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APPROACHES TOWARDS HUMAN CAPITAL MANAGEMENT IN SMES*

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Abstract. Human capital management (HCM) impacts enterprises and is a challenge for small and medium-sized enterprises (SMEs). The article aims to explain the essence of HCM and find out how SMEs perceive the concept of HCM and which activities they perform and consider necessary for the future. We used scientific methods such as content analysis, synthesis, induction, deduction, comparison, and modelling. In addition, Cronbach's alpha, descriptive statistics and chi-square test were calculated. The data we process are the result of a questionnaire survey from 2020 (682 subjects) and from 2021 (477 subjects). We found that SMEs in 2021 considered the HCM concept more relevant to their future. In 2020, up to 40.76% of SMEs in Slovakia still perceived employees only as costs. The positive impact of the HCM concept on the company's financial situation and competitiveness was also confirmed.

Keywords: Human Capital; Human Capital Management; SMEs; Financial Performance; Competitiveness.

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1. Introduction

Since a large enterprise has more than 250 employees and an annual turnover of more than 50 million euros, it is natural that the concept of HCM and modern digital technologies go hand in hand and, in this area, are often used. However, looking at small and medium-sized enterprises (SMEs), which comprise Slovakia's most significant part of the economy, is also necessary. Slovakia is considered the centre of Europe and an automotive powerhouse, so paying attention to companies operating in this country is essential.

Domestic and foreign literature provides ample information on the issues encountered by SMEs. Nevertheless, only a few authors have addressed SMEs' linkage with the HCM concept. The literature emphasizes the great importance of SMEs in countries' economies. This type of enterprise contributes significantly to the gross domestic product and increased employment. Their biggest problem tends to be penetrating foreign markets because they do not have the technology or the perception to compete with foreign firms.

The importance of human resources (employees), which are made up of human capital (knowledge, skills, competencies, motivation, attitudes, values, behaviour of people) has been confirmed by exploring the

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sustainability of businesses (Androniceanu & Georgescu, 2023; De la Rosa-Navarro et al., 2024), corporate innovation (Wang et al., 2024), corporate culture and values (Wieschollek & Dlouhý, 2022), and business performance (Popescu, 2022; Wood et al., 2023).

A comprehensive overview of changes, roles and continuities within HRM/human capital is provided by Cayrat and Boxall (2023), who found that strategic HRM must also consider stakeholders' values, goals and strategies; thereby, the performance and competitiveness of enterprises will be supported.

Many factors influence SMEs, and changes in the market environment and the country's economy are more challenging to small enterprises than large ones. In 2020, Slovakia experienced an outbreak of COVID-19, which limited the activities of SMEs until the end of 2021. At that time, the owners and managers of these businesses realised what was most important to them and changed their position vis-à-vis their employees.

We were therefore interested in how this perception of SMEs towards employees changed at the onset of COVID-19 but also at its peak and decline (2020-2021). Thus, this paper aims to explain the essence of HCM and to find out how SMEs in Slovakia perceive the concept of HCM and which of its activities they perform and consider important for the future functioning of the business.

2 Theoretical backgrounds

2.1 Small and Medium-Sized Enterprises (SMEs) in optics of HCM

Small and medium-sized enterprises (SMEs) form a vital part of the economy of any country with the most tremendous potential for growth and impact on economic stabilisation. Their success or failure depends not only on know-how, capital, or machinery but also on people, which is one of their competitive advantages and a critical success factor (Hitka et al., 2021). Existing studies confirm the importance of SMEs to any country's economy, even though often these enterprises are less financially supported than larger ones and thus have more difficulty implementing the modern technologies that drive the current economy (Vlasov, 2020; Shou, 2022; Chen et al., 2022).

According to the European Commission, which issued a Recommendation in 2003 defining the size criteria for enterprises, there are four basic types of enterprises (Table 1).

Table 1. Enterprise size and characteristics

Enterprise category	Number of Employees	Annual turnover	Annual Balance Amount
Micro	0 to 9	≤ € 2 million	≤ € 2 million
Small	10 to 49	≤ € 10 million	≤ € 10 million
Medium-Sized	50 to 249	≤ € 50 million	≤ € 43 million
Big	250 and more	> € 50 million and more	> € 43 million and more

Source: processed by EC – Eur-Lex, 2003; EC, 2023

We can categorize SMEs from other enterprises according to the European Commission (2020) as follows:

- Independent enterprises - independent to other enterprises in the market, or one or sometimes more partnerships, but with a minority shareholding (less than 25%), i.e. an enterprise may have a maximum of 25% shareholding in another enterprise or enterprises in the market have a maximum of 25% shareholding in a given enterprise,
- Partner enterprises - established mutual partnerships with other enterprises in the market with shareholdings ranging from 25 % to 50 %,
- Affiliated enterprises - SMEs in which other enterprises in the market have more than 50 % ownership

Successful businesses need to invest in human capital, which is considered the cornerstone of success, i.e. business growth and development. People drive individual businesses forward or make companies stagnate in one place (Castillo et al., 2019). Through human capital, SMEs can increase their competitiveness in the

marketplace and gain some competitive advantage, enabling the business to grow and develop further (Strielkowski et al., 2021). These advantages are even more significant in SMEs if companies use digital technologies like Big Data (Koman et al., 2022). Despite these advantages, Zhao and Thompson (2019) and (Lu et al., 2023) point to the underinvestment in human capital in the SME environment. Investing in HC deepens the knowledge and improves the skills of managers, which can contribute to better managers' decision-making skills in times of risk and thus support the growth potential of the enterprise.

Various surveys (Andalib & Halim, 2019; Pech & Vrchota, 2020; Hernita et al., 2021) have pointed out that SMEs face different challenges and to sustain in a highly competitive market, they should use some of the digital technologies that Industry 4.0 brings with it. Government and owners and managers have the most significant influence on the sustainability of businesses. In addition to supporting the digital sphere of SMEs, the owners and managers of such enterprises should also pay attention to the development of human capital, which significantly impacts the economic performance and sustainability of such enterprises. Based on research by Mura et al. (2023), if the enterprise is open to innovation and knowledge is transferred by using electronic devices, the enterprise supports new ideas, and the employees are free to express their opinions.

Human capital development is about deepening the knowledge and skills needed to use the digital technologies that a business introduces. This confirms the fact that the technological development of enterprises must be linked to the development of human capital. However, according to experts, we should avoid cyber attacks, which are becoming more intense and complex as they reflect an increasing level of sophistication (Steingartner et al., 2021a, 2021b).

2.2 Human Capital Management - essence, measurements

HCM is a relatively new concept of managing people in organisations. In the literature, we encounter its various definitions. We have compared some of them to develop a more comprehensive view of the concept by defining the essence, objectives, activities (mainly focused on measuring human capital and its use) and the meaning of HCM for the enterprise.

We can also define HCM as an effort to maintain and further develop the human capital in an enterprise through its employees and their capabilities. The primary reason for using these capabilities is to create an advantage over competitors. HCM provides a way of aligning people's views from an economic and human perspective. Of course, financial reporting standards do not allow human capital to be accounted for in the same way as financial capital. However, it can be considered as something of value, i.e., if properly managed, it can be recognised and used to make more than short-term profit. While measurement in HCM for HRM is essential, it is more of a way to lead people to great results. HCM is about creating enterprise value through people. By focusing on keeping employees happy and achieving their full potential, the performance of the business is improved, and so is its bottom line.

The HCM concept frequently appears in all spheres of the economy. Zhyvko et al. (2020), in turn, investigated the increase in the level of human capital within the framework of the implementation of the HCM process as a basis for ensuring the economic security of the enterprise. Related to the above is the research of Nikitochkina (2021), who, based on the analysis of domestic and international research, identified the characteristics of HCM and the factors influencing the recruitment, retention and development process of employees of generations X, Y and Z.

Human capital consists of the knowledge, experience, skills, and other qualities an organisation's workforce displays. Management then means knowing how to use quantitative tools to measure these qualities (worker performance measures) and using them most effectively. HCM represents the ability to reinforce the belief that people are an asset rather than a cost, the need to create a strategy and adapt HRM processes to make the value needed to achieve the organisation's goals, the way to develop the necessary strategy, the need for partners in the form of HR specialists, the ability to learn what to measure and how to measure it, the way to demonstrate that a well-managed employee delivers excellent results and points the direction in which the strategy should be heading.

2.3 Human Capital Management - strategic approach, relationship to performance and competitiveness

Several authors, documents and institutions emphasize the strategic approach to HCM. For example, the European Public Policy Partnership (2016) describes the area of human capital as a fundamental determinant of the future success of any business, given that its value increases over time, so there is a need to understand the importance of HCM and to look at people as a resource rather than just as a cost item. Therefore, HCM should be conceptualised as a strategic, thoughtful and logical approach to managing the people working in an enterprise, contributing individually or collectively to achieving its goals—the strategic orientation towards human capital and investment in HR that leads to improved business performance. Also, according to the HCM, it is a strategic approach to people management that focuses on critical issues for organisational success. This approach considers people management as a high level of strategic decision-making and consists of systematically analysing, measuring and evaluating how people create value. Khosroeva et al. (2019) emphasise strategic HCM at the macroeconomic level as an essential factor in the innovative development of the economy. They note that human capital needs adequate and modern governance mechanisms to change the impact of identified negative trends in socio-economic development. The solution to the problem of economic growth, improving the population's quality of life, and increasing human capital is mainly in balance and is determined by budget allocations to education and health. Planning under HCM enables organizations to create and shape a pool of resources ready to achieve strategic goals. This attitude provides several benefits to organizations, including development, career counselling and recruitment efforts; using resources more efficiently and effectively, ensuring the same or more work is accomplished by fewer employees; providing realistic staffing projections for budgeting purposes; helping to maintain or strengthen human capital; helping to prepare for human capital formation and development; and providing a clear rationale for training and retraining expenditures, to name a few. However, it is also necessary to emphasize the possible depreciation of the components of human capital, e.g., forgetting, a natural process in humans that usually occurs with increasing age or illness.

The importance of HCM for HC development is also underlined by researchers (Samoilovych et al., 2022). Implementing HCM in enterprises is of practical importance if it increases performance, efficiency and competitiveness. Within the enterprise-level research, HCM has remained in a narrower scope, referring to the measurement and analysis of HR metrics such as employee turnover, cost per employee, and training and learning effectiveness. This aspect of HCM can provide meaningful feedback for assessing the functioning and effectiveness of the broader HCM system. However, its limitations are a need for more emphasis on efficiency, effectiveness, and evaluation of results. Several authors have disputed this in their research papers and have sought tools to demonstrate the linkage between HCM and business outcomes.

HCM describes some activities that manage human capital in an organization to increase organizational competitive value through individual capabilities to achieve higher performance levels. The impact of working capital management on corporate profitability has also been investigated by (Deari et al., 2022). A remarkable result of this study is an inverted U-shaped relationship between working capital management and firm profitability. Lin et al. (2017) empirically tested the relationships between HCM, employee value and uniqueness, and organizational competitiveness. Their research found that people development and onboarding practices and the design of job-specific training led to increased employee value and uniqueness, but companies could not retain them. It is the successfully implemented HCM that should address this challenge. Human capital, together with structural capital, represents intellectual capital. Osibanjo et al. (2020) examined the impact of selected HCM dimensions on employer-employee relationships, collaboration and communication and employee engagement in hospitals. The analysis revealed that when employers invest in the human capital of their employees, their commitment to perform their work effectively increases, thus contributing to the improvement of the company. These findings were also confirmed in the research by Salau et al. (2018). According to (Toszevska-Czerniej, 2018), the creation of competitive advantage is based on the ability of the enterprise to provide value to the customer. The critical factor here is human capital, which employees carry in enterprises. Asri et al. (2021) examined the impact of physical and human capital on the financial situation of regions and found a strong positive effect of human capital on the financial situation of regions in all regression models used. Human capital affects not only the economic situation but also the environmental situation and institutional conditions. Zulkifli et al. (2018) and Sprajc et al. (2018) emphasize that HCM tends to increase the

performance and value of the firm, thus moving towards competitiveness. Iwamoto and Suzuki (2019) confirmed that HCM is an essential factor contributing to the success of corporate social responsibility activities and the implementation of quality management. Cameron (2023) even confirmed the positive impact of effectively implemented HCM on communication, efficiency and work team performance in a surgery department in Maryland, USA. Koman et al. (2023) confirmed in their research that the success of HCM and HRM also depends on using information systems that speed up, simplify and improve individual personnel processes. They emphasize that paying attention to the possible risks of digitisation is also essential.

It can sometimes be challenging to demonstrate a clear link between the effectiveness of HCM and the success of a business. It is for this reason that we conducted our questionnaire survey.

3. Methodology, materials and hypothesis

The article aims to explain the essence of HCM and to find out how Slovak SMEs perceive the concept of HCM and which activities they perform and consider necessary for the future functioning of the enterprise. We used methods such as analysis, synthesis, induction, and deduction, as well as content analysis, modelling methods, or comparison when comparing the opinions of individual authors. We calculated Cronbach's alpha and descriptive statistics and used the chi-square test to detect dependencies between variables.

We used a questionnaire survey in 2020/2021 and 2021/2022 to achieve the article's aims. The respondents were managers or owners of Slovak SMEs. We set a confidence level of 95% and a significance level of $\alpha = 5\%$ (0.05). In 2020/2021, 682 SMEs participated in the survey and 2021/2022, it was 477 SMEs.

In the core of the questionnaire, a Likert scale from 1 to 5 was used, while its interpretation depended on the answer, which could refer to the actual application (reality), in which case 1 – do not apply, 2 – do not apply yet, 3 – do not know, 4 – apply partially, and 5 – apply, or degrees of importance (future), when 1 – unimportant, 2 – rather unimportant, 3 – do not know, 4 – rather important and 5 – important. Answers 4 and 5 are considered "applicable" and "important". Answers 1 and 2 are understood as "not applicable" and "unimportant". Answer 3 will tell us more about the management staff's awareness of HCM.

To find out how Slovak SMEs perceive the concept of HCM and which of its activities they perform and consider important for the future functioning of the company, we looked for answers to 6 research questions (RQ):

RQ1: Are employees considered wealth (an intangible asset) in your enterprise?

RQ2: Does your enterprise have an HCM concept in place?

RQ3: Is the size and value of HC measured in your enterprise?

RQ4: Do you evaluate turnover costs in the enterprise?

RQ5: Does HCM improve the enterprise's financial situation?

RQ6: Does the HCM concept increase the enterprise's competitiveness?

The research questions formed the framework for the hypotheses. We also set out two scientific hypotheses that will help us to understand further the perception of the concept of HCM among SMEs in Slovakia in 2021/2022:

H1: The introduction and use of the HCM concept has a demonstrably positive effect on the enterprise financial situation.

H2: The introduction and use of the HCM concept demonstrably increase the enterprise's competitiveness.

4. Results and implications in practice

We found that Cronbach's alpha is 0.98 ($\alpha > 0.70$), which means that the created and processed questionnaire is reliable, consistent, and suitable for investigating the issue of HCM use in SMEs. We focused on the SME category (Table 2), and in 2020/2021, 682 SMEs participated in the survey, and in 2021/2022 it was 477 SMEs.

Table 2. Number of responses from the questionnaire in terms of the size of the economic entity

Size Criterion	2020		2021	
	Relative abundance	Absolute abundance	Relative abundance	Absolute abundance
Micro (1 to 9)	268	39.30 %	245	51.36 %
Small (10 to 49)	212	31.08 %	133	27.88 %
Medium-Sized (50 to 249)	202	29.62 %	99	20.76 %
SME total	682	100.00 %	477	100.00 %

Source: own processing

We used four questions from the questionnaire (Table 3), which focus on how SMEs perceive the HCM concept and which activities they perform and consider substantial for the future functioning of the enterprise.

Table 3. HCM concept - real application

Concept HCM	2020			2021		
Employees are treated as wealth (intangible asset)	278	211	193	78	100	299
The entity has a HCM concept	264	206	212	155	146	176
The entity ascertains the size and value of HC	257	204	221	136	126	215
The entity evaluates turnover costs	319	170	193	165	133	179

Source: own processing

It is striking that in 2020/2021, as many as 278 SMEs (40.76%) considered their employees just a cost. So, they looked at them mainly through personal costs. Even though in the case of the degree of importance for the future, 281 SMEs (41.20%) identified it as substantial to perceive employees as wealth, i.e., an intangible asset. In 2021/2022, there was a change probably caused by the disease COVID-19, when employers valued their employees more, and employees were grateful for their work. In the given year, 299 SMEs (62.68%) indicated that they consider their employees as an intangible asset, and 316 SMEs (66.25%) considered such a positive attitude towards employees to be important in the future.

More than a third of SMEs (264; 38.71%) in 2020/2021 did not have an HCM concept in place, and what is worse, up to 30.21% of SME managers and owners did not know whether they had such a concept in place or not. Up to 68.92% of SMEs still needed the HCM concept in 2020/2021. As part of the question regarding the degree of importance for the future, up to 44.57% consider it unimportant that the HCM concept be introduced in SMEs. In 2021/2022, managers perceived the issue of HCM positively, and only 36.90% (176) of SMEs stated that they had implemented the HCM concept. On a positive note, it is possible to assess the level of importance, as 218 (45.70%) SMEs stated that this is an important activity the enterprise should have in place. The results are almost identical in both years regarding the degree of importance for the future.

In 2020/2021, only 32.40% (221) of SMEs devoted themselves to determining the size and value of HC, while 37.68% did not perform this activity at all, and 29.91% of SMEs could not answer the question because they did not have sufficient knowledge of the issue. Interestingly, as part of the level of importance for the future, 41.06% of SMEs considered it substantial to determine the size and value of the HC of their employees. In 2021/2022, the positive expectations of the enterprises were fulfilled and 45.07% (215) of SMEs determined the size and value of HC. This positive tendency is likely to continue, as even in 2021/2022, almost half of SMEs (49.06%) considered this area substantial for the future of the enterprise.

The last question dealt with turnover costs. Fluctuation represents the movement of employees to and from the enterprise, i.e., the ratio between terminated employment and the average number of employees. High turnover causes increased costs of recruiting and onboarding new employees, while high HC employees may leave the enterprise. In 2020/2021, up to 46.77% (319) of SMEs did not monitor turnover costs, while 36.80% considered it very important for the future of the enterprise. The problem can be a need for more information from managers and business owners about what they should imagine under the term turnover costs, how they should calculate

them and what they can use the obtained results for. In 2021/2022, only 37.53% tracked these costs, while 34.59% did not track them, and 27.88% did not know about them. We can positively evaluate the fact that in 2021/2022, 41.93% of SMEs were aware of the importance of this type of cost for the future of the enterprise. The impact of HCM implementation on the results of SMEs (Table 4) can be an improvement in the enterprise's financial situation and an increase in competitiveness.

Table 4. Impact of HCM on the subject - real application

Impacts of HCM	2020			2021		
The HCM concept improves the entity's financial situation.	275	223	184	129	147	201
The HCM concept increases the competitiveness of the entity.	259	202	221	119	147	211

Source: own processing

Only 26.98% of SMEs were aware of the positive impact of the HCM concept on the enterprise's financial situation in 2020/2021, while up to 40.32% did not consider that their financial situation would improve thanks to the HCM concept. In 2020/2021, as part of evaluating the degree of importance for the future, 38.12% of SMEs considered that HCM improves their financial situation to be substantial. In 2021/2022, 42.14% of SMEs were aware that HCM positively impacts their financial side, and up to 49.27% considered it substantial for the future. In 2020/2021, 32.40% of SMEs were aware of increasing the enterprise's competitiveness thanks to an established HCM concept, and 39.74% of SMEs considered it substantial to have an established HCM concept to increase their competitiveness. In 2021/2022, the numbers increased, and up to 44.23% of SMEs said that the HCM concept helped them to increase their competitiveness. Up to 50.10% of SMEs consider the mentioned idea towards the future to be substantial. From this, SMEs, based on the experience of other enterprises, will introduce the HCM concept to improve their position in the market and increase their competitiveness.

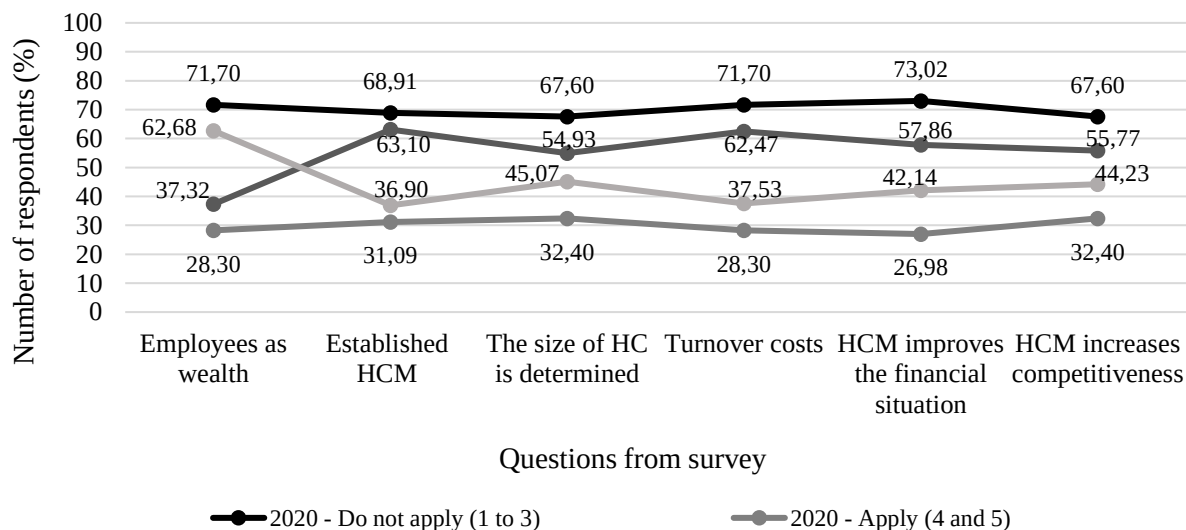


Figure 1. Comparison of actual application in 2020/2021 and 2021/2022

Source: own processing

The data in Figure 1 and Figure 2 are given in percentages. In both 2020/2021 and 2021/2022, the curves showing responses 1 to 3 are well above those showing respondents' positive responses. Even in 2020/2021, a minimum of 67.60% and a maximum of 73.02%, indicated a negative answer. A year later, the opinions of SMEs changed, and a negative answer (options 1 to 3) was indicated by a minimum of 37.32% (178 SMEs) and a maximum of 63.10%, representing 301 SMEs. Interestingly, in 2020/2021 when applying and not applying a given element of the HCM concept, the responses of SMEs ranged in the same only 5.42% interval. The year 2021/2022 showed that economic entities began to consider their employees more as an asset than just a cost, and the differences between individual answers also decreased. The biggest difference was noted in introducing the HCM concept and in the question regarding the evaluation of turnover costs.

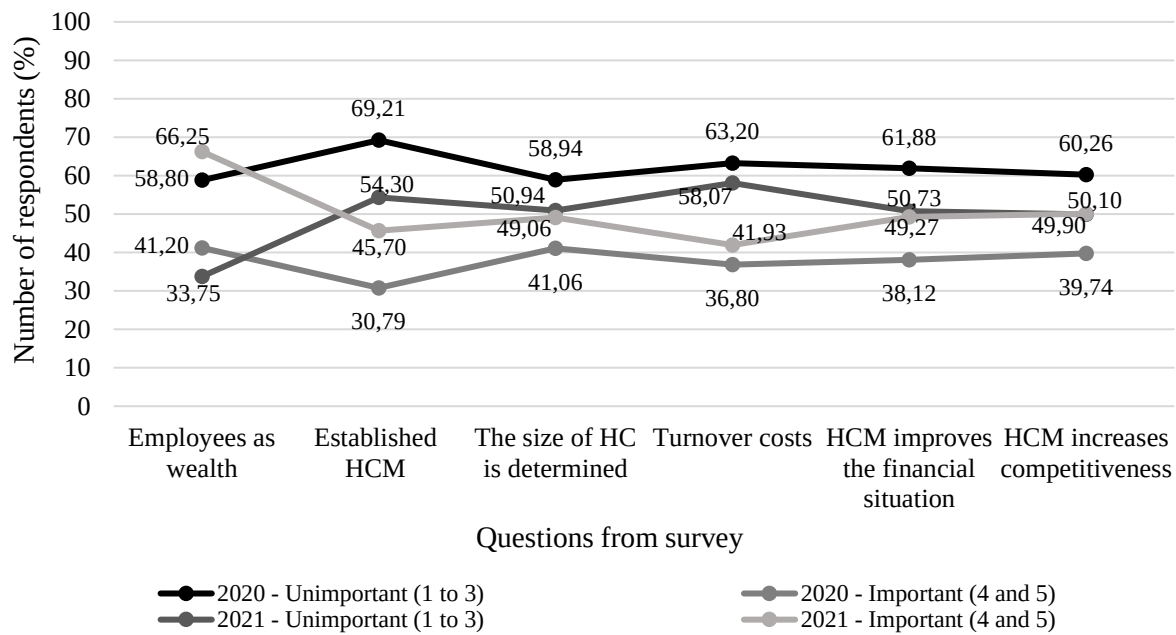


Figure 2. Comparison of the degree of importance in 2020/2021 and 2021/2022

Source: own processing

The most significant difference in the degree of importance for the future was in introducing the HCM concept and the question concerning the detection of turnover costs. Since these two questions had the most significant difference between positive (4 and 5) and negative (1 to 3) answers, the respondents did not understand the given questions, or they did not understand the mentioned concepts. We noticed an improvement in the situation in Slovak SMEs because when comparing the years 2020/2021 and 2021/2022, the number of positive answers increased (4 and 5). Based on the analysis of the HCM concept, we performed descriptive statistics on four out of six questions based on data from 2020/2021 (Table 5).

Table 5. Descriptive statistics of selected HCM questions in 2020/2021

Descriptive Statistics features	Size of HC	HCM increases competitiveness	HCM improves the financial situation	Fluctuation costs
Number (n)	682	682	682	682
Mean	2.83	2.83	2.72	2.61
95 % confidence interval – upper	2.92	2.93	2.81	2.71
95 % confidence interval - lower	2.73	2.73	2.62	2.51
Median	3.00	3.00	3.00	3.00
Mode	3.00	3.00	3.00	1.00
Standard Deviation	1.31	1.28	1.26	1.35
Variance	1.71	1.65	1.58	1.83
Kurtosis	-1.09	-1.06	-0.98	-1.17
Skewness	0.01	-0.02	0.09	0.23
Variaton range	4.00	4.00	4.00	4.00
Minimum value	1	1	1	1
Maximum value	5	5	5	5
Sum - Total	1 928.00	1 928.00	1 852.00	1 782.00

Source: own processing

It is interesting that even though for the mentioned four questions related to HCM, at least 26.98% of SMEs stated that they implement the given activity, the most frequent answer was the value 3, even for the last one, it was 1, that is, that the owners and managers do not know whether the given activity they implement in the enterprise, or they do not implement it rather than implement it. The kurtosis values take on negative values in all cases, which means that the data distribution in the file is flatter, and there are more extreme values in the file. The coefficient of skewness mainly acquires positive values, which means that in three cases, it is a left-skewed distribution of values in a set with lower values. In two cases, the file had an almost symmetrical distribution of data. The average deviation from the arithmetic mean is between 1.51 and 1.71. For comparison, we also performed descriptive statistics in 2021/2022 (Table 6).

Table 6. Descriptive statistics of selected HCM questions in 2021/2022

Descriptive Statistics features	HC as a wealth	HCM increases competitiveness	Size of HC	HCM improves the financial situation	Fluctuation costs	HCM concept
Number (n)	477	477	477	477	477	477
Mean	3.65	3.16	3.14	3.11	2.96	2.92
95 % confidence interval – upper	3.76	3.28	3.26	3.23	3.08	3.04
95 % confidence interval - lower	3.54	3.04	3.02	3.00	2.84	2.80
Median	3.00	3.00	3.00	3.00	3.00	3.00
Mode	4.00	3.00	4.00	3.00	3.00	3.00
Standard Deviation	1.25	1.30	1.31	1.28	1.36	1.33
Variance	1.56	1.69	1.72	1.65	1.84	1.78
Kurtosis	-0.26	-0.86	-0.98	-0.89	-1.15	-1.12
Skewness	-0.80	-0.39	-0.33	-0.32	-0.09	-0.17
Variation range	4.00	4.00	4.00	4.00	4.00	4.00
Minimum value	1	1	1	1	1	1
Maximum value	5	5	5	5	5	5
Sum - Total	1 740.00	1 508.00	1 497.00	1 484.00	1 413.00	1 391.00

Source: own processing

Due to the impact of the COVID-19 disease, in 2021/2022 the number of SMEs implementing the given activities increased, even though the total number was lower than in 2020/2021. This is evidenced by the average indicator, which oscillates in the interval 3.10-3.65, while the previous year's values were 2.80-3.30. Similarly, the most frequently occurring value was the answer 4; they implement the activity at least partially. The deviation from the arithmetic mean is in the interval 1.56-1.78. The coefficient of spiciness and skewness acquire exclusively negative values, i.e., a flat distribution of data in the set skewed to the right, located further from the average, and there are several extreme (higher) values.

Table 7. Statistical testing of hypotheses

Signpost	H1	H2
Degrees of freedom (df)	4	4
Chi square test (χ^2)	273,97	39,37
Chi-square test table.	9,49	9,49
P-value	0,0000	0,0000
Significance level (α)	0,05	0,05
The result	confirmed	confirmed

Source: own processing

For a more thorough examination of the issue, we established two hypotheses, which we statistically verified thanks to the 2021/2022 questionnaire data and additional secondary sources (Table 7).

H1: The introduction and use of the HCM concept have a demonstrably positive effect on the financial situation of SMEs.

H2: The introduction and use of the HCM concept demonstrably increase the competitiveness of SMEs.

We calculated the Kolmogorov-Smirnov test, which speaks about the normality of the data distribution in the analysed set, and the Levene test, which tests the agreement of the variances of the data in the set. Both tests came out at 0.000, a value lower than the established significance level (0.05). It follows that hypotheses cannot be tested with parametric tests but only with tests belonging to the group of non-parametric ones - e.g., the chi-square test.

Since the calculated chi-square test value for both hypotheses (H1, H2) was much higher than its tabular value, and the determined significance level was higher than the calculated p-value, both hypotheses (H1 and H2) were confirmed. A more negligible dependence was identified for H2 with a value of 0.28, i.e., a weak dependence. H1 had moderate dependence (Pearson's C = 0.60).

Therefore, based on the survey carried out on the conditions of Slovak SMEs, the introduction and use of the HCM concept has a demonstrably positive effect on the financial situation of SMEs (H1 confirmed). H2 also confirmed that introducing and using the HCM concept demonstrably increases the competitiveness of SMEs.

5. Discussion and conclusions

Human capital management is an approach where people in a company are viewed as an intangible asset that forms part of the company's value and not as a cost item. The unit resource of human capital in conjunction with units of output was previously addressed by Gallagher et al. (2022). Our ambition was to explain the essence of HCM and point out the activities carried out in connection with the implementation of HCM in the practice of SMEs in Slovakia in 2020/2021 and 2021/2022. We also investigated the impact on the company's results if companies implement HCM.

We found that if SMEs in Slovakia implement the HCM concept, it positively impacts the financial situation and the competitiveness of companies. These hypotheses were confirmed in 2020/2021 and also in 2021/2022. Considering the confirmation of the hypotheses, we are of the opinion that companies can significantly improve their financial situation (the costs of recruitment, selection, orientation and adaptation of employees will be reduced), which will contribute to higher efficiency (regular employees will not have to train newly hired employees, but will always devote their work) and finally to increase competitiveness (with a stable staff, the company can more quickly accept changes and move forward). Regardless of the country in which they are based, businesses can move forward, be inspired and implement the concept of human capital management thanks to our findings.

The study of Sahban et al. (2021) confirmed the positive impact of people orientation in the organization of SMEs on its results. Knowledge, abilities and skills of the entrepreneurs themselves, founders of enterprises, can contribute to the success of SMEs, which was confirmed in research works, for example, by El Shoubaki et al. (2020) and Zhang et al. (2023). Block et al. (2017) state that entrepreneurs' human capital contributes to SMEs' innovativeness. On the contrary, Huang et al. (2023), based on research conducted in China, found that in high-tech companies, there is a mismatch of human capital (human capital mismatch) and innovation performance, which can be eliminated, for example, by investments in HC. According to Safránková, Sikýr (2020), to cope with the challenges, SMEs should apply appropriate strategies, policies and procedures in human resources management to attract enough talented and motivated people and ensure the development of their potential towards increased performance.

In 2021/2022, compared to 2020/2021, due to COVID-19, interest in introducing HCM and its importance for the future of businesses increased in Slovak SMEs. Although our survey showed that the introduction of the HCM concept has a positive effect on the operation of the enterprise (statistical results from 2021/2022), SMEs in Slovakia, especially in 2020/2021, did not have this opinion and perceived their employees only as a production factor that is reflected in the company only in cost items. Due to the impact of the COVID-19 disease, the situation regarding the concept of HCM and employees in Slovakia improved between 2020/2021 and 2021/2022, which was also shown by the analysis of the data and their mutual comparison. While in 2020/2021, at least 32% of the subjects expressed themselves positively (answers 4 and 5) in the analyzed questions related to HCM, in 2021/2022, at least 45% of the subjects expressed themselves positively in the same number of

questions (answers 4 and 5). We assume that this positive phenomenon was caused by the COVID-19 disease, during which employers (SMEs) began valuing their employees more and providing them with educational courses and training to a greater extent, which increased the value of their HC. Unfortunately, in most companies, employees are only considered a cost item in accounting. Their value in the form of an intangible asset is more likely to be realized by companies that implement investment activities or are focused on IT and marketing, where it takes a long time for an employee to learn. Also, developing and using various new applications like digitalization, augmented reality (AR), virtual reality (VR), or embedded 3D viewers help improve employees' skills (Papp, 2021; Toth et al., 2023).

For SMEs, investments (Malichová & Mičiak, 2019) and education are of great importance as critical investments in HC in the era of digitization and Industry 4.0 (Irtysheva et al., 2020; Maltseva et al., 2021). In connection with developments influenced by digitization, as well as the crisis caused by the Covid-19 pandemic and not small changes in the demands of employees on the working environment across all generations, new tools and management concepts are being developed in the field of human resources to maintain competitiveness (Stacho et al., 2022). Increasing qualifications, deepening knowledge and improving skills increase the attractiveness of employees both in the company and in the labour market. If an organization emphasizes education and career development, it can expect an increase in reciprocity, performance and a decrease in employee turnover (Ng et al., 2022). The perception of employees and their HC as wealth for the company can be part of the marketing strategy of companies (Ližbetinová et al., 2019) and part of the creation of the value of the company for interested groups (Kusnířová et al., 2023). Flexibility, personal development, and further education will be decisive in transforming various organizations, such as agricultural and forestry organizations (Hitka et al., 2023). Therefore, we see the possibility of continuing research in the field of education, which is part of the HCM concept. However, within HCM and social policy, businesses need to consider the findings of Giuliani et al. (2023), who found that companies that rely on financial performance have an incorrectly set social policy, i.e. HCM.

For the implementation of the HCM concept associated with the requirement to increase not only the performance but also the competitiveness of a specific enterprise, it is necessary to raise the awareness of managers and business owners about the HCM concept so that they can design and use metrics for HCM, adapt them to specific business conditions, and in the context of corporate strategy. Human resource managers themselves need to be educated in this area.

The limitation of our article is the implementation of a questionnaire survey in only one country (Slovakia). However, the questionnaire provides enough quantitative and qualitative data from various organizations. Another limitation of the article is the focus on small and medium-sized enterprises because it is a size category that only sometimes has defined departments; that is, few enterprises use human capital management.

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