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APPROACHES TOWARDS PERFORMANCE MEASUREMENT AND MANAGEMENT**Lucie Lendelova ¹, Viliam Lendel ², Denisa Mackova ³***^{1,2,3} Faculty of Management Science and Informatics, University of Žilina, Žilina, Slovakia**E-mails: ¹ lucie.lendelova@fri.uniza.sk; ² viliam.lendel@fri.uniza.sk; ³ denisa.mackova@fri.uniza.sk**Received 11 November 2023; accepted 2 February 2024; published 30 March 2024*

Abstract. In today's dynamic and highly competitive business environment, performance measurement and management systems play a crucial role. They help companies to be competitive. However, companies must properly set up approaches towards performance measurement, management, and all associated activities to take full advantage of these systems and ensure their sustainability. This can be a challenging task. Only some researchers discuss approaches toward comprehensive performance measurement and management. The authors have identified issues related to understanding, implementing, and using these systems. This article aims to fill this gap by providing a comprehensive view of performance measurement and management. It describes the performance measurement system, components, steps, measures, measurement areas, users, and information transfer. The performance management system has to consider the context of the entire organisation and embrace external and internal factors that influence its implementation, development and quality, as well as tools that make it more efficient and ensure its sustainability. The suggested framework is graphically illustrated. Finally, the meaningfulness, reality and possible usability in practice are verified through semi-structured interviews with managers of selected companies.

Keywords: performance; management; approaches; measurement; system; factors; tools

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JEL Classifications: M10, M12, M21

1. Introduction

In today's dynamic and highly competitive business environment, managers need a reliable performance management system based on performance measurement results for their decision-making. At the same time, they need to understand the management of performance measurement systems. This is possible by answering two key questions (Kennerly, Neely 2003): "What factors affect the ability of performance measurement systems to transform over time?" and "How will companies help manage their performance measurement systems to continue to fulfil their purpose? " It is therefore necessary to deal not only with the implementation and proper setup of these systems but also their development over time and sustainability. Companies focus more on what should be measured today but must address what should be measured in the future and how (Yadav et al., 2013). Likewise, only some researchers still focus on performance measurement rather than performance management in a broader context (Kennerly, Neely, 2003). They also state that only some companies have a systematic process to manage the development of their performance measurement systems to reflect the organisational context. The concept of dynamism emphasises the need to create such a system that continuously monitors the internal and external environment and, following this, sets and evaluates goals and priorities (Bititchi, Turner 2002). The performance management system should be understood in the company as a tool for connecting, improving, and learning (Atkinson, 2012). Successful performance measurement and management systems designs often need a comprehensive approach to performance management, neglecting

various dimensions. This article addresses this gap by proposing a detailed performance measurement and management approach. The primary aim is to formulate an approach toward comprehensive performance measurement and management through a literature review, achieved by designing individual components such as performance management and performance measurement systems and identifying influencing factors and tools for efficiency. The proposal is further refined through discussions with industry representatives to gather insights and feedback for potential real-world applications. The research questions guide developing, understanding, and achieving set objectives with a defined methodological approach for literature search processing.

2. Theoretical background

Performance measurement involves many assumptions and judgments that need to be made before the measurement result is visible. According to Liu et al. (2019), performance measurement is a vital tool for efficient and effective management, with the aim of:

- identify the organisation's success, customer satisfaction and where there are problems that can be improved,
- understand the processes in the organisation and determine what they are doing well or what they do not know,
- ensure effective decision-making and improve the performance of the organisation,
- determine whether the expected results of stakeholders have been met so that satisfaction with the results achieved can be enhanced in the future.

The performance measurement system (PMS), described by Carlsson-Wall et al. (2016), is a set of measures collectively used to assess organisational performance. PMS transforms input into output measures for performance evaluation and feedback as an information system. It determines relevance, signalling interventions for management, with impulses focusing on operational efforts and responsibilities (Hald, Mouritsen, 2018). The environment's and organisation's growing complexity is a significant obstacle to implementing effective PMS (Harkness, Bourne, 2015). Most researchers have focused primarily on examining the complexity of the external environment (Harkness, Bourne 2015). According to Nudurupati et al. (2011), it is necessary to understand the role of PMS as agents of change to understand the complexity of the PMS context. The question of how to solve complexity in organisations is addressed by a number of researchers, e.g., Bititci, Turner (2002), Nudurupati et al. (2011), Melnyk et al. (2014), Smith, Bititci (2017) and others.

The results of a systematic literature review conducted by Okwir et al. (2018) show that most research studies have identified social or technical controls as the basis for an effective PMS. Detailed views, characteristics and defining of included parts of these controls are stated in (Bititci, 2015).

Okwir et al. (2018) further identified six sources of complexity in PMM (performance measurement and management) dimensions: role, task and procedural types of complexity were associated with the social dimension, and methodological, analytical and technological types of complexity were associated with the technical dimension.

Understanding the dimensions of performance management, complexity theory, and the influence of internal and external factors is crucial to facilitating responsiveness and dynamism in organisations and for the effective implementation of PMS and PMM.

PMS is beneficial for properly evaluating business performance and can improve business management. However, developing PMS is challenging, especially in identifying and selecting performance indicators to be included, which are often challenging to implement (Cagno et al., 2019). One way to understand how a performance measurement system is designed, implemented and used is to categorise its critical factors for finding context, processing and understanding the content of the measurement (Cuthbertson, Piotrovicz, 2011; Pekkola, Ukko, 2016; Bubenik et al., 2022). It is essential to define the conditions under which the measurement

is performed, how it is performed and what is measured (Harkness, Bourne, 2015). They also argue that the development of performance measurement and management systems can be divided into three main phases:

- design of performance measurement performance measures and identification of strategic objectives,
- implementation of performance measures, data collection, collection, sorting and distribution,
- use of performance measures, measures that affect the measurement, control and reflection of the correctness of the selected performance evaluation measures. Important for performance measurement systems is the cascading or otherwise scaling up of key elements of the performance measurement system to understand the context, process and content of the measurements and incorporate performance indicators to enable employees to take responsibility for those indicators they affect (Hey, 2017; Ukko, Saunila, 2020).

Teplická et al. (2015) present the components of the performance measurement system divided into these areas: performance measurement, strategy management, communication, behavioural influences and areas of learning and improvement. The relationship between the performance measurement system and the performance management system is reciprocal because the PMS evolves in response to the strategy and the feedback signal from the PMS, and it also informs the strategy that is defined in the performance management system (Nudurupati et al., 2021). Cokins (2004) designed a performance management system consisting of components: vision, mission and strategy development, definition of strategic objectives, monitoring of strategy objectives, their interconnection and cause and effect relationships, meaning of initiatives to reduce performance gaps in achieving objectives, selecting the right strategic performance indicators, collecting data and comparing with set targets, creating action plans to close management gaps (Cokins, 2004).

Controls and evaluations of business performance based on quantitative and qualitative measures are impact factors that affect the quality and sustainability of the PMM system. One of the effects on the performance measurement and management system is changes that can take the form of risks and opportunities in the business environment (Hey, 2017). At the organisational level, Denisi and Smith (2014) outlined a conceptual model that includes external factors, such as national culture, organisational culture, corporate performance definition, and organisational strategy, that affect employee performance management, knowledge, skills, and abilities (Denisi, Smith 2014). Impact factors related to performance indicators include the duplication of data, which can reduce costs by reducing the amount of data and the effort expended to collect them. Reduced performance monitoring may require increased documentation (Hey, 2017). Factors influencing the performance management system, from a people's point of view and their organisational effectiveness, relate to aspects of performance improvement that include leadership, teamwork, problem-solving skills, fact-based decision-making, focus on results, change management, mentoring (coaching), ability to do work, open and honest communication, performance management based on behaviour, rewards for results (Ukko, Saunila, 2020).

Further research by Pichler (2012) has also identified relationships between managers and employees as a critical factor in the social context of performance management. In this respect, recent discussions between researchers and experts in improving performance management practices suggest a broad consensus that the relationship between managers and employees is critical to success (Pulakos, O'leary, 2011; Levy et al., 2017). Performance management systems include a support infrastructure ranging from a simple data collection and analysis method using Excel to a sophisticated information system that facilitates enterprise resource planning platforms or Business Intelligence solutions (Franco-Santos et al., 2012). According to Koman et al. (2019), working with diverse data in and around the enterprises using the Big Data solution can provide significant information value to improve the decision-making processes of the enterprise managers. In addition, Big Data can offer possibilities to support the innovation management process (Koman et al., 2018).

Currently, there are many relatively successful designs of performance measurement and management systems, and many of them have been successfully implemented in practice. Still, these systems do not provide a comprehensive view of performance management in the company and do not sufficiently address the individual dimensions of performance management. Unfortunately, few researchers still devote themselves to a comprehensive view of performance management, that is, a detailed study and knowledge of the performance measurement system, the performance management system, the factors influencing its implementation, further

development and sustainability. The contribution of this article lies precisely in a comprehensive view of enterprise performance management.

3. Methodology

The main objective of this paper is to propose approaches towards performance measurement and management based on the literature review.

The fulfilment of the main goal depends on the following specific goals:

1. Identify and analyse internal and external factors affecting the company and performance management system.
2. Define tools for improving the performance management system.
3. Define performance management system.
4. Define performance measurement system.
5. Characterise the cycle of continuous improvement.
6. Verify the possibility of introducing the approach towards performance management in the conditions selected companies.
7. Summarise the obtained results and conclusions.

A literature review was performed based on analysing books, articles and research studies found in various databases, such as Web of Science, Scopus, Science Direct, SpringerLink, etc. Appropriate literature was selected based on the chosen criteria. Literary sources published after 2000 were included in the selection. The entire design of the approaches towards the performance management process is expressed graphically and in detail. The resulting proposal was consulted with four companies operating in Slovakia. For this purpose, semi-structured controlled interviews were conducted with the managers of companies. These companies can be categorised as large according to the number of employees and turnover (OECD, 2021). Three companies are manufacturing. Two of these companies operate in the automotive industry (one is a car producer, the second produces parts for motor vehicles), the third deals with the production of ferroalloy and non-ferrous powders), and the other is a non-manufacturing - providing services - software development. Semi-structured controlled interviews were conducted with the top managers of these companies to verify the proposal's suitability. The companies were selected based on intentional technology. The suitability of the companies was determined based on the preliminary research that was performed.

This is only preliminary research to determine whether this model is suitable for businesses and applicable in practice. The authors are already preparing the next phase of the research, which will determine the applicability of this model in companies from different business areas through a questionnaire survey.

4. Approaches towards performance measurement and management

In the past, for example, the authors Stříteská and Jelínková (2018) have tried to capture a comprehensive proposal for the performance management process. This proposal can be considered very well processed, but it is processed only in general terms and does not go into detail. The basic steps of this proposal also form the basis for the newly created model in this article.

The proposal of the approaches towards performance measurement and management is shown below. It consists of individual parts. The external part captures external factors that affect the company and, at the same time, also performance measurement and management systems. Subsequently, internal factors directly influencing the performance management system are captured, as well as tools that can help ensure the continuous improvement of the entire system. The central part of the proposal is the performance management system, which consists of the performance measurement system, particular steps and parts.

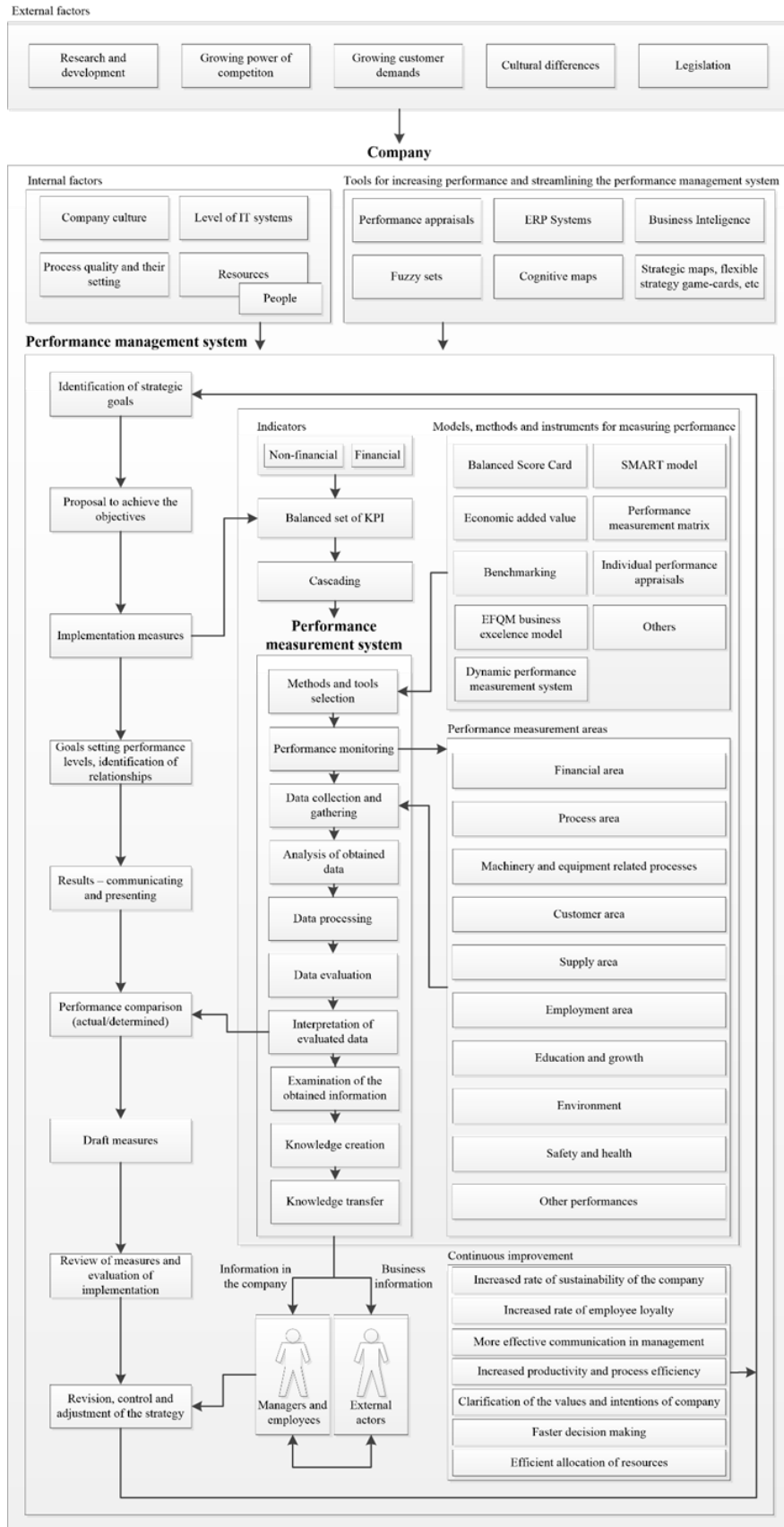


Figure 1. Graphical design of approaches towards performance measurement and management

Source: own elaboration

4.1. Factors affecting the company and performance management system

The company, its functioning, management method, and thus its performance are influenced by various factors. Factors that come from within the company were defined as internal factors. The key to good performance is a strong corporate culture. This is because a positive and strong culture can motivate the average individual to achieve good performance, leading to better company performance (Mujeeb et al., 2011). Likewise, performance management only works with regular open communication, which is part of the corporate culture (Mckinsey et al., 2021). Most companies currently have much space to monitor performance and their processes. Technological progress is constantly improving this source of monitoring. IT systems significantly influence performance management, impacting quality and efficiency. Effective performance management is crucial, aligning employees, resources, and systems with strategic goals (Mckinsey et al., 2021). Organisational resources and process setup are closely linked. Processes involve transforming inputs into outputs using resources to achieve goals (Glavan, 2023). Companies increasingly prioritise employees, recognising their unique competitive advantage and significant impact on overall performance (Desa, Asaari, 2020).

The company's external environment significantly affects not only the company but also its processes, management and, thus, the overall functioning of the company. Research and development can dramatically affect the business environment and the company (Business Queensland, 2023). The development of ICT (information and communication technologies) is also a significant external factor (Schleck, 2022). Companies must prioritise customer satisfaction in a highly competitive landscape, adopting a modern business quality approach, as Cengiz (2010) emphasised. To stay competitive, companies should strive to innovate, recognising that offering the same or outdated products may prompt customers to seek novel solutions (Tšernov, 2023). In a globalised industry, it is crucial for executives, especially in multinational companies operating in different regions, to emphasise and be aware of the impact of national culture on business (Nazarian et al., 2017; Soviar et al., 2017). The impact of legislation cannot be ruled out of the operation of companies. Legislation and regulations affect the performance of any business. An example is the higher performance of companies seeking flexibility in recruiting temporary staff (Van Landuyt et al., 2017). This impacts frequent staff turnover, negatively affecting the company's costs and performance, as new employees are not as efficient at first as experienced employees (Defranzo, 2023).

4.2. Tools for improving the performance management system

The growing need for faster decision-making places increasing emphasis on managing business performance. This is what Business Intelligence (BI) supports. The role of BI is to support management in the creation of reports, analysis of results, prediction, and planning. Integrating BI into performance management is critical to quick decisions (BI-survey, 2023). Other ICT tools are digital communication channels (e-mail, internal communication platform and other team collaboration software), which are necessary even during a pandemic (Jouany, Martic, 2023). Performance appraisal is an essential aspect of performance management. It is a tool for correctly setting and managing employee performance, including further development (Omojaro, Taiwo, 2023). Related to this is a digital panel or dashboard, a tool for monitoring and collecting individual company data in real-time, i.e. for monitoring employees (Mišún, Mišúnová Hudáková, 2017). Real-time feedback applications allow managers and employees to provide, search for, and receive competency-based feedback using their computers, smartphones, or other devices (Rivera et al., 2021). Strategic maps are the most critical component of the BSC. They show the target status and the key goals and priorities the company must meet (Marr, 2023). Fuzzy logic or fuzzy sets can be a powerful tool for managers to use for evaluating the performance of personnel or teams within the performance management system (Beheshti, Lollar, 2008). The flexible strategy game card, comprised of two broad perspectives, enterprise perspective and customer perspective, can be used to play the strategy game in strategy formulation and execution (Sushil, 2010).

4.3. Performance Management System

Based on a literature search, an effective performance management system was defined, consisting of a set of the following steps:

- identification of strategic objectives,
- a proposal for achieving the goals,
- implementation of measures,

- objectives setting performance levels and identifying relationships between them,
- results and their communication,
- comparison of performance (actual and determined performance),
- draft measures,
- review of measures and evaluation of implementation,
- revision, control and revision of the strategy.

4.4. Performance Measurement System

In a performance management system, it is first necessary to know the performance to manage it. This is the focus of performance measurement systems within a performance management system, which evaluate performance and provide feedback.

The areas of performance measurement that are shown in the graphical proposal of approaches towards performance measurement and management in the picture (Figure 1) are:

- financial area (includes measuring the performance of economic variables such as profit, cash flow, profitability and more),
- process area (using, for example, the six-sigma method),
- machines and equipment related to processes (measuring the performance of machines and equipment about process settings),
- customer area (finding and measuring the satisfaction of products or services from customers),
- supply area (evaluation of suppliers for their management, which is the creation of an optimal combination of the number of suppliers, their quality, speed of delivery of materials and costs),
- employee area (measuring employee performance, creating and adhering to established performance and quality standards, etc.),
- education and growth (innovation),
- environment, safety, and health (measuring environmental impacts, such as the amount of waste produced, etc.),
- other performance (individual performance measurements specific to the company).

First, it is essential to identify critical key performance indicators (KPIs) that need to be improved (Cai et al., 2009). By setting a balanced set of key performance indicators (KPIs), it is possible to monitor performance. That is why it is necessary to focus on indicators that support business performance (Capri et al., 2023).

In an ideal system, each company creates a cascade of indicators and individual goals at individual levels to make the performance measurement system as close as possible to the company's needs (Capri et al., 2023). It should be remembered that the sets of indicators should include financial and non-financial indicators to obtain relevant data (Bisbea, Malagueno, 2012).

The aim of the new PMS is, therefore, to achieve a greater balance between individual types of measures: financial and non-financial, short-term and long-term, delayed and prestigious or focused on control and improvement (leading and lagging), oriented towards shareholders and stakeholders, internal and external performance measures (Kennerly, Neely, 2002).

According to Landström et al. (2018), certain pitfalls must be identified when designing a business performance measurement system. The relationship must be known for the performance measurement system's effectiveness for different KPIs. Insufficient understanding of the relationships between indicators often leads to a lack of an overall picture as a systemic view of the organisation.

The mapping of the primary vital areas of performance, their indicators and causal links were dealt with, for example, by Paraschi et al. (2019).

Based on the literature review, a performance measurement system can consist of the following 10 steps:

- choice of methods and tools,
- performance monitoring,

- collection and compilation of necessary data,
- analysis of the obtained data by selected methods,
- data processing,
- data evaluation,
- interpretation of the evaluated data,
- examination of information,
- knowledge creation,
- knowledge transfer.

The choice of methods and tools is the first step in measuring performance. Methodologies, methods and tools are not separate measurement systems. They are used for the structured development of specific performance measurement systems (Schreiber et al., 2020). The most well-known and most frequently used tools for measuring performance the following models, methods, and tools are, e.g.:

- Economic added value is an indicator of financial performance that can assess whether a company is successful in the market and predict its future direction (Worthington, West, 2002).
- Benchmarking in business compares industry best practices with business processes to identify performance gaps and gain a competitive advantage (Prašnikar et al., 2005).
- The Balance Score Card (BSC) is a strategic management performance metric used to identify and improve various internal business functions and their resulting external results (Lesáková, Dubcová, 2016).
- A dynamic performance measurement system is a performance measure that must be current and relevant to be helpful in a dynamic business environment. Thus, it is essential for a company that its performance measurement system is dynamic, either in terms of indicators and measures or strategy (Weicker, 2002).
- The SMART model is a method by which a company sets goals (Worden, 2014; Banks, 2023).
- The Performance Measurement Matrix (PMM) is one of the older systems used to measure business performance. PMM defines four measurement perspectives representing a company's internal and external, financial and non-financial views (Ossovsky et al., 2023).
- The EFQM Business Excellence Model is a tool that enables companies to understand the strengths and weaknesses of their defined vision and mission (Németh, 2020). His philosophy is to self-evaluate the organisation through clearly defined criteria and rules. The result of the self-assessment is a map of the organisation, which provides an overview of the advantages and disadvantages of the company (Moščáková, 2019).
- Individual Performance Appraisals represent a traditional assessment measuring performance against measurable goals (Cappelli, Conyon, 2018).
- The company creates its methods to reflect best the needs of measuring performance according to its specific requirements.

Performance monitoring and monitoring the specific area of performance measurement itself is the next step. Data are collected automatically by an information system, in an electronic form or manually based on paper outputs from monitoring. The analysis of the obtained data by selected methods is the analysis of the received information and their decomposition according to common properties for subsequent processing. Data processing can mean the creation of a basis for analysis for further data evaluation. Data evaluation is the comparison of acquired data. In the next step in interpreting the evaluated data, comparing the data will create information about possible deviations in performance. Interpretation of the estimated data is the point at which the data becomes full-fledged information that enters the performance management system as a basis that communicates to the management for performance management. By evaluating and obtaining information from performance measurement, the manager can compare the performance shift over time and propose measures. Examining the information obtained consists of its in-depth processing and its interrelationships with consequences. The setting of the system concerning the results is also discussed, based on which the company can learn and thus create knowledge. It is essential to develop understanding because it can stimulate new, innovative solutions or change to increase the chances of gaining a competitive advantage. Knowledge creation

is often cited as a resource for improving business performance (Adams, Graham, 2017). Knowledge transfer is the last step in a performance measurement system. In this step, stakeholders in the performance management system are given knowledge. Based on this result (acquired knowledge), a revision, control or possible strategy adjustment is performed. The performance measurement and management system has several stakeholders who enter the individual processes as users of results and managers. Still, simultaneously, the employees create a specific performance as performers of activities. In the created graphical design of approaches towards performance measurement and management (see Figure 1), stakeholders are divided as follows:

- Managers are seen in this proposal as a basis for making critical decisions and creating business strategies (Olsen et al., 2007). If the results are unexpected, managers can respond promptly and determine corrective action. Managers also use the measurement results to compare the results compared with the competition (Pavelková, Knápková, 2005). Thanks to the results, managers at the top and the middle or lower levels can react flexibly and adjust processes that do not show ideal results. Within the proposal, employees represent work performance (Wagnerová, 2008). Without their work, using the system would not be possible, as they are a source of necessary data that can be managed and influence their performance. Employees are also informed about the company's performance.
- External consultants can create a set of proposals and recommendations through the obtained results, which will help the company's top managers make fundamental decisions about its future direction.
- Based on the acquired results, shareholders decide whether the company is attractive to them and whether they are willing to continue to invest their capital in it (Fibírová et al., 2015).

4.5. A cycle of continuous improvement

It is a control framework that performs activities to improve processes continuously. The cycle consists of 4 parts: planning, implementation, evaluation and intervention (Song, Fischer, 2010). The cycle can improve the following areas described below:

Companies increasingly prioritise sustainability for their reputation and enhancing business processes and overall company value. More executives acknowledge the positive impact of sustainability programs on short-term and long-term company value (Capri et al., 2023).

Employee loyalty is crucial for workforce management. High loyalty reduces turnover, enhancing overall company performance in terms of cost and efficiency (Defranzo, 2023).

Achieving more effective communication across management levels is vital. Clear communication of the company's top goals is necessary for all management levels, improving overall output by avoiding misunderstandings. Effective communication and feedback are crucial for business performance, allowing continuous process improvement (Lumenwayworker, 2023).

When objectives are clearly defined, a performance management system can enhance individual and team productivity. Feedback is integral for improvement, but the system is more than just feedback—it involves various processes. For optimal results, managers must actively engage in the performance management system (Cardy, Leonard, 2015).

5. Verification of the findings

The possible applicability in practice was discussed with managers of selected companies, specified in more detail in the methodological part.

Respondents agreed that the submitted proposal is applicable and usable in practice. They did not identify any missing elements and stated that it is by logic and that its parts are designed in the correct sequence.

Respondents consider their currently implemented performance management systems more straightforward, less structured and organised. As in the present proposal, the individual steps are often performed in parallel, not sequentially. Specifically, these steps are included in the design of the performance management system,

such as the proposal of corrective measures and revision of the implemented strategy. Combining several design elements brings significant time savings for businesses. The steps in which the currently implemented system in one of the companies coincides with the submitted proposal are defining goals, monitoring performance, evaluating the achieved results and comparing the achieved results with the planned ones.

Cascading is used in three addressed companies, where the goals and set indicators are cascaded at individual levels of the company. Unfortunately, one of the companies does not use cascading at all and, at the same time, does not use KPIs. In contrast, another company states that it uses cascading and includes communication of results. It works similarly hierarchically as key performance indicators. Knowledge is sold from the lowest management level to the company's top management.

In the question concerning internal and external factors influencing the performance measurement and management system, it was found that companies perceive these factors and implement them into their processes. Corporate resources and corporate culture were identified as the most used internal factors. Upon closer examination, it was also found that the external factor of cultural differences needs to be given more attention. Because selected companies work mainly in Slovaks, minimal cultural differences exist. Changes in the factors affecting the company seek to promptly identify companies and thus ensure that their potential impact is minimised. One of the companies also identified other factors that affect their already established performance measurement and management system. It included the labour market among these factors and is currently significantly impacted by the coronavirus pandemic. This affected the supply of materials and raw materials and the number of orders, which decreased due to the pandemic. Part of long-term planning is also an effort to manage factors; within this planning, companies try to identify activities to reverse or mitigate the impacts that have come, either legislative or market. Planning on an annual basis if the situation can be influenced. If external or internal factors cannot be controlled, or if an unpredictable situation suddenly arises, companies respond as soon as possible to minimise the impact as much as possible. Another external factor that one of the companies considers to be vital and absent in the proposal is cooperation (Soviar et al., 2018; Holubčík and Soviar, 2021), as it is almost impossible for one entity to change anything, either from a market or labour perspective. Including cooperation with the public sector in the proposal would also be possible.

The proposal's tools, models and methods are mostly known to the respondents, and most are used in practice. However, the tool that the respondents needed to recognise was Fuzzy sets. The most used tool in the addressed companies is Benchmarking, which is used to streamline the systematic performance management process. No other tools, models, or methods companies know and use were identified.

The results obtained from the performance management system are communicated in a cascade from the lowest level to the managers. Only results that directly affect employees are displayed. Communication occurs in various ways, such as personal, telephone and e-mail communication or via the intranet, training, workshops and meetings.

According to the respondents, during the implementation of the submitted proposal into business processes, problems could arise regarding the reluctance of employees to change the already established system. Employees usually respond negatively to changes that occur in companies. They are used to already established systems, which they prefer to keep going. Another possible problem is the collection of data that does not benefit businesses. According to managers, a large amount of data is collected, but it is not essential for the operation and progress of the company. By processing large amounts of unnecessary data, businesses spend time they can use more efficiently. One of the companies also identified an outdated system for recording the obtained data as a possible problem.

The interviews showed that companies continuously strive to improve the established performance management system. The individual steps that are shown in the graphic design are sufficiently contained. Businesses focus mainly on effective communication, increasing productivity and clarifying the company's intentions.

Respondents described approaches towards performance measurement and management as well-structured, easy to understand and comprehensive. According to the respondents, their implementation is possible, but a

slight simplification would be needed. During its implementation, companies may need more knowledge of individual employees in performance measurement and management.

It is important to note that the proposal needs to be adapted to the conditions and requirements of a particular company. This general theoretical proposal should be used as a template or guide for the subsequent compilation of a specific company. The aim of the conducted interviews with the managers of selected companies was to obtain the opinions of experts from business practice on the above theoretical proposal so that it could be further improved.

Conclusions

As a practical implication of this paper, these claims are mainly that the proposed approaches towards performance measurement and management provide companies with a comprehensive view of performance. It presents a detailed performance management system as a sequence of individual steps and activities, follows the company's strategic management and resolves individual causal links and relationships. At the same time, it also solves the transfer of information and the issue of continuous improvement and sustainability of the entire system. It draws information from the performance measurement system, which lies at its "heart". The performance measurement system also contains a sequence of steps and activities that need to be performed. Indicators, their definitions, cascading, areas of performance monitoring, and models used for measurement and management are integral parts. The quality and maturity of the performance measurement and management system are ensured precisely by including individual components, steps, activities, and their interconnectedness, as well as the degree of their knowledge. The stability of the system and its sustainable development and effective functioning are strengthened by identifying and studying internal and external factors and tools. In addition, this proposal was marked as a complex solution for performance management and valuable in business practice based on interviews conducted with managers of selected companies.

Theoretical implications are conducting a detailed analysis and critical evaluation of the literature in the addressed area and proposal and a detailed description of the created theoretical proposal of approaches towards performance measurement and management.

Regarding the research limitation, this paper's stated approaches towards performance measurement and management are only preliminary research to determine whether these approaches apply in practice and need further development and testing according to the managers' opinions. Regarding the positive comments of managers on the given approaches, the authors in further research will focus mainly on establishing the broader applicability of the approaches in companies from various areas of business and also on the application of this proposal in selected companies and to monitor the results associated with it over time.

Given the breadth of the performance measurement and management field, there is scope for further research. These future research investigations could cover, for example, the following areas:

- Elaborate in detail on the individual steps of the proposed performance measurement and management system, define processes, tasks, and responsibilities at unique levels of management and documentation for each step.
- Dealing with a detailed analysis of the standards used in practice and identification of methods leading to ensuring their balance.
- To deal with the problem of the strategy review process based on the results of the obtained performance measurements.
- Analyse in detail the level of management of key external and internal factors in enterprises, i.e. monitoring the current state, identifying the specific impacts of these factors on the enterprise, how these factors are taken into account within the performance management system, etc. Also, examine the causality and degree of dependence of individual vital factors and performance factors using statistical methods, namely regression and correlation analysis.
- Investigate the difference between manufacturing companies and service companies, as it is evident that specific conditions exist within both groups of these companies.

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