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THE DEVELOPMENT OF A NEW SOFI MODEL FOR PERFORMANCE MANAGEMENT OF MEDIUM-SIZED AND LARGE COMPANIES

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Abstract: *Measurement and adequate performance management of a company represent an imperative regarding the attainment of competitive advantage in the market. This need is especially pronounced in medium-sized and large companies, which represent complex organizations and require the application of scientific principles for solving complex issues in practice. Therefore, the performance management process in medium-sized and large companies is singled out as the subject of the research. It is important to point out that the main concept of the paper is the macro aspect of the performance management process. The primary goal of the research is the development of a new model for performance management based on considering all important parameters of business operations of these companies on the territory of the Republic of Srpska. The research was conducted via combined methods – a multiple case study which implies four companies and a survey questionnaire. Through the analysis of many models in the literature, seven were singled out which were studied further. The main elements and conceptual bases of these models served as the basis for conducting research and creating a new model for performance management. The result of the published research represents "SOFI" model (strategic, organizational, financial and information–technological aspects), whose application contributes towards easier management by managers, as well as making correct management decisions in the conditions of uncertainty.*

Key words*: Management, performance, model, company.*

1. Introduction

Measuring in business economy has always attracted the attention of the academic community and practice for the simple reason and a well-known fact that

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"one cannot manage something that cannot be measured". The issue of performance management is important for all companies, regardless of their activity or geographical position, but is especially affirmed with a company's growth and its development. The increase in the size of a company, maturing and the expansion of operations confront the management with the challenge of information reliability for making correct managerial decisions. To be competitive in modern business, companies must cooperate with each other (Puška et al. 2022).

Reference literature recognizes a significant number of models (seven of which were chosen for further study) which focus on the performance management of a company, but simultaneously numerous open issues and unresearched specificities are present. In accordance with this, as the main research question in this paper, an analysis of concept frequency and key elements of theoretical models of performance management in the practice of medium-sized and large companies is posed, with the main goal of developing a new model for performance management of medium-sized and large companies.

Taking into consideration the goal of the research, a group of research questions is defined, which relates to the identification of the most significant theoretical models for performance management and their prevalence in the practice of medium-sized and large companies. It required desk research, which enabled insight into scientific and professional literature in performance management. The frequency of the elements of the chosen models was determined via quantitative research, that is, using a questionnaire, on a sample of 130 respondents, as well as through a qualitative part, that is, a multiple case study (the research presented in this paper is a part of larger research). Based on that, the following research questions were formulated:

Q1: Theoretical models for performance management and their applicability:

Q1a: Which are the most significant theoretical models for the performance management of a company?

Q1b: Which elements of theoretical models are present in the practice of medium-sized and large companies in the Republic of Srpska?

One of the main goals of the research is also to determine the manner of conducting the performance management process in the practice of medium-sized and large companies. Besides a standard description of performance management practice, the information-technological section was singled out as a significant and special segment, that is, IT support necessary for performance management process itself. Two following questions illustrate the previous explanation:

Q2: What is the practice of medium-sized and large companies like, concerning performance management?

The response to this question ought to provide information concerning the performance management practice of medium-sized and large companies in the Republic of Srpska. Besides the influence of information technologies on performance management, the barriers to doing business and the types of performances which have been measured and evaluated will be considered as well as the frequency of measuring different types of performances.

Q3: How and which information technologies and systems are used to support performance management of medium-sized and large companies?

The importance of information technologies and systems in the modern business world is significant. In that context, it is necessary to mention the market of tools and products of business intelligence (BI), which has been increasing continuously in the recent period and has shown a strong tendency towards further expansion in the

future. In the context of economic sciences, it is possible to place every goal in the frame of business intelligence (Soldić Aleksić & Stankić, 2011).

The review of the literature shows that PM practice in medium-sized and large companies has been the subject of various research, but that such research in transition economies is very rare. Simultaneously, companies in these economies have a pronounced need for the use of systematic methods of setting goals and monitoring the progress of their realization, but they also have some difficulties in a direct takeover of models, created due to the needs of the companies in developed market economies. That is why this research puts the following question in the first place:

Q4: What kind of performance management model could be successfully implemented in the practice of medium-sized and large companies in the Republic of Srpska?

Each management process faces different barriers in business. One research question, precisely, concerned the revealing of the most significant organizational barriers in the performance management process of medium-sized and large companies. Furthermore, a gap between the existing theoretical models for performance management and real practice, regarding the frequency of these models in the abovementioned process, was supposed to be determined.

Q5: Revealing organizational barriers in the performance management process and defining the ways for their overcoming:

Q_5a: Is there a gap between theoretical models for performance management and real practice in performance management?

Q_5b: What are the ways of overcoming organizational barriers?

The research questions defined in this way limit the subject, goal, and scope of research, which will be presented in this paper. Thereby, a conceptual framework is defined, as well as research ambitions and tasks. Based on these research questions, hypotheses, subjected to the evaluation using quantitative statistical methods, are defined. Only the main method will be presented in this paper:

H1: The practice of performance management in medium-sized and large companies in the Republic of Srpska shows deviations from the referent theoretical models of performance management.

Based on everything abovementioned, it is concluded that the main goal of this paper is the development and evaluation of the model for performance management of medium-sized and large companies. The model that can be adequately implemented in most studied organizations certainly contributes to a better practice of performance management and improvement of all aspects of business in medium-sized and large companies.

A more explicit and deeper interpretation of the subject of the research can be obtained from the established goals of the research. Detailed study and review of relevant literature, the goal of which is determining and analyzing referent theoretical models for performance management, emerges as the first goal. The second goal concerns the evaluation of the frequency of concepts and key elements of theoretical models of performance management in medium-sized and large companies in the Republic of Srpska. The third goal implies determining the state and the description of typical ways of performance management in medium-sized and large companies in the Republic of Srpska. The following, fourth goal refers to information technology (IT) and the system for performance management support, which are used in the practice of medium-sized and large companies, being established based on theoretical and empirical research. Development, design and evaluation of the performance management model in medium-sized and large

companies are defined as the fifth goal. The sixth goal refers to revealing organizational barriers in the performance management process and defining recommendations for the advancement of the performance management process in medium-sized and large companies.

The structure of the paper includes a review of the literature in performance management, research methodology, the representation of the development of SOFI model for performance management in medium-sized and large companies, the representation of the model elements with key performance indicators and questions necessary for successful model implementation, the discussion of the results and final considerations.

2. Literature Review

Performance management (hereinafter, PM) has experienced expansion in the last twenty years, but it has been systematically developed and studied in developed market economies for more than half a century. According to certain authors (Bititci et al. 2014), this concept evolved from performance measurement into performance management. In developing this area, there are also critical reviews, which demonstrated concern regarding the efficiency of a performance management system developed in management theory and the possibilities for their application in practice (Furnham, 2004; Hazard, 2004). Criticisms are mainly directed at the processes and problems of building strong and successfully applicable performance management systems (PMS) in practice, more than the very need for those systems, which is confirmed through their contribution to the effectiveness and efficiency of the organization, both in management theory and practice (Cokins, 2004; Pulakos, 2004; Armstrong, 2006; Pulakos, 2009). In accordance with the previously mentioned, it can be said that PMS represents a system based on several integrated processes, which support managers in making decisions for creating values in a holistic manner (Hristov et al., 2021). Furthermore, PMS can be defined as a collection of control management mechanisms, which are used by managers and employees with the general purpose of fulfilling organizational goals, which are affected by the behaviour of people and their performance (Franco-Santos & Otley, 2018). Performance is understood as the success (both regarding effectiveness and efficiency) of an organization in achieving established goals and performing its mission (Balaban et al., 2016).

The concept of "business process" started to be used more intensively in academic circles in the early nineties (Rummler & Brache 1995; Rentzhog, 1998). The total concept of business processes developed in stages, but it can be freely said that corporate performance management (CPM) is the most advanced stage of its development (Scheer & Jost, 2005). This process is recognized by Gartner group, which named this concept "corporate performance management – CPM", which refers to the use of processes, methodologies, metrics, and technologies to create an unbreakable bond between corporate strategy, planning, implementation, and control. To ensure the company's agility, the members of management must use the tools and methods that enable the organization to quickly evaluate the consequences of decisions so that the company can adjust to a new situation. The primary task of every management ought to be the pursuit of efficient (doing things in the right way) and effective (doing the right things) business operations. Besides the direct benefit of carrying out the performance management process for the purpose of business optimization, the importance of monitoring the process has increased because of

both initiatives and legal provisions, which refer to corporate management and risk management. The synonyms for the concept of corporate performance management (CPM) are business performance management (BPM) and enterprise performance management (EPM) (Dresner, 2008).

The most recent papers in this area point to the importance of the development and use of PMS, where the inclusion of employees in the design, development, and use of the performance management process itself is especially emphasized (Cooper et al., 2019). It is necessary for companies to implement an appropriate system of evaluation and identification of the performance of each employee, team, or the entire organization, and accordingly to apply adequate rewards (Andrejić, 2022). Furthermore, some other contemporaries emphasize that performance management is the general practice that organizations use for measuring and managing employees' work, which aims at ensuring the attainment of the desired goals of the organization (Tweedie et al., 2019). Performance management also implies setting corporate, departmental, team and individual goals, the use of a performance evaluation system, appropriate strategy and reward schemes, training and development strategies, feedback information, communication and teaching, individual career planning, the mechanisms for monitoring the efficiency of the performance management system, and even organizational culture management system (Schleicher et al., 2018). To survive on the market and be competitive, enterprises must share and distribute knowledge and information (Puška et al. 2019). According to some authors, employee performance management is one of the most critical functions in any organization. This function, which includes employee performance evaluation, attempts to improve employee performance, with the goal of improving performance at the organisational level (DeNisi et al., 2021). Investing in staff, as well as staff management and the use of their knowledge becomes the key to the success of a modern organization (Kaplan & Norton, 1996). In general, performance management is challenging, complex, multiple, and multi-layered processes, relying on theory and research from many different areas, including measurement theory and motivation theory, cognitive, clinical, social and behavioural psychology, neuroscience, organizational development and change management (Pulakos et al., 2019).

As previously mentioned, the topic of the paper represents determining the importance and the role of the performance management process in medium-sized and large companies. According to the existing research, mature conceptual models of performance management are widespread, but the value of the use of these models in the practice of organizations has not been sufficiently researched (Bititci et al., 2014). The abovementioned conclusion is one of the reasons for the research conception in this paper. The insight into considerable research on performance management tells us that it has been conducted in various areas, and that the criteria for choosing companies have been different. Some authors tackled the research of performance management in large companies (Wang, 2010; Striteska, 2012; Gungor & Gozlu, 2016). In the paper of Taletović and Sremac (2023), it is stated that small and medium-sized companies are not competitive in comparison to large companies in the economies of scale within transport services. There is a significant number of authors who focused their research on manufacturing companies, regardless of their size (Wong et al., 2014; Oh et al., 2014; Feng et al., 2014; Bititci, 2015). Furthermore, certain research included companies from different industries, and companies of all sizes (Flamholtz & Aksehirli, 2000). It is also important to mention our national authors whose study included a wide range of companies with different features regarding their size, branch affiliation, stock market listing, and the like (Todorović

et al., 2015). It is evident that large companies have been the subject of these studies more often. In this paper, the research has included large companies, but the range has also been expanded with medium-sized companies. There surely are justified reasons for introducing medium-sized companies into the research, because, together with small companies, they are the driving force of development and progress in all the economies in the world. Small and medium-sized companies have also demonstrated exceptional vitality and the countries with this sector developed overcame transitional issues more easily and successfully. However, practice shows us that small companies, most frequently, do not have the capacities and do not apply the systematic performance management models, and thus, they are centralized and owner-bound, so this category of companies will not be included in the research in this paper, nor will micro companies. The insight into some research conducted in domestic areas shows that small companies use incomparably fewer performance measures than large companies (Todorović et al., 2015).

Besides theoretical research of different concepts and performance management models (Cross & Lynch, 1989; Kaplan & Norton, 1992; Flamholtz, 1995; Bititci et al. 1997; Ghalayini et al., 1997; Neely et al., 2007), a significant part of the research is focused on practice and exploration of valuable models that are used in practice by medium-sized and large companies in the Republic of Srpska, as well as the study of typical ways of performance management in medium-sized and large companies. The results of both studies have been used for the development and design of a performance management model in medium-sized and large companies, which is evaluated by experts and members of the academic community.

3. Research Methodology

The research was conducted with combined methods – a multiple case study and a questionnaire. Four companies, classified according to the criteria of size and the period of experience in implementing a systemic manner of performance management, were analyzed in the multiple case study. The research via questionnaire (quantitative research) enables parallel collection of additional findings on performance management in medium-sized and large companies, significant for the main purpose of this study. It is undertaken with the aim of ascertaining the characteristics of distributions and relationships between the variables in a basic set via examining a sample of the basic set (Ristić, 2016). The quantitative research encompassed 130 respondents, in the period from February to June 2018 and it was conducted on the territory of the Republic of Srpska. Based on the theoretical and empirical research, a model for performance management in medium-sized and large companies (SOFI model) was developed, named after four aspects it includes – strategic, organizational, financial and information-technological aspects. Appropriate key performance indicators, which enable the monitoring of the planned goals and indicate the need for performance advancement, may be applied to every element of the model. This paper provides an overall view of the research field, enriching the existing knowledge fund with the model developed on the basis of the research conducted in the Republic of Srpska and defining recommendations and possibilities for further research.

The empirical research conducted in this paper, which is an integral part of wider research, is composed of two parts: a case study as a qualitative part of the research and a questionnaire as a quantitative part of the research. A schematic diagram of the research can be observed in the following Figure 1.

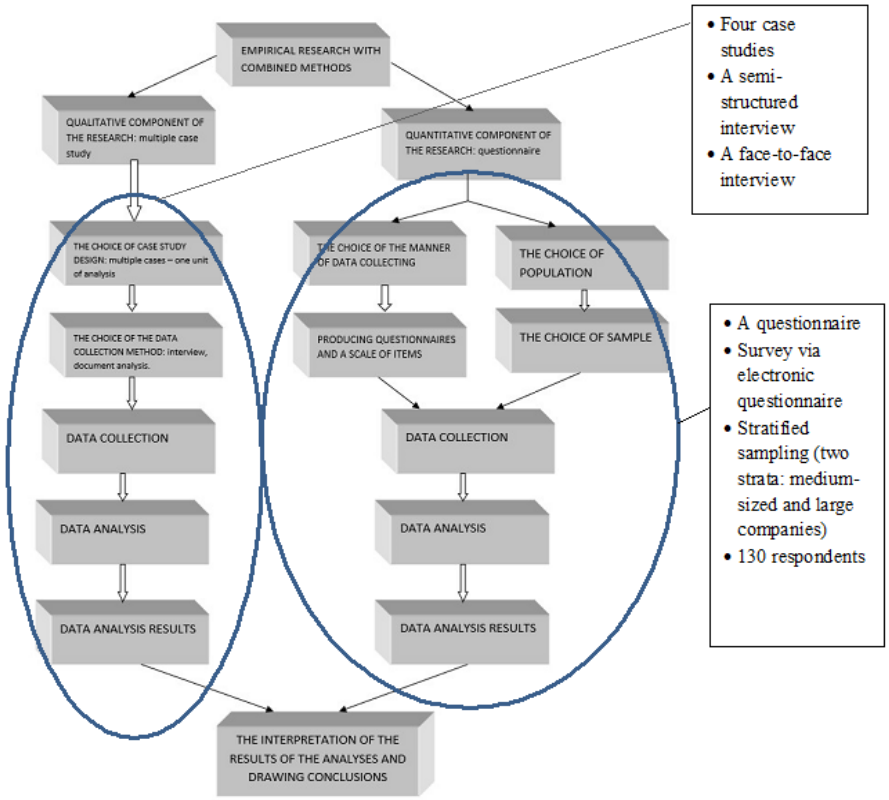


Figure 1. Emphasized schematic diagram of the methodology and design of the empirical research

3.1. Qualitative research

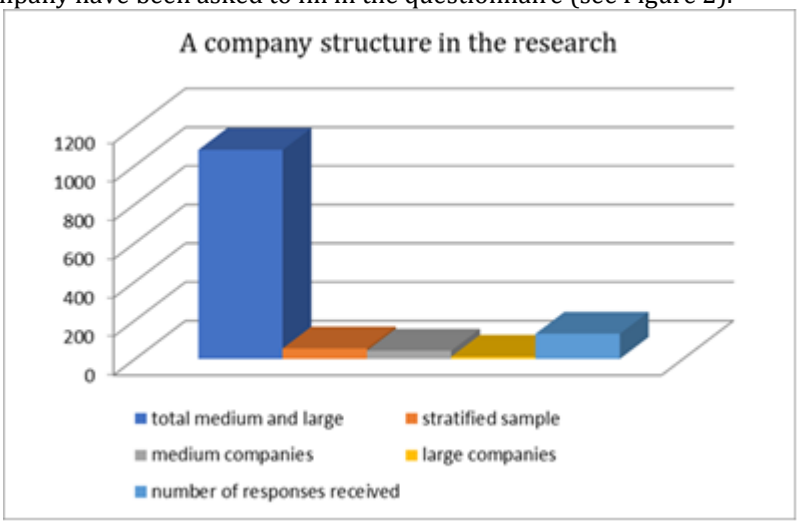
The first part of the research meant conducting a multiple case study. According to Creswell, the defined size of the sample for a multiple case study ought to be in the range between three and five (Creswell, 2002). In this case, four companies were analyzed, two of which are medium-sized, and two are large. The first variable in choosing a company is company size, and the level of experience in implementing a performance management system – PMS, is taken as the second variable. According to similar research, it can be observed that one variable represents the time period since the moment the performance management system was implemented and amounts to ten years (Striteska, 2012). Considering that in this case, it is the question of a transitional area, a shorter period is taken, namely a period of five years of the use of a systematic manner of performance management. Two companies (a medium-sized and a large one) implemented a systematic manner of performance management in a period shorter than five years, while the other two companies conducted the process of performance management for longer than five years. The design of this multiple case study, according to the methodology of Yin (2009) belongs to the group "multiple cases – one unit of analysis". The subject of analysis is certainly the performance management process. Two public and two private companies took part in this research, each of which belongs to the category of

different business activities (banking, public service, telecommunications, electric-energy sector). A semi-structured interview and the method of document analysis were used as the methods for collecting qualitative data. The methods of analysis and synthesis, directed at research questions and the understanding of concepts, were applied as the methods of the analysis of qualitative data.

3.2. Quantitative research

The second part of the research, concerning quantitative, that is, a survey questionnaire, is conducted using a standardized questionnaire. The questionnaire consists of closed-ended questions and the Likert-type scale of five-level items. Furthermore, an integral part of the questionnaire is a cover letter, whereby the purpose of the research is explained. The questionnaire is created via Google Forms application, and the access link was being delivered through e-mail. The local chamber of commerce took part in the research by means of support and connecting with the companies.

The research sample was determined via stratification of the basic set of medium-sized and large companies in the Republic of Srpska. According to the data of The Chamber of Commerce and Industry of the Republic of Srpska, a sample for conducting research in the Republic of Srpska (54 companies[1]) was obtained through stratification out of a total of 1080 large and medium-sized companies. 11 belonged to the category of large, and 43 to the category of medium-sized companies, out of a total of 54 companies. The research was carried out over five months (February – June 2018), with 130 responses obtained, which enabled the smooth implementation of statistical analyses (Cohen, 1988). These 130 responses have been collected from 54 companies, where several employees holding management positions in each company have been asked to fill in the questionnaire (see Figure 2).



[1] It is necessary to mention that 459 companies had a registered public email address out of a total of 1080 medium-sized and large companies. Stratified sampling was determined based on that set of companies. This data is important because the non-existence of a registered public email address may question the existence of business activities of registered companies, because business entities are obliged to file a tax return to authorized institutions in electronic form (www.poreskaupravars.org). Furthermore, delivering a link for filling in a questionnaire electronically enables faster and more transparent communication, so these data swayed the researcher that the quantitative research is based solely on the companies which possessed registered email addresses.

Figure 2. The representation of a company structure in the conducted research

The performed statistical analyses can be grouped in the following way: descriptive, exploratory, and inferential statistical analyses. Within descriptive statistics, a number of analyses, referring to respondent structure in relation to: size, form of ownership, form of organizing, company's business activity, the level of conducting the PM process, the frequency of measurements and performance evaluation, ranking diverse types of performance according to the frequency of measurements and evaluation, company size, a form of organizing and a form of ownership, the use of information technology and systems (integrated information system, business intelligence technology, specialized software for performance management and Excel) was carried out and the ranking of barriers according to the size of negative impact on the PM process. In the inferential statistics part, there are the analyses which check the posed hypotheses and other questions significant for the research purpose with the help of diverse statistical tests. Those tests describe the statistical significance of certain phenomena. Besides statistical importance, there is more and more talk about practical significance, which implies the calculation of effect size. For each used analysis there is a corresponding test for effect calculation. Software package Statistical Package for Social Sciences was used in the research. However, due to the limited possibilities of presenting all the statistical analyses, only the most significant analyses necessary for model design will be presented in this paper.

In every quantitative research, before testing the posed hypotheses, research questions and other forms of analyses, it is necessary to determine the reliability of measuring instruments. Cronbach's alpha is most often used for calculating the reliability of measuring instruments. This coefficient may have a value from zero to 1, and it is believed that the closer the result is to one, the reliability is greater (Cronbach, 1951). The main indicator of reliability between the results of measurements is the correlation coefficient. Rather large Cronbach's alpha coefficients are calculated in this research (from 0.894 to 0.947), which suggests that the reliability of scales is at a high level (see Table 1).

Table 1. The analysis of scales reliability

Model	BSC	prism	pro	efqm	idpms	ipms	smart
Cronbach's Alpha	0.946	0.911	0.924	0.930	0.914	0.894	0.947

The choice of questions for the questionnaire (or the interview) is determined by the choice of important data that ought to be collected. They primarily relate to the posed hypotheses, established research questions and the research goals. In order to obtain important answers to the posed research questions by means of research, first, it is necessary to identify and specify the information which provides the answer to those research questions, and only then approach choosing and establishing the questions for the questionnaire or the interview, whereby the data that may contain that information are collected. To sum up, the posed research questions and hypotheses determine the important data that should be collected, and through the choice of those data, the choice of questions posed in the questionnaire and the interview is determined.

Before the final application of the questionnaire, trial research on the comprehensibility of the questions was also conducted, where each interviewee had the opportunity to suggest about any segment of the research instrument. 15 respondents, namely the respondents who occupy managerial positions in the economy or are a part of the academic community, were included in the testing of questions' comprehensibility, that is, scale items. The obtained suggestions influenced the forming of the final version of the questionnaire and are considered useful. The most frequent suggestions concerned the additional explanation of a term, which was believed to be common knowledge and established in business terminology (stakeholders, market segments, market niches, organizational culture, performance indicators, mission, vision, and the like). Considering the purpose, the questionnaire was adjusted in that sense, as well as various reformulations of items within the scale, which contributed to a better understanding of respondents in the research itself. In the final version of the questionnaire, the items are randomly divided into scales (per aspect), so as not to observe a clear classification into a certain model, because, in that case, the responses could be suggestive.

4. The development of a performance management model for medium-sized and large companies

The first established hypothesis (H1) should be used to check if the practice of performance management in medium-sized and large companies in the Republic of Srpska shows deviations from referent theoretical models of performance management. The following table (Table 2) shows the sum of average deviations of performance management practice from the performance management model.

Table 2. The sum of average deviations of performance management practice from theoretical models of performance management

The sum of average deviations of performance management practice from theoretical models of performance management						
BSC	prism	pro	efqm	idpms	ipms	smart
194.53	187.8	179.34	196.8	207.25	203.8	180.4

The deviation of the evaluated performance management practice from a theoretical model of performance management is calculated by subtracting from the number five (the maximum possible frequency of an element (item) of a given theoretical model in performance management practice) a round number for the item of that model in the scale, which indicates the evaluated frequency of an element (item) of that theoretical model in performance management practice. Then, all the deviations are added up and the obtained sum is divided by the number of the elements (scale items) of that theoretical model. Arithmetic means of deviations of performance management practice from theoretical models of performance management are shown further in Table 3.

Table 3. Descriptive statistics of the deviation of PM practice from PM models

	N	Mean value	Standard deviation	Minimum	Maximum
BSC	128	1.4964	.92926	.00	4.00
prism	128	1.4359	.85608	.00	4.00
pro	128	**1.3711**	.94263	.00	4.00
efqm	128	1.5063	1.02441	.00	4.00
idpms	128	**1.6191**	1.03100	.00	4.00
ipms	128	**1.5625**	.93329	.00	4.00
smart	128	**1.3781**	1.01461	.00	4.00

It is evident that the greatest deviation of the practice of IDPMS model with the calculated value of 207.25 (see table 2), and then from IPMS model. The smallest deviation is from Pyramid of organizational development model with the value of 179.34 (see table 2), and a slightly higher deviation is also observed in SMART model. Other models (BSC, the performance prism and EFQM), significantly more frequent in the practice of world organizations, are rated at an average level in this research**,** that is, the deviation of practice from these models is in the middle of the interval of deviation in the presented results. If a model is completely represented, then all the statements relating to that model are evaluated at number five in the scales. It would mean there is no deviation and that all the calculated values are at zero. The maximum value of deviation would occur in a situation where all the respondents assigned grade 1 to a certain statement, which can be calculated depending on the number of respondents and items related to a model. In this case, the comparison was performed per model, i.e., the amount of the deviation of practice compared to every model individually was determined. It is concluded that

the arithmetic means of the deviation of performance management practice from the performance management model were calculated in the testing of this hypothesis. The calculated deviations were in the interval from 179.34 (for the Pyramid of organizational development model) to 207.24 (for the IDPMS model) for the basic posed hypothesis. During the additional testing, The Friedman test was used for several dependent groups, where the result showed that the null hypothesis was rejected (p = .000), that is, that at least two performance management models mutually statistically significantly differ per the amount of deviation from performance management practice. This conclusion was also confirmed by the calculated effect value (d=1.3422), which points to the existence of a great effect. The basic established hypothesis is confirmed.

In the part of the descriptive statistics (see Table 4), an analysis was performed where a range of deviations in the evaluated performance management practice from the items of the theoretical models of performance management can be observed, i.e., the largest and the smallest deviations can be determined.

Table 4. Arithmetic means of the deviation of practice from the items of the performance management model

RBSC1	1.09	RPRO6	1.64
RBSC2	1.19	REFQM1	1.48
RBSC3	1.22	REFQM2	1.16
RBSC4	1.25	REFQM3	1.58
RBSC5	1.44	REFQM4	1.81
RBSC6	1.69	REFQM5	1.53
RBSC7	1.43	RIPMS1	1.56
RBSC8	2.18	RIPMS2	1.51
RBSC9	1.74	RIPMS3	1.22
RBSC10	1.73	RIPMS4	1.88
RBSC11	1.49	RIPMS5	1.66
RPRISM1	1.28	RSMART1	1.17
RPRISM2	1.62	RSMART2	1.15
RPRISM3	1.57	RSMART3	1.49
RPRISM4	1.34	RSMART4	1.51
RPRISM5	1.42	RSMART5	1.62
RPRO1	0.83	RIDPMS1	1.62
RPRO2	1.26	RIDPMS2	1.22
RPRO3	1.37	RIDPMS3	1.89
RPRO4	1.52	RIDPMS4	1.75
RPRO5	1.65		

The largest deviation can be observed in item eight in BSC model, which reads: "In our company, the innovation management processes are organized (design/development of products/services, research and development, etc.)". This shows us that companies do not have organized innovation management processes, nor can they in any way follow the effects and results that are achieved by introducing innovations. The smallest deviation is in item one in the PRO model, which reads: "We are developing products/services that correspond to the market that our company has chosen." This certainly tells us that most companies believe that the products or services they provide are adequate to the market in which they

operate, and that this element is at a satisfactory level in the performance management process.

It can be concluded, based on the calculated values of the arithmetic means of the deviation of performance management practice compared to the items of the performance management model, that the range of deviation is from 0.83 to 2.18. A logical sequence of the choice of the items of theoretical models for the performance management model of medium-sized and large companies was such that the items with the smallest deviation are chosen out of every model. The model obtained in this way can be defined as a descriptive model, which illustrates the elements applicable in medium-sized and large companies in the Republic of Srpska. Considering that the total average deviation of all the items of the model is 1.48, the conclusion has been reached that it could be the upper limit for the choice of items of the new model. This would mean that items, with a deviation of less or equal to 1.48, are chosen out of every model.

If we look at the BSC model, it can be observed that the first four items form a new model, as well as items five and seven. The review of these items is as follows: we systematically measure and evaluate financial business results, in order to obtain a greater value for the owners, then we devote great attention to the service of products/services, systematically determine functionality, quality, availability and the price of products/services for customer key segments, we devote great attention to product/service image, customer management processes are organized in our company (choosing, acquiring, retaining and increasing the number of customers) and the operations management processes are organized in our company (managing supply, production, distribution, risks). In the performance prism model, the first, the fourth and the fifth item have a deviation up to the average value and as such form a new model. They are formulated in the following manner: we know exactly what people, practices, technologies, and infrastructure are needed for enabling business processes, it exactly is known in our company what our stakeholders want from it and our business processes are arranged in such a way that they lead towards the implementation of defined strategies. In the Pyramid of organizational development model, the items one, two and three have a value less than average and are defined as: we develop products/services that correspond to the market that our company has chosen, we precisely identify and define a sustainable market (target market segments and market niches – smaller groups of customers with specific needs within one market segment) and develop support systems to the main business (marketing, sales, accounting, management information system, etc.) necessary for effective and efficient functioning. The items one and two from EFQM model, with the deviation of 1.48 and 1.16, satisfying the criterium for forming a new model are: we manage the relations with our partners, suppliers and internal resources and we implement our mission and vision by developing and applying the strategy focused on stakeholders. In the IPMS model, item three has a deviation of 1.22 and is defined as: our company is focused on key business processes in business performance management. SMART model contains two items with a deviation less than the defined criterium. These items are defined as follows: business vision in our company represents the basis for the company's strategy and based on the established strategy at the company level, we define goals for each branch, and then strategies are set for achieving those goals. The last IDPMS model contains only one item, which has a deviation within a defined range, and it is as follows: management is responsible for determining "general" areas of success (based on the strategy and important for the long-term success of a company) and "specific" areas of success (important for competing in specific product markets).

Besides the quantitative part of the research, the qualitative part of the research also influenced the model formation, that is, conducting the multiple case study. The conclusions made from four case studies determined the choice of certain additional elements necessary for a new model formulation. It is also important to mention that the creation of a new model is based on previous settings of four aspects of reviewing company's operations. In the domain of the information-technological aspect, no item with a deviation within the defined criterium has been positioned, so in this case, the possibility of the inclusion of elements which concerns information capital in the model itself has been reviewed. The analysis shows that item eleven of the BSC model, which refers to this aspect, had a deviation of 1.49, and it is considered that it can be an integral part of the new model. It is defined as follows: large importance is dedicated to information capital (databases, information systems, networks, technical infrastructure). Furthermore, from the aspect of the importance of information systems in the total business process, that is, performance management, it is necessary to include this element in the new model composition. The justification for the introduction of this item can be derived from the case studies' analysis as well, where the necessity of the implementation of information technologies and systems has been emphasized in all four case studies. The information–technological aspect of doing business changes the way a company operates, sheds completely new light on business activities and employees' behaviour and certainly becomes strategically important. Simply, business digitalization occurs, which is an indication of monitoring the organization's compliance with the fourth industrial revolution.

Digital transformation of the business environment will consider those organizations successful that can adapt quickly, learn fast and accept dynamic requirements from the business environment. Organizations with high performance act as strong networks, coordinated through culture, information systems and the mobility of talented employees. Many companies are focused on redesigning the organization itself, but also on building new organizational models. The way organizations with high performance do business today differs significantly from the way they functioned ten years ago. However, many organizations still practice inherited practices, systems, and behaviors, which ought to be rejected, before the market rejects them. As organizations become increasingly digital, they face bigger and bigger challenges to redesign themselves, to move more quickly and adjust to the changes in the environment (Bersin et al., 2017). Further in the paper, the model for performance management of medium-sized and large companies – SOFI model (see Figure 3), can be observed, obtained because of qualitative and quantitative research. SOFI presents an acronym for the names of aspects from which doing business in this model is observed (strategic, organizational, financial, and information-technological).

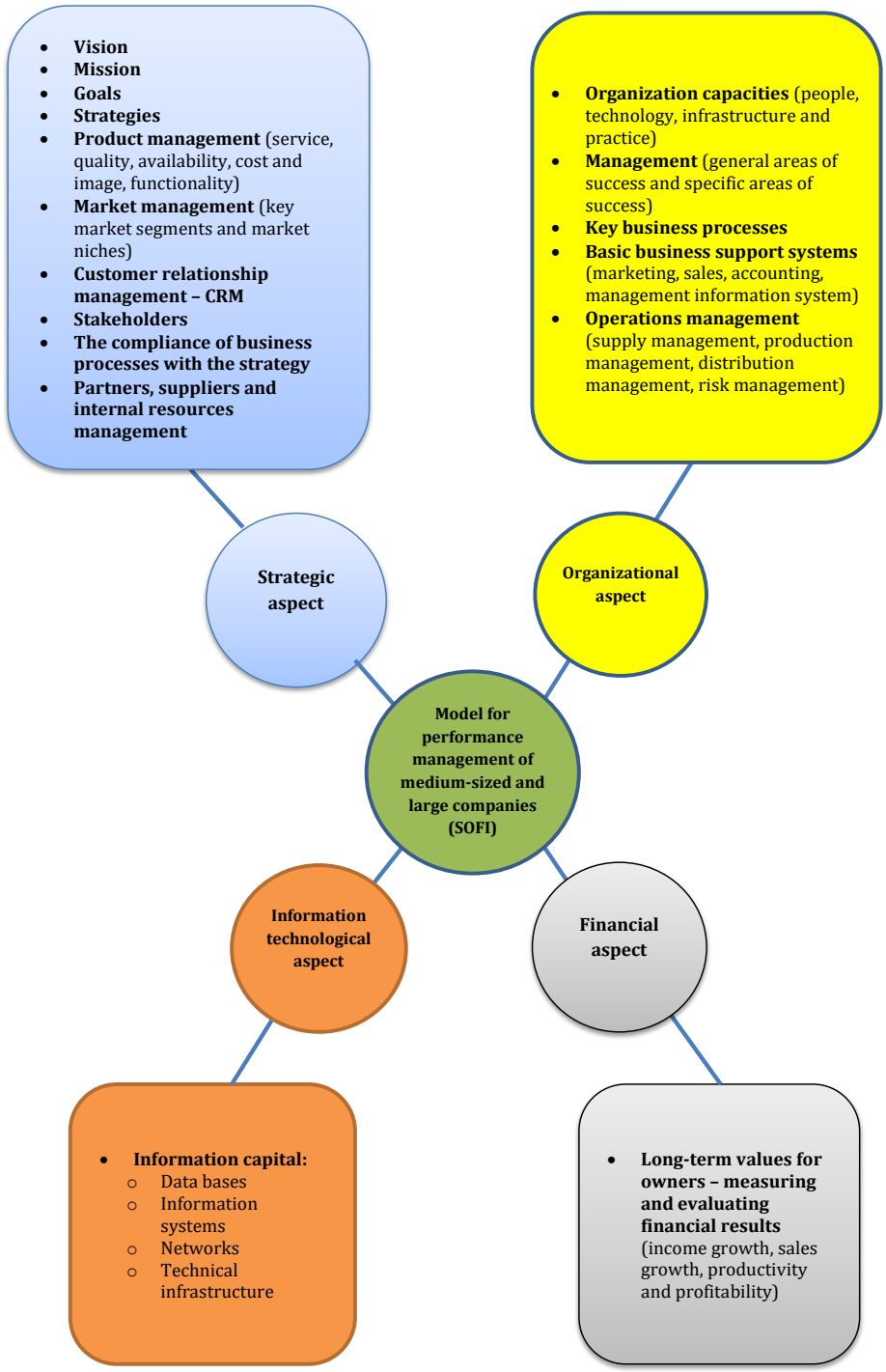


Figure 3. Performance management model for medium-sized and large companies – SOFI

5. Key performance indicators and the questions necessary for a successful model implementation

The model is the counterpart of BSC model, because like it, it contains four aspects or perspectives. Just as famous authors Kaplan and Norton developed a model, and tried to simplify perspectives by formulating diverse questions, which every manager ought to observe, to facilitate the performance management process, so this paper will attempt to contribute to a better understanding of a performance management model of medium-sized and large companies by posing adequate questions, as well as the examples for key performance indicators.

Table 5. Questions for elements contained in the strategic aspect

NO.	ELEMENTS	QUESTION	The examples of key performance indicators – KPI for a strategic aspect (for more details, see Marr, 2012)
1.	Vision	In which business area are we? What is our core business?	The employee engagement level – to what extent are employees dedicated to the implementation of a company's mission and vision
2.	Mission	In which business area are we? What is our core business? What is the purpose of our existence?	The employee engagement level – to what extent are employees dedicated to the implementation of a company's mission and vision
3.	Goals	What do we want to achieve? How do we plan to measure our plan?	The progress in the goals of joint investments
4.	Strategies	How do we want to compete in the market?	Sales per employee Development in accordance with a regional development vision The costs and the impact of non-compliance with the regulations
5.	Products management	Do we develop products that correspond to the market our company has chosen? Is there a need for new product development?	Brand equity (BE) Time to market (TM) Quality index (QI)
6.	Market management	Do we know exactly which are our target market segments? Do we have developed market niches (smaller groups of customers with specific needs)	Market share Market growth rate (MGR) Relative market share (RMS)

		within certain market segments?	
7.	Customer relationship management - CRM	Do we know who our loyal customers are? How do we retain the existing and attract new customers? How do we make a uniform platform for customer relationships with the aim of increasing total value for customers?	Customer satisfaction index (CSI) Customer retention rate (CRR) Customer lifetime value (CLV) Customer turnover rate (CTR) The number of complaints Average costs of attracting new customers Total revenue per customer Total costs per customer
8.	Stakeholders	Who are our stakeholders? What do they want from us? What do we expect from them?	Rentability Employee fluctuation rate Absenteeism rate Customer complaint rate Dividend coverage level The value of given charity donations
9.	The compliance of business processes with the strategy	Are our business operations complied with the strategy? Is the strategy implemented as planned? How do we achieve the compliance of all business units while implementing a defined strategy?	Cash outflows trend of outsourcing resources The efficiency of new investments The sale of newly-introduced products
10.	Managing partners, suppliers and internal resources	Do the relationships with partners, suppliers and internal resources support the company's strategy and enable the process to unfold efficiently?	Average delays of payments The time of shipment delay The average value of procurement per supplier

It is evident that the strategic aspect (see Table 5) contains ten elements. The proper implementation of these elements depends on the response to the posed questions, which the manager ought to interpret adequately. By choosing adequate key performance indicators, we facilitate the process of monitoring our business operations and making correct managerial decisions.

Table 6. Questions for elements contained in the organizational aspect

NO.	ELEMENTS	QUESTION	The examples of key performance indicators – KPI for organizational aspect (for more details, see Marr, 2012)
1.	Organization capacities	Do we know exactly what people, practices, technology and infrastructure are needed for enabling business processes? How do we ensure that our employees are motivated to work in accordance with the strategy?	Overall equipment effectiveness (OEE) Process or machine downtime level – (PMDL) Human capital added value (HCVA) Revenue per employee (RPE) Employee satisfaction index (ESI) Employee churn rate (ECR) Average employee tenure (AET)
2.	Management	Has the management defined general areas of success based on the strategy and which are important for the long-term success of the company? Are specific areas of success important for competing on specific products market defined? Does the management adequately manage social responsibility processes?	Energy consumption (EC) Waste reduction rate (WRR)
3.	Key business processes	What are our key business processes that bring us the most value? Are there critical business processes?	Process waste level (PWL) Six Sigma process level (SSL)
4.	Basic business support systems	Are marketing, sales, accounting and IT sectors adequately developed? Are certain modifications needed in order to provide effective and efficient functioning?	Page views and bounce rates (PV & BR) Online share of voice (OSOV) Klout score (KS)
5.	Operations management	Which business processes do we have to improve to implement a defined strategy? How do we link operational plans with strategies?	Order fulfilment cycle time (OFCT) Delivery in full, on time rate (DIFOT) The percentage (%) of the first pass yield (FPY)

In the organizational aspect (see Table 6), we observe five elements, which are also defined through appropriate questions and examples of key performance indicators. If we observe the element "organization capacities", then the following key questions are imposed: "Do we know precisely what people, practices, technology, and infrastructure are needed for enabling business processes? How do we ensure that our employees are motivated to work in accordance with the strategy?". The examples of KPI which can be used within this element are: overall equipment effectiveness – OEE, process or machine downtime level – PMDL, human capital added value – HCVA, revenue per employee – RPE, employee satisfaction index – ESI, employee churn rate – ECR, and average employee tenure – AET). It is certain that the abovementioned KPI enables observing whether and to what extent the established goals are achieved, which evidently applies to other elements as well.

Table 7. Questions for elements contained in the information technological aspect

NO.	ELEMENTS	QUESTION	The examples of key performance indicators – KPI for information technological aspect (for more details, see Kotarba, 2017 and Baroudi, 2010)
1.	Information capital	Do we have adequate information capital which supports the performance management process? Does the existing informational capital provide us with insight into the situation daily and in which segments? Can we have all the types of reports necessary for the efficient functioning of a company?	The share of costs spent on hardware in total costs The share of costs spent on software in total costs The number of activities performed in the network per person IT reporting frequency The percentage (%) of IT functions connected with business IT costs per employee Average IT cost per customer Technology efficiency index

Table 8. Questions for elements contained in the financial aspect

NO.	ELEMENTS	QUESTION	The examples of key performance indicators (KPI) for the financial aspect (for more details, see Marr, 2012)
1.	Long-term values for owners – measuring and evaluating of financial results	How do we increase value for shareholders? Has a larger income been realized compared to the previous period? Has greater productivity been realized compared to the previous period?	Net gain Net profit margin Gross profit margin Operating profit margin Productivity Sales in crease Income growth EBIT – earnings before interest and taxes ROI – return on investment Total shareholder return - TSR Economic value added - EVA Cash conversion cycle - CCC

In the last two aspects, we observe one element in each (informational capital (see Table 7) and long-term values for owners – measuring and evaluating financial results (see Table 8), which are, by their nature, comprehensive and wide, and as such, they can provide insight into a wider range of business activities related to finance and information technologies.

6. Discussion

By analyzing all four case studies, a conclusion was reached that organizational culture and the knowledge and experience of employees have the largest negative impact on the performance management process. Although employee performance is mostly measured and evaluated, it proved that employees and their attitude towards the organization also represent the biggest obstacle in the performance management process. Employees are a key link in a business chain and their inflexibility can pose a big problem. Yet again, the fact that people do not like change because they are used to comfort in the existing environment is proved. It is necessary to work on the change of human consciousness, to get productive and satisfied employees. Furthermore, knowledge related to information technology is mostly an obstacle to successful activity performance, because a certain number of employees are not ready to learn and adjust to new software solutions, which can ultimately only facilitate the process of business operations. In most cases, information systems and organizational structure do not represent a barrier in the abovementioned process, that is, they have the smallest negative impact. The reason for that was the fact that the topic of research were the companies in which integrated information systems were implemented, whereby all business processes were covered, and which simultaneously support performance management activities as well. It is evident that none of the official theoretical models of performance management in a company is used in the examined companies. Described conclusions from all four case studies along with quantitative research helped to form a model for performance management of medium-sized and large companies.

The answers to the posed questions will also be elaborated in this part. The issues of the research are, as has already been stated in the introductory part, expressed in the following research questions:

Q 1a: Which are the most significant theoretical models for the performance management of a company?

By studying the literature in the area of performance management, it can be observed that there are a number of models, the goal of which is to perceive all the elements of business results and which provide direct help to managers to monitor, optimize and maximize those business results continuously. Using a multidisciplinary approach, various authors formulated diverse scientific models applicable in the practice of organizations of all sizes and types of organizing. However, not all models started to be practised in the same way and with the same intensity. Seven models were singled out of a large number of the existing models in the literature, which served to form and conduct research, and which were recognized as relevant in the research of other authors, confirmed in practice, but at the same time complying with the established subject, goal and methodology of this research. They are: 1) SMART model (*Strategic Measurement and Reporting Technique*), (Cross & Lynch, 1989), 2) Balanced Scorecard (BSC), (Kaplan & Norton, 1992), 3) Performance prism model), (Neely et al., 2002), 4) EFQM excellence model (*The European Foundation for Quality Management Excellence Model*), (EFQM, 1992), 5) Pyramid of organizational development model – PRO, (Flamholtz, 1995), 6) IPMS (*Integrated Performance Measurement System*), (Bititci et al. 1997), 7) IDPMS (*Integrated Dynamic Performance Measurement System*), (Ghalayini et al., 1997).

Q 1b: Which elements of theoretical models are present in the practice of medium-sized and large companies in the Republic of Srpska?

Based on theoretical research of the chosen seven models of performance management, the grouping of all the elements of the existing models into certain

categories was performed. The analysis has shown that each of the elements belongs to one of four categories (financial, strategic, organizational and information-technological). Based on that, an integrated theoretical model of performance management has been developed, which encompasses and summarizes various areas or aspects of a company in the process of reviewing company performance. By researching a sample of 130 respondents from medium-sized and large companies, the results of the size of the deviation of certain model elements from practice were obtained. The amount of deviation determines the percentage of the element's frequency in practice. The less the deviation, the greater the frequency of the element in the practice of organizations taking part in the research. Empirical research has shown that out of all examined elements, medium-sized and large companies in the Republic of Srpska mostly recognize and use the following elements in their practice of business results management: vision, mission, goals, strategies, product management, market management, organization capacities, management, key business processes, partners, suppliers and internal resources management, long-term values for owners and information capital.

Q2: What is the practice of medium-sized and large companies like concerning performance management?

The performance management process can be considered a development generator of a business system. It can be observed in the research results that 95% of respondents believe that a systematic way of performance management is being carried out in their companies. Both parts of the research have shown that this process is supported by information technologies and systems, but it is also considered that precisely information technologies represent a large barrier to performance management. A certain number of respondents realized that inadequate IT support has a negative impact on their business system. On the other hand, organizational culture and knowledge and experience of employees are considered the largest barrier to case studies. There where information technologies are at a high level, employees and their attitude towards work are the biggest obstacles in performance management. In the quantitative part of the research, the results demonstrate that financial performance is most frequently measured and evaluated, and the performance of programs and projects most rarely, while the results of the qualitative research, in the first place, affirm the performance of employees, that is, individuals and teams. Furthermore, there are differences in the frequency of performance measuring and evaluating, and it can be perceived that this process is performed daily in most studies, while, in the quantitative part of the research, performance measurements and evaluations are mostly carried out monthly.

Q3: How and which information technologies and systems support performance management of medium-sized and large companies?

The response to this research question can be obtained from case studies in a much more detailed and precise manner compared to the quantitative part of the research. The conducted studies with the conclusions derived from them provided different answers. Primarily, it is characteristic that all four companies use an integrated information system, business intelligence technology solutions and have specialized software for performance management support. Depending on the company's activities, the solutions of information technologies and systems are adjusted accordingly. ERP solution, as a product of SAP company, is present in medium-sized and large companies. Besides ERP solutions, performance management processes are also supported by specialized software such as: IBM base application, as well as the applications for loan processing and payment transactions,

then in-house software for payment of receivables, invoicing and spending, web help desk applications for employee performance monitoring, software for documents management and key processes management, Data Warehouse platform with programs specialized for performance management and others. The parameters important for business monitoring are obtained by data filtering for the required purpose and by drafting adequate reports, which are mainly exported in excel. Moreover, in certain cases, Data Marts are integrated with ERP whereby dynamic excel reports are created, which additionally improves system performance monitoring.

Q4: What kind of performance management model could be successfully implemented in the practice of medium-sized and large companies in the Republic of Srpska?

The conducted research aimed at determining the elements of the existing theoretical models, which are present in the practice of medium-sized and large companies in the Republic of Srpska. The elements that are mostly present in practice represent a basis of a new model, which could be successfully implemented in the practice of medium-sized and large companies. The model itself (see Figure 3) is structured in the form of four aspects, where each aspect individually reflects one business dimension. It consists of strategic, organizational, financial and information-technological aspects. The model is made of many elements, which ought to enable the organization to manage performance adequately. In the strategic part, the following were singled out as the most significant elements: vision, mission, goals, strategies, product management, market management, customer relationship management, stakeholders, the compliance of business processes with the strategy and partner, suppliers and internal resources management. When the elements are observed in a strategic aspect, it is perceived that an adequation formulation of vision, mission, goals and strategies is necessary for the successful functioning of a business, as scientists have for a long time apostrophized. According to this research, besides a general formulation of statements on vision and mission, and then determining concrete values that are to be obtained in the future period, that is, determining goals, besides defining general organizational strategy, it is necessary to determine goals for each business unit, and then strategies for achieving those goals as well. Managing products or services implies the development of adequate, that is, competitive products/services regarding functionality, price, quality, service, time of delivery and image, in accordance with the chosen market. Managing a market means that it is necessary to identify a sustainable market and market niches where products or services could be marketed. This process also includes strategic market planning, which enables determining potential customers and their needs. Customer relationship management (CRM) implies detailed customer analyses and their purchases. Choosing, acquiring, retaining and the growth of the number of customers are important segments in this part. Stakeholders are an important segment of every business system, where the position and status of all stakeholders are very significant, that is, defining what they want out of the company itself, but also what the company expects from them. The compliance of business processes with the strategy implies that the processes are established in such a way as to lead towards the implementation of the defined strategies. The last element in a strategic aspect implies partners, suppliers and internal resources management. This element indicates that organizations plan and manage partnerships, suppliers and internal resources in order to support the organization's strategy and enable efficient process, that is, that intra- and inter-organizational networks are efficiently managed. The organizational aspect comprises elements, which relate to the organization's capacities, management, key business processes, support systems to

basic business and operations management. The organization's capacities are observed through employees, technology, infrastructure and practice (policies and procedures on work methods). In order to determine the level of the capacities or possibilities of a company, the method of comparison with the second most important competitors is mostly used. In this way, an incentive for the improvement of all the elements of the organization's capabilities is encouraged, which simultaneously represents the support for key business processes as well. In this paper, management stood out as an independent element rated rather high, and it is observed as the management responsible for determining "general" and "specific" areas of success. "General" areas of success are based on the strategy and are significant for long-term company success, while "specific" areas of success are significant for competitiveness in specific market segments. If a competitive advantage for a certain product is to be gained, then marketing sector analyses according to sales reports, market share and customer satisfaction is most often conducted. One feature is singled out as key most often and it becomes a specific area of success for that specific product. It can be quality, time of delivery, expenses or some other specificity. Management area includes general management, but also marketing, production, engineering, finance and accounting management. It is highly important to identify key business processes, those that bring the most benefit and focus attention on them and their smooth operation. These processes ought to be in accordance with the defined strategy. Developing a support system for basic business for its efficient and effective functioning is necessary and can relate to marketing, sales, accounting, information system and others. Operations management includes the second segment of a company and it relates to the efficient operation of procurement, production, distribution processes, but also adequate risk management. An information-technological aspect relates to information capital, which is made up of databases, networks, information systems and technical infrastructure. It is impossible to imagine that any performance management process functions without adequate information systems support. All the indicators, both financial and non-financial, ought to be an integral part of a unique information system. In order for employees to be able to contribute towards the realization of the set goals, they need timely and fast information, which is realized through the creation of necessary reports with the help of information technologies. The financial aspect encompassed the element relating to the realization of long-term value for owners, where systematic measuring and evaluating financial results is apostrophized. Undoubtedly, without financial indicators, there is no long-term success of a company, but it must not rely solely on them. In this segment, income or sales growth, productivity and profitability are measured most often, which ought to contribute towards the realization of long-term value for owners and the long-term success of a company.

Q 5a: Is there a gap between theoretical models for performance management and real practice in performance management?

Theoretical models of performance management present in this research and the real practice of performance management indicate that there is a gap in the frequency of these models in the abovementioned practice. Certain elements of the model are more frequent than others in a greater or smaller percentage, but models, in total, are not present in the practice of medium-sized and large companies in the Republic of Srpska.

Q 5b: What are the ways of overcoming organizational barriers in the performance management process?

Theoretical research has shown that organizational structure, organizational culture, knowledge and the experience of the employees who are in these jobs and the non-existence of the appropriate information system for the support of performance management process occur as the biggest obstacles in the performance management process. In the organizational barriers testing, the barriers in the form of information systems, organizational culture and knowledge and experience of employees stood out as statistically significant. The ways for overcoming the abovementioned barriers have to comply with the same type of barrier. If we consider the barrier relating to information systems, then employee education, implying engaging consultants as well, better equipment regarding IT infrastructure, "outsourcing" for certain IT services and forming strategic partnerships are suggested as the best way of overcoming it.

According to the stated authors, the digital revolution faces organizations with the issue of adequacy of their strategies, organizational structures and support systems, managerial capabilities to respond to the demands of those modern technologies with the help of knowledge and skills, the need to change organizational cultures, in order to benefit from new technologies in full (Aleksić Mirić & Petković, 2018).

The barrier concerning organizational culture includes the changes in the value system of employees in such a way that they experience measurement systems and performance evaluation as just and adequate in favour of their personal and organizational development. In one segment, it is necessary to act directly on employees' values, beliefs and opinions, and in another segment, performance ought to be managed in a way to produce desired changes in the company's cultural values, which is recognized as a reciprocal relationship between organizational culture and performance in the relevant literature. It is important to influence the employees' conscience regarding the fact that the inclusion in performance management process can have a positive contribution to their status, the sense of belonging to the company, as well as material satisfaction. Organizational culture development that supports the use of the chosen performance management system of a company is necessary because numerous research confirms that it can be the instrument of management, whereby the company's goals are realized (Janićijević, 2013).

The knowledge and experience of employees can, certainly, present an obstacle to the successful development of the performance management process, which has also been confirmed in this research. At the same time, the knowledge and experience of employees represent the most valuable organizational resources (Lalić, 2016). The human resource management sector, which ought to present an understanding of the connection between individual and organizational performance, should have a key role in overcoming this barrier. That process implies the understanding of purpose, methods, desired effects and implications, which performance management on an organizational level has on employees' performance. Besides acting on cultural values, which are abovementioned, barrier overcoming, and employees' resistance ought to encompass specially designed training, targeted at the advancement of that knowledge and form of behavior, which is mostly connected to a concrete organizational model of performance management.

The conducted theoretical and empirical research (qualitatively and quantitatively) generated authentic results which have been spoken about up till now. However, while viewing these results and possibilities for their generalization, it is important to consider certain limitations as well.

The first limitation relates to the fact that the theoretical analysis and the generation of an integrated theoretical model included the seven most frequent, and

not all models possible in theory and practice. Considering that this is an interesting area for modern management, it is also concluded that the research did not include the models which have been recently published and generated.

The second limitation relates to the qualitative part of empirical research and is reflected in the analyses relating to multiple case studies. The promised analyses that could not be applied are: the technique of key words in context and thematic analysis. While conducting multiple case studies, the interviews were done face to face and the notes were kept during the interview, but the respondents did not allow the interview to be recorded. As the main reasons, they stated the feeling of discomfort due to recording, negative impact on the interviewing process itself and the uneasiness while formulating answers. However, the interviews were successful. Nevertheless, the written text from the notes is insufficient for the abovementioned analyses, where more extensive vocabulary is required. It is the main reason for the impossibility of performing the promised analyses and acquiring the necessary conclusions. In exchange for the abovementioned limitations of the paper, the methods of analysis and synthesis focused on research questions and understanding of concepts, which responded adequately to the established requirements, were applied.

The third limitation relates to the quantitative part of empirical research via questionnaires and the possibilities of providing "socially desirable responses" to the questions from the established questionnaire. It would mean that the respondents could answer the way they thought they ought to, and not according to the true state of the studied companies. However, it is indisputable that such situations are always possible in conducting research via questionnaires, which is their integral part.

The fourth limitation relates to the perceptive character of measures. Although they are usually conducted by interviewing or polling natural persons in research, it has to be mentioned that their perception or subjectivity of responding can present a weakness in the research process. In this research, the respondents were familiar with the performance management process in their companies (managers, decision-makers, those who answer to the capital owners) and they described and evaluated PM practice in the companies they work for. There was an attempt at diminishing this limitation by choosing respondents, but it is certainly necessary to be stated.

The fifth limitation is related to population defining and forming the research sample taken from that population. It must be emphasized that stratified sampling from the population of medium-sized and large companies, which operate on the territory of the Republic of Srpska, was used for this part of the research. 459 companies out of a total of 1080 medium-sized and large companies had a registered email address, which ultimately represented the population for this stratified sampling. The non-existence of a registered public email address may question the existence of business activities of registered companies, so the researcher decided on these steps, which are considered appropriate to the moment in which it is being done. In case that the companies without the registered email address have also been included, the surpassed research form (sending questionnaires in written form by post) would have been resorted to, which could be characterized as an archaic approach. It is also necessary to point out the problems which occurred during data collecting for the purpose of quantitative research. The research was realized, but a settlement was not reached in certain companies during data collecting, which resulted in the scantiness of this sample. The response to research demand was such that it led to a diminished sample. The main reasons, which the respondents stated are: "the lack of time", "heavy workload", "animosity towards many researchers", "distrust concerning anonymity" and the like. Because of that, the necessary sample

size for the correct application of that statistical test was previously calculated with "the analysis of statistical strength a priori" for each applied statistical test. In the cases with little deviation from the necessary sample size, "bootstrapping" procedure was applied.

Finally, the last limitation relates to the examples of possible performance indicators for every element per individual aspect. During the model elaboration, already existing indicators in the literature were stated. However, it is necessary to emphasize that those are the indicators which are established and used in practice, so the fact represented a motif for choosing the indicator and thus establishing the justification of their use.

Besides the responses to research questions and limitations, it is necessary to define the recommendations for further research as well. The first recommendation for further research arises from the fact that theoretical analysis and the generation of the integrated theoretical model included the seven most frequent, and not all models possible in theory and practice. Further research should be directed at the meta-analysis of all the existing performance management models, as well as the convergence of the existing and confirmed in practice, established models and their further improvement, development, and upgrade, and not necessarily forming some completely new models.

The second recommendation for further research is to retain and foster qualitative research, which is of special value because they introduce the context of reality and represent a "laboratory" in the field, and that future research ought not to be based solely on quantitative analyses. It is important to point out the importance of qualitative research because companies are specific, and those specificities shape the context in which performance management takes place.

The third recommendation concerns the quantitative research design, which includes the questionnaire's features, the contents of items in scales, defining research sample and performance indicators for every element within individual aspects. Accordingly, further research can bring improvements through the correction of the contents of certain items in scales, to decrease the possibility of socially desirable responses, expand the research sample and form new, specific performance indicators for every element of every individual aspect.

The fourth recommendation for further research arises from the fact that this research was conducted using stratified sampling from the population of medium-sized and large companies, which operate on the territory of the Republic of Srpska. The recommendation is that the conclusions be tested in other transitional economies as well, but also the companies of developed market economies.

The fifth recommendation for further research concerns the fact that the model that is developed is focused on complete implementation in the group of medium-sized and large companies, where a distinction is to be made between the manufacturing and service industry, key performance indicators and the elements relating to products and services sectors classified.

7. Conclusion

One of the most important results of this research is the model for performance management of medium-sized and large companies (SOFI). In the area of performance management, according to the author's findings, research with the use of combined methods is rare. It is assumed that the results of the research with combined methods can provide a stronger basis and hypotheses establishment for

building future research in this area. Based on the results obtained through the applied methodology (multiple-case study and a survey questionnaire), the frequency of the basic elements of theoretical models in the practice of studied organizations, which served to design and develop an adequate model for performance management, was analyzed. It is assumed that such a model could be implemented in medium-sized and large companies, which could certainly contribute to the improvement of insight into the reasons for good or bad own business operation of a large part of the economy. The performance management process of medium-sized and large companies in the Republic of Srpska was considered in a systematic and comprehensive manner.

The model obtained through the research conducted in this paper has yielded certain elements, which are mostly present in the practice of studied organizations. Those elements relate to mission, vision, goals, strategy, product, market, customer relationship, operations, partners, suppliers' management, key business processes, management, organization's capacities, long-term values for owners and information capital. The following appear as the least frequent elements: innovations management, organizational culture, established methodology of performance measurement, a pyramidal hierarchical structure of goals and measures, as well as teamwork on process improvement. All of these elements show critical points of a company in the market in which the research was conducted, which leaves room for improvement in the part of these segments.

Contributions for further research of performance management theory in medium-sized and large companies relate to the new model development which would respond to the requirements of practice in a scientifically established way and thus contribute to further development of this important area of business management.

The research also has concrete contributions to the management practice of medium-sized and large companies. SOFI model (Figure 3) shows that managers ought to follow four key units, the monitoring of which is determined by the appropriate key performance indicators and responses to the posed questions relating to every aspect individually (table 5 – table 8). They can also monitor the realization and progress of the implementation of that concept through a research instrument (questionnaire) which is developed.

The model is to help managers govern easily, monitor performance, and make correct managerial decisions. At the same time, the obtained model represents the authentic result of this research, and simultaneously stimulates considering the possibility of its use in different economic circumstances. Besides the contribution of this research and according to the limitations within which it was conducted, a multitude of potential research directions appear. The main possibilities for further research reflect in the verification of the model itself in practice, where it is necessary to focus on the adjustment to different activities, and the analysis of barriers occurring in the SOFI model implementation process itself.

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