

# Keeping Talents in the Transport and Logistics Enterprises: Case Study from the Czech Republic

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*Abstract: The aim of the article is to identify the motivation preferences of Czech managers on critical management positions of transport and logistics enterprises and to determine the method for the effective setting of the motivation factors in the interest of keeping them in an enterprise. The article is based on research outcomes from transport and logistics enterprises where the focus is on managers identified as talents by the enterprises. Research was conducted in 2018 in the Czech Republic using a questionnaire. In research, 154 managers were interviewed. Data were processed using basic descriptive statistics. The proposed effective setting of motivational elements is based on the use of a method for determining an appropriate variant - AHP multicriteria decision making method. The results of the article can serve to help entrepreneurs not only in the field of transport and logistics services. Other enterprises also have the potential to gain a strong system not only to retain their talents in society, but also to create satisfaction and commitment to the enterprises. The presented way of setting motivation factors is universally applicable to any sector and regional location.*

*Keywords: talents; managers; transport and logistics enterprises; AHP decision method*

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# 1 Introduction

Current labour market is changing along with business environment in a very high pace. Companies own significant amount of intangible assets, i.e. human resources, high-quality and qualified labour force, whose value may be improved further [1] [2]. Such perspective employees have the potential to help enterprises in overcoming hard economic times and affect economic growth in a positive way [3]. Considering the actual situation in labour market, it's becoming more demanding for companies and entrepreneurs to hire, educate and keep the talents [4] [5]. For the companies to keep such employees, they are forced to create attractive work environment [6] [7] [8]. Companies are aware of the fact how important it is to have talented employees. Such talent means an individual with high potential – his/her own combination of certain extraordinary capacities and personal properties that distinguish him, also bringing added value to the company [9]. In the corporate practice, talent is considered as an ability to achieve performance above standard as the performance is the aspect such company requires, measures and appreciates [10]. Talents are educated, in particular, for critical management positions, having significant impact on company performance as a whole. To get and educate a talent, it requires significant effort from the company as well as time and costs. Their loss and even shift to competitors may weaken the company markedly [11]. Therefore, talent management area grows in importance within a wider spectrum of organisations and it's becoming a key challenge in the human resources area companies face in different industries [12] [13] [14]. This trend is fueled by the incoming 4<sup>th</sup> industrial revolution, when the paradigm of human resources management is changing [15]. Coming new technologies and concepts such as automation, creation of a global cybernetic space (GCS) [16], process digitalisation, system integration, autonomous robotics and vehicles, digitalisation or systems of artificial intelligence modify the already implemented procedures and mindset in companies, in particular in the area of industrial production [17] [18] [19]. Also, the demands on human resources are changing markedly. Although the estimates count on a decrease of demands on the volume of human resources, companies will be facing the need of change to their structure of employees by the implementation of more intelligent systems – automation. According to Dočkalová [20], development of technologies may lead to a mass unemployment. On the basis of its research, the German Ministry of Industry and Development stated that the changes to structure of labour positions brought more than 10% increase in work positions in operation companies as a consequence of automation [21]. Subsequently, by an increase in the volume of production, completely new work positions were created, but a high demand for highly qualified IT employees, able to control and program software for majority of machines [21], as well. Research of the Czech Ministry points to a decrease in work positions by one third and to an increase of new positions by one eighth [22].

On the other hand, specific need is being created for higher management that will be able to react on the shift process within implementation of elements and system changes in the industry flexibly 4.0 [15] [23]. Subsequently, they will be able to control the processes and change their current management mindset in accordance with the modification of management paradigm [24]. This requirement will have the highest importance for managers at key (or critical) management positions, ideal for the so-called talents in this case. Within the context of industrial revolution 4.0, talent may be flexibly adjusted to the requirements for implementation of technological elements in enterprise and has necessary competences for the management of intelligent systems, new procedures as well as human resources [25]. Critical positions (designated also as key positions) are such positions that are decisive for the achievement of success in organisation. Non-timely occupation of such positions may lead to a serious disruption to enterprise functioning [10] [25]. Therefore, it's necessary to reveal and define key positions and to plan the employees for these positions sufficiently in advance so unexpected complications are thus avoided. Key positions may be identified from the analysis of organisational structure. These are, in particular, strategic positions of higher management [8].

## 1.1 Keeping Talents in Enterprise

Implementation of elements of the industry 4.0 is considered risky by enterprises in the CR, in particular due to the insufficiency of successful exemplary business cases. The problems are the shortcomings of studies for the integration of elements for industry 4.0 for top management and insufficient confidence in new procedures [26]. This is a hard task and this process could be critical without high-quality workers of the "talent pool." Creation of appropriate conditions for talents at key positions represents a reduction or the risk of their loss and potential improvement of loyalty towards respective enterprise [27]. According to Grenčíková et al. [28], number of experts are focusing mainly on the identification of talent pool in organisation, on their planning and development. However, their motivation and keeping them is also an important element [25] [29] [30].

The trends stated above are related also to the area of transportation and logistics within the Central Europe [24]. Transportation enterprises struggle with shortage of qualified and high-quality human resources. Significant shortage of necessary human resources are often solved by the employed of riskier groups of workers – graduates and older applicants. An important source are foreign workers from Ukraine, Russia, Mongolia and other countries [31] [32]. Another and also an innovative solution at the same time is the implementation of automation and smart systems into respective procedures, where it's possible to substitute human resources. A huge problem is to find and keep high-quality qualified and talented workers for the positions of higher management. Here, it's appropriate to use a targeted motivation system increasing the satisfaction of this group of workers,

and according to Jigjiddorj et al. [27], it will also provide loyalty towards enterprise secondarily. Hitka [33] states that a targeted motivation program for specific categories of workers has a higher efficiency and it's financially and timely more effective. This statement is also supported by the fact that if the applied motivational element is strongly preferred by workers, it's more effective than the combination of other elements that may be financially or timely more demanding. An appropriate choice and application of motivational program, with regard to the preferences of certain group of workers, creates opportunities for number of companies to develop a long-term competitive advantage [34] and for the security of competitiveness in global environment. This article follows the studies focused on motivation of workers and supplements the knowledge by a specific group of workers, representing a key element of success not only in the area of transportation and logistics. Presented results enrich the knowledge base by practical application within a case study from transportation and logistics environment of the Czech Republic.

## 2 Methodology

The objective of this article is to identify the motivation preferences of Czech managers at critical management positions (identified as talents by the enterprises) of transportation and logistic enterprises, and the determination of method for effective setup of effects of motivation factors for the purpose of keeping them in such enterprise. This article is based on the outcomes of research within enterprises active in the transportation and logistics industry where the attention is paid to managers at critical positions. Research was held in 2018 in the Czech Republic through a questionnaire. Within the research, 154 managers were interviewed, such enterprises marked as key high-quality employees at critical positions or planned for these positions in the enterprise, so-called talents (these are selected workers of middle and top management). 32 enterprises were engaged in this research. Characteristics of research sample was presented in the Table 1.

Table 1  
Characteristic of research sample

			Gender				Total	
			Women	%	Men	%	Count	%
Age	Up to 30 years	Count	15	42.9%	20	57.1%	35	100.0%
		% within Gender	20.3%		25.0%		22.7%	
	31-40 years	Count	18	37.5%	30	62.5%	48	100.0%
		% within Gender	24.3%		37.5%		31.2%	
	41-50 years	Count	27	54.0%	23	46.0%	50	100.0%
		% within Gender	36.5%		28.8%		32.5%	
	51 and above	Count	14	66.7%	7	33.3%	21	100.0%
		% within Gender	18.9%		8.8%		13.6%	
of	Less than a 1	Count	8	53.3%	7	46.7%	15	100.0%

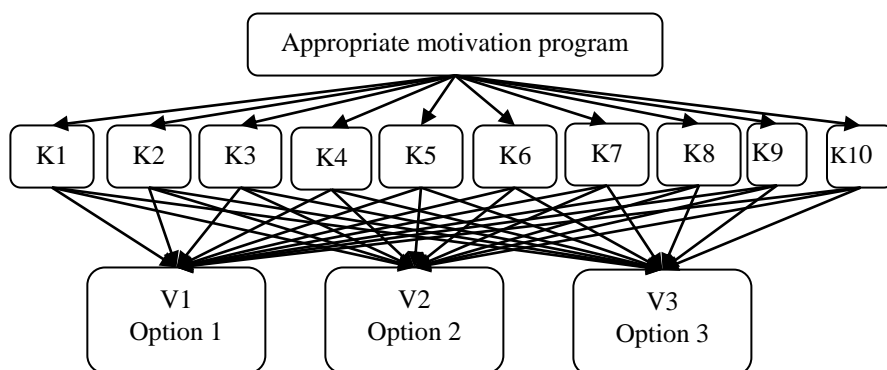
	year	% within Gender	10.8%		8.8%		9.7%	
	from 1 year to 3 years	Count	12	42.9%	16	57.1%	28	100.0%
		% within Gender	16.2%		20.0%		18.2%	
	from 4 years to 6 years	Count	11	35.5%	20	64.5%	31	100.0%
		% within Gender	14.9%		25.0%		20.1%	
	from 7 years to 9 years	Count	11	42.3%	15	57.7%	26	100.0%
		% within Gender	14.9%		18.8%		16.9%	
	10 years and above	Count	32	59.3%	22	40.7%	54	100.0%
		% within Gender	43.2%		27.5%		35.1%	
	Total	Count	74	48.1%	80	51.9%	154	100.0%

The portion of men and women in the sample is relatively balanced, while in case of women, higher age categories prevail as well as their period of practice in comparison to men. This is probably caused by the fact that the Czech Republic belongs to masculine culture [35], preferring men for leading positions, in particular within top management. It takes more time to women to get to such positions [36] [37]. This questionnaire consisted of two basic parts – fundamental data about respondents (age, assignment, region in the Czech Republic, period of practice) and part for the evaluation of important of motivation factors. Respondents could evaluate 30 motivation factors on the basis of their subjective opinion on the importance at the Likert scale form 1 to 5 (1 – unimportant to 5 – the most important). Data were processed by the use of basic descriptive statistics and the verification of their significant differences was performed by the ANOVA test.

Suggested effective setting of motivation elements is based on the use of multi-criteria method of evaluation of options. Within the nature of input data and decision task, it's possible to use different methods of multi-criteria decision-making, e.g. the Decision matrix method, weighted sum approach method, TOPSIS or AHP method. The Decision matrix method [38] is a relatively simple and fast method of choosing the right option. With this method, options for each criterium within the range of 1-10 are evaluated, where 1 means inappropriate and 10 ideal). Following multiplication of this evaluation by the use of weight of criterium importance will determine the most optimal option. An analogical method is the weighted sum approach method, evaluating options according to their benefit within criteria from 0 to 1, when 0 means no benefit and 1 means maximum benefit [37]. The TOPSIS method works with an ideal and basal value of option and with a calculation of distance of options from these values. This method is more accurate than the weighted sum approach method and eliminates its deficiencies. The AHP multicriteria decision making method, based on a pair comparison of option appropriateness according to respective criteria, is more comprehensive and unbiased [39] [40]. Also, the use of pair verbal evaluation allows an easier decision and the requirements for consistency of the Sattyho matrix ensure more accurate setting of pair comparison of options. Its disadvantage is based on a relatively high time demanding nature in case there are more criteria and options used. In this article, selection of appropriate option will be solved by the use of the AHP method, while the hierarchy of decision-making

task is illustrated on Figure 1, where K1-10 is the criterium in a form of motivation factor and V1-3 is the evaluated option. Weights of criteria (motivation factors) are recalculated on the basis of results of the preferences' research of respondents according to gender. Within the solution of decision-making task, 10 most important criteria are considered for a group of men and separately for a group of women. This task application is solved in an environment of specific transport enterprise that submitted three options of motivation programs. The appropriateness of respective options according to each criterium is evaluated by three expert evaluators, consisting of top management workers and human resources department of the enterprise.

Figure 1  
Hierarchy of solved task by AHP



In accordance with the principle of the AHP method, evaluators assign the weight of appropriateness of option in the range of 1 to 9 (1 - both options take part on objective intervention in the same portion, 3 – first option is more appropriate than the second option to certain extent, 5 – first option is significantly more important than the second one, 7 - first option is far more important than the second one, and 9 – absolute preference of first option against the second one according to certain criterium). If the first option is less important than the other, this relationship is expressed by the inverse of the scales (1 / 1-9). This evaluation is expressed in formula 1, where “k” represents the number of all options and “p” means the evaluation on the range of importance for respective option. Consequently, as the assigned value i-th criterion is marked as  $p_i$ , it is possible to estimate scales (Eq. 1) by calculation [38]. Consequently, the final evaluation can be entered in Saaty’s matrix, where each element  $S_{ij}$  (Eq. 2 - 4) can be obtained as the ratio of estimating of weights for the i-th and j-th option [41]:

$$v_i = \frac{p_i}{\sum_{i=1}^k p_i} \quad i = 1, 2, \dots, k \quad (1)$$

$$s_i \approx \frac{v_i}{v_j} \quad (i, j = 1, 2, 3, \dots, k) \quad (2)$$

$$v_i' = \left( \prod_{j=1}^k s_{ij} \right)^{1/k} \quad i = 1, 2, \dots, k \quad (3)$$

$$v_i = \frac{v_i'}{\sum_{i=1}^k v_i'} \quad i = 1, 2, \dots, k \quad (4)$$

Substitution of calculated elements [42] of matrix into the Eq. 3 and 4 allows the calculation of weights of appropriateness of each option. Saaty's method is the most appropriate form of determination [43] of options' appropriateness for the purpose of identification of appropriate motivation program in our case study for transport enterprise, as it respects comprehensive relations between respective criteria and alternative options. Within the research, following work hypotheses were set:

H1 From the perspective of gender of workers, marked as talents by transport enterprises (working in middle or top management), the evaluation of importance of motivation factors has no statistically important differences.

H2 The most appropriate option for workers marked as talents in transport enterprises, is the motivation program with the highest level of base wage.

### 3 Results and Discussion

Acquired data from the research were processed by the use of basic descriptive statistics, whose results are presented in the Table 2. Average evaluation of preferences of respective motivation factors states the arithmetic mean value. Within the results, it is diversified into the groups of women and men. Standard error of mean value lies within the range from 0.077 to 0.138, confirming the interpretability of calculated mean values. Following the results of average evaluation of importance of motivation factors (Table 2), the most important factor at workplace for key workers in top management, considered as talents according to their employer, is the atmosphere in workplace for both groups – men (arithmetic mean value 2.29) and women (4.58). Subsequently, preferences of men and women differ. Men consider the base wage (2.25) as the second most important factor while women placed it to the 5<sup>th</sup> place in importance (4.43). For women, a factor of the same importance as the atmosphere at workplace, are good colleagues (4.58), seen by men only at the third place of importance (4.20). As the third most important factor, seen by women, is the approach of superior employee (4.54). The fourth, most important factor, is identical for both gender categories, and that's the communication at workplace (4.51 for women and 4.19 for men) and also the application of their own skills (4.41 for women and 4.16 for men). Subsequently, women see fair evaluation as important (4.39), subject and type of work activities (4.35), work environment (4.35) and safety at workplace (4.27). In case of men, they assign then the highest importance to the subject (4.15) and type of performed work, certainty of such workplace (4.14), work environment (4.10)

and education and personal growth (4.06). On the basis of results of questionnaire, it may be stated that, from the gender point of view, the highest importance is not assigned to the motivation factor in a form of base salary.

Table 2  
Basic statistical characteristics of the importance of motivational factors

Number of MF	Motivational factor (MF)	Women				Men				Total Mean
		Mean	Std. Deviation	Std. Error of Mean	Variance	Mean	Std. Deviation	Std. Error of Mean	Variance	
1	Workplace atmosphere	4.58	0.844	0.098	0.713	4.29	1.105	0.123	1.220	4.43
2	Good working team	4.58	0.794	0.092	0.630	4.20	0.947	0.106	0.896	4.38
3	More financial rewards	4.09	0.953	0.111	0.909	3.98	1.102	0.123	1.215	4.03
4	Physical demands of work	3.45	0.953	0.111	0.908	3.38	1.084	0.121	1.174	3.41
5	Job security	4.26	0.908	0.105	0.824	4.14	1.064	0.119	1.133	4.19
6	Communication	4.51	0.832	0.097	0.692	4.19	0.901	0.101	0.813	4.34
7	Prestige / company name	4.03	0.936	0.109	0.876	3.65	1.104	0.123	1.218	3.83
8	Applying own abilities	4.41	0.739	0.086	0.546	4.16	0.920	0.103	0.847	4.28
9	The content and type of work	4.35	0.801	0.093	0.642	4.15	0.901	0.101	0.813	4.25
10	Performance feedback	4.24	0.791	0.092	0.625	3.98	0.886	0.099	0.784	4.10
11	Working hours	4.24	1.018	0.118	1.036	4.04	0.974	0.109	0.948	4.14
12	Working environment	4.35	0.784	0.091	0.615	4.10	0.949	0.106	0.901	4.22
13	Work performance	4.26	0.795	0.092	0.632	4.00	0.842	0.094	0.709	4.12
14	Career advancement	4.15	0.828	0.097	0.685	4.03	0.886	0.099	0.784	4.08
15	Competences	4.05	0.905	0.105	0.819	3.94	0.891	0.100	0.794	3.99
16	Prestige of a job	4.12	0.793	0.092	0.629	3.89	0.955	0.107	0.911	4.00
17	Senior / supervisor access	4.54	0.666	0.077	0.444	4.01	1.037	0.116	1.076	4.27
18	Separate decision making	4.24	0.808	0.094	0.652	3.86	0.978	0.109	0.956	4.05
19	Self-realization	4.26	0.861	0.100	0.741	4.00	1.055	0.118	1.114	4.12
20	Social benefits	3.84	0.966	0.112	0.932	3.56	1.157	0.129	1.338	3.69
21	Fair evaluation	4.39	0.889	0.103	0.790	3.95	1.231	0.138	1.516	4.16
22	Workplace Safety	4.27	0.816	0.095	0.666	3.78	1.273	0.142	1.620	4.01
23	Psychic load	4.04	1.053	0.122	1.108	3.71	1.127	0.126	1.271	3.87
24	Company vision	3.96	0.943	0.110	0.889	3.72	1.085	0.122	1.178	3.84
25	Region development	3.70	1.131	0.132	1.280	3.30	1.226	0.137	1.504	3.49
26	Education and personal growth	4.09	0.995	0.116	0.991	4.06	1.035	0.116	1.072	4.08
27	Ecological approach	3.78	0.983	0.114	0.966	3.50	1.243	0.139	1.544	3.64
28	Free time	4.05	0.920	0.107	0.846	3.95	1.200	0.134	1.441	4.00
29	Recognition	4.11	0.915	0.106	0.837	3.88	1.236	0.138	1.528	3.99
30	Basic salary	4.43	0.938	0.109	0.879	4.25	1.061	0.119	1.127	4.34



Within the research, differences between men and women, tested by the ANOVA test at the level of significance of 5% (Table 3), were detected. Statistically significant differences were determined within motivation factors according to genders: good colleagues, communication at workplace, prestige – names of company, feedback to work results, approach of superior, individual decision making, fair evaluation of employee and regional development.

Table 3

ANOVA test of evaluation of the importance of motivational factors by gender

Number of motivational factor		Sum of Squares	df	Mean Square	F	Sig.
1 Workplace atmosphere	Between Groups	3.313	1	3.313	3.394	0.067
	Within Groups	148.401	152	0.976		
	Total	151.714	153			
<b>2 Good working team</b>	Between Groups	5.583	1	5.583	7.264	<b>0.008</b>
	Within Groups	116.814	152	0.769		
	Total	122.396	153			
3 More financial rewards	Between Groups	0.550	1	0.550	0.515	0.474
	Within Groups	162.288	152	1.068		
	Total	162.838	153			
4 Physical demands of work	Between Groups	0.193	1	0.193	0.185	0.668
	Within Groups	159.034	152	1.046		
	Total	159.227	153			
5 Job security	Between Groups	0.547	1	0.547	0.555	0.457
	Within Groups	149.609	152	0.984		
	Total	150.156	153			
<b>6 Communication with colleagues</b>	Between Groups	4.086	1	4.086	5.416	<b>0.021</b>
	Within Groups	114.674	152	0.754		
	Total	118.760	153			
7 Prestige / company name	Between Groups	5.464	1	5.464	5.186	<b>0.024</b>
	Within Groups	160.146	152	1.054		
	Total	165.610	153			
8 Applying own abilities	Between Groups	2.268	1	2.268	3.230	0.074
	Within Groups	106.725	152	0.702		
	Total	108.994	153			
9 The content and type of work performed	Between Groups	1.559	1	1.559	2.133	0.146
	Within Groups	111.065	152	0.731		
	Total	112.623	153			
<b>10 Performance feedback</b>	Between Groups	2.766	1	2.766	3.908	<b>0.050</b>
	Within Groups	107.572	152	0.708		
	Total	110.338	153			
11 Working hours	Between Groups	1.627	1	1.627	1.643	0.202
	Within Groups	150.509	152	0.990		
	Total	152.136	153			
12 Working environment	Between Groups	2.429	1	2.429	3.181	0.077
	Within Groups	116.065	152	0.764		
	Total	118.494	153			
13 Work performance	Between Groups	2.534	1	2.534	3.772	0.054
	Within Groups	102.122	152	0.672		
	Total	104.656	153			
14 Career advancement	Between Groups	0.603	1	0.603	0.818	0.367
	Within Groups	111.292	151	0.737		
	Total	111.895	152			

15 Competences	Between Groups	0.522	1	0.522	0.648	0.422
	Within Groups	122.471	152	0.806		
	Total	122.994	153			
16 Prestige of a job	Between Groups	2.107	1	2.107	2.717	0.101
	Within Groups	117.893	152	0.776		
	Total	120.000	153			
17 Senior / supervisor access	Between Groups	10.719	1	10.719	13.882	<b>0.000</b>
	Within Groups	117.366	152	0.772		
	Total	128.084	153			
<b>18 Separate decision making</b>	Between Groups	5.573	1	5.573	6.880	<b>0.010</b>
	Within Groups	123.109	152	0.810		
	Total	128.682	153			
19 Self-realization	Between Groups	2.534	1	2.534	2.710	0.102
	Within Groups	142.122	152	0.935		
	Total	144.656	153			
20 Social benefits	Between Groups	2.914	1	2.914	2.550	0.112
	Within Groups	173.742	152	1.143		
	Total	176.656	153			
<b>21 Fair evaluation</b>	Between Groups	7.506	1	7.506	6.430	<b>0.012</b>
	Within Groups	177.435	152	1.167		
	Total	184.942	153			
<b>22 Workplace Safety</b>	Between Groups	9.429	1	9.429	8.118	<b>0.005</b>
	Within Groups	176.545	152	1.161		
	Total	185.974	153			
23 Psychic load	Between Groups	4.137	1	4.137	3.469	0.064
	Within Groups	181.266	152	1.193		
	Total	185.403	153			
24 Company vision	Between Groups	2.163	1	2.163	2.084	0.151
	Within Groups	156.752	151	1.038		
	Total	158.915	152			
<b>25 Development of the region</b>	Between Groups	6.234	1	6.234	4.464	<b>0.036</b>
	Within Groups	212.259	152	1.396		
	Total	218.494	153			
26 Education and personal growth	Between Groups	0.040	1	0.040	0.038	0.845
	Within Groups	157.025	152	1.033		
	Total	157.065	153			
27 Ecological approach	Between Groups	3.096	1	3.096	2.444	0.120
	Within Groups	192.541	152	1.267		
	Total	195.636	153			
28 Free time	Between Groups	0.416	1	0.416	0.360	0.549
	Within Groups	175.584	152	1.155		
	Total	176.000	153			
29 Recognition	Between Groups	2.089	1	2.089	1.746	0.188
	Within Groups	181.885	152	1.197		
	Total	183.974	153			
30. Basic salary	Between Groups	1.279	1	1.279	1.270	0.262
	Within Groups	153.162	152	1.008		
	Total	154.442	153			

Note: statistically significant differences within the motivation factor are marked thick

Results of the ANOVA test demonstrated that the atmosphere at workplace has the same importance for both groups without statistically significant difference, dependent on gender. In case of women, good colleagues, approach of superior and communication at workplace were evaluated at a significantly higher level as

in case of men. It proves the fact that for women the interpersonal relations within work procedure enjoy clearly higher importance. They consider it as more important than the system of basic financial evaluation. On the other hand, men consider the base wage as the second most important factor. From the perspective of importance, both groups see then the utilisation of their skills and the subject and type of work as important the factor, demonstrating the need of working in their profession and use of their knowledge and experiences. At the same time, it's also significantly more important for women to get feedback to their performance as well as the possibility to decide on their own, what men consider as less important. This fact may be connected to higher self-confidence in management. On the basis of results of the ANOVA test, we may state that the workers, marked as talents, show statistically significant differences in the context of preference of motivational factors according to gender. Thus, we refuse the H1 work hypothesis for the benefit of the alternative one.

For the determination of appropriate tool to select an optimal motivation program from more options, the AHP method looks as appropriate. This method seems to be appropriate for the reason that it provides the possibility of comparison of options in words on the basis of weight of determined criteria (motivation factors) by expert evaluator. In this case study, three workers of selected enterprise are in the role of expert evaluators. These are workers of human resources department and top management, proposing three options of motivation programs. Research will evaluate the possibility of use of the AHP method in this case. Following the suggestion of one of the investigated enterprises, we will apply selection from these three options of motivation programs:

- **Motivation program V1:** Motivation program is focused mainly on the diversification of higher amount of personal evaluation according to work performance with the determination of lower base wage. This is determined in a very specifically prepared evaluation system for fair evaluation and strong feedback to work results. It provides high possibility of education and personal growth (targeted plan of talents' education), taking the high potential of career growth into consideration. This system is based rather on competitive atmosphere and mutual rivalry, where the impact on higher performance is expected. Social benefits are also strongly diversified according to status in hierarchy and credit in enterprise. There's a strong feedback to performance in a form of evaluation interviews, held biannually. Work hours are fixed and controlled, workers have the possibility to get refreshment at workplace (juices, mineral waters, teas, coffee and sandwiches) besides lunch. Safety at workplace is solved in compliance with EU legal rules and assessed in regular intervals.
- **Motivation program V2:** This motivation program is focused on the setting of lower wage evaluation in comparison to competitors, while there exists a higher portion of personal evaluation, dependent on work results, fixed for a longer period of time (year). This setting should create fair evaluation of workers without strong pressure on rivalry and competition. In particular, cooperation,

collaboration, open communication and friendly atmosphere are supported. For this purpose, informal meetings and activities, formation of project teams through hierarchy and coaching approach of managers become tradition. Coaching management style is supported also by the need of self-fulfillment, individual decision-making and utilisation of own skills of individuals. At the same time, management style supports regular bidirectional feedback between the superior and subordinated employees. Career growth is slower and based on proven abilities and education while personal growth is executed according to a targeted and individually focused plan for talent development in enterprise. Significant attention is paid to work environment – configuration of work space, offices, light, entry into building and its surrounding area. Safety at work is solved in compliance with EU legal rules and assessed in regular intervals.

- **Motivation program V3:** This motivation program is based on a higher portion of base wage (in comparison with competitors) without any additional evaluation portion. Fairness in evaluation is solved by feedback to performance and the possibility to get wide social benefits and by program for education, personal and career growth. Management is solved by a strong structure of hierarchy with clearly set formal competences and subject of work. The approach of superior is very formal, but subordinated employees may participate on solution and decision-making process of departments. For the purpose of collective integration, mutual meetings are created in a form of corporate breakfasts and sport activities. Subordinated employees get maximum feedback over year, always on quarterly basis in a form of assessment interview, where they can provide comments. Safety at work is solved in compliance with EU legal rules and assessed in regular intervals.

With regard to the scope of this article, ten most important criteria (motivation factors) are considered for the selection of appropriate option of motivation program within a group of women and men. Table 4 shows the calculation of importance weights of ten most preferred criteria within motivation of women and men. This calculation is based on the recalculation of final values of arithmetic mean value, gained by the evaluation at Likert scale from talents in the transportation and logistics industry.

Table 4  
Weights of criteria for men and women - the most important motivational factors

code	Women´ weight of criteria			Men weight of criteria		
		critereion	weight		critereion	weight
K1	1	Workplace atmosphere	0.103134	1	Workplace atmosphere	0.103127
K2	2	Good working team	0.103134	30	Basic salary	0.102225
K3	17	Senior / supervisor access	0.102221	2	Good working team	0.101022
K4	6	Communication with colleagues	0.101612	6	Communication with colleagues	0.100722
K5	30	Basic salary	0.099787	8	Applying own abilities	0.100120
K6	8	Applying own abilities	0.099179	9	Content and type of work	0.099820
K7	21	Fair financial remuneration	0.098874	5	Job security	0.099519
K8	9	Content and type of work	0.097962	12	Working environment	0.098617

K9	12	Working environment	0.097962	26	Education and personal growth	0.097715
K10	22	Workplace safety	0.096136	11	Working hours	0.097114
Total			1.000000	Total		1.000000

Table 5

Saaty's matrix for variants of motivational programs according to criteria for women

K1	V1	V2	V3	$v_i$	$v_i$	K6	V1	V2	V3	$v_i$	$v_i$
V1	1	0.12	0.21	0.29516	0.06552	V1	1	0.27	1.00	0.64850	0.15194
V2	8.33	1	3.67	3.12630	0.69394	V2	3.67	1	8.33	3.12630	0.73249
V3	4.67	0.27	1	1.08371	0.24055	V3	1.00	0.12	1	0.49324	0.11557
K2	V1	V2	V3	$v_i$	$v_i$	K7	V1	V2	V3	$v_i$	$v_i$
V1	1	0.14	0.19	0.29460	0.06747	V1	1	0.33	1.33	0.76314	0.21972
V2	7.33	1	3.33	2.90220	0.66467	V2	3.00	1	3.00	2.08008	0.59890
V3	5.33	0.30	1	1.16961	0.26787	V3	0.75	0.33	1	0.62996	0.18138
K3	V1	V2	V3	$v_i$	$v_i$	K8	V1	V2	V3	$v_i$	$v_i$
V1	1	0.12	0.23	0.30254	0.06744	V1	1	0.43	0.96	0.74286	0.21555
V2	8.33	1	3.67	3.12630	0.69688	V2	2.33	1	3.67	2.04526	0.59347
V3	4.33	0.27	1	1.05726	0.23568	V3	1.05	0.27	1	0.65818	0.19098
K4	V1	V2	V3	$v_i$	$v_i$	K9	V1	V2	V3	$v_i$	$v_i$
V1	1	0.12	0.19	0.28231	0.06216	V1	1	0.43	0.43	0.56844	0.17082
V2	8.33	1	3.67	3.12630	0.68836	V2	2.33	1	2.33	1.75921	0.52866
V3	5.33	0.27	1	1.13303	0.24948	V3	2.33	0.43	1	1.00000	0.30051
K5	V1	V2	V3	$v_i$	$v_i$	K10	V1	V2	V3	$v_i$	$v_i$
V1	1	1.00	0.13	0.50000	0.10000	V1	1	1.00	1.00	1.00000	0.33333
V2	1.00	1	0.13	0.50000	0.10000	V2	1.00	1	1.00	1.00000	0.33333
V3	8.00	8.00	1	4.00000	0.80000	V3	1.00	1.00	1	1.00000	0.33333

Table 6

Saaty's matrix for variants of motivational programs according to criteria for men

K1	V1	V2	V3	$v_i$	$v_i$	K6	V1	V2	V3	$v_i$	$v_i$
V1	1	0.12	0.21	0.29516	0.06552	V1	1	0.30	1.67	0.79370	0.21780
V2	8.33	1	3.67	3.12630	0.69394	V2	3.33	1	3.67	2.30347	0.63210
V3	4.67	0.27	1	1.08371	0.24055	V3	0.60	0.27	1	0.54697	0.15009
K2	V1	V2	V3	$v_i$	$v_i$	K7	V1	V2	V3	$v_i$	$v_i$
V1	1	1.00	0.13	0.50000	0.10000	V1	1	1.00	1.00	1.00000	0.33333
V2	1.00	1	0.13	0.50000	0.10000	V2	1.00	1	1.00	1.00000	0.33333
V3	8.00	8.00	1	4.00000	0.80000	V3	1.00	1.00	1	1.00000	0.33333
K3	V1	V2	V3	$v_i$	$v_i$	K8	V1	V2	V3	$v_i$	$v_i$
V1	1	0.14	0.19	0.29460	0.06747	V1	1	0.43	0.43	0.56844	0.17082
V2	7.33	1	3.33	2.90220	0.66467	V2	2.33	1	2.33	1.75921	0.52866
V3	5.33	0.30	1	1.16961	0.26787	V3	2.33	0.43	1	1.00000	0.30051
K4	V1	V2	V3	$v_i$	$v_i$	K9	V1	V2	V3	$v_i$	$v_i$
V1	1	0.12	0.19	0.28231	0.06216	V1	1	0.43	2.33	1.00000	0.28686
V2	8.33	1	3.67	3.12630	0.68836	V2	2.33	1	3.33	1.98131	0.56836
V3	5.33	0.27	1	1.13303	0.24948	V3	0.43	0.30	1	0.50472	0.14478
K5	V1	V2	V3	$v_i$	$v_i$	K10	V1	V2	V3	$v_i$	$v_i$
V1	1	0.27	1.00	0.64850	0.15194	V1	1	4.00	8.00	3.17480	0.71335
V2	3.67	1	8.33	3.12630	0.73249	V2	0.25	1	3.33	0.94104	0.21144
V3	1.00	0.12	1	0.49324	0.11557	V3	0.13	0.30	1	0.33472	0.07521

Comparison of options appropriateness in pairs for women and men according to respective criteria is presented in the Table 5 and Table 6. In this comparison, values from 1 to 9 are assigned to expert evaluators (in our case, 3 evaluators from selected enterprise) within evaluation in words, where 1 means that options are equally appropriate and 9 means that the first option is absolutely more appropriate than the second one. In the event of opposite ratio, a converse value of this expression is used, like 1/9. The condition of matrix consistency through the value  $\lambda_{max}$  is necessary, being equal to the number of compared “k” elements under full consistency of matrix. The evaluation of adequate level of consistency is solved by the C.I. (consistency index), reaching the values up to 0.1 for a sufficiently consistent matrix. Results of the consistency index within the matrix for women and men reach values within the range from 0.0046 to 0.0465 their value does not exceed the limit of 0.1, and therefore, we may consider the results of matrixes as interpretable.

Table 7

Evaluation of the suitability of variants using AHP method for women

Crit.	The weight of the variants of motivational program			weight of criterion	Evaluation results of the programs		
	V1	V2	V3		V1	V2	V3
<b>K1</b>	0.06552	0.69394	0.24055	<b>0.10313</b>	0.00676	0.07157	0.02481
<b>K2</b>	0.06747	0.66467	0.26787	<b>0.10313</b>	0.00696	0.06855	0.02763
<b>K3</b>	0.06744	0.69688	0.23568	<b>0.10222</b>	0.00689	0.07124	0.02409
<b>K4</b>	0.06216	0.68836	0.24948	<b>0.10161</b>	0.00632	0.06995	0.02535
<b>K5</b>	0.10000	0.10000	0.80000	<b>0.09979</b>	0.00998	0.00998	0.07983
<b>K6</b>	0.15194	0.73249	0.11557	<b>0.09918</b>	0.01507	0.07265	0.01146
<b>K7</b>	0.21972	0.59890	0.18138	<b>0.09887</b>	0.02173	0.05922	0.01793
<b>K8</b>	0.21780	0.63210	0.15009	<b>0.09796</b>	0.02134	0.06192	0.01470
<b>K9</b>	0.17082	0.52866	0.30051	<b>0.09796</b>	0.01673	0.05179	0.02944
<b>K10</b>	0.33333	0.33333	0.33333	<b>0.09614</b>	0.03205	0.03205	0.03205
Total evaluation					0.14381	<b>0.56890</b>	0.28729
The order of suitability of the variants					3	<b>1</b>	2

Table 7

Evaluation of the suitability of variants using AHP method for men

Crit.	The weight of the variants of motivational program			weight of criterion	Evaluation results of the programs		
	V1	V2	V3		V1	V2	V3
<b>K1</b>	0.06552	0.69394	0.24055	<b>0.10313</b>	0.00676	0.07156	0.02481
<b>K2</b>	0.10000	0.10000	0.80000	<b>0.10222</b>	0.01022	0.01022	0.08178
<b>K3</b>	0.06747	0.66467	0.26787	<b>0.10102</b>	0.00682	0.06715	0.02706
<b>K4</b>	0.06216	0.68836	0.24948	<b>0.10072</b>	0.00626	0.06933	0.02513
<b>K5</b>	0.15194	0.73249	0.11557	<b>0.10012</b>	0.01521	0.07334	0.01157
<b>K6</b>	0.21780	0.63210	0.15009	<b>0.09982</b>	0.02174	0.06310	0.01498
<b>K7</b>	0.33333	0.33333	0.33333	<b>0.09952</b>	0.03317	0.03317	0.03317
<b>K8</b>	0.17082	0.52866	0.30051	<b>0.09862</b>	0.01685	0.05214	0.02964
<b>K9</b>	0.28686	0.56836	0.14478	<b>0.09771</b>	0.02803	0.05554	0.01415
<b>K10</b>	0.71335	0.21144	0.07521	<b>0.09711</b>	0.06928	0.02053	0.00730
Total evaluation					0.21433	<b>0.51608</b>	0.26959
The order of suitability of the variants					3	<b>1</b>	2

The result of Saaty's matrix are the weights of respective options for each assessed criterium (Tables 7 and 8). These weights of options under criteria are recalculated through the weights of criteria in the Table 7 and the sum of resulting values within respective options determines the order of their appropriateness. For women, the V2 option seems to be the most appropriate, while subsequently the V3 option, with a lower preference by 49.5%, is identified. In case of men (Table 8), the V2 option seems to be the most appropriate, while subsequently, the V3 option is preferred, losing by 47.8% compared to the previous one.

From the stated application of the AHP method to this specific case it's clear that for both groups of leading workers (marked as talents by enterprises), working in the transportation and logistics industry, the second option of motivation program, proposed by selected enterprise, is the most optimal one. An interesting aspects is the fact that despite the preference of base wage by men at the second top place, the second option is more appropriate, having its base wage at lower level in comparison with competitors while the total evaluation is based on another financial aspect of personal evaluation of performance for certain period of time. From the stated above it's clear that the option based on cooperation atmosphere, open communication and coaching approach by superiors, it forms appropriate motivation conditions for workers of both gender categories, despite a lower level of base wage. Also, the workers at managing positions in the transportation and logistics industry, considered as talents, have such wage remuneration that this hygienic factor is fulfilled and the relationship motivation factors are becoming more motivational. From the result of the use of the AHP method, we can confute the H2 work hypothesis for the benefit of the alternative one. For the group of workers in consideration, the most appropriate motivation program is the option that does not offer the highest level of base wage.

Vlaseková and Mura [44] [45] stress the fact that motivation is very individual and managers have a difficult role to motivate their employees. Research has confirmed a stronger level of motivation by internal factors more than external factors, which superiors should not overlook. Based on our results, it can be stated that women tend to assign greater importance to all factors in general compared to men. In the context of comparable research, this trend is also seen in women [46] [47] [48], regardless of nationality [49] [50] [51]. Hitka et al. [52] presents the results of research of motivational preferences of managers in woodworking companies in Slovakia. He determined 3 basic clusters, which differ in the preferences of motivational factors. Two clusters consider the basic salary to be the most important motivational factor and the third cluster to be primarily a fair evaluation system. The results of this research may differ for a number of reasons from ours, as respondents live under different national economic conditions, but it is also a different professional field of work and 2016, and the fact that they are not labeled as talents. On the contrary, a more recent study from 2019 by Lorincova at al. [53] about the motivational preferences for the senior management category correspond to our findings from the gender perspective.

Slovak senior management prefers the basic salary factor to a workplace atmosphere factor for both men and women. While for women, the second most important factor is a good work team and then a basic salary. Men have a sequence of two other factors opposite. Mikkelsen *et al.* [54] states that employee motivation requirements may change even if their regional needs are met. In view of this, it is advisable to continuously review the effectiveness of the current incentive program and to diversify it as needed. Greiner [55] draws attention to the fact that, for each enterprise, the incentive system is a complex and costly activity, but according to Kachaňáková and Urbancová [56], its effectiveness can significantly affect and promote the competitiveness of the company. Vetráková [5] [57] adds that the effectiveness of the motivation program is influenced by a precise analysis of employees and not neglecting this aspect can significantly strengthen the incentive program.

### **Conclusions**

The aim of the paper is to identify the motivation preferences of Czech managers on critical management positions of transport and logistics companies and to determine the method for effective setting of motivational factors in order to keep them in the company. Correct definition and selection of a motivational program may depend on multiple factors. In this article, attention is focused on workers referred to as talents who work in the transport and logistics field. The most important thing for these workers is the atmosphere in the workplace and then the preferences diversify by gender. For men, the amount of basic salary is another powerful incentive. However, in general it can be said that, in the first place, relationship motivation factors such as workplace atmosphere, good workforce and workplace communication are at the forefront. This may be due to the fact that these workers have a relatively high financial reward and a clear career in the company. For this reason, the importance of financial valuation and career advancement is shifted to other aspects. This also explains the appropriateness of a determined motivational program for both gender groups. However, it is a matter of further research, as the motivation of the category of workers under investigation will evolve over time and also the impact of satisfying other motivational factors on the perception of their importance. Conclusions in this article may be helpful for the entrepreneurs not only in the area of transportation and logistics services to get a strong system for the purpose of keeping talents in the enterprise, but also for the formation of satisfaction and loyalty towards enterprise. Presented method of setup of motivation factors is universally utilizable for any industry and region.

### **Acknowledgement**

This work was supported by TL02000559 Safe and secure cities for pedestrians and senior citizens, TL02000017 Inter-generational management to support digitization in construction, TL01000349 Stabilization and development of SMEs in rural areas, SVV202002 Trends in human resource management in transport



and logistics companies and KH 061712 Financial and social aspects in establishing a regional transport enterprise.

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