Utjecaj upravljanja kompetencijama ljudskih potencijala na uspješnost poslovanja malih i srednjih poduzeća

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THE INFLUENCE OF HUMAN RESOURCES COMPETENCY MANAGEMENT ON THE BUSINESS SUCCESS OF SMALL AND MEDIUM ENTERPRISES

DOCTORAL DISSERTATION

Varaždin, 2021

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DOCTORAL DISSERTATION

Supervisor:

Prof.dr.sc. Goran Kozina

Varaždin, 2021

Statutory Declaration

1. Iva Klepić (ID 1819001111), herby declare that

(1) I have completed the submitted PhD thesis with the title

"THE INFLUENCE OF HUMAN RESOURCES COMPETENCY MANAGEMENT ON THE BUSINESS SUCCESS OF SMALL AND MEDIUM ENTERPRISES"

Without using any sources or resources other that those stated:

(2) I have not submitted a PhD thesis or any other academic paper with same or a similar to the University North Varaždin or to any other institution.

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(signature)

Abstract

Human resources are the most valuable resource of the organization and they use and manage other resources in the organization (financial, material and information). The success of the organization is based on the quality of human resources, their competencies, motivation, loyalty, and their business results. The basic aim of this research is to determine whether and to what extent Human resources competency management influences the business success of small and medium enterprises. The empirical research was conducted in 234 small and medium enterprises in the Federation of Bosnia and Herzegovina in January 2021. An original questionnaire was created for the survey, which gathered the opinions of top managers on Human resources competency management, as well as on four business performance perspectives based on the Balanced Scorecard model. In the doctoral dissertation, Human resources competency management is viewed as a process consisting of: determining the required competencies, determining current competencies and the competency gap and undertaking activities to ensure and develop the necessary competencies. For the business success of small and medium enterprises, business performance was researched through four perspectives of BSC (financial perspective, customer perspective, internal business processes perspective and learning and growth perspective).

The research results showed the correlation between the studied variables and the influence of Human resources competency management on the business success of small and medium enterprises viewed from all four perspectives. The dissertation includes a comparison with similar research and recommendations for future research. A limitation of the research is reflected in the extent of the sample and the method of creating the research sample. Some qualitative data that enable subjectivity were used in the research because a subjective evaluation of state as well as impacts has been conducted. The originality of this work lies in creating an original model of the connection between Human resources competency management and business success (performance) of small and medium enterprises as viewed through four perspectives of the Balanced Scorecard, which has been empirically tested. Also, no such research has been conducted in B&H to investigate the influence between the Human resources competency management and the business success of small and medium enterprises.

***Keywords**: business success, business performance, balanced scorecard, competencies, competency management, competency gap, human resources, human resources management, small and medium enterprises*

Extended abstract

Small and medium enterprises are the backbone of every country's economy, and without them, economic growth and development is unthinkable. Through entrepreneurship, SMEs are the bearers of permanent innovation that renews, transforms and encourages the development of economies around the world. In developed market economies, the relative market share of small enterprises is constantly increasing in relation to the total number of enterprises. Small and medium enterprises are the main driver of innovation, employment and competitiveness. SME's are very important from a social and economic point of view. They are vital to the world's economy, as well as European economy. They account for two-thirds of jobs in the private sector and are responsible for more than half of the total added value attained by companies in the EU. Growth in Europe is unthinkable without SMEs, and they play a crucial role in delivering innovative products, strengthening competitiveness and creating new jobs. They generate innovation and entrepreneurship, which are the main drivers of economic development in creating new jobs. They are able to identify new needs of both consumers and industry, and have the potential to absorb new technologies, contribute to science and local development. SMEs are key to employment growth as well as the development of the necessary conditions for socioeconomic prosperity. In the last decade, the European Union has placed a particular emphasis on the development of entrepreneurship and SMEs.

Globalization and market liberalization, which resulted from the changes that took place at the end of the last century, have led to ever-increasing competition that poses a survival threat to businesses, especially small and medium enterprises. However, this has led to new opportunities including the chance to place their products on markets around the world, thus securing their growth and development.

The economic globalization and increased competitive pressures for most firms demand innovative, efficient, and effective management strategies to comply with such dynamic, increasingly technological, and highly uncertain environments. Today the success of individuals and organisations is measured by their adaptability to change. Organizations today are facing heightened challenges in their efforts to perform effectively. These include increasing levels of competition, the internationalization of business, accelerating pace of change, technological advances, meeting the needs of an increasingly diverse workforce, more demanding customers and consumers, greater concerns about corporate governance and board transparency. The changing

and globalizing environment in business has resulted in increasing competition in markets and sectors.

Numerous authors point out that human resources are a source of competitive advantage in both large enterprises and small and medium enterprises (SMEs). Due to the uniqueness and specificity of SMEs it can be said that HC as a source of competitive advantage is even more important for SMEs despite the scarce resources, both financial and other. It is a way for them to stand out from the competition, because human resources cannot be copied.

Human resources are the most valuable resource of the organization, and they use and manage other resources in the organization (financial, material and information). The success of the organization is based on the quality of human resources, their competencies, motivation, loyalty, and their business results. Their contribution to the organization as a resource is highly unpredictable, unique and has potential for further development. This is one of the reasons why the function of management, human resources management, has taken center place of importance in the 21st century. And over the past few decades, human resources management has grown into a credible and highly sophisticated discipline.

Individual competencies are the central component of human capital and they bring organizational performance in interaction with organizational, technological and behavioural processes. The human resources function needs to determine the specific competencies needed to successfully perform all categories of work, especially the key tasks in the organization.

Competency management refers to the effective identification, development, and alignment of organizational and individual competencies to successfully achieve business and strategic goals of a business organization, as well as the individual goals of employees. Competency management involves the specification of an organization's competency needs, the identification of competency gaps (between needed and actual competencies), competency sourcing, competency development through training and coaching, and the staffing of an organization.

The basic aim of this research is to determine whether and to what extent Human resources competency management influences the business success of small and medium enterprises. The empirical research was conducted in 234 small and medium enterprises in the Federation of Bosnia and Herzegovina in January 2021. An original questionnaire was created for the survey, which

gathered the opinions of top managers on Human resources competency management, as well as on four business performance perspectives based on the Balanced Scorecard model. In the doctoral dissertation, Human resources competency management is viewed as a process consisting of: determining the required competencies, determining curent competencies and the competency gap and undertaking activities to ensure and develop the necessary competencies. For the business success of small and medium enterprises, business performance was researched through four perspectives of BSC (financial perspective, customer perspective, internal business processes perspective and learning and growth perspective).

The methodology of data collection (collecting primary data through surveys, and secondary data using the documentation analysis method), data processing (descriptive statistics, structural analysis, Kolmogorov-Smirnov test, Mann-Whitney U test, Kruscal-Wallis test, correlation analysis, factor analysis and hierarchical multiple regression models), and tabular and graphical methods are used to create an empirical part of the research and work presentation of the results obtained.

The research results showed the correlation between the studied variables and the influence of Human resources competency management on the business success of small and medium enterprises viewed from all four perspectives.

The results of the empirical research fully confirmed the following: (1) the Human resources competency management positively influences the business performance of small and medium enterprises and (2) determining the required human resources competencies positively influences the business performance of small and medium enterprises. The following was also partially confirmed: (1) determining current competencies and determining the competency gap between the required and current human resources competencies positively influences the business performance of small and medium enterprises, (2) taking action to ensure and develop the necessary human resources competencies positively influences the business performance of small and medium enterprises, (3) Human resources competency management positively influences the business performance from the financial perspective of small and medium enterprises, (4) Human resources competency management positively influences business performance from the customer perspective of small and medium enterprises, (5) Human resources competency management positively influences business performance from the internal business processes perspective of

small and medium enterprises and (6) Human resources competency management positively influences business performance from the learning and growth perspective of small and medium enterprises.

Given that very little research in this area is available in literature, and that similar research has not been conducted so far, especially in Bosnia and Herzegovina, the contributions of this paper are reflected in a number of achievements that have made a significant departure from other research on issues of Human resources competency management in small and medium enterprises and the impact on business performance of enterprises observed through four perspectives of a balanced scorecard. Most of the research was related to the research of individual competency management activities, most of them by identifying key competencies and their impact on some of the business performance. Also, research was mainly conducted in large companies. By researching, formulating and presenting the results of research on the impact of Human resources competency management on the business performance of small and medium enterprises, a number of scientific contributions have been made.

The subject of research has been set in a new and original way linking the Human resources competency management of small and medium enterprises and business performance of small and medium enterprises through the development of a theoretical model of the relationship between defined variables. An original theoretical and empirical model has been formed, the purpose of which is to determine the impact, direction and intensity of the links between the Human resources competency management and business performance of small and medium enterprises. A model for measuring the business performance of small and medium enterprises has been developed using a balanced scorecard model that includes four perspectives (financial perspective, customer perspective, internal business processes perspective and learning and growth perspective).

Empirical verification of the defined model expanded and deepened the insight into the paradigm of modern business, and Human resources competency management, their development and affirmation in the field of management and business success.

The dissertation includes a comparison with similar research and the recommendations for future research. A limitation of the research is reflected in the extent of the sample and the method of creating the research sample. Some qualitative data were used in the research and they enable subjectivity because a subjective evaluation of state as well as of impacts has been conducted.

***Keywords**: business success, business performance, balanced scorecard, competencies, competency management, competency gap, human resources, human resources management, small and medium enterprises*

About the Author

Iva Klepić was born on August 16t^{h} 1994 in Mostar, Bosnia and Herzegovina. She currently lives in Mostar, where she has finished elementary and secondary (grammar school) education. She completed four years of Undergraduate study programme in Business Economy, within the Management field of study and attained a Bachelor of Economics degree in 2017 with the final thesis *"Family business and the oldest family businesses"* at the Faculty of Economics, University of Mostar. In 2018, she completed the Master programme - one year graduate university study programme in the field of Management and gained the title of Master of Economics at the same Faculty with the thesis *"Recruitment and selection of human resources in international companies"* and an average grade of 5,0. In 2018, she enrolled in International Joint Cross-Border PhD Programme in International Economic Relations and Management, held in English language, organized and administered by the Consortium of the following universities: Juraj Dobrila University of Pula, Croatia; University of Economics in Bratislava, Faculty of International Relations, Slovak Republic; University of Sopron, Doctoral School István Széchenyi, Sopron, Hungary; University North, Varazdin, Croatia; University of Mostar; University of Life Sciences Prague, Faculty of Economics and Management and University of Applied Sciences Burgenland (UAS), Eisenstadt, Austria. During her studies she has worked in Raiffeisen Bank in the Administration department and Intesa Saopaolo Bank as an Assistant Relationship Manager in Corporate Banking Products Directorate. In 2018, she started working at the Rectorate of the University of Mostar as an Expert Associate in the Public procurement department and in the same year as an External Teaching Associate on the Faculty of Science and Education at the University of Mostar in the field of Economics and Management. In 2020 she was promoted to Head of Human Resources at the Rectorate of the University of Mostar, where she is still employed.

Throughout her college days she gained management experience in her university's Student Council, Student Academic Journal and has taken part in multiple projects, internships, conferences and programs. She has won *Dean's Award for best students* for the academic year 2013/14, *Rector's award for the promotion of the University of Mostar (for sport)* in the academic year 2014/15, *Rector's award for best students* in the academic year 2015/16 and *Award of the Federal Ministry*

of Education and Science for the best students in the Federation B&H in the academic year 2015/16. Being a karate practicioner since the age of four, she has also gained recognition through her sport activities in karate, and is a winner of numerous domestic and international competitions. She has been awarded as the *Best Athlete of the City of Mostar* several times, and has been a member of the national team of Bosnia and Herzegovina for more than 10 years. She is the winner of two European medals on European Karate Championship 2010 in Izmir, Turkey in cadet fights - 3rd place and European Karate Championship for Regions for cadets and juniors 2011 in Ankara, Turkey - 3rd place; then on Mediterranean Karate Championship 2014 in Bar, Montenegro - senior fights - 3rd place and Mediterranean Karate Championship 2011 in Bari, Italy - junior fights - 3rd place and one medal on Balkan Karate Championship 2013 in Kragujevac, Serbia - fights under 21 years - 2nd place. Iva has been 11 times individual National Champion of B&H in karate fights, 3 times vice-champion of B&H and once bronze medalist, and besides that 2 times team champion of B&H as a competiror of University karate club "Neretva" Mostar. She has published 3 chapters in the book - ***"MANAGEMENT"*** – University textbook of University of Mostar; University of Split; Faculty of economics of University of Sarajevo: Klepić, Z., Madžar, D. and Klepić, I. (2020). **Poslovna okolina/Business environment**. In: Klepić, Z., Alfirević, N. and Rahimić, Z. ed. (2020). MANAGEMENT. Mostar, B&H; Split, Croatia; Sarajevo, B&H: University of Mostar; University of Split – Faculty of economics; University of Sarajevo– Faculty of economics, pages (41-89); Klepić, Z., Mabić, M., Klepić, I. and Šunjić, L. (2020). **Poslovno odlučivanje/Business decision making**. In: Klepić, Z., Alfirević, N. and Rahimić, Z. ed. (2020). MANAGEMENT. Mostar, B&H; Split, Croatia; Sarajevo, B&H: University of Mostar; University of Split – Faculty of economics; University of Sarajevo– Faculty of economics, pages (155-183); Klepić, Z., Malić Bandur, K. and Klepić, I. (2020). **Kontroliranje/Controlling**. In: Klepić, Z., Alfirević, N. and Rahimić, Z. ed. (2020). MANAGEMENT. Mostar, B&H; Split, Croatia; Sarajevo, B&H: University of Mostar; University of Split – Faculty of economics; University of Sarajevo– Faculty of economics, pages (315-353). She has also published 6 original scientific papers: Klepić, Z., Šunjić, L., & Klepić, I. (2019). **The impact of state and activities in organizations on barriers, representation and success of women as top managers**. *South Eastern European Journal of Communication*. 1 (1), 163-175, ISSN: 2712-0430, ISSN online: 2712-0457; Klepić, I. (2019). **Correlation of Recruitment and Selection of Human Resources and the Performance of Small and medium enterprises**. *Naše gospodarstvo/Our Economy*, 65(4), 14–26. DOI: 10.2478/ngoe-2019-0016;

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Information on supervisor

Goran Kozina was born on July 25 in 1964 in Vareš, in Bosnia and Herzegovina. Having graduated from the Faculty of Geotechnical Engineering in Varaždin on May in 1997, the postgraduate scientific study of Theories and politics of marketing at Faculty of Economics in Zagreb followed, where he obtainted his masterdegree on December 22 in 1998 with his scientific paper titled *"Business decisions in marketing theory and practice".* His doctoral dissertation titled *"The project of knowledge management of higher education institutions in the Republic of Croatia"* was the final dissertation at postgraduate doctoral study of Management at the Faculty of Economics in Osijek, on December 12 in 2011. From 2007 to 2012, he was the director of the Polytechnic of Varaždin, later the dean in charge of development of the Polytechnic, following the position as head of the department of biomedical science; and since 2014, he has been the rector of finance and general affairs of the University of North in Varaždin. In 2010, he was recognized for his contribution to the development of the Polytechnic in Varaždin and the introduction of new study programs. In 2012, he was titled the Associate Professor in the interdisciplinary field of science. Being the author and co-author, he has published two books and one textbook. He has participated in and presented more than 15 papers at domestic and international conferences. He has published as an author and co-author more than 40 scientific and scientific papers. He is a member of the editorial board of scientific and professional journals (Technical Journal, Journal of Health Sciences, Journal of Economic and Social Development). He has won many awards and has been recognized multiple times, including the awards such as "Chrome" 2003 and "Poslovne.hr" 2010 for the most successful entrepreneurs. Moreover, he is a Croatian defender and bearer of the Homeland War memorial, has won a series of karate medals and is a holder of the master belt. He is one of the initiators of Polytechnic university development and the founder of the University of North in Varaždin by order of mayor Čehok and the City Council of Varaždin, where with his associated he worked as a city councilor and director of the Polytehnic on the strategy and development from the Polytehnic to the University. He also founded a study in the field of biomedical sciences, which is one of the best and most prestigious in Croatia. Alongside all of this, he is tirelessly discussing with the Prime Minister and individual ministers and working towords the development of the city of Varadin as a city of students, science and education.

List of Abbreviations

BAM / KM - The Bosnia and Herzegovina convertible mark

BARS - A behaviorally anchored rating scale

BC – before Christ

BEI - behavioral event interview

B&H, BiH – Bosnia and Herzegovina

BSC - Balanced Scorecard

CCPS - Center for Chemical Process Safety

CLV- Customer lifetime value

CV - Curriculum Vitae

CMM - competency management model

DMCs - distinctive management competencies

EBITDA - Earning before interest, taxes, depreciation, and amortization

EBRD – The European Bank for Reconstruction and Development

EC - The European Commission

ESN - enterprise social networking

ETF – The European Training Foundation

EU – European Union

EUR - The euro

EVA - economic value added

FB&H - Federation of Bosnia and Herzegovina

GDP - Gross domestic product

GEM - The Global Entrepreneurship Monitor

HC - Human capital

HPHRPs - Hgh-performance human resource practices

HR – Human resources

HR-PCS - HR Professional Competency Survey

HRCI - Human Resources Certification Institute

HRIS - Human resources information system

HRM – Human resources management

ISD - Instructional System Design

JCAM - The Job Competence Assessment Method

KIPIO - knowledge-intensive, project-intensive organization

KSAs - knowledge, skills, and abilities

KSAOs - knowledge, skills, abilities and other characteristics

IHRDC - International Human Resources Development Corporation

ISD - Instructional System Design

KMO - Kaiser-Meyer-Olkin

KW - Kruscal-Wallis

KS - Kolmogorov - Smirnov

MBO - Management by Objectives

NFBS - Nonfinancial business sector

MVA - market value added

MW - Man-Whitney

OI - open innovation

OE - Organizational effectiveness

OECD - Organisation for Economic Co-operation and Development

PMI - Project Management Institute

PMMS - Performance measurement and management system

ROCE - Return on capital employed

ROE - Return on equity

ROI - Return on investment

RS - Republika Srpska

R&D - Research and development

SBA - The Small Business Act for Europe

SDL - Self-directed training

SDGs - Sustainable Development Goals

SEM - The model of structural equations

SHRM - Society for Human Resource Management

SME - Small and medium sized enterprise

T&D - Training and development

U.S. - the United States

WA - work analysis

WERS - Workplace Employment Relations Study

Content

1. INTRODUCTION

1.1.Research problem

Small and medium enterprises represent more than 99% of the total number of enterprises and employ almost 70% of the total number of employees. Small and medium enterprises are the main drivers of innovation, employment and social and local integration in Europe. In many of its documents, the European Union has put small and medium enterprises at the top of their priorities, which emphasizes the need to help this sector.

Small and medium enterprises in Bosnia and Herzegovina are even more important given the fact that the economy in the war and after has significantly collapsed. It is expected that small and medium enterprises could and should be the backbone of Bosnia and Herzegovina's development which could enable faster growth and development.

The globalization and the market liberalization, which resulted from the changes that took place at the end of the last century, have led to ever-increasing competition that poses a threat to businesses, especially small and medium enterprises, for their survival. However, this has led to new opportunities including the chance to place their products on markets around the world, thus securing their growth and development.

The economic globalization and increased competitive pressures for most firms demand innovative, efficient, and effective management strategies to comply with such dynamic, increasingly technological, and highly uncertain environments. Today the success of individuals and organisations is measured by their adaptability to change. Organizations today are facing heightened challenges in their efforts to perform effectively. These include increasing levels of competition, the internationalization of business, accelerating pace of change, technological advances, meeting the needs of an increasingly diverse workforce, more demanding customers and consumers, greater concerns about corporate governance and board transparency. The changing and globalizing environment in business has resulted in increasing competition in markets and sectors.

Human resources are the most valuable resource of the organization and they use and manage other resources in the organization (financial, material and information). The success of the organization

is based on the quality of human resources, their competencies, motivation, loyalty, and their business results. Their contribution to the organization as a resource is highly unpredictable, unique and has potential for further development. Eisenberg, Goodall and Trethwey (2009, p. 292) stated that researches show that companies which treat people as their most important asset are also the most profitable. Senyucel (2009, p. 13) concluded that it is absolutely vital that organisations see their employees as valuable assets and not just as a file or a number in a spreadsheet. Employees now expect their employers to invest in their training and development and in return the organisations expect employees to be flexible, creative and productive.

Numerous authors point out that human resources are a source of competitive advantage in both large enterprises and small and medium enterprises (SMEs). Due to the uniqueness and specificity of SMEs it can be said that HC as a source of competitive advantage is even more important for SMEs despite the scarce resources, both financial and other. It is one way for them to stand out from the competition, because human resources cannot be copied.

As a result, the policies and practices of human resource management, especially the ones associated with innovation and organizational performance, can make a difference and are determinant to the growing of the role of human resources management in organization management (Machado & Davim, 2020, p. 23-24).

Numerous authors believe that individual competencies are the central component of human capital and that they bring organizational performance in interaction with organizational, technological and behavioural processes. The human resource function needs to determine the specific competences needed to successfully perform all categories of work, especially the key tasks in the organization.

Competency management refers to the effective identification, development and alignment of organizational and individual competencies in order to achieve successfully the business and strategic goals of a business organization, as well as the individual goals of employees.

Richard Boyatzis, and others used the competency concept in the context of performance improvement (Griffiths & Washington, 2015, p. 2). The authors Shet, Patil and Chandawarkar (2019) signify the importance of developing competency-based performance concept in

organizations. They explored the relationship between competency-based performance management and organizational effectiveness in their paper.

It has been found that human resource practices, which include a number of activities of competency management can positively generate greater company performance when they are properly applied. (Wright et al., 2005, p. 435; Sheehan, 2014, p. 546).

The practice of identifying, defining, and applying competencies helps employees to understand the areas in which their efforts will improve their performance, and this in turn helps the entire organization (Dubois & Rothwell, 2004, p. 34-39). Isaković (2010) explored the influence of manager's competencies on the growth of manufacturing SMEs in the Federation of Bosnia and Herzegovina.

After reviewing and analyzing the available literature and previous research, it can be concluded that in Bosnia and Herzegovina, as well as in the region, the process of competency management is not sufficiently researched, nor is the impact on company performance observed through Balance Scorecard (BSC) method, which represents a combination of quantitative and qualitative business results. Most research only identifies general and key competencies that are important to employees, but not competency management. Also, some of the phases or activities were investigated individually, but not the whole process and its connection with business performance.

Based on previous research and analyzed literature, several research questions are posed: (1) Whether and to what extent Human resources competency management influences the business success of small and medium enterprises; (2) Do the defined groups of activities (phases) of Human resources competency management influence the business performance of small and medium enterprises; (3) Does the Human resources competency management influence the business performance of small and medium enterprises from four perspectives of BSC (financial, customer, internal business processes and the learning and growth perspective); (4) What is the direction and intensity of the connection of each of the groups of activities and business performance of small and medium enterprises; (5) Is there a difference in the impact of defined groups of activities of Human resources competency management on the business performance of small and medium enterprises; (6) Is there a difference in the impact of competency management on the performance of small and medium enterprises with regard to the size of the enterprise; (7) To what extent is the Human resources competency management in small and medium enterprises developed; (8) What

is the business performance of small and medium enterprises like, observed from different perspectives.

Taking into account all the aforementioned needs and research opportunities, this doctoral dissertation explores the Human resources competency management as a segment of human resources management and their impact on business performance observed through four perspectives of balanced scorecard business performance. The emphasis is on the competency management as well as business performance in small and medium enterprises in the Federation of Bosnia and Herzegovina.

Accordingly, the subject of this doctoral dissertation and empirical research is to determine the importance of Human resources competency management for SMEs and their business performance.

1.2.Objectives of the research

From the defined problem and subject of the dissertation arise the objectives that are set for this dissertation and research. The fundamental objective of this research is the following:

To reach theoretical knowledge and empirically investigate whether and to what extent Human resources competency management influences the business success of small and medium enterprises.

In addition to the fundamental objective, other scientific objectives have been set for this research, as follows:

1. To what extent is the Human resources competency management in small and medium enterprises developed?
2. What is the business success of small and medium enterprises like, observed from different perspectives?
3. Do the defined groups of activities (phases) of Human resources competency management influence the business performance of small and medium enterprises?
4. What is the direction and intensity of the connection of each of the groups of activities and business performance of small and medium enterprises?
5. Does the Human resources competency management influence the business performance of small and medium enterprises from the financial perspective?

6. Does the Human resources competency management influence the business performance of small and medium enterprises from the customer perspective?
7. Does the Human resources competency management influence the business performance of small and medium enterprises from the internal business processes perspective?
8. Does the Human resources competency management influence the business performance of small and medium enterprises from the learning and growth perspective?
9. Is there a difference in the impact of defined groups of activities of Human resources competency management on the business performance of small and medium enterprises?
10. Is there a difference in the impact of Human resources competency management on the performance of small and medium enterprises with regard to the size of the enterprise?

For this research and dissertation, practical (applied) research objectives have been set, as follows:

- Point out to managers the Human resources competency management as an important tool in human resources management and business operations,
- Present managers a number of activities and opportunities of Human resources competency management and especially how to bridge the gap between existing and required human resource competencies needed to successfully perform tasks and achieve goals as well as competencies that will be needed in the future,
- Point out to managers the impact that competency management has on a business performance of enterprise from different perspectives,
- Suggest to managers, based on the research results, how to improve and enhance activities of Human resources competency management in enterprises that can help them achieve better business performance and competitive position of enterprise,
- Provide researchers and academic staff with additional background and material for further research, study and improvement of this important matter for business and management of human resources.

1.3.Research hypotheses

Taking into account the defined problem, the subject of research and the set objectives, an original research model was created for this dissertation. The model was developed based on the analysis of existing literature and theoretical knowledge, and previous empirical researches conducted on

the connection between Human resources competency management and the business success of small and medium enterprises.

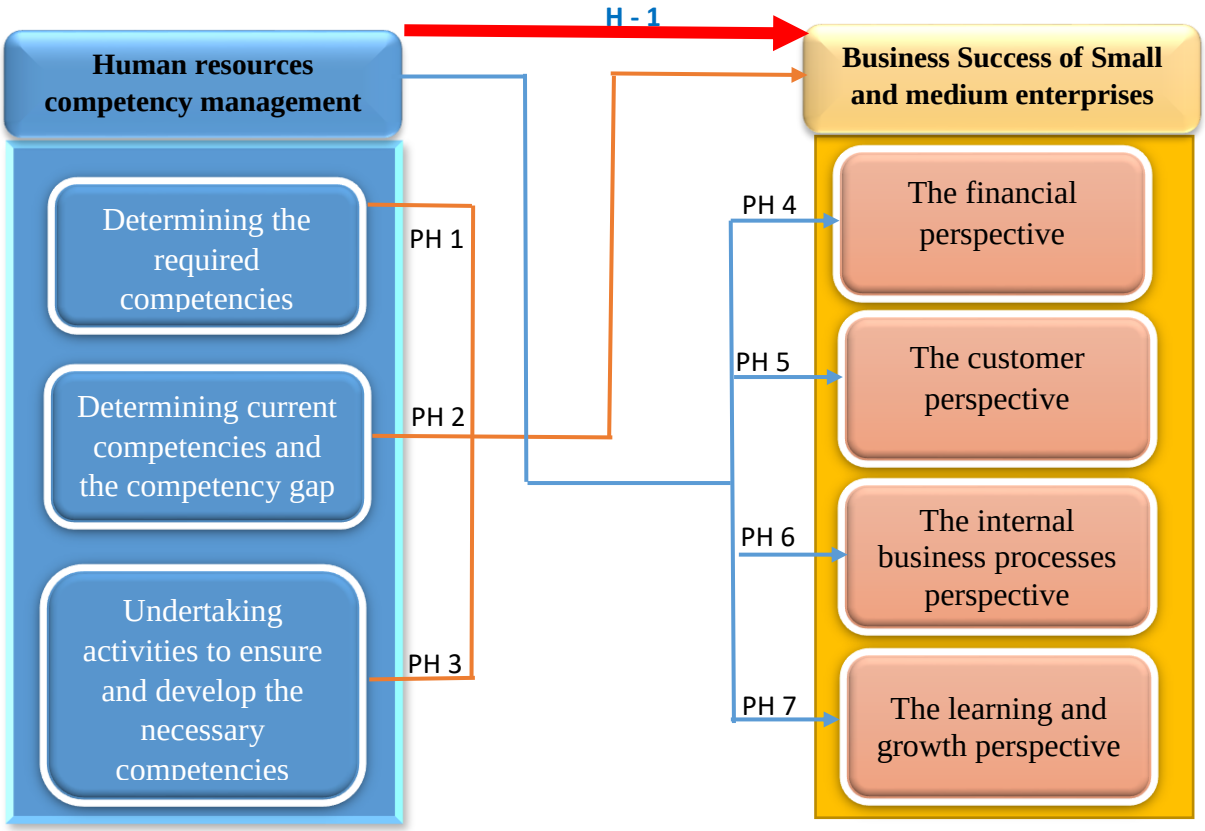


Figure 1 A Research model

Source: Author's work

In the research model, Human resources competency management consists of three groups of activities and the business success of small and medium enterprises consists of four dimensions that represent four perspectives for observing business performance.

For the purposes of this dissertation and the research of the connection between the Human resources competency management and business performance of small and medium enterprises, one main hypothesis and seven auxiliary hypotheses were defined according to the research model.

The authors who presented their competency management models are not so numerous. Most of the research is based on discovering and identification of core competencies, and a smaller part has dealt with management models of competencies. These models vary from author to author as well as the number of stages in the process. Also, in the previous research, the connection with business

performance has been analyzed in part because performance has not been analyzed and researched as fully as it can be using the balanced scorecard (BSC) model and research in SMEs is very rare.

Numerous authors have proven that human resources management (which includes numerous competency management activities) generally has a positive impact on the business performance of SMEs (both financially and through competitiveness, better relationships with employees, customers, etc.). Scientists have suggested that adopting specific human resources management (HRM) practices can improve small firm performance and sustain competitiveness (e.g. Michie & Sheehan, 2008; Patel & Cardon, 2010; Aït Razouk, 2011; Williamson et al., 2002; Sheehan, 2014, p. 545-552).

Boselie, Dietz and Boon (2005) and Jardon and Gonzalez Loureiro (2013, p. 255) suggested that the impact of human resources management (which includes also numerous activities of Human resources competency management) on internal performance indicators is what generates better financial performance. Inadequate human resources management not only reduces the productivity and profitability of the company, but it may create a negative climate that will lead even to the failure of SMEs.

SMEs must establish good governance and human resources management that would ensure a motivated workforce, trained and able to produce efficiently to have success because their size may not warrant bringing on professionals exclusively dedicated to human resources management activities (Hornsby & Kuratko, 2003). Recruitment, selection, allocation, and retention of human talent is critical to the success of SMEs (Zula & Chermack, 2008; Jardon & Gonzalez Loureiro, 2013, p. 260).

Numerous authors point out that there is considerable evidence that the adoption of certain HRM practices can have a positive impact on the organizational performance of SMEs (Huselid, 1995; Ichniowski & Shaw, 1995; Wood, 1999; Appelbaum et al., 2000; Guest et al., 2003; Edwards et al., 2010; Messersmith & Guthrie, 2010; Aït Razouk, 2011; Patel & Conklin, 2012; Allen et al., 2013; Sheehan, 2014, Newman & Sheikh, 2014, p. 414-417). When it comes to SMEs, the literature generally confirms a strong relationship between the adoptions of these practices, either in isolation or bundled together with other practices, and SME performance (Wagar, 1998; Chandler and McEvoy, 2000; Way, 2002; Hayton, 2003; Nguyen & Bryant, 2004; Sels et al., 2006; Zheng et al., 2006; Newman & Sheikh, 2014, p. 414-417). It has been found that human resource practices, which include a number of activities of competency management, when properly applied, can

positively generate greater company performance (Wright et al., 2005, p. 435; Sheehan, 2014, p. 546).

It is suggested that that the implementation of best HR practices might actually be easier in smaller enterprises due to their flat hierarchical structures, greater flexibility and more direct impact of employees on organizational performance (Bacon et al., 1996; Newman & Sheikh, 2014, p. 414-417).

Otoo (2020) in his paper examined the mediating role of employee competencies in the association between human resources management (HRM) practices and organizational effectiveness of the pharmaceutical industry in Ghana. Knapik, Fernandes and Sales (2020) in their work analyzed such issues in the implantation and subsequent revisions of a competency management model (CMM) in a multinational automobile firm. Zupančič (2020) in his article highlighted the importance of investments into competencies. The approach to his study is linked to the practical deficiencies of ineffective competency management in Slovenia and its consequences.

Loufrani-Fedida and Aldebert's (2020) paper aims to improve the understanding of competence management in innovative small and medium enterprises (SMEs) through a multilevel approach. The authors Shet, Patiland and Chandawarkar (2019) in their paper were exploring the relationship between competency-based performance management and organizational effectiveness (OE). It signifies the importance of developing competency-based performance concept in organizations. Al Mamun, Fazal and Muniady (2019) in their study examined the effect of entrepreneurial skills, market orientation, sales orientations and networking on entrepreneurial competency and performance of micro-enterprises in Kelantan, Malaysia. Authors Barazandeh, Parvizian, Alizadeh and Khosravi (2015) in their study analyzed the relationship between entrepreneurial competencies along with social norms and entrepreneurs' business performance. Arrfelt, Wiseman, McNamara and Hult's (2015) research on the role of the corporate office in firm performance has focused on establishing how much performance variance can be attributed to a "corporate effect," with little attention devoted to understanding how this influence occurs.

Rambe and Makhalemele (2015) in their study examined the relationship between managerial competencies of owners/managers and the performance of emerging internet firms in South Africa. Elizondo Sandoval et al. (2018) in their paper concluded that the existence of "competitive gap" is a barrier that impacts the survival and growth of SMEs. In their research they proposed a model of managerial competencies and its implementation process. This model is used to increase the

development of specific managerial competencies in SMEs. The impact reduces the mortality rate and increase business as a result. Sardi, Garengo and Bititci (2019) in their study aimed to develop knowledge on the role of enterprise social networking (ESN) in measurement and management of competences to favor the development of a holistic performance measurement and management system (PMMS). Authors Bilal, Naveed and Anwar (2017) conducted a comparative analysis of the short- and long-term financial strategies to augment SMEs' performance in emerging markets. Using a resource-based theoretic perspective; the analysis has investigated the mediating role of distinctive management competencies (DMCs) between efficient financial strategies and SMEs' business growth.

The practice of identifying, defining, and applying competencies helps employees to understand the areas in which their efforts will improve their performance, and this in turn helps the entire organization (Dubois & Rothwell, 2004, p. 34-39). The use of competencies is appealing because it enables HR systems to concentrate on the factors that contribute directly to the organization'ssuccess (Raising the Bar, 1996). Cooperet al. (1998) noted some of the positive outcomes produced by valid and reliable competency-based HR management models. These include linking individual competencies directly to the organization's strategies and goals. Pritchard (1997) saw competencies as a way to integrate HR strategy with business strategy, thus adding performance value to the organization.

Therefore, based on the literature analysis, the main hypothesis has been developed:

H – 1. The Human resources competency management positively influences the business performance of small and medium enterprises.

Central contribution of key early commentator on competencies Boyatzis (1982) was the need to achieve performance through the identification of the underlying personality traits, skills and abilities within a job (Stokes & Oiry, 2012, p. 6). Dubois & Rothwell (2004). p. 11, 22-23) investigated how competency-based approach stimulates productivity and uses human talent to the best competitive advantage. They concluded that exemplary performers are significantly more productive than their fully successful counterparts, and if the organization finds or develops exemplary performers, it could be more productive with the same size workforce. They also came to the knowledge that if organization can pinpoint those differences in operational terms, it may be able to select more people who function at the exemplar's level or help others to develop that

capability, and that would enable an organization to become dramatically more productive with the same staff. Additionally, they concluded that the information gained from identifying the competencies (traits or characteristics) used by exemplary performers helps all workers to improve their performance, and that even modest improvement can significantly increase overall productivity. Rothwell (2012, p. 46) investigated the competency models and the most productive performers - the exemplars - and what makes that person so productive. Rothwell come to the knowledge that if organizations could identify the differences between their merely successful and exemplary performers, then they might be able to achieve quantum leaps in productivity improvement. They might be able to save money by preserving productivity with fewer people.

The authors Evianisa, Sukmawati and Slamet (2021) in their study aimed to identify the competency of human resources and management best practices related to advancing employee performance in a palm oil mill company in Seluma Regency, Bengkulu. The results showed that competency affects employee performance in the palm oil mill company, that competency has an insignificant result on management best practices, and that management best practices affect employee performance. The purpose of the paper of the authors Martin, Elg, Gremyr and Wallo (2021) was to introduce a competence-based terminology for describing general competencies of quality management work in organisations and to create a competence framework in order to understand what is needed to be a quality management practitioner. The competencies and role responsibilities are discussed in relation to the notion of emergent quality management and the emerging need of more integrative and business excellence-oriented quality management. Podmetina, Soderquist, Petraite and Teplov (2018) in their paper focused on competency sets for open innovation (OI) and provided recommendations for OI competency development in companies, linked to the core OI processes. They developed a generic OI competency model applicable across industries, combined with organisational implications for sustaining OI management capabilities. The research clusters competencies based on the empirical analysis, which addresses the various challenges of OI, leading to recommendations for competency management in an OI context. The authors concluded that organizations are now more than ever impacted by organisational capabilities, competences and hidden, “soft” routines, bringing innovation and creativity to the core of organization. The research is exploratory and aims at theory-based practical indication combining deductive identification of competency clusters and inductive model development.

Namusonge (2003) in his doctoral dissertation tried to assess the relative importance of management competencies and competitive strategies among Kenyan exporting small to medium sized enterprises, and to determine if relationships existed between the managers' ratings of the importance of competencies and the firms' competitive strategies. The results indicate that while some competencies are equally important (or not equally important) among the small and medium sized enterprises, other competencies are much more important in one sector type or the other. The results further showed the importance of a firm's competencies in achieving certain competitive strategies. The study of author Sanghi (2016) was focused on how to develop and map competencies, and design competency models. It was designed to help the management and executives in an organization understand the complexities and dynamics of competency models and related decision making. It helps managers to design and implement the appropriate competency framework, and management students to understand the application and know-how of competency mapping, which is primarily to develop the capacity to act, implement, and bring performance improvement in the workplace.

The first phase of the competency management process, i.e., determining the required human resource competencies, was researched and mentioned by the following authors.

Elizondo Sandoval et al. (2018, p. 92) in their scientific paper graphically presented intervention methodology for the implementation of the profile of managerial competences for SMEs, and through the phases presented the measurement of optimal performance, then defining the desired performance and determining the gap. The first stage in the competency management process for Patalas-Maliszewska and Hochmeister (2011, p. 74) in their study is competence identification to define the required competence. In their scientific paper authors Medina and Medina (2015, p. 286) created competency management model that consists of three stages: competence identification, competence assessment and competence usage. First stage in their model is competence identification. Dubois and Rothwell (2004, p. 24) in their book through competency model explored and explained process of identification of competencies. Berio and Harzallah (2005, p. 21) in their study pointed out that competence management can be organized according to four kinds of process, and first of them is competence identification, i.e. when and how to identify and to define competencies required (in the present or in the future) to carry out tasks, missions, strategies. Horton, Hondeghem and Farnham (2002, p. 27) presented the process of competency development, and explained assessment of competencies needs.

Therefore, based on the literature analysis, first auxiliary hypothesis has been developed:

PH - 1. ***Determining the required human resource competencies positively influences the business performance of small and medium enterprises.***

Saks and Haccoun (2016, p. 131-132) investigated assessment processes and came to the knowledge that self-assessment has both benefits and limitations. Employees might be more motivated to be treained if they have some input in deciding on their needs. However, expressions of needs include feeling or desired and may have no relation to performance. They presented several studies that have found weak relationships between employees' self-assessments of performance and managerial assessments.

The article of authors Karwehl and Kauffeld (2021) provided an overview of established and new ways in competence management, with a focus on the HR Analytics approach. Authors stated that this process can be extended by a data-driven approach in order to support HR departments and achieve an improved rate of correct assessments for future HR developmental measures. The most prominent approach nowadays according to them is a company-specific competence model that is derived from the organisational strategy. Employees are developed with regard to the competence strategy—even though it might turn out as too rigid to react flexibly to changing environmental conditions in a steadily faster global competition.

Goldman and Scott (2016) investigated in their study the competency models used by organizations to assess the strategic thinking ability of their leaders, managers, and other employees. A basic interpretive study was conducted with human resource executives across a broad range of large organizations. Models in use either identify strategic thinking as a stand-alone competency, or embed it under three different areas. The findings provide practitioners with format and content examples to enhance the assessment of strategic thinking in existing competency models, as well as process considerations for model development/revision. The findings also identifed how competency model components are used across the spectrum of talent management activities. The study fills a gap in the literature by providing empirically based identification of the strategic thinking behaviors organizations consider essential competencies and how they are assessed. In addition, the study links strategic thinking to the competency development literature, illustrating details of competency model development for strategic thinking, and identifying opportunities for related theory development in both domains.

Madu (2009) in his doctoral dissertation examined from managers, executives, directors, and HR professionals their expectations regarding the HR professional roles and competencies. The study revealed the presence of gaps between organizational expectations and the level of individual proficiency taken from actual competency level. The purpose of the study was to achieve an alignment between HR strategy and organizational mission in developing a strategic business partnership between human resource professionals and business executives, and to position HR function as an effective and identifiable measure of organizational goals. This study developed effective methodology and viewed the statistical findings related to constituency group perceptions of importance of HR competencies.

Aguilar (2016) in her study provided a snapshot of current Human Resources (HR) and Management curricula of four-year public universities in Texas in 2016 and evaluated their alignment with the competencies of the SHRM Competency Model®. This comprehensive analysis revealed that there is alignment between course curricula of public universities in Texas and competency expectations of graduates wishing to pursue a career in Human Resources. Sternberger (2002) in his paper, utilizing a competency framework from the Society for Human resources management (SHRM), and the human resources body of knowledge from the Human Resources Certification Institute (HRCI), developed the HR Professional Competency Survey (HR-PCS) to gather quantitative data regarding perceptions of importance among a sample population of senior-level human resources management professionals. Findings from perceived importance ratings and proficiency levels were compared to detect gaps in specific competency areas required for effective organizational leadership and functional excellence. Analysis of the data confirmed the presence of gaps within 19 specific competency data sets, although 76 percent of respondents rated their personal proficiency above average. Additional findings from this study revealed ostensible inconsistencies between levels of practitioner competence and organizational or professional expectations of performance. All respondents exhibited competency gaps. The research of Pluzdrak (2007) was focused on leadership development and the relationship of the results of leadership competencies to the results of the business. The objectives of the study looked at leadership competencies and business results in 2 distinct time periods to determine if improvement in leadership competencies was related to significantly better business results, and to be able to identify if a specific group of competencies has greater impact on the business. The study's conclusion showed that changes in behavior in the areas of Customer Focus, Interpersonal Savvy

and Drive for Results were positively correlated in the business areas of Profits, Turnover and Actual Net. Additionally, the study showed that ABC's Leadership program had a significant impact in the area of self learning and management. The initial results of the research showed 6 leadership competency areas that were positively related to the business. Gaeta, Marzano, Miranda and Sandkuhl (2017) in their research investigated applying competence management, skill gap analysis and a study of the existing organizational structures to point out the functional unit with the most critical situation in terms of allocated employees in order to suggest the people to involve in learning programmes according to the complex laws, internal regulation for the staff management and trade-union influences. The proposed approach identifies the real gaps that create inefficiencies and suggests the employees to engage in learning activities by focusing exactly on what the organizations need with respect to what the employees have.

Elizondo Sandoval et al. (2018, p. 92) in their scientific study showed graphicaly intervention methodology for the implementation of the profile of managerial competences for SMEs, and through the phases presented and presented the measurement of the optimal performance, as well as the definition of the desired and the determination of the gap. The second phase in the process of competency management in scientific research of Patalas-Maliszewska and Hochmeister (2011, p. 73-74) is the competence assessment to determine if a competence has been acquired, and third one is the competence acquisition to plan how required competencie can be acquired. Medina and Medina (2015, p. 286) presented competency management model that consists of competence identification, competence assessment and competence usage, in their study "The competence loop". Dubois and Rothwell (2004, p. 88) presented a few competency assessment methods such as self-assessment, superior or "boss" assessment, peer and work expert assessment, customer or client assessment, certification or licensing assessment, and assessment centers. Berio and Harzallah (2005, p. 21) as a second stage of competency management process in their scientific study presented competence assessment, i.e. (i) when and how to identify and to define competence acquired by individuals and/or (ii) when and how an enterprise can decide that an employee (or an individual) has acquired specific competencies; how the relationships between individuals and required competencies are represented. Horton, Hondeghem and Farnham (2002, p. 27) explained assessment of the current competencies possessed by members of personnel.

Therefore, based on the literature analysis, a second auxiliary hypothesis has been developed:

PH - 2. ***Determining current competencies and determining the competency gap between the required and current human resources competencies positively influences the business performance of small and medium enterprises.***

The link between training and an organization's performance is strongly supported by research. American Management Association conducted a survey that found that companies that expanded their programs showed gains in productivity and larger operating profits. On the other side, in another study, a 10 percent increase in training produced a 3 percent increase in productivity over two years. A review of research on training and organizational effectiveness found that training is positively related to human resource outcomes (e.g. employee attitudes, motivation, behaviors), organizational performance outcomes (e.g. performance and productivity) and financial outcomes (e.g. profit, financial indicators). In addition, research has found that companies that invest more in training have higher revenues, profits and productivity growth than firms that invest less in training (Saks & Haccoun, 2016, p. 9-10)

Klepić, Alfirević and Rahimić (2020, p. 235) have researched and proven that that continuing education and training of employees is the safest way to achieve long-term sustainable competitive advantages, and that the absence or insufficient investment in education and development of employees is the most common cause of loss of market position, especially in industries characterized by rapid technical and technological progress and which operate in an extremely dynamic and complex environment. Truitt (2011, p. 2) in constructing the definition of training came to the realization of its impact on performance, eventually defining training as "the planned intervention that is designed to enhance the determinants of individual job performance". He also concluded that training related to the skills an employee must acquire to improve the probability of achieving the organization's overall business and academic goals and objectives. Saks and Haccoun (2016, p. 8) were exploring training and concluded that it refers to formal and planned efforts to help employees acquire knowledge, skills and abilities to improve performance in their current job. Holton and Baldwin (2000) also came to the cognition that in order to enhance job performance, training skills and behaviors have to be transferred to the workplace, maintained over time, and generalized across contexts**.**

A research by the Conference Board of Canada found that enterprises that spend the most on training and development believe they outperform their competitors on a number of performance

indicators, such as employee satisfaction, customer satisfaction, profitability and productivity, compared with those that spend the least on training and development. A study of companies in South Korea found that those that invest more in workplace learning achieve higher levels of learning outcomes (i.e. employee competence, labour productivity and employee enthusiasm) and financial performance. Otherwise said, investment in workplace training influences organizational performance through learning outcomes (Saks & Haccoun, 2016, p. 9-10)

Numerous authors have researched and come to the realization that training is seen as relevant to fostering a positive relationship between learning satisfaction and the effectiveness of applied learning (Liu, 2002; Wang, 2001). Trend to cut training programs during poor economic times seems shortsighted, if in fact, training does affect job proficiency and relieves workplace conflict. Several authors have also written about the importance of staff development. Both formal and informal training opportunities are thought to provide a forum for the development of talent. When talent is fostered and nurtured, competitive advantages in performance are untainted (Becker & Gerhard, 1996; Bowling, 2007; Davenport, 2006; Peters & Waterman, 1982). Also, training and education have been shown to have a significant positive effect on job involvement, job satisfaction and organizational commitment.

Training is related to the skills an employee must acquire to improve the probability of achieving the organization's overall business and academic goals and objectives. Positive training offered to employees may assist with reduction of anxiety or frustration, which most employees have experienced on more than one occasion during their employment careers (Cheng & Ho, 2001). In addition, the larger the gap between the skills required to perform a task and the actual skills available for performing a task, the greater the lack of job satisfaction and the greater the increase in employee turnover within the organization (Truitt, 2011, p. 2-3).

Salas et al. (2012) while researching training came to the cognition that it is the systematic approach that affects individuals' knowledge, skills and attitudes particular to a specific occupation, and, if it is based on the science of training and learning, it should lead to changes in cognition, behaviour and affect. Susomrith, Coetzer and Ampofo (2019, p. XX), while exploring reviews of T&D literature, have identified the multiple benefits of T&D for individuals, teams, organisations and society. Salas et al. (2012, p. 74) showed that training and development activities allow organizations to adapt, compete, excel, innovate, produce, be safe, improve service, and reach

goals. Cheng and Ho (2001, p. 22) also discussed the importance of training and its impact on job performance. Saks and Haccun (2016, p. 9) pointed out that benefits of training and development have workers, organizations and society and that training and development can facilitate an organization's strategy, increase effectiveness and improve employee recruitment and retention. Organizations can be successful by training employees so they can have the knowledge and skills necessary to help achieve organization goals and objectives. By linking training to an organization's strategy, training becomes a strategic activity that operates in concert with other programs and activities to achieve an organization's strategic business objectives. They found out that there is a calculable benefit to training employees. Trained employees can do more and work better, make fewer errors, require less supervision, have more positive attitudes and have lowers rates of attrition. Trained employees also produce higher-quality products and services. These benefits have a positive effect on an organization's competiveness and performance.

Training has also been found to be more effective than other interventions. For example, a study that compared the impact of HR practices to practices that place greater emphasis on operational initiatives, such as advanced manufacturing technology, found that the HR practices were directly related to the productivity of 308 companies over 22 years, while none of the operational manufacturing practices related to productivity. Both empowerment and extensive training were related to productivity and together they accounted for a 9 percent increase in value added per employee. Training is so important for organizations that it can even make the difference between the success or failure of a business. For example, research has found that a key factor associated with the success of a franchisee is the length of training. The more robust and lengthier the training program for the franchisee is, the more likely the franchisee is to succeed (Saks & Haccoun, 2016, p. 9-10).

Kim and Polyhart (2014) conducted a study of 359 firms in a period of 12 years before (2000-2007) and after (2008-2011) recession. They argue that training develops firm-specific human capital resources that will result in higher productivity. The results of this study demonstrate that training influences firm profit growth through its effect of training on profit growth are due to its direct effect on productivity. The most important practical implication of this study is that firms that use more extensive internal training produce and perform better than competitors and recover more quickly from a recession (Saks & Haccoun, 2016, p. 11). Fink and Kraus (2009, p. 82-83)

concluded that investments in training have direct and indirect effects on total performance. Isaković (2010, p. 123) pointed out that every company and its long-term growth depends solely on quality human resources.

Yarnall (2007, p. 2) concluded that career management is about how careers are managed, and if it is effective, it should enable an organisation to attract and retain high quality staff, as well as add to the skill base of the company to help ensure long-termsurvival and growth. Since the 1990s career management is more often seen as requiring an alignment between both individual and business requirements, as age-grade progression opportunities are no longer realistic for organisations, but maximising individual potential is still viewed as crucial to business success. Isaković (2010, p. 133) pointed out that with the development of a career, the employee acquires emotional security, achieves his own satisfaction, better quality of life, self-esteem, respect from others, which gives him new encouragement of his own development.

The following authors in their scientific papers, studies and books dealt with the third stage of the competency management process. Patalas-Maliszewska and Hochmeister (2011, p 74), as a fourth stage presented "competence usage" to systematically utilise knowledge about competencies for the benefit of an organization. Medina and Medina (2015, p. 286) presented in their study "The competence loop" competence management model that consists of competence identification, competence assessment and competence usage. Dubois and Rothwell (2004, p. 125) through an extensive chapter in their book dealt with competency-based training, compared it with traditional one and explained through different phases the process of training after competency identification and assessment. Given that Berio and Harzallah (2005, p. 22) in their scientific research presented the competency management process through 4 phases, through the third phase they presented "the competence acquisition", i.e. how an enterprise can decide about how to acquire some competencies in a planned way and when; and through the fourth "competence usage", i.e. how to use the information or knowledge about the competencies produced and transformed by identification, assessment and acquisition processes; for instance, how to identify gaps between required and acquired competencies, who should attend required training, how finding key employees (i.e. holding key competencies) and so on. Horton, Hondeghem and Farnham (2002, p. 27) in their book showed assessment of the acquisition of the new competencies (validation, certification).

Therefore, based on the literature analysis, third auxiliary hypothesis has been developed:

PH - 3. ***Taking action to ensure and develop the necessary human resources competencies positively influences the business performance of small and medium enterprises.***

Pace (2016) in his doctoral dissertation used statistical analysis to determine if a significant relationship existed between outsourced human resource core and non-core competencies (predictor variables) and firm performance (criterion variable). Spearman's rho indicated a significant association existed between outsourced payroll and overall financial performance. This finding indicated individuals who identified payroll as a core task also rated their firm's overall financial performance higher. Spearman's rho indicated significance between outsourced information systems and overall financial performance. Four hypotheses were tested that involved the outsourcing of human resource core and non-core competencies and their effect on firm performance. In addition, results of the statistical analyses indicated that a significant association existed between payroll, information systems, overall financial performance, and overall non-financial performance.

The research of Pluzdrak (2007) was focused on leadership development and the relationship of the results of leadership competencies to the results of the business. The objectives of the study looked at leadership competencies and business results in 2 distinct time periods to determine if improvement in leadership competencies was related to significantly better business results, and to be able to identify if a specific group of competencies has greater impact on the business. The study's conclusion showed that changes in behavior in the areas of Customer Focus, Interpersonal Savvy and Drive for Results were positively correlated in the business areas of Profits, Turnover and Actual Net. Additionally, the study showed that ABC's Leadership program had a significant impact in the area of self learning and management. The initial results of the research showed 6 leadership competency areas that were positively related to the business. These leadership competencies were Customer Focus, Interpersonal Savvy, Drive for Results, Decision Quality, Ethics and Values, and Integrity and Trust.

Lai, Saridakis & Johnstone's (2017) article used the matched employee–employer dataset from the Workplace Employment Relations Study of 2011 (WERS2011) in Britain to empirically examine the direct relationship between human resources management (HRM) practices and small and medium-sized enterprise (SME) performance in the United Kingdom, as well as the potential

moderating effect of organisational commitment/job satisfaction on the HRM-performance linkage. The autors found a positive and direct relationship between the use of certain formalised human resource (HR) practices and SME performance, measured by financial performance and labour productivity. More importantly, they found that the positive relationship between HR practices and financial performance varies between SMEs with high job satisfaction and low job satisfaction, and that the relationship is weakened in SMEs with high job satisfaction. The results suggest that certain HR policies and practices may improve small firm performance, especially within firms with low levels of commitment and satisfaction.

Financial perspective was observed through following indicators: income, profit, costs, loss and market share. Financial indicators were observed by many authors since they are most common used. Income was researched by the following authors: Smith (2007, p. 186), Niven (2002. p. 121, 192), Nair (2004, p. 51), Von Bergen & Benco (2004, p. 9), Kaplan & Norton (1996, p. 25-26), Meyer (2003, p. 45) and Schäfer & Teuber (2007, p. 41). Profit/Loss was researched by the following authors: Smith (2007, p. 186); Nair (2004, p. 51); Niven (2002, p. 121, 192); Schäfer & Teuber (2007, p. 41); Kaplan & Norton (1996, p. 25-26). Costs were researched by the following authors: Smith (2007, p. 186); Niven (2002, p. 121, 216); Nair (2004, p. 51); Von Bergen & Benco (2004, p. 9); Biazzo & Garengo (2012, p. 110); Kaplan & Norton (1996, p. 25-26); Meyer (2003, p. 45) and Schäfer & Teuber (2007, p. 41).

Therefore, based on the literature analysis, a fourth auxiliary hypothesis has been developed:

PH - 4. ***Human resources competency management positively influences the business performance from the financial perspective of small and medium enterprises.***

Nair (2004. p. 48-49) stated that if the mission, values, and vision are the heart of an organization, the customers are the bloodstream that carries sustaining value to the organization. How customers are acquired and maintained are the main activities of a company. But the customer perspective measures the underlying goals/objectives that acquire, maintain, and grow customers. The segment-specific drivers of core customer outcomes represent those factors that are critical for customers to switch to or remain loyal to their suppliers. The customer perspective enables business unit managers to articulate the customer and market-based strategy that will deliver superior future financial returns (Kaplan and Norton, 1996, p. 26).

The customer perspective was observed in the research through 4 most frequently mentioned indicators in the literature: market share, retention of existing customers, retrieving new customers and customer satisfaction. The following authors have defined "market share" as an indicator used to measure this perspective: Smith (2007, p. 186); Niven (2002, p. 127, 192); Nair (2004, p. 50); Von Bergen & Benco (2004, p. 8); Biazzo & Garengo (2012, p. 131); Meyer (2003, p. 45); Kaplan & Norton (1996, p 26) and Schäfer & Teuber (2007, p. 42). The second indicator is "the retention of existing customers" according to the following authors: Smith (2007, p. 186); Nair (2004, p. 50); Von Bergen & Benco (2004, p. 8); Niven (2002, p. 127); Kaplan & Norton (1996, p. 26) and Schäfer & Teuber (2007, p. 42). The indicator "retrieving new customers" was researched by: Smith (2007, p. 186); Niven (2002, p. 127); Von Bergen & Benco (2004, p. 8); Nair (2004, p. 48-49); Kaplan & Norton (1996, p. 26) and Schäfer & Teuber (2007, p. 42). "Customer satisfaction" was also observed as an indicator of customer perspective by subsequent authors: Smith (2007, p. 186); Niven (2002, p. 127, 209); Nair (2004, p. 50); Von Bergen & Benco (2004, p. 8); Biazzo & Garengo (2012, p. 110); Meyer (2003, p. 45); Kaplan & Norton (1996, p. 26) and Schäfer & Teuber (2007, p. 42).

Therefore, based on the literature analysis, fifth auxiliary hypothesis has been developed:

PH - 5. ***Human resources competency management positively influences business performance from the customer perspective of small and medium enterprises.***

The paper of authors Lampela, Taipale-Erävala and Heilmann (2017) was focused on the links between SME competence changes and business model innovations in industrial structural changes in the external environment. The findings of a comparative case study of Russian and Finnish SMEs identified the positive attitude to change and activeness in external networking and in seeking new opportunities as enabling competences for business model innovation. The practical implications highlight the competence transformation strategies enabling business model innovation and the effects of different institutional environments.

Susomrith, Coetzer and Ampofo (2019) in their paper examined whether participation in training and development (T&D) events is associated with employees' affective commitment and propensity to enact innovative behaviours in small professional services firms. The study also investigated associations between both attitudes towards T&D and policy and practice supportive of T&D and levels of participation in T&D events. Participation in T&D events was positively

related to affective commitment. Furthermore, employees who participated in more T&D events were more likely to enact innovative behaviours, while affective commitment mediated the positive relationship between number of T&D events attended and innovative behaviours. Contrary to expectations, neither participation in just training nor participation in just development was associated with either attitudes or behaviours. The findings have important implications for small firms which tend to rely on wholly work-based experiences for the development of employees' knowledge and skills. Such an approach to learning for work may inadvertently shape a workforce that lacks commitment to the organisation and that has a diminished capacity for innovative behaviour.

Lai, Saridakis and Johnstone's (2017) article used the matched employee–employer dataset from the Workplace Employment Relations Study of 2011 (WERS2011) in Britain to empirically examine the direct relationship between human resources management (HRM) practices and small and medium-sized enterprise (SME) performance in the United Kingdom, as well as the potential moderating effect of organisational commitment/job satisfaction on the HRM-performance linkage. The autors found a positive and direct relationship between the use of certain formalised human resource (HR) practices and SME performance, measured by financial performance and labour productivity. More importantly, they found that the positive relationship between HR practices and financial performance varies between SMEs with high job satisfaction and low job satisfaction, and that the relationship is weakened in SMEs with high job satisfaction. The results suggest that certain HR policies and practices may improve small firm performance, especially within firms with low levels of commitment and satisfaction.

The internal business processes perspective was observed through 4 indicators that the following authors, through their presented research, recognized and identified as the ones with which this perspective is most often measured. The indicator "introducing innovations to business process" was investigated by the following authors**:** Niven (2002, p. 134, 216); Nair (2004, p. 52); Von Bergen & Benco (2004, p. 7-8); Smith (2007, p. 186); Kaplan & Norton (1996, p. 26) and Schäfer & Teuber (2007, p. 42).). On the other hand, the indicator "percentage of made errors" was mentioned by: Nair (2004, p. 52); Von Bergen & Benco (2004, p. 7.-8) and Niven (2002, p. 134). The indicator "finishing production and supplying the product / service to customers in time" was also observed as an indicator of this perspective by the following authors: Smith (2007, p. 186); Niven (2002, p. 134, 192); Von Bergen & Benco (2004, p. 7.-8) and Schäfer & Teuber (2007, p.

42). In fourth place is the "after-sales service / customer service", indicator which was researched by the following authors: Von Bergen & Benco (2004, p. 7-8); Niven (2002, p. 16, 134) and Schäfer & Teuber (2007, p. 42).

Therefore, based on the literature analysis, sixth auxiliary hypothesis has been developed:

PH - 6. Human resources competency management positively influences business performance from the internal business processes perspective of small and medium enterprises.

Authors Medina & Medina (2015) in their paper tried to identify the mechanisms that steers competence management in knowledge-intensive organizations and also the factors that are involved in the human capital contribution to competitive advantage in relation to the interaction between parent organizations and projects. The main contribution of this study is the theoretical framework derived from different domains. The framework is called the competence loop and explains how projects generate competence that the parent organization can either exploit in further activities or use for strategy adjustment. It also explains how an organization can use learning strategies to support competence exploration/ exploitation. Another contribution is the description of the relationship between dynamic capabilities and organizational learning in project-intensive organizations. The paper combines different domains to define a framework that is a new approach to competence management in a project-parent organizational context. The framework includes learning and competence management characteristics and has both theoretical and practical value. Observing the learning and growth perspective of small and medium enterprises and its indicators, "investments in training and education of employees" as an indicator of learning and growth perspective the following authors observed in their scientific papers and books: Smith (2007,, p. 186); Niven (2002, p. 216); Nair (2004, p. 53); Von Bergen& Benco (2004, p. 7); Biazzo & Garengo (2012, p. 110) and Meyer (2003, p. 88). The indicator "enabling employees to use new technologies" researched: Smith (2007, p. 173); Von Bergen & Benco (2004, p. 7); Biazzo & Garengo (2012, p. 110) and Niven (2002, p. 140). The following authors have defined "mutual employee collaboration and knowledge sharing" as an indicator for measuring this perspective: Smith (2007, p. 173, 186); Niven (2002, p. 140) and Von Bergen & Benco (2004, p. 7). The indicator "empowerment and consideration of employee suggestions" was also observed as an

indicator of the learning and growth perspective by the following authors: Niven (2002, p. 140, 192) and Von Bergen & Benco (2004, p. 7).

Therefore, based on the literature analysis, seventh auxiliary hypothesis has been developed:

PH - 7. Human resources competency management positively influences business performance from the learning and growth perspective of small and medium enterprises.

Numerous authors have proven that human resources management in general has a positive effect on the business performance of SMEs (both financially and through competitiveness, better relationships with employees, customers, etc.)

Scientists have suggested that adopting specific human resources management (HRM) practices can improve small firm performance and sustain competitiveness (e.g. Michie & Sheehan, 2008; Patel & Cardon, 2010; Aït Razouk, 2011; Williamson et al., 2002; Sheehan, 2014, p. 545-552).

Boselie, Dietz and Boon (2005) and Jardon and Gonzalez Loureiro (2013, p. 255) suggested that the impact of human resources management (HRM) on internal performance indicators is what generates better financial performance.

Inadequate human resources management not only reduces company productivity and profitability, but it may create a negative climate that will lead even the failure of the SMEs. HCM in SMEs must facilitate continuous improvement of everything through enhanced horizontal and lateral relationships (Fazzari & Mosca, 2009). SMEs must establish good governance and human resources management that would ensure a motivated workforce, trained and able to produce efficiently to have success because their size may not warrant bringing on professionals exclusively dedicated to HRM activities (Hornsby & Kuratko, 2003). Recruitment, selection, allocation, and retention of human talent is critical to the success of SMEs (Zula & Chermack, 2008) (Jardon & Gonzalez Loureiro, 2013, p. 260).

There is considerable evidence that the adoption of certain HRM practices can have a positive impact on the organizational performance of SMEs (Huselid, 1995; Ichniowski & Shaw, 1995; Wood, 1999; Appelbaum et al., 2000; Guest et al., 2003; Edwards et al., 2010; Messersmith & Guthrie, 2010; Aït Razouk, 2011; Patel & Conklin, 2012; Allen et al., 2013; Sheehan, 2014, Newman & Sheikh, 2014, p. 415). When it comes to SMEs, the literature generally confirms a strong relationship between the adoptions of these practices, either in isolation or bundled together with other practices, and SME performance (Wagar, 1998; Chandler & McEvoy, 2000; Way, 2002;

Hayton, 2003; Nguyen & Bryant, 2004; Sels et al., 2006; Zheng et al., 2006, Newman & Sheikh, 2014, p. 415).

The implementation of best HR practices might be associated with considerable development costs (Urbano & Yordanova, 2008). Bacon et al. (1996) even suggest that the implementation of best HR practices might actually be easier in smaller enterprises due to their flat hierarchical structures, greater flexibility and more direct impact of employees on organizational performance (Newman & Sheikh, 2014, p. 417)

Researchers concluded that future research should focus on study designs that are better able to demonstrate causal order to show that human resource practices, when implemented correctly, can positively generate higher firm performance (Wright et al., 2005, p. 435; Sheehan, 2014, p. 546).

The following authors have placed a clear emphasis in their definitions of competencies on their impact on a company's business performance.

Weiss and Kolberg (2003, p. 21) defined a competency as a personal characteristic, motive, behavior, skill, or knowledge that is proven to drive superior job performance, and Training Commission (1988) defined it as "the ability to perform the activities within an occupational area to the levels of performance expected in employment". A competency according to Boyatzis (1982) and Klemp (1980) is an underlying characteristic (motive, trait, skill, aspect of self-image, social role, body of knowledge) that an employee uses and that results in effective or superior performance (Dubois & Rothwell, 2004, p. 65). Boyatzis (1982) also concluded that it is generally accepted, however, as encompassing knowledge, skills, attitudes and behaviors that are causally related to superior job performance. Some see competence as an underlying characteristic of an individual that causally relates to superior performance in a job or situation (Taylor, 2007, p. 28). Hirsh and Strebler (1994, p. 83) pointed out that competences are positively associated with superior performance; and competences can be described in terms of specific behaviours which can be observed in the job (Stokes & Oiry, 2012, p. 7). Competency is a cluster of related knowledge, attitudes, skills, and other personal characteristics that affects a major part of one's job (i.e., one or more key roles or responsibilities); that correlates with performance on the job; that can be measured against well-accepted standards; and that can be improved via training and development (Project Management Institute, 2001, p. 82). Competencies, are characteristics that individuals have and use in appropriate, consistent ways in order to achieve desired performance (Dubois & Rothwell, 2004, p. 16). Competence can be understood as the set of capacities, attitudes,

knowledge, behaviors, experiences of different natures and typologies that lead and help a collaborator to achieve his goals and improve his performance (Price 1997; Sanchez 2004). Based on Scott Parry's definition (1998), a competency is a cluster of related knowledge, attitudes, skills, and other personal characteristics (Project Management Institute, 2001, p. 2): that affects a major part of one's job (i.e., one or more key roles or responsibilities) and that correlates with performance on the job.

Scientists concluded that if used properly, competency-based HR management has the potential to meet many business needs. It can, for example, be of value to organizations that seek to achieve the following goals (Dubois & Rothwell, 2004, p. 34-35): enhance competitive advantage; develop better quality in products and services; increase productivity; position the organization for future growth; facilitate culture change and transformation; assist with large-scale organizational change; foster positive outcomes with customers or suppliers; increase financial performance; establish systematic linkages and integration among HR management practices and align HR management practices with the mission, vision, values, or the business strategies or objectives of the organization.

Some of the most frequently given reasons for the introduction of competencies are to improve organization performance, increase the ability to be competitive, support culture change, enhance training and development effectiveness, improve processes associated with recruitment and selection, reduce turnover, clarify managerial roles and specialist roles, increase emphasis on business objectives, aid in career and succession planning, analyze skills and be able to identify the current and projected deficiencies in skills, improve workforce flexibility, support the integration of overall HR strategies, and provide a basis for compensation and reward programs (Pickett, 1998). The results suggest that improved organizational performance and improvements to the bottom line can occur when competencies support even a few HR systems. Nine out of ten organizations indicated overall improvement when job/role competencies support six HR systems, and with support from competencies in four HR systems or more, the percentage of organizations that experience improvemental most doubles.

The research of the author Waldmann-Williams (2001) explored the commonalties and differences between what competencies businesses require in workers and what competencies the educational systems actually produce. It explored ways that each institution could collaborate or partner with

the other in dimensions other than strategic competency management. The authors Mojab, Zaefarian and Azizi (2011) in their study examined the importance of entrepreneurial competencies to identify entrepreneurship education headlines using a competency-based approach for IT students. Springer (2019) thoroughly researches and processes a project and program of a competency-based management approach.

1.4.Research methods

In order to prove (or refute) the hypotheses and to achieve the objectives of the doctoral dissertation, both fundamental and applied, many scientific methods were used throughout the doctoral dissertation.

In the theoretical research and theoretical part of the doctoral dissertation, besides the collection and analysis of relevant literature, general methods of scientific research will be used: The Method of Analysis - analysis of complex concepts, judgments and conclusions on their simplest components; The Synthesis Method - linking simple claims to complex claims, conclusions and models; The Method of generalization - generalization of concepts in conclusions applicable to the subject's research; The Descriptive method - description of facts and processes and their empirical relations and connections; The Comparative method - comparing the same or related facts, phenomena and relationships, or determining their similarities and differences; The Compilation method – taking the results of the research work of other authors, i.e. other conclusions and findings; The Method of Classification - the systematic division of the general concept into the specific terms that this term encompasses; The Method of Induction and Deduction - making conclusions about the analysed phenomena in a way that is performed from the general to the individual (theoretical part of the research) or from the individual to the general (in the empirical part of the research).

The methodology of data collection (collecting primary data through surveys, and secondary data using the documentation analysis method), data processing (descriptive statistics, structural analysis, Kolmogorov-Smirnov test, Mann-Whitney U test, Kruscal-Wallis test, correlation analysis, factor analysis and hierarchical multiple regression models), and tabular and graphical methods are used to create an empirical part of research and work presentation of the results obtained.

In order to test the hypotheses set for this research, a survey questionnaire was used as a research instrument in which closed questions with offered limited number of answers were asked, of which for most questions intensity answers with Likert scale from 1 to 5 were offered. The questionnaire was completed by heads of human resources departments, senior managers or employees who are well acquainted with this issue in the company, taking into account the situation before the the appearance of Corona virus Covid - 19. The questionnaire consists of three parts. The first part refers to basic information on the researched companies, the second part to the competency management in the researched companies and the third part to the business success of the researched companies (data before the appearance of the Covid - 19 virus).

The survey questionnaire was submitted to 234 small and medium enterprises in the Federation of B&H. The percentage of processed small and medium enterprises reflects the real situation according to statistical data on the number of small and the number of medium enterprises in the FB&H. Therefore, 159 small and 75 medium enterprises were researched. When determining the share of small and medium enterprises in the research for this doctoral dissertation, the structure of enterprises in FB&H was taken into account. There was also an even distribution by sectors by cantons, according to official statistics on the structure of small and medium enterprises in the FB&H. The number of employees was taken as the criterion for the size of the company because only that criterion is identical in all laws for measuring the size of the company within B&H and it is identical to the recommendations of the European Union. The classification of small and medium enterprises is taken according to the Federal law on fostering small bussines development (2006). The research was conducted in January 2021.

1.5.Structure of doctoral dissertation

The disseration is structured in 6 chapters that are interconnected and form one meaningful whole. In the first chapter, i.e., in the *Introduction*, the research problem, objectives of the research, research hypotheses, research methods, structure of doctoral dissertation and expected scientific contribution are presented through 6 subsections.

The second chapter *"Human resources competency management"* deals with the human resource management, and Human resources competency management which includes three phases and subsections: determining the required competencies, determining current competencies and

determining the competency gap between the required and current competencies, and undertaking activities to ensure and develop the necessary competencies.

The third chapter *"Balanced scorecard"* deals with the term Balanced scorecard and business performances, then clarifies the concepts and measurement of each of the 4 perspectives of the BSC model: financial perspective, customer perspective, internal business processes perspective and learning and growth perspective.

The fourth chapter refers to *"Small and medium sized enterprises"*, entrepreneurship, the concept, meaning, division of SMEs, the status and importance of SMEs in Bosnia and Herzegovina and in the end human resources management in small and medium enterprises.

The fifth chapter *"Empirical research about the influence of Human resources competency management on the business success of small and medium enterprises" presents* research instruments, research results, testing research model hypothesis and discussion of results.

The sixth chapter *"Conclusion"* presents the most significant conclusions reached in the theoretical and practical part of the research of the doctoral dissertation, and presents the achieved objectives of doctoral dissertation, doctoral dissertation hypotheses, scientific and applied contribution of doctoral dissertation, limitations and recommendations for future research and concluding thoughts.

Also, at the end of the dissertation, an overview of the used literature is given, as well as a list of figures, tables and graphs that are in the dissertation and appendixes to the survey questionnaire, list of published works by the author and additional tables from the conducted research and statistical analysis.

1.6.Expected scientific contribution

Small and medium enterprises represent the backbone of the development of every national economy and society, and human resources are the most important resource of every company and organization. Competency management encompasses a number of activities within the human resources management process that are crucial for the successful management of human resources and the organization, as well as for the business performance of individuals and the organization, ie the company as a whole. This doctoral dissertation and research conducted investigates the impact of Human resources competency management on the business performance of small and

medium enterprises, and the research results have significant scientific contributions and practical implications. Given that very little research in this area is in the world literature, and that similar research has not been conducted so far, especially in Bosnia and Herzegovina, the contributions of this paper are reflected in a number of achievements that have made a significant departure from other research on issues of Human resources competency management in small and medium enterprises and the impact on business performance of enterprises observed through four perspectives of a balanced scorecard (financial perspective, customer perspective, internal business processes perspective and learning and growth perspective). Most of the research was related to the research of individual competency management activities, most of them by identifying key competencies and their impact on some of the business performance. Also, research was mainly conducted in large companies. By researching, formulating and presenting the results of research on the impact of Human resources competency management on the business performance of small and medium enterprises, a number of scientific contributions will be made, which can be expressed as follows:

- All relevant concepts and categories in the field of Human resources competency management of small and medium enterprises, and a balanced scorecard through which business performance is observed, which describe the previous theoretical and empirical findings in the field of the issue, will be researched and analyzed,
- Classification and systematization of numerous Human resources competency management activities will be performed, and in this way the work of future researchers of Human resources competency management will be facilitated through the development of the offered theoretical framework,
- The classification and systematization of the approach to defining and measuring the business performance of small and medium enterprises through a balanced scorecard will be performed, and thus it will be easier for future researchers of business performance of small and medium enterprises through the development of the offered theoretical framework,
- The subject of research will be set in a new and original way linking the Human resources competency management of small and medium enterprises and business performance of small and medium enterprises through the development of a theoretical model of the relationship between defined variables,

- An original theoretical and empirical model will be formed, the purpose of which is to determine the impact, direction and intensity of the links between the Human resources competency management and business performance of small and medium enterprises,
- The validity of the model will be verified by this research, which is a significant departure from other research and models,
- A model for measuring the business performance of small and medium enterprises will be developed using a balanced scorecard model that includes four perspectives (financial perspective, customer perspective, internal business processes perspective and learning and growth perspective),
- The mutual influence and connection of groups of activities of Human resources competency management and business performance observed through all four perspectives of the balanced scorecard determined in the set model will be determined,
- Empirical verification of the defined model will expand and deepen the insight into the paradigm of modern business, and Human resources competency management, their development and affirmation in the field of management and business success.

The practical implications of this research could be summarized as follows:

- Three phases of the Human resources competency management process will be identified, and activities for each of the phases of competency management will be identified, which will help small and medium enterprises and their management in developing and improving human resource management,
- The practice of Human resources competency management in small and medium enterprises in Bosnia and Herzegovina will be established,
- The business performance of small and medium enterprises in Bosnia and Herzegovina will be determined, measured through four perspectives of the balanced scorecard method, which are to a large extent also predictors of future business performance indicators,
- The positive impact of all phases of Human resources competency management on business performance will be determined through all four perspectives, which will provide a quality foundation for small and medium enterprises to make further decisions on competency management activities in small and medium but also a large enterprise, which can significantly raise competitiveness of enterprises, and affect their business performance,

- The results of the research will be used as a basis for making recommendations for small and medium enterprises to improve the Human resources competency management, which can significantly increase the business performance of enterprises themselves, and affect their competitive position, development and survival.

2. HUMAN RESOURCES COMPETENCY MANAGEMENT

2.1.Human resources management

According to most authors and experts, management includes five functions: planning, organizing, human resource management, leading and controlling. Humans are complex, social beings who have different backgrounds, values, beliefs, levels of experience and knowledge. For this reason, it is not easy to manage a team of different people, guide them, shape and develop them. Human resources are the most valuable resource of the organization and they use and manage other resources in the organization (financial, material and information). The success of the organization is based on the quality of human resources, their competencies, motivation, loyalty, and their business results. Their contribution to the organization as a resource is highly unpredictable, unique and has potential for further development. This is one of the reasons why the function of management, human resource management, has taken center place of importance in the 21st century. And over the past few decades, human resources management has grown into a credible and highly sophisticated discipline.

Eisenberg, Goodall and Trethwey (2009, p. 292) stated that researches show that companies that treat people as their most important asset are also the most profitable. Senyucel (2009, p. 13) concluded that it is absolutely vital that organisations should see their employees as valuable assets not just a file or a number in a spreadsheet. Employees are now expecting their employers to invest on their training and development and in return the organisations expect employees to be flexible, creative and productive. According to Bahtijarević-Šiber (2014, p. 6) human resources are the total knowledge, skills, abilities, talents, creativity, motivation and loyalty that an organization or society has at its disposal. It is the total intellectual and psychic energy that an organization can engage in achieving its goals and business development. Otherwise, it is the human capital (HC) that the organization has at its disposal and which can be used to achieve business and strategic goals. Numerous authors point out that human resources are a source of competitive advantage in both large enterprises and small and medium enterprises (SMEs). Due to the uniqueness and specificity of SMEs it can be said that HC as a source of competitive advantage is even more important for SMEs despite the scarcer resources, both financial and other, it is one way for them to stand out from the competition, because human resources cannot be copied. This stems from the fact that the improvement of the HC has an impact on performance that it is not simple neither easy

to evaluate and hence to imitate. HC is different when compared SMEs and large enterprises, mainly because of the constrains affecting smaller organizations (Hayton, 2003). Perhaps, it is more important as a source of competitive advantage for SMEs than for large companies because HC is specific and SMEs can use it to differentiate from competitors (Jardon & Gonzalez Loureiro (2013, p. 255). The idea that human resources can become a source of competitive advantage for the organization is not new. It is generally accepted that firms can create a competitive advantage from human resources and their management practices (Pablos & Lytras, 2008, p. 49). HC is the sum of the knowledge, skills, abilities (KSA) and other characteristics of individuals (Ployhart & Moliterno, 2011) belonging to the firm (Becker, 1964). HC is unique because people cannot be separated from their knowledge, skills, or values in the way they can be separated from their financial and physical assets. SMEs have specific characteristics in comparison to large enterprises. Hutchinson and Quintas (2008) highlight the relevant differences between large and SMEs, particularly regarding the latter limited internal resources constraining their management of external and internal sources of intangible-based competitive advantages (Jardon & Gonzalez Loureiro, 2013, p. 256). "The term 'human resources' implies that people have capabilities that drive organizational performance (along with other resources such as money, materials, information, and the like). Other terms such as 'human capital' and 'intellectual assets' all have in common the idea that people make the difference in how an organization performs". The four elements of human capital investment can be seen in this human capital equation: (ability + behavior) × effort ×time" (Dubois & Rothwell, 2004, p. 33). High skilled people are able to perform more efficiently their job and consequently they can reduce their unitary cost, but this is just one of the benefits that quality employees bring to the organization. The benefits are reflected in better employee performance, better results, greater employee satisfaction, etc. Organizational resources lead to a sustained competitive advantage when they are valuable, rare, inimitable and have no substitute. The first four criteria create a potential for competitive advantage, but if the firm wants to obtain this advantage over its rivals, then it will have to be organized to use these resources. (Ulrich & Lake, 1990). The spotlight going to human resources management is justifiable since it is a resource that tends to be rare (i.e., is not available in abundance); a resource which is valuable (i.e., contributes to achievement of organizational goals), imperfectly imitable (i.e., cannot be reproduced by other organizations) and hardly substitutable (i.e. cannot be replaced by another form of resource) and as such should be managed well and very carefully. As a result, the policies

and practices of human resource management, especially the ones associated with innovation and organizational performance, can make a difference and are determinant to the growing of the role of human resources management in organization management (Machado & Davim, 2020, p. 23-24).

On the other hand, despite these advantages that HC allows smaller organizations to gain an advantage, the problem may be that HC can move easily from organization to organization and be taken over by the biggest rivals. With quality human resource management, organizations can keep employees in their organization. Some might argue that the function of human resources dates back to prehistoric days where consistent methods of selecting tribal leaders have been documented (Rotich, 2015). Others prefer to recognize the origins in the Chinese employee screening techniques used between 2000 BC and 1500 BC and still others claim the first human resource function was documented with the Greek practices of developing and implementing an apprentice system (Beagire, 2004). Modern historical reports tend to note the beginnings of this functional department to be related to the growth of large factories during the British Industrial Revolution during the 19th-century (Christiansen & Chandan, 2017, p. 2). Since the mid-1980's Human resources management (HRM) has gained acceptance in both academic and commercial circles (Senyucel, 2009, p. 14). Different authors have different definitions of human resource management. According to Dessler (2015, p. 30) human resources management is the process of hiring, training, evaluating and rewarding employees, with care on labor relations, health and safety of workers, and issues of fairness. Christiansen and Chandan (2017, p. 21) defined human resources management as an administrative function in organizations designed to maximize employee performance through the planning, organizing and coordinating of activities such as hiring, firing, performance management and training. On the other side Bahtijarević-Šiber (2014, p. 5) defines human resources management as a complete and integrated system of complex and interconnected initiatives, activities and tasks of management to ensure the appropriate number and structure of employees, their knowledge, skills, competencies, interests, motivation and forms of behavior necessary to achieve current, development and strategic goals of the organization, achieving sustainable competitive advantage and organizational success. The term human resources management includes all activities and decisions of managers, which have an impact on the nature and quality of the relationship between companies and employees. Starting from the characteristics of today's business environment, human resources management should be viewed as a wide set of

activities that will contribute to greater commitment and dedication to work, as well as employee loyalty to the organization. HRM observed in this way represents the backbone of achieving the strategic goals of the organization (Klepić, Alfirević & Rahimić, 2020, p. 219-220). The HRM can also be defined as "an inevitable process that accompanies the growth of organizations." (Medina & Medina, 2015, p. 284). Essential to any definition human resources management according to Dubois and Rothwell (2004, p. 33) is the understanding that effective organizations must be able to find, use, keep, and develop human beings in order to achieve results. HR management is the process of helping organizations do just that. The manner in which organizations manage their people is a potential source of sustained competitive advantage. The book of Christiansen and Chandan (2017, p. 4) contains a definition according to the Society for Human resources management - SHRM (2016), another contemporary view of HRM where the practice encompasses the management of people in the form of a collective relationship between the management and employees. This approach focuses on the objectives and outcomes of the HRM function and lends itself to be in alignment with the metrics of the business for which they serve. Terms such as employee engagement and people development are often used. These practices may contribute to productivity, retention, and sustainability but the evidence is not clear. Medina and Medina (2015, p. 284) concluded that there is a close connection between an organization's ability to innovate, the organization's intellectual capital and the organization's ability to utilize its knowledge. An organization's greatest potential contribution to strategy is skill acquisition, learning and accumulation of intangible and organizational assets. HRM allows creating competitive advantage in enterprise and enterprises achieve and retain competitive advantage if they focus on enlarging of the knowledge value for the organization.

Traditional observation of the role and process of human resources management according to Klepić, Alfirević and Rahimić (2020, p. 222) includes: human resource planning, recruitment, selection, socialization, training and development, performance appraisal and promotion, relocation, denomination and dismissal. According to Machado and Davim (2020, p. 25), traditionally, HRM was focused on short-term quantitative aspects regarding work hours, remunerations, social benefits and health and safety. Currently, qualitative aspects that contribute to motivation such as the appreciation of people, opportunities for development and professional evolution, autonomy and communication have all gained importance. The role of HRM as nowstopped being exclusively administrative and is also strategically connected to the different

organizational dimensions. Within the present-day economy, lays in the consensually accepted assumption that it is a strategic management considered as (i) a shared function within the organization; in which (ii) HR are the main source of sustainable competitive advantage of the organization; and (iii) in addition, having an integrated approach of HRM with the remaining subsystems of management. Yu (2013, p. 19) stated that high-performance human resource practices (HPHRPs), are designed to enhance employees' competencies, motovation, and performance, is associated with lower employee turnover rates, higher labor productivity, and better company performance.

Without adequate human resources, an organization is doomed to failure in advance. Companies with the clearest competitive strategies point out that these strategies depend on skilled and dedicated employees. That is why managers rightly believe that the abilities, motivation and creativity of their employees are a crucial and irreplaceable source of competitive advantage. The importance of human resources management is emphasized in preventing or reducing the opportunities for employment of the wrong person, high turnover, employees who do not work hard, wasting time on meaningless job interviews, ending up in court due to discrimination, bringing the company into trouble due to non-compliance with occupational safety regulations, employee complaints on the unfairness of the salary in relation to others, reduced efficiency of the department and other unfair work practices. According to Burke and Cooper (2008, p. XVII) effective HRM practices increase firm performance because employees work both harder and smarter. Employees work harder because of greater job involvement, more peer pressure for results and for the economic gains based on high performance. Employees work smarter because they can use their knowledge and skills acquired through training and development in the jobs themselves in getting the work done. Pablos and Lytras (2008, p. 49) also stated that effective human resources management will generate a higher capacity to attract and hold employees who are qualified and motivated for good performance, and also the benefits from having adequate and qualified employees are numerous. Some examples are higher profitability, less rotation, higher product quality, lower costs in manufacturing and a faster acceptation and implementation of the organizational strategy. Senyucel (2009, p. 21) concluded that there is a need to think and develop a set of activities that connect the HR practices on the strategic level. This is evidence that HR function is different and more sophisticated than personnel management and managing the human resource is a crucial process in achieving competitive advantage. It is absolutely necessary that

employee needs (e.g. training, development, etc.) have to be tailored with future needs and opportunities in mind, instead of addressing to current conditions.

Today, when companies are looking for a competitive advantage, one of the new ways to transform human resources management is competency based human resource management. People are a factor that companies cannot copy or whose knowledge they cannot take. This new model of human resources management is insufficiently researched, ie the process of competency management itself is not sufficiently researched in detail. Many authors have focused on only one part of the process, so in this doctoral dissertation an attempt was made to connect all these parts of the process into a single model of competency management in companies.

Leaders of organizations today, in search of competitive advantage, have discovered a new, powerful way to revitalize human resource management: competency-based human resource management. The focus of the new approach is the person as the most important unit of the organization, together with their skills, knowledge, characteristics and abilities, which the organization must recognize, invest in them and improve the same skills, knowledge, characteristics and abilities through training and then reward employees.

2.2.Competency management

2.2.1. The concept, definition and content of competencies

The source of sustainable competitive advantage lies in the unique synergy and mix of rare, valuable, impossible to copy and imitate, irreplaceable resources and capabilities of the organization. It is not enough for an organization to just possess such valuable resources but to combine them and connect them into a unique entity that will create such a competitive advantage. In this way, core competencies are created.

The concept of competence draws its origins from medieval guilds, where apprentices learned skills by working with a master and for that awarded credentials when they reached the standards. The industrial revolution brought with it the study of jobs and thus the skills needed to do those jobs. With the arrival of scientific management in the 1930s, the human relations school of thought academic and practitioner interest became focused on how to organize work and how to motivate workers. The modern ideas associated with the competency movement emerged out of the changing economic and political context of the 1960s (Horton, Hondeghem & Farnham, 2002, p. 6). David

McClelland, author of Motives, Personality and Society, was one of the first to make the case that behavioral competencies, rather than intelligence, was what differentiated successful people from their less successful peers in the workplace. He defined a competency as a personal characteristic, motive, behavior, skill, or knowledge that is proven to drive superior job performance. McClelland, who is frequently credited as being the father of competencies, argued in the 1973 paper "Testing for Competence Rather than Intelligence" that traditional academic criteria, such as grades in school or academic aptitude, simply did not predict later success in the workplace (Weiss & Kolberg, 2003, p. 21). In the academic domain, a key early commentator on competencies was Boyatzis (1982) following on from the work of McClelland (1973). His central contribution was the need to achieve performance through the identification of the underlying personality traits, skills and abilities within a job (Stokes & Oiry, 2012, p. 6). In the book of Elearn (Auth.) (2009, p. 44) two opposing definitions of competencies are mentioned, as "an underlying characteristic of a person which results in effective and/or superior performance in a job" (Boyatzis, 1982) or "the ability to perform the activities within an occupational area to the levels of performance expected in employment" (Training Commission, 1988). According to Boyatzis (1982) and Klemp (1980) competency is an underlying characteristic (motive, trait, skill, aspect of self-image, social role, body of knowledge) that an employee uses and that results in effective or superior performance. Over time competency has been defined in different ways. Bahtijarević-Šiber (2014, p. 124) defined competencies as a complex combination and integration of individual skills, knowledge, abilities, motives and personality traits that result in forms of work and business behavior necessary to achieve job performance, business and organizational strategies and goals. More simply, these are certain forms of behavior that require the successful performance of certain tasks and roles in the organization based on a specific combination of personality traits, abilities, knowledge and skills of employees. Competence according to Levin and Ward (2011, p. 73) is a cluster of related knowledge, attitudes, skills, and other personal characteristics that affects a major part of one's job (i.e., one or more key roles or responsibilities), correlates with performance on the job, can be measured against well-accepted standards, and can be improved by means of training and development. Klinvex, O'Connell, and Klinvex (1999, p. 4) point out that competencies are "clusters" of related knowledge, skills, abilities, motivations, and other conditions necessary for work performance to be successful. Some see competence as an underlying characteristic of an individual that causally relates to superior performance in a job or situation. According to Taylor,

(2007, p. 28) definition of competencies includes aspects such as: motives, for example the motivation to achieve; traits and attitudes such as conscientiousness; self-concept, say the level of self-confidence; knowledge; behaviours or skills.

Woodruffe (1992, p. 17) states that competencies are "the set of behaviour patterns that the incumbent needs to bring to a position in order to perform its task and functions with competence". Whereas, typical of later literature, Bratton and Gold (2007, p. 580) highlight the contextual aspects of "competencies" as the: underlying characteristics of a person which result in competent or effective performance taking into consideration the nature of the task and the organization context. Hirsh and Strebler (1994, p. 83) observe a competency at the level of the individual and point out "three recurrent features: a competence is seen in the context of a particular job or job role and the organization in which that job exists; it is positively associated with superior performance; and it can be described in terms of specific behaviours which can be observed in the job" (Stokes & Oiry, 2012, p. 7). The term "competency" refers to the intertwined individual abilities, skills and knowledge of the manager, which the manager in interaction with the environment directs through business activities, and as a result has successfully achieved organizational goals. Possession of specific competencies is a key factor in the successful management of the company by managers or the ability of the company to respond to market changes (Isaković, 2010, p. 102). Roothwell (2012, p. 46) concluded that the best way to define a competency is as a characteristic of a successful performer and that the competencies relate to the people who do the work, not, like job descriptions, to the work itself. Competencies lead to successful work results. Anything contributing to successful work results is thus a competency. Competency is a cluster of related knowledge, skills, and abilities that affects a major part of one's job (a role or responsibility), that correlates with performance on the job, that can be measured against well-accepted standards, and that can be improved via training and development (Building Blocks for Competency Models Foundational Competencies, 2017, p. 3). According to Wright et al. (2001**)** competence is held by individuals and refers to work-related knowledge, skills and ability, and Sanford (1989) has a similar view. Spencer et al. (1997) add the attitudes required for performance in a designed role and setting. The latter view is closely related to that of Turner and Müller (2006) who, in addition, point out that personal characteristics are also a part of competence (Medina & Medina, 2015, p. 285). Washington and Griffiths (2015, p. 2) concluded that each competency reflects a unique

combination of knowledge, skills, abilities, and other factors that are driven and influenced by multiple traits and motivations, ultimately manifesting themselves in skillful behaviour.

Competency is a cluster of related knowledge, attitudes, skills, and other personal characteristics that affects a major part of one's job (i.e., one or more key roles or responsibilities); that correlates with performance on the job; that can be measured against well-accepted standards; and that can be improved via training and development (Project Management Institute, 2001, p. 82). Competencies, are characteristics that individuals have and use in appropriate, consistent ways in order to achieve desired performance. These characteristics include knowledge, skills, aspects of self-image, social motives, traits, thought patterns, mind-sets, and ways of thinking, feeling, and acting. Competencies form the foundation of competency-based HR management practices (Dubois & Rothwell, 2004, p. 16). The definition of Hirsch and Stabler (1995) states that 'competencies are the skills, knowledge, experience, attributes and behaviour that an individual needs to perform a job effectively.' A distinction is often made, in English, between competency(ies) defined privously by Boyatzis which refers to' the behavioural characteristics of an individual which is causally related to effective or superior performance in a job' and competence(s) which is 'the ability to perform activities within an occupation to a prescribed standard' defined by Fletcher (1991). According to Horton, Hondeghem and Farnham (2002, p. 4) this distinction is the result of a difference in focus. The first one focuses on the inputs that help achieve successful performance in a job and the second one on the demonstrated outcomes of competence. These are often described as behavioural competencies and outcome-based competencies.

Competence can be also understood as the set of capacities, attitudes, knowledge, behaviors, and experiences of different natures and typologies that lead and help a collaborator to achieve his goals and improve his performance (Price, 1997; Sanchez, 2004). Thus, today, being competent is increasing, being able to manage complex and unstable situations (Boterf, 2005). As a result of this statement, to be competent is to gather a set of skills that allow to manage unforeseen, complex situations, that people must own and that are difficult to imitate by the competition. These competencies (abilities and skills) were addressed by Prahalad and Hamel (1990) who called them core competencies that allow differentiation in organizations and are difficult to imitate (Machado & Davim, 2020, p. 98). A competency, according to Fishbein and Ajzen (1975) represents all the

forms of knowledge, skill, attitude, ability and learning objective described in learning, training or professional areas. Thus, a competency is an element part of the competence. A competency is knowledge, skill or attitude (KSA)**.** The knowledge means the information that a person may apply to do a task. The skill is the experience, the practical ability and the easiness in doing the task. The acquisition of a skill increases the ability of a person in doing action automatically and unconsciously. The attitude is the inclination of a person in doing actions as a response in particular situations. It includes affective, cognitive and behavioural components that allow the individual to recognise and opportunely deal with the situation (Gaeta et al., 2017, p. 407). In the book "La Gestion des compétences" of Levy-Leboyer (1996) competencies have been related to an individual's psychological aspects, such as personality traits, skills, and the acquisition of knowledge.

The key components of competencies according to Bahtijarević-Šiber (2014, p. 124) are shown in the following figure:

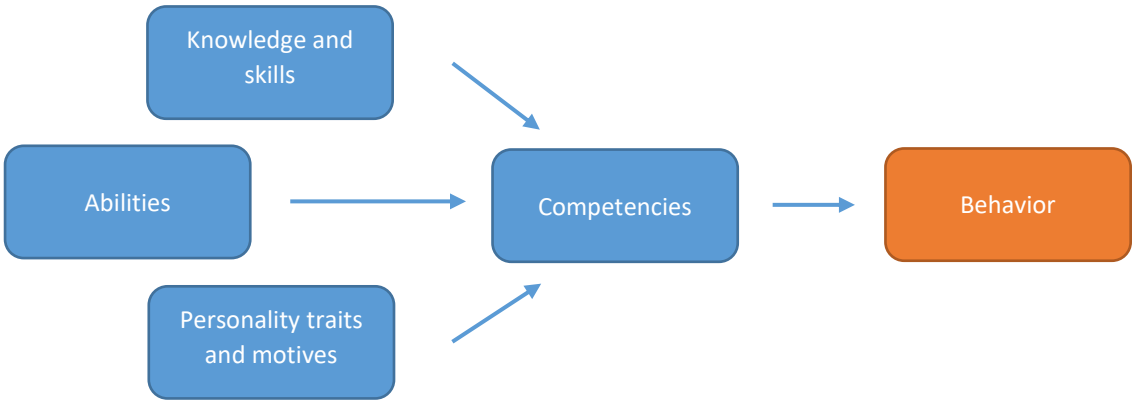


Figure 2 The components of individual competencies

Source: From *Strateški menadžment ljudskih potencijala: suvremeni trendovi i izazovi* (p. 124) by F. Bahtijarević-Šiber, 2014, Školska knjiga.

Levin and Ward (2011, p. 74) definied knowledge as "Knowing something with the familiarity gained through experience, education, observation, or investigation. It is understanding a process, practice, or technique, or how to use a tool". Klinvex, O'Connell, and Klinvex (1999, p. 5) defined knowledge as information that an employee needs to possess in order to do effectively the job that needs to be done. This should not include specific knowledge that can be learned by doing a certain job. The term knowledge is defined in various ways, of which they are most often used as (Isaković,

2010, p. 108): “Facts, information and skills that a person has acquired through experience or education; theoretical or practical understanding of a subject”; “The totality of everything known in a field; facts and information.” or "Awareness or familiarity gained through the experience of a fact or situation."

According to Levin and Ward (2011, p. 75) skill is “Ability to use knowledge, a developed aptitude, and/ or a capability to effectively and readily execute or perform an activity”. Klinvex, O’Connell and Klinvex (1999, p. 5) observe skills and abilities together and define them as a degree of expertise that is reflected in performance in relevant areas. Examples of technical skills and abilities are welding, working with tools and paints, drafting, technical writing and accounting. Examples of non-technical skills and abilities are planning and organizing, oral communication, interpersonal communication, decision making and leadership. Skill according to Isaković (2010, p. 113-114) is the ability to demonstrate systems and consistent behavior aimed at meeting set goals, it implies the skill of converting knowledge and abilities into certain forms of behavior and reacting to phenomena. For managers, the following general managerial skills defined by Katz (1955, p. 33-42; 1974, p. 101-102) are most often highlighted in the literature: technical skills, skills of working with people, conceptual or comprehension skills and design skills.

According to Buble and Klepić (2009, p. 109), the abilities of managers are mental as well as physical characteristics of people that form general personal preconditions for achieving success in a certain activity. Most of them develop on inherited dispositions influenced by the environment and personal activities. Many of these traits can be improved and perfected over time with proper and persistent exercise. There are four groups of human abilities: intellectual (mental), sensory, psychomotor (psychophysical) and physical abilities. Abilities are relatively stable individual differences that are related to performance on some set of tasks, problems, or other goal oriented activities (Murphy, 1996). On the other side Carroll (1993) conceptualizes abilities as relatively enduring attributes of an individual’s capability for performing a particular range of tasks. Abilities are similar to traits in that they exhibit some stability over time, yet they are different in the sense that they may develop slowly with exposure to multiple situations (Snow & Lohman, 1984). Carroll (1993) concluded that despite various definitions, ultimately every ability is defined in terms of some kind of performance, or potential for performance.

In practice and in literature, the terms competencies and abilities or competencies and skills or abilities and skills are often wrongly used as synonyms. These expressions have their different semantic and content meaning.

In addition to the above, there are other requirements that do not fall into one of the above categories, for example legal documents such as certificates and licenses are included in this category.

Psychology's long history of interest in personality stems from the desire to predict the motivational aspects of work behavior. Nevertheless, until recently, the prevalent view was that personality variables were a dead end for predicting job performance. Some of the factors fueling this belief were: (1) the view that a person's behavior is not consistent across situations and thus, traits do not exist; (2) literature reviews concluding that personality variables lack predictive validity in selection contexts; and (3) concern about dishonest responding on personality inventories. However, by the late 1980s, favorable opinions about personality regarding personnel selection began to grow. Evidence accumulated to refute the notion that traits are not real or stable (Martocchio & Ferris, 2003, p. 306).

Vázquez (2013) states that seven characteristics of competences can be summarized (Elizondo Sandoval et al., 2018, p. 75):

1. Competencies are a set of behaviors that some people master better than others, which makes them effective in a given situation.
2. They are personal attributes: knowledge, skills, aptitudes, character, traits, and concepts of oneself.
3. They are causally related to actions that produce successful results. They manifest in the action through behaviors that can be observed.
4. They are characteristics underlying the person that function as an interactive and globalizing system; as an inseparable whole that is superior and different from the sum of individual attributes.
5. They achieve results in different contexts.
6. Competencies represent the link between the individual characteristics and the qualities required to carry out precise professional missions.

7. They represent dispositions to act in situations, to problems or demands of very different contexts.

Based on Scott Parry's definition (1998), a competency is a cluster of related knowledge, attitudes, skills, and other personal characteristics (Project Management Institute, 2001, p. 2) that: affects a major part of one's job (i.e., one or more key roles or responsibilities); correlates with performance on the job; can be measured against well-accepted standards; can be improved via training and development, and that can be broken down into dimensions of competence.

Uses of competencies according to Porter, Smith and Fagg (2006, p. 104):

- Training and development: identifying gaps and helping employees develop;
- Development, promotion and succession planning: assessing employees' readiness or potential to take on new challenges;
- Annual appraisals and/or performance-related pay: appraising and managing performance according to competency;
- Grading structures;
- Recruitment and selection – choosing the right people for the organization;
- Change management – using competencies when restructuring or involved in culture change.

Today great attention is paid to competency-based education and application of this method in entrepreneurship education at academic level as well as other educational environments. Current business education programs are strongly criticized for not being in accordance with the requirements of changing business environment. One general criticism is that business education has become too task-oriented and does not emphasize on multi-dimensional complexities of issues (Mojab, Zaefarian & Azizi, 2011, p. 436). Competencies are now the most prevalent method used to define ideal employees and have become a fundamental part of talent management systems across organizations. In rapidly changing business environments, organizations are recognizing the value of a workforce that is not only highly skilled and technically adept, but more importantly, a workforce that can learn quickly, adapt to change, communicate effectively, and foster interpersonal relationships (Rodriguez et al., 2002, p. 309) (Bücker & Poutsma, 2010, p. 832). Although literature describes a wide number of intangible assets (for instance organizational climate, intellectual capital and leadership) employees' competences are recognized as one of the main intangible assets. However, studies of competences are often focused on individual employee

competences and they do not sufficiently investigate competences as applied into a firm-specific context and integrated into a company's strategy (Sardi, Garengo & Bititci, 2019, p. 110). In general, SMEs have fewer resources and competences available for them than larger companies, so they need to be more creative and agile in combining their competences in a novel way, or in developing completely new competences, and also be more proactive in anticipating and recognizing new potential business models in a rapidly changing situation (Lampela, Taipale-Erävala & Heilmann, 2017, p. 180-181).

Competency analysis is the process of determining the competencies (knowledge, skills, abilities, motivations and other requirements) required for effective work performance (Klinvex, O'Connell & Klinvex, 1999, p. 8). Competency management according to Bahtijarević-Šiber (2014, p. 17) in the context of HRM means a distinct strategic orientation and integration of all its activities and tasks in creating strategies and key sources of sustainable competitive advantage and organizational success.

In competencies, the emphasis is on the behavior by which competencies are determined and confirmed. Therefore, competencies can be defined as certain forms of behavior that require the successful performance of certain tasks and roles in the organization based on a specific combination of individual characteristics.

A more detailed presentation of the fundamental structure of individual competencies is given by the following picture:

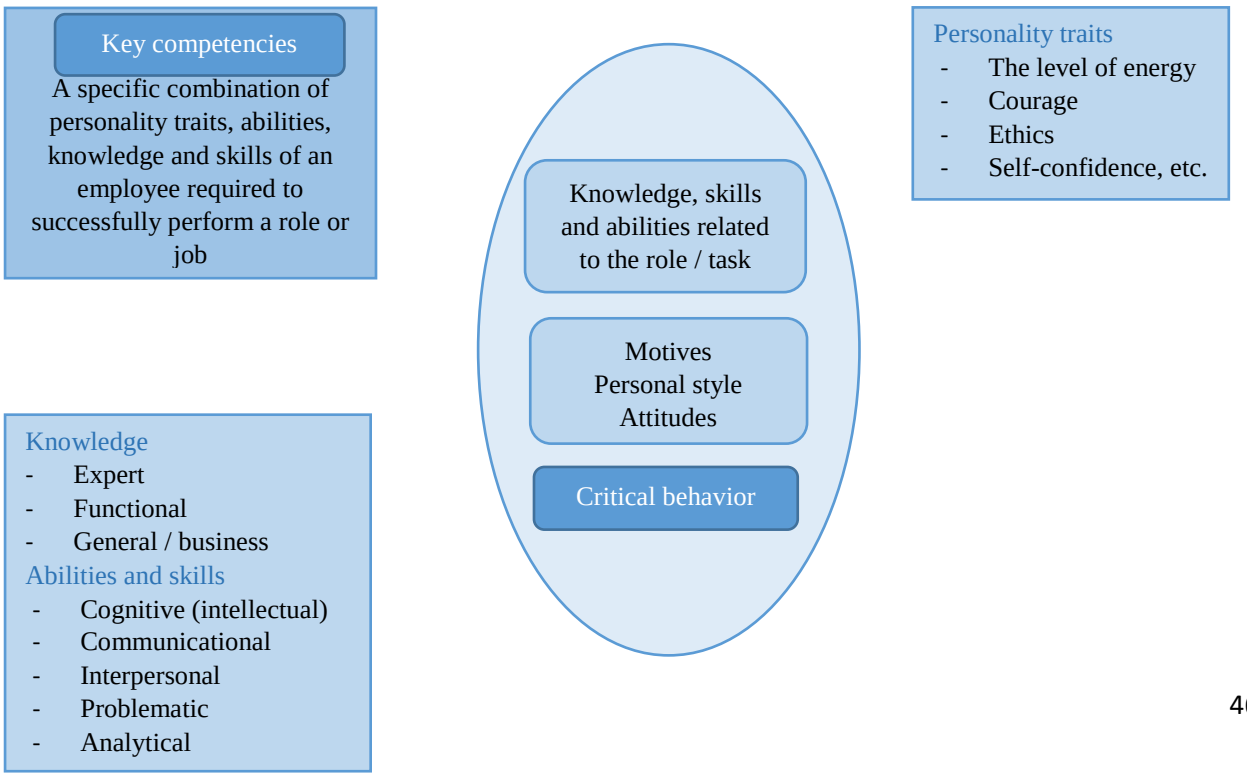


Figure 3 Fundamental structure of individual competencies

Source: From *Strateški menadžment ljudskih potencijala: suvremeni trendovi i izazovi* (p. 125) by F. Bahtijarević-Šiber, 2014, Školska knjiga.

2.2.2. Types of competencies

There are different divisions and classifications of competencies, according to the types or levels discussed in the various areas of business and management literature. Competencies are often made into subdevisions or they are eventually put into groups. They are usually grouped as organizational or individual; technical and non-technical etc. Murray (2003, p. 306) describes these as (Stokes & Oiry 2012, p. 6): personal (or management competencies), those competencies that comprise personal attributes, skills and behaviours to perform a function or task of a job in a designated [...] way, and organisation competencies, those competencies defined by processes, systems and practices (e.g. training methods, performance appraisal reviews, motivation techniques, change programmes, technical processes) that enable any firm to turn personal competencies into organisation-wide competencies. Dubois and Rothwell (2004, p. 19) concluded that within the category of individual competencies, there are different types of competencies, such as technical and personal functioning. Some practitioners simply make the distinction between technical and nontechnical competencies: technical competencies are specific to certain roles, and non-technical competencies are more generic in nature (Rothwell, Hohne, & King, 2000). Byham and Moyer (1998) classified competencies as organizational, job- or role-related, and personal. Some organizations reduce all competencies required by a job or role to three categories: general, leadership, and professional competencies, or business, professional, and social competencies. Each of these key categories has a defined set of individual competencies and forms of behavior that make it up and ensure success (Bahtijarević-Šiber, 2014, p. 136). Building Blocks for Competency Models Foundational Competencies (2017, p. 3) devided types of competencies in few blocks: Personal Effectiveness Competencies (interpersonal skills, integrity, professionalism, initiative, dependability and reliability, adaptability and flexibility, lifelong learning); Academic Competencies (reading, writing, mathematics, science and technology, communication, critical and analytical thinking, basic computer skills); Workplace Competencies (teamwork, customer focus, planning and organizing, creative thinking, problem solving and decision-making, working with tools and technology, scheduling and coordinating, checking, examining and recording, business

fundamentals, health and safety); Industry-Wide Technical Competencies (the knowledge and skills that are common across sectors within a broader industry); Industry-SectorTechnical Competencies (a sub-set of industry technical competencies that are specific to an industry sector) and a last four types of competencies represent the specialization that occurs within specific occupations within an industry.

Mintzberg (1990) divided the competencies of managers into: individual skills, control skills (supervisory skills), and skills of line managers, while Cooper and Robertson (1995, p. 186) divided the competencies into four generic competencies (Isaković, 2010, p. 104): intellectual competencies (strategic perspective, analytics and assessment, planning and organization); interpersonal competencies (interpersonal sensibility, staff leadership, persuasive power, determination, communicativeness); adaptable competencies (adaptability, mobility, flexibility) and success orientation (energy, initiative, motivation, job sensitivity). Woodruffe (1993) classifies competencies in two nuclei: technical skills which are specific to the job and generic skills, which can be universal or transferable. Lawrence (2002) proposes a typology which has been adopted in the USA: academic skills (knowledge and skills associated with the academic disciplines of reading, writing, mathematics, and science); employability skills (used to perform effectively, which are transferable to abroad range of occupations, such as teamwork, decision-making, and problem-solving); and occupational and technical skills (specific technical and occupational knowledge and skills which are job-specific, such as knowledge of sales methods, engine repair, and database programming). Types of competence according to Taylor (2007, p. 29) are: Universals, Occupationals and Relationals. Universals are competencies that can be linked to performance in any business, such as ‘Interpersonal Skill’ and ‘Oral Communication’. Occupationals are competencies related to a particular job or a group of related jobs, and Relationals are competencies that depend on what is required in a particular setting of the job.

2.2.3. Competency based models of human resources management

Comparing the traditional HR management and competency-based HR-management it can be concluded that the work analysis and job descriptions form the foundation of traditional HR management. Work analysis serves as a basis for recruiting, selecting, orienting, training and developing, rewarding, and appraising people. The job description delineates work activities and does not state expected work results. Traditional HR management is focused on the number of

people and employee costs mistakenly assuming that the job and performance in the future will be the same as in the past. It also favors quantitative methods for workforce planning.

Employees need certain knowledge, skills, abilities, as well as traits to perform successfully, i.e., they need certain competencies. The basis of competency-based HR management is: the identification, modeling, and assessment of competencies. The HR function seeks to discover employees who perform their job successfully, have excellent performances, and seeks to configure HR activities around cultivating them. It concentrates on talent and the value HR brings to the organization and does not assume that the future will be like the past or that the same head count is needed to achieve predictable results. This approach stimulates productivity and uses human talent to the best competitive advantage. Exemplary performers are significantly more productive than others and organizations that have more such employees are significantly more productive. The process is designed to help individuals to better manage talent. Companies need to find adequate and rapid responses to increasing competition and challenges to ensure survival and development. A competency-based approach is more appropriate than a traditional one and is focused on talents, their business success and past or future business performance. It has become clear to managers that they must focus on achieving set goals and performance, and that it is not enough to focus on workplaces and work activities. The changes that are constantly happening in the company and in the environment, force companies to focus on the person and on its outputs or results, which in fact represents competency-based HR management. Unlike jobs and work activities that are constantly changing, competencies are permanent and employees who possess certain competencies adapt to new work tasks and jobs. Competency models can supplement traditional job descriptions and become the foundation for using competency-based HR management. Competency-based HR management views the needed outputs and the organization's work roles or requirements from a person-oriented rather than a job-oriented perspective. Recruitment, selection, placement, orientation, training, performance management, and workers' rewards are based on competencies. Organizations build a competency-based HR system by integrating competencies into all HR activities.

There are numerous benefits for a company that uses competency-based HR management. Dubois and Rothwell (2004, p. 34-35) point out that this can be useful for organizations striving to achieve the following goals: enhance competitive advantage, develop better quality in products and

services, increase productivity, position the organization for future growth, facilitate culture change and transformation, assist with large-scale organizational change, foster positive outcomes with customers or suppliers, increase financial performance, establish systematic linkages and integration among HR management practices, align HR management practices with the mission, vision, values, or the business strategies or objectives of the organization.

Cooper et al. (1998) noted some of the positive outcomes produced by valid and reliable competency-based HR management models. These include linking individual competencies directly to the organization's strategies and goals; developing profiles for positions or roles and matching individuals to the task sets and responsibilities; affording the opportunity to continuously monitor and refine competency profiles; facilitating the selection and evaluation of employees as well as the training and development; assisting with the hiring of individuals with unique competencies that are costly and not easily developed; assisting organizations in the ranking of competencies for both compensation and performance management.

According to Pickett (1998), some of the most frequently given reasons for the introduction of competencies are to improve organization performance, increase the ability to be competitive, support culture change, enhance training and development effectiveness, improve processes associated with recruitment and selection, reduce turnover, clarify managerial roles and specialist roles, increase emphasis on business objectives, aid in career and succession planning, analyze skills and be able to identify the current and projected deficiencies in skills, improve workforce flexibility, support the integration of overall HR strategies, and provide a basis for compensation and reward programs. *Raising the Bar* (1996) point out that research results show that organizational efficiency improves when organizations use competency-based HR systems. The use of competencies is appealing because it enables HR systems to concentrate on the factors that contribute directly to the organization's success. The practice of identifying, defining, and applying competencies helps employees to understand the areas in which their efforts will improve their performance, and this in turn helps the entire organization (Dubois & Rothwell, 2004, p. 36).

Each organization needs to develop its own competency model that suits its needs and specifics. Therefore, one unique model that is valid for all cannot be found in the literature, but there are numerous models in organizations. The competency model determines those skills and behaviors or competencies of employees that will ensure the achievement of strategic goals. It provides the

right criteria for determining whether an organization has a HR that will enable it to achieve its goals. The competency model is considered by some authors to be a narrative description of competencies associated with success because it describes the future ideal (Bahtijarević-Šiber, 2014, p. 132-133). Competence management involves the specification of an organization's competence needs, the identification of competence gaps (between needed and actual competence), competence sourcing, competence development through training and coaching, and the staffing of projects (Baladi, 1999). While determining the organization's extant and desired core competencies is generally part of strategic management's macro focus (Simpson, 2002), managing those competencies at an operational level is usually the responsibility of human resources management (Bergenhenegouwen et. al., 1996) (Lindgren, Henfridsson, & Schultze, 2004, p. 436). The aim of competence management is to plan, implement and evaluate initiatives that ensure that the proper competencies are available to a company, which requires them to achieve its business objectives (Nordhaug, 1993). To preserve a company's competitive edge, it is an inevitable necessity that a competence-management system be developed. In general terms, competence management operates on two levels: the macro- and the micro-. The former is concerned with core competencies and is controlled by business management (Maliszewska & Hochmeister, 2011, p. 73-74).

Berio and Harzallah (2005, p. 22) concluded that competence management can be organized according to four kinds of processes (Figure 4):

1. Competence identification, i.e. when and how to identify and to define competencies required (in the present or in the future) to carry out tasks, missions, strategies;
2. Competence assessment, i.e. (i) when and how to identify and to define competence acquired by individuals and/or (ii) when and how an enterprise can decide that an employee (or an individual) has acquired specific competencies;
3. Competence acquisition, i.e. how an enterprise can decide about how to acquire some competencies in a planned way and when;
4. Competence usage**,** i.e. how to use the information or knowledge about the competencies produced and transformed by identification, assessment and acquisition processes; for instance, how to identify gaps between required and acquired competencies, who should attend required training, how to find key employees (i.e. holding key competencies).

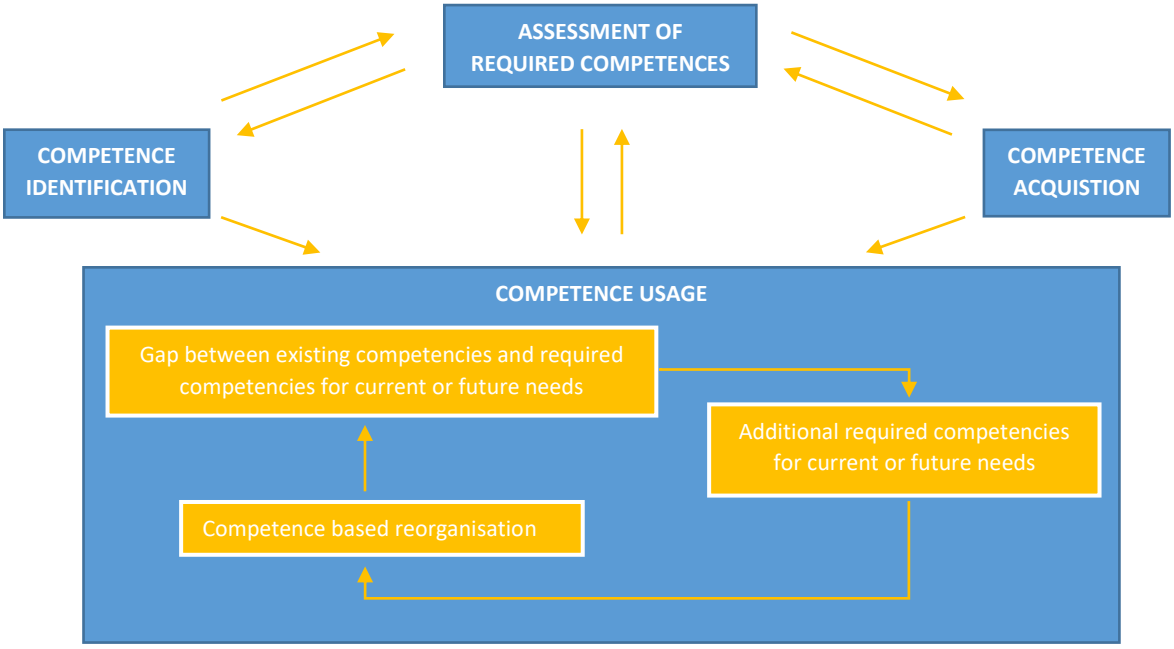


Figure 4 Competence Managament Process Architecture

Source: Adapted from "Knowledge management for competence management," by G. Berio & M. Harzallah, 2005, *Journal of Universal Knowledge Management*, p. 22.

Harzallah et al. (2006) developed a three-step competence management model that consists of competence identification, competence assessment and competence usage. Competence management is a way for the organization to manage the competencies at the corporation, group and individual levels. It is based on human capital, and make a connection between core competencies, HRM practices and corporate strategy, and highlight the need to design HRM practices to fit the desired employee competence (Medina & Medina, 2015, p. 286).

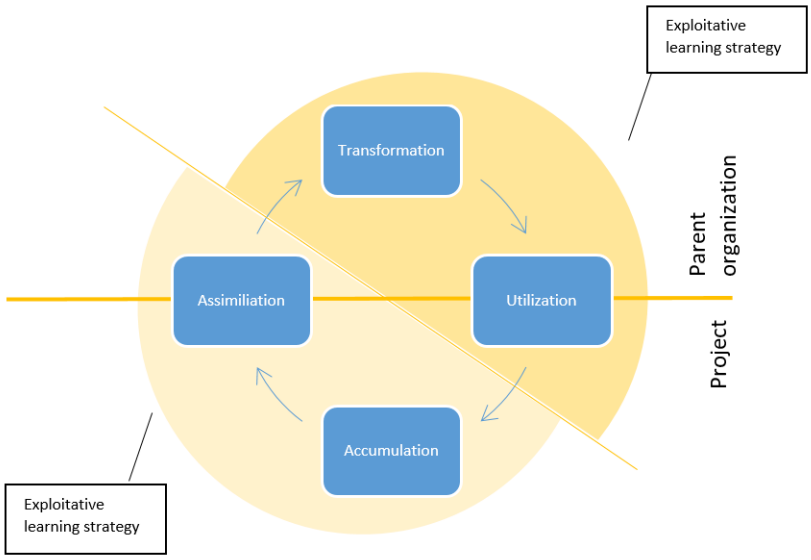


Figure 5 The competence loop

Source: Adapted from: "The competence loop: Competence management in knowledge-intensive, project-intensive organizations," by R. Medina & A. Medina, 2015, *International Journal of Managing Projects in Business*, p. 292.

Competence transformation is the KIPIO's (knowledge-intensive, project-intensive organizations) mechanism to perform competence planning and combine new and existing competence, to identify competence gaps, update the knowledge base or reconfigure core competencies, which takes place in the parent organization. Jerez-Gómez et al. (2005) describe knowledge integration as the state in which new knowledge is combined with existing knowledge to update the organization's knowledge base. Competence transformation could also be related to what Harzallah et al. (2006) call competence utilization, which they describe as when the organization uses information about new competencies to select people for new missions or to define training or recruitment needs (Medina & Medina, 2015, p. 293).

Methodology for achieving competence within the Framework of Project Management Institute progresses through three stages (Project Management Institute, 2001, p. 77): (1) Self-Assessment; (2) Addressing Gaps in Competence; and (3) Consolidation of Competence.

Gaeta, Marzano, Miranda and Sandkuhl (2017, p. 408) summarized in the following list the main steps of approach that they describe in their book:

1. Analysing the organization and the organizational/business units;

2. Extracting competences from all the job descriptions;
3. Extracting competences from all the employees' CVs (Curriculum Vitae);
4. Evaluating the competence gap for each business unit;
5. Assigning priorities to learning programmes;
6. Suggesting the best learning programmes.

Washington and Griffiths (2015, p. 28) graphically presented the process of competency management and linked them to the development of talents in the organization (Figure 6).

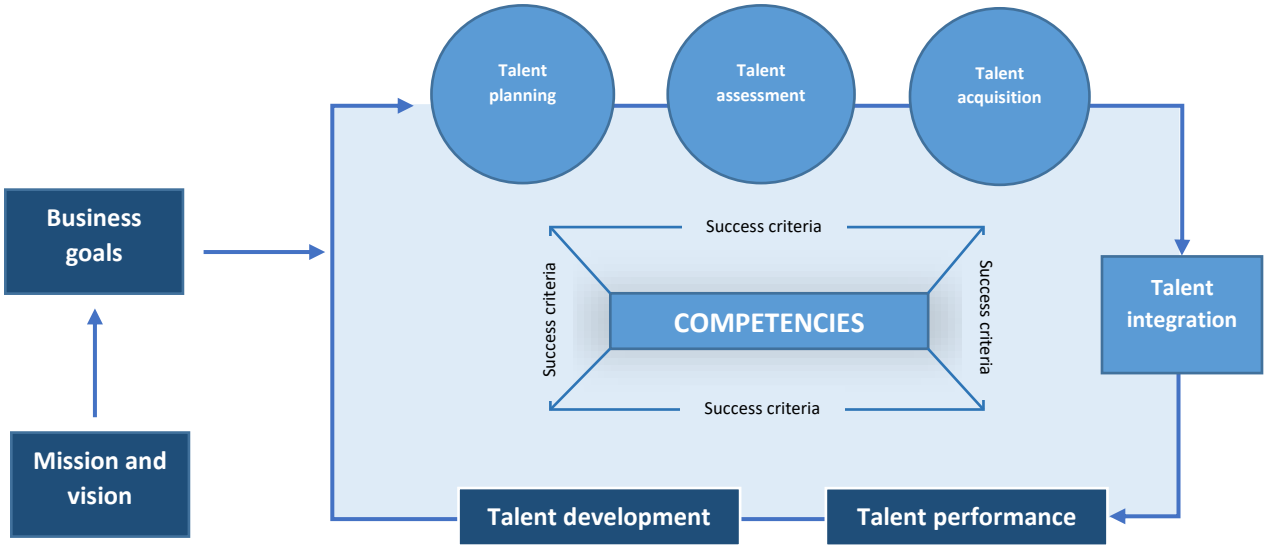


Figure 6 Talent management system driven by business needs

Source: From "Competencies at work: Providing a common language for talent management" by E. Washington & B. Griffiths, 2015, *Business Expert Press*, p. 28.

The model shown in Figure 7 is a model developed by the International Human Resources Development Corporation that divides the competency management process into three main phases: competency assessment, identifying gaps and learning and development.

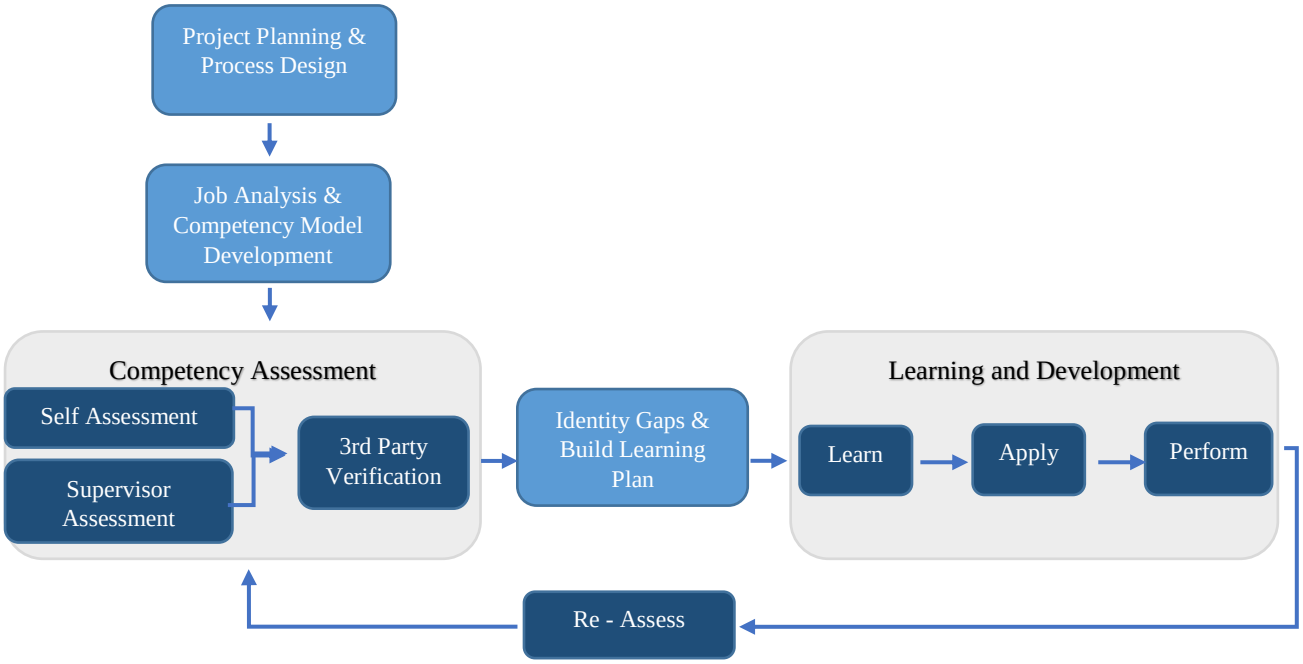


Figure 7 Competency Management

Source: From *Competency Management*, by International Human Resources Development Corporation, 2021, (https://www.ihrdc.com/pdfs/IHRDC-Competency-Management-Brochure.pdf)

Person analysis is the process of studying employee behaviour and performance to determine whether the performance meets the work standards. A standard is the desired level of performance – ideally, the quantifable output of a specific job. This analysis examines how well an employee performs the critical tasks and their knowledge, skills and abilities. A three-step process of analysis according to Saks (2016, p. 122):

1. Define the desired performance,
2. Determine the gap between desired and actual performance and
3. Identify the obstacles to effective performance.

A competency-based approach to performance management according to Dubois and Rothwell (2004, p. 147) use the steps showed below:

- Step 1: Define the work and the competencies required to perform it
- Steps 2 and 3: Identify the employees to do the work and assess employee competencies
- Step 4: Identify and document competency gaps

- Step 5: Prioritize employee development needs
- Step 6: Establish work goals, plans, and standards with the employees
- Step 7: Implement competency development activities
- Step 8: Monitor performance
- Step 9: Conduct performance reviews.

Developing a competency model is a complex, comprehensive, systematic and time-consuming process consisting of a series of steps. Those are (Bahtijarević-Šiber, 2014, p. 133):

- Determining the strategic goals of the organization;
- Discovering the different competencies needed to achieve these goals;
- Determining criteria and standard of performance;
- Analysis and identification of current competencies of employees - determining the inventory of competencies;
- Comparing required and current competencies and identifying the gap that shows whether employees have the necessary competencies, and if not, where they should be developed;
- Determining the needs and methods of development and ensuring the necessary competencies;
- Creating a program for the development of individual competencies.

This process is shown in the following figure:

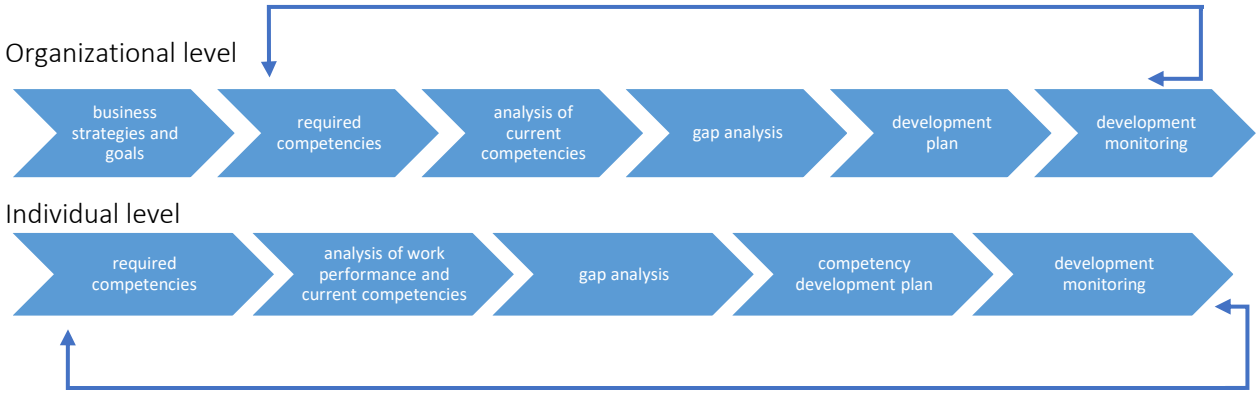


Figure 8 Competency management

Source: From *Strateški menadžment ljudskih potencijala: suvremeni trendovi i izazovi* (p. 133) by F. Bahtijarević-Šiber, 2014, Školska knjiga.

It is a stable and dynamic process that needs to monitor changes in business and work requirements and identify the new competencies they require. It is necessary to constantly monitor the needs of

consumers and markets, technologies, products and services, competitors and their changes and evaluate competencies in relation to them at certain intervals (Bahtijarević-Šiber, 2014, p. 133).

Based on the existing competency management models for the needs of this doctoral dissertation, a modified model is presented as the most suitable, which is a combination of the previously presented models and which consists of 3 phases (Figure 9):

1. Determining the required competencies;
2. Determining current competencies and determining the competency gap between the required and current competencies;
3. Undertaking activities to ensure and develop the necessary competencies.

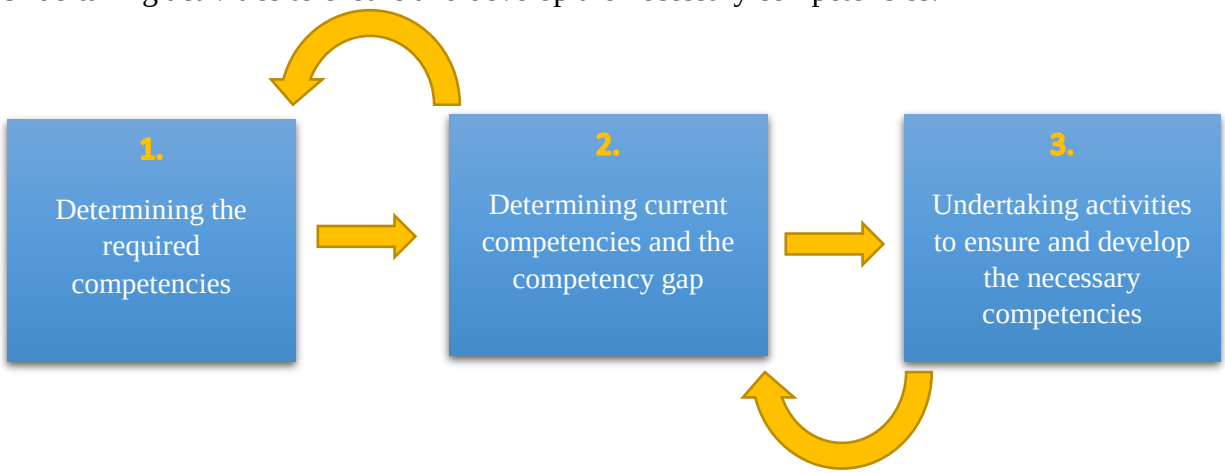


Figure 9: The human resources competency management model
Source: Author's work

2.3.Determining the required competencies

The first phase of the competency management model refers to determining the required competencies. Different authors list different ways of identifying the required competencies as well as the methods and techniques they use in doing so.

According to Saks and Haccoun (2016, p. 122) the first step in their model is to establish standards for performance. These standards will be important in the needs analysis, during training, and in evaluating the effectivenes of training. The idea is to determine the standard or the acceptable level of task performance. This enables a comparasion of each employee's performance level against the standard in order to identify discrepancies and the need for training.

The required competencies determine the key activities and behaviors required in each key area of work. They represent the basis for quality performance of other phases, i.e., steps in the process of competency management. Research of best practice in this area according to Bahtijarević-Šiber (2014, p. 134) shows that organizations begin this process with a key set of competencies - behaviors, ways of thinking and values that they believe should be common throughout the company. Different levels of analysis can be applied in identifying the required competencies (Bahtijarević-Šiber, 2014, p. 134):

1. Job analysis - the object of this analysis is a job that someone performs;
2. Analysis of job constructs or constructivist analysis - the object of analysis is a typical job, i.e., a construct consisting of different but interconnected jobs;
3. Functional analysis - takes as the object of analysis a function, i.e., a meaningful structure of interconnected tasks that are performed in order to achieve a certain business goal;
4. Analysis of key areas - assumes the identification and analysis of those areas of business and business behavior that are crucial for organizational performance and key success factors;
5. Occupational analysis - usually conducted at the level of society in order to establish standards based on competencies for some occupations with regard to the key purposes and functions they may perform, rather than concrete activities in any business.

Job analysis according to Elearn (Auth.) (2009, p. 32) means adopting a method for establishing what is required to perform a job efficiently and effectively. The organization as well as its employees must adapt to changes in the environment that are dynamic, uncertain and complex. Job analysis helps organization to assess its requirements for the future, rather than basing decisions on historical information. The employment of new people in the organization is also based on these foundations, which is oriented towards future needs and not towards past job requirements and goals, i.e., performance. Job analysis according to Klepić, Alfirević and Rahimić (2020, p. 223-224) is the process of gathering information about the content and nature of the job, and the necessary knowledge, abilities, and skills necessary to perform the job. It is important to emphasize that the character of the job, i.e., the profile of the job and the profile of the executor of the job must be done independently of the person currently performing that job. Data related to the list of tasks and duties and the list of knowledge, skills, abilities, experience and other characteristics

necessary for the successful execution of the job must be reliable and should be verified. A job analysis is a process for understanding a job (though some authors, such as Morgeson & Dierdorff, 2011, use the term 'work analysis' to reflect the fact that jobs today are often less rigidly defined than in the past) (Goldstein et al., 2017, p. 12-13). Workplace analysis is the process of determining the main responsibilities in the workplace and the characteristics of the people who need to be employed in those workplaces. The immediate superior manager or human resources specialist through the job analysis process typically collects one or more of the following types of information: work activities; behaviors; machines, tools, equipment and work aids; performance standards; job context and employee requirements (Dessler, 2015, p. 142).

Work analysis (WA) can be defined as the systematic process for gathering information about activities (e.g., tasks, duties, and responsibilities) and the personal attributes an employee must have in order to accomplish the objectives that the organization has established for a particular job, through a procedure of analysis, synthesis, and inference. This analysis consists of subdividing jobs into more detailed elements to find out specific and important aspects for further applied decision-making purposes (Nikolaou & Oostrom, 2015, p. 10). Competency-based job analysis is actually describing a job through measurable, observable, experimental competencies (knowledge, skills, and / or behaviors) that an employee must demonstrate in order to do a job well. This is in contrast to describing work through duties and responsibilities. Traditional job analysis is more job-oriented (What responsibilities does a certain job entail?). Competency-based analysis is more worker-centered. The question there is: "What do these employees need to be able to do in order to perform a certain job that requires the development of different skills?" Defining and recording the competencies needed to do the job involves a process very similar to traditional job analysis. In other words, employees and their superiors can be interviewed and asked open-ended questions about responsibilities and activities within the job, and perhaps identify key events that indicate job success. But that is where any resemblance ends (Dessler, 2015, p. 169-170).

IHRDC's competency specialists work in partnership with their client's technical leaders to perform a job analysis of current positions by reviewing relevant information pertaining to the job, including: existing competency models, job descriptions, equipment lists, process descriptions, operating manuals, and information from job interviews with supervisors and job incumbents. Utilizing IHRDC's Competency Library, their specialists build and customize job specific

competency models and match training resources to each competency unit (International Human Resources Development Corporation, 2021, p. 8)

Each organization has its own organizational chart that identifies, among other things, the number and profiles of employees, ie it has a job description and the requirements that employees need to meet in order to perform this job successfully. This is a typical statement underlining, for people engaged in doing the job, what are the responsibilities, the activities that will involve them, what are the competences they should have, what are the objectives they should pursue. The key subjects extracted from the text of the job description correspond to Competences (ability to perform a series of particular actions) and Competencies (Competence aspects: Skills, Knowledge and Attitudes) (Gaeta et al., 2017, p. 408).

The two major outcomes of a job analysis are a complete and detailed job description and a list of job specifications, ie. the inferred workers' traits required for successful performance. Dessler (2015, p. 142) states that job analysis gathers information to write a job description (a list of what the job covers) and job specifications (what kind of people should be employed in that workplace). The information derived from work analysis (WA) can be classified into three categories: job identification, job description, and job specification. Job identification includes information about job titles and physical and/or functional location. Job description includes a job summary and the workflow breakdown into duties and tasks performed by the incumbents. Other relevant information such as job conditions, methods, or techniques can also be included in it. Job specification refers to job requirements needed to carry out the job's duties and tasks. It may include the knowledge, skills, abilities, and other characteristics (KSAOs) that are used in personnel selection procedures, such as memory or initiative (Brannick, Levine, & Morgeson, 2007) (Nikolaou & Oostrom, 2015, p. 10). A job description, literally describes the job that people do, and a job specification, usually describes the minimum qualifications required of someone to be selected for a job. The problem is that job descriptions are increasingly out of touch with today's working world. Job descriptions usually delineate what people do in a job. They tend to list work activities. But work activities change quickly in light of competitive conditions and technological change. Job descriptions usually do not clarify the measurable work outputs—that is, the final results—of the work and how it is measured. Instead, they focus on volatile work activities. Additionally, job descriptions do not clarify what kind of person should do the work but instead

speak in terms of the work activities that people do. When managers try to pick out people to do the work based on a job description, they have to translate what it says they should do (listed on the job description) and what kind of person is being chosen (not listed anywhere) (Rothwell, 2012, p. 45-46). The job description is a clear and concise summary of specific tasks, duties and responsibilities and the job specification provides a description of knowledge, skills, education, physical abilities and other characteristics necessary for adequate performance of work. The basic task of job analysis is to recruit people who will be able to do certain jobs. In order for applicants for a particular job to perform better a personal assessment of suitability for the preferred job position and organization, and to make the organization determine more accurately whether the candidate is a good choice, certain organizations also apply the technique of so-called realistic job previews (Klepić, Alfirević & Rahimić, 2020, p. 223-224). A job description is a statement of the tasks, duties and responsibilities that a position entails. It also may provide information about the work environment. Unlike a job description, which focuses on work activities, job specifications involve worker attributes. Job specifications describe the knowledge, skills, abilities and other characteristics (KSAOs) that an employee should possess to successfully perform a job (Goldstein et al., 2017, p. 12-16). Job specifications are given scant attention by most authorities on human resources management. One reason is that traditional ways of dealing with them do not tell us much. They merely describe, in a few sentences, the education, experience, and other basic requirements necessary for an individual to begin a job (Rothwell & Kazanas, 2003, p. 109). Sometimes job descriptions are derived directly from an initial specification of organizational structure and a definition of areas of responsibility alone and do not give direct indications of behavioural requirements (Edenborough, 2005, p. 189). One problem with traditional job descriptions is that they are written only to clarify those activities job incumbents are supposed to perform and may not clearly describe measurable worker outputs or results that meet the requirements for organizational success. Another problem with traditional job descriptions is that they quickly become outdated. In today's dynamic organizations, work activities do not remain the same for long. Job descriptions, however, rarely keep pace with changes in work requirements (Dubois & Rothwell, 2004, p. 6). The job description states the purpose, responsibilities and conditions of the job. The person or employee specification outlines the abilities and qualities that would best fit the job (Elearn (Auth.), 2009, p. 37). Companies have always defined a job using a specific set of tasks, obligations and responsibilities, listed in the form of a job description.

Although it has been good for many companies over the past years, it is starting to be considered obsolete today. The world of work has undergone dramatic changes. Yesterday's job descriptions, which have been focused just on one job, simply cannot capture the full range of skills, abilities, and motivations needed by tomorrow's workforce. A good job description accurately reflects the job that employees are expected to do. Employees are expected to play many roles - do whatever it takes to help a company achieve its goals. This is another reason why job descriptions cannot be defined as narrowly as they used to. The question is how to precisely define the work, if no description is made of each position that includes different duties and tasks. A competency-based description will allow more flexibility in assigning jobs to employees, will allow an organization to group multiple jobs that require similar skills within the same job description, and extend the life cycle of a job description (Klinvex, O'Connell & Klinvex, 1999, p. 2-3).

Traditional workforce analysis—like traditional work analysis, its counterpart—is inadequate for anticipating future organizational needs. There are only a few terms associated with workforce analysis (Rothwell & Kazanas, 2003, p. 104-105):

- A position specification is a list of concrete requirements inferred from a position description—educational, experiential, and personal. These requirements are considered minimum entry-level knowledge, skills, and abilities necessary for one position in one organization.
- A job specification lists the human characteristics that are deemed essential to learning the job. It translates the general work requirements found on the job description into the necessary educational, experiential, and personal requirements needed by someone to do the job.
- A person description is similar to a job specification, but it is more detailed. It translates each task listed on a job or position description into the skills needed by an individual to carry out the task.
- A job performance standard, sometimes called simply a work standard, is a norm that establishes how well an activity should be performed. Based on work analysis, it is a yardstick against which individual performance is to be assessed.
- Employee performance appraisal, assesses or measures how well individuals are performing their jobs over a specific time period. While a job description sets forth what people are supposed to do, employee appraisal evaluates how well an individual actually carries out those job description activities, duties, or responsibilities over a given time.

- Performance management is the process of establishing a work environment where people want to perform, and where they receive continuous feedback about their performance. Performance appraisal is usually included as part of a more comprehensive performance management system.
- 360-degree appraisal is a process by which individuals are rated by those who surround them (as in a circle). 360-feedback systems can be used for development or for appraisal.
- A skill inventory is a general term referring to any manual or computerized catalogue of human characteristics available to the organization. This enables decision-makers to find out what kinds of people are available, usually within the organization.
- A human resources information system (HRIS) is a comprehensive, almost always computerized database that contains information for many purposes. It differs from a skill inventory in that it is more complete, containing all personnel and payroll information in a form capable of nearly infinite cross-indexing and matching.

Organizations are human institutions, and jobs are carried out by people. For both reasons, the success of organizations in achieving goals and long-term plans depends on the talent of people at work and in the organization. By comparing what people do and what they should do (work analysis data) and what types of people do the work and who should do it (workforce analysis data), decision makers begin to collect data on the strengths and weaknesses of an organization's HR. These data can be subsequently compared with predictions about the organization's future talent needs as a means of developing strategic human resource plans. This will also facilitate the implementation of strategic business plans at the level of the entire organization.

Various methods of job analysis and competency modeling have been developed over the years to inform competency definition and selection. One of the ways to identify competencies is to identify the most successful employees who are called "exemplars" in the literature.

Griffiths and Washington (2015, p. 12) stated that interviews and focus groups with high performers are the centerpiece of most modeling processes. Interviews are conducted with exemplar individuals to identify the knowledge, skills, and abilities they possess that set them apart. High performers are classically identified as those individuals with a history of generating both results and respect. They are also likeable (a shorthand for emotional intelligence) and passionate about their work. A significant portion of the high-performer interview is dedicated to soliciting

examples (or stories) of effective and in effective performance, which are later used to provide real life illustrations of the competencies in use. Rothwell (2012, p. 46) stated that competency models may be of two kinds. One describes the characteristics of a person who meets the minimum requirements. The second kind of competency model is tied to productivity improvement and competitive advantage. Research has shown that not all workers produce equal results. Some people are simply more productive than others. The most productive person in a job category is called the exemplar. Every job category or department has them. The exemplar may be as much as twenty times more productive than an average, but fully trained, performer in the same job category. That means that each exemplar may equal twenty workers. A competency model describes the most productive performer—the exemplar—and what makes that person so productive. The stakes are high, and if organizations could identify the differences between their merely successful and exemplary performers, then they might be able to achieve quantum leaps in productivity improvement. They might be able to save money by preserving productivity with fewer people. Dubois and Rothwell (2004, p. 22-23) concluded that the information gained from identifying the competencies (traits or characteristics) used by exemplary performers helps all workers to improve their performance. Even modest improvement can significantly increase overall productivity.

By knowing the competencies that distinguish an exemplary performer from a fully successful one, it is possible to help all workers who do the same job achieve beyond the fully successful level. Competency identification must be an outgrowth of the organization's earlier work to identify its desired strategic results, the relationship of those results to business success, and the connection between worker results and organizational success. After these facts are known, work analyses must identify and verify the tasks workers perform and pinpoint the results expected of them, at a given level of quality, within the constraints of the organization (Dubois & Rothwell, 2004, p. 85-87).

There are numerous methods that organizations can use to discover the necessary individual competencies, and according to Bahtijarević-Šiber (2014, p. 135) some of them are: expert method, structured behavioral interview, known group method, workshops, critical case method and scenario method.

The best results are given by the combined application of different methods.

Based on a detailed analysis and collected data on competencies, the following is determined (Bahtijarević-Šiber, 2014, p. 136):

- Key groups, clusters or areas of competence (different organizations call them differently);
- Key activities and competencies in each area;
- Required levels of competence;
- Behavioral indicators related to a certain level and performance criteria that show the behavior expected in the application of competence.

Identified key competencies must meet some essential requirements **(**Bahtijarević-Šiber, 2014, p. 137):

- Selected competencies must be crucial for business success, i.e., success in certain positions and roles:
- Each key competency must be unique and specific to the business;
- Competencies must determine the essential behaviors that are required and expected in performing important roles and tasks in the organization;
- Each competency should contain several levels, each of which has a certain degree of expected success;
- The competencies and behaviors that indicate them must be precisely and clearly described;
- An integral part of the model and system of competencies must be quality descriptive scales that describe different levels of competencies that require different roles and jobs;
- Key competencies must be clear and understandable to all employees in the organization.

Information on duties, responsibilities and activities within an early place can be gathered in a variety of ways (for example, through interviews or questionnaires). The most popular methods of data collection for job analysis according to Dessler (2015, p. 145) are interviews, questionnaires, observations and/or work notes/diaries. All of them make it possible to obtain realistic information about what people are not actually doing in a job. Managers use these methods to develop job descriptions and specifications.

Qualitative methods such as interviews or questionnaires are not always appropriate, which is why quantitative methods of job analysis are used, such as the job analysis questionnaire and the approach of the Ministry of Labor.

Competency identification (Dubois & Rothwell, 2004, p. 28-32) is a means of clarifying key requirements for a job category or department and should be completed only after the dimensions of the work (for example, activities, tasks, setting, and tools) are identified. “The Job Competence Assessment Method (JCAM**)”** was one of the first competency identification methods. In the behavioral event interview (BEI), the interviewer asks a series of detailed questions about actions performed in the work setting that workers perceive to be successful or unsuccessful and the thoughts, feelings, and outcomes that accompanied them. Isolating the characteristics unique to exemplary performers is a common goal of this approach. “The competency menu method” relies on competency lists obtained from sources in the private and public domains. Practitioners create menus from the lists and then use the menus to identify the competencies necessary for a work role or traditional job in an organization. Many vendors have made competency menus available; they can also be found through a quick search of the World-WideWeb. Competency menus from external sources may be of questionable value to an organization. Practitioners should carefully examine the origins of the competency menus they have found. “The modified DACUM method” is a popular job analysis process that relies on a disciplined, focus group approach for information collection, analysis, and presentation of results. DACUM process to includes the identification of abstract competencies (for example, patience) that are frequently difficult to identify and verify. The modified DACUM method begins by assembling work experts. These experts may be exemplary performers, managers, supervisors, team leaders, and possibly customers if they are highly informed about the work to be profiled. The experts are asked to describe the work activities people perform daily to achieve the necessary results. These work activities become the basis for discovering the underlying competencies essential to achieving work outputs or results.

Job analysis methodology according to Elearn (Auth.) (2009, p. 34) includes the following:

- Observation which involves recording everything the job holder is doing as part of the job. It provides an overview of a job, but does not highlight the level of difficulty of the various tasks or the importance of each.
- Diaries and logs which involve the job holder recording what they do. This might happen at the end of a given time period or when they change from one activity to another.

- Job analysis interviews which involve interviewing the jobholder, without a predetermined list of questions or checklist. It can involve talking around the job description or bringing two jobholders together to talk about their work.
- Critical incident technique which concentrates on collecting information about critical incidents that are related to success and failure in a job. The incidents are recorded in relation to how the person handles certain situations and a composite picture is built up.
- Repertory grid which allows the identification of good and poor performance. It is generally undertaken with the manager or supervisor of people doing the same job, using a system of cards. The names of three people are written on cards, separated into two piles - one for good performers, one for poor. The supervisor then pulls out two good and one bad, and is asked to describe how the two good performers are similar and how they differ from the bad. The exercise is then repeated.
- Checklist/inventories which involve developing a list of tasks associated with a job and asking the jobholder to indicate which ones they perform and to rank them in order.

The result of this first phase, i.e. the entire mentioned process, is the identification of the necessary competencies, then the determination of the structure of competencies and the determination of the required level or degree of competencies. Ultimately, a catalog of competencies is developed. In addition to competencies, this catalog also contains detailed descriptions of the various levels and stages of their development.

Bahrijarević-Šiber (2014, p. 137) as a result of this process provides detailed lists and descriptions of competencies and behaviors that indicate their existence, scales that serve to determine and assess them in the individual. Organizations typically seek to identify fewer key activities and competencies such as work management, working with others, personal effectiveness and job expertise. Some organizations use only three categories of competencies: general, leadership and professional, or business, professional and social competencies.

Successful competency identification according to Dubois and Rothwell (2004, p. 86-87) relies on the following information:

- A thorough understanding of the organization’s strategic business objectives;
- The current and future work outputs or results to be achieved by the organization;

- The outputs or results expected of the worker group under investigation, and how those outputs or results support the achievement of organizational objectives;
- The major work tasks that must be performed in order to achieve the required outputs or results.

This information must be available for use before competency identification begins. The components must be investigated in this order if valid and reliable competency identification results are to be obtained. After competency identification is completed, managers of the workers under investigation and appropriate organizational leaders must endorse the competency lists and their definitions.

2.4. Determining current competencies and determining the competency gap between the required and current competencies

The second phase in the analysis of competencies refers to determining current competencies and determining the competency gap between the required and current competencies. Once the necessary competencies required for a particular job have been identified, the next step in the process is to determine what competencies current employees have and identify the gap between the required competencies for a particular job and those that employees have now. This is a very important step in order to realize how to overcome this gap.

That, too, is a kind of assessment of skills and competencies that employees have. It can be performed in several ways, namely (Bahtijarević-Šiber, 2014, p. 137):

- Objective (psychological) testing in order to establish the level of important competencies such as critical thinking, creativity, encouraging others, the ability to cooperate and build alliances, etc.;
- Behavioral interview;
- Critical analysis of career and business experience;
- Interview and 360% estimate;
- Peer assessment.

Based on the performed assessment, a file is created for each employee with data on education, training, experience, work experience, performance, etc., as well as an assessment of the level and type of competencies that the employee possesses. The same is done for work teams, department and organization as a whole and all this is an integral part of the information system of HR companies.

After the analysis, i.e. the assessment of current competencies, the next step is to determine the differences or gap between the required and current competencies, or what is and what should be. The competency gap is the difference between the current and required level of competencies. It is determined on the basis of a comparison between the required and current competencies for each employee (but also the department, function, the entire organization).

When organization has extracted the competence ontologies from all the available job descriptions related to the positions and all the CVs of the people working there, it may proceed with the competence gap analysis. The process is a comparison among the competence ontologies extracted from the job descriptions with the ontologies extracted from all the CVs of the people working inside the business unit so as to evaluate the competence gap of the unit. To do this evaluation with more accuracy, organization decided to introduce a weight that depends on the position of each considered person in the organizational chart of the business unit (Gaeta et al., 2017, p. 409).

This process is shown in the following figure:

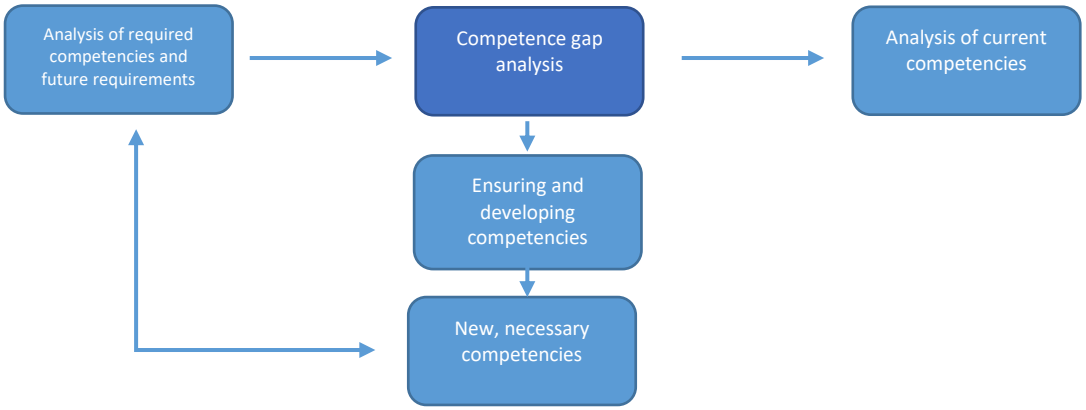


Figure 10 Competence gap analysis

Source: From *Strateški menadžment ljudskih potencijala: suvremeni trendovi i izazovi* (p. 138) by F. Bahtijarević-Šiber, 2014, Školska knjiga.

Several methods for analyzing current competencies and recognizing gaps are mentioned in the literature. Determining the gap between desired and actual performance is the second step of this proces, according to Saks and Haccoun (2016, p. 122). In this step, a comparision is made between the standard level of performance and each employee's perormance. Employee performace data can be obtained from performance appraisals, work samples, observations, self-assesments of competencies and formal tests.

There are many methods and tehniques for conducting a needs analysis. The methods differ in terms of quality and type of information obtained, as well as the time and cost of collecting it. Saks and Haccoun (2016, p. 127**)** described nine basic needs analysis methods: observation, questionnaries, key consultation, print media, interviews, group discussion, test, records and reports, and work samples. Some methods of needs analysis are better than others in terms of response rate, quality, usefulness of the data, and cost. The best method, however, depends on the time and money available the experience of the analyst, and the nature of the responses.

The information gained in these assessments gives a current picture of the status of each job role's competency. This information can be used to identify the gaps between the current status and organizational need. A gap analysis can be done for each element on the skills and knowledge.

The assessment and gap analysis identifies the gaps between the current status and competency needs. The findings and recommendations from the gap analysis are the basis for developing a gap closure plan. The analysis could show any of the following gaps:

- The elements that do not have someone filling the need for competency;
- Which individuals, in their job roles, have lack of competency;
- In which competencies, the individuals need to improve their skill, knowledge, and experience to show competency in their job roles.

According to Bahtijarević-Šiber (2014) there are two types of gaps shown in the following table.

Table 1 Types of competency gaps

Types	Areas
Strength	An area of unique competency in which a person is considered an expert or extremely successful
Development opportunities	Area in which a person needs to build competencies in order to achieve the required level of required competencies

Source: Bahtijarević-Šiber, F. (2014). *Strateški menadžment ljudskih potencijala: suvremeni trendovi i izazovi*. Školska knjiga. p. 138

The analysis can also highlight where an employee may be competent in elements unrelated to his or her job role. These gaps, when compiled into findings and recommended items, will set the framework to develop the gap closure plan. To address these gaps, a variety of training and non-training methods can be used, and supporting materials can be developed to supplement the gap closure action items. Additionally, prerequisite scan must be developed for the competency levels,

as stepping stones must be completed before advancing to the next competency level (CCPS, 2015, p. 51-53).

Most organizations have some form of formal employee performance appraisal system. It has almost become a ritual; supervisors are required to fill out forms and meet with their subordinates at least once a year. However, they are not very happy to do that job. This is precisely the reason why it does not give good results and even has the opposite effect on employee performance. In addition, it focuses on past employee performance. For this reason, it might be best to concentrate formal evaluations for some purpose — development, for example — while providing daily concrete feedback for specific performance issues. The issue of what to evaluate has traditionally been approached through ratings based on traits, outputs, critical incidents, behaviors, and objectives (Rothwell & Kazanas, 2003, p. 113-118):

1. Trait Rating

A trait is a personality attribute, a descriptive term useful in labeling. Examples of such terms include ambitious, creative, decisive, tenacious, and cooperative. Trait rating is advantageous in that it appears to furnish a common basis for evaluating all people in an organization, regardless of their jobs or locations.

2. Output Ratings

An output is a tangible work product or work result. Examples include the number of orders taken, the number of units made, or the number of people served. Outputs can also include ratings or measures of quality as well as quantity, such as the number of complaints received, the number of errors, or the number ofrejected units. Output ratings are, as a rule, easily verifiable. The objectivity of output ratings, in fact, is a major advantage to using them overtrait ratings, which can vary substantially across raters.

3. Critical Incident Rating

A critical incident is a statement that describes very good or very bad performance. The major advantages of the critical incident rating method are that they bring greater objectivity to the process than trait ratings; the potential is greater than output ratings for dealing with jobs that have hard-to-define outputs (examples include research scientists, auditors, medical doctors, and HR planners); and the method is a greater source of information than either trait or output ratings.

4. Behaviorally Anchored Ratings

A behaviorally anchored rating scale (BARS) consists of a list of common behaviors ranging from those deemed most to least desirable, presented in a scaled format. This approach to performance appraisal is especially appropriate when the focus is on work behaviors or processes (how should the work be done?) and not so much on work results (what outcomes resulted?). The advantages this scale has over other employee appraisal methods is that it minimizes subjectivity in ratings, provides the basis for specific feedback on performance to job incumbents, and clarifies supervisory expectations in ways likely to improve future performance. The BARS is especially well suited to use with competency models - the narrative descriptions that result from competency identification—and with value statements, the codification of expected values in an organization that are the typical outputs of value clarification. Like the critical incident approach, it tends to focus attention on past rather than future performance.

5. Management by Objectives (MBO)

Management by objectives focuses on work results or outcomes more than on work processes. Unlike trait ratings, it lends itself to objective verification; and unlike output ratings, it can be used with jobs with hard-to-define outcomes. Objective-setting is an organization-wide process; one laudable aim is to link each person's targeted work results to the organization's targeted competitive results.

Competency assessment according to Brunt (2008, p. 15) is "systematic and allows for a measurable assessment of the person's ability to perform required activities". Assessment centres according to Edenborough (2005, p. 148) use exercises designed as simulations of situations likely to be encountered in a particular job or role. An individual's performance on the exercises, then, is regarded as providing evidence for the likelihood or otherwise of success in the role concerned. The approach may be applied in selection or in development. Interpretation of the behaviour generated in the exercises is undertaken by trained assessors making their interpretations according to acompetency model. Hence a critical element will be the specification of the competencies, based on a job analysis.

In addition, it is important to determine who conducts this analysis. The literature points out that employees can conduct the analysis themselves, it can be a colleague, superiors, customers or a third party, then experts, assessment centers, etc.

International Human Resources Development Corporation's (IHRDC) (2021, p. 8) competency assessment process typically is a three-step process that includes an employee Self-Assessment, Supervisor Assessment, and Qualified Assessor Assessment or Verification. It is designed to involve employees so they understand how the process works; ensure supervisors, who are in the best position to assess the employee, give input; allow a qualified assessor to provide an objective third opinion and help normalize statistical variance across the organization. At each assessment step, users can upload evidence and comments to assure and substantiate an individual's competence level.

There are many sources of needs analysis information. According to Saks and Haccoun (2016, p. 131-132) among the most important and often used are employees, managers, human resources staff and subject-matter experts who are familiar with a job.

Rothwell and Kazanas (2003, p. 121) tried to determine who needs to handle the evaluation in the organisation. Dubois and Rothwell (2000) consider that supervisors usually handle evaluations. However, there are alternatives: Job incumbents can appraise themselves; their peers can do so; subordinates can do so; or a combination of groups can participate in the process to create the increasingly popular full-circle, multi-rater assessment.

Competency assessment methods according to Dubois and Rothwell (2004, p. 88-93) are: self-assessment, superior or "boss" assessment, peer and work expert assessment, customer or client assessment, certification or licensing assessment, and assessment centers.

Self-appraisal (self-assessment) is a method in which employees evaluate themselves and their work performance. Employees are evaluated according to characteristics or according to critical incidents and their responses are compared with the evaluations of superior managers. With this method, it is necessary to be careful because employees for various reasons can hardly be objective when evaluating themselves. This self-assessment can provide excellent information to managers about employee perceptions and expectations.

Peer appraisals (peer-assessment) and work expert asessment, involve the conduct of employee performance evaluations by colleagues. They can be more accurate and frequently more concrete than ratings conducted by superiors. One approach is to ask people in a work unit to rate each other anonymously. The supervisor compiles scores for each employee and can even include his or her own independent (and previously prepared) ratings in the composite. Some of the possible variants

of this type of assessment is interviewing employees. Interviews can be conducted by an employee of HR department or a person outside the company (expert).

Full-circle, multi-rater assessment - sometimes called 360-degree appraisal - is an approach to rating an individual performer who uses the people who interact with them. (The term “360 degrees” comes from the number of degrees in a circle.) A full-circle, multi-rater assessment is meant to address the problem of rater bias by smoothing out the biases through many raters. It is thus possible to have an individual rated by one or more organizational superiors, one or more organizational peers, up to five subordinates, and perhaps other raters as well—including representatives of customer groups, company suppliers, company distributors, and even family members of the individual.

Appraisal of senior managers is a method that is very often used in organizations to assess employees and their performance. The premise for this is that senior managers are qualified and trained to make assessments, that they will not be biased, that they contact employees often enough and that they have the technical knowledge to assess which competency needs to be applied in order to evaluate an employee qualitatively.

Customer assessment is a method that uses employees' customers or clients to evaluate employees. Here, too, there is a presumption that the client or customer is familiar with the work performance and that he has sufficient contacts and that he can objectively and qualitatively give an assessment of the employee.

Certification or licensing assessment represents a method where certain professional associations establish certification programs that assess and verify the competencies of practitioners. The objective of the programs is usually to build credibility for the profession. State and local government licensing agencies often require certification for those who apply to practice in their jurisdictions.

Assessment centers are often used to determine the development needs of high-potential candidates for senior leadership positions. They can also provide competency assessment for managers, supervisors, and individual contributors. These results may be used to help individuals improve performance or prepare for new work roles, to assess individual potential, or to determine which employees would be the “best fit” for specific work projects or roles. An assessment center can be an important element in a competency-based HR planning approach. In the assessment center process, the persons who are being assessed perform work activities in simulated environments or

future scenarios under the direct observation of trained assessors. Assessors are usually work experts, managers, or senior managers.

Multirater competency assessment is an increasingly popular approach in organizations. Many variations are possible, depending on organizational setting, resources available, and other factors.

Rothwell and Sredl (2000) emphasized that training is based on needs, defined as gaps or discrepancies between an ideal and an optimal state. They are different from wants and interests, which are consciously desired and arise from within the person. Needs, on the other hand, arise from the job, from a comparison between desired and actual work methods, or between desired and actual work results. Training needs assessment is the process of discovering precisely what gaps exist between what people know, do, or feel and what they should know, do, or feel in order to perform competently.

The following sources for the analysis of training and education needs are most often mentioned in the literature: organizational analysis, work analysis and individual analysis.

In the broad organizational analysis, trainers compare what the organization is doing and what it should be doing. Trainers focus attention on organizational objectives, skills, inventories, organizational climate, and indices of efficiency, including costs for labor, materials, and distribution. The second source is work analysis. Somewhat more narrow than organizational analysis, work analysis compares what the job requires to what the job incumbent can do. Trainers identify individual skill deficiency, the gap between what people need to perform and what they can presently do. Such deficiencies are measured by comparing job results to work standards, job descriptions to employee skills, and perceptions of job requirements to those actually demonstrated on the job. The third source is individual analysis. Most narrow of all, individual analysis is centered on a person doing the job. Does he or she know what to do? How to do it? The minimal acceptable level of performance? Attention focuses on comparisons between what should be at present and what is actually happening as measured by employee performance appraisals, tests, and attitude surveys (Rothwell & Kazanas, 2003, p. 359-360).

According to Martocchio and Ferris (2003, p. 202-203) there are three different types of needs assessment: organizational, task, and individual. An organizational needs assessment takes a holistic look at the kind of training needed and who should be trained. More specifically, the analysis identifies global issues that could impact training needs; anything new or lacking in the

legal arena. In addition, an organizational needs assessment examines the extent of support from senior management, and the degree of willingness on the part of employees to participate in and take responsibility for outcomes. It also explores resources available, including money, facilities, materials, and in-house expertise. Resources for accomplishing an organizational needs assessment include mission statements, strategic plans, skills inventories, and analyses of efficiency indices, e.g., costs of labor, annual reports, and organizational charts. A task needs assessment reveals information about a job or a job family in terms of knowledge, tangible skills and abilities, and intangible qualities needed to achieve maximally successful job performance. Job descriptions serve as a valuable source in achieving this end, as do individual interviews with incumbents, former incumbents, and managers. Focus groups consisting of six to ten participants are an alternative to one-on-one interviews when time is limited. Individual needs assessments reveal information concerning how well specific employees are functioning in their jobs. These assessments further determine which employees require training and what kind. Members of HR generally turn to employee performance management reviews, documentation of any disciplinary matters, work samples, interviews with employees and managers, focus groups, questionnaires, and surveys for input. A needs assessment should be the first step before any training and development venture. With it, the organization identifies and determines specific training requirements.

2.5. Undertaking activities to ensure and develop the necessary competencies

Once the gap between the required competencies and the competencies that employees possess has been identified, the development of a plan and program for ensuring the necessary / missing competencies for each employee, group, organizational unit and the entire organization is approached. It is important to emphasize that there are a number of solutions, the most commonly used are employee training. However, training is not always the best solution, but there are other options that an organization needs to consider, from relocating employees and laying off, to recruiting new staff from outside. According to Bahtijarević-Šiber (2014, p. 139) there are three key activities of the HRM to ensure the necessary competencies:

- Development and education of existing employees;
- Acquisition and selection of competencies from outside;
- Relocation or dismissal of employees who cannot develop the necessary competencies.

Klepić, Alfirević and Rahimić (2020, p. 234) presented several solutions that occur at this stage, i.e., after the gap has been identified. They see the solution in promotion, dismissal (degradation) or relocation of employees. In addition, they pointed out that the missing competencies can be improved or acquired through the process of training and development of employees. According to Stoner and Gilbert (2002), promotion means a change of position in the organization to a higher organizational level, which requires greater knowledge, skills and abilities. Promotion can be a reward for excellent results or an effort by a company to harness the potential of its employees. It is especially important that employees are promoted correctly, ethically and impartially, based on rated performance. In situations where the employee does not meet the expectations in his workplace or violates the policy of the organization, one of the measures applied is the degradation, i.e. demote associates to a lower position. If degradation is not possible, then it is better to approach dismissal than to remain in the current position (the workplace). Relocation (internal deployment, lateral transfer) is recommended to the management of organizations to use relocation in order for employees to expand their experiences, gain new knowledge and improve for new vacancies. So, this measure increases the motivation and satisfaction of employees in the organization (Klepić, Alfirević & Rahimić, 2020, p. 234).

According to Saks and Haccoun (2016, p. 123), if all the barriers to performance listed in the table 2 are considered, only the first two (lack of knowledge and skills) suggest a training solution. Other barriers have to do with motivation and the work environment. Clearly, the solution to performance problem is not always going to be training. When there is a performance problem, the manager must first describe the problem and decide whether it is worth spending time and money to correct it. When a performance problem is important and worth pursuing, the true analysis begins.

Table 2 Barriers to effective performance

HUMAN	TECHINCAL	INFORMATION	STRUCTURAL
Lack of knowledge	Poor job design	III-defined goals/objectives	Overlapping roles and responsibilities
Lack of skills	Lack of tools/equipment	Lack of performance measurements	Lack of flexibility
Lack of motivation	Lack of standardized procedures	Raw data, not normative or comparative data	Lack of control systems
Counterproductive reward system	Rapid change in technology	Resources sub-optimized	Organizational political climate
Group norms	Ineffective feedback	Informal leaders	

Source: Adapted from *Managing performance through training and development* (p. 123) by A. M. Saks & R. R. Haccoun, 2016, Nelson Education.

And other pre-training solutions, such as lowering expectations, simplifying a task, or moving an employee to a job that better suits his or her knowledge and skills. In addition, it is important to remove all other obstacles in the environment. Training will not be a good solution when the environment is the cause of poor performance, and this may include lack of authority, inadequate tools or technology, conflicting responsibilities, work overload, etc. removing these barriers in the work environment and replacing them with a supportive environment might be the best solution to the performance problem. Ultimately, if there is a true lack of skills and the person has no potential for change, then replacing the person could be the only solution. If the person has the potential for change, then the training could be the potential solution (Saks & Haccoun, 2016, p. 125 – 126).

Where there are competency gaps, the review team will need to discuss the methods to close those gaps and determine which method is most appropriate. Ideally, incumbents will possess all the necessary competencies to fulfill the criteria established by the company. If incumbents do not possess the necessary competencies, there are a number of options available to establish the required competencies (CCPS, 2015, p. 54-55):

- Tasks or Personnel Reassignment - When a gap has been identified and the requisite skill set is available within the company, the person with the desired competency may be reassigned to support the efforts where the gap is identified. This stop-gap approach may be taken until such time that another person within the desired team can develop this competency on a long-term basis.
- Internal & External Training - To fill a competency, a person may be chosen and trained to the competency of that element. In many instances the training required for some of the lower proficiency levels can be met internally through either formal, such as classroom-based training sessions, or more informal one-on-one training, such as on-the-job supervision, coaching, or mentoring. For the “Expert” proficiency level, specific training courses or certifications may be needed. It may be best to require external training for competencies that need to be met at a higher proficiency level, such as understanding facility siting, human factors, or complex unique processes.
- External Resources - If the competency does not exist within the company, hiring someone into the company with the skills, knowledge, or expertise to close that gap is a possible solution. This solution may take a significant amount of time to find a person with the requisite

competencies, and hiring is often viewed as a long-term commitment on the part of the company. If the competency is needed only for the short-term, such as to support a specific project phase, then an alternate solution is to work with a consultant or someone available with the needed expertise for certain projects that require that competency.

According to Project Management Institute (2001, p. 78) measures to address gaps between required and existing competencies are:

- Attendance at training and education programs aimed at gaining a better understanding about human behavior and motivation;
- Gaining relevant experience in the workplace, either directly or by related means;
- Networking with other managers through professional industry or organizational agencies;
- Working with a mentor who can help managers better assess themselves within this competency dimension;
- Exposure to peer and/or management reviews and feedback.

Saks and Haccoun (2016, p. 122) concluded when a gap exists between the standard and an employee's performance, it is necessary to determine the cause of or reason for the gap. Performance problems can be the result of deficiences in execution as well as deficiences in KSAs (knowledge, skills, and abilities). There are numerous reasons for the existence of competency gaps such as: not knowing the standard, not receiving feedback about performance, inadequate compensation, a lack of motivation etc. It is important to determine the causes of the gap before defining possible solutions to bridge the gap.

As pointed out by a large number of authors, it is often possible to bridge the gap through the process of training and development, and more and more funds are being invested in training and development of employees in companies. According to Larsen and Mayrhofer (2006, p. 118) initiatives to promote training and development in SMEs are extensively promoted around Europe. One of the major challenges with regard to training in SMEs is to convince owner-managers that training is an investment and not an operational cost.

Employee training and development encompass terms that are often identified but there is a significant difference between them: learning, training, education and development.

Employee training and development programs represent the organization’s planned efforts to facilitate and stimulate employee learning related to the skills, knowledge, and behaviors necessary

for the job (Keys and Wolfe, 1988). The term training is most often used to denote teaching employees to perform current jobs with a standard level of performance, while development includes teaching employees a much wider set of skills that will not only benefit the employee in the current job but will prepare them for much greater responsibilities they will take on in some future jobs. This means that development is not limited only to the employee's current job, but that its goal is to prepare employees for future jobs or career development demands in the long run. Learning is a relatively permanent change in abilities, knowledge and behavior that is not the result of a developmental process but of practice or experience. Changes in abilities that occur as a result of learning can occur in the following five forms: verbal information, intellectual abilities, motor skills, attitudes, and cognitive strategies. Continuing education and training of employees is the safest way to achieve long-term sustainable competitive advantages. Absence or insufficient investment in education and development of employees is the most common cause of loss of market position, especially in industries characterized by rapid technical and technological progress and operating in an extremely dynamic and complex environment **(**Klepić, Alfirević & Rahimić, 2020, p. 235). According to Bach (2005, p. 211-212) learning is normally taken to encompass education and training, both formal and informal, whereas training still tends to be understood as relating to formalized learning activities such as courses and structured programmes of activity under guidance from others. The term education or training refers to the acquisition of competencies of employees in order to more successfully perform current tasks. Development refers to the acquisition of competencies of employees that they need for current and future jobs. Truitt (2011, p. 2) defined training as "the planned intervention that is designed to enhance the determinants of individual job performance". It is related to the skills an employee must acquire to improve the probability of achieving the organization's overall business and academic goals and objectives. Saks and Haccoun (2016, p. 8) stated that training refers to formal and planned efforts to help employees acquire knowledge, skills and abilities to improve performance in their current job. Training usually consists of short-term focus on acquiring skills to perform one's job. According to Bahtijarević-Šiber (1999, p. 721), on the other hand, education means the expansion of the overall knowledge, skills and abilities of a person that enable him to make independent decisions and act in different situations. "One of the most frequently encountered human capital development interventions is training" (Campbell & Kuncel, 2001, p. 278). To enhance job performance, training

skills and behaviors have to be transferred to the workplace, maintained over time, and generalized across contexts (Holton & Baldwin, 2000) (Truitt, 2011, p. 2).

Employee training is a complex process that is usually realized through four basic phases (Buble, 2000. p. 413): identification of training needs, planning of necessary training, conducting training and evaluation of completed training. Dessler (2015, p. 293) divided the training process into 4 steps: needs analysis, instruction design, program implementation and program performance evaluation.

Training has multiple positive effects for the individual, organization and society. Even though authors have suggested that training programs are vital to organizations (Knoke & Kalleberg, 1994; Liu, 2002; Wang, 2001), training programs are often the first to go out in crisis (Young, 2008). These are short-term effects that managers want to achieve by reducing costs, but in the long run this has negative consequences. The training is seen as relevant to fostering a positive relationship between learning satisfaction and the effectiveness of applied learning (Liu, 2002; Wang, 2001). Both formal and informal training opportunities are thought to provide a development of talent in organization. (Becker & Gerhard, 1996; Bowling, 2007; Davenport, 2006; Peters & Waterman, 1982). In addition to that, training and education have been shown to have a significant positive effect on job involvement, job satisfaction and organizational commitment. Education and training must be incorporated into a formal system of the enterprise in order to achieve set individual and organizational goals (Liu, 2002; McGehee & Thayer, 1961). Training is related to the skills an employee must acquire to improve the probability of achieving the organization's overall business and academic goals and objectives. Positive training offered to employees may assist with the reduction of anxiety or frustration, which most employees have experienced on more than one occasion during their employment careers (Cheng & Ho, 2001). According to Truitt (2011, p. 3) the larger the gap between the skills required to perform a task and the actual skills available for performing a task, the greater the lack of job satisfaction and the greater the increase in employee turnover within the organization. Noe et al. (2014) consider that learning through employee participation in formal training and development programmes influences the development of human capital resources. According to Salas et al. (2012) training is the systematic approach that affects individuals' knowledge, skills and attitudes particular to a specific occupation, and, if it is based on the science of training and learning, it should lead to changes in cognition, behaviour and

affect. Reviews of training and development literature have identified the multiple benefits of training and development for individuals, teams, organisations and society (Susomrith, Coetzer & Ampofo, 2019, p. 497). Training and development activities allow organizations to adapt, compete, excel, innovate, produce, be safe, improve service, and reach goals (Salas et al., 2012, p. 74). Cheng and Ho (2001, p. 22) consider that employees are concerned about their own productivity and are aware of the accelerated obsolescence of knowledge and skills in the modern environment. With effective training and development of employees, they will become more motivated and prepared for career growth.

The benefits of training, education and employee development have workers, organizations and society. Training and development affect the management of talents, i.e., attracting quality employees, their development, but also retaining quality employees in organizations, and reducing absenteeism. By acquiring new knowledge, skills and abilities, individual and organizational success is improved and the tasks and goals of the organization are achieved. Employees who are trained achieve better performance, work better, make fewer mistakes, are more satisfied, have more positive attitudes, and produce better quality products and services. They have a strong impact on maintaining and increasing the competitiveness of the organization and business performance.

The link between training and an organization's performance is strongly supported by research. In addition, research has found that companies that invest more in training have higher revenues, profits and productivity growth than firms that invest less in training. Besides that, training is so important for organizations that it can even make the difference between the success or failure of a business (Saks & Haccoun, 2016, p. 9-10).

Youngsand Kim and Robert Polyhart (2014) conducted a study of 359 firms over a period of 12 years before (2000-2007) and after (2008-2011) the recent recession. Research results showed that, firms with more internal training had greater productivity and profit growth, and the relationship between training and profit growth was due in part to greater productivity. The authors also found that firms with more extensive training generated resources that help them to buffer and more quickly recover from the recession. The results of this study demonstrate that the training influences the profit growth of the firm through its training effect on the profit growth which directly affects the productivity. The most important practical implication of this study is that firms

that use more extensive internal training produce and perform better than competitors and recover more quickly from a recession" (Saks & Haccoun, 2016, p. 11).

The knowledge and skills that are studied become obsolete very quickly, and this is especially true of formal institutional education. Knowledge develops at an extremely high speed and requires continuous education from employees.

Employee-development programs are increasingly tailored to fit the interests, learning styles, locations, and even schedules of targeted employees. Like customers, employees want education that is "just in time, just for me". For this reason, companies are designing highly flexible and modular development centers or "corporate universities" that offer a dazzling array of learning opportunities through a range of media (Eisenberg, Goodall & Trethwey, 2009, p. 292-295). Lifelong learning and education is a key and complex activity for developing the competence of managers and other human resources in the company. Every company and its long-term growth depends exclusively on quality human resources. In order to adapt to daily changes in the global market, companies are forced to organize various forms of education of their human resources so that "Continuous education and training of employees is one of the most efficient ways to achieve a competitive advantage, a fundamental precondition for entering the market competition and competing with the competition for the favor and trust of consumers." Due to this fact, global companies mainly build their differentiation from competitors on knowledge. The reason for this is reflected in the fact that technologies, devices and equipment are available to everyone who wants to buy them, unlike knowledge, which is the most valuable resource, because it is not abundant and has its own shelf life. Knowledge of human resources differs from physical resources such as equipment and machinery in the following: 1) with greater use knowledge grows, 2) knowledge is inalienable, the owner always carries it with him, 3) physical resources want everyone, while knowledge only a few (Isaković, 2010, p. 123).

Human knowledge in doing so, rather than manual labor, has become the most important element for value creation in enterprises. Capable employees who develop new ideas, create value and innovate business operations have become a key asset of the New Economy. The key question of a company's success in the global market today is no longer what a company owns, but what it knows and can create. The business of the enterprise has become considerably more knowledge-intensive than capital-intensive (Kolaković, 2021, p. 5).

According to Dubois and Rothwell (2004, p. 207-208), the objectives for any competency-based employee development process will differ somewhat across organizations. However, facilitators of the effort may want to include one or more of the following statements of objectives among their own:

- To ensure an adequate and balanced competency pool so that the organization can achieve its strategic goals and business objectives;
- To communicate to employees the organization's support of their continuous learning and the understanding and pursuit of their life career preferences;
- To ensure that work assignments are aligned with employees' competency strengths and the successful pursuit of their life-career preferences;
- To serve as an employment incentive to attract exemplary performers;
- To encourage the retention of fully successful and exemplary performers;
- To provide less productive employees with self-insight in an ethical and professional manner and encourage them to take responsibility for their daily work and life-career preferences, possibly including outplacement.

The knowledge acquired during the formal education process, as well as the procedures and methods that the employee has mastered while working in the company, are not a guarantee of long-term achievement of good business performance. Companies must organize training and development programs for employees. According to Klepić, Alfirević and Rahimić (2020, p. 236) training programs seek to maintain and improve performance in the current workplace, and training programs are aimed at developing the skills needed for future employment. These are various trainings, which contribute to the improvement of skills of performing both current and future jobs, i.e. practicing some physical or intellectual activity. The decision on trainings is made based on the evaluation of employee performance. Potential evaluation identifies associates who have the potential for further development (for career development) and defines the needs of their education. Education is focused on personality development, the acquisition of new knowledge, i.e., the improvement of potential. The process of education enables the dissemination of overall cognitions, knowledge, skills and abilities of persons who are trained for independent decision-making and action in different situations, and creates preconditions for the promotion of staff.

The process of training and development of employees, just like the whole HRM are specific to small and medium enterprises for several reasons. Therefore, differences in employee training and development practices can be seen between large corporations and SMEs. In addition to having more resources for training and development, they also have better access to all formal practices, have more organized and larger human resources management departments, etc. For this reason, they prefer informal ways of training and on-the-job training. The SME owner-managers usually prefer informal learning such as mentoring**,** shadowing or networking, but that non-owner managers prefer credit based formal education delivered as short, applied courses offering flexibility as to time and place. The reasons for the different preferences are that non-owner managers, particularly midlevel line managers, have an eye to career development, while the owner-managers have an eye to performance improvement of their firm over the short term. Indeed, informal development activities such as 'on-the-job' and 'learning from others', which are even less structured than the informal alternatives covered in the European Commission survey, have been found to be the most common ways of acquiring management competences in small firms and microfirms. However, size is not the only determinant of SME management and staff training and development. Lack of supply of key skills in the potential labor pool (whether due to weaknesses in the educational system or successful competition from larger organizations) poses a real constraint to innovation in SMEs. When faced with such constraints, ambitious SMEs have little option but to develop the necessary skills in-house, accepting a risk of poaching or drainage of those skills to other larger and wealthier firms (Fink & Kraus, 2009, p. 112-114). Small firm employees are less likely to obtain access to formal training and development events than are employees in large firms (Hoque and Bacon, 2006; Kotey and Folker, 2007). Studies have identified several "barriers" to the provision of firm-sponsored, formal training and development in smaller firms (Bai et al., 2017). Thus, small firms have a strong preference for and are highly reliant upon informal learning processes (Coetzer et al., 2017). However, as Bishop (2008, p. 661) has noted: While it is crucial that we recognise the importance of informal aspects of learning in small firms (as in all organisations), it would be hazardous to advance a position that accords no importance at all to formal training. For example, in some types of jobs, just informal learning activities would not be sufficient to acquire the depth of understanding necessary for complex work activities that require high level conceptual knowledge (Clardy, 2018). Furthermore, opportunities for formal learning stimulate participation in informal learning activities (Bednall and Sanders,

2017). As Lai et al. (2016) have noted, medium-sized businesses tend to be more similar to large businesses than small businesses, and thus they are managed in a relatively more formalised, professionalised and structured manner compared to small businesses (Susomrith, Coetzer & Ampofo, 2019, p. 498).

Manager education according to Isaković (2010, p. 124) can be formal and informal. The knowledge acquired through formal education is institutionally verified for the purpose of acquiring a qualification of a certain level. Non-formal education is an organized process of employee training aimed at specialization and qualification for the workplace or personal development. It is carried out through two education programs: educational program (within which different types of knowledge and skills of employees in the field of business processes and activities are developed) and cognitive programs (within which employee attitudes and other specific traits such as: creativity, passion, courage and persistence are developed). Non-formal form of employee education is conducted in companies, employment bureaus, associations, political parties, non-profit organizations, workshops, courses, seminars, etc. Non-formal education finds its place especially in those areas where formal education cannot fully meet the needs.

An important factor for the success of education is the choice of an appropriate method. The choice depends on the educational program and its goals. The most appropriate method needs to: motivate employees to improve their performance, clearly illustrate the desired skills and knowledge, provide participants with active participation, provide the opportunity to practice, provide feedback on performance during learning, use some means of motivation and support for employees during learning, structure the material from simpler to more complex tasks, adapt to specific needs and enable participants to transfer what they have learned to other situations, especially to the work they do (Bahrijarević-Šiber, 1999, p. 753)

International Human Resources Development Corporation (2021, p. 8) in its model considers that after an employee is assessed and skills gaps identified, a customized individual Learning Plan is developed and implemented to close identified gaps. Each Learning Plan, contains a combination of actionable learning methods, including e-Learning, classroom, workshop, on-the-job training, and coaching. Once an employee learns the new skills and applies them to the job, they are re-

assessed to ensure gaps are closed and, subsequently, their competency profiles are updated to close the gap.

According to Dubois and Rothwell (2004, p. 130) there are three models for reinventing training around a competency foundation. The models correspond to the approaches to competency-based training:

1. Reinventing the ISD (Instructional System Design) model - When the ISD model is reoriented toward building worker competence to achieve exemplary performance rather than matching individual abilities to work requirements, training becomes competency based. One key point of change centers on the third step in the ISD model, the training needs assessment. The competency-based approach views training as more than providing knowledge, building skill, or improving attitude. It is not easy to redirect training from its traditional focus on meeting needs to a new focus on building competencies. Training people to become successful (or even exemplary) performers dramatically expands the role of training. This means determining and building competencies which distinguish exemplary from fully successful performers. The key to transforming traditional training into competency-based training is thus centered on the training needs assessment process and its focus. The goal is to discover the differences between exemplary and fully successful performers and trying to narrow those differences.
2. Training to build individual competence relative to a competency model of exemplary performance - In this approach, the responsibility for training—and for competency building—shifts from the organization to the individual. Although the organization remains responsible for clarifying the competencies essential for successful performance in a job category, work role, department, or occupation, individuals are expected to be more responsible for building their own competencies. They do that by being more proactive, assessing their competencies against existing competency models or those they develop on their own by, for example, talking to mentors or exemplary performers or keeping competency journals in which they record their process of building competencies.
3. Building individual competence in a work team context - When teams become the focus of attention, it just makes sense to start thinking in terms of team or team member role competency models rather than job, department, work role, or occupational competence. Each individual works within a team, and its members should contribute to the collective ability to meet or

exceed customer requirements. With a team competency model, individuals can be assessed against how well they demonstrate the needed competencies. Training can then help to narrow deficiencies in individual performance.

Different authors point out different training methods, and in most cases divide them into those at work and outside of work (on-the-job and off the-job). Off the-job training methods according to Saks and Haccoun (2016, p. 175) are: lecture method, discussion method, case study method, case incident method, behavior method, role play, simulations, games, action learning and instructional media. Methods of out-of-work education according to Bahtijarević-Šiber (1999, p. 749) are: lectures, audiovisual techniques, programmed learning, computer-assisted learning, interactive video, conferences and discussions, training in stimulated working conditions and case methods. Lesko Bošnjak and Klepić (2013, p. 140-144) also presented and methods of training and education of managers outside work: case study method, method of "basket training", method of group discussion without a leader, method of managerial games, method of role playing, method of laboratory training, method of behavior modeling, etc. On the other side, methods of training and education of non-managers outside of work are lectures, audiovisual techniques, programmed teaching methods, computer-assisted training, simulation methods, case and conference and discussion methods. Off-the-job education programs according to Rahimić (2010) are lectures, audiovisual techniques, programmed learning, computer-based learning, interactive video, conferences and discussions, training in simulated working conditions, case methods, etc.

On-the-job training methods according to Saks and Haccoun (2016, p. 204) are: job instructions training, performance aids, job rotation, apprenticeships, coaching and mentoring. Methods of education at work according to Bahtijarević-Šiber (1999, p. 745): individual instructions, job rotation, apprenticeship or professional practice, internship, mentoring and student practice. According to Lesko Bošnjak and Klepić (2013, p. 140-144) methods of training and education of non-managers at work are individual instructions, job rotation, professional practice, internship, mentoring and student practice. On the other side methods of training and education of managers at work: teaching, assignment of employees, job rotation, lateral transfer, assignment of projects and committees and attendance at staff meetings. On-the-job education programs according to Rahimić (2010) are individual instructions, job rotation, professional practice, internship, mentoring, student internship, etc.

Rothwell and Kazanas (2003, p. 364-366) concluded that on-the-job training is the most difficult to recognize because it is usually informal and is rarely distinguishable from regular work activities. Seldom is it preceded by formal needs assessment or preparation of instructional objectives. Instead, people receive instruction and feedback on performance while working (Rothwell and Kazanas, 1994). Supervisors, conducting training at work, show them what to do, explain what they demonstrated, demonstrate it again and observe while employees demonstrate, coach employees on what they do wrong and praise them for what they do right, let them do the job but continue to monitor them, and then gradually leave them alone. Colleges and universities as well as many training consulting firms offer off-site training and education. They are useful for learning about state of-the-art practices in the occupation or field. The advantage of on-the-job training is that it is highly applied: there is no boundary between who instructs and who supervises. One disadvantage is that supervisors frequently have trouble structuring learning experiences. Another disadvantage is that some learners tend not to ask questions because they don't want to appear dense. Off-the-job training is expensive in terms of the time it takes away from productive labor, but it is cost-effective for large groups of people sharing similar needs. In addition, it can be more professionally structured; there is also a separation between the trainer who provides instruction and the supervisor who subsequently judges the adequacy of individual job performance.

The place of implementation of the presented programs is less important in a dynamic, uncertain and complex environment. The support of the organization in the continuous development of employees and the creation of a climate of "learning" organization is far more important. In such organizations, employees constantly learn and are encouraged to apply the acquired knowledge and skills in improving the quality of products and services. These are organizations that have realized in a timely manner that learning and new knowledge are the key to success. One of the newer trends, which is the result of the development of information technologies and the increasing use of social networks, especially among younger employees, is social learning. This type of learning involves informal learning from others using mobile technology and through social networks, blogs, wikis, virtual games, etc. A typical example of this might be an employee asking a question on a blog, forum or Twitter for advice and help on a task or process from fellow professionals who are not necessarily in his company. It is quite certain that social networks and various Internet tools, the number of which is growing every day, contribute to information sharing,

access to knowledge, finding resources and collaboration in a natural way because employees connect based on common interests (Klepić, Alfirević & Rahimić, 2020, p. 236).

Manager training according to Isaković (2010, p. 129-130) is carried out using different methods. Job rotation is one of the most common techniques for developing managerial skills. It is classified as a method of training at work. This technique primarily aims to give the manager an idea of how the organization works, i.e. to build the cross-functional skill that is necessary for successful management of the organization. Another method is the doubling of tasks, or expanding the job, where the manager is assigned various tasks that are outside the domain of his current position. In this way, an effort is made to acquaint the manager with the specifics of other jobs so that in the future it would be easier to establish coordination between departments in the company. Mentoring is a method that is widely used and is a very complex interactive process between individuals of different levels in the organization where a more experienced manager during the performance of business activities seeks to train a younger manager to perform more complex tasks.

According to Martocchio and Ferris (2003, p. 204), there are two types of training: directed training and nondirected training. Directed training teaches employees to perform a specific task or learn a new skill. There are three common formats: self-directed, information processing and simulation. Any training program may employ a combination of formats, and each may be enhanced by visuals, e.g., PowerPoint™ presentations and videos, as well as handout materials. All three formats require practice, feedback, and reinforcement. Nondirected training emphasizes providing employees with the skills and knowledge needed to become more invested in their organization. It provides employees with transferable "employability." Employees learn how the business operates, enabling them to perform various tasks if and when the company shifts direction or starts stockpiling openings. Companies that participate in nondirected training maintain that there is increased worker productivity, improvement in quality and increased operating profits. From a list of courses; when the course is completed, the program may include a test or some other learning assessment tool. Employees then receive credit for the training. There are three primary approaches to distance learning: remote classroom, virtual classroom and anytime classroom.

There are numerous opportunities for employee training and service delivery in this area, with geographical location not being a constraint. Candidates for learning opportunities include the following (Dubois & Rothwell, 2004, p. 208): web-based and distance learning; embedded

learning; on-the-job learning with peers or site-assigned facilitators; coaching from a supervisor, manager, or executive; professional counseling, career counseling, or assistance from a certified career development facilitator; management discussions; workbooks or other self-directed learning media; computer-based career guidance systems; professional or trade conferences, seminars, and workshops; job or work rotation; learning opportunities provided by labor or other organizations; group-based life-career exploration or planning activities; community college, 4-year college, and university courses or other offerings, including adult or continuing education; community-based adult or continuing education and employee-initiated learning projects. Dessler (2015) presented in his book a number of training methods including internship training, non-formal learning, business process learning, lectures, programmed learning, training using audiovisual materials, training near the workplace, distance training and video conferencing, electronic work efficiency support system, computer training, simulated learning, online training, virtual classroom and online learning.

Technology based training methods according to Saks and Haccoun (2016, p. 265) are: computer-based training and e-learning, instructor-led training and self-distracted learning, asynchronous and synchronous training, online education and electronic performance support systems, the virtual classrooms, social media and web 2.0 technology, mobile learning (m-learning). E-learning can be defined as: "…a wide set of applications and processes, such as web-based learning, computer-based learning, virtual classrooms, and digital collaboration. The benefits of e-learning include cost savings/avoidance; greater flexibility, including 24/7 delivery; and increased productivity, especially where learners are geographically dispersed" (Torres-Coronas & Arias-Oliva, 2004, p. 154). Surveys of industry practice how an increasing number of organizations are implementing technology-based training in support of, or instead of, traditional forms of training. Thus, plans to implement technology-based training should be based on whether content can be learned effectively using technology, and reduced training costs should be modeled and then tracked, not simply assumed. Regardless of the media used, it is important to plan all training efforts carefully and to incorporate research findings about training effectiveness in order to build engaging, challenging learning environments (and not simply "entertaining" experiences) that optimize individual learning (Salas et al., 2012, p. 87-88). In recent years, technology-based and technology-assisted delivery methods have revolutionized the training field. Some call this approach e-learning. Managers and workers alike are anxious to find multimedia-based training solutions.

However, e-learning is impersonal, and it does not tap into the individual's needs for social interaction or capitalize on the value of group instruction where new ideas can be more easily formulated. For this reason, although the e-learning revolution is most likely to continue, a balance between e-learning and classroom learning is probably necessary (Rothwell & Kazanas, 2003, p. 364). Especially in 2020 and 2021 the trend of digitalization of education and distance learning in general developed rapidly, all companies, schools and other organizations had to suddenly switch to the online model due to the situation with the corona virus. Due to this, there was an accelerated development of new technologies for distance learning and work, and mostly used online video learning platforms such as Zoom, Meet, Clasroom, etc., but also information systems for interactive participation in teaching and posting online materials. This type of training has shown both good and bad sides.

Employee career planning, development and management has two benefits for both the employee and the organization. Today, employees very easily move from an organization to an organization if they are not satisfied, if they do not see some long-term plan for progress, if the company does not appreciate them or does not invest in them. By managing the development of employees, organizations not only keep them, but they also benefit from ambitious employees who work on themselves and want to progress. According to Isaković (2010, p. 132), the essential meaning of a career implies the formal recognition of the acquired skills and abilities of the employee by the organization, which is why such an employee is placed in a higher position within the same profession, thus meeting both organizational and individual goals. Senyucel (2009, p. 68) stated that career development is one of the key points in attracting and retaining employees. It is therefore significant to both employees, in terms of their individual progression, and also to the organisation, in terms of retaining a vital resource for competitive advantage. In order to gain employees trust, improve their commitment and motivation and prolong their stay in the organisation, HR managers need to provide opportunities for them to develop their careers. Otherwise, it is very likely that employees will seek opportunities for development elsewhere. Yarnall (2007, p. 2) concluded that career management is about how careers are managed, and if it is effective, it should enable an organisation to attract and retain high quality staff, as well as add to the skill base of the company to help ensure long-termsurvival and growth. According to Burke and Cooper (2008, p. 184) career management, once viewed as the firm's responsibility to its long-term employees, gradually became viewed as the responsibility of the individual. Careers, and subsequently career

management practices, were no longer defined solely within the context of the firm as illustrated by Hall's (2002, p. 12) definition of the modern careers as "the individually perceived sequence of attitudes and behaviors associated with work-related experiences and activities over the span of the person's life." Given the fundamental changes that have occurred in the workplace, the domain of career management has also changed. Isaković (2010, p. 133) pointed out that career management is a complex process in which human resources management planned and in coordination with other departments of the company identifies potential candidates, monitors and evaluates their work, develops training programs in which potential candidates develop their abillities and skills to meet future organizational needs. Through career development, the employee acquires emotional security, achieves his own satisfaction, better quality of life, self-esteem, respect from others, which gives him new encouragement of his own development. According to Martocchio and Ferris (2003, p. 214) career development programs typically consist of individual career counseling, which enables employees to explore their skills, knowledge, and interests; the creation of individual development plans; ongoing training in a variety of general areas, such as communication, and training in job-specific areas, such as computer software; succession planning; and tuition reimbursement. Experts agree that career development should ideally begin when employees first enter an organization.

Salas et al. (2012, p. 88-90) concluded that transfer of training has long been a fundamental concern for researchers and practitioners alike. Despite the fact that billions of dollars are invested in training every year, reports suggest that trained competencies often do not transfer to the workplace, indicating an enduring "transfer problem." Transfer of training is the "endgame," the extent to which knowledge and skills acquired during training are applied to the job. Evaluation of training and education as well as the whole competency management process is often a neglected phase, but it is very important and should become indispensable. It is important to identify errors in the process on time and to be able to correct them for the next process. Also, in order for the evaluation to be correct and complete, it should be carried out in different time periods, before training, during the training, immediately following the training session; six months after training and one year after training. This is very important in order to see a positive transfer of what is learned, ie whether employees have acquired the necessary competencies and overcomed the gap with one of the methods and techniques of overcoming the gap and whether they apply what they have acquired at work. If a shortcoming is noticed, it should be seen whether the problem was in

the learning process itself or simply in the employee. Salas et al. (2012, p. 90) concluded that evaluation is part of an effective training system. It allows organizations to continue conducting training that works and to modify or discontinue training that does not work. Thus, the question of whether instructional objectives were achieved usually requires multiple measures of different types of outcomes, for example, measures of changes in declarative knowledge (whether trainees now know more), in skilled behavior (whether trainees are doing things better), and in self-efficacy for transfer (whether there has been a positive affective change). Studies show that an alarmingly small percentage of employers measure trainees'"training transfer," that is, the actual application of knowledge and skill acquired in training programs. At best, organizations usually give participants a form at the end of the training or workshop in which they should check for generic subjects to indicate whether they would rate their ability to apply the skills learned in those subjects as "excellent," "very good," "good," or bad". Although this method of evaluation is useful, it is still not a sufficient indicator to determine the overall effectiveness of the program. Arthur (2004, p. 210) concluded that the most straightforward way to determine if trainees have learned the targeted competencies is to ask them via questionnaires, a structured format that provides quantitative and qualitative feedback. A second method is to conduct a knowledge review, a group of multiple-choice or short-answer questions to which employees respond in writing. Informal or structured observation by members of the training department during a training session is another method of determining if trainees have learned the targeted competencies. Another way of evaluating the application of acquired competencies after the training is the analysis of skills gaps. Competencies are assessed and compared before and after training.

3. BALANCED SCORECARD

The Balanced Scorecard (BSC) was developed by Robert Kaplan, a professor at Harvard University, and David Norton, a consultant also from the Boston area. They conducted a survey in 1990 aimed at exploring new methods of measuring performance. Kaplan and Norton were motivated by the belief that financial measures, which until then had been dominant for measuring performance, had become ineffective for modern business. Exploring numerous methods and alternatives, they have created a method that contains business performance that encompasses a wide range of activities of the entire business of the organization, including customer issues, internal business processes, employee activities and the interests of shareholders.

Kaplan and Norton labeled this new tool the Balanced Scorecard and later summarized the concept in the first of three Harvard Business Review articles, "The Balanced Scorecard - Measures that Drive Performance". Over the next four years a number of organizations adopted the Balanced Scorecard and achieved immediate results. Kaplan and Norton discovered that these organizations were not only using the Scorecard to complement financial measures with the drivers of future performance but were also communicating their strategies through the measures they selected for their Balanced Scorecard (Niven, 2002, p. 11). Corporations, both big and small, can fail for several reasons. But the most significant cause of failure is not the lack of strategy, but the incapacity to execute on a balanced strategy. Balanced Scorecard exists to serve this incapacity. Its founders, Robert Kaplan and David Norton have started formulating a new method that would not rely so much on just financial metrics as measure but would show a balance of financial and nonfinancial perspectives. The outcome of this is the Balanced Scorecard. BSC is such a methodology that identifies and formalizes the main drivers to the business and provides a quick view of corporation's strategic health. It is focused on uncovering the main non-financial drivers of the business, along with the economics of the business. Balanced Scorecard shows a way to make strategy actionable. As a framework for action, it can be updated and creates a renewable methodology and framework (Nair, 2004, p. 3-6). The Balanced Scorecard retains traditional financial measures. But financial measures tell the story of the past events, an adequate story for industrial age companies for which investments in long-term capabilities and customer relationships were not critical for success. These financial measures are inadequate, however, for guiding and evaluating the journey that information age companies must make to create future

value through investment in customers, suppliers, employees, processes, technology, and innovation (Kaplan & Norton, 1996, p. 7).

The objectives and the measures for the Balanced Scorecard are derived from a top-down process driven by the mission and strategy of the business unit. The BSC should translate a business unit's mission and strategy into tangible objectives and measures. The measures represent a balance between external measures for shareholders and customers, and internal measures of critical business processes, innovation, and learning and growth. The measures are balanced between the outcome measures – the results from past efforts – and the measures that drive future performance. And the scorecard is balanced between objective, easily quantified outcome measures and subjective, somewhat judgmental, performance drivers of outcome measures (Kaplan & Norton, 1996, p. 9-10). Recognizing the difficulties of an overemphasis on financial measures, Kaplan and Norton (1992; 1993; 1996a; 1996b; 2000), advised that long-term organizational excellence can be achieved only by taking a broad, holistic, and balanced approach and not by focusing solely on financials. Using the BSC approach managers are encouraged to take a "balanced view across a range of performance measures" (Amaratunga et al., 2001, p. 180) including "…financial and nonfinancial measures relating to a company's critical success factors" (Chow, Haddad, & Williamson, 1997, p. 7) (Von Bergen & Benco, 2004, p. 4). Andersen, Lawrie and Shulver (2000, p. 3) defined the Balanced Scorecard as a framework that expresses an organization's strategy as a set of measurable goals from the perspectives of owners/investors, other external stakeholders, and the organisation itself. If these goals and associated measures, and targets are well chosen, the Balanced Scorecard will help managers focus on the actions required to achieve them, so helping the organization achieve its overall strategic goals and realise its strategic visions. Von Bergen and Benco (2004, p. 2) defined the balanced scorecard as a performance management system that enables businesses to drive strategies based on measurement and follow-up. Schmeisser, Clausen and Lukowsky (2008, p. 16) defined the balanced scorecard as an integral management system that enables the simultaneous and balanced use of monetary and non-monetary indices and indicators, which application provides the management with a comprehensive managing and control system. One of the most significant aspects of the balanced scorecard is the "communication of strategy", in a way that the formulated strategies may be implemented into a concrete agenda as well as concrete measures. Schäfer and Teuber (2007, p. 39) defined the BSC as an instrument of strategic corporate management, with the help of which a strategy is translated into concrete, operational

measures. As a result, the BSC creates a "common understanding of strategy implementation" and enables stringent communication in the company as well as integration into existing systems. Nair (2004, p. 30) concluded that the Balanced Scorecard is a methodology to solve challenges in balancing the multiple perspectives demanded of strategy with its execution. In a nutshell, BSC is a methodology for translating strategy into action. Smith (2007, p. 106) points out that a Balanced Scorecard is a management tool that provides senior executives with a comprehensive set of measures to assess how the organization is progressing toward meeting its strategic goals. In the introduction to the book of Biazzo and Garengo (2012, foreword), Kaplan pointed out that the Balanced Scorecard is currently used by more than 70% of companies worldwide, and regularly ranked among the top-ten management tools used worldwide according to the annual survey conducted by Bain & Company, a leading strategy consulting company. Using the BSC, the odds reverse with 75% of companies using the BSC as their central strategy execution system reporting that they are outperform their competition, usually by a significant amount.

Biazzo and Garengo (2012, p. 23) concluded that implementing a Balanced Scorecard is a complex process that requires careful attention: determining the logical paths to follow in the system scheme and choosing how to involve the organisational actors may appreciably influence the success of the project. In literature, as well as in practice, the methodology of reference for the implementation of the BSC is, for obvious reasons, the one that Kaplan and Norton developed.

The Balanced Scorecard is more than a tactical or an operational measurement system. Innovative companies are using the scorecard as a strategic management system, to manage their strategy over their long run. They are using the measurement focus of the scorecard to accomplish critical management processes (Kaplan & Norton, 1996, p. 10): (1) Clarify and translate vision and strategy; (2) Communicate and link strategic objectives and measures; (3) Plan, set targets, and align strategic initiatives; and (4) Enhance strategic feedback and learning.

BSC has the following characteristics (Nair, 2004, p. 30):

- Its methodology is suited for managing business strategy.
- It uses a common language at all levels of the organization.
- It uses a common set of principles to manage day-to-day operations as well as to framework the company's strategy.
- It is designed to identify and manage business purposes.

- It provides a balance between relatively opposing forces in strategy: (1) between internal and external influences; (2) between leading and lagging indicators and measures; (3) between financial and nonfinancial goals; (4) between organizational silos focused on their own goals and an overarching framework of goals; and (5) between finance priorities and operations.
- It aligns strategic goals with objectives, targets, and metrics.
- It cascades to all levels of the organization.

BSC provides balance between Internal and External Factors. The financial measures found in the various financial statements and balance sheets show what has happened in the past and say little or almost nothing about what will happen in the future. Business data is needed by management, owners and all other stockholders, but for many of them it is very important from these indicators that they can see the future of the company in different segments that are observed and analyzed. Leading indicators are signs of future performance or situations. The power of a balanced strategic performance system is to acknowledge both leading and lagging indicators, which allows corporations to balance past results with future drivers of performance (Nair, 2004, p. 16). BSC provides also balance between Financial and Nonfinancial Measures. Organizations must incorporate a combination of financial and non-financial goals into their strategic goals and achieve a balance between them. A common misconception is that nonfinancial goals are nonnumeric in nature. That is also not true, because non-financial goals can be measured (Nair, 2004, p. 17).

The Balanced Scorecard has emerged as a proven and effective tool in quest to capture, describe, and translate intangible assets into real value for all of an organization's stakeholders, and in the process allow organizations to successfully implement differentiating strategies. This simple methodology translates an organization's strategy into performance objectives, measures, targets, and initiatives in four balanced perspectives. While many organizations have used a combination of financial and non-financial measures in the past, what sets the Balanced Scorecard apart is the concept of cause-and-effect linkages (Niven, 2002, preface, xii). The Balanced Scorecard complements financial measures of past performance with measures of the drivers of future performance, the objectives and measures of the scorecard are derived from an organization's vision and strategy. The objectives and measures view organizational performance from four perspectives: financial, customer, internal business processes and learning and growth. These four perspectives provide the framework for the Balanced Scorecard (Kaplan & Norton, 1996, p. 8).

Improvements in employee learning and growth result in improved internal business processes, which create better products and services and, therefore, higher customer satisfaction and higher market share, leading to enhanced financial results for the organization. Thus, a good balanced scorecard identifies many cause-and-effect relationships within the business and helps employees and managers appreciate the roles of employee and task as well as the importance of each result to the overall corporate effort (Von Bergen & Benco, 2004, p. 3). The individual perspectives of a BSC deal with different questions. Within the financial perspective, the question must be answered, which objectives can be derived from the financial expectations of the capital provider. The customer perspective looks at the question of which goals result from customer requirements, the implementation of which in turn favors the achievement of the financial goals. “How do the company's processes have to be designed in order to achieve the market and customer goals and thus the financial goals?” is the key question of the process perspective (Schäfer & Teuber, 2007, p. 41).

Kaplan and Norton have proposed the following perspectives that need to be analysed but suggested that the organizations should add another perspectives that are relevant to them (Nair, 2004, p. 19):

1. Financial perspective: What are the financial targets?; What drives these targets?; What kind of profit and revenue to achieve?
2. Customer perspective: Who are the customers?; How do company delights them?; What segments do company wish to address?; What goals do company wish to achieve with partners?; What are company's goals for the distribution channel?
3. Internal perspective: In which processes must company be the best to win customers?; What internal activities do company need to sustain competencies?
4. Learning and growth perspective: What must company be great in performing, and how do company train it's people to get up to that level? What climate and culture nurtures growth?; What do company has to do in developing and training it's people to achieve the other objectives?

3.1.Financial perspective

3.1.1. Concept and definition of financial perspective

BSCs do not ignore the traditional need of management for financial data. Managers will always have a priority to get timely and accurate data on financial operations and financial indicators. Von Bergen and Benco (2004, p. 9) point out that the emphasis on non-BSC financial statements leads to "unbalanced" situation with respect to other perspectives, which implies the need to include additional data such as risk assessment and cost-effectiveness data in this category. The financial perspective represents the financial outcome elements of the strategy. The financial goals serve as a focus for the goals and key figures of all other perspectives. From a financial perspective, it becomes clear whether the chosen strategy has a positive effect on the discounted free net cash flow and whether this increases the company's value. The financial perspective contains goals and key figures from the following elements: income growth and income mix; increase in productivity and reduce costs; use structure of assets; investment and acquisition strategies and cost of capital (Schäfer & Teuber, 2007, p. 41). The BSC retains the financial perspective since financial measures are valuable in summarizing the readily measurable economic consequences of actions already taken. Financial performance measures indicate whether a company's strategy, implementation and execution are contributing to bottom line improvement. Financial objectives typically relate to profitability –measured, for example, by operating income, return – on – capital-employed, or, more recently, economic value-added. Alternative financial objectives can be rapid sales growth or generation cash flow (Kaplan and Norton, 1996, p. 25-26). In a profit-pursuing business, this financial perspective is the more overused and overanalyzed. The revenues, both recurring and new, subscription-based or otherwise, margins, and expenses are very important to an organization seeking to achieve its goals. A common mistake with organizations is that they forget the link between the financial goals and the nonfinancial strategy of the company. The financial perspective gives respect to the relationship between stated financial goals and other goals that feed the machine to create the result. Given the profit-pursuing organizations, the financial perspective is critical as it forces recognition and definition to the main critical financial goals that the organization must achieve. In tough times of business, money might seem like everything, but the financial perspective gives companies the following reminders (Nair, 2004, p. 21-22):

- The main goal of business is wealth creation, as measured by a series of financial targets achieved.
- The purpose of financial targets is to galvanize the operating units to manage performance and gain competencies for future success.
- It is one of many other perspectives but the one that funds the mission and purpose of the organization.
- It is a lagging indicator of performance because it records success after the fact.

Financial measures are an important component of a balanced scorecard, especially in a for-profit world. These measures tell the organization whether its implementation of the strategy, which is described in detail through the measures selected in other perspectives, leads to the achievement of the set goals. According to Niven, (2002, p. 17) organization could focus all of its energy and capabilities on improving customer satisfaction, quality, on-time delivery, or any number of things, but without an indication of their effect on the organization's financial returns they are of limited value. Classic lagging indicators are normally encountered in the financial perspective. Typical examples include profitability, revenue growth, and economic value added.

3.1.2. The measurement of financial perspective

In most organizations there is a sufficient number of financial measures. Traditional measures still hold, but the relationship between goals, initiatives, targets, and measures is the new learning with Balanced Scorecard. Measures traditionally used in for-profit organizations to present the financial perspective include the following (Nair, 2004, p. 50-51): (1) revenue; (2) profit margin; (3) gross margin; (4) cost; (5) cost of goods sold; (6) cost of services; (7) expense targets; (8) risk adjusted return on capital; (9) credit rating; (10) debt rating; (11) revenue per employee; (12) return on X (e.g., equity, investment, assets); (13) cash flow; (14) debt to equity ratio; (15) earning before interest, taxes, depreciation, and amortization (EBITDA); and (16) earnings. Nonprofit or government groups may use other measures such as: (1) budget shortfalls; (2) expense targets; (3) allocation from donors; (4) allocation from legislatures; (5) cost to deliver service; and (6) tax dollars/county.

According to Von Bergen and Benco (2004, p. 9) frequently cited BSC measures for the financial perspective include (1) operating income, (2) revenue growth, (3) revenues from new

products, (4) gross margin percentage, (5) cost reductions in key areas, (6) economic value added; and (7) return on investment.

Niven (2002, p. 121) presented commonly used financial measures in his book "Balanced scorecard step-by-step: Maximizing performance and maintaining results": (1) total assets; (2) total assets per employee; (3) profits as a % of total assets; (4) return on net assets; (5) return on total assets; (6) revenues/total assets; (7) gross margin; (8) net income; (9) profit as a % of sales; (10) profit per employee; (11) revenue; (12) revenue from new products; (13) revenue per employee; (14) return on equity (ROE); (15) return on capital employed (ROCE); (16) return on investment (ROI); (17) economic value added (EVA); (18) market value added (MVA); (19) value added per employee; (20) compound growth rate; (21) dividends; (22) market value; (23) share price; (24) shareholder mix; (25) shareholder loyalty; (26) cash flow; (27) total costs; (28) credit rating; (29) debt; (30) debt to equity; (31) times interest earned; (32) days sales in receivables; (33) accounts receivable turnover; (34) days in payables; (35) days in inventory; and (36) inventory turnover ratio.

According to Smith (2007, p. 186) financial indicators are: (1) maximizing profitability; (2) increasing revenue; and (3) reducing costs.

3.2.Customer perspective

3.2.1. Concept and definition of customer perspective

The customer perspective is the second perspective of BSC. Companies are increasingly attempting to replace or expound product-orientated strategies by customer-orientated strategies. For this reason, the quantification of customer relations within the scope of the BSC is increasingly achieving significance as an implementation instrument for strategies and as a supplement to classic product profitability analysis (Schmeisser, Clausen & Lukowsky, 2008, p. 3). In the customer perspective of the Balanced Scorecard, managers identify the customer and market segments in which the business unit will compete and the measures of the business unit's performance in these targeted segments. This perspective typically includes several core or generic measures of the successful outcomes from a well-formulated and implemented strategy. The segment-specific drivers of core customer outcomes represent those factors that are critical for customers to switch to or remain loyal to their suppliers. The customer perspective enables business

unit managers to articulate the customer and market-based strategy that will deliver superior future financial returns (Kaplan & Norton, 1996, p. 26). In the customer perspective, the strategy is broken down into market and customer-related goals. It represents the value proposition that is offered to individual customers and customer segments. Financial goals can only be achieved by rewarding the customer for the benefits offered by the company. The customer perspective contains goals and key figures on: market share; customer acquisition and new customers; customer satisfaction; customer loyalty and loyalty; customer profitability and customer value (CLV) (Schäfer & Teuber, 2007, p. 42). There is an increasing realization of the importance of customer focus and customer satisfaction in any business. If customers are not satisfied, they will eventually find other suppliers who will meet their needs. Poor performance from this perspective is thus a leading indicator of future decline, even though the current financial picture may look good. In developing metrics for satisfaction, customers should be analyzed in terms of kinds of customers and the kinds of processes for which an organization is providing a product or service to those customer groups (Von Bergen & Benco, 2004, p. 8). The customer profit contribution accounting enables a more precise assignment of direct costs as well as indirect costs (distribution, marketing and order processing), which were -up to now- only broken down into percentages by the help of activity-based costing, to the cost unit "customer" by means of additional allocation bases. By using this method, it is possible to evaluate the profitability of the customer. The knowledge of the profitability of individual customers offers both starting points for cost cutting measures, and an opportunity to conduct an improved customer and yield management, and so ultimately enhance the profitability of the entire company (Schmeisser, Clausen & Lukowsky, 2008, p. 3). Before setting goals using this perspective, corporations need to answer the following questions: Who is the ideal customer (s)?; Can these customers be segmented by activities, tastes, expectations, age, agencies, functions, business processes and so on? Who influences their buying behavior?; Why they buy - perceived and actual value / benefit of the purchase? When they buy - budget cycles, purchase time? What do they buy - problems with products, services, company image and positioning? and How do they buy - are they trained to buy? What is their way of buying? A company can have a change in the market segment in its goals, and very often the requirements and needs of customers change over time and customers mature. Businesses necessarily ask the question of what it is that customers will want in the future, what are the values they value. A value proposition is an emotional, physical, and symbolic remnant that a customer performs after an

individual or organization buys a product or service at a price. Often, the customer perspective is viewed as the set of objectives the organization must achieve to gain customer acquisition, acceptance, and perpetuation. Objectives are an outgrowth of assumptions made about the customers and their habits, the markets they represent, and the value they perceive in a relationship with organization (Nair, 2004, p, 22-23). When choosing measures for the Customer perspective of the Scorecard, organizations must answer two critical questions: Who are their target customers? and What is their value proposition in serving them? They sound simple, but both of these questions offer many challenges to organizations. Most organizations will state that they do in fact have a target customer audience, yet their actions reveal an "all things to all customers" strategy. This lack of focus will prevent an organization from differentiating itself from competitors. Regardless of the value discipline chosen, this perspective will normally include measures widely used today: customer satisfaction, customer loyalty, market share, and customer acquisition, for example (Niven, 2002, p. 15).

3.2.2. The measurement of customer perspective

Nair (2004. p. 48-49) stated that if the mission, values, and vision are the heart of an organization, the customers are the bloodstream that carries sustaining value to the organization. How customers are acquired and maintained are the main activities of a company. But the customer perspective measures the underlying goals/objectives that acquire, maintain, and grow customers. Retaining and evaluating customer satisfaction may demand satisfaction surveys. Research is indicating that just because company's customers do not switch, one cannot assume that they are content. It just may be that they feel stuck with the solution that is offered. Hence, satisfaction reviews may be one measure while customers attending user groups could be another. The percentage return business is always a good measure of satisfaction.

The core outcome measures include customer satisfaction, customer retention, new customer acquisition, customer profitability and market and account share in targeted segments. But the customer perspective should also include specific measures of the value propositions that the company will deliver to customers in targeted market segments (Kaplan & Norton, 1996, p. 26).

Frequently cited BSC measures for the customer perspective according to Von Bergen and Benco (2004, p. 8) include: (1) market share, (2) customer satisfaction, (3) customer retention percentage, (4) penetration of targeted market segments, and (5) time taken to fulfill customer's requests.

Sample Customer Perspective Measures according to Nair (2004, p. 50-51) are: (1) brand equity measures; (2) market share; (3) share of mind; (4) total available market; (5) total accessible market; (6) customer retention; (7) customer satisfaction; (8) customer attrition; (9) average selling price; (10) lifetime value of customer; (11) sales per employee; (12) customer profitability by channel by product; and (13) design win (number of wins per year).

Niven (2002, p. 127) presented a sample of customer measures in his book "Balanced scorecard step-by-step: Maximizing performance and maintaining results": (1) customer satisfaction; (2) customer loyalty; (3) market share; (4) customer complaints; (5) complaints resolved on first contact; (6) return rates; (7) response time per customer request; (8) direct price; (9) price relative to competition; (10) total cost to customer; (11) average duration of customer relationship; (12) customers lost; (13) customer retention; (14) customer acquisition rates; (15) percentage of revenue from new customers; (16) number of customers; (17) annual sales per customer; (18) win rate (sales closed/sales contacts); (19) customer visits to the company; (20) hours spent with customers; (21) marketing cost as a percentage of sales; (22) number of ads placed; (23) number of proposals made; (24) brand recognition; (25) response rate; (26) number of trade shows attended; (27) sales volume; (28) share of target customer spending; (29) sales per channel; (30) average customer size; (31) customers per employees; (32) customer service expense per customer; (33) customer profitability; and (34) frequency (number of sales transactions).

According to Smith (2007, p. 186) customer indicators are: (1) building strong cust relationships; (2) penetrating new markets; and (3) maintaining top reputation.

3.3.Internal business processes perspective

3.3.1. Concept and definition of internal business processes perspective

The internal-business-process perspective, executives identify the critical internal processes in which the organizations must excel. These processes enable the business unit to: deliver the value propositions that will attract and retain customers in targeted market segments and satisfy shareholder expectations of excellent financial returns. The internal-business process measures focus on the internal processes that will have the greatest impact on customer satisfaction and achieving an organization's financial objectives. The scorecard approach will usually identify entirely new processes at which an organization must excel to meet customer and financial

objectives. The second departure of the BSC approach is to incorporate innovation processes into the internal-business-proces perspective (Kaplan & Norton, 1996, p. 26). The process perspective represents goals and key figures for the internal processes that are most critical for the provision of services. Processes to be analyzed are usually the innovation process, the order acquisition, order processing and customer care process. In addition to classic aspects such as quality, time and costs, the goals and key figures are derived directly from external performance requirements and factors. In the process perspective, the critical core competencies are identified and made transparent. The resulting process image promotes process orientation throughout the company. In this sense, the process perspective should be understood as an opportunity to anchor the customer focus for all processes in the company (Schäfer & Teuber, 2007, p. 42). Metrics based on this perspective allow managers to evaluate how well their business is running, and whether its products and services conform to customer requirements (the mission). These metrics must be carefully designed by those who know these processes most intimately; with firms' unique missions these cannot be developed exclusively by outside consultants (Von Bergen & Benco, 2004, p. 7-8). Businesses often have excellently written strategies and other plans but they get into trouble and fail due to poor implementation of those plans. The internal perspective shows that there are certain activities and processes that lead companies to achieve their goals expressed in financial indicators and customer satisfaction. Internal processes, mores, cultures, and procedures in all departments and business units support the value proposition to the target market segments. Typically, organizations have habits that are challenging to break or change in these perspectives. In other words, their internal behaviors will sabotage their ability to meet targets in the customer and the financial perspectives. These organizations must re-tool to win, and this perspective helps them define what this retooling is. Conversely, if an organization can identify these internal characteristics and define ways to enable them, their execution arsenal can be tuned to win the customer and also destroy the competition (Nair, 2004, p. 23-24). In the internal process perspective of the Scorecard, companies identify the key processes they must excel at in order to continue adding value for customers and, ultimately, shareholders. To satisfy customer and shareholder expectations, companies may have to identify entirely new internal processes rather than focusing their efforts on the incremental improvement of existing activities. Product development, production, manufacturing, delivery, and postsale service may be represented in this perspective. Many organizations rely heavily on

supplier relationships and other thirdparty arrangements to effectively serve customers (Niven, 2002, p. 16).

3.3.2. The measurement of internal business processes perspective

The internal perspective is associated with all the objectives and initiatives around the internal processes and capabilities of the organization. Hence, every measure from engineering productivity to manufacturing capability belongs into this perspective. It should be recognized that the common measure still prevails (Nair, 2004, p. 52): (1) patents filed in engineering; (2) product lifecycle measures; (3) mean time between failures of existing products; (4) spec to prototype cycle; (5) bug-count on release; (6) weighted defect count; (7) activity-based costs of major contributing activities and outputs; (8) inventory turns; (9) number of new products in pipeline; (10) R&D pipeline for new products; (11) number of returns; and (12) percentage claims ratio (insurance company).

Von Bergen and Benco (2004, p. 7-8) stated that frequently cited BSC measures for the internal business processes perspective include the innovation process (manufacturing capabilities, number of new products or services, product development times, and number of new patents), operations process (yield, defect rates, product delivery time, on-time deliveries, average time taken to manufacture orders, setup time, manufacturing down time), and post sales service (time taken to replace or repair defective products, hours of customer training for using the product).

Internal Process Measures according to Niven (2002, p. 134) are: (1) average cost per transaction; (2) on-time delivery; (3) average lead time; (4) inventory turnover; (5) environmental emissions; (6) research and development expense; (7) community involvement; (8) patents pending; (9)average age of patents; (10) ratio of new products to total offerings; (11) stockouts; (12) labor utilization rates; (13) response time to customer requests; (14) defect percentage; (15) rework; (16) customer database availability;(17) breakeven time; (18) cycle time improvement; (19) continuous improvement; (20) warranty claims; (21) lead user identification; (22) products and services in the pipeline; (23) internal rate of return on new projects; (24) waste reduction; (25) space utilization; (26) frequency of returned purchases; (27) downtime; (28) planning accuracy; (29) time to market of new products/services; (30) new products introduced; and (31) number of positive media stories.

Smith (2007, p. 186) presented process the following indicators: (1) increasing on-time delivery %; (2) accelerating product development time; and (3) optimizing supply chain.

3.4.Learning and growth perspective

3.4.1. Concept and definition of learning and growth perspective

Organizational learning and growth come from three principal sources: people, systems and organizational procedures. The financial, customer and internal business-process objectives on the BSC typically will reveal large gaps between the existing capabilities of people, systems and procedures and what will be required to achieve breakthrough performance. To close these gaps, businesses will have to invest in reskilling employees, enhancing information technology and systems and aligning organizational procedures and routines (Kaplan & Norton, 1996, p. 26). This perspective includes employee training and corporate cultural attitudes related to individual and organizational self-improvement. In a knowledge-worker organization, people—the only repository of knowledge—are the main resource and should be in a continuous learning mode. Appropriate metrics can guide managers in focusing training funds where they can help the most (Von Bergen & Benco, 2004, p. 7). The learning and growth perspective is the foundation from which all other perspectives spring and lean. The learning perspective shows how people absorb new ideas and turn them into actions. For a company and its business success, the critical time distance is between the moment something is learned and the moment what is learned begins to be applied. Learning and growth form the foundation of an organization's capabilities and must be anticipated and taken into account when designing a strategy. Usually, current failure in the competitive business world is the result of past failures in the acknowledgment and exploitation of learning and the growth of talent. Learning and growth, under this definition, is not the indeterminate activities found in various organizations. This is measurable and linked to the other productivity measures. In other words, this learning and growth measures for objectives are aligned to key deliverables in the other perspectives. Furthermore, this perspective reminds of the relevance of continued learning and growth goals and how they affect the continued competitiveness of the organization (Nair, 2004, p. 24). The measures in the learning and growth perspective of the Balanced Scorecard represent the foundation on which the whole house of a balanced scorecard is built and allow for other perspectives. Once companies identify measures and related initiatives in their Customer and Internal Process perspectives, they can be certain of discovering some gaps between current organizational infrastructure of employee skills and information systems, and the level necessary to achieve results. The measures company design in this perspective will help the

company to close that gap and ensure sustainable performance for the future. Like the other perspectives of the Scorecard, companies would expect a mix of core outcome (lag) measures and performance drivers (lead measures) to represent the Learning and Growth perspective. Employee skills, employee satisfaction, availability of information, and alignment all have a place in this perspective. Each organization seeks to identify and develop its own set of measures for the learning and growth perspective. It often happens in companies that this perspective and the development of measures are considered "soft things" that are best left to the human resources department. No matter how valid the rationale seems, this perspective cannot be overlooked in the development process (Niven, 2002, p. 16).

3.4.2. The measurement of learning and growth perspective

One of the greatest side effects of the BSC framework is the emphasis the Balanced Scorecard has placed on the fundamental participation of learning and growth in the cause-and-effect relationships. The learning and growth segment contributes to future capabilities of the organization and is rarely acknowledged and is usually the first to be cut in a tight market. Learning and growth measure examples are (Nair, 2004, p. 53): (1) training by level; (2) retention numbers; (3) redeployment percent; (4) forced and unforced attrition; (5) one-on-one interviews per employee; (6) employee and vendor satisfaction; (7) pay benchmarks; (8) rankings; (9) six-month performance after hire; (10) promotion from within; and (11) personal development plan creation.

Frequently cited BSC measures for the learning and growth perspective emphasize employee capabilities (e.g., employee education and skill levels, employee satisfaction scores, employee turnover rates); information systems availability (e.g., percentage of front-line employees with on-line access to customer information, percentage of business processes with real-time feedback); and motivation and empowerment (e.g., number of suggestions per employee, percentage of employee suggestions implemented, and percentage of compensation based on individual and team incentives). Kaplan and Norton (2000) emphasize that learning includes not only training, but also mentoring, ease of communication among workers, and technological tools (Von Bergen & Benco, 2004, p. 7).

“Employee learning and growth measures” according to Niven (2002, p. 140) are: (1) employee participation in professional or trade associations; (2) training investment per customer; (3) average years of service; (4) percentage of employees with advanced degrees; (5) number of cross-trained

employees; (6) absenteeism; (7) turnover rate; (8) employee suggestions; (9) employee satisfaction; (10) participation in stock ownership plans; (11) lost time accidents; (12) value added per employee; (13) motivation index; (14) outstanding number of applications for employment; (15) diversity rates; (16) empowerment index (number of managers); (17) quality of work environment; (18) internal communication rating; (19) employee productivity; (20) number of scorecards produced; (21) health promotion; (22) training hours; (23) competency coverage ratio; (24) personal goal achievement; (25) timely completion of performance appraisals; (26) leadership development; (27) communication planning; (28) reportable accidents; (29) percentage of employees with computers; (30) strategic information ratio; (31) cross-functional assignments; (32) knowledge management; and (33) ethics violations.

Smith (2007, p. 186) mentioned these learning and growth indicators: (1) developing high-quality staff; (2) improving internal communication; and (3) upgrading systems.

4. SMALL AND MEDIUM ENTERPRISES

4.1.Entrepreneurship

Entrepreneurship is a very important economic and social phenomenon that characterizes and determines modern development and the process of modification and transformation of leading industrial and other countries. For this reason, some authors often call the modern economy an entrepreneurial economy.

According to the Global Entrepreneurship Monitor's (GEM) 2019/2020 Global Report (Bosma et al., 2020, p. 20) entrepreneurship is broadly defined as "any attempt at new venture or new business creation, such as self-employment, a new business organization or the expansion of an existing business, by an individual, a team of individuals, or an established business". It is a vital ingredient in the economic development mix and an important determinant of present and future incomes and jobs. Entrepreneurship according to Buble and Kružić (2006, p. 10) can be viewed as a process that emphasizes the ability and activity (of individual actors and society as a whole) to use change, innovation and assessment, all in conditons of new combinations of limited production factors, to create and perform such an endeavor that will result in profit (and other social benefits). Barringer and Ireland (2010, p. 26) pointed out that two highly regarded academics, Stevanson and Jarillo, define entrepreneurship as the process by which individuals take advantage of opportunities no matter what resources they currently have at their disposal. Others, like entrepreneur Fred Wilson, define it more simply, as the art of turning an idea into a business venture. Buble and Buble (2014, p. 10) define entrepreneurship as the creation of an innovative economic organization (or network of organizations) for the purpose of profit or growth, in conditions of risk and uncertainty. Hisrich, Peters and Shepherd (2011. p. 7) pointed out that almost all definitions of entrepreneurship speak of such behavior, which includes: (1) taking the initiative, (2) organizing and reorganizing social and economic mechanisms and resources in a practical direction, and (3) accepting risk or failure.

Entrepreneurship is not a new phenomenon, it has existed throughout history in all epochs of development of human society, and today's civilization and its history are in a way the result of the actions of entrepreneurship. Significant development of the market and entrepreneurship according to Kružić et al. (2016, p. 1) comes in the Middle Ages with art workshops in cities, crafts, maritime, trade, agriculture, etc. Entrepreneurship has proven itself in the practice of developed countries,

and in the economic theory of developed countries it stands out as a cornerstone of the economic system and economic development. Due to its great importance, entrepreneurship has become the subject of interest of many sciences, economics, psychology, sociology, law, etc., and in recent years it has been one of the main general social topics, especially political, economic and media. Entrepreneurship is present and can develop in all branches and activities of the economy (Buble & Klepić, 2007, p. 43). According to the GEM 2019/2020 Global Report (2020, p. 13) entrepreneurship is an essential driver of societal health and wealth, and a formidable engine of economic growth. It promotes the innovation required not just to exploit new opportunities, promote productivity and create employment, but also to help address some of society's toughest challenges as stated by the United Nations Sustainable Development Goals (SDGs). Many of the world's governments, think tanks, non-governmental and international organizations now look towards entrepreneurship as a key part of the solution to ending poverty and social inequity, promoting women's empowerment, and implementing business solutions to the world's environmental challenges, including climate change.

The future of entrepreneurship is very bright, not only because of innovation, global change, technological development, but also because this is the age of entrepreneurship, when entrepreneurship is embraced by corporations, educational institutions, government units and society. Entrepreneurship is increasingly involved in the educational process but also academic research, so many universities and colleges at all cycles offer university programs in entrepreneurship, most have at least one subject in entrepreneurship and this trend continues. Entrepreneurship is being introduced in programs in secondary and primary schools, it is being taught even to children in kindergartens, and the promotion and positive view of entrepreneurship and entrepreneurs in society is growing rapidly.

In the Croatian Encyclopedia (Leksikografski zavod Miroslav Krleža, 2021), an enterprise is defined as an organized economic entity through which its holder operates. It consists of objective, subjective and organizational components. According to Vujević (2007, p. 98) an enterprise is any commercial, economic or business entity in the private or public sector of business. It is an independent economic, technical and social entity owned by certain entities, which produces goods or services for the needs of the market, using appropriate resources and bearing business risk, in order to achieve profit and other economic and social goals. According to Isaković (2010, p. 13),

an enterprise is a legal entity registered in the competent institutions with the aim of performing certain business activities within the law, whose business results are reflected through the creation of new value.

There are numerous classifications of enterprises, and the most common are divisions according to the size of the enterprise, according to the manner of performing the transformation process and according to the legal form of organizing the enterprise. According to size, enterprises are mostly divided into micro; small; medium and large enterprises.

4.2.The concept of SME's

Europe's 25 million small and medium enterprises (SMEs) are the backbone of the EU economy **(**European Commission, 2020, p. 1). SME's represent 99% of all companies in the EU (European Commission, 2021). They employ around 100 million people, account for more than a half of Europe's GDP and play a key role in adding value in every sector of the economy. SMEs bring innovative solutions to challenges like climate change, resource efficiency and social cohesion and help spread this innovation throughout Europe's regions. They are therefore central to the EU's twin transitions to a sustainable and digital economy. They are essential to Europe's competitiveness and prosperity, economic and technological sovereignty, and resilience to external shocks. As such, they are a core part of the achievement of the EU's industrial strategy (European Commission, 2020, p. 1).

There are many different definitions of SMEs depending on authors but as well countries. In European Union they have to satisfy three main criteria: one is related to the number of employees, the second to financial status and the third to ownership status.

In the "Definition of micro, small and medium enterprises adopted by the Commission" states (European Commission, 2003, Title I, Article 2):

1. The category of micro, small and medium enterprises (SMEs) is made up of enterprises which employ fewer than 250 persons and which have an annual turnover not exceeding EUR 50 million, and/or an annual balance sheet total not exceeding EUR 43 million.
2. Within the SME category, a small enterprise is defined as an enterprise which employs fewer than 50 persons and whose annual turnover and/or annual balance sheet total does not exceed EUR 10 million.

3. Within the SME category, a microenterprise is defined as an enterprise which employs fewer than 10 persons and whose annual turnover and/or annual balance sheet total does not exceed EUR 2 million.

It is also defined that small and medium-sized enterprises must be autonomous, ie that another enterprise or group of partner or affiliated enterprises does not have an ownership share or voting rights of 25% and more.

According to OECD (2017, p. 36) micro-enterprises are defined as firms with 1-9 persons employed; small enterprises: 10-49; medium enterprises: 50-249; and large enterprises: 250 and more. The group of micro, small and medium enterprises (SMEs) refers to the size class 1-249.

Small and medium enterprises are the backbone of every country's economy, and without them, economic growth and development are unthinkable. Through entrepreneurship, SMEs are the bearers of a permanent innovation that renews, transforms and encourages the development of economies around the world. The dynamics of entrepreneurship is such that every hour from day to day in the world a large number of new ventures and companies are born. In developed market economies, the relative market share of small enterprises is constantly increasing in relation to the total number of enterprises. Small and medium enterprises are the main driver of innovation, employment and competitiveness. SMEs are very important from a social and economic point of view. They are vital to the world economy, as well as European economy. They provide two-thirds of jobs in the private sector and are responsible for more than half of the total added value realized by companies in the EU **(**European Parlamaint, 2021, p. 1). Growth in Europe is unthinkable without SMEs, and they play a crucial role in delivering innovative products, strengthening competitiveness and creating new jobs. They generate innovation and entrepreneurship which are the main drivers of economic development in creating new jobs, are able to identify new needs of both consumers and industry, and have the potential to absorb new technologies, contribute to science and local development. SMEs are key to employment growth as well as the development of the necessary conditions for socioeconomic prosperity. In the last decade, the European Union has placed a particular emphasis on the development of entrepreneurship and SMEs. In the U.S., SMEs also employ more than half of all private-sector employees, are responsible for half of the GDP and generate between 60 and 80 percent of net new jobs per year (Kraus 2007) (Fink & Kraus, 2009. p. xix). The average number of employees in the Republic of Croatia in micro and small

enterprises is 4 while the average number of employees in medium enterprises is 120 (Alpeza et al., 2020, p. 10).

SMEs continue to play an increasingly important role in major economies around the globe (Mugler, 1998). SMEs also account for a significant share of interfirm cooperations across national borders (Fink & Teodorowicz, 2008; Fink et. al., 2009). Against this backdrop, it is not surprising that SMEs have become a popular topic of academic research since Birch (1979) found that small firms create more new jobs than large firms (Fink & Kraus, 2009. p. xix). SMEs are the engine of the European economy. They drive job creation and economic growth and ensure social stability. SMEs also stimulate an entrepreneurial spirit and innovation throughout the EU and are thus crucial for fostering competitiveness and employment. Given their importance to Europe's economy, SMEs are a major focus of EU policy. The European Commission aims to promote entrepreneurship and improve the business environment for SMEs, thereby allowing them to realise their full potential in today's global economy (European Commission, 2020, p. 3). The following data also show the importance of small and medium enterprises for the economy in the EU. There were slightly more than 25 million SMEs in the EU-28 in 2018, of which 93% were micro SMEs. SMEs accounted for 99.8% of all enterprises in the EU-28 nonfinancial business sector (NFBS), generating 56.4% of NFBS value added and 66.6% of NFBS employment. Overall, the NFBS represented 54.5% of EU-28 GDP and 61.4% of total EU-28 employment (European Commission, 2019, p. 17).

If it is taken into account the fact that small and medium enterprises have limitations in terms of financial resources in relation to large enterprises, Isaković (2010, p. 23) concludes that their contribution to added value is very significant.

Recognizing the importance of SMEs for the economy of European countries, the The European Charter for Small Enterprises was adopted in Lisbon in 2000. The charter defined ten key areas, with the aim of promoting the development of small business. SMEs are very vulnerable, and because of their importance in generating entrepreneurship, governments of developed countries are developing special programs to encourage them. In 2008, the European Union adopted The Small Business Act for Europe (SBA), as an overarching framework for the EU policy on Small and medium enterprises (SMEs). It aims to improve the approach to entrepreneurship in Europe, simplify the regulatory and policy environment for SMEs, and remove the remaining barriers to

their development. The European Commission has identified a major role for SMEs in developing the innovative and exporting capacity of the EC, either directly or indirectly through subcontracting with larger enterprises. At the same time SMEs face particular difficulties related to their size. Accordingly, the EC has an important role to play in reducing the burdens on SMEs and in assisting them through advice and support structures (Dyson, 1990, preface). Small and medium sized enterprises have been and are the basis for economic development all over the world. They play an important role for employment, innovation and societal change. Researchers and teachers also have recognized that management processes in SMEs differ from large businesses, requiring specialized tools and management concepts. Small firms need specialized practices in human resource management; they apply specific strategies and use different methods of strategic management; and organizational learning within the firm is closely linked to the entrepreneur and his/her team (Fink & Kraus, 2009, p. foreword). Larsen and Mayrhofer (2006, p. 108) concluded that SMEs are considered to be non-subsidiary, independently owned firms with a specific number of employees. The European Commission has set as its purpose to make the EU the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion. In turn, the need arises for Europe to respond as a unified body to global competition and reestablish its position in the world markets (OECD, 2002). SMEs within Europe can contribute to such competitiveness; in this respect, the EU has enacted policies to support SMEs. Among these are the free movement of goods and services, easing of regulatory restrictions, and streamlining of accounting procedures (Mulhern, 1995). Within Europe, the wealthier nations have greater-than-average sized SMEs, probably reflecting their ability to exploit economies of scale in their larger markets. However, in general EU businesses tend to be much smaller than those of nations like the US. Furthermore, the Mediterranean countries have the greatest prevalence of smaller firms within Europe. In fact, the further north one goes in Europe, the larger average firm size tends to become.

SMEs have specific characteristics in comparison to large enterprises. Hutchinson and Quintas (2008) highlight the relevant differences between large and SMEs, particularly regarding the latter limited internal resources constraining their management of external and internal sources of intangible-based competitive advantages. Bearing in mind the particular characteristics of SMEs, it calls for further investigation on the mediator elements and on the mechanisms, which can explain theoretically the empirical results (Jardon & Gonzalez Loureiro, 2013, p. 257).

Nevertheless, ‘a small business is not a little big business’, as Welsh and White already noted in 1980. Thus, Small Business Management may rely on the established concepts and instruments of Big Business Management, but also needs to develop a flexible and easily used set of tools to support the entrepreneur in making the optimal decisions. In light of the importance of SMEs in developed economies worldwide, it becomes essential to investigate the underlying mechanisms and practices of management within these enterprises (Fink & Kraus, 2009, p. xix). SMEs are not as well equipped as bigger companies to do so, due to their limited resources and available competences. SMEs, including micro enterprises, have been identified as an important contributor to both national economic output and employment, as keydrivers of change in the economy, and as the source for business model innovations changing the operating rules of industries (The Edinburgh Group, 2013). The importance of strategic renewal of SMEs for regions and industries undergoing profound changes in business is remarkable in sustaining the economic activity, and sustainable growth in these areas can only be achieved by changes in SMEs and in their competences (Lampela, Taipale-Erävala & Heilmann, 2017, p. 176).

Small and medium enterprises have their strengths and weaknesses. The following can be mentioned as advantages of small enterprises (Buble & Klepić, 2007, p. 11-16): they employ more than large companies, have a higher rate of return than large companies, quickly apply innovations, deliver their products to large companies at the lowest prices, create new jobs and make it easier for women to access. In addition, according to Petković, Serdarević and Bejić (2010, p. 14) the most important characteristics of SMEs are that they satisfy that part of the demand for goods and services that large companies can hardly meet; due to their size they are much more flexible which allows them to have a very elastic supply and to adapt to market demand trends; seek a relatively universal type of workers and equipment who can perform a variety of jobs in the production process; show a greater willingness to replace old technologies with new ones and perform that replacement more quickly; provide wider opportunities for innovation and faster application of new knowledge and business models; economic independence and willingness to bear risks in business encourages SMEs to connect and network elastically in order to achieve more successful joint businesses, but also easier risk bearing.

Lampela, Taipale-Erävala and Heilmann (2017, p. 175) concluded that as a result of changes in the local or regional business environment, SMEs in many industries are facing the need to change their business models radically and seize new business opportunities or fall out of business.

Although the important impact of SMEs in economic growth and job creation is well known, current knowledge is rather limited on the effects of competences for changing the business models in SMEs. According to Patalas-Maliszewska and Hochmeister (2011, p. 72), nowadays, enterprises perceive knowledge as a strategic resource which contributes to the competitive dominance of an enterprise. Small and medium enterprises play a critical role in creating workplaces and, in a more general sense, they also constitute factors in social stability and economic development. However, given the limited guarantees they canoffer, SMEs often encounter difficulties in obtaining capital or credit as well as the fact that they typically have limited access to information concerning new technologies and potential markets. Hegge (2002, p. 4-5) concluded that, in general, the SME is highly specialised on one or two product lines. This high specialisation might enable the SME to reap economies of scale. In some cases, the firm finds itself in a situation of a quasi-monopoly. Competition with large enterprises becomes possible. The location in agglomerations (or industrial districts) enables SMEs to reap to a higher extent not only economies of scale, but also economies of scope due to proximity advantages. This facilitates their internationalisation.

4.3.Status and importance of SME's in Bosnia and Herzegovina

Bosnia and Herzegovina is a complex state that consists of two entities, the Federation of Bosnia and Herzegovina and Republika Srpska, and Brčko District. The definition of SME-s is not fully harmonized and each entity, as well as Brčko District, has its definition and classification (Klepić, 2019, p. 17). In accordance with the division of administrative competencies, the legal definition of SMEs is decided at the entity level in B&H. Each entity has two definitions of SMEs: one in the Law on Accounting and Auditing for accounting purposes, and another in the Law on Fostering Small Business Development in the FB&H and Law on SME Development in the RS for the purposes of providing financial support to SMEs. In addition, Brčko District has its own SME definition in the Law on Enterprises. The definition for accounting purposes is the same in both entities and distinguishes between small, medium-sized and large companies. The Law on Accounting and Auditing provides clear criteria for micro enterprises in the RS, whereas the FB&H does not define them separately. Since the last assessment, the RS has reduced the turnover and balance sheet thresholds in its second SME definition so as to harmonise them with the first, which has made the two entities' definitions more comparable and coherent according to both laws. For the purposes of financial reporting, the two entities' accounting and auditing laws use financial thresholds to categorise SMEs that differ from those in the EU definition, although the employment

criteria are the same. These definitions are adapted to the specific context of the economy of each entity (OECD/ETF/EU/EBRD, 2019, p. 20). A comparison of the classification of SMEs in the European Union and in the entities according to the two mentioned laws can be seen in Table 3.

Table 3 Classification of SMEs in European Union and Bosnia and Herzegovina

		Federation B&H		Republika Srpska		Brčko district
	EU DEFINITION	**Law on accounting and auditing**	**Law on fostering small bussines development**	**Law on accounting and auditing**	**Law on SME development**	**Law on enterprise**
Micro	< 10 employees ≤ EUR 2 million turnover or balance sheet	No definition in place	< 10 employees ≤ BAM 400.000 (~EUR 204 000 turnover and/or balance sheet	< 5 employees < BAM 250 000 (~EUR 128 000) balance sheet <BAM 500 000 (~EUR 255 000) turnover	< 10 employees	No definition in place
Small	< 50 employees ≤ EUR 10 million turnover or balance sheet	< 50 employees < BAM 1 million (~EUR 0.51 million) circulating assets < BAM 2 million (~EUR 1.02 million) turnover	< 50 employees ≤ BAM 4 million (~EUR 2.04 million) turnover and/or balance sheet	< 50 employees < BAM 1 million (~EUR 0.51million) balance sheet < BAM 2 million (~EUR 1.02 million) turnover	< 50 employees < BAM 1 million (~EUR 0.51 million) balance sheet ≤ BAM 2 million (~EUR 1.02 million) turnover	< 50 employees < BAM 2.8 million (~EUR 1.43 million) turnover < BAM 1.4 million (~EUR 0.71 million) circulating assets
Medium sized	< 250 employees ≤ EUR 50 million turnover ≤ EUR 43 million balance sheet	< 250 employees < BAM 4 million (~EUR 2.04 million) circulating assets < BAM 8 million (~EUR 4.08 million) turnover	< 250 employees ≤ BAM 40 million (~EUR 20.41 million) turnover and/or ≤ BAM 30 million (~EUR 15.30 million) balance sheet	< 250 employees < BAM 4 million (~EUR 2.04 million) balance sheet < BAM 8 million (~EUR 4.08 million) turnover	< 250 employees ≤ BAM 4 million (~ EUR 2.04 million) balance sheet ≤ BAM 8 million (~ EUR 4.08 million) turnover and/or	< 250 employees < BAM 4 million (~EUR 2.04 million) turnover ≤ BAM 8 million (~EUR 4.08 million) circulating assets

Source: Adapted from *"Bosnia and Herzegovina Small Business Act Profile", in SME Policy Index: Western Balkans and Turkey 2019: Assessing the Implementation of the Small Business Act for*

Europe, *SME Policy Index*, by OECD/ETF/EU/EBRD, 2019 (https://doi.org/10.1787/g2g9fa9a-en), p. 21-22.

According to Law on fostering small bussines development passed by the Parliament of the Federation of B&H (2006, Article 2) small businesses consist of small businesses, individuals and legal entities, which permanently perform legally permitted activities for income or profit, including self-employment and family businesses related to crafts and other activities, registered with the competent authority, regardless of the form of organization and which: are independent in business, employ less than 250 people a year and have an annual turnover of up to KM 40 million and / or whose annual balance sheet does not exceed KM 30 million. The law also defines that companies are independent in business, which means that another company or group of companies is not the owner of shares or has the right to decide more than 25%.

Small and medium enterprises in the Federation are developing in a complex environment burdened by bureaucratic company registration procedures, fragmentation of institutional infrastructure for SME development, high administrative burdens, difficult access to finance especially for start-ups, inconsistent education system in terms of economic needs and inadequate level of entrepreneurship culture, the lack of a strategic framework for the adoption and development of innovations, etc. All this is reflected in the competitiveness of SMEs, which results in slowing economic growth, or reducing the potential of the SME sector in generating new jobs (Federal Ministry of Development, Entrepreneurship and Crafts, 2019, p. 2)

Like its regional peers, Bosnia and Herzegovina's economy is dominated by SMEs. In 2017 there were around 30 000 SMEs (99.1% of all businesses) operating in B&H, with a large majority (77.7%) being micro enterprises. Small and medium-sized firms constituted slightly more than 20% of all SMEs. As Figure 11 shows, SMEs create much more employment than large enterprises. Even though their contribution to overall business sector employment has fallen by 4.4% since the last assessment, they still provided around 64% of jobs in the business sector 2017. At the same time, on average, SMEs contributed 60% to the annual value added in the business sector, which is around the regional average.

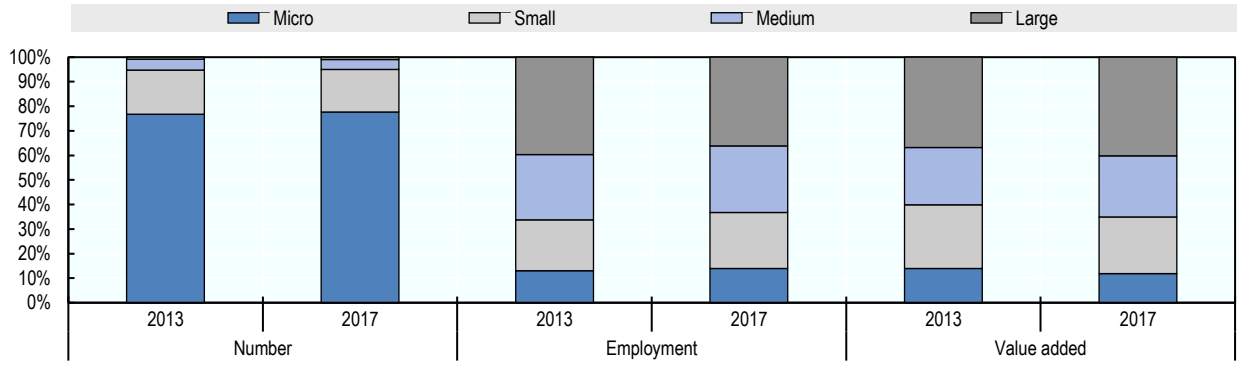
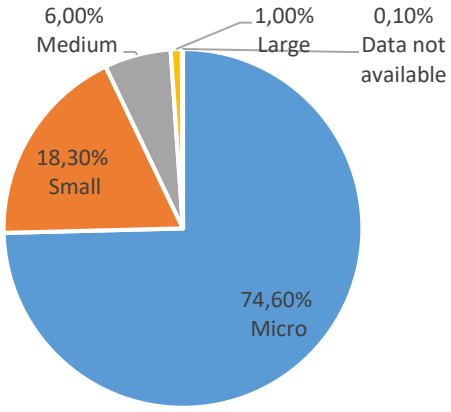


Figure 11 Business demography indicators in Bosnia and Herzegovina (2013 and 2017)

Source: From *"Bosnia and Herzegovina Small Business Act Profile", in SME Policy Index: Western Balkans and Turkey 2019: Assessing the Implementation of the Small Business Act for Europe, SME Policy Index,* by OECD/ETF/EU/EBRD, 2019 (https://doi.org/10.1787/g2g9fa9a-en), p 22. (According to Statistical offices of FB&H and the RS)

A classification of enterprises by employment size classes, using criteria "number of persons employed", shows that micro enterprises (0-9 persons employed) create the largest share of the total number of classified enterprises, even 74.6%. Small enterprises (10-49 persons employed) create 18.3%, medium enterprises (50 – 249 persons employed) create 6.0%, while the share of large enterprises (250 and more persons employed) is only 1.0%. For 0.1% of active enterprises, data on employment are not available (Graph 1) (Agency for statistics of Bosnia and Herzegovina, 2019, p. 2).

Graph 1 Enterprises by employment size classes (%)



Source: Adapted from *Business Statistics - Units of the Statistical Business Register Data as of June 30, 2019.* by Agency for statistics of Bosnia and Herzegovina, 2019, p. 3.

The largest number of small enterprises, 24.5% are classified in Section Wholesale and retail trade; repair of motor vehicles and motorcycles. Small enterprises are also represented by a larger number in the following sections: Manufacturing 19.5%, Education 9.0%, Construction 8.2% and Transportation and storage 6.4%. Out of the total number of medium enterprises, the majority, 21,7% are classified in Education, then in Manufacturing with 21,6%, Wholesale and retail trade; repair of motor vehicles and motorcycles with 12.9%, Public administration and defence; compulsory social security with 10,8%, and Section of Human health and social work activities with 6.4% (Agency for statistics of Bosnia and Herzegovina, 2019, p. 2).

In 2017, more than 70% of SMEs were located in the FB&H, with around 30% in the RS (Table 4). In the FB&H, SMEs were primarily concentrated in and around the main commercial hubs, and in particular around Sarajevo (23% in 2017).

Table 4 Number of registered companies in Bosnia and Herzegovina, by enterprise size and entitiy and FB&H canton (2017)

Entities	Cantons (FB&H)	Enterprise size, by employment				Total	Share of total number of enterprises
		0-9	10-49	50-249	250+		
Federation of Bosnia and Herzegovina	Bosnian-Podrinje	112	58	14	3	187	0.57%
	Herzegovina-Neretva	1 686	675	174	24	2 559	7.86%
	Canton 10	457	164	27	2	650	2.00%
	Posavina	233	111	25	3	372	1.14%
	Canton Sarajevo	5 078	1 884	487	98	7 547	23.18%
	Central Bosnia	1 137	496	155	30	1 818	5.58%
	Tuzla Canton	2 425	1 042	312	36	3 815	11.72%
	Una-Sana	1 299	535	118	8	1 960	6.02%
	West Herzegovina	763	365	97	23	1 248	3.83%
	Zenica-Doboj	1642	833	243	39	2 757	8.47%
	Total FB&H	14 832	6 163	1 652	266	22 913	70.4%
Republika Srpska		7 434	1 711	400	100	9 645	29.6%
Bosnia and Herzegovina		22 226	7 874	2 052	366	32 558	100%

Source: From *"Bosnia and Herzegovina Small Business Act Profile", in SME Policy Index: Western Balkans and Turkey 2019: Assessing the Implementation of the Small Business Act for Europe, SME Policy Index,* by OECD/ETF/EU/EBRD, 2019 (https://doi.org/10.1787/g2g9fa9a-en), p. 24. (According to Federal Information Agency and SBA assessment government questionnaire)

SME's in Bosnia and Herzegovina are even more important given the fact that the economy during the war and afterwards has significantly collapsed. It is expected that small and medium enterprises could and should be the backbone of Bosnia and Herzegovina's development, which could enable faster growth and development (Klepić, Klepić & Mabić, 2020, p. 266). A significant boost for the development of small and medium enterprises in the transition countries of the Western Balkans began in 2003, when a joint declaration was made and the "Thessaloniki Agenda" for the Western Balkans was adopted, whereby the signatory countries accepted the "Charter for Small Enterprises" (Isaković, 2010, p. 20). Given the importance of small and medium enterprises (SMEs) in the economy of Bosnia and Herzegovina, but also the growing importance of entrepreneurship in the last twenty years, this area is extremely dynamic. The business environment in B&H is burdened with bureaucratic procedures, administrative and legal obstacles that limit the efficiency of enterprise establishment, functioning and development of SMEs. Oversized and bureaucratized administration has a counterproductive effect on starting a business and the efficiency of the company's business process. A major problem is also the burden of high tax obligations and administrative fees, difficult access to finance, especially for start-ups, inconsistent education system in terms of the needs of the economy and inadequate level of entrepreneurial culture, lack of strategic framework for innovation adoption and development, etc. All this is reflected on the competitiveness of SMEs, which results in a slowdown in economic growth, i.e., a reduction in the potential of the SME sector in generating new jobs.

A necessary precondition for the survival and development of SMEs is a regulatory and institutional environment created by the state that facilitates their business. According to the "SME Policy Index: Western Balkans and Turkey 2019" of OECD/ETF/EU/EBRD (2019, p. 17) the business environment in Bosnia and Herzegovina remains very burdensome despite the positive economic outlook. As outlined in its Economic Reform Programme 2018-2020, the major reasons for its poor private sector performance stem from a complex institutional set-up, which has created a large and inefficient public sector that dominates the economy. The business environment in B&H is not stimulating for the development of entrepreneurship and it seems that the government takes into account its own interests, but not the interests of entrepreneurs. Moreover, most barriers for doing business come from the authorities, instead of giving incentives as in other countries in the region and beyond (Džafić & Bejić, 2012, p. 63).

The significant obstacles identified in the Economic Reform Programmes 2018-2020 can be summarised as the continuing lack of a single economic space; weak access to finance; weak rule of law; and the complex, unclear and sometimes contradictory legal and regulatory frameworks. In addition to the significant cost of business entry and exit procedures, businesses are subjected to numerous para-fiscal charges. Gaps in contract enforcement and implementation of laws further aggravate the business environment (OECD/ETF/EU/EBRD, 2019, p. 17).

For policy makers trying to improve the business economic regulatory environment, a comparison with the regulatory environment of other countries is necessary. "Ease of doing business" is a World Bank document that analyzes how easy it is for a local entrepreneur, according to the current legislation of the country, to open a small or medium enterprise and do business. It provides a cumulative ranking of "Ease of doing business" based on indicators that establish measures and standard regulations during the life cycle of domestic small and medium enterprises. Countries are ranked from 1 to 190. In the analysis for 2020, Bosnia and Herzegovina is ranked 90th and compared to 2019 it has fallen one place. Compared to the surrounding countries, Bosnia and Herzegovina is by far the worst ranked and lags behind the surrounding countries (Serbia 44, Montenegro 50, Croatia 51, Kosovo 57, Albania 82) (World Bank Group, 2019). According to the Global Competitiveness Index for 2019, Bosnia and Herzegovina is ranked 102nd out of 141 countries analyzed, which is one position worse than in 2018. Compared to the countries in the Region, Bosnia and Herzegovina is also ranked the worst (Slovenia 35, Croatia 63, Serbia 72, Montenegro 73, Albania 81 and Macedonia 82) (Federalni zavod za programiranje razvoja, 2019, p. 33). "The BiH Economic Reform Program for 2020-2022" includes 18 structural reforms, 6 of which are new and 12 are old ones. In line with the European Commission's Guidance, the following key barriers to growth and competitiveness have been identified: Underdeveloped energy market; Underdeveloped transport infrastructure and high traffic mortality; High social security contributions, with the existence of non-taxable benefits in the labour taxation system, give a picture that is not realistic and restrict investment and growth; The mismatch between the labour market and the education system; Less than stimulative business environment; Poor links between the real sector and the scientific and research community, and the mismatch between study programmes, enrolment policies and real sector needs; Underdeveloped framework for tourism development as a fast growing sector; and The need to improve support for SMEs (Bosnia and Hezegovina, 2020, p. 77).

4.4.Human resources management in small and medium enterprises

Human resources and effective employee management can be considered a key factor for the survival and development of SMEs. Competent human resources are a prerequisite for the success of SMEs.

However, until the late 1990s, there was a problem of lack of theory in the field of human resources management in SMEs, which was pointed out by numerous authors (Hornsby & Kuratko 1990; Deshpande & Golhar 1994) although this special knowledge should be extremely useful for small businesses. A review of the relevant literature over the last twenty years suggests that a number of scientists have realized the importance of the role of human resources management in SMEs. Most research on HRM has been conducted in larger companies. Therefore, empirical and theoretical knowledge in this field was considered developing and insufficiently researched (Fink & Kraus, 2009, p. 128-129). In the last time, there has been more and more literature on HRM and smaller companies. Numerous authors (Wright et al., 2005, p. 435; Sheehan, 2014, p. 546) suggested that future research should focus on study designs that are better able to demonstrate causal order to show that human resources practices, when implemented correctly, can positively generate higher firm performance.

Researchers as well as managers and owners in small and medium enterprises have recognized the importance of competencies in human resources management. SMEs in practice still lag behind large companies in human resources development and human resources management. Small and medium enterprises have limited resources and opportunities compared to large ones. Due to their limited size and resources, it is not economically justified for many SMEs to hire permanent HRM experts to deal with these challenges. As a result, HRM activities often become the responsibility of general managers, draining managerial time and resources as well as lacking the necessary expertise to carry out these activities requisitely. While it is positive for general managers to be involved in HR activities, something often missing from large organizations, these activities should not be their primary responsibility (Larsen & Mayrhofer, 2006, p. 111). Harney and Dundon (2006, p. 49), have stated that HRM in SMEs can be understood as complex and heterogeneous. They refer to previous studies that indicate that HRM research does not adequately capture the complexity or heterogeneity of HRM in SMEs. Emergent HRM means that it is not formally planned but is based on and takes its form from the current external and internal factors of the firm.

They also state that this emergent HRM can lead to better labor productivity, flexibility, social legitimacy and the informality/formality of relations (Fink & Kraus, 2009, p. 82-83).

Given contemporary financial market constraints and limited growth in demand, smaller firms are focusing increasingly on how to utilise existing resources more efficiently and effectively (Gallego et al., 2012). Given their resource limitations, small and medium sized enterprises have fewer options than their larger counterparts to improve performance. However, one resource that is common to all organisations, which has been the focus of increasing theoretical, empirical and practical attention in SMEs, is that of human resources. Scholars have suggested that adopting specific HRM practices can improve small firm performance and sustain competitiveness (e.g. Michie & Sheehan, 2008; Patel & Cardon, 2010; Aït Razouk, 2011; Williamson et al., 2002) (Sheehan, 2014, p. 545). According to Wapshott and Mallett (2015) large enterprises have HR department or HR specialists, and small enterprises, due to lack of resources, rarely have HR professionals and experts and usually have lack sophisticated and formalised HR practices. Marlow et al. (2010) concluded that in SMEs HR issues remain the domain of organisational leaders, founders and owners, or they are delegated to other non-specialist staff. Hayton (2003) considers that, because of the constrains affecting smaller organizations, HC is different when compared SMEs and large enterprises. SMEs are often governed by informal rules, unwritten customs and tacit understandings, rather than the formal rules, policies documents, written agreements and staff handbooks commonly associated with large firms (Kitching & Marlow, 2013). Singh and Vohra (2009) suggest that explicit, written HR policies and procedures are present to varying degrees in small firms, but that generally HR activities in SMEs are informal, reactive and have a short-term outlook (De Kok et al., 2002; De Kok & Uhlaner, 2001) (Lai, Saridakis & Johnstone, 2017, p. 472). Pearson et al. (2006) stated that it can be assumed that SMEs are different from large enterprises with regards to their HRM practices, support systems or personnel profiles. HRM department in SMEs only seldom exists and performs only a few activities (De Kok, 2003). Due to the specificity of small businesses, the concepts originally developed for larger enterprises do not seem to be directly applicable or sufficiently beneficial in SMEs (Wagar 1998; Kaman et al. 2001).

HC is most valuable and most inimitable when it is organization-specific and resides in the environment where it was originally (optimally) developed (Hitt et al., 2001). Context and specificity use of HC strengthen their inimitability. The flexibility of SMEs facilitates to achieve more specificity and, in consequence, SMEs can use HC as strategic resource. Finally, in order for

any characteristic of an organization's HC to provide a source of sustainable competitive advantage, the organization must be organized to exploit the resource (Jardon & Gonzalez Loureiro, 2013, p. 258).

Investments in training have direct and indirect effects on total performance. However, there are reasons why small firm owners are reluctant to invest in training. These include ignorance of potential benefits, time issues, fear of increased employee mobility and a lack of evidence for enhanced firm performance. Informal training is therefore preferred. The role and importance of formal and informal HR practices is growing in SMEs because it is essential to keep employees satisfied with their work. They need to compete with larger organizations for competent workers. Therefore, questions of well-being and the work climate become essential to consider when attracting and retaining employees (Fink & Kraus, 2009, p. 83).

Boselie, Dietz and Boon (2005) suggest that the impact of human resources management (HRM) on internal performance indicators is what generates better financial performance.

Small and medium enterprises, by adopting best practices in human resources management, contribute to the establishment and maintenance of competitive advantages. SMEs adapt human resources management practices used in large companies and develop their own practices because due to their size, limited resources and lack of experience they are not able to fully apply HRM practices or hire and retain HRM professionals as large companies.

The implementation of best HR practices might be associated with considerable development costs (Urbano & Yordanova, 2008). Smaller firms might not have the resources to invest in developing such practices and therefore might be less likely to adopt best HR. Empirical research supports such assertions confirming that size is positively related to the adoption of best HR practices in SMEs (Wagar, 1998; Bayo-Moriones & Merino-Diaz de Cerio, 2001; De Kok & Uhlaner, 2001; Cassell et al., 2002; Nguyen & Bryant, 2004; De Kok et al., 2006; Kotey & Folker, 2007; De Grip & Sieben, 2009; Wu et al., 2014). However, there is another smaller stream of research which suggests that the use of best HR practices does not differ significantly between large and smaller firms (Bacon et al., 1996; Golhar & Deshpande, 1997; Sels et al., 2006; Urbano & Yordanova, 2008). Golhar and Deshpande (1997) find no evidence of major differences in the use of best HR practices between large and small Canadian manufacturing firms. Bacon et al. (1996) even suggest that the implementation of best HR practices might actually be easier in smaller enterprises due to

their flat hierarchical structures, greater flexibility and more direct impact of employees on organizational performance (Newman & Sheikh, 2014, p. 417).

Inadequate human resources management not only reduces company productivity and profitability, but it may create a negative climate that will lead even the failure of the SMEs. SMEs must establish good governance and HRM that would ensure a motivated workforce, trained and able to produce efficiently to have success because their size may not warrant bringing on professionals exclusively dedicated to human resources management activities (Hornsby & Kuratko, 2003). Recruitment, selection, allocation, and retention of human talent is critical to the success of SMEs (Zula & Chermack, 2008) (Jardon & Gonzalez Loureiro, 2013, p. 260).

In recent years increasing numbers of SMEs are beginning to recognize the benefits that the implementation of best HR practices can bring (Sheehan, 2014). In this situation SME managers have started to adopt best HR practices to develop their competitive advantage and the human capital of their employees (Bacon et al., 1996; Kotey & Slade, 2005). There is considerable evidence that the adoption of certain HRM practices can have a positive impact on the organizational performance of SMEs (Huselid, 1995; Ichniowski & Shaw, 1995; Wood, 1999; Appelbaum et al., 2000; Guest et al., 2003; Edwards et al., 2010; Messersmith & Guthrie, 2010; Aït Razouk, 2011; Patel & Conklin, 2012; Allen et al., 2013; Sheehan, 2014). When it comes to SMEs, the literature generally confirms a strong relationship between the adoptions of these practices, either in isolation or bundled together with other practices, and SME performance (Wagar, 1998; Chandler & McEvoy, 2000; Way, 2002; Hayton, 2003; Nguyen & Bryant, 2004; Sels et al., 2006; Zheng et al., 2006) (Newman & Sheikh, 2014, p. 415).

5. EMPIRICAL RESEARCH ABOUT THE INFLUENCE OF HUMAN RESOURCES COMPETENCY MANAGEMENT ON THE BUSINESS SUCCESS OF SMALL AND MEDIUM ENTERPRISES

5.1.Research instruments

The research instruments that were used for testing the hypothesis, consist of the following constructs (elements):

1. Human resources competency management;
2. Business performance measurement with BSC framework;
3. Charasteristics of participating companies.

5.1.1. Human resources competency management

"Human resources competency management" of the researched companies is measured through three phases: "Determining the required competencies"," Determining current competencies and determining the competency gap between the required and current competencies" and "Undertaking activities to ensure and develop the necessary competencies". Each of the phases was measured through statements that respondents rated from 1 to 5 points on the Likert scale where the lowest grade is 1- not at all, up to grade 5 - excellent, which is the highest grade.

A construct for measuring"the Determining the required competencies" is shown in Table 5. "Determining the required competencies" is tested based on 12 components: DESCR, PERF, KNOWL, ABILL, TECHSKILL, INTERPSKILL, TRAIT, DUTY, BEHAV, COMP, MOTIV and EXEMP.

Table 5 Research instrument for determining the required competencies

Variable code	Question
DESCR	is there a detailed and accurate job position and job description that an individual employee does at each job position?
PERF	is the individual work performance *(goals / norms / performance standards)* defined and prescribed for each workplace that the employee needs to achieve?
KNOWL	is the required knowledge identified for each workplace and defined as a condition for someone to be hired or assigned to a particular workplace?
ABILL	are the necessary abilities for the workplace identified and defined as a condition for someone to be hired or assigned to a particular workplace (*intellectual, psychomotor, physical, sensory*)?

TECHSKILL	are the required technical skills identified for each workplace (specific to each job, profession, occupation, activity, etc.) and defined as a condition for someone to be hired and assigned to a particular workplace?
INTERPSKILL	the necessary interpersonal skills, i.e., skills of working with people, have been defined as a condition for someone to be hired and assigned to a certain workplace (*developing good relations, propensity for teamwork, communication, sensitivity, respect for diversity, openness in relationships, understanding other people's feelings and behaviors, influencing others, networking*)?
TRAIT	are the personality traits / characteristics of the employee for each workplace determined and defined as a condition for someone to be hired or assigned to a certain position *(self-confidence, determination, energy, courage, risk-taking, ethics, compassion, propensity for teamwork, analytical skils, communicativeness, etc.)* ?
DUTY	are the duties (obligations) and responsibilities defined for workplace that the employee has, for every workplace?
BEHAV	is the behavior of employees in the workplace defined *(creativity, initiative, ambition, flexibility, adaptability, continuous learning, loyalty, developing good relationships, responsibility, etc.)*?
COMP	are the competencies (knowledge, skills, abilities…) required as a condition for each workplace in line with the established goals, strategy and mission of the company?
MOTIV	is the needed motivation of employees determined in each workplace in order to be successful in performing the job and work task *(enthusiasm, passion, ambition, initiative, energy, desire to learn, etc.)*?
EXEMP	are the most successful employees (exemplars) identified and their characteristics, behavior and performance described as an example of excellent employees with whom other employees can be compared?

Source: Author's work

A construct for measuring the "Determining current competencies and determining the competency gap between the required and current competencies" is shown in Table 6. "Determining current competencies and determining the competency gap between the required and current competencies" is tested based on 12 components: KNOWL2, ABILL2, TECHSKILL2, INTERPSKILL2, TRAIT2, PERF2, BEHAV2, MOTIV2, EXEMP2, EVAL, DOC and INTERW.

Table 6 Research instrument for determining current competencies and determining the competency gap between the required and current competencies

Variable code	Question
KNOWL2	is an assessment / verification of the employee's knowledge performed during new employments, but also after that, and is a comparison made with the needed, ie required knowledge for performing the job and the workplace where they work?
ABILL2	are necessary abilities determined for workplaces assessed / tested during the new employment, but also after that, and compared with the necessary, ie required abilities to perform the job and the workplace they work at *(intellectual, psychomotor, physical, sensory)?*
TECHSKILL2	during new employment, but also occasionally / regularly after that, the determined necessary technical skills for jobs are assessed / tested *(they are specific for each job, profession, occupation, activity, etc.)* and a comparison made with the necessary ie required skills for performing the job and the workplace they work at?
INTERPSKILL2	during new employment, but also after that, the determined necessary interpersonal skills, ie skills of working with people for each job, are assessed / tested and compared with the necessary, ie required skills for performing the job and the workplace they work in *(developing good relations, propensity for teamwork, communicativeness, sensitivity, respect for diversity, openness in relationships, understanding other people's feelings and behavior, influencing others, networking)*?
TRAIT2	during new employment, but also after that, the personality traits / characteristics of employees are evaluated *(self-confidence, determination, energy, courage, risk-taking, ethics, compassion, propensity for teamwork, analytical skills, communicativeness, etc.)* and comparison is made with the necessary, ie. required characteristics to perform the job and the workplace they work at?
PERF2	is the achieved individual work performance and analysis of the work of each employee measured and compared with set and planned standards, norms and goals?
BEHAV2	is employee behavior in the workplace continuously / periodically evaluated *(creativity, initiative, ambition, flexibility, adaptability, continuous learning, loyalty, developing good relationships, responsibility, etc.)* and compared with the necessary behavior required to do the job and the workplace they work at?
MOTIV2	is the motivation of employees continuously / periodically assessed *(enthusiasm, passion, ambition, initiative, energy, desire to learn, etc.)* and compared with the necessary or required motivation needed to successfully perform the job and their workplace?
EXEMP2	is a comparison made between job candidates and employees identified as the most successful employees *(characteristics, behavior and performance)* that serve as an example (model) of excellent employees?

EVAL	is criteria for the performance evaluation of employees been determined according to which the evaluation of employees and their work performance is performed?
DOC	are official forms for evaluation (documents) of employees and their work performance developed in the company?
INTERW	after the evaluation of employees and their work performances, an interview is conducted with employees regarding the results where individual results are communicated to them and the performance evaluation, reasons and possibilities for improvement and achievement of the required standards are discussed?

Source: Author's work

A construct for measuring the "Undertaking activities to ensure and develop the necessary competencies" is shown in Table 7. "Undertaking activities to ensure and develop the necessary competencies" is tested based on 18 components: INVEST, PLAN, GGOAL, SGOAL, COND, OUT, EDUC, CERT, CAREER, SOC, EXP, ROT, SPEC, EVAL2, MONIT, HIGH, EXTERN and LAYOFF.

Table 7 Research instrument for investigating the activities to ensure and develop the necessary competencies

Variable code	Question
INVEST	invests in training and education of its employees in order to improve existing and acquire new competencies?
PLAN	plans and organizes training and education of employees to provide them with missing competencies well and in detail?
GGOAL	has established general goals of employee training and education *(raising competitiveness, improving work performance, updating knowledge and skills of employees, etc..)*?
SGOAL	has defined well and in detail specific goals aimed at that segment of behavior or areas of work performance that employees need to change or improve?
COND	conducts training and education of employees to acquire, disseminate and deepen knowledge and skills for current work and adapt to changes in work and technology?
OUT	sends its employees to training and education outside the company in order to acquire new competencies and missing competencies *(other companies, seminars, courses, etc.)*?
EDUC	sends its employees for additional education to educational institutions in order to acquire the missing and improve existing competencies?
CERT	directs its employees to education and certification in order to obtain appropriate certificates for performing certain tasks?
CAREER	performs training and education of employees for career development, prepares employees for advancement and performing more complex and responsible tasks in the organization?

SOC	train employees and managers for social or interpersonal and strategic skills?
EXP	train subordinates in a way that a more experienced employee or manager teaches an employee who needs education as well as mentoring?
ROT	uses job rotation, ie moving employees according to a predetermined time schedule from one job to another in order to acquire the missing competencies and develop existing ones?
SPEC	assigns work tasks to employees and lower levels and provides experience of working on specific problems and tasks for training and development of employees?
EVAL2	after the training, evaluates the opinion and satisfaction of participants with the training, educational program, conditions, teachers and content, and evaluates the extent to which participants have adopted and know the concepts, principles, facts, techniques and skills presented in the program?
MONIT	monitors how much participation in the training program has really changed behavior at the workplace, ie whether a positive transfer of acquired knowledge to the work situation and workplace has been made, and analyzes the concrete results and work performance of employees who attended the training?
HIGH	performs employee development and promotion to higher positions in the company of those who have the necessary and appropriate competencies?
EXTERN	employs and selects human resources outside the company with necessary competencies that cannot be provided within the company?
LAYOFF	lays off or otherwise dismisses employees who cannot develop and achieve the required competencies?

Source: Author's work

5.1.2. Business performance measurement using BSC framework

Business performance in the research will be measured using the BSC framework and its four business perspectives: financial, customer, internal business procesess and learning and growth perspective. Components of each business perspective will be presented in tables 8-11.

Business performance will be measured using the 5-point Likert scale (1- Large drop, 2- Small drop, 3- Stagnation, 4 - Small growth, 5 - Large growth) where respondents evaluated the results of the company through the observed perspectives for the period of the last three years having in mind the situation before Covid-19.

Table 8 presents the research instrument for testing the financial perspective (FINANC1, FINANC2, FINANC3 and FINANC4). In addition, it should be added that market share was part of both this perspective and the customer perspective.

Table 8 Research instrument for the variable measuring the business performance – financial perspective

Variable	Question	Measurement
FINANC1	Assess the changes in financial results that Your company has achieved in last three (3) years (financial perspective):	Income
FINANC2		Costs
FINANC3		Profit – *if it operated positively* Loss – *if it operated negatively*
FINANC4		Market share

Source: Author's work

Table 9 presents the research instrument for testing the customer perspective (CUSTOM1, CUSTOM 2, CUSTOM 3 and CUSTOM4).

Table 9 Research instrument for the variable measuring the business performance – customer perspective

Variable	Question	Measurement
CUSTOM1	To what extent in the last three years, in relation to customers and business (the customer perspective) have You managed to achieve:	Market share
CUSTOM2		Retention of existing customers
CUSTOM3		Retrieving new customers
CUSTOM4		Customer satisfaction

Source: Author's work

Table 10 presents the research instrument for testing the internal business processes perspective (INT-PROC1, INT-PROC2, INT-PROC3 and INT-PROC4).

Table 10 Research instrument for the variable measuring the business performance – internal business processes perspective

Variable	Question	Measurement
INT-PROC1	Assess how Your company has accomplished the following in the last three years (internal business processes perspective):	Introducing innovations to business process
INT-PROC2		Percentage of made errors
INT-PROC3		Finishing production and supplying the product/service to customers in time
INT-PROC4		After-sales service/customer service

Source: Author's work

Table 11 presents the research instrument for testing the learning and growth perspective (LEARN-GROW1, LEARN-GROW2, LEARN-GROW3 and LEARN-GROW4).

Table 11 Research instrument for the variable measuring the business performance – learning and growth perspective

Variable	Question	Measurement
LEARN-GROW1	How much emphasis in Your company in the last three years (the learning and growth perspective) has been on:	Investments in training and education of employees
LEARN-GROW2		Enabling employees to use new technologies
LEARN-GROW3		Mutual employee collaboration and knowledge sharing
LEARN-GROW4		Empowerment and consideration of employee suggestions

Source: Author's work

5.1.3. Characteristics of participating companies

The components for measuring company's characteristics are presented in the table 12 and include: bussines activity (ACT), canton (CANTON), years of existence (AGE), number of employees (SIZE), legal form (FORM), ownership structure (OWNER), and organization of human resources management (HRM). These components are control variables.

Table 12 Research instrument for the variables measuring characteristics of participating companies

Variable code	Question	Measurement
ACT	What is the main and most important business activity of your company according to the classification in FB&H? (You can only mark one answer)	1. Agriculture, forestry and fishing 2. Mining and quarrying 3. Manufacturing industry 4. Production and supply of electricity, gas, steam and air conditioning 5. Water supply; wastewater disposal, waste management and remediation activities 6. Construction 7. Wholesale and retail trade; repair of motor vehicles and motorcycles 8. Transport and storage 9. Accommodation and food service activities (hotels and restaurants) 10. Information and communication 11. Financial and insurance activities 12. Real estate business 13. Professional, scientific and technical activities 14. Administrative and support service activities

		15. Public administration and defense; compulsory social insurance 16. Education 17. Health and social work activities 18. Arts, entertainment and recreation 19. Other service activities 20. Activities of households as employers; activities of households that produce different goods and perform different services for their own needs 21. Activities of extraterritorial organizations and bodies
CANTON	In the area of which County / Canton is the seat of your company?	1. USŽ Una-Sana County / Canton 2. ŽŠ Posavina County / Canton 3. TŽ Tuzla County / Canton 4. ZDŽ Zenica-Doboj County / Canton 5. BPŽ Bosnian-Podrinje County / Canton 6. ŽSB County / Canton Central Bosnia 7. HNŽ Herzegovina-Neretva County / Canton 8. ZZH County / Canton West Herzegovina 9. SŽ Sarajevo County / Canton 10. HBŽ Hercegbosnian County / Canton No. 10
AGE	How long has your company been around?	a) less than 5 years b) from 5 to 10 years c) more than 10 years
SIZE	What is the average annual number of employees in your company (before the appearance of COVID - 19 virus)?	a) from 1-9 employees b) from 10-49 employees c) from 50-249 employees d) 250 and more employees
FORM	What is the legal form of your company?	a) Limited liability company b) Joint stock company c) Crafts and related activities d) Other
OWNER	What is the ownership structure of your company?	a) Domestic private property b) Domestic state property c) Foreign ownership d) Mixed domestic private and state ownership e) Mixed domestic and foreign ownership
HRM	How is human resources management organized in your company? (Check X next to the statement that most describes Your company)	__1. The human resources process management is under the direct management of the general manager and there is no one else in the company who deals with it. __2. One person is entrusted with the task of managing human resources, which is directly subordinated to the general manager.

		__3. One person is entrusted with the task of managing human resources, which is a part of another department. __4. A special human resources department has been organized, headed by a middle-level manager. __5. One of the senior managers is in charge of human resources management and there is a special organizational unit for human resource management.

Source: Author's work

The number of employees was taken as the criterion for the size of the company because only this criterion is identical in all laws for measuring the size of the company within Bosnia and Herzegovina and it is identical in accordance with the recommendations of the European Union.

For the purposes of this dissertation, 159 small and 75 medium enterprises were sampled, divided by activities and counties in percentages in which they are represented according to statistical data.

5.2.Methodology

Data collected by the conducted empirical research were analyzed using:

- graphic representations (structural circles or columns);
- descriptive statistics;
- structural analysis;
- Kolmogorov-Smirnov test to check whether the distribution of the analyzed variable satisfies the assumption of "normality";
- Mann-Whitney U test for two independent samples for distributions that do not satisfy the "normality" assumption;
- Kruscal-Wallis test for more than two independent samples for distributions that do not meet the "normality" assumption;
- correlation analysis;
- factor analysis; and
- hierarchical multiple regression models.

Within the descriptive statistics for the analyzed variables in total and by groups of companies that differ by activity, legal form or some other classification, the following parameters were calculated:

- minimum and maximum value of the analyzed variable,
- average or mean value calculated using the arithmetic mean,

- standard deviation, as an absolute measure of variability around the average,
- coefficient of variation, as a relative measure of variability around the average.

In order to check whether the distribution of the analyzed phenomenon satisfies the assumption of normality in the samples available, the Kolmogorov - Smirnov test (sample size of 50 and more elements) is used. The P-value with the corresponding KS test is considered statistically significant if it is lower than 0.05, since the tests are performed with an error of the first type of 5%, i.e. a significance of 95%. In this case, the hypothesis is accepted that the distribution of the analyzed phenomenon does not satisfy the assumption of "normality".

Mann-Whitney U test for independent samples was used to test the difference between the mean values of two samples representing target populations and are independent, if the distribution of the analyzed phenomenon does not meet the assumption of "normality". The resulting U, W and z values. The P-value with the appropriate statistical tests is considered statistically significant or significant if it is lower than 0.05, since the tests are performed with an error of the first type of 5%, i.e. with a significance of 95%. In that case, the hypothesis that the observed samples or groups differ statistically significantly is accepted.

The Kruskal-Wallis one-way test is used to test whether there is a statistically significant difference between the medial values of multiple samples (independent) representing target populations if the distribution of the analyzed phenomenon does not satisfy the assumption of normality. The resulting chi-square is an empirical value. The P-value with the corresponding Kruskal-Wallis one-way test is considered statistically significant or significant if it is lower than 0.05, since the tests are performed with an error of the first type of 5%, that is, with a 95% significance. In that case, the hypothesis that the observed samples or groups differ statistically significantly is accepted.

A partial correlation coefficient is used to check for interdependence between variables (to “exclude” or control the influence of other independent variables). The correlation is significant for a first-order error of 0.05 (bidirectional) if the p value of the correlation coefficient is less than 0.05.

Regression analysis as a method of multivariate analysis is used to test a model in which one dependent variable (which is a metric variable) is explained by the influence of one or a set of several independent variables. The quality of the obtained multiple regression model is seen

through the coefficient of determination or correlation coefficient (the closer the absolute value of these coefficients is to 1, the "better" the model is). Independent variables whose p value t of the test is less than 0.05 are singled out and they are considered statistically significant. The essential assumptions of the model are examined: absence of autocorrelation (DW statistics close to 2), absence of heteroskedasticity (VIF statistics lower than 10) and absence of outliers (standardized residual values are not outside the range limits (-3, 3)). A model of hierarchical regression analysis is used, where the independent variables are included in the model gradually "in blocks".

The factor analysis is used to obtain information on how the analyzed original variables related to the questions from the survey questionnaire are related. The aim of factor analysis in this case is to reduce a large number of variables (criteria) to a smaller number that is more operational for analysis and to keep only those variables that are "sufficiently informative". The basic task is to determine a new component variable or factor in the form of an appropriate linear combination of correlated manifest variables. This selected component variable needs to have maximum variance. This means that it assumes the largest possible part of the total variation of the set of all manifest variables. Thus, the goal of factor analysis is to reduce the number of variables included in the analysis and to retain only those component variables that take up most of the information about the original (manifest) variables. The factor analysis method used is the Principal Axes method with "oblique" rotation to the original statements from the questionnaire. The KMO (Kaiser-Meyer-Olkin) measure of sample adequacy and the sphericity test verify the obtained factor models. KMO> 0.7 and p values of the sphericity test less than 0.05 mean that the model is justified.

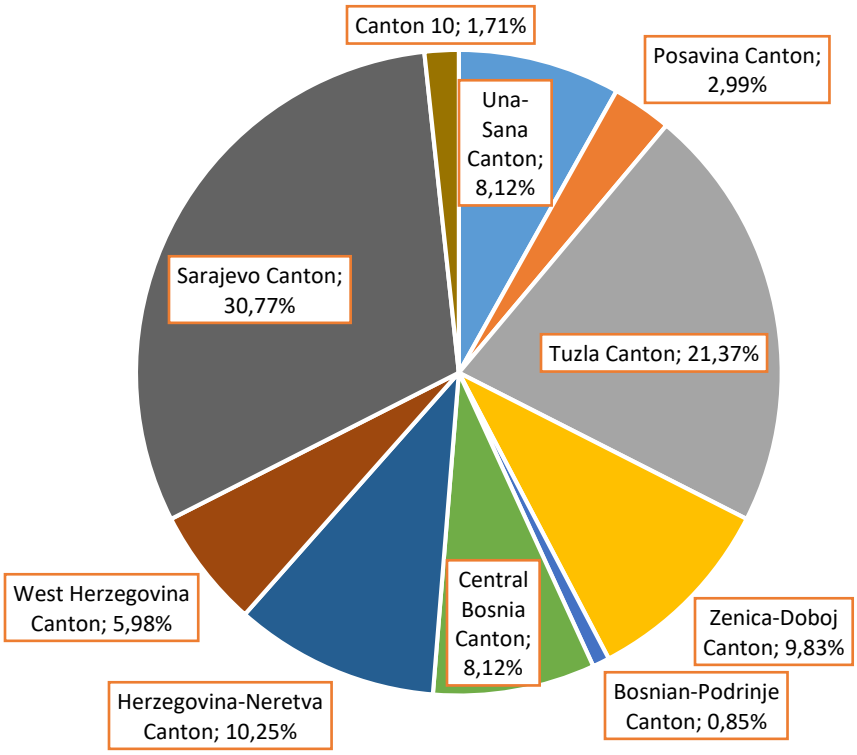
The results are presented in tables and graphs and interpreted in the context of the set hypotheses of the research work.

5.3.Research results

5.3.1. Characteristics of participating companies

The empirical research included 234 companies from the Federation of Bosnia and Herzegovina, from different cantons (Graph 2).

Graph 2. Sample structure by location in the Federation of Bosnia and Herzegovina

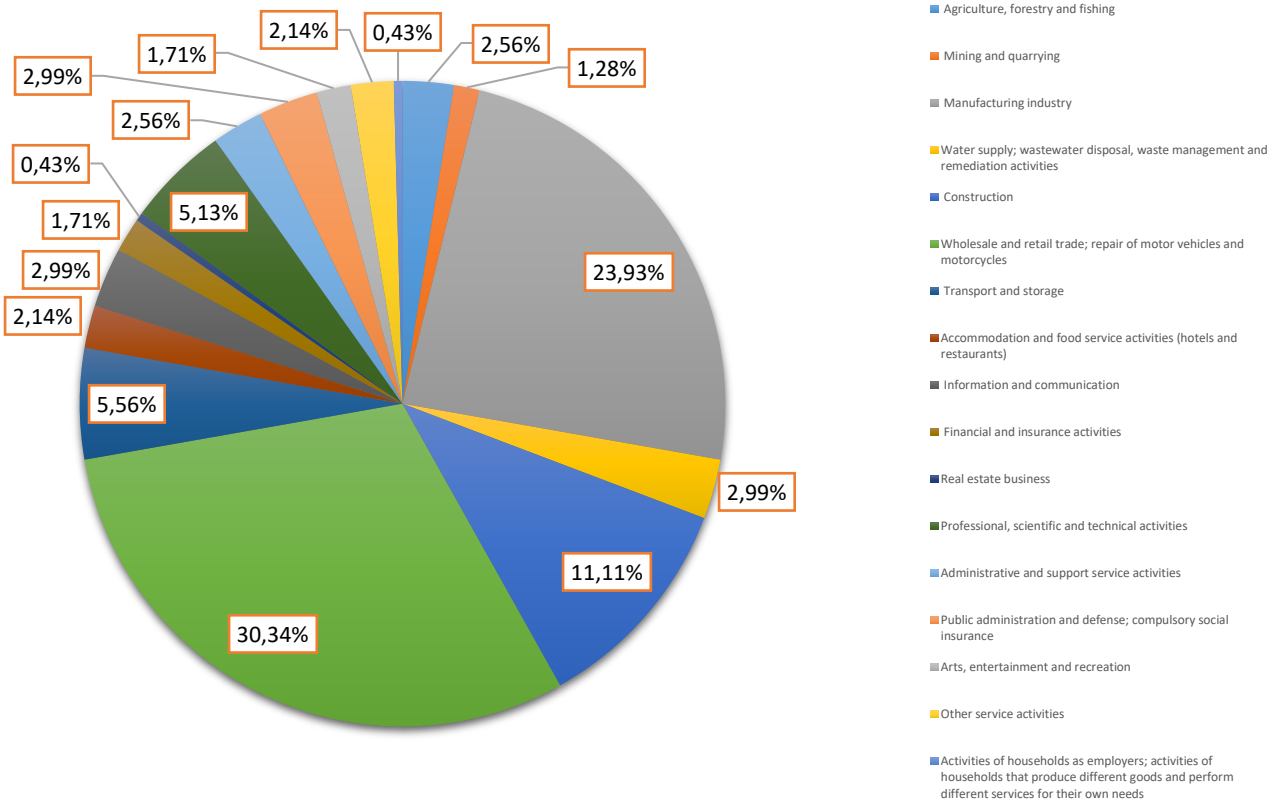


Source: Author's work

The largest share of companies is from the Katon Sarajevo (30.77%), Tuzla Canton (21.37%) and West Herzegovina Canton (10.36%).

The sample structure in the context of the industry to which the company belongs is shown in Graph 3.

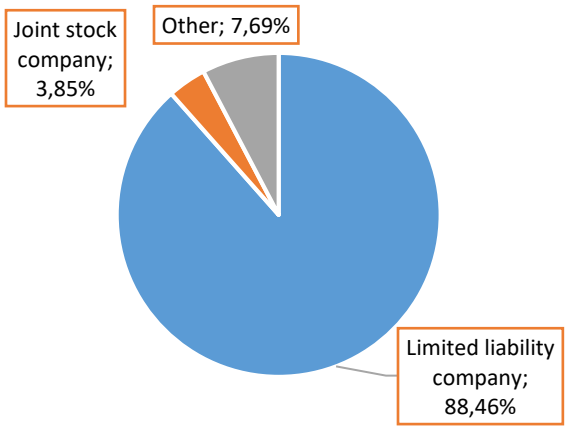
Graph 3 The sample structure according to the activity in which the company is engaged



Source: Author's work

The highest share is of those companies engaged in trade (30.34%), manufacturing (23.9%) and construction (11%).

Graph 4 The sample structure according to the legal form

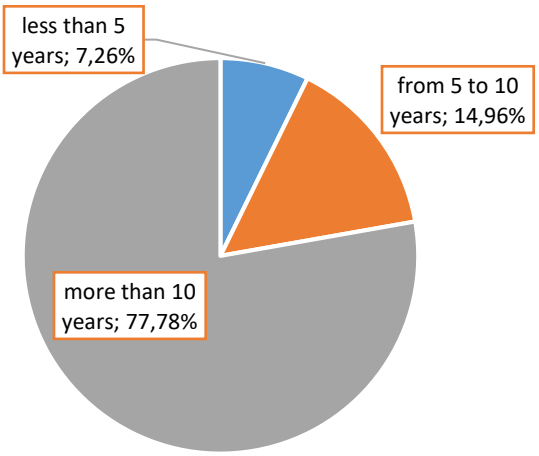


Source: Author's work

Small limited liability companies dominate (88.46%).

The structure according to the age of the companies from the sample is presented in Graph 5.

Graph 5 The sample structure according to the age of the company

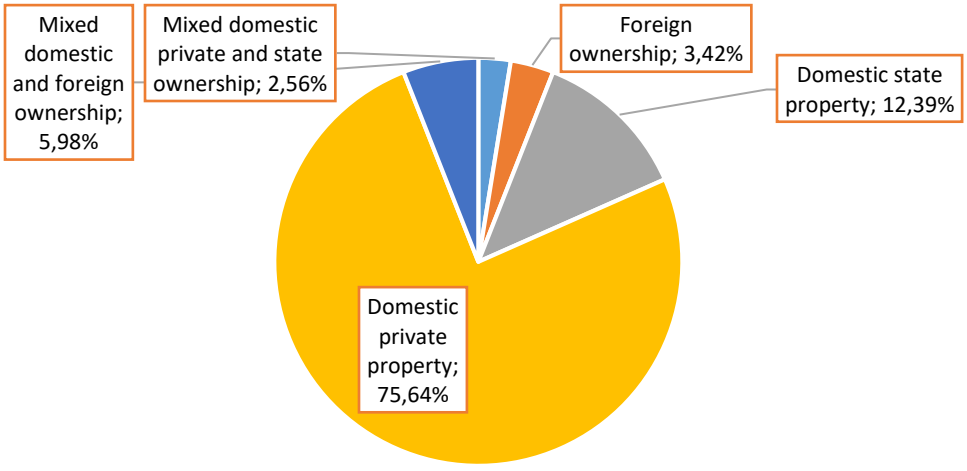


Source: Author's work

The highest share is of companies older than 10 years (77.78%).

According to the ownership structure, companies with domestic private ownership dominate (75.64%) (Graph 6).

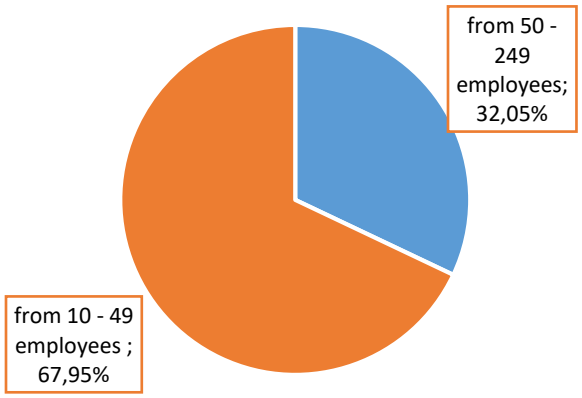
Graph 6 The sample structure according to the ownership structure



Source: Author's work

In the context of the size of companies according to the number of employees, small and medium enterprises are included in the survey (Graph 7).

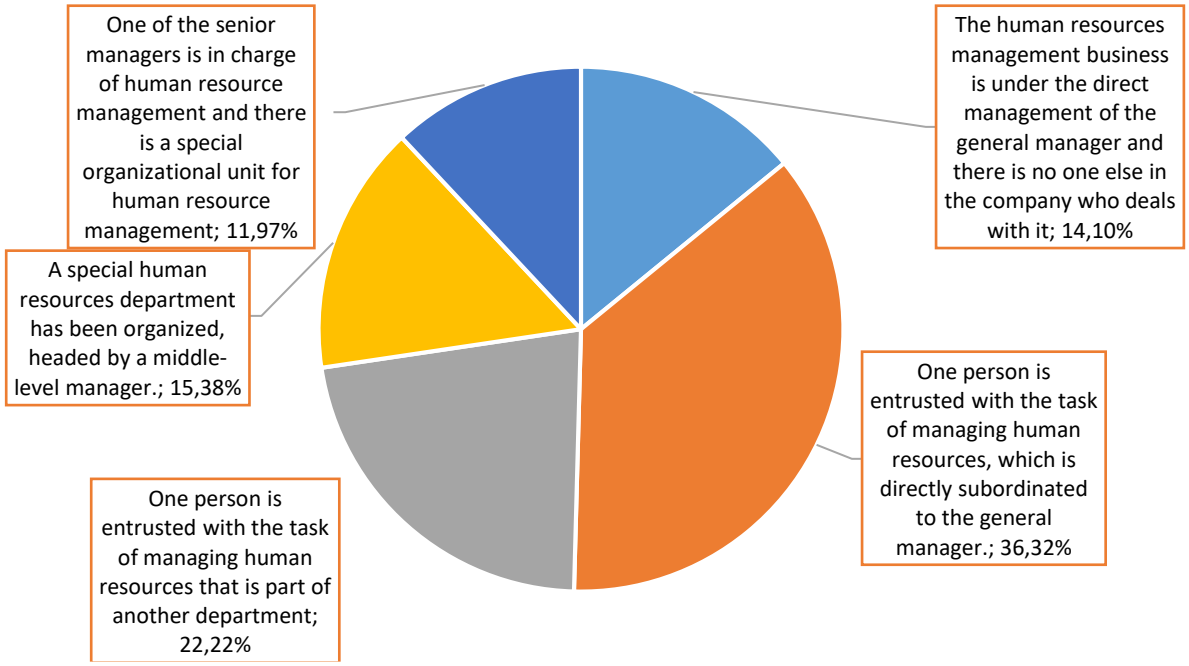
Graph 7 The sample structure by size expressed by the number of employees before the Covid pandemic



Source: Author's work

The sample is dominated by small companies with 10 to 49 employees (67.55%), which is in line with the actual situation in the Federation of Bosnia and Herzegovina. The sample was created by stratification according to how small and medium-sized (according to the number of employees) companies are represented within the cantons and counties in The Federation of Bosnia and Herzegovina, as well as within various business.

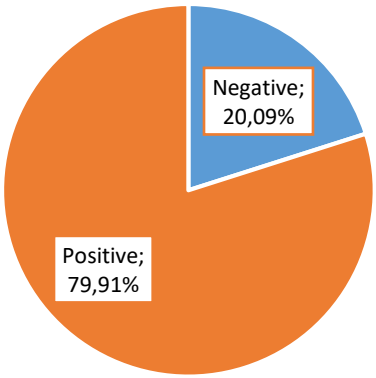
Graph 8 The structure of the sample according to the way in which the company is organized to perform human resource management



Source: Author's work

The highest share belongs to companies where human resources management is under the direct management of the general manager and there is no one else in the company who deals with it (36.32%) or one person is entrusted with human resources management that is directly subordinate to the general manager (22, 22%).

Graph 9 The sample structure according to the business result (profit / loss) in the last 3 years before the Covid-19 pandemic



Source: Author's work

The sample is dominated by companies that have operated successfully (with a profit) with about 80% of the share.

5.3.2. Descriptive research results

5.3.2.1. Human resources competency management in a company

Three constructs or dimensions are used to measure the Human resources competency management in a company. These are: “determining the necessary competencies”, “determining current competencies and competency gap (necessary and actual)”, and “undertaking activities to ensure and develop the necessary competencies”.

5.3.2.1.1. Determining the required competencies

“Determining the required competencies in a company” as a construct was measured by a questionnaire. It equals the average agreement of companies from the sample with 12 statements related to determining the required competencies. All claims were measured on a Likert scale of 1-5 (1 - not at all to 5 - excellent). Cronbach's alpha reliability coefficient, which is a measure of the internal consistency of statements or questions, for 12 statements from the questionnaire that express “the determination of required competencies in the company” is 0.938> 0.7, which means that these 12 statements can be aggregated into one variable expressing the determination of required competencies. As an average of the answers or an assessment of agreement with the statements from the questionnaire related to a given construct, a variable called “determining the required competencies” was calculated.

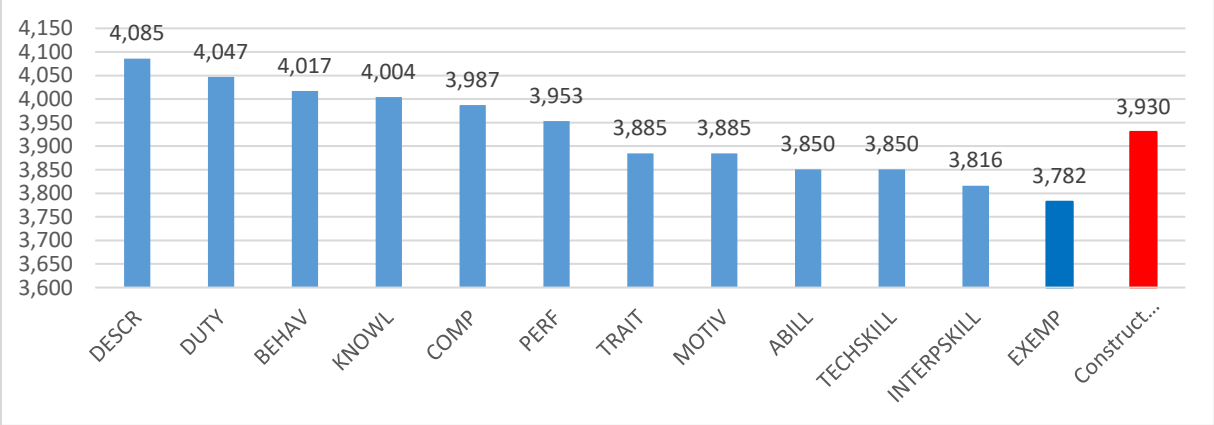
The obtained results are presented in Table 13 and in Graph 10. In Graph 10, only the mean values are highlighted.

Table 13 Descriptive statistics for the construct and original variables from the questionnaire that express "determination of required competencies"

Descriptive statistics							The Kolmogorov–Smirnov test for "normality"	
To what extent in your company:	N	Min	Max	Average	Standard deviation	Coefficient of variation	Statistics	P value
DESCR	234	1	5	4.085	0.941	23.031	0.236	0.000
PERF	234	1	5	3.953	0.941	23.814	0.225	0.000
KNOWL	234	1	5	4.004	1.017	25.398	0.233	0.000
ABILL	234	1	5	3.850	1.014	26.345	0.242	0.000
TECHSKILL	234	1	5	3.850	1.023	26.564	0.238	0.000
INTERPSKILL	234	1	5	3.816	0.996	26.097	0.201	0.000
TRAIT	234	1	5	3.885	0.993	25.570	0.217	0.000
DUTY	234	1	5	4.047	1.024	25.311	0.238	0.000
BEHAV	234	1	5	4.017	0.985	24.513	0.234	0.000
COMP	234	1	5	3.987	1.017	25.505	0.225	0.000
MOTIV	234	1	5	3.885	1.006	25.901	0.225	0.000
EXEMP	234	1	5	3.782	1.027	27.162	0.212	0.000
Construct, Average	234	1.42	5.00	3.930	0.771	19.616	**0.093**	**0.000**

Source: Author's work

Graph 10 The comparison of average grades for variables that express the determination of required competencies in a company



Source: Author's work

For the construct "determining the required competencies in the company" the average grade is 3.93 with a standard deviation of 0.771. The lowest average grade in the construct "determining the required competencies in the company" is according to the statement "To what

extent are the most successful employees (exemplars) in your company identified and their characteristics, behavior and performance described as an example of excellent employees with whom other employees can be compared?" while the highest average grade is according to the statement "To what extent is there a detailed and accurate job position and job description that an individual employee does at each job position?". The "normality" of the distribution of answers from the sample for all 12 initial statements and for the construct "determination of the required competencies in the company" was also tested. For the initial claims from the questionnaire, "normality" was not satisfied even for the derived variable "determination of required competencies in the company" (p values of KS test are lower than 0.05).

The Differences according to the level of "determining the required competencies for companies" with different characteristics

Given the important characteristics of the company highlighted in the sample description, the differences between companies with different characteristics (activity, legal form, ownership structure, age, number of employees) are tested in terms of the level of determining the required competencies in the company. Since the Likert scale (1-5) was used and the "normality" tests for the complete sample showed that no "normality" was met for any of the variables, non-parametric statistical tests were used in further analysis and the testing of differences (without further verification of "normality" by samples).

Activity

The table 44 in Appendix 3 shows the results of the Kruscal-Wallis non-parametric test for testing the differences between companies from different industries in terms of the level of determining the required competencies in the company.

It is evident that in the subsample of companies the average assessment of the level of "determining the required competencies in the company" is the highest in the business sector Information and communication (4.33) while in the business of Households as employers (3.17) and Mining and quarrying (3.39) is the lowest. But according to the results of the KW nonparametric test for testing differences between more than two independent samples, there is no statistically significant difference between the averages for the variable expressing the level of determining required competencies in subsamples by activity (p KW test value is higher than 0.05). Implicitly, the conclusion is that the level of "determining the required competencies in the company" does not depend on the activities of the company.

The legal form

The table 45 in Appendix 3 presents the results of the Kruscal-Wallis non-parametric test for testing differences between companies of different legal form in terms of the level of determining the required competencies in the company.
The average grade for the level of determining the required competencies in the company is the highest for JSC (4,157) while the lowest for the category Other (3.88). This difference is not statistically significant (p value of KW test is higher than 0.05), and it can be concluded that the level of determining the required competencies in the company does not depend on the legal form of the company.

Ownership structure

The results of the Kruscal-Wallis non-parametric test for testing the differences between companies of different ownership structure in terms of the level of determining the required competencies in the company are given in the table 46 in Appendix 3.

The average score for the level of "determining the required competencies in the company" is the highest for Mixed domestic private and state ownership (3,972) while the lowest for the category Mixed domestic and foreign ownership (3,673). This difference is not statistically significant (p value of KW test is higher than 0.05), and it can be concluded that the level of "determining the required competencies in the company" does not depend on the ownership structure in the company.

The age of the company

The table 47 in Appendix 3 shows the results of the Kruscal-Wallis non-parametric test for testing differences between companies of different ages in terms of the level of "determining the required competencies in the company".

The average grade for the level of "determining the required competencies in the company" is the highest for companies older than 10 years (4,053), which are the majority, while the lowest for the category of companies less than 5 years (3,377). This difference is statistically significant (P value KW test is lower than 0.05), and therefore it can be concluded that the level of "determining the required competencies in the company" depends on the age of the company and is significantly highest in older companies.

Number of employees

The table 48 in Appendix 3 presents the results of the Man-Whitney non-parametric test for testing differences between companies of different sizes according to the number of employees in terms of the level of determining the required competencies in the company (small and medium enterprises).

The level of "determining the required competencies in the company" is very similar in small and medium enterprises from the sample, which is confirmed by the result of the MW test (p value of the MW test is higher than 0.05). It follows that the level of determining the required competencies in the company does not depend on the number of employees in the company.

Business

The table 49 in Appendix 3 shows the results of the Man-Whitney non-parametric test to test the differences between companies operating at a profit or loss in terms of the level of "determining the required competencies in the company".

The level of “determining the required competencies” differs for companies that make a profit or a loss, which is confirmed by the result of the MW test (p value of the MW test is lower than 0.05). It follows that the level of "determining the required competencies in the company" depends on the business results of the company.

5.3.2.1.2. Determining current competencies and determining the competency gap between the required and current competencies

“Determining current competencies and determining the competency gap between the required and current competencies in the company” as a construct was measured on the basis of a questionnaire. It was measured as the average agreement of the company from the sample with 12 statements related to determining current competencies and competency gap. All claims were measured on a Likert scale 1-5 (1 - not at all to 5 - excellent). Cronbach's alpha reliability coefficient, which is a measure of the internal consistency of statements or questions, equals 0.928> 0.7 for 12 statements from the questionnaire that express “the determination of current employee competencies and the gap in competencies in the company”, which means that these 12 statements can be aggregated into one variable which expresses the determination of current employee competencies and competency gaps. A variable called “determining current competencies and competency gap” was calculated as the average answer or an assessment of agreement with the statements from the questionnaire related to a given construct

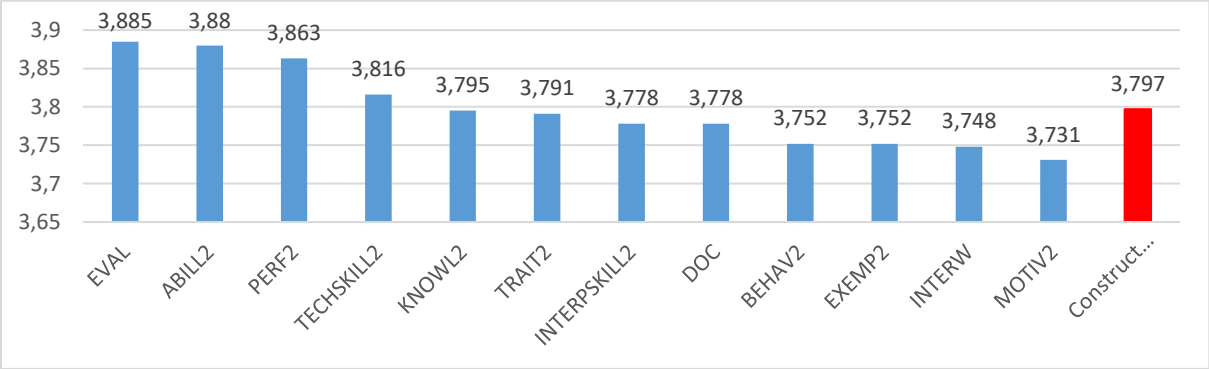
The obtained results are presented in Table 14 and in Graph 11. In Graph 11, only mean values are highlighted.

Table 14 The descriptive statistics for the construct and original variables from the questionnaire expressing "determination of current employee competencies and competence gap"

Descriptive statistics							The Kolmogorov–Smirnov test for "normality"	
To what extent in your company:	N	Min	Max	Average	Standard deviation	Coefficient of variation	Statistics	P value
KNOWL2	234	1	5	3.795	1.002	26.417	0.226	0.000
ABILL2	234	1	5	3.880	1.016	26.191	0.214	0.000
TECHSKILL2	234	1	5	3.816	1.021	26.766	0.247	0.000
INTERPSKILL2	234	1	5	3.778	0.981	25.980	0.218	0.000
TRAIT2	234	1	5	3.791	0.986	26.024	0.195	0.000
PERF2	234	1	5	3.863	0.997	25.808	0.204	0.000
BEHAV2	234	1	5	3.752	1.006	26.801	0.200	0.000
MOTIV2	234	1	5	3.731	1.060	28.425	0.211	0.000
EXEMP2	234	1	5	3.752	1.018	27.140	0.203	0.000
EVAL	234	1	5	3.885	1.036	26.659	0.237	0.000
DOC	234	1	5	3.778	1.120	29.656	0.200	0.000
INTERW	234	1	5	3.748	1.085	28.941	0.186	0.000
Construct, average	**234**	**1.92**	**5.00**	**3.797**	**0.769**	**20.241**	**0.069**	**0.009**

Source: Author's work

Graph 11 The comparison of average grades for variables that express the determination of current employee competencies and the gap in competencies in the company



Source: Author's work

For the construct “determining current employee competencies and the gap in competencies in the company” the average score is 3.797 with a standard deviation of 0.769. The lowest average grade in the construct "determining current employee competencies and the gap in competencies in the company" is according to the statement "To what extent in your company is employee motivation (enthusiasm, passion, ambition, initiative, energy, desire to learn, etc...) continuously/occasionally evaluated and compared with the necessary or required motivation needed to successfully perform the job?”, while the highest average grade is according to the statement “To what extent the criteria for the performance evaluation of employees been determined according to which the evaluation of employees and their work performance is performed?”. The "normality" of the distribution of answers from the sample for all 12 initial statements was also checked for the construct "determining current competencies and competency gap in the company". For the initial claims from the questionnaire, “normality” was not satisfied even for the derived variable “determining current competencies and competency gap in the company” (p values of KS test are lower than 0.05).

Differences according to the level of determining current competencies and competency gap for companies with different characteristics

Given the important characteristics of the company highlighted in the sample description, the differences between companies with different characteristics (activity, legal form, ownership structure, age, number of employees) are tested in terms of the level of “determining current employee competencies and competency gaps in the company”. Since the Likert scale (1-5) was used and the “normality” tests for the complete sample showed that “normality” was not satisfied for any of the variables, non-parametric statistical tests were used in further analysis and difference testing (without further verification of “normality” in samples).

Activities

The table 50 in Appendix 3 shows the results of the Kruscal-Wallis non-parametric test for testing differences between companies from different industries in terms of the level of determining current employee competencies and the gap in competencies in the company.

In the subsample of companies in the activity Transport and storage, the average assessment of the level of “determining current competencies and competency gap in the company” is the highest (4,135) while the lowest is for Real Estate (3,167). But according to the results of the KW nonparametric test for testing differences between more than two independent samples, there is no statistically significant difference between the average for the variable expressing

the level of "determining current employee competencies and the gap in competencies" in subsamples by activity (p KW test value is higher than 0.05) . Based on this, it follows that the level of determining current competencies and competency gap in the company does not depend on the activities of the company.

The legal form

The table 51 in Appendix 3 presents the results of the Kruscal-Wallis non-parametric test for testing differences between companies of different legal form in terms of the level of "determining current employee competencies and the gap in competencies in the company".
The average score for the level of "determining current competencies and competency gap in the company" is the highest for JSC (4,185) while the lowest for the category Other (3,736). This difference is not statistically significant (p value of KW test is higher than 0.05), and based on this it can be concluded that the level of "determining current competencies and competency gap in the company" does not depend on the legal form of the company.

Ownership structure

The results of the Kruscal-Wallis non-parametric test for testing differences between companies of different ownership structure in terms of the level of "determining current employee competencies and the gap in competencies in the company" are also presented (Table 52) in Appendix 3.

The average score for the level of "determining current competencies and competency gap in the company" is the highest for Mixed domestic private and state ownership (3,889) while the lowest is for the category Mixed domestic and foreign ownership (3.5). This difference is not statistically significant (p value of KW test is higher than 0.05), which leads to the conclusion that the level of "determining current competencies and competency gap in the company" does not depend on the ownership structure in the company.

Age of the company

The table 53 in Appendix 3 shows the results of the Kruscal-Wallis non-parametric test for testing differences between companies of different ages in terms of the level of "determining current competencies and competency gap in the company".

The average score for the level of "determining current competencies and competency gap in the company" is the highest for companies older than 10 years (3,892) which is also the highest in the sample, while the lowest for the category of companies aged 5 to 10 years (3,419). This

difference is statistically significant (p value of KW test is lower than 0.05), and based on this it can be concluded that the level of "determining current employee competencies and the gap in competencies in the company" depends on the age of the company and is significantly highest in older companies.

Number of employees

The table 54 in Appendix 3 presents the results of the Man-Whitney non-parametric test for testing differences between companies of different sizes according to the number of employees in terms of "determining the level of current employee competencies and the gap in competencies in the company (SMEs)".

The level of "determining current competencies and competency gap in the company" is slightly higher in small than in medium enterprises in the sample. But this difference is small and not statistically significant, which is confirmed by the result of the MW test (p value of the W test is higher than 0.05). It can be concluded that the level of "determining current competencies and competency gap in the company" does not depend on the number of employees in the company.

Business

The table 55 in Appendix 3 shows the results of the Man-Whitney non-parametric test which represents the differences between companies operating at profit or loss in terms of the level of "determining current employee competencies and the gap in competencies".

The level of "determining current employee competencies and the competency gap" differs slightly for companies that make a profit or loss, but the result of the MW test (p value of the MW test is higher than 0.05) indicates that this difference is not statistically significant. It follows that the level of "determining current competencies and competency gap in the company" does not depend on the business results of the company.

5.3.2.1.3. Undertaking activities to ensure and develop the necessary competencies

"Undertaking activities to ensure and develop the necessary competencies in the company" as a construct was measured by a questionnaire which shows the average agreement of the company from the sample with 18 statements related to undertaking activities to ensure and develop the necessary competencies. All claims were measured on a Likert scale 1-5 (1 - not at all to 5 - excellent). Cronbach's alpha reliability coefficient, which is a measure of the internal

consistency of statements or questions, for 18 statements from the questionnaire expressing activities to ensure and develop the necessary competencies in the company is 0.943> 0.7, which means that these 18 statements can be aggregated into one variable which expresses "the undertaking of activities to ensure and develop the necessary competencies". As an average of the answers or an assessment of agreement with the statements from the questionnaire related to a given construct, a variable called "undertaking activities to ensure and develop the necessary competencies" was calculated.

The obtained results are presented in Table 15 and in Graph 12. In Graph 12, only mean values are highlighted.

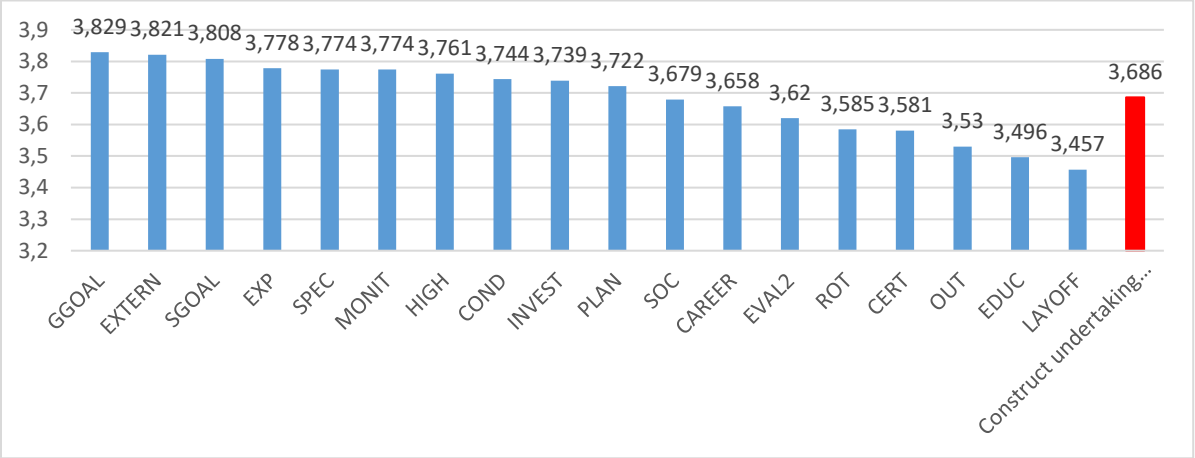
Table 15 Descriptive statistics for the construct and original variables from the questionnaire that express "undertaking activities to ensure and develop the necessary competencies"

Descriptive statistics							The Kolmogorov–Smirnov test for "normality"	
To what extent in your company:	N	Min	Max	Average	Standard deviation	Coefficient of variation	Statistics	P value
INVEST	234	1	5	3.739	1.079	28.847	0.215	0.000
PLAN	234	1	5	3.722	1.094	29.395	0.228	0.000
GGOAL	234	1	5	3.829	0.983	25.673	0.223	0.000
SGOAL	234	1	5	3.808	0.990	25.999	0.205	0.000
COND	234	1	5	3.744	1.066	28.467	0.232	0.000
OUT	234	1	5	3.530	1.139	32.268	0.216	0.000
EDUC	234	1	5	3.496	1.216	34.784	0.208	0.000
CERT	234	1	5	3.581	1.174	32.773	0.221	0.000
CAREER	234	1	5	3.658	1.128	30.845	0.213	0.000
SOC	234	1	5	3.679	1.137	30.888	0.222	0.000
EXP	234	1	5	3.778	1.028	27.224	0.248	0.000
ROT	234	1	5	3.585	1.129	31.478	0.212	0.000
SPEC	234	1	5	3.774	0.987	26.157	0.240	0.000
EVAL2	234	1	5	3.620	1.051	29.023	0.244	0.000
MONIT	234	1	5	3.774	0.991	26.272	0.240	0.000
HIGH	234	1	5	3.761	1.003	26.682	0.214	0.000

EXTERN	234	1	5	3.821	1.033	27.029	0.248	0.000
LAYOFF	234	1	5	3.457	1.112	32.162	0.196	0.000
Construct, average	**234**	**1.00**	**5.00**	**3.686**	**0.768**	**20.830**	**0.062**	**0.029**

Source: Author's work

Graph 12 The comparison of average grades for variables that express the undertaking of activities to ensure and develop the necessary competencies in the company



Source: Author's work

For the construct "undertaking activities to ensure and develop the necessary competencies", the average score is 3,686 with a standard deviation of 0.768. The lowest average grade in the construct "undertaking activities to ensure and develop the necessary competencies in the company" is according to the statement "To what extent does your company invests in training and education of its employees in order to improve existing and acquire new competencies?", while the highest average grade is for the statement "To what extent does your company have established general goals of employee training and education (raising competitiveness, improving work performance, updating knowledge and skills of employees, etc.)?". The "normality" of the distribution of answers from the sample for all 18 initial statements and for the construct "Undertaking activities to ensure and develop the necessary competencies in the company" was also tested. For the initial claims from the questionnaire, "normality" was not satisfied even for the derived variable "undertaking activities to ensure and develop the necessary competencies in the company" (p KS test values are lower than 0.05).

Differences in the context of the level of undertaking activities to ensure and develop the necessary competencies for companies with different characteristics

Taking into account the important characteristics of the company highlighted in the sample description, the differences between companies with different characteristics (activity, legal form, ownership structure, age, number of employees) are analyzed in terms of the level of activities to ensure and develop the necessary competencies in the company. Since the Likert scale (1-5) was used and the "normality" tests for the complete sample showed that "normality" was not satisfied for any of the variables, non-parametric statistical tests were used in further analysis and difference testing (without further verification of "normality" in samples).

Activities

The table 56 in Appendix 3 shows the results of the Kruscal-Wallis non-parametric test for testing differences between companies from different industries in terms of the level of action taken to ensure and develop the necessary competencies in the company.

In the subsample of companies from the activity Health and social work activities, the average assessment of the level of undertaking activities to ensure and develop the necessary competencies in the company is the highest (3,952) while the lowest for Real Estate (2,833). According to the results of the KW nonparametric test for testing differences between more than two independent samples, there is no statistically significant difference between the averages for the variable expressing the level of activity to ensure and develop the necessary competencies in subsamples by activity (p KW test value is higher than 0.05). Based on this, it follows that the level of "undertaking activities to ensure and develop the necessary competencies in the company" does not depend on the activities of the company.

Legal form

The table 57 in Appendix 3 presents the results of the Kruscal-Wallis non-parametric test for testing differences between companies of different legal form in terms of the level of action taken to ensure and develop the necessary competencies in the company.

The average score for the level of "undertaking activities to ensure and develop the necessary competencies in the company" is the highest for JSC (4,185) while the lowest for the category Other (3,736). However, this difference is not statistically significant (p value of KW test is higher than 0.05), and based on this it can be concluded that the level of undertaking activities

to ensure and develop the necessary competencies in the company does not depend on the legal form of the company.

Ownership structure

The table 58 in Appendix 3 also presents the results of the Kruscal-Wallis non-parametric test for testing differences between companies of different ownership structures in terms of the level of action taken to ensure and develop the necessary competencies in the company.

The average score for the level of "undertaking activities to ensure and develop the necessary competencies" in the company is the highest for Mixed Domestic Private and State Ownership (3,889) while the lowest for the category Mixed Domestic and Foreign Ownership (3.5). This difference is not statistically significant (p value of KW test is higher than 0.05), which leads to the conclusion that the level of "undertaking activities to ensure and develop the necessary competencies in the company" does not depend on the ownership structure in the company.

Age of the company

The table 59 in Appendix 3 shows the results of the Kruscal-Wallis non-parametric test for testing differences between companies of different ages in terms of the level of activity undertaken to ensure and develop the necessary competencies in the company.

The average score for the level of "undertaking activities to ensure and develop the necessary competencies in the company" is the highest for companies older than 10 years (3,803), which is the highest in the sample, while the lowest for the category of companies less than 5 years (3.25). The obtained difference is statistically significant (p value of KW test is lower than 0.05), and based on this it can be concluded that the level of undertaking activities to ensure and develop the necessary competencies in the company depends on the age of the company and is significantly highest in older companies.

Number of employees

The table 60 in Appendix 3 presents the results of the Man-Whitney non-parametric test for testing differences between companies of different sizes according to the number of employees in terms of the level of action taken to ensure and develop the necessary competencies in the company (small and medium enterprises).

The level of "undertaking activities to ensure and develop the necessary competencies in the company" is slightly higher in small than in medium enterprises in the sample. However, this

difference is small and not statistically significant, which is confirmed by the result of the MW test (p value of the MW test is higher than 0.05). It follows that the level of undertaking activities to ensure and develop the necessary competencies in the company does not depend on the number of employees in the company.

Business

The table 61 in Appendix 3 shows the results of the Man-Whitney non-parametric test for testing differences between companies operating at a profit or loss in terms of the level of action taken to ensure and develop the necessary competencies.

The level of undertaking activities to ensure and develop the necessary competencies differs very little in companies that make a profit or loss, but the result of the MW test (p value of the MW test is lower than 0.05) indicates that this difference is not statistically significant. It is concluded that the level of "undertaking activities to ensure and develop the necessary competencies in the company" does not depend on the business results of the company.

5.3.2.2.Business performance of small and medium enterprises

Four constructs or dimensions are used to measure the business success of an enterprise that is measured through performance measurement from four Balanced scorecard perspectives. These are: financial perspective, customer perspective, internal business processes perspective and learning and growth perspective. The condition refers to the period before the appearance of the Covid 19 virus (past 3 years).

5.3.2.2.1. Business performance from the financial perspective

In order to see the performance of the company from a financial perspective, the movement of income, costs, operating result (profit or loss) and market share is monitored. In the context of better performance in revenue and profit, grade 1 is associated with a large decline and grade 5 with a large increase. In terms of costs and losses, there is an indirect relationship with performance, so a score of 1 joins a large increase and a score of 5 a large decline. Profit and loss scores derived in this way are combined for the business result.

Cronbach's alpha reliability coefficient, which is a measure of the internal consistency of statements or questions, for 3 statements from the questionnaire expressing the movement of income, operating expenses (profit and loss) in the company is 0.584 <0.7, which means that these 4 statements are not ideal to aggregate into one variable that expresses performance from a financial perspective. Such reliability coefficients in the observed sample (lower than the limit

of 0.7) indicate a possible problem with the measurement scales that unite these claims. Such results in the sample do not justify the application of the model of structural equations (SEM) in order to test the hypotheses of the work. This is the reason for the factor analysis to be carried out on the statements and see how they relate to the isolated factors, and by applying hierarchical regression analysis to test the set hypotheses. Another reason for choosing regression analysis in the hypothesis testing process is that it is possible and easy to interpret as needed qualitative dummy variables related to the characteristics of the company in the sample to include in the model. However, as a logical continuation of previous analyzes, as an average of responses or an assessment of agreement with these statements from the questionnaire related to a given construct, a variable called "performance from a financial perspective" was calculated.

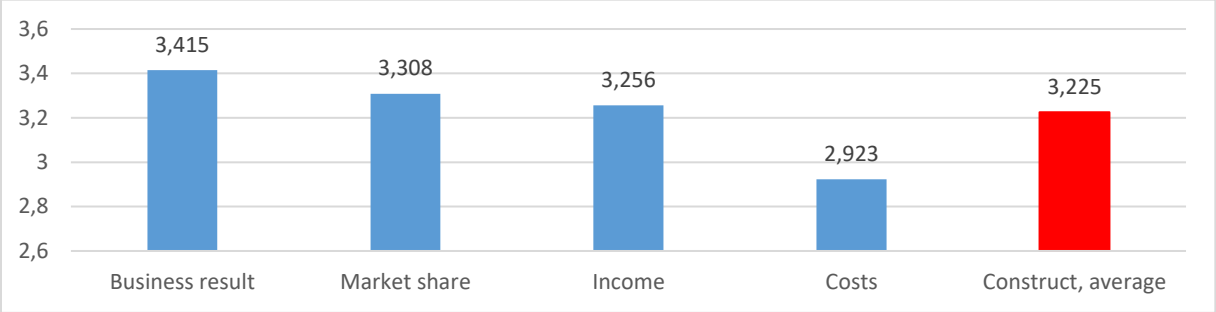
The obtained results are presented in Table 16 and in Graph 13. In Graph 13, only mean values are highlighted.

Table 16 Descriptive statistics for the construct and original variables from the questionnaire expressing "performance of companies from a financial perspective"

Descriptive statistics							The Kolmogorov–Smirnov test for "normality"	
Results	N	Min	Max	Average	Standard deviation	Coefficient of variation	Statistics	P value
Income	234	1	5	3.256	0.861	26.432	0.250	**0.000**
Costs	234	1	5	2.923	0.793	27.138	0.299	0.000
Business result	234	1	5	3.415	0.995	29.147	0.200	0.000
Market share	234	1	5	3.308	0.828	25.041	0.299	0.000
Construct, average	**234**	**1.25**	**4.75**	**3.225**	**0.517**	**16.031**	**0.151**	**0.000**

Source: Author's work

Graph 13 Comparison of average grades for variables that express the performance of the company from the financial perspective in the company



Source: Author's work

For the construct "performance of the company from a financial perspective in the company" the average score is 3,225 with a standard deviation of 0.517. The lowest average grade in the construct "performance of the company from the financial perspective in the company" is in terms of costs, while the highest average grade is in the statement Business result. The "normality" of the distribution of answers from the sample for all 4 starting elements and for the derived construct "performance of the company from the financial perspective in the company" was also checked. For the initial elements from the questionnaire, "normality" was not satisfied even for the derived variable "performance of the company from the financial perspective in the company" (p values of KS test are lower than 0.05).

Differences in the context of the level of performance of companies from a financial perspective for companies with different characteristics

Taking into account the important characteristics of the company highlighted in the sample description, the differences between companies with different characteristics (activity, legal form, ownership structure, age, number of employees) are analyzed in terms of the level of performance of the company from a financial perspective. Since the Likert scale (1-5) was used and the "normality" tests for the complete sample showed that no "normality" was satisfied for any of the variables, non-parametric statistical tests were used in further analysis and testing of differences (without further verification of "normality" by samples).

Activities

The table 62 in Appendix 3 shows the results of the Kruscal-Wallis non-parametric test to test differences between firms from different industries in terms of the level of performance of firms from a financial perspective in the firm.

In the subsample of companies from the activity Other service activities, the average assessment of the level of performance of the company from the financial perspective in the company is the highest (3,335) while the lowest is for Mining and quarrying (2,833). Consistent with the results of the KW nonparametric test for testing differences between more than two independent samples, there is no statistically significant difference between the averages for the variable expressing the level of performance of the company from a financial perspective in subsamples by activity. Based on this, it follows that the level of performance of the company from a financial perspective in the company does not depend on the activities of the company.

Legal form

The table 63 in Appendix 3 presents the results of the Kruscal-Wallis non-parametric test for testing differences between companies of different legal forms in terms of the level of performance of companies from a financial perspective in the company.

The average score for the level of performance of the company from the financial perspective in the company is the highest for Limited liability company (3,232) while the lowest for the category JSC (3,139). The obtained difference is not statistically significant (p value of KW test is higher than 0.05), and based on this it can be concluded that the level of performance of the company from a financial perspective in the company does not depend on the legal form of the company.

Ownership structure

The table 64 in Appendix 3 also presents the results of the Kruscal-Wallis non-parametric test for testing differences between companies of different ownership structure in terms of the level of performance of the company from a financial perspective in the company.

The average score for the level of performance of the company from the financial perspective in the company is the highest for Mixed domestic private and state ownership (3,458) while the lowest for the category Domestic private ownership (3,179). This difference is not statistically significant (p value of KW test is higher than 0.05), which leads to the conclusion that the level of performance of the company from the financial perspective in the company does not depend on the ownership structure in the company.

Age of the company

The table 65 in Appendix 3 shows the results of the Kruscal-Wallis non-parametric test for testing differences between firms of different ages in terms of the level of performance of companies from a financial perspective in the company.

The average score for the level of performance of the company from the financial perspective in the company is the highest for companies older than 10 years (3,268), which is the highest, while the lowest for the category of companies aged 5 to 10 years (3.05). The obtained difference is not statistically significant (p value of KW test is higher than 0.05), and based on this it can be concluded that the level of performance of the company from the financial perspective in the company, unlike the previously analyzed constructs, does not depend on the age of the company, and is significantly highest in older companies.

Number of employees

The results of the Man-Whitney non-parametric test for testing differences between companies of different sizes according to the number of employees in terms of the level of performance of companies from the financial perspective in the company (small and medium enterprises) are presented (Table 66) in Appendix 3.

The level of performance of the company from a financial perspective in the company is slightly lower in small than in medium enterprises in the sample. But this difference is very small and not statistically significant, which is confirmed by the result of the MW test (p value of the MW test is higher than 0.05). It follows that the level of performance of the company from a financial perspective in the company does not depend on the number of employees in the company.

Business

The table 67 in Appendix 3 shows the results of the Man-Whitney non-parametric test to test the differences between companies operating at a profit or loss in terms of the level of performance of companies from a financial perspective.

The level of performance of companies from a financial perspective is very different for companies that make a profit or loss, which is confirmed by the result of the MW test (p value of the MW test is lower than 0.05). This result is completely expected given the significance of this construct. It follows that the level of performance of the company from a financial perspective in the company depends on the business results of the company.

5.3.2.2.2. Business performance from the customer perspective

In order to see the performance of the company from the customer perspective, market share, retention of existing customers, retrieving new customers and customer satisfaction are monitored. The Cronbach's alpha reliability coefficient, which is a measure of the internal consistency of statements or questions, for the 4 statements in the questionnaire expressing market share, retaining existing customers, retrieving new customers and customer satisfaction is 0.864> 0.7, which means that these 4 statements can be aggregated into one variable that expresses performance from a customer perspective. As an average of the answers or an assessment of agreement with these statements from the questionnaire related to a given construct, a variable called "performance from a customer perspective" was calculated.

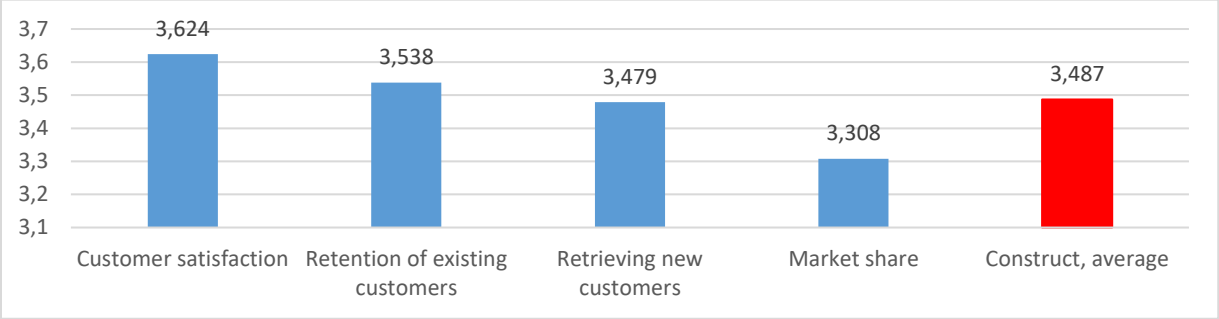
The obtained results are presented in Table 17 and in Graph 14. In Graph 14, only mean values are highlighted.

Table 17 Descriptive statistics for the construct and original variables from the questionnaire that express "business performance from a customer perspective"

Descriptive statistics							The Kolmogorov–Smirnov test for "normality"	
Results	N	Min.	Max	Average	Standard deviation	Coefficient of variation	Statistics	P value
Market share	234	1	5	3.308	0.828	25.041	0.299	0.000
Retaining existing customers	234	1	5	3.538	0.899	25.396	0.264	0.000
Raining new customers	234	1	5	3.479	0.937	26.924	0.221	0.000
Customer satisfaction	234	1	5	3.624	0.910	25.108	0.249	0.000
Construct, average	**234**	**1.00**	**5.00**	**3.487**	**0.753**	**21.601**	**0.160**	**0.000**

Source: Author's work

Graph 14 The comparison of average scores for variables that express the performance of the company from the customer perspective in the company



Source: Author's work

For the construct "performance of the company from the customer perspective in the company" the average score is 3,487 with a standard deviation of 0.753. The lowest average score in the construct "performance of the company from the perspective of customers in the company" is according to the statement "Growth of market share", while the highest average rating is according to the statement "Growth of customer satisfaction". The "normality" of the distribution of answers from the sample for all 4 initial statements was also tested for the construct "Performance of the company from the perspective of customers in the company". For the initial claims from the questionnaire, "normality" was not satisfied even for the derived variable "performance of the company from the perspective of customers in the company" (p values of KS test are lower than 0.05).

Differences in the context of the level of performance of the company from the perspective of customers for companies with different characteristics

Taking into account the important characteristics of the company that are highlighted in the sample description, the differences between companies with different characteristics (activity, legal form, ownership structure, age, number of employees) are analyzed in terms of company performance from the customer perspective. Since the Likert scale (1-5) was used and the "normality" tests for the complete sample showed that no "normality" was satisfied for any of the variables, non-parametric statistical tests were used in further analysis and testing of differences" by samples).

Activities

The table 68 in Appendix 3 shows the results of the Kruscal-Wallis nonparametric test to test differences between firms from different industries in terms of the level of performance of the firm from a customer perspective in the firm.

In the subsample of companies from Other service activities of care and Administrative and support service activities, the average assessment of the level of performance of companies from the perspective of customers in the company is the highest (3.65 and 3.625) while the lowest for Activities of households as employers (2.75). According to the results of KW nonparametric test for testing differences between more than two independent samples, there is no statistically significant difference between the averages for the variable expressing the level of performance of the company from the customer perspective in subsamples by activity (p KW test value is higher than 0.05). Based on this, it follows that the level of performance of the company from the perspective of customers in the company does not depend on the activities of the company.

Legal form

Table 69 in Appendix 3 presents the results of the Kruscal-Wallis non-parametric test for testing differences between companies of different legal form in terms of the level of performance of the company from the perspective of customers in the company.

The average score for the level of performance of the company from the perspective of customers in the company is the highest for LLC (3,499) while the lowest for the category JSC (3,333). Obviously, this difference is not statistically significant (p value of KW test is higher than 0.05), and therefore it can be concluded that the level of performance of the company from the perspective of customers in the company does not depend on the legal form of the company.

Ownership structure

The table 70 in Appendix 3 also presents the results of the Kruscal-Wallis nonparametric test for testing differences between companies of different ownership structures in terms of the level of performance of the company from the perspective of customers in the company.

The average score for the level of performance of the company from the perspective of customers in the company is the highest for Mixed domestic and foreign ownership (3,643) while the lowest for the category Mixed domestic private and state ownership (3,458). This difference is not statistically significant (p value of KW test is higher than 0.05), and it can be concluded that the level of performance of the company from the perspective of customers in the company does not depend on the ownership structure in the company.

The age of the company

The table 71 in Appendix 3 shows the results of the Kruscal-Wallis nonparametric test for testing differences between companies of different ages in terms of the level of performance of the company from the perspective of customers in the company.

The average score for the level of performance of the company from the perspective of customers in the company is highest for companies older than 10 years (3,591) which are most represented in the sample, while the lowest for the category of companies less than 5 years (3,088). This difference is statistically significant (p value of KW test is lower than 0.05), and based on this it can be concluded that the level of performance of the company from the perspective of customers in the company depends on the age of the company and is significantly highest in older companies.

Number of employees

The results of the Man-Whitney non-parametric test for testing differences between companies of different sizes according to the number of employees in terms of the level of performance of the company from the customer perspective in the company (small and medium enterprises) are presented (Table 72) in Appendix 3.

The level of performance of the company from the customer perspective in the company is higher in small than in medium enterprises in the sample. However, the difference is small and not statistically significant, which is confirmed by the result of the MW test (p value of the MW test is higher than 0.05). It follows that the level of performance of the company from the perspective of customers in the company does not depend on the number of employees in the company.

Business

Table 73 in Appendix 3 shows the results of the Man-Whitney non-parametric test to test the differences between companies operating at a profit or loss in terms of the level of performance of the company from the customer perspective.

The level of performance of the company from the perspective of customers is very different for companies that make a profit or loss, which is confirmed by the result of the MW test (p value of the MW test is lower than 0.05). It follows that the level of performance of the company from the perspective of customers in the company depends on the business results of the company.

5.3.2.2.3. Business performance from the internal business processes perspective

In order to see the performance of the company from the internal business processes perspective, the introduction of innovations in the business process, the percentage of mistakes made, compliance with deadlines and after-sales service or services are monitored. The percentage of errors made is indirectly related to performance, so a score of 1 is associated with a large increase and a score of 5 with a large decrease. In the context of better performance in the other three variables, grade 1 is associated with a large decline and grade 5 with a large increase.

Cronbach's alpha reliability coefficient, which is a measure of the internal consistency of statements or questions, for 4 statements from the questionnaire expressing the introduction of innovation in the business process, the percentage of errors, deadlines and after-sales service is 0.579 <0.7, which means that these 4 claims are not ideally aggregated into a single variable that expresses performance from an internal business processes perspective. As an average of the answers or an assessment of agreement with these statements from the questionnaire related to a given construct, a variable called "performance from the internal business processes perspective" was calculated.

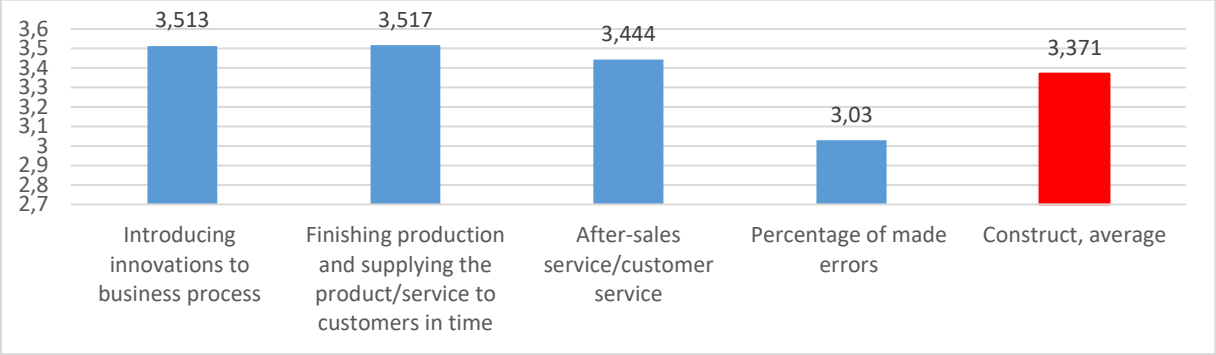
The obtained results are presented in Table 18 and in Graph 15. In Graph 15, only mean values are highlighted.

Table 18 The descriptive statistics for the construct and original variables from the questionnaire that express "performance of companies from the internal business processes perspective"

Descriptive statistics							The Kolmogorov–Smirnov test for "normality"	
Results	N	Min	Max	Average	Standard deviation	Coefficient of variation	Statistics	P value
introduction of innovations in the business process	234	1	5	3.513	0.890	25.329	0.239	0.000
the percentage of mistakes made	234	1	5	3.030	0.863	28.498	0.305	0.000
meeting deadlines	234	1	5	3.517	0.946	26.892	0.255	0.000
after-sales service	234	1	5	3.444	0.935	27.151	0.277	0.000
Construct, average	**234**	**1.00**	**5.00**	**3.371**	**0.604**	**17.918**	**0.165**	**0.000**

Source: Author's work

Graph 15 The comparison of average grades for variables that express the performance of the company from the internal business processes perspective in the company



Source: Author's work

For the construct "performance of the company from the internal business processes perspective in the company" the average score is 3,371 with a standard deviation of 0.604. The lowest average score in the construct "performance of the company from the internal business processes perspective in the company" is according to the statement "Decrease in the percentage of errors made", while the highest average score is according to the statement "Growth of innovation in business process". The "normality" of the distribution of answers from the sample for all 4 initial statements was also checked for the derived construct "Performance of the company from the internal business processes perspective in the company". For the initial claims from the questionnaire, "normality" was not satisfied even for the derived variable "performance of the company from the internal business processes perspective in the company" (p values of KS test are lower than 0.05).

The differences in the context of the level of performance of companies from the internal business processes perspective for companies with different characteristics

Taking into account the important characteristics of the company elaborated in the sample description, the differences between companies with different characteristics (activity, legal form, ownership structure, age, number of employees) are analyzed in terms of company performance from the internal business processes perspective. Since the Likert scale (1-5) was used and the "normality" tests for the complete sample showed that no "normality" was satisfied for any of the variables, non-parametric statistical tests were used in further analysis and testing of differences in samples).

Activities

Table 74 in Appendix 3 shows the results of the Kruscal-Wallis nonparametric test for testing differences between firms from different industries in terms of the level of performance of firms from the internal business processes perspective in the firm.

In the subsample of companies from the activity Administrative and support service activities, the average assessment of the level of performance of the company from the internal business processes perspective in the company is the highest (3,542) while the lowest for Professional, scientific and technical activities (3,146). Consistent with the results of the KW nonparametric test for testing differences between more than two independent samples, it can be concluded that there is no statistically significant difference between the averages for the variable expressing the level of performance of the company from the internal business processes perspective in subsamples higher than 0.05). Based on this, it follows that the level of performance of the company from the internal business processes perspective in the company does not depend on the activities of the company.

The legal form

Table 75 in Appendix 3 presents the results of the Kruscal-Wallis non-parametric test for testing differences between companies of different legal form in terms of the level of performance of the company from the internal business processes perspective in the company.

The average score for the level of performance of the company from the internal business processes perspective in the company is the highest for JSC (3,472) while the lowest for the category Other (3,208). Such a difference is not statistically significant (p value of KW test is higher than 0.05) and based on this it can be concluded that the level of performance of the company from the internal business processes perspective in the company does not depend on the legal form of the company.

Ownership structure

Table 76 in Appendix 3 also presents the results of the Kruscal-Wallis non-parametric test for testing differences between companies of different ownership structure in terms of the level of performance of the company from the internal business processes perspective in the company.

The average score for the level of performance of the company from the internal business processes perspective in the company is the highest for Mixed domestic private and state ownership (3,417) while the lowest for the category Domestic state ownership (3,371). The

obtained difference is not statistically significant (p value of KW test is higher than 0.05), which leads to the conclusion that the level of performance of the company from the internal business processes perspective in the company does not depend on the ownership structure in the company.

The age of the company

Table 77 in Appendix 3 shows the results of the Kruscal-Wallis nonparametric test for testing differences between companies of different ages in terms of the level of performance of the company from the internal business processes perspective in the company.

The average score for the level of performance of the company from the internal business processes perspective in the company is the highest for companies older than 10 years (3.44), which is the highest in the sample, while the lowest for the category of companies less than 5 years (3). The difference in subsamples is statistically significant (p value of KW test is lower than 0.05), and based on this it can be concluded that the level of performance of the company from the internal business processes perspective in the company depends on the age of the company and is significantly the highest in older companies.

The number of employees

The results of the Man-Whitney non-parametric test for testing differences between companies of different sizes according to the number of employees in terms of the level of performance of the company from the internal business processes perspective in the company (small and medium enterprises) are presented (Table 78) in Appendix 3.

The level of performance of the company from the internal business processes perspective in the company is almost identical in the small and medium enterprises in the sample. Of course, this difference is not statistically significant, which is confirmed by the result of the MW test (p value of the MW test is higher than 0.05). It follows that the level of performance of the company from the internal business processes perspective in the company does not depend on the number of employees in the company.

Business

Table 79 in Appendix 3 shows the results of the Man-Whitney non-parametric test to test the differences between companies operating at a profit or loss in terms of the level of performance of the company from the internal business processes perspective.

The level of performance of companies from the internal business processes perspective is higher in companies that make a profit compared to companies that make a loss, which is confirmed by the result of the MW test (p value of the MW test is lower than 0.05). It follows that the level of performance of the company from the internal business processes perspective in the company depends on the business results of the company.

5.3.2.2.4. Busienss performance from the learning and growth perspective

In order to see the performance of the company from the learning and growth perspective, investment in training and education of employees, enabling employees to use new technologies, mutual cooperation of employees and knowledge sharing and empowerment and acceptance of employee proposals are monitored. Cronbach's alpha reliability coefficient, which is a measure of the internal consistency of statements or questions, for 4 statements from the questionnaire expressing investment in employee training and education, enabling employees to use new technologies, employee cooperation and knowledge sharing and empowerment and acceptance of employee suggestions is 0.845> 0.7, which means that these 4 statements can be aggregated into one variable that expresses performance from a learning and growth perspective. A variable called "performance from a learning and growth perspective" was calculated as the average of the answers or the score of agreement with these statements from the questionnaire related to the given construct

The obtained results are presented in Table 19 and in Graph 16. In Graph 16, only mean values are highlighted.

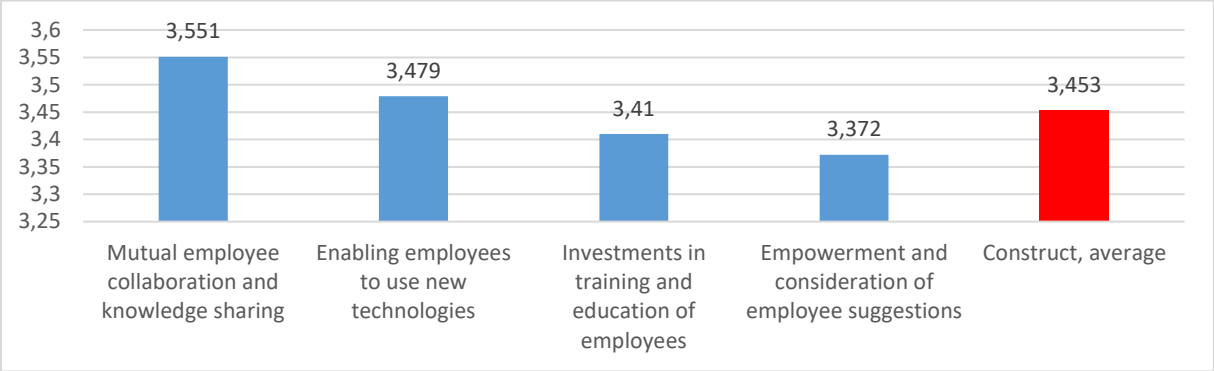
Table 19 The descriptive statistics for the construct and original variables from the questionnaire that express "performance of companies from a learning and growth perspective"

Descriptive statistics							The Kolmogorov–Smirnov test for "normality"	
Results	N	Min	Max	Average	Standard deviation	Coefficient of variation	Statistics	P value
investing in training and education of employees	234	1	5	3.410	0.914	26.799	0.263	0.000
enabling employees to use new technologies	234	1	5	3.479	0.937	26.924	0.255	0.000

mutual cooperation of employees and knowledge sharing	234	1	5	3.551	0.926	26.081	0.258	0.000
empowering and accepting employee suggestions	234	1	5	3.372	0.890	26.402	0.264	0.000
Construct, average	**234**	**1.00**	**5.00**	**3.453**	**0.758**	**21.940**	**0.157**	**0.000**

Source: Author's work

Graph 16 The comparison of average grades for variables that express the performance of the company from the learning and growth perspective in the company



Source: Author's work

For the construct "performance of the company from the learning and growth perspective in the company" the average score is 3,453 with a standard deviation of 0.758. The lowest average grade in the construct "performance of the company from the learning and growth perspective in the company" is according to the statement "Growth of empowerment and consideration of for employee suggestions", while the highest average score is according to the statement "Growth of mutual employee collaboration and knowledge sharing". The "normality" of the distribution of answers from the sample for all 4 initial statements was also tested for the construct "perfromacne of the company from the learning and growth perspective in the company". For the initial claims from the questionnaire, "normality" was not satisfied even for the derived variable "performance of the company from the learning and growth perspective in the company" (p values of the KS test are lower than 0.05).

The Differences in the context of the level of performance of companies from the learning and growth perspective for companies with different characteristics

Taking into account the important characteristics of the company highlighted in the sample description, the differences between companies with different characteristics (activity, legal form, ownership structure, age, number of employees) are analyzed in terms of company

performance from the learning and growth perspective in the company. Since the Likert scale (1-5) was used and the "normality" tests for the complete sample showed that no "normality" was satisfied for any of the variables, non-parametric statistical tests were used in further analysis and testing of differences in samples).

Activities

Table 80 in Appendix 3 shows the results of the Kruscal-Wallis nonparametric test for testing differences between firms from different industries in terms of the level of performance of firms from a learning and growth perspective in the firm.

In the subsample of companies from activity Activities of households as employers; activities of households that produce different goods and perform different services for their own needs the average assessment of the level of performance of the company from the learning and growth perspectivein the company is the highest (4) while the lowest for Real Estate and Accommodation and food preparation catering) (3). According to the results of the KW nonparametric test for testing differences between more than two independent samples, there is no statistically significant difference between the averages for the variable expressing the level of performance of the company from the learning and growth perspective. Based on this, it follows that the level of performance of the company from the learning and growth perspectivein the company does not depend on the activities of the company.

Legal form

Table 81 in Appendix 3 presents the results of the Kruscal-Wallis non-parametric test for testing differences between companies of different legal form in terms of the level of performance of the company from the learning and growth perspectivein the company.

The average score for the level of performance of the company from the learning and growth perspective in the company is the lowest for JSC (3,278) while the highest for the category Other (3,528). This difference is not statistically significant (p value of KW test is higher than 0.05), and based on this it can be concluded that the level of performance of the company from the learning and growth perspectivein the company does not depend on the legal form of the company.

Ownership structure

Table 82 in Appendix 3 also presents the results of the Kruscal-Wallis non-parametric test for testing differences between companies of different ownership structures in terms of the level of performance of the company from the learning and growth perspectivein the company.

The average score for the level of performance of the company from the learning and growth perspectivein the company is the highest for Domestic state ownership (3,655) while the lowest for the category Mixed domestic and foreign ownership (3,125). Although evident, the difference is not statistically significant (p value of KW test is higher than 0.05), which leads to the conclusion that the level of performance of the company from the learning and growth perspectivein the company does not depend on the ownership structure in the company.

The age of the company

Table 83 in Appendix 3 shows the results of the Kruscal-Wallis nonparametric test for testing differences between firms of different ages in terms of the level of performance of firms from the learning and growth perspectivein the firm.

The average score for the level of performance of the company from the learning and growth perspectivein the company is the highest for companies older than 10 years (3,562) which is at the same time the highest, while the lowest for the category of companies less than 5 years (3,029). The obtained difference is statistically significant (p value of KW test is lower than 0.05), and based on this it can be concluded that the level of performance of the company from the learning and growth perspectivein the company depends on the age of the company and is significantly highest in older companies.

The number of employees

The results of the Man-Whitney non-parametric test for testing differences between companies of different sizes according to the number of employees in terms of the level of performance of the company from the learning and growth perspective in the company (small and medium enterprises) are presented (Table 84) in Appendix 3.

The level of performance of the company from the learning and growth perspective in the company is higher in small than in medium enterprises in the sample. However, this difference is small and not statistically significant, which is confirmed by the result of the MW test (p value of the MW test is higher than 0.05). It follows that the level of performance of the

company from the learning and growth perspective in the company does not depend on the number of employees in the company.

Business

Table 85 in Appendix 3 shows the results of the Man-Whitney non-parametric test to test the differences between companies operating at a profit or loss in terms of the level of performance of companies from learning and growth.

The level of performance of companies from the learning and growth perspective is much higher in companies that make a profit compared to companies that make a loss, which is confirmed by the result of the MW test (p value of MW test is lower than 0.05). It follows that the level of performance of the company from the learning and growth perspectivein the company depends on the business results of the company.

5.4.Testing research model hypothesis

The aim of this paper is to examine whether and to what extent the degree of Human resources competency management has an impact on the performance of small and medium enterprises. In this way, the main hypothesis of the work is tested. As previously presented, the management of human resources competencies, as an independent variable, and the business performance of the company, as a dependent variable, were "measured" and aggregated through a series of constructs through a questionnaire.

The testing of the theoretical model was conducted in two ways:

1. Previously elaborated final constructs obtained as subconstruct averages were taken for the constructs that will express the degree of Human resources competency management and business performance of the company
2. For constructs that will express the degree of Human resources competency management and business performance of the company, factors obtained by applying exploratory factor analysis (Principal Axes, the method with "oblique" rotation) to the original statements from the questionnaire related to these constructs. KMO measures and the sphericity test justify the obtained models (KMO> 0.7 and p values of the sphericity test less than 0.05).

I. For the 12 initial statements related to the determination of the required competencies, one factor was singled out which takes up almost 60% (precisely 59.645%) of the total variability and the scores of that first factor were taken as a construct for determining the required competencies.

II. For the 12 initial statements related to determining current competencies and competency gap, one factor was singled out that takes more than 56% (precisely 56.016%) of the total variability and the scores of the first factor were taken as a construct to determine the current competencies of employees and the gap in competencies.

III. For the 18 initial claims related to undertaking activities to ensure and develop the necessary competencies, two factors were singled out that take more than 58% (precisely 58.389%) of the total variability and the scores of the first factor (which takes 51.44% of the total variability) were taken as a construct for undertaking activities to ensure and develop the necessary competencies.

IV. For the 4 initial statements related to performance from the financial perspective, one factor was singled out that assumes more than 55% (precisely 55.96%) of the total variability and the scores of the first factor were taken as a construct for performance from the financial perspective.

V. For the 4 initial claims related to performance from the customer perspective, one factor was singled out that takes more than 71% (exactly 71.089%) of the total variability and the scores of this first factor were taken as a construct for performance from the customer perspective.

VI. For the 4 initial claims related to performance from the internal business processes perspective, one factor was singled out that takes more than 56% (precisely 56.504%) of total variability and the scores of this first factor were taken as a construct for performance from the internal business processes perspective.

VII. For the 4 initial claims related to performance from the learning and growth perspective, one factor was singled out which takes more than 68% (precisely 68.333%) of the total variability and the scores of this first factor were taken as a construct for performance from the learning and growth perspective.

5.4.1. Model with constructs obtained as variables averages

Table 20 shows the correlation matrix (partial correlation coefficients, control by excluded independent variables) for the previously described average constructs.

Table 20 The correlation matrix: degree of “Human resources competency management”, as an independent variable, and “business performance of small and medium enterprises”, as a dependent variable (averages)

The Human resources competency management through:		Business success from:			
		financial perspective	customer perspective	internal business processes perspective	learning and growth perspective
Determining the required competencies	Partial correlation coefficient	0.170***	0.292***	0.284***	0.229***
	P value	0.009	0.000	0.000	0.000
Determining current competencies and competency gap	Partial correlation coefficient	0.049	0.008	0.029	-0.035
	P value	0.457	0.909	0.663	0.597
Undertaking activities to ensure and develop the necessary competencies	Partial correlation coefficient	0.018	0.068	0.049	0.249***
	P value	0.789	0.306	0.460	0.000

(* p <0.1, ** p <0.05, *** p <0.01)
Source: Author’s work

When the influence of the other two constructs that monitor the degree of Human resources competency management is controlled or excluded, the conclusion follows that:

- there is a significant positive impact of the level of determining the necessary competencies on the business performance of small and medium enterprises.
- there is a significant positive impact of the level of undertaking activities on ensuring and developing the necessary competencies on the business performance of small and medium enterprises from the learning and growth perspective.
- Based on the above conclusions, hypothesis H1 is fully confirmed, and hypotheses H3, H4, H5, H6 and H7 are partially confirmed.
- Hypothesis 2 has not been confirmed.

The constructed averages for the degree of Human resources competency management and business performance of small and medium enterprises obtained in the previously described ways are further modeled by applying hierarchical regression analysis. The control variables included the dummy variable for the size of the company according to the number of employees and the dummy variable for the characteristics of the company, according to which significant

differences in mean values for constructs (business and age of the company) were shown in previously performed statistical tests. The dummy business variable had modalities 0 for loss-making firms and 1 for profit-making firms. The dummy variable for company size by the number of employees had modalities 0 for medium enterprises and 1 for small companies. A dummy variable was created for the age of the company, where modality 1 was for companies that were older than 10 years, and 0 for companies up to 10 years old. This was the first block of variables in the hierarchical regression model. In the following blocks, the model, where the constructs for business success are considered as dependent variables, gradually includes independent variables constructs for the degree of human resources competence management.

According to ANOVA, all constructed models are significant with a coefficient of determination other than 0, which means that they are acceptable. The problem of multicollinearity was not present in the obtained models, so it was not necessary to eliminate independent variables. Outliers were also considered. In this way, the final models were reached, the results of which are presented in Table 21, 22, 23, and 24.

Table 21 Hierarchical regressions - business performance of small and medium enterprises from a financial perspective (average) dependent variable

	Business performance of small and medium enterprises from the financial perspective (average)			
Model	1	2	3	4
dummy company size	-0.033	-0.038	-0.046	-0.045
dummy business of the company	0.512***	0.473***	0.475***	0.475***
dummy age of the company	0.164**	0.075	0.070	0.067
determination of required competencies (average)		0.163***	0.108*	0.108*
determining current competencies and competency gap (average)			0.078	0.067
undertaking activities to ensure and develop the necessary competencies (average)				0.015
R^2	0.424	0.483	0.489	0.489
ΔR^2	/	0.059	0.006	0.000

(* p <0.1, ** p <0.05, *** p <0.01)
Source: Author's work

One outlier is evident (standardized residual $|-3.046| < 3.5$), however this deviation is negligible. "Determining the necessary competencies" has a significant impact on the performance of small and medium enterprises from a financial perspective. "Determining

current competencies and competency gap" does not have a significant impact on the performance of small and medium enterprises from a financial perspective. "Undertaking activities to ensure and develop the necessary competencies" does not have a significant impact on the performance of small and medium enterprises from a financial perspective. Based on the above conclusions, hypothesis H1 for the financial perspective was confirmed. Hypotheses H2 and H3 for the financial perspective have not been confirmed. Hypothesis H4 is partially confirmed.

Table 22 Hierarchical regressions - business performance of small and medium enterprises from the perspective of customers (average) dependent variable.

	Business performance of small and medium enterprises from the customer perspective (average)			
Model	1	2	3	4
dummy company size	-0.034	-0.045	-0.054	-0.050
dummy business of the company	0.408***	0.317***	0.319***	0.321***
dummy age of the company	0.443***	0.233**	0.229**	0.216*
determining the required competencies (average)		0.382***	0.322***	0.323***
determining current competencies and competency gap (average)			0.084	0.036
undertaking activities to ensure and develop the necessary competencies (average)				0.064
R^2	0.336	0.5	0.504	0.505
ΔR^2	/	0.164	0.004	0.001

(* p <0.1, ** p <0.05, *** p <0.01)
Source: Author's work

One outlier is present (standardized residual $|-3.603| > 3.5$), however this deviation is not significant. "Determining the necessary competencies" has a significant impact on the performance of small and medium enterprises from the perspective of customers. "Determining current competencies and competency gap" does not have a significant impact on the performance of small and medium enterprises from the perspective of customers. "Undertaking activities to ensure and develop the necessary competencies" does not have a significant impact on the performance of small and medium enterprises from the perspective of customers. Based on the above conclusions, hypothesis H1 for the customer perspective was confirmed. Hypotheses H2 and H3 for the customer perspective have not been confirmed. Hypothesis H5 is partially confirmed.

Table 23 Hierarchical regressions - business performance of small and medium enterprises from the internal business processes perspective (average) dependent variable

	Business performance of small and medium enterprises from the internal business processes perspective (average)			
Model	1	2	3	4
dummy company size	0.024	0.015	0.006	0.009
dummy business of the company	0.237**	0.158*	0.160*	0.161*
dummy age of the company	0.282***	0.102	0.097	0.088
determining the required competencies (average)		0.329***	0.274***	0.274***
determining current competencies and competency gap (average)			0.077	0.043
undertaking activities to ensure and develop the necessary competencies (average)				0.045
R^2	0.253	0.469	0.473	0.475
ΔR^2	/	0.216	0.004	0.002

(* p <0.1, ** p <0.05, *** p <0.01)
Source: Author's work

One outlier is present (standardized residual 3.294 <3.5), but this deviation is not significant. "Determining the necessary competencies" has a significant impact on the performance of small and medium enterprises from the internal business processes perspective. "Determining current competencies and competency gap" does not have a significant impact on the performance of small and medium enterprises from the internal business processes perspective. "Undertaking activities to ensure and develop the necessary competencies" does not have a significant impact on the business performance of small and medium enterprises. Based on the above conclusions, hypothesis H1 for the internal business processes perspective was confirmed. Hypotheses H2 and H3 for the internal business processes perspective have not been confirmed. Hypothesis H6 is partially confirmed.

Table 24 Hierarchical regressions - business performance of small and medium enterprises from the learning and growth perspective (average) dependent variable

	Business performance of small and medium enterprises from the learning and growth perspective (average)			
Model	1	2	3	4
dummy company size	-0.055	-0.065	-0.087	-0.072
dummy business of the company	0.334***	0.244**	0.250**	0.258**
dummy age of the company	0.465***	0.259**	0.248**	0.184
determining the required competencies (average)		0.375***	0.230***	0.234***
determining current competencies and competency gap (average)			0.203**	-0.031
undertaking activities to ensure and develop the necessary competencies (average)				0.312***
R^2	0.322	0.484	0.504	0.543

ΔR^2	/	0.162	0.020	0.039

(* p <0.1, ** p <0.05, *** p <0.01)

Source: Author's work

One outlier (standardized residual │-3.313│ <3.5) was recorded, however this deviation is not significant. "Determining the necessary competencies" has a significant impact on the performance of small and medium enterprises from a learning and growth perspective. "Determining current competencies and competency gap" in the final model does not have a significant impact on SME performance from a learning and growth perspective, but it does in the third model. "Undertaking activities to ensure and develop the necessary competencies" has a significant impact on the success of small and medium enterprises in learning and growth. Based on the above conclusions, hypotheses H1, H2 (partially) and H3 for the learning and growth perspective were confirmed. Hypothesis H7 has been confirmed.

Based on the analysis and testing of hypotheses and models obtained on the basis of data from a sample of 234 companies, it follows that the degree of Human resources competency management (in the form of 3 constructs) has a positive and significant effect on the performance of small and medium enterprises from four different perspectives.

5.4.2. Model with constructs obtained as variable factors

Table 25 shows the correlation matrix (partial correlation coefficients, control by excluded independent variables) for the previously described construct factors.

Table 25 The Correlation matrix: degree of "Human resources competency management", as an independent variable, and "business performance of small and medium enterprises", as a dependent variable (factors)

Human resources competency management through:		Business success from:			
		financial perspective	customer perspective	internal business processes perspective	learning and growth perspective
determining the required competencies	Partial correlation coefficient	0.181***	0.294***	0.262***	0.236***
	P value	0.006	0.000	0.000	0.000
determining current competencies and competency gap	Partial correlation coefficient	0.089	0.068	0.112	0.060
	P value	0.175	0.305	0.090*	0.365
undertaking activities to ensure and develop the necessary competencies	Partial correlation coefficient	0.011	-0.025	-0.019	0.167
	P value	0.871	0.709	0.779	0.011**

(* p <0.1, ** p <0.05, *** p <0.01)
Source: Author's work

When the influence of the other two constructs that monitor the degree of Human resources competency management is controlled or excluded, the conclusion follows that:

- there is a significant positive impact of the level of "determining the necessary competencies" on the business performance of small and medium enterprises.
- there is a significant positive impact of the level of "determining current competencies and competency gap" on the performance of small and medium enterprises from the internal business processes perspective.
- there is a significant positive impact of the level of "undertaking activities on ensuring and developing the necessary competencies" on the business performance of small and medium enterprises from the learning and growth perspective.
- Based on the above conclusions, hypothesis H1 is fully confirmed.
- Hypotheses H2, H3, H4, H5, H6 and H7 have been partially confirmed.

The constructs obtained in the previously described ways, factors for the degree of Human resources competency management and business success of small and medium enterprises, were further modeled by applying hierarchical regression analysis. The control variables included the dummy variable for the size of the company according to the number of employees and the dummy variable for the characteristics of the company, according to which significant differences in mean values for constructs (business and age of the company) were shown in previously performed statistical tests. The dummy business variable had modalities 0 for loss-making firms and 1 for profit-making firms. The dummy variable for the company size by the number of employees had modalities 0 for medium enterprises and 1 for small companies. A dummy variable was created for the age of the company, where modality 1 was for companies that were older than 10 years, and 0 for companies up to 10 years old. This was the first block of variables in the hierarchical regression model. In the following blocks, the model, in which the constructs for business success are considered as dependent variables, gradually includes independent variables constructs for the degree of human resources competence management.

According to ANOVA, all constructed models are significant with a coefficient of determination other than 0, which means that they are acceptable. The problem of multicollinearity was not present in the obtained models, so it was not necessary to eliminate independent variables. Outliers were also considered. In this way, the final models were reached, the results of which are presented in Table 26, 27, 28 and 29.

Table 26 Hierarchical regressions - business performance of small and medium enterprises from a financial perspective (factor) dependent variable

	Business performance of small and medium enterprises from a financial perspective (factor)			
Model	1	2	3	4
dummy company size	-0.083	-0.092	-0.113	-0.113
dummy business of the company	0.889***	0.800***	0.806**	0.807**
dummy age of the company	0.370**	0.169	0.158	0.155
determining the required competencies (factor)		0.285***	0.175**	0.175**
determining current competencies and competency gap (factor)			0.154*	0.148
undertaking activities to ensure and develop the necessary competencies (factor)				0.010
R^2	0.396	0.479	0.491	0.491
ΔR^2	/	0.083	0.012	0.000

(* p <0.1, ** p <0.05, *** p <0.01)
Source: Author's work

One outlier is evident (standardized residual 3.208 <3.5), however this deviation is negligible. "Determining the necessary competencies" has a significant impact on the performance of small and medium enterprises from a financial perspective. "Determining current employee competencies and competency gaps" in the final model does not have a significant impact on the performance of SMEs from a financial perspective, but it does in Model 3. "Undertaking activities to ensure and develop the necessary competencies" have a significant impact on SME performance financial perspectives. Based on the above conclusions, hypothesis H1 for the financial perspective was confirmed. Hypothesis H2 for the financial perspective has been partially confirmed. H3 hypothesis for the financial perspective has not been confirmed. Hypothesis H4 is partially confirmed.

Table 27 Hierarchical regressions - business performance of small and medium enterprises from the perspective of customers (factor) dependent variable

	Business performance of small and medium enterprises from the customer perspective (factor)			
Model	1	2	3	4
dummy company size	-0.048	-0.061	-0.073	-0.075
dummy business of the company	0.543***	0.422***	0.425***	0.422***
dummy age of the company	0.589***	0.313**	0.307**	0.319**
determining the required competencies (factor)		0.392***	0.331***	0.329***
determining current competencies and competency gap (factor)			0.085	0.112
undertaking activities to ensure and develop the necessary competencies (factor)				-0.046
R^2	0.337	0.501	0.505	0.506
ΔR^2	/	0.164	0.004	0.001

(* p <0.1, ** p <0.05, *** p <0.01)
Source: Author's work

One outlier is present (standardized residual │-3.793│> 3.5), however this deviation is only per object and therefore not significant. “Determining the necessary competencies” has a significant impact on the performance of small and medium enterprises from the perspective of customers. “Determining current competencies and competency gap” does not have a significant impact on the performance of small and medium enterprises from the perspective of customers. “Undertaking activities to ensure and develop the necessary competencies” does not have a significant impact on the performance of small and medium enterprises from the perspective of customers. Based on the above conclusions, hypothesis H1 for the customer perspective was confirmed. Hypotheses H2 and H3 for the customer perspective have not been confirmed. Hypothesis H5 is partially confirmed.

Table 28 Hierarchical regressions - business performance of small and medium enterprises from the internal business processes perspective

	Business performance of small and medium enterprises from the internal business processes perspective (factor)			
Model	1	2	3	4
dummy company size	0.010	-0.004	-0.024	-0.026
dummy business of the company	0.485***	0.357**	0.363**	0.361**
dummy age of the company	0.476***	0.185	0.174	0.182
determining the required competencies (factor)		0.413***	0.305***	0.303***
determining current competencies and competency gap (factor)			0.151*	0.169*
undertaking activities to ensure and develop the necessary competencies (factor)				-0.029
R^2	0.283	0.483	0.494	0.494
ΔR^2	/	0.200	0.011	0.000

(* p <0.1, ** p <0.05, *** p <0.01)
Source: Author’s work

There is one outlier (standardized residual │-3.985│> 3.5), but this deviation is not significant because it is only one company. “Determining the necessary competencies” has a significant impact on the business performance of small and medium enterprises from the internal business processes perspective. “Determining current competencies and competency gap” has a significant impact on the performance of small and medium enterprises from the internal business processes perspective (with a first-class error of 10%). “Undertaking activities to ensure and develop the necessary competencies” does not have a significant impact on the business performance of small and medium enterprises. Based on the above conclusions, hypotheses H1 and H2 for the internal business processes perspective were confirmed. Hypothesis H3 for the internal business processes perspective has not been confirmed. Hypothesis H6 is partially confirmed.

Table 29 Hierarchical regressions - business performance of small and medium enterprises from the learning and growth perspective (factor) dependent variable

	Business performance of small and medium enterprises from the learning and growth perspective (factor)			
Model	1	2	3	4
dummy company size	-0.074	-0.087	-0.114	-0.107
dummy business of the company	0.444***	0.324**	0.332**	0.341**
dummy age of the company	0.615***	0.345**	0.330**	0.284*
determining the required competencies (factor)		0.384***	0.241***	0.248***
determining current competencies and competency gap (factor)			0.200**	0.101
undertaking activities to ensure and develop the necessary competencies (factor)				0.165**
R^2	0.323	0.487	0.506	0.523
ΔR^2	/	0.164	0.019	0.017

(* p <0.1, ** p <0.05, *** p <0.01)

Source: Author's work

One outlier was recorded (standardized residual $|-3.584| > 3.5$), however this deviation is not significant. "Determining the necessary competencies" has a significant impact on the performance of small and medium enterprises from a learning and growth perspective. "Determining current competencies and competency gap" in the final model does not have a significant impact on SME performance from a learning and growth perspective, but it does in the third model. "Undertaking activities to ensure and develop the necessary competencies" has a significant impact on the success of small and medium enterprises in learning and growth. Based on the above conclusions, hypotheses H1, H2 (partially) and H3 for the learning and growth perspective were confirmed. Hypothesis H7 has been confirmed.

5.5.Discussion of results

In this chapter a total and summary review of research results in accordance with the set hypotheses is given.

Table 30 shows independent variable „Determining the required competencies" and its influence on the dependent variable „Business success of small and medium enterprises" observed through four balanced scorecard perspectives (the financial perspective, the customer perspective, the internal business processes perspective, the learning and growth perspective, as variables averages.

Table 30 The correlation matrix: degree of “determining the required competencies”, as an independent variable, and “business performance of small and medium enterprises”, as a dependent variable (averages)

The Human resources competency management through:		Business success from:			
		financial perspective	customer perspective	internal business processes perspective	learning and growth perspective
determining the required competencies	Partial correlation coefficient	0.170***	0.292***	0.284***	0.229***
	P value	0.009	0.000	0.000	0.000

(* p <0.1, ** p <0.05, *** p <0.01)

Source: Author’s work

Based on the results obtained by the research, it can be concluded that there is a significant positive impact of the level of “determining the necessary competencies” on the business performance of small and medium enterprises. Based on the above conclusion, auxiliary hypothesis PH1 is fully confirmed.

Table 31 shows independent variable „Determining the required competencies“ and its influence on the dependent variable „Business success of small and medium enterprises“ observed through four balanced scorecard perspectives (the financial perspective, the customer perspective, the internal business processes perspective, the learning and growth perspective, as variable factors.

Table 31 The correlation matrix: degree of “determining the required competencies”, as an independent variable, and “business performance of small and medium enterprises”, as a dependent variable (factors)

Human resources competency management through:		Business success from:			
		financial perspective	customer perspective	internal business processes perspective	learning and growth perspective
determining the required competencies	Partial correlation coefficient	0.181***	0.294***	0.262***	0.236***
	P value	0.006	0.000	0.000	0.000

(* p <0.1, ** p <0.05, *** p <0.01)

Source: Author’s work

Based on the results obtained by the research, it can be concluded that there is a significant positive impact of the level of determining the necessary competencies on the business performance of small and medium enterprises. Based on the above conclusion, auxiliary hypothesis PH1 is fully confirmed.

Table 32 shows independent variable „determining current competencies and competency gap“ and its influence on the dependent variable „Business success of small and medium enterprises“ observed through four balanced scorecard perspectives (the financial perspective, the customer perspective, the internal business processes perspective, the learning and growth perspective, as variables averages.

Table 32 The correlation matrix: degree of “determining current competencies and competency gap”, as an independent variable, and “business performance of small and medium enterprises”, as a dependent variable (averages)

The Human resources competency management through:		Business success from:			
		financial perspective	customer perspective	internal business processes perspective	learning and growth perspective
determining current competencies and competency gap	Partial correlation coefficient	0.049	0.008	0.029	-0.035
	P value	0.457	0.909	0.663	0.597

(* p <0.1, ** p <0.05, *** p <0.01)
Source: Author’s work

Based on the results obtained by the research, it cannot be concluded that there is a significant positive impact of the level of “determining current competencies and competency gap” on the “business performance of small and medium enterprises”. Based on the above conclusion, auxiliary hypothesis PH2 has not been confirmed.

Table 33 shows independent variable „determining current competencies and competency gap“ and its influence on the dependent variable „Business success of small and medium enterprises“ observed through four balanced scorecard perspectives (the financial perspective, the customer perspective, the internal business processes perspective, the learning and growth perspective, as variable factors.

Table 33 The correlation matrix: degree of determining current competencies and competency gap, as an independent variable, and business performance of small and medium enterprises, as a dependent variable (factors)

Human resources competency management through:		Business success from:			
		financial perspective	customer perspective	internal business processes perspective	learning and growth perspective
determining current competencies and competency gap	Partial correlation coefficient	0.089	0.068	0.112	0.060
	P value	0.175	0.305	0.090*	0.365

(* p <0.1, ** p <0.05, *** p <0.01)
Source: Author's work

Based on the results obtained by the research, it can be concluded that there is a significant positive impact of the level of "determining current competencies and competency gap" on the "performance of small and medium enterprises" from the internal business processes perspective. Based on the above conclusion, auxiliary hypothesis PH2 has been partially confirmed.

Table 34 shows independent variable „undertaking activities to ensure and develop the necessary competencies" and its influence on the dependent variable „Business success of small and medium enterprises" observed through four balanced scorecard perspectives (the financial perspective, the customer perspective, the internal business processes perspective, the learning and growth perspective, as variables averages.

Table 34 The correlation matrix: degree of "undertaking activities to ensure and develop the necessary competencies", as an independent variable, and "business performance of small and medium enterprises", as a dependent variable (averages)

Human resources competency management through:		Business success from:			
		financial perspective	customer perspective	internal business processes perspective	learning and growth perspective
Undertaking activities to ensure and develop the necessary competencies	Partial correlation coefficient	0.018	0.068	0.049	0.249***
	P value	0.789	0.306	0.460	0.000

(* p <0.1, ** p <0.05, *** p <0.01)
Source: Author's work

Based on the results obtained by the research, it can be concluded that there is a significant positive impact of the level of "undertaking activities on ensuring and developing the necessary competencies" on "the business performance of small and medium enterprises" from the learning and growth perspective. Based on the above conclusion, auxiliary hypothesis PH3 has been partially confirmed.

Table 35 shows independent variable „undertaking activities to ensure and develop the necessary competencies" and its influence on the dependent variable „Business success of small and medium enterprises" observed through four balanced scorecard perspectives (the financial perspective, the customer perspective, the internal business processes perspective, the learning and growth perspective, as variable factors.

Table 35 The correlation matrix: degree of “undertaking activities to ensure and develop the necessary competencies”, as an independent variable, and “business performance of small and medium enterprises”, as a dependent variable (factors)

Human resources competency management through:		Business success from:			
		financial perspective	customer perspective	internal business processes perspective	learning and growth perspective
Undertaking activities to ensure and develop the necessary competencies	Partial correlation coefficient	0.011	-0.025	-0.019	0.167
	P value	0.871	0.709	0.779	0.011**

(* p <0.1, ** p <0.05, *** p <0.01)
Source: Author’s work

Based on the results obtained by the research, it can be concluded that there is a significant positive impact of the level of “undertaking activities on ensuring and developing the necessary competencies” on the “business performance of small and medium enterprises” from the learning and growth perspective. Based on the above conclusion, auxiliary hypothesis PH3 has been partially confirmed.

Table 36 shows independent variable „The Human resources competency management” observed through three groups of activities (determining the required competencies, determining current competencies and competency gap and undertaking activities on ensuring and developing the necessary competencies) and its influence on the dependent variable „Business success of small and medium enterprises“ observed through the financial perspective, as variables averages.

Table 36 The correlation matrix: degree of Human resources competency management, as an independent variable, and business performance of small and medium enterprises from financial perspective, as a dependent variable (averages)

The Human resources competency management through:		Financial perspective
Determining the required competencies	Partial correlation coefficient	0.170***
	P value	0.009
Determining current competencies and competency gap	Partial correlation coefficient	0.049
	P value	0.457
Undertaking activities to ensure and develop the necessary competencies	Partial correlation coefficient	0.018
	P value	0.789

(* p <0.1, ** p <0.05, *** p <0.01)
Source: Author’s work

Based on the results obtained by the research, it can be concluded that there is a significant positive impact of the level of “determining the necessary competencies” on the “business

performance of small and medium enterprises" from financial perspective. Based on the above conclusion, auxiliary hypothesis PH4 is partially confirmed.

Table 37 shows independent variable „The Human resources competency management" observed through three groups of activities (determining the required competencies, determining current competencies and competency gap and undertaking activities on ensuring and developing the necessary competencies) and its influence on the dependent variable „Business success of small and medium enterprises" observed through the financial perspective, as variable factors.

Table 37 The correlation matrix: degree of "Human resources competency management", as an independent variable, and "business performance of small and medium enterprises" from financial perspective, as a dependent variable (factors)

The Human resources competency management through:		Financial perspective
Determining the required competencies	Partial correlation coefficient	0.181***
	P value	0.006
Determining current competencies and competency gap	Partial correlation coefficient	0.089
	P value	0.175
Undertaking activities to ensure and develop the necessary competencies	Partial correlation coefficient	0.011
	P value	0.871

(* p <0.1, ** p <0.05, *** p <0.01)
Source: Author's work

Based on the results obtained by the research, it can be concluded that there is a significant positive impact of the level of "determining the necessary competencies" on "the business performance of small and medium enterprises" from financial perspective. Based on the above conclusion, auxiliary hypothesis PH4 is partially confirmed.

Table 38 shows independent variable „The Human resources competency management" observed through three groups of activities (determining the required competencies, determining current competencies and competency gap and undertaking activities on ensuring and developing the necessary competencies) and its influence on the dependent variable „Business success of small and medium enterprises" observed through the customer perspective, as variables averages.

Table 38 The correlation matrix: degree of “Human resources competency management”, as an independent variable, and “business performance of small and medium enterprises” from customer perspective, as a dependent variable (averages)

The Human resources competency management through:		Customer perspective
Determining the required competencies	Partial correlation coefficient	0.292***
	P value	0.000
Determining current competencies and competency gap	Partial correlation coefficient	0.008
	P value	0.909
Undertaking activities to ensure and develop the necessary competencies	Partial correlation coefficient	0.068
	P value	0.306

(* p <0.1, ** p <0.05, *** p <0.01)
Source: Author’s work

Based on the results obtained by the research, it can be concluded that there is a significant positive impact of the level of determining the necessary competencies on the business performance of small and medium enterprises from customer perspective. Based on the above conclusion, auxiliary hypothesis PH5 is partially confirmed.

Table 39 shows independent variable „The Human resources competency management” observed through three groups of activities (determining the required competencies, determining current competencies and competency gap and undertaking activities on ensuring and developing the necessary competencies) and its influence on the dependent variable „Business success of small and medium enterprises“ observed through the customer perspective, as variable factors.

Table 39 The correlation matrix: degree of “Human resources competency management”, as an independent variable, and “business performance of small and medium enterprises” from customer perspective, as a dependent variable (factors)

The Human resources competency management through:		Customer perspective
Determining the required competencies	Partial correlation coefficient	0.294***
	P value	0.000
Determining current competencies and competency gap	Partial correlation coefficient	0.068
	P value	0.305
Undertaking activities to ensure and develop the necessary competencies	Partial correlation coefficient	-0.025
	P value	0.709

(* p <0.1, ** p <0.05, *** p <0.01)
Source: Author’s work

Based on the results obtained by the research, it can be concluded that there is a significant positive impact of the level of determining the necessary competencies on the business performance of small and medium enterprises from customer perspective. Based on the above conclusion, auxiliary hypothesis PH5 is partially confirmed.

Table 40 shows independent variable „The Human resources competency management" observed through three groups of activities (determining the required competencies, determining current competencies and competency gap and undertaking activities on ensuring and developing the necessary competencies) and its influence on the dependent variable „Business success of small and medium enterprises" observed through the internal business processes perspective, as variables averages.

Table 40 The correlation matrix: degree of "Human resources competency management", as an independent variable, and "business performance of small and medium enterprises" from internal business processes perspective, as a dependent variable (averages)

The Human resources competency management through:		Internal business processes perspective
Determining the required competencies	Partial correlation coefficient	0.284***
	P value	0.000
Determining current competencies and competency gap	Partial correlation coefficient	0.029
	P value	0.663
Undertaking activities to ensure and develop the necessary competencies	Partial correlation coefficient	0.049
	P value	0.460

(* p <0.1, ** p <0.05, *** p <0.01)
Source: Author's work

Based on the results obtained by the research, it can be concluded that there is a significant positive impact of the level of determining the necessary competencies on the business performance of small and medium enterprises from internal business processes perspective. Based on the above conclusion, auxiliary hypothesis PH6 is partially confirmed.

Table 41 shows independent variables „The Human resources competency management" observed through three groups of activities (determining the required competencies, determining current competencies and competency gap and undertaking activities on ensuring and developing the necessary competencies) and their influence on the dependent variable „Business success of small and medium enterprises" observed through the internal business processes perspective, as variable factors.

Table 41 The correlation matrix: degree of "Human resources competency management", as an independent variable, and "business performance of small and medium enterprises from internal business processes perspective", as a dependent variable (factors)

The Human resources competency management through		Internal business processes perspective
Determining the required competencies	Partial correlation coefficient	0.262***
	P value	0.000
Determining current competencies and competency gap	Partial correlation coefficient	0.112
	P value	0.090*
Undertaking activities to ensure and develop the necessary competencies	Partial correlation coefficient	-0.019
	P value	0.779

(* p <0.1, ** p <0.05, *** p <0.01)
Source: Author's work

Based on the results obtained by the research, it can be concluded that:

- there is a significant positive impact of the level of determining the necessary competencies on the business performance of small and medium enterprises from internal business processes perspective, and
- there is a significant positive impact of the level of determining current competencies and competency gap on the business performance of small and medium enterprises from internal business processes perspective.

Based on the above conclusion, auxiliary hypothesis PH6 is partially confirmed.

Table 42 shows independent variables „The Human resources competency management" observed through three groups of activities (determining the required competencies, determining current competencies and competency gap and undertaking activities on ensuring and developing the necessary competencies) and their influence on the dependent variable „Business success of small and medium enterprises"observed through the learning and growth perspective, as variables averages.

Table 42 The correlation matrix: degree of "Human resources competency management", as an independent variable, and "business performance of small and medium enterprises" from learning and growth perspective, as a dependent variable (averages)

The Human resources competency management through:		Learning and growth perspective
Determining the required competencies	Partial correlation coefficient	0.229***

	P value	0.000
Determining current competencies and competency gap	Partial correlation coefficient	-0.035
	P value	0.597
Undertaking activities to ensure and develop the necessary competencies	Partial correlation coefficient	0.249***
	P value	0.000

(* p <0.1, ** p <0.05, *** p <0.01)

Source: Author's work

Based on the results obtained by the research, it can be concluded that:

- there is a significant positive impact of the level of determining the necessary competencies on the business performance of small and medium enterprises from learning and growth perspective.
- there is a significant positive impact of the level of undertaking activities on ensuring and developing the necessary competencies on the business performance of small and medium enterprises from the learning and growth perspective.

Based on the above conclusion, auxiliary hypothesis PH7 is partially confirmed.

Table 43 shows independent variables „The Human resources competency management" observed through three groups of activities (determining the required competencies, determining current competencies and competency gap and undertaking activities on ensuring and developing the necessary competencies) and their influence on the dependent variable „Business success of small and medium enterprises" observed through the learning and growth perspective, as variable factors.

Table 43 The correlation matrix: degree of "Human resources competency management", as an independent variable, and "business performance of small and medium enterprises" from learning and growth perspective, as a dependent variable (factors)

The Human resources competency management through:		Learning and growth perspective
Determining the required competencies	Partial correlation coefficient	0.236***
	P value	0.000
Determining current competencies and competency gap	Partial correlation coefficient	0.060
	P value	0.365
Undertaking activities to ensure and develop the necessary competencies	Partial correlation coefficient	0.167
	P value	0.011**

(* p <0.1, ** p <0.05, *** p <0.01)

Source: Author's work

Based on the results obtained by the research, it can be concluded that:

- there is a significant positive impact of the level of determining the necessary competencies on the business performance of small and medium enterprises from learning and growth perspective.
- there is a significant positive impact of the level of undertaking activities on ensuring and developing the necessary competencies on the business performance of small and medium enterprises from the learning and growth perspective.

Based on the above conclusion, auxiliary hypothesis PH7 is partially confirmed.

Based on the analysis and testing of hypotheses and models obtained on the basis of data from a sample of 234 companies, it follows that the degree of Human resources competency management (in the form of 3 constructs) has a positive and significant effect on the success of small and medium enterprises from four different perspectives.

Figure 12 shows research model with tested hypothesis and final conclusions.

Main hypothesis H1 and auxiliary hypothesis PH-1 are fully confirmed.

- Hypothesis H - 1: "The Human resources competency management positively influences the business performance of small and medium enterprises."
- Auxiliary Hypothesis PH – 1: "Determining the required human resources competencies positively influences the business performance of small and medium enterprises."

Auxiliary hypotheses PH-2, PH-3, PH-4, PH-5, PH-6 and PH-7 are partially confirmed.

- Auxiliary Hypothesis PH – 2: "Determining current competencies and determining the competency gap between the required and current human resources competencies positively influences the business performance of small and medium enterprises."

- Auxiliary Hypothesis PH – 3: "Taking action to ensure and develop the necessary human resources competencies positively influences the business performance of small and medium enterprises."

- Auxiliary Hypothesis PH – 4: "Human resources competency management positively influences the business performance from the financial perspective of small and medium enterprises."

- Auxiliary Hypothesis PH – 5: "Human resources competency management positively influences business performance from the customer perspective of small and medium enterprises."

- Auxiliary Hypothesis PH – 6: "Human resources competency management positively influences business performance from the internal business processes perspective of small and medium enterprises."

- Auxiliary Hypothesis PH – 7: "Human resources competency management positively influences business performance from the learning and growth perspective of small and medium enterprises."

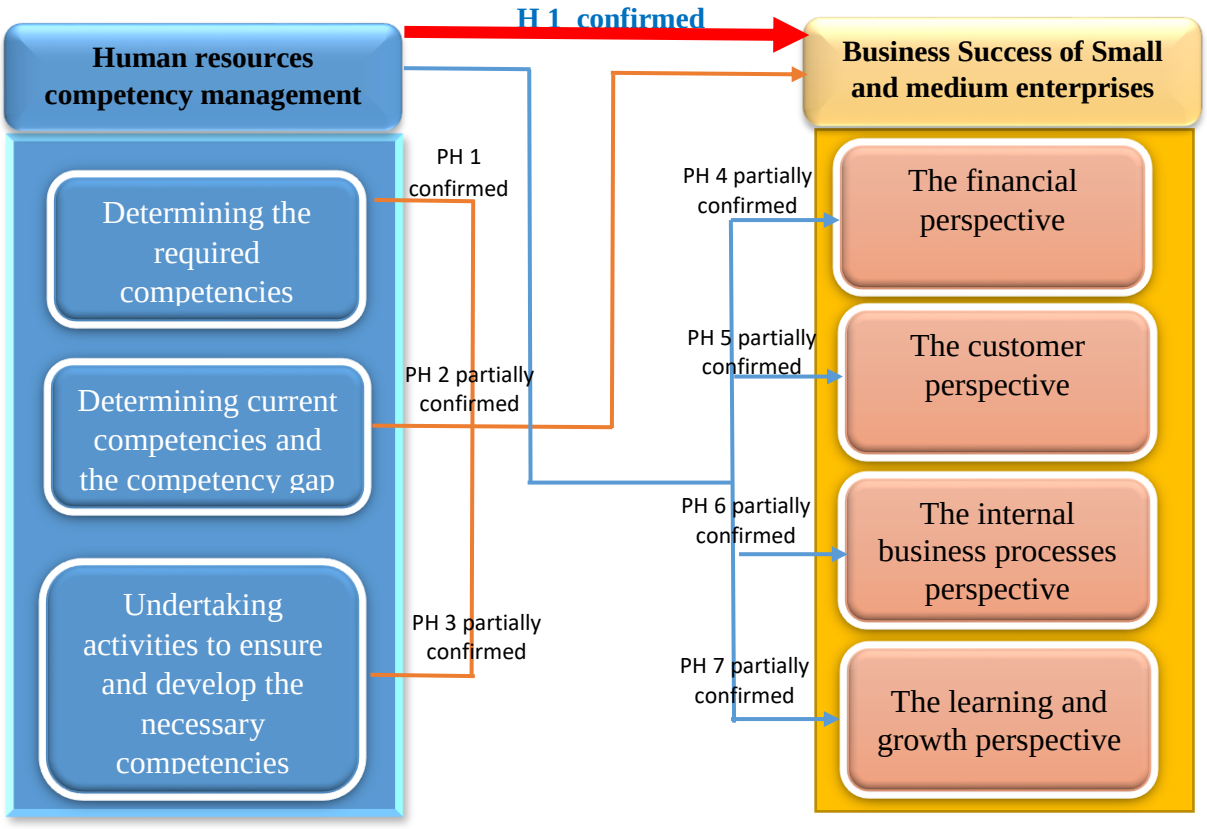


Figure 12 Testing the research model

Source: Author's work

Based on the analysis and testing of hypotheses and models, it follows that the degree of Human resources competency management (in the form of 3 constructs) has a positive and significant effect on the business success of small and medium enterprises from four different perspectives.

6. CONCLUSION

6.1. Achieved objectives of doctoral dissertation

The fundamental objective of this doctoral dissertation was to reach theoretical knowledge and empirically investigate whether and to what extent Human resources competency management influences the business success of small and medium enterprises. The fundamental objective of the dissertation was achieved through research using primary data collected through the survey.

Data for the independent variable Human resources competency management and the dependent variable business success measured through four perspectives of business performance in the framework of balanced scorecard (financial perspective, customer perspective, internal business processes perspective and learning and growth perspective), were collected from small and medium enterprises from Federation of Bosnia and Herzegovina.

In addition to the fundamental objective, other scientific and practical (applied) objectives have been set for this doctoral dissertation. Through the doctoral dissertation, findings from the area of this doctoral dissertation were presented and a critical review of the relevant researches, both from Bosnia and Herzegovina as well as the international ones, so far was given.

The dissertation presents competency management as a process consisting of three phases: determining the required human resources competencies, determining current competencies and determining the competency gap between the required and current competencies and undertaking activities to ensure and develop the necessary competencies to overcome the identified gap. For each of these phases of competency management, numerous activities and modern technologies, tools and techniques used in modern business and human resources management have been identified and explained. The key emphasis in the doctoral dissertation is placed on competency management in small and medium enterprises and the impact on success observed through business performance observed through four perspectives in the framework of BSC.

The dissertation presents new, contemporary approaches to human resources management through competency management, modern tools and techniques that are accessible and available to small and medium enterprises and management to improve their performance and business performance.

6.2. Doctoral dissertation hypotheses

In order to prove the set objectives, the following research hypotheses were tested:
Hypothesis H - 1: “The Human resources competency management positively influences the business performance of small and medium enterprises. “

The results of research fully confirmed first hypothesis, which confirms that the Human resources competency management positively influences the performance of small and medium enterprises. Independent variable, the Human resources competency management, which consists of three constructs (determining the required human resources competencies, determining current competencies and determining the competency gap between the required and current human resources competencies and taking action to ensure and develop the necessary human resources competencies) positively affects the dependent variable “business performance of small and medium enterprises“ measured through four balanced scorecard perspectives (financial perspective, customer perspective, internal business processes perspective and learning and growth perspective).

Auxiliary Hypothesis PH – 1: “Determining the required human resources competencies positively influences the business performance of small and medium enterprises. “
The results of research fully confirmed first auxiliary hypothesis, which confirms that determining the required human resources competencies positively influences the performance of small and medium enterprises. Independent variable „determining the required human resources competencies“ positively affects the dependent variable “business performance of small and medium enterprises“ measured through four balanced scorecard perspectives (financial perspective, customer perspective, internal business processes perspective and learning and growth perspective).

Auxiliary Hypothesis PH – 2: “Determining current competencies and determining the competency gap between the required and current human resources competencies positively influences the business performance of small and medium enterprises. “
The results of research partially confirmed second auxiliary hypothesis, which partially confirms that determining current competencies and determining the competency gap between the required and current human resources competencies positively influences the performance of small and medium enterprises. Based on the results obtained by the research, independent variable “determining current competencies and determining the competency gap“ has a

significant positive impact on the performance of small and medium enterprises from the internal business processes perspective, as a dependent variable.

Auxiliary Hypothesis PH – 3: "Taking action to ensure and develop the necessary human resources competencies positively influences the business performance of small and medium enterprises."

The results of research partially confirmed third auxiliary hypothesis, which partially confirms that taking action to ensure and develop the necessary human resources competencies positively influences the performance of small and medium enterprises. Independent variable has a significant positive impact on the business performance of small and medium enterprises from the learning and growth perspective, as a dependent variable.

Auxiliary Hypothesis PH – 4: "Human resources competency management positively influences the business performance from the financial perspective of small and medium enterprises. "

The results of research partially confirmed fourth auxiliary hypothesis, which partially confirms that Human resources competency management positively influences the business performance from the financial perspective of small and medium enterprises. Independent variable (construct the level of determining the necessary competencies) has a significant positive impact on the business performance of small and medium enterprises from financial perspective.

Auxiliary Hypothesis PH – 5: "Human resources competency management positively influences business performance from the customer perspective of small and medium enterprises. "

The results of research partially confirmed fifth auxiliary hypothesis, which partially confirms that Human resources competency management positively influences business performance from the customer perspective of small and medium enterprises. Independent variable (construct the level of determining the necessary competencies) has a significant positive impact of the level of determining the necessary competencies on the business performance of small and medium enterprises from customer perspective.

Auxiliary Hypothesis PH – 6: "Human resources competency management positively influences business performance from the internal business processes perspective of small and medium enterprises. "

The results of the research partially confirmed sixth auxiliary hypothesis, which partially confirms that Human resources competency management positively influences business performance from the internal business processes perspective of small and medium enterprises.

Two constructs of independent variable (the level of determining the necessary competencies and the level of determining current competencies and competency gap) have a significant positive impact on the business performance of small and medium enterprises from internal business processes perspective.

Auxiliary Hypothesis PH – 7: "Human resources competency management positively influences business performance from the learning and growth perspective of small and medium enterprises. "

The results of research partially confirmed seventh auxiliary hypothesis, which partially confirms that Human resources competency management positively influences business performance from the learning and growth perspective of small and medium enterprises. Two constructs of independent variable (the level of determining the necessary competencies and the level of undertaking activities on ensuring and developing the necessary competencies) have a significant positive impact on the business performance of small and medium enterprises from learning and growth perspective.

6.3. Scientific and applied contribution of doctoral dissertation

Based on the results of the research of this doctoral dissertation and the written doctoral dissertation, as well as the review of the large number of expert literature, it is possible to define the scientific and applied contribution of the dissertation. In the theoretical part of the paper, the Human resources competency management is presented and explained through three stages, as well as business performance of small and medium enterprises observed through four balanced scorecard perspectives.

Competency management encompasses a number of activities within the human resources management process that are crucial for the successful management of human resources and the organization, as well as for the business performance of individuals and the organization, ie the company as a whole. This doctoral dissertation and research conducted investigates the impact of Human resources competency management on the business performance of small and medium enterprises, and the research results have significant scientific contributions and practical implications.

Given that very little research in this area is in the world literature, and that similar research has not been conducted so far, especially in Bosnia and Herzegovina, the contributions of this paper are reflected in a number of achievements that have made a significant departure from other research on issues of Human resources competency management in small and medium enterprises and the impact on business performance of enterprises observed through four

perspectives of a balanced scorecard (financial perspective, customer perspective, internal business processes perspective and learning and growth perspective). Most of the research was related to the research of individual competency management activities, most of them by identifying key competencies and their impact on some of the business performance. Also, research was mainly conducted in large companies. By researching, formulating and presenting the results of research on the impact of Human resources competency management on the business performance of small and medium enterprises, a number of scientific contributions have been made.

In this doctoral dissertation all relevant categories and concepts in the field of Human resources competency management of small and medium enterprises, and a balanced scorecard through which business performance have been observed, which describe the previous theoretical and empirical findings in the field of the issue, have been researched and analyzed.

Classification and systematization of numerous Human resources competency management activities has been performed, and in this way the work of future researchers of Human resources competency management has been facilitated through the development of the offered theoretical framework. The classification and systematization of the approach to defining and measuring the business performance of small and medium enterprises through a balanced scorecard was performed, and thus it will be easier for future researchers of business performance of small and medium enterprises through the development of the offered theoretical framework.

The subject of research has been set in a new and original way linking the Human resources competency management of small and medium enterprises and business performance of small and medium enterprises through the development of a theoretical model of the relationship between defined variables. An original theoretical and empirical model has been formed, the purpose of which is to determine the impact, direction and intensity of the links between the Human resources competency management and business performance of small and medium enterprises. A model for measuring the business performance of small and medium enterprises has been developed using a balanced scorecard model that includes four perspectives (financial perspective, customer perspective, internal business processes perspective and learning and growth perspective).

The validity of the model has been verified by this research, which is a significant departure from other research and models. The mutual influence and connection of groups of activities of Human resources competency management and business performance observed through all four perspectives of the balanced scorecard determined in the set model has been determined.

Empirical verification of the defined model expanded and deepened the insight into the paradigm of modern business, and Human resources competency management, their development and affirmation in the field of management and business success.

The practical implications of this research and doctoral dissertations are also numerous.

Three phases of the Human resources competency management process have been identified, and activities for each of the phases of competency management have been identified, which will help small and medium enterprises and their management in developing and improving human resource management. The practice of Human resources competency management in small and medium enterprises in Bosnia and Herzegovina has been established.

The business performance of small and medium enterprises in Bosnia and Herzegovina has been determined, measured through four perspectives of the balanced scorecard method, which are to a large extent also predictors of future business performance indicators. The positive impact of all phases of Human resources competency management on business performance has been determined through all four perspectives, which will provide a quality foundation for small and medium enterprises to make further decisions on competency management activities in small and medium but also large enterprises, which can significantly raise competitiveness of enterprises, and affect their business performance.

The results of the research will be used as a basis for making recommendations for small and medium enterprises to improve the Human resources competency management, which can significantly increase the business performance of enterprises themselves, and affect their competitive position, development and survival.

6.4. Limitations and recommendations for future research

The goal of the dissertation was accomplished and the empirical research confirmed that the degree of Human resources competency management (in the form of 3 constructs) as an independent variable positively and significantly affects the business success of small and medium enterprises (observed through business performance from four balanced scorecard perspectives) as a dependent variable. Limitations of the doctoral dissertation and recommendations for future research based on the conducted empirical research and the results obtained are listed.

Limitation of a conducted research is reflected in the extent of the sample and the method of creating the research sample. According to the spatial coverage, the research was conducted on the territory of the Federation of Bosnia and Herzegovina, the larger of the two entities, which represents about 51% of Bosnia and Herzegovina. This represents one of the limitations of the

research and it would be useful and desirable but also a recommendation for future research to include the area of the smaller B&H entity of Republika Srpska, neighboring countries, and also EU member states and other countries.

Empirical research for this doctoral dissertation covered small and medium enterprises, which is a certain limitation, and it would be recommended in future research to investigate competency management as well as business performance in large companies and make comparisons with this research. Also, micro enterprises with less than 10 employees were left out, which is the largest share in the total number of enterprises, so it would be interesting and desirable to include them in future research on this topic, and see the situation and relationships within this group of enterprises and compare them with larger enterprises.

The research includes top managers and managers who manage human resources in enterprises, which is a certain limitation for research, and it would be useful and recommended that future research take into account and explore the attitudes and perceptions of other management levels and check possible deviations from attitudes and perception of top management.

The business success of small and medium enterprises was investigated through a research of business performance observed through the four perspectives of a balanced scorecard (financial perspective, customer perspective, perspective of internal business processes and perspective of learning and growth) and for each of these perspectives four indicators were defined. A recommendation for future research would be to introduce some more perspective into the balanced scorecard model such as corporate social responsibility or another. It is also recommended for future research to introduce some more indicators for each of the perspectives, in order to perspectives of BSC be explored in more detail, as the research results showed different impacts of competeny management on business performance viewed through four different perspectives.

Also, in the independent variable “Human resources competency management” are formed three constructs that represent the three phases of competency management and it would be useful and desirable in future research to divide each of these constructs into several subgroups of activities and to form new constructs in order to explore and analyze groups of activities and investigate their impact on the business success.

In the research were used some qualitative data that enable subjectivity because a subjective evaluation of state as well as of impacts has been conducted.

6.5. Concluding thoughts

The changes that have taken place in the world in recent decades have led to major changes in the economy and business, and the approach to the resources that companies use has changed to a great extent. Today, companies operate and compete in the global market, and the number of business opportunities and threats has significantly increased. Business owners and managers have become aware that people in such circumstances have become the most important resource of the organization and human resources management has been given one of the most important roles in companies. The success of the organization is based on the quality of human resources, their competencies, motivation, loyalty, and their business results. Their contribution to the organization as a resource is highly unpredictable, unique and has potential for further development. Human resources are a source of competitive advantage in both large enterprises and small and medium enterprises (SMEs). Due to the uniqueness and specificity of SMEs it can be said that human resources as a source of competitive advantage are even more important for SMEs despite the scarcer resources, both financial and other, it is one way for them to stand out from the competition.

Leaders of organizations today, in search of competitive advantage, have discovered a new, powerful way to revitalize human resource management: competency-based human resource management. The focus of the new approach is the person as the most important unit of the organization, together with their skills, knowledge, characteristics and abilities, which the organization must recognize, invest in them and improve the same skills, knowledge, characteristics and abilities through training and then reward employees.

Companies are increasingly moving away from the traditional approach to human resources management based on job analysis and job description and focusing on new competency based human resources management in an effort to create and maintain a competitive advantage, develop and survive in the marketplace.

Competency models are more flexible and more enduring than job descriptions. They are based on measurable work results and are specific to the organization's culture and success factors. Competency models are also highly effective at describing the less definable characteristics associated with exemplary individual performance. This may enhance the capability of HR practitioners to link organizational core competencies to the competencies of individual exemplary performers.

In the future, however, it is expected that competency-based human resources management will be used to align HR practices with the organization's strategic objectives and employee development efforts and to integrate all components of the HR function across an organization.

The competency-based HR management practices that enhance, encourage, and support exemplary performance will dominate the HR management scene in the future. Organizations will most likely introduce competency-based HR management through their recruitment and selection applications.

Growing awareness of the value of competency-based HR management will lead to innovations in competency technology. HR practitioners will be able to apply increasingly sophisticated electronic technologies to competency identification, modeling, and assessment. Web-based applications for competency identification and validation as well as for development and career management, already possible, will become the norm.

The results of the research confirmed the connection and influence of human resurces competency management on the business success of small and medium enterprises observed from the financial perspective, the customer perspective, the internal business processes perspective and the learning and growth perspective. This means that SMEs need to focus their approach on developing competency management models to improve their business performance.

This is especially true for small and medium enterprises in Bosnia and Herzegovina, where owners and managers need to understand that people are the ones who create and maintain their competitive advantage and that the only way to survive and develop is to focus on people and human resource management, as well as good practices and achievements in Human resources competency management.

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Appendix

Appendix 1. Questionnaire for the online survey

THE SURVEY QUESTIONNAIRE

Dear,

in front of You is a questionnaire compiled for the needs of research and writing of a doctoral dissertation entitled " THE INFLUENCE OF HUMAN RESOURCES COMPETENCY MANAGEMENT ON THE BUSINESS SUCCESS OF SMALL AND MEDIUM ENTERPRISES". The survey questionnaire is completely anonymous and will only be used for scientific research purposes.

The survey questionnaire is a research instrument used to examine the impact of Human resources competency management on the business performance of small and medium enterprises in the Federation of Bosnia and Herzegovina.

Please make sure the survey questionnaire is filled by the heads of human resources departments, senior managers or people who are well acquainted with this issue in the company, taking into account **the situation before the appearance of the Corona virus COVID-19.**

Please read all the questions carefully and answer them honestly and objectively, so that the results are objective and accurate.

Completing this survey takes approximately 10-15 minutes.

Thank You for Your help.

PART I - GENERAL INFORMATION ABOUT THE COMPANY

1. **What is the main and most important business activity of your company according to the classification in FB&H? (You can only mark one answer)**
    1. Agriculture, forestry and fishing
    2. Mining and quarrying
    3. Manufacturing industry
    4. Production and supply of electricity, gas, steam and air conditioning
    5. Water supply; wastewater disposal, waste management and remediation activities
    6. Construction
    7. Wholesale and retail trade; repair of motor vehicles and motorcycles
    8. Transport and storage
    9. Accommodation and food service activities (hotels and restaurants)
    10. Information and communication
    11. Financial and insurance activities
    12. Real estate business
    13. Professional, scientific and technical activities
    14. Administrative and support service activities
    15. Public administration and defense; compulsory social insurance
    16. Education
    17. Health and social work activities

18. Arts, entertainment and recreation
19. Other service activities
20. Activities of households as employers; activities of households that produce different goods and perform different services for their own needs
21. Activities of extraterritorial organizations and bodies

2. In the area of which County / Canton is the seat of your company?

1. USŽ Una-Sana County / Canton
2. ŽŠ Posavina County / Canton
3. TŽ Tuzla County / Canton
4. ZDŽ Zenica-Doboj County / Canton
5. BPŽ Bosnian-Podrinje County / Canton
6. ŽSB County / Canton Central Bosnia
7. HNŽ Herzegovina-Neretva County / Canton
8. ZZH County / Canton West Herzegovina
9. SŽ Sarajevo County / Canton
10. HBŽ Hercegbosnian County / Canton No. 10

3. How long has your company been around?

a) less than 5 years
b) from 5 to 10 years
c) more than 10 years

4. What is the average annual number of employees in your company (before the appearance of COVID -19 virus)?

a) from 1-9 employees
b) from 10-49 employees
c) from 50-249 employees
d) 250 and more employees

5. What is the legal form of your company?

a) Limited liability company
b) Joint stock company
c) Crafts and related activities
d) Other

6. What is the ownership structure of your company?

a) Domestic private property
b) Domestic state property
c) Foreign ownership
d) Mixed domestic private and state ownership
e) Mixed domestic and foreign ownership

7. How is human resources management organized in your company? (Check X next to the statement that most describes your company)

__1. The human resources process management is under the direct management of the general manager and there is no one else in the company who deals with it.

__2. One person is entrusted with the task of managing human resources, which is directly subordinated to the general manager.
__3. One person is entrusted with the task of managing human resources, which is a part of another department.
__4. A special human resources department has been organized, headed by a middle-level manager.
__5. One of the senior managers is in charge of human resources management and there is a special organizational unit for human resource management.

PART II - COMPETENCE MANAGEMENT IN THE COMPANY

II-1 Determination of the required competencies

Please answer the questions by marking grades from 1 to 5, where the lowest grade is *1- not at all*, up to grade *5 - excellent*, which is the highest grade.

8. To what extent in your company:

	Not at all	Very little	Neither a little nor a lot	Very good	Excellent
	1	2	3	4	5
1. is there a detailed and accurate **job position and job description** that an individual employee does at each job position?					
2. is **the individual work performance** *(goals / norms / performance standards)* defined and prescribed for each workplace that the employee needs to achieve?					
3. is **the required knowledge** identified for each workplace and defined as a condition for someone to be hired or assigned to a particular workplace?					
4. are **the necessary abilities** for the workplace identified and defined as a condition for someone to be hired or assigned to a particular workplace (*intellectual, psychomotor, physical, sensory*)?					
5. are the required technical skills identified for each workplace (specific to each job, profession, occupation, activity, etc.) and defined as a condition for someone to be hired and assigned to a particular workplace?					
6. the **necessary interpersonal skills, i.e., skills of working with people**, have been defined as a condition for someone to be hired and assigned to a certain workplace (*developing good relations, propensity for teamwork, communication, sensitivity, respect for diversity,*					

openness in relationships, understanding other people's feelings and behaviors, influencing others, networking)?					
7. are **the personality traits / characteristics** of the employee for each workplace determined and defined as a condition for someone to be hired or assigned to a certain position *(self-confidence, determination, energy, courage, risk-taking, ethics, compassion, propensity for teamwork, analytical skils, communicativeness, etc.)* ?					
8. are the **duties (obligations) and responsibilities** defined for workplace that the employee has, for every workplace?					
9. is the **behavior of employees** in the workplace defined *(creativity, initiative, ambition, flexibility, adaptability, continuous learning, loyalty, developing good relationships, responsibility, etc.)*?					
10. are the **competencies** (knowledge, skills, abilities,…) required as a condition for each workplace **in line** with the established goals, strategy and mission of the company?					
11. is the needed **motivation** of employees determined in each workplace in order to be successful in performing the job and work task *(enthusiasm, passion, ambition, initiative, energy, desire to learn, etc.)*?					
12. are the **most successful employees (exemplars)** identified and their characteristics, behavior and performance described as an example of excellent employees with whom other employees can be compared?					

II-2 Determining current employee competencies and competency gaps (required and actual)

9. To what extent in Your company:

	Not at all	Very little	Neither a little nor a lot	Very good	Excelle -nt
	1	2	3	4	5
1. is an **assessment / verification of the employee's knowledge** performed during new employments, but also after that, and **is a comparison** made with the needed, ie required knowledge for performing the job and the workplace where they work?					

2.	are **necessary abilities** determined for workplaces **assessed / tested** during the new employment, but also after that, and **compared** with the necessary, ie required abilities to perform the job and the workplace they work at *(intellectual, psychomotor, physical, sensory)?*					
3.	during new employment, but also occasionally / regularly after that, the determined necessary **technical skills for jobs are assessed / tested** *(they are specific for each job, profession, occupation, activity, etc.)* and **a comparison** made with the necessary ie required skills for performing the job and the workplace they work at?					
4.	during new employment, but also after that, **the determined necessary interpersonal skills, ie skills of working with people for each job**, are assessed / tested and **compared** with the necessary, ie required skills for performing the job and the workplace they work in *(developing good relations, propensity for teamwork, communicativeness, sensitivity, respect for diversity, openness in relationships, understanding other people's feelings and behavior, influencing others, networking)*?					
5.	during new employment, but also after that, the **personality traits / characteristics** of employees are evaluated *(self-confidence, determination, energy, courage, risk-taking, ethics, compassion, propensity for teamwork, analytical skills, communicativeness, etc.)* and comparison is made with the necessary, ie. required characteristics to perform the job and the workplace they work at?					
6.	is the achieved **individual work performance and analysis of the work** of each employee measured and **compared** with set and planned standards, norms and goals?					
7.	is **employee behavior in the workplace** continuously / periodically evaluated *(creativity, initiative, ambition, flexibility, adaptability, continuous learning, loyalty, developing good relationships, responsibility, etc.)* **and compared** with the necessary behavior required to do the job and the workplace they work at?					
8.	is **the motivation of employees continuously / periodically assessed** *(enthusiasm, passion, ambition, initiative, energy, desire to learn, etc.)* and **compared** with the necessary or required					

motivation needed to successfully perform the job and their workplace?					
9. is **a comparison made between** job candidates and employees **identified as the most successful employees** *(characteristics, behavior and performance)* that serve as an example (model) of excellent employees?					
10. is **criteria for the performance evaluation** of employees been determined according to which the evaluation of employees and their work performance is performed?					
11. are **official forms for evaluation (documents)** of employees and their work performance developed in the company?					
12. after the evaluation of employees and their work performances, **an interview** is conducted with employees regarding the results where individual results are communicated to them and the performance evaluation, reasons and possibilities for improvement and achievement of the required standards are discussed?					

II- 3 Performing activities to ensure and develop the necessary competencies

10. To what extent Your company:

	Not at all	Very little	Niether a little nor a lot	Very good	Excelle -nt
	1	2	3	4	5
1. **invests** in training and education of its employees in order to improve existing and acquire new competencies?					
2. **plans and organizes training and education** of employees to provide them with missing competencies well and in detail?					
3. has **established general goals** of employee training and education *(raising competitiveness, improving work performance, updating knowledge and skills of employees, etc..)*?					
4. has defined well and in detail **specific goals** aimed at that segment of behavior or areas of work performance that employees need to change or improve?					
5. conducts training and education of employees to acquire, disseminate and deepen knowledge and					

skills for current work and adapt to changes in work and technology?					
6. sends its employees to training and education **outside the company** in order to acquire new competencies and missing competencies *(other companies, seminars, courses, etc.)*?					
7. sends its employees for additional **education to educational institutions** in order to acquire the missing and improve existing competencies?					
8. directs its **employees to education and certification** in order to obtain appropriate certificates for performing certain tasks?					
9. performs training and education of employees **for career development**, prepares employees for advancement and performing more complex and responsible tasks in the organization?					
10. train employees and managers **for social or interpersonal and strategic skills**?					
11. train subordinates in a way that a more **experienced employee or manager teaches an employee** who needs education as well as mentoring?					
12. uses **job rotation, ie moving** employees according to a predetermined time schedule from one job to another in order to acquire the missing competencies and develop existing ones?					
13. assigns **work tasks** to employees and lower levels and provides **experience of working on specific problems and tasks** for training and development of employees?					
14. after the training, **evaluates** the opinion and satisfaction of participants with the training, educational program, conditions, teachers and content, and evaluates the extent to which participants have adopted and know the concepts, principles, facts, techniques and skills presented in the program?					
15. monitors how much participation in the training program **has really changed behavior at the workplace**, ie whether a positive transfer of acquired knowledge to the work situation and workplace has been made, and analyzes the concrete results and work performance of employees who attended the training?					

16. performs **employee development and promotion to higher positions** in the company of those who have the necessary and appropriate competencies?					
17. **employs and selects human resources outside the company** with necessary competencies that cannot be provided within the company?					
18. **lays off** or otherwise dismisses employees who cannot develop and achieve the required competencies?					

PART III Business Performance (Pre-Virus Data - 19)

Assess the changes in financial results that Your company has achieved in last three (3) years (financial perspective):

	Large drop	Small drop	Stagnation	Small growth	Large growth
Income					
Costs					
Profit – *if it operated positively*					
Loss – *if it operated negatively*					

To what extent in the last three years, in relation to customers and business (the customer perspective) have You managed to achieve:

	Large drop	Small drop	Stagnation	Small growth	Large growth
Market share					
Retention of existing customers					
Retrieving new customers					
Customer satisfaction					

Assess how Your company has accomplished the following in the last three years (internal business processes perspective):

	Large drop	Small drop	Stagnation	Small growth	Large growth
Introducing innovations to business process					
Percentage of made errors					
Finishing production and supplying the product/service to customers in time					
After-sales service/customer service					

How much emphasis in Your company in the last three years (the learning and growth perspective) has been on:

	Large drop	Small drop	Stagnation	Small growth	Large growth
Investments in training and education of employees					
Enabling employees to use new technologies					
Mutual employee collaboration and knowledge sharing					
Empowerment and consideration of employee suggestions					

Appendix 2. List of published works by the author

Chapters in edited book – ***"MANAGEMENT"*** – University textbook of University of Mostar; University of Split; Faculty of economics of University of Sarajevo:

1. Klepić, Z., Madžar, D. & Klepić, I. (2020). **Poslovna okolina/Business environment**. In: Klepić, Z., Alfirević, N. & Rahimić, Z. ed. (2020). *MANAGEMENT*. Mostar, B&H; Split, Croatia; Sarajevo, B&H: University of Mostar; University of Split – Faculty of economics; University of Sarajevo– Faculty of economics, pages (41-89), ISBN 978-9958-16-151-3 (University of Mostar); ISBN 978-953-281-087-5 (University of Split, Faculty of economics); ISBN 978-9958-25-151-1 (University of Sarajevo, Faculty of economics).
2. Klepić, Z., Mabić, M., Klepić, I. & Šunjić, L. (2020). **Poslovno odlučivanje/Business decision making**. In: Klepić, Z., Alfirević, N. & Rahimić, Z. ed. (2020). *MANAGEMENT*. Mostar, B&H; Split, Croatia; Sarajevo, B&H: University of Mostar; University of Split – Faculty of economics; University of Sarajevo– Faculty of economics, pages (155-183), ISBN 978-9958-16-151-3 (University of Mostar); ISBN 978-953-281-087-5 (University of Split, Faculty of economics); ISBN 978-9958-25-151-1 (University of Sarajevo, Faculty of economics).
3. Klepić, Z., Malić Bandur, K. & Klepić, I. (2020). **Kontroliranje/Controlling**. In: Klepić, Z., Alfirević, N. & Rahimić, Z. ed. (2020). *MANAGEMENT*. Mostar, B&H; Split, Croatia; Sarajevo, B&H: University of Mostar; University of Split – Faculty of economics; University of Sarajevo– Faculty of economics, pages (315-353), ISBN 978-9958-16-151-3 (University of Mostar); ISBN 978-953-281-087-5 (University of Split, Faculty of economics); ISBN 978-9958-25-151-1 (University of Sarajevo, Faculty of economics).

Original scientific paper published:

1. Klepić, Z., Šunjić, L., & Klepić, I. (2019). The impact of state and activities in organizations on barriers, representation and success of women as top managers. *South Eastern European Journal of Communication.* 1 (1), 163-175.

ISSN: 2712-0430, ISSN online: 2712-0457

Official Journal website: https://seejc.sum.ba/

Online version of the Journal: http://seejc.sum.ba/casopisi/5-SEEJC-elektronska-verzija.pdf

2. Klepić, I. (2019). Correlation of Recruitment and Selection of Human Resources and the Performance of Small and medium enterprises. *Naše gospodarstvo/Our Economy,* 65(4), 14–26. DOI: 10.2478/ngoe-2019-0016

Official Journal website: http://www.ng-epf.si

Online version of the Journal: http://www.ng-epf.si/index.php/ngoe/article/view/214

http://www.ng-epf.si/index.php/ngoe/article/view/214/187

3. Klepić, I., Mabić, M., & Madžar, D. (2020). Recruitment and selection of human resources and organizational creativity in small and medium enterprises. *BH Economic Forum,* 12 (1), 11-34.

ISSN: 1986-681X (Print)

ISSN: 2637-2185 (Online)

Official Journal website: http://www.ef.unze.ba/OJS/index.php/BHF/index

Online version of the Journal: http://www.ef.unze.ba/OJS/index.php/BHF/article/view/184/117

4. Klepić, I., Klepić Z., Mabić, M. (2020) 'Correlation between organizational creativity and business performance of small and medium enterprises'. Proceedings of XIV. International Balkan and Near Eastern Social Sciences Congress Series on Economics, Business and Management, Plovdiv Bulgaria, 263-274.

ISBN: 978-619-203-289-0

Official Journal website: http://www.ibaness.org/

Online version of the Journal:
http://www.ibaness.org/conferences/plovdiv_2020/ibaness_plovdiv_proceedings_draft_2.pdf

5. Klepic, I. and Klepic, Z. (2020) 'Intentions and perceptions of the entrepreneurial career among students'. *Economic and Social Development (Book of Proceedings), 61st International Scientific Conference on Economic and Social Development Development – "Corporate social responsibility in the context of the development of entrepreneurship and small businesses"*, Varaždin, Croatia, 62-72.

ISSN 1849-6903

Official Journal website: https://www.esd-conference.com/

Online version of the Journal: https://www.esd-conference.com/past-conferences

6. Klepić, I. (2021). Correlation between training and education of human resources and business performance of small and medium enterprises. Naše gospodarstvo/Our Economy, 67(3), 1-16. DOI: 10.2478/ngoe-2021-0013

Official Journal website: http://www.ng-epf.si

Online version of the Journal: http://www.ng-epf.si/index.php/ngoe/issue/view/44

http://www.ng-epf.si/index.php/ngoe/article/view/265/261

Appendix 3. Tables from the conducted research

The Differences according to the level of determining the required competencies for companies with different characteristics

Table 44 The results of descriptive statistics and KW test for a variable that expresses the level of determining the required competencies in the company by the activity

The main and most important activity of the company according to the classification in the Federation of Bosnia and Herzegovina		Construct determination of required competencies, average
Agriculture, forestry and fishing	N	6
	Average	3.986
	Standard deviation	1.025
Mining and quarrying	N	3
	Average	3.389
	Standard deviation	1.339
Manufacturing	N	56
	Average	3.935
	Standard deviation	0.748
Water supply; wastewater disposal, waste management and remediation activities	N	7
	Average	4.155
	Standard deviation	0.574
Construction	N	26
	Average	3.907
	Standard deviation	1.025
Wholesale and retail trade; repair of motor vehicles and motorcycles	N	71
	Average	3.892
	Standard deviation	0.718
Transport and storage	N	13
	Average	4.077
	Standard deviation	0.619
Accommodation and food service activities (hotels and restaurants)	N	5
	Average	4.017
	Standard deviation	0.622
Information and communication	N	7
	Average	4.333
	Standard deviation	0.692
Financial and insurance activities	N	4
	Average	3.937
	Standard deviation	0.966
Real estate business	N	1
	Average	3.583
Professional, scientific and technical activities	N	12
	Average	3.993
	Standard deviation	0.856
Administrative and support service activities	N	6
	Average	4.028
	Standard deviation	0.529
Health and social work activities	N	7
	Average	3.798
	Standard deviation	0.629
Arts, entertainment and recreation	N	4
	Average	3.625
	Standard deviation	1.111
Other service activities	N	5
	Average	3.833

	Standard deviation	0.868
Activities of households as employers; activities of households that produce different goods and perform different services for their own needs	N	1
	Average	3.167
KW TEST RESULT	H statistics	7,148
	P value	0,970>0,05

Source: Author's work

Table 45 The results of descriptive statistics and KW test for a variable that expresses the level of determining the required competencies in the company according to the legal form

The legal form		Construct determination of required competencies, average
A limited liability enterprise	N	207
	Average	3.925
	Standard deviation	0.760
Joint-stock company	N	9
	Average	4.157
	Standard deviation	0.649
Other	N	18
	Average	3.880
	Standard deviation	0.959
KW TEST RESULT	H statistics	0.590
	P value	0,745>0,05

Source: Author's work

Table 46 The results of the descriptive statistics and KW test for a variable that expresses the level of determining the required competencies in the company according to the ownership structure

Ownership structure		Construct determination of required competencies, average
Domestic private ownership	N	177
	Average	3.960
	Standard deviation	0.768
Domestic state ownership	N	29
	Average	3.922
	Standard deviation	0.812
Foreign ownership	N	8
	Average	3.708
	Standard deviation	0.589
Mixed domestic private and state ownership	N	6
	Average	3.972
	Standard deviation	0.562
Mixed domestic and foreign ownership	N	14
	Average	3.673
	Standard deviation	0.904
KW TEST RESULT	H statistics	2,440
	P value	0,655>0,05

Source: Author's work

Table 47 The results of descriptive statistics and KW test for a variable that expresses the level of determining the required competencies in the company according to the age of the company

The age of the company		Construct determination of required competencies, average
Less than 5 years	N	17
	Average	3.377
	Standard deviation	0.775
5 to 10 years	N	35
	Average	3.562
	Standard deviation	0.851
More than 10 years	N	182
	Average	4.053
	Standard deviation	0.711
KW TEST RESULT	H statistics	19.015
	P value	0,000<0,05

Source: Author's work

Table 48 The results of the descriptive statistics and the MW test for a variable that expresses the level of determining the required competencies in the enterprise according to the number of employees in the enterprise

Number of employees		Construct determination of required competencies, average
10 - 49 (small enterprises)	N	159
	Average	3.915
	Standard deviation	0.800
50-249 (medium enterprises)	N	75
	Average	3.962
	Standard deviation	0.709
MW TEST RESULTS	U statistics	5882.5
	P value	0,868>0,05

Source: Author's work

Table 49 Results of descriptive statistics and MW test for a variable that expresses the level of determining the required competencies in the company according to business performance.

Operates at		Construct determination of required competencies, average
A profit	N	187
	Average	3.984
	Standard deviation	0.758
A loss	N	47
	Average	3.718
	Standard deviation	0.794
MW TEST RESULTS	U statistics	-2.127
	P value	0.033<0.05

Source: Author's work

Differences according to the level of determining current competencies and competency gap for companies with different characteristics

Table 50 The results of descriptive statistics and KW test for a variable that expresses the level of determining current competencies and competency gap in the company by activity

The main and most important activity of the company according to the classification in the Federation of Bosnia and Herzegovina		Construct determination of current employee competencies and competency gap, average
Agriculture, forestry and fishing	N	6
	Average	3.806
	Standard	0.939
Mining and quarrying	N	3
	Average	3.444
	Standard	1.229
Manufacturing	N	56
	Average	3.875
	Standard	0.757
Water supply; wastewater disposal, waste management and remediation activities	N	7
	Average	3.286
	Standard	0.478
Construction	N	26
	Average	3.699
	Standard	0.924
Wholesale and retail trade; repair of motor vehicles and motorcycles	N	71
	Average	3.806
	Standard	0.770
Transport and storage	N	13
	Average	4.135
	Standard	0.603
Accommodation and food service activities (hotels and restaurants)	N	5
	Average	3.717
	Standard	0.620
Information and communication	N	7
	Average	4.107
	Standard	0.654
Financial and insurance activities	N	4
	Average	3.896
	Standard	1.048
Real estate business	N	1
	Average	3.167
Professional, scientific and technical activities	N	12
	Average	3.778
	Standard	0.788
Administrative and support service activities	N	6
	Average	3.778
	Standard	0.889
Health and social work activities	N	7
	Average	3.798
	Standard	0.446
Arts, entertainment and recreation	N	4
	Average	3.542
	Standard	0.750
Other service activities	N	5
	Average	3.350

	Standard	0.769
Activities of households as employers; activities of households that produce different goods and perform different services for their own needs	N	1
	Average	3.667
KW TEST RESULT	H statistics	11.691
	P value	0.765>0.05

Source: Author's work

Table 51 The results of descriptive statistics and KW test for a variable that expresses the level of determining current competencies and competency gap in the company according to the legal form

The legal form		Construct determination of current employee competencies and competency gap, average
A limited liability enterprise	N	207
	Average	3.786
	Standard deviation	0.761
Joint-stock company	N	9
	Average	4.185
	Standard deviation	0.583
Other	N	18
	Average	3.736
	Standard deviation	0.912
KW TEST RESULT	H statistics	2.395
	P value	0.302>0.05

Source: Author's work

Table 52 The results of descriptive statistics and the KW test for a variable that expresses the level of determining current competencies and competency gap in the company according to the ownership structure

Ownership structure		Construct determination of current employee competencies and competency gap, average
Domestic private ownership	N	177
	Average	3.818
	Standard deviation	0.789
Domestic state ownership	N	29
	Average	3.805
	Standard deviation	0.701
Foreign ownership	N	8
	Average	3.760
	Standard deviation	0.696
Mixed domestic private and state ownership	N	6
	Average	3.889
	Standard deviation	0.507
Mixed domestic and foreign ownership	N	14
	Average	3.500
	Standard deviation	0.793
KW TEST RESULT	H statistics	1.929
	P value	0.749>0.05

Source: Author's work

Table 53 Results of descriptive statistics and KW test for a variable that expresses the level of determining current competencies and competency gap in the company according to the age of the company

Age of the company		Construct determination of current employee competencies and competency gap, average
Less than 5 years	N	17
	Average	3.564
	Standard deviation	0.693
5 to 10 years	N	35
	Average	3.419
	Standard deviation	0.741
More than 10 years	N	182
	Average	3.892
	Standard deviation	0.757
KW TEST RESULTS	H statistics	13.224
	P value	0.001>0.05

Source: Author's work

Table 54 Results of descriptive statistics and MW test for a variable that expresses the level of determining current competencies and competency gap in the company according to the number of employees in the company

The number of employees		Construct determination of current employee competencies and competency gap, average
10 - 49 (small enterprise)	N	159
	Average	3.818
	Standard deviation	0.783
50-249 (medium-sized enterprise)	N	75
	Average	3.754
	Standard deviation	0.740
MW TEST RESULTS	U statistics	5610.500
	P value	0.466>0.05

Source

Table 55 The results of descriptive statistics and MW test for a variable that expresses the level of current employee competencies and the gap in competencies in the company according to business performance

Operates at		Construct determination of current employee competencies and competency gap, average
A profit	N	187
	Average	3.832
	Standard deviation	0.780
A loss	N	47
	Average	3.658
	Standard deviation	0.714
MW TEST RESULTS	U statistics	-1.463
	P value	0.143>0.05

Source: Author's work

Differences in the context of the level of undertaking activities to ensure and develop the necessary competencies for companies with different characteristics

Table 56 The results of the descriptive statistics and KW test for a variable that expresses the level of undertaking activities to ensure and develop the necessary competencies in the company by activity

The main and most important activity of the company according to the classification in the Federation of Bosnia and Herzegovina		Construct undertaking activities to ensure and develop the necessary competencies, average
Agriculture, forestry and fishing	N	6
	Average	3.519
	Standard deviation	1.395
Mining and quarrying	N	3
	Average	3.593
	Standard deviation	0.717
Manufacturing	N	56
	Average	3.714
	Standard deviation	0.807
Water supply; wastewater disposal, waste management and remediation activities	N	7
	Average	3.437
	Standard deviation	0.481
Construction	N	26
	Average	3.564
	Standard deviation	0.931
Wholesale and retail trade; repair of motor vehicles and motorcycles	N	71
	Average	3.720
	Standard deviation	0.737
Transport and storage	N	13
	Average	3.936
	Standard deviation	0.596
Accommodation and food service activities (hotels and restaurants)	N	5
	Average	3.622
	Standard deviation	0.658
Information and communication	N	7
	Average	3.929
	Standard deviation	0.608
Financial and insurance activities	N	4
	Average	3.611
	Standard deviation	0.949
Real estate business	N	1
	Average	2.833
Professional, scientific and technical activities	N	12
	Average	3.662
	Standard deviation	0.467
Administrative and support service activities	N	6
	Average	3.713
	Standard deviation	0.941
Health and social work activities	N	7
	Average	3.952
	Standard deviation	0.411
Arts, entertainment and recreation	N	4
	Average	3.194
	Standard deviation	1.083
	N	5

Other service activities	Average	3.567
	Standard deviation	0.819
Activities of households as employers; activities of households that produce different goods and perform different services for their own needs	N	1
	Average	3.333
KW TEST RESULT	H statistics	8.054
	P value	0.947>0.05

Source: Author's work

Table 57 Results of descriptive statistics and KW test for a variable that expresses the level of action taken to ensure and develop the necessary competencies in the enterprise according to the legal form

The legal form		Construct Undertaking activities to ensure and develop the necessary competencies, average
A limited liability enterprise	N	207
	Average	3.655
	Standard deviation	0.763
Joint-stock company	N	9
	Average	4.142
	Standard deviation	0.603
Other	N	18
	Average	3.824
	Standard deviation	0.844
KW TEST RESULT	H statistics	4.135
	P value	0.126>0.05

Source: Author's work

Table 58 Results of descriptive statistics and KW test for a variable that expresses the level of action taken to ensure and develop the necessary competencies in the company according to the ownership structure

Ownership structure		Construct undertaking activities to ensure and develop the necessary competencies, average
Domestic private ownership	N	177
	Average	3.714
	Standard deviation	0.782
Domestic state ownership	N	29
	Average	3.718
	Standard deviation	0.762
Foreign ownership	N	8
	Average	3.674
	Standard deviation	0.767
Mixed domestic private and state ownership	N	6
	Average	3.824
	Standard deviation	0.429
Mixed domestic and foreign ownership	N	14
	Average	3.222
	Standard deviation	0.635
KW TEST RESULT	H statistics	6.580
	P value	0.160>0.05

Source: Author's work

Table 59 Results of descriptive statistics and KW test for a variable that expresses the level of action taken to ensure and develop the necessary competencies in the company according to the age of the company

Age of the company		Construct undertaking activities to ensure and develop the necessary competencies, average
Less than 5 years	N	17
	Average	3.245
	Standard deviation	0.551
5 to 10 years	N	35
	Average	3.292
	Standard deviation	0.663
More than 10 years	N	182
	Average	3.803
	Standard deviation	0.766
KW TEST RESULT	H statistics	22.935
	P value	0.000<0.05

Source: Author's work

Table 60 Results of descriptive statistics and MW test for a variable that expresses the level of action taken to ensure and develop the necessary competencies in the company according to the number of employees in the company

The number of employees		Construct Undertaking activities to ensure and develop the necessary competencies, average
10 - 49 (small enterprise)	N	159
	Average	3.674
	Standard deviation	0.794
50-249 (medium-sized enterprise)	N	75
	Average	3.713
	Standard deviation	0.713
MW TEST RESULTS	U statistics	5893.500
	P value	0.886>0.05

Source: Author's work

Table 61 Results of descriptive statistics and MW test for a variable that expresses the level of action taken to ensure and develop the necessary competencies in the company according to business performance

Operates at		Construct Undertaking activities to ensure and develop the necessary competencies, average
A profit	N	187
	Average	3.707
	Standard deviation	0.791
A loss	N	47
	Average	3.603
	Standard deviation	0.667
MW TEST RESULTS	U statistics	-1.029
	P value	0.304>0.05

Source: Author's work

Differences in the context of the level of performance of companies from a financial perspective for companies with different characteristics

Table 62 Results of descriptive statistics and KW test for a variable that expresses the level of perfromance of the company from the financial perspective in the company by activity

The main and most important activity of the company according to the classification in the Federation of Bosnia and Herzegovina		Construct the performance of the company from the financial perspective, average
Agriculture, forestry and fishing	N	6
	Average	2.958
	Standard deviation	0.188
Mining and quarrying	N	3
	Average	2.833
	Standard deviation	1.010
Manufacturing	N	56
	Average	3.250
	Standard deviation	0.531
Water supply; wastewater disposal, waste management and remediation activities	N	7
	Average	3.250
	Standard deviation	0.408
Construction	N	26
	Average	3.077
	Standard deviation	0.551
Wholesale and retail trade; repair of motor vehicles and motorcycles	N	71
	Average	3.345
	Standard deviation	0.462
Transport and storage	N	13
	Average	3.192
	Standard deviation	0.502
Accommodation and food service activities (hotels and restaurants)	N	5
	Average	3.000
	Standard deviation	1.250
Information and communication	N	7
	Average	3.179
	Standard deviation	0.590
Financial and insurance activities	N	4
	Average	3.250
	Standard deviation	0.456
Real estate business	N	1
	Average	3.250
Professional, scientific and technical activities	N	12
	Average	3.125
	Standard deviation	0.361
Administrative and support service activities	N	6
	Average	3.292
	Standard deviation	0.679
Health and social work activities	N	7
	Average	3.071
	Standard deviation	0.345
Arts, entertainment and recreation	N	4
	Average	3.187
	Standard deviation	0.427
Other service activities	N	5
	Average	3.350
	Standard deviation	0.454
	N	1

Activities of households as employers; activities of households that produce different goods and perform	Average	3.000
KW TEST RESULTS	H statistics	14.249
	P value	0.580>0,05

Source: Author's work

Table 63 Results of descriptive statistics and KW test for a variable that expresses the level of performance of the company from the financial perspective in the company according to the legal form

The legal form		Construct the performance of a company from a financial perspective, average
A limited liability enterprise	N	207
	Average	3.232
	Standard deviation	0.531
Joint-stock company	N	9
	Average	3.139
	Standard deviation	0.453
Other	N	18
	Average	3.194
	Standard deviation	0.389
KW TEST RESULTS	H statistics	0.625
	P value	0.732>0.05

Source: Author's work

Table 64 Results of descriptive statistics and KW test for a variable that expresses the level of perfromance of the company from the financial perspective in the company according to the ownership structure

Ownership structure		Construct the performance of the company from the financial perspective, average
Domestic private ownership	N	177
	Average	3.179
	Standard deviation	0.510
Domestic state ownership	N	29
	Average	3.302
	Standard deviation	0.548
Foreign ownership	N	8
	Average	3.438
	Standard deviation	0.395
Mixed domestic private and state ownership	N	6
	Average	3.458
	Standard deviation	0.660
Mixed domestic and foreign ownership	N	14
	Average	3.429
	Standard deviation	0.475
KW TEST RESULTS	H statistics	6.841
	P value	0.145>0.05

Source: Author's work

Table 65 Results of descriptive statistics and KW test for a variable that expresses the level of performance of the company from the financial perspective in the company according to the age of the company

Age of the company		Construct the performance of a company from a financial perspective, average
Less than 5 years	N	17
	Average	3.132
	Standard deviation	0.516
5 to 10 years	N	35
	Average	3.050
	Standard deviation	0.575
More than 10 years	N	182
	Average	3.268
	Standard deviation	0.500
KW TEST RESULTS	H statistics	3.013
	P value	0.222>0.05

Source: Author's work

Table 66 Results of descriptive statistics and MW test for a variable that expresses the level of performance of the company from the financial perspective in the company according to the number of employees in the company

The number of employees		Construct the performance of a company from a financial perspective, average
10 - 49 (small enterprise)	N	159
	Average	3.219
	Standard deviation	0.545
50-249 (medium enterprises)	N	75
	Average	3.240
	Standard deviation	0.455
MW TEST RESULTS	U statistics	5801.000
	P value	0.734>0.05

Source: Author's work

Table 67 Results of descriptive statistics and MW test for a variable that expresses the level of performance of companies from a financial perspective to business performance

Operates at		Construct the performance of a company from a financial perspective, average
A profit	N	187
	Average	3.329
	Standard deviation	0.477
A loss	N	47
	Average	2.814
	Standard deviation	0.465
MW TEST RESULTS	U statistics	-5.908
	P value	0.000<0.05

Source: Author's work

Differences in the context of the level of performance of the company from the perspective of customers for companies with different characteristics

Table 68 The results of the descriptive statistics and the KW test for a variable that expresses the level of performance of the company from the customer perspective in the company by activity

The main and most important activity of the company according to the classification in the Federation of Bosnia and Herzegovina		The Construct The performance of the company from the customer perspective, average
Agriculture, forestry and fishing	N	6
	Average	3.083
	Standard deviation	0.465
Mining and quarrying	N	3
	Average	3.250
	Standard deviation	1.146
Manufacturing	N	56
	Average	3.558
	Standard deviation	0.707
Water supply; wastewater disposal, waste management and remediation activities	Average	3.500
	Standard deviation	0.382
Construction	N	26
	Average	3.356
	Standard deviation	0.895
Wholesale and retail trade; repair of motor vehicles and motorcycles	N	71
	Average	3.606
	Standard deviation	0.780
Transport and storage	N	13
	Average	3.500
	Standard deviation	0.924
Accommodation and food service activities (hotels and restaurants)	N	5
	Average	3.150
	Standard deviation	1.282
Information and communication	N	7
	Average	3.536
	Standard deviation	0.918
Financial and insurance activities	N	4
	Average	3.438
	Standard deviation	0.515
Real estate business	N	1
	Average	3.000
Professional, scientific and technical activities	N	12
	Average	3.292
	Standard deviation	0.592
Administrative and support service activities	N	6
	Average	3.625
	Standard deviation	0.627
Health and social work activities	N	7
	Average	3.429
	Standard deviation	0.554
Arts, entertainment and recreation	N	4
	Average	2.938
	Standard deviation	0.315
Other service activities	N	5
	Average	3.650
	Standard deviation	0.418
	N	1

Activities of households as employers; activities of households that produce different goods and perform different services for their own needs	Average	2.750
KW TEST RESULTS	H statistics	14.810
	P value	0.539>0.05

Source: Author's work

Table 69 The results of descriptive statistics and KW test for a variable that expresses the level of performance of the company from the customer perspective in the company according to the legal form

The legal form		The Construct The performance of the company from the customer perspective, average
A limited liability enterprise	N	207
	Average	3.499
	Standard deviation	0.741
Joint-stock company	N	9
	Average	3.333
	Standard deviation	0.599
Other	N	18
	Average	3.431
	Standard deviation	0.966
KW TEST RESULTS	H statistics	1.236
	P value	0.539>0.05

Source: Author's work

Table 70 The results of descriptive statistics and KW test for a variable that expresses the level of performance of the company from the perspective of customers in the company according to the ownership structure

Ownership structure		Construct the performance of the company from the perspective of customers, average
Domestic private ownership	N	177
	Average	3.459
	Standard deviation	0.763
Domestic state ownership	N	29
	Average	3.560
	Standard deviation	0.677
Foreign ownership	N	8
	Average	3.594
	Standard deviation	0.626
Mixed domestic private and state ownership	N	6
	Average	3.458
	Standard deviation	0.534
Mixed domestic and foreign ownership	N	14
	Average	3.643
	Standard deviation	0.964
KW TEST RESULTS	H statistics	2.381
	P value	0.666>0.05

Source: Author's work

Table 71 The results of the descriptive statistics and the KW test for a variable that expresses the level of performance of the company from the customer perspective in the company according to the age of the company

The age of the company		The Construct the performance of the company from the customer perspective, average
Less than 5 years	N	17
	Average	3.088
	Standard deviation	0.897
5 to 10 years	N	35
	Average	3.143
	Standard deviation	0.810
More than 10 years	N	182
	Average	3.591
	Standard deviation	0.698
KW TEST RESULTS	H statistics	11.936
	P value	0.003<0.05

Source: Author's work

Table 72 Results of descriptive statistics and MW test for a variable that expresses the level of performance of the company from the customer perspective in the company according to the number of employees in the company

The number of employees		The Construct the performance of the company from the customer perspective, average
10 - 49 (small enterprise)	N	159
	Average	3.462
	Standard deviation	0.786
50-249 (medium enterprises)	N	75
	Average	3.540
	Standard deviation	0.682
MW TEST RESULT	U statistics	5810.500
	P value	0.749>0.05

Source: Author's work

Table 73 The results of the descriptive statistics and MW test for a variable that expresses the level of performance of the company from the customer perspective according to business performance

Operates at		The Construct the performance of the company from the customer perspective, average
A profit	N	187
	Average	3.572
	Standard deviation	0.742
A loss	N	47
	Average	3.149
	Standard deviation	0.710
MW TEST RESULTS	U statistics	-3.614
	P value	0.000>0.05

Source: Author's work

The differences in the context of the level of performance of companies from the internal business processes perspective for companies with different characteristics

Table 74 The results of the descriptive statistics and the KW test for a variable that expresses the level of performance of the company from the internal business processes perspective in the company by activity

The main and most important activity of the company according to the classification in the Federation of Bosnia and Herzegovina		The Construct of The performance of the company from an internal business processes perspective
Agriculture, forestry and fishing	N	6
	Average	3.208
	Standard deviation	0.510
Mining and quarrying	N	3
	Average	3.250
	Standard deviation	1.090
Manufacturing	N	56
	Average	3.442
	Standard deviation	0.522
Water supply; wastewater disposal, waste management and remediation activities	N	7
	Average	3.357
	Standard deviation	0.593
Construction	N	26
	Average	3.231
	Standard deviation	0.655
Wholesale and retail trade; repair of motor vehicles and motorcycles	N	71
	Average	3.451
	Standard deviation	0.653
Transport and storage	N	13
	Average	3.346
	Standard deviation	0.666
Accommodation and food service activities (hotels and restaurants)	N	5
	Average	3.350
	Standard deviation	0.929
Information and communication	N	7
	Average	3.429
	Standard deviation	0.688
Financial and insurance activities	N	4
	Average	3.375
	Standard deviation	0.433
Real estate business	N	1
	Average	3.250
Professional, scientific and technical activities	N	12
	Average	3.146
	Standard deviation	0.361
Administrative and support service activities	N	6
	Average	3.542
	Standard deviation	0.714
Health and social work activities	N	7
	Average	3.393
	Standard deviation	0.643
Arts, entertainment and recreation	N	4
	Average	3.063

	Standard deviation	0.774
Other service activities	N	5
	Average	3.400
	Standard deviation	0.379
Activities of households as employers; activities of households that produce different goods and perform different services for their own needs	N	1
	Average	3.0000
KW TEST RESULTS	H statistics	7.963
	P value	0.950>0.05

Source: Author's work

Table 75 Results of descriptive statistics and the KW test for a variable that expresses the level of performance of the company from the internal business processes perspective in the company according to the legal form

The legal form		The Construct of the performance of the company from an internal business processes perspective, average
A limited liability enterprise	N	207
	Average	3.388
	Standard deviation	0.610
Joint-stock company	N	9
	Average	3.472
	Standard deviation	0.565
Other	N	18
	Average	3.208
	Standard deviation	0.564
KW TEST RESULTS	H statistics	1.454
	P value	0.483>0.05

Source: Author's work

Table 76 The results of the descriptive statistics and the KW test for a variable that expresses the level of performance of the company from the internal business processes perspective in the company according to the ownership structure

Ownership structure		The Construct of the performance of the company from an internal business processes perspective, average
Domestic private ownership	N	177
	Average	3.376
	Standard deviation	0.615
Domestic state ownership	N	29
	Average	3.371
	Standard deviation	0.541
Foreign ownership	N	8
	Average	3.375
	Standard deviation	0.327
Mixed domestic private and state ownership	N	6
	Average	3.417
	Standard deviation	0.563
Mixed domestic and foreign ownership	N	14
	Average	3.393
	Standard deviation	0.783

KW TEST RESULTS	H statistics	0.300
	P value	0.990>0.05

Source: Author's work

Table 77 The results of the descriptive statistics and the KW test for a variable that expresses the level of performance of the company from the internal business processes perspective in the company according to the age of the company

The age of the company		The Construct of the performance of the company from an internal business processes perspective, average
Less than 5 years	N	17
	Average	3.000
	Standard deviation	0.729
5 to 10 years	N	35
	Average	3.236
	Standard deviation	0.667
More than 10 years	N	182
	Average	3.440
	Standard deviation	0.565
KW TEST RESULTS	H statistics	6.510
	P value	0.039<0.05

Source: Author's work

Table 78 The results of the descriptive statistics and the MW test for a variable that expresses the level of perfromance of the company from the internal business processes perspective in the company according to the number of employees in the company

The number of employees		The Construct of the performance of the company from an internal business processes perspective, average
10 - 49 (small enterprises)	N	159
	Average	3.376
	Standard deviation	0.621
50-249 (medium enterprises)	N	75
	Average	3.380
	Standard deviation	0.573
MW TEST RESULT	U statistics	5851.500
	P value	0.815>0.05

Source: Author's work

Table 79 Results of descriptive statistics and MW test for a variable that expresses the level of performance of the company from the internal business processes perspective according to business performance

Operates at		The Construct of the performance of the company from an internal business processes perspective, average
A profit	N	187
	Average	3.426
	Standard deviation	0.605
A loss	N	47
	Average	3.176
	Standard deviation	0.580

MW TEST RESULTS	U statistics	-2.536
	P value	0.011>0.05

Source: Author's work

The Differences in the context of the level of performance of companies from the learning and growth perspective for companies with different characteristics

Table 80 Results of descriptive statistics and KW test for a variable that expresses the level of peroformance of the company from the learning and growth perspective in the company by activity

The main and most important activity of the company according to the classification in the Federation of Bosnia and Herzegovina		The construct of the performance of the company from the learning and growth perspective, average
Agriculture, forestry and fishing	N	6
	Average	3.375
	Standard deviation	0.833
Mining and quarrying	N	3
	Average	3.750
	Standard deviation	1.146
Manufacturing	N	56
	Average	3.469
	Standard deviation	0.704
Water supply; wastewater disposal, waste management and remediation activities	N	7
	Average	3.536
	Standard deviation	0.668
Construction	N	26
	Average	3.231
	Standard deviation	0.933
Wholesale and retail trade; repair of motor vehicles and motorcycles	N	71
	Average	3.539
	Standard deviation	0.723
Transport and storage	N	13
	Average	3.538
	Standard deviation	0.796
Accommodation and food service activities (hotels and restaurants)	N	5
	Average	3.000
	Standard deviation	1.146
Information and communication	N	7
	Average	3.393
	Standard deviation	0.734
Financial and insurance activities	N	4
	Average	3.250
	Standard deviation	0.791
Real estate business	N	1
	Average	3.000
Professional, scientific and technical activities	N	12
	Average	3.208
	Standard deviation	0.797
Administrative and support service activities	N	6
	Average	3.458
	Standard deviation	0.714
Health and social work activities	N	7
	Average	3.607
	Standard deviation	0.734
	N	4

Arts, entertainment and recreation	Average	3.563
	Standard deviation	0.800
Other service activities	N	5
	Average	3.750
	Standard deviation	0.586
Activities of households as employers; activities of households that produce different goods and perform different services for their own needs	N	1
	Average	4.0000
KW TEST RESULTS	H statistics	8.687
	P value	0.926>0.05

Source: Author's work

Table 81 Results of descriptive statistics and KW test for a variable that expresses the level of perofrmance of the company from the learning and growth perspective in the company according to the legal form

The legal form		The construct of the performance of the company from the learning and growth perspective, average
A limited liability enterprise	N	207
	Average	3.454
	Standard deviation	0.737
Joint-stock company	N	9
	Average	3.278
	Standard deviation	0.551
Other	N	18
	Average	3.528
	Standard deviation	1.060
KW TEST RESULTS	H statistics	0.350
	P value	0.840>0.05

Source: Author's work

Table 82 Results of descriptive statistics and KW test for a variable that expresses the level of performance of the company from the learning and growth perspective in the company according to the ownership structure

Ownership structure		The construct of the performance of the company from the learning and growth perspective, average
Domestic private ownership	N	177
	Average	3.438
	Standard deviation	0.741
Domestic state ownership	N	29
	Average	3.655
	Standard deviation	0.814
Foreign ownership	N	8
	Average	3.594
	Standard deviation	0.550
Mixed domestic private and state ownership	N	6
	Average	3.500
	Standard deviation	0.316
Mixed domestic and foreign ownership	N	14
	Average	3.125
	Standard deviation	0.999
KW TEST RESULTS	H statistics	3.866
	P value	0.424>0.05

Source: Author's work

Table 83 The results of the descriptive statistics and the KW test for a variable that expresses the level of performance of the company from the learning and growth perspective in the company according to the age of the company

The age of the company		The construct of the performance of the company from the learning and growth perspective, average
Less than 5 years	N	17
	Average	3.029
	Standard deviation	0.780
5 to 10 years	N	35
	Average	3.093
	Standard deviation	0.777
More than 10 years	N	182
	Average	3.562
	Standard deviation	0.720
KW TEST RESULTS	H statistics	14.612
	P value	0.001<0.05

Source: Author's work

Table 84 Results of descriptive statistics and MW test for a variable that expresses the level of performance of the company from the learning and growth perspectivein the company according to the number of employees in the company

The number of employees		The construct of the performance of the company from the learning and growth perspective, average
10 - 49 (small enterprises)	N	159
	Average	3.418
	Standard deviation	0.783
50-249 (medium enterprises)	N	75
	Average	3.527
	Standard deviation	0.699
MW TEST RESULT	U statistics	5650.000
	P value	0.511>0.05

Source: Author's work

Table 85 Results of descriptive statistics and MW test for a variable that expresses the level of performance of the company from the learning and growth perspective according to business performance

Operates at		The construct of the performance of the company from the learning and growth perspective, average
A profit	N	187
	Average	3.523
	Standard deviation	0.765
A loss	N	47
	Average	3.176
	Standard deviation	0.667
MW TEST RESULTS	U statistics	-3.121
	P value	0.002<0.05

Source: Author's work