

Human Capital Management and Business Performance

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Human capital (HC) is a key factor of the performance and competitiveness of enterprises. HC as an element of intellectual capital, efficiency of invested capital and efficiency of human capital positively affect firms' return on equity (ROE) and business performance.

Keywords: human capital ; human capital management ; investments ; effectiveness

1. Introduction

Human elements in an organization are those able to learn, change, innovate, and provide a creative force which, if properly motivated, can ensure the long-term survival of this organization.

In business practice, we often encounter the importance of human capital, or even an emphasis on people and human labor in the company, and many need to learn the difference between these terms. The term human resources management is, in turn, confused with the "more modern" term, human capital management, but even managers and business owners themselves do not understand the true meaning of the "more modern" terms, HC, investment in HC, and HCM. This fact motivated the researchers to devote the entry to clarifying these terms and, at the same time, the relationships between them.

In ^[1] build upon Davenport's definition in which it is stated that people possess innate abilities, behaviors, and personal energy, and these components create human capital (HC), which they bring into their work.

A considerable contribution to the human capital theory was conducted by ^[2]. Other contributors were from ^[3]. According to them, HC represents the human factor in organizations, combining intelligence, abilities, and competence, which gives the organization its distinctive character. In ^[4] defines HC in a similar way; that is, as knowledge and skills that the individuals create, maintain, and apply to their work. In ^[5], in his description of human capital and its value, focuses on the capability of people, consisting of their knowledge, skills, experience, contacts, behavior, and temperament.

According to the ^[6], human capital is defined as knowledge, skills, competences, and attributes embodied in individuals, which facilitate the creation of personal, social, and economic welfare. In ^[7] describes HC within the business context as the combination of features that people bring into their work, the ability of people to learn, and the motivation of people to share the pieces of information and knowledge.

There are several perspectives on the value and position of HC in an enterprise and in the whole society. In ^[8] follow Brown's concept of HC where this refers specifically to the value which an employee has for his/her employer and which is entrenched in specific knowledge and skills, interpersonal knowledge and skills (the non-technical ones), intelligence, and relationships.

Refs. ^{[9][10][11]} consider human capital to be a source of economic growth. In ^{[4][12][13][14][15]}, understand it as a part of the intellectual capital, which, accompanied by the financial capital, creates the market value of an enterprise. In ^{[16][17]} refer to human capital as an intangible asset, which, when put together with the tangible assets, represents the enterprise's market value. According to the ^[18], HC represents the capacity of individuals who are able to achieve an economic outcome by joint efforts.

2. Human Capital and Human Capital Management

Every company wants to maintain, but also increase, its competitiveness in the market, as well as productivity and efficiency, and to avoid the shortage of qualified staff. In order to do so, it is necessary to invest in human capital in one of the possible forms ^{[2][13][19]} stated that the investments in education and training of individuals resemble the investments of enterprises in their property and equipment. The investments in HC represent a method and a means for the enterprise to expand its available HC, to increase its value, and to enhance its quality.

The essence of creating and increasing the HC value is spending financial and non-financial resources at present with the aim of acquiring financial or non-financial yields in the future, but not satisfying the present needs. When spending the

funds to create HC, this is an investment, not consumption. However, the quantification of these expected yields is problematic [20][21][22][23] adds that the development of human capital at present in a several-year-long proposal, even though it is usually listed in the accounting as a cost within a single period.

Refs. [24][25] add another perspective, focusing on the macroeconomic level. According to the authors, the investments in HC depend on numerous factors, including the level to which the capital markets are functioning, and the level of security in the economy and the political establishment.

The investment in HC as a production input can be conducted in various forms. The enterprise can focus on improving the employees' health [26], improving the working conditions [27], increase in the working abilities, skills, and knowledge, and the desired change in attitudes, which is being performed via a system of corporate education and development [49][28].

Since human capital is the central resource that needs to be properly utilized by the enterprises during the creation of value for their customers and the whole society, it deserves to be professionally and appropriately managed [29]. Within the theory, science, and practice of management, the concept of human capital management has begun to form. This is being described and applied in the search for solutions to a set of issues emerging in the field of human capital, which often stem from its very definition.

Refs. [20][30] use the definition created by The Accounting for People Task Force which describes human capital management (HCM) as a systematic approach to the analysis, measurement, and evaluation of the effect that the policies and practices focused on the employees have on value creation.

Refs. [31][32], concerning HCM, stated that it recognizes that people are the investors of their personal human capital and that this provides the main source of value for the organization. He uses this wording to emphasize that HC is actually owned by the employees themselves, and they decide to invest it in the enterprise when they use it in their work. Ingham also presents Finn's opinion, according to whom HCM uses the most precious asset, people, for the improvement of the business' performance and the increase in competitive advantage. HCM focuses on attracting, motivating, and inspiring the best talent. The definition of HCM is supplemented by [33], who define HCM as a process focused on specific HC practices such as recruitment, selection, training, development, performance appraisal. and employee compensation.

Ref. [34] states that it is possible to measure investment in HC by combining quantified indicators (turnover, cost per employee, average number of years of service) with qualitative indicators (job satisfaction).

Refs. [35][36][37] wrote of HCM that it is about getting the best from the people, and the success of this effort depends on understanding what motivates employees to perform, how organizational systems can act as barriers of performance, and how leadership and processes of human resources management will probably affect results and outputs.

According to [4][20][38], the key characteristic of HCM is the application of metrics that direct how enterprises approach the management of people, perceiving them as assets and fully realizing that competitive advantage is achieved via strategic investment in these assets.

This core of the HC issues is continuously being affected by a whole spectrum of internal as well as external factors. Substantial factors within the internal corporate environment include the overall corporate infrastructure and economic conditions, conditions of the physical working environment related to ergonomics at the workplace, employee motivation [39][40], corporate culture and its manifestations in the enterprise's everyday operation, the hierarchy within the organizational structure, employees relationships [41][42], corporate social responsibility application [43], ways and routes of communication among employees, but also the connection to the human resources information system [2], collecting and processing the data related to HC, providing the reports and analytical overviews being used in human capital management. The external factors with a direct effect on HC available include anthropometric changes in the population related to the workplace ergonomics, economic policy, the state's employment policy connected to the increase in qualification [44][45][46][47][48], requalification of unemployed persons [49] with untapped HC [50], demographic changes affecting the number of potential new employees in the labor market, and the trends in the industry [51][52][53][54][55] which require changes in the structure of HC if they shall be captured and reflected in the enterprise's outputs.

The main part of the HCM process is the identification and evaluation of the effectiveness of HC utilization as well as the effectiveness of the investment in HC. The key is to search for connections between these elements of the HCM process and the enterprise's performance.

For the assessment of investments in HC the traditional methods for the assessment of investments in physical capital can be used, such as the net present value (NPV) or the internal rate of return (IRR) [56][57][58][59]. They both take time and risk into account during the investment assessment. The time factor represents a separate variable in investment decision making. Time is one of the dimensions in which the economic process is being performed, and within a certain context, it is a distinctive risk factor affecting the economic variables and their relationships in a positive or negative way [10][56][57]. The application of both above-mentioned methods in the context of HC requires an estimation of the expected yields from the investment, which is a relatively difficult task. To make the quantification of the yields less difficult, it is recommended

to apply these methods in the business practice rather when realizing non-recurring or short-term educational programs. For the same reasons, it is recommended to apply the indicators of the payback period (PP) in a similar way [57][58].

In addition, the traditional method of return on investment (ROI) has been adjusted in different ways by several authors [59][60][61][62][63]. Another metric designed is the training investment value (TIV) [22][64], or the return on talent [65][66][67][68][69][70].

For a better understanding of the main points gathered via the literature review on the topic of human capital and its management, these were summarized in **Table 1**.

Table 1. Summary of literature review of HCM.

Author (Year)	The Main Findings for the Theoretical Background of the Studied Topic
Davenport and Prusak (1998)	
Becker (1964)	
Tokarčíková et al. (2020)	
Halder (2018)	<ul style="list-style-type: none"> • The investments at the microeconomic level (in enterprises);
Koziol and Mikos (2020)	<ul style="list-style-type: none"> • The investments in education and training of individuals resemble the investments of enterprises in their property and equipment;
Stopka et al. (20019)	<ul style="list-style-type: none"> • Combining quantified with qualitative indicators;
Slotje (2010)	<ul style="list-style-type: none"> • The overall corporate infrastructure and economic conditions, conditions of the physical working environment, corporate culture, organizational structure, corporate social responsibility, communication, connection to the HR information system.
Kvet et al. (2020)	
Ližbetinová et al. (2020)	
Chrysler-Fox and Roodt (2014)	
Goldin (2001)	
Molina-Azorin et al. (2021)	
Cahyaningsih et al. (2017)	
Armstrong (2006)	
Osipov et al. (2022)	<ul style="list-style-type: none"> • The investments at the macroeconomic level;
Stacho et al. (2019)	<ul style="list-style-type: none"> • Investments in HC lead to competitive advantage;
Dietz and Zwick (2022)	<ul style="list-style-type: none"> • External factors affect HC;
Hitka et al. (2018)	<ul style="list-style-type: none"> • The anthropometric changes in the population, economic policy, the state's employment policy, requalification of the unemployed person, demographic changes, trends in the industry.
Zafar et al. (2019)	
Bosi et al. (2021)	
Klučka (2017)	
Lu et al. (2020)	
Gandrita and Rosado (2019)	

Author (Year)	The Main Findings for the Theoretical Background of the Studied Topic
Tumová (2019)	
Fontana et al. (2019)	
Sequeira (2017)	
Tokarčíková et al. (2020)	
Dissou et al. (2016)	
Babaei and Jassabi (2022)	
Barro (2001)	
Sohl, 2022	<ul style="list-style-type: none"> Investments in HC in three forms—improving the employees’ health, improving the work conditions, education, and development;
Addico et al. (2022)	<ul style="list-style-type: none"> The assessments of investments in HC via traditional methods—NPV, IRR, PP, ROI, TIV, ROT;
Lorincová et al. (2018)	<ul style="list-style-type: none"> Time and risk into account during the investments assessment;
Fareri et al. (2020)	<ul style="list-style-type: none"> The estimation of the expected yields from the investment is difficult.
Echols (2005)	
Lorincová et al. (2021)	
Pirozzi and Ferulano (2016)	
Dadd and Hinton (2022)	
Chen et al. (2004)	
Omotunde and Alegbeleye (2021)	
Cahyaningsih et al. (2017)	
Rahman and Akhter (2021)	<ul style="list-style-type: none"> Quantification of HC and its effectiveness is problematic;
Echols (2005)	<ul style="list-style-type: none"> HC is usually quantified as cost in accounting.
Mubarik et al. (2018)	

Author (Year)	The Main Findings for the Theoretical Background of the Studied Topic
Mustafinand Ignateva (2016)	
Armstrong and Taylor (2014)	
Cahyaningsih et al. (2017)	<ul style="list-style-type: none"> • Enterprises must manage HC;
Ingham (2007)	<ul style="list-style-type: none"> • Emergence of the HCM concept;
Yarovaya et al. (2021)	<ul style="list-style-type: none"> • Method of analysis, measurement, assessment of HC in enterprises; • The essence of HCM is HC;
Boon et al. (2018)	<ul style="list-style-type: none"> • Close connection of HCM with HRM;
Blackman et al. (2016)	<ul style="list-style-type: none"> • Metrics for managing HC in an enterprise with all its components;
Maltseva et al. (2017)	<ul style="list-style-type: none"> • Managers need to know what motivates their employees.
Qu (2022)	
Armstrong (2006)	
Osipov et al. (2022)	

The theoretical starting points summarized in this way contributed to the identification and description of the knowledge gap on which the research was oriented. This gap was defined as a lack of knowledge of the specifics of HC investments are the methods that managers actually use to evaluate such investments.

3. Human capital management and business performance

Several authors confirm the positive impact of HC, investments in HC, and the implementation of HCM on the performance of companies in various areas of their activity in the economy. These include, for example, [71][72][73][74].

Moreover, [21] wrote that investments in HC can increase the efficiency of employees and companies, as well as the financial performance of companies. This idea is also confirmed by [32], according to which company managers represent HC, and all types of investment in this intangible asset of the company increases the effectiveness of HC, the overall performance of managers, and the performance of the company.

HC as an element of intellectual capital, efficiency of capital employed, and efficiency of human capital positively affects firms' return on equity (ROE) and business performance [33][75].

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