study of the development of personnel marketing, and this work can serve as an information foundation for further research. In conclusion, it is possible to state that personnel marketing is a field of the future and this work can be a starting point to this interesting issue. In the future it will be interesting and even necessary to elaborate the identified attributes, perhaps even dividing them further, and to determine their effectiveness in practice.

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