

Comparison of Using Managerial Instruments in Industry Companies in Slovakia and the Czech Republic

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Abstract – Performance management is key factor of successful business and obtaining competitiveness advantages on the global business market. Monitoring of performance is basic instrument of innovative activities in the industrial enterprises. The main goal of this contribution is to monitor the attitudes of industrial enterprises in Slovakia and the Czech Republic to the use and application of performance management tools. Based on a questionnaire survey in industrial enterprises in Slovakia and in the Czech Republic, we monitored the areas of performance management that businesses prefer, specific financial indicators, and new management tools implemented in companies. The conclusion of the research pointed to the most monitored area - finance, from the point of view of financial indicators the most monitored are costs, revenues, profit, liquidity, indebtedness. New trends in performance management that businesses have introduced are quality management, project management, and EVA financial indicator.

Keywords – profit, performance management, financial indicators, monitoring, efficiency

1. Introduction

Peter Drucker says: "What can't be measured can't be controlled."

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Finding a universal performance measurement tool has been the subject of research in several countries around the world. From an economic point of view, "InvestorWords.com" defines performance as "the result of an organization's activity or investment for a certain time". "BusinessDictionary.com" defines performance as "fulfilling a given task compared to known standards of accuracy, completeness, cost, and speed." The importance of business in terms of the above definitions is played by performance management. The main goal of this contribution is to monitor the attitudes of industrial enterprises in Slovakia and the Czech Republic to the use and application of performance management tools.

2. Literature Review

Performance management needs to be developed and implemented in enterprises to deliver business efficiency, economy, competitiveness, productivity, and business definition as a "world class business." Hanousek et.al. dealt with technological efficiency and productivity by identifying the factors that affect their achievement and their impact on business performance [5]. Müller monitored innovation performance and identified the synergy effect between technology and the economy [13]. Bobáková et.al found that the competitiveness of industrial enterprises is increasing through well-developed performance management [1]. Some performance factors impact business performance over a long-term strategic horizon and are a prerequisite for developing Enterprise performance model [17]. Lebas and Euske view performance as today's performance that leads to more measurable outputs tomorrow [12]. Hauber considers that the concept of performance describes the benefits of specific systems (organizational units, employees and processes) to achieve and verify business goals [6]. Wettstein understands performance as a degree of satisfaction in the business environment that affects him [18]. Krause describes performance in terms of achieving goals and states that performance is

typically defined through a multidimensional set of criteria, and the performance sources are participants' activities in business processes [10]. Performance and its measurement are solved globally and are looking for a versatile performance measurement tool. Cokins proposes a way of creating and implementing performance management in a number of steps: creating visions, missions and strategies, defining strategic goals, mapping strategic goals for their "cause-effect" interconnection, defining initiatives to reduce performance gaps in Strategic objectives, selection of appropriate strategic performance indicators, selection of target values for key performance indicators for an appropriate time period, data collection and benchmarking, and gaps in performance through action plans [2]. Chong outlines a number of other steps for implementing performance management: strategy formulation and planning, mapping strategic goals and their interconnections, choosing the right performance indicators linked to strategic objectives, data collection and analysis of performance indicators, performance-based action [7]. Franco-Santos et al. identified four types of current performance measurement systems [4]. Ittner and Larcker found fundamental errors in the use of performance measurement systems, respectively [8]. When using non-financial performance indicators, performance management must be based on financial and non-financial indicators and accept business. In 2009, the CIPD consulting company conducted a sample survey of 507 managers titled Performance Management in Action: Current Trends and Practices. For the question "What do you understand under the term performance management," respondents should indicate what activities are associated with performance management. More than 90% of respondents reported regular evaluation meetings, 85.2% reported targets and target values, 83% regular feedback to individuals, 82.8% performance evaluation, 45% reported that performance management should include remuneration derived from Performance [16]. Financial indicators are used in industry in Slovakia very often, because they depend on principles and laws in this country [9].

3. Research of Managerial Instruments in Slovakia and the Czech Republic

In the framework of an industrial survey conducted in Slovakia and the Czech Republic in 100 industrial enterprises, we dealt with the research questions, which are oriented towards the use of managerial tools for performance management. The sample of enterprises was oriented to industrial enterprises. To achieve higher back survey, we used the Dillman method to increase the return on questionnaires by

20%. It consists of sending two repeated sheets, the first one being sent after 10 days and the other after two weeks. The questionnaire contained closed and semi-closed questions, where respondents could add their own response in addition to the options. We used the five-step Likert's scale on the issues in which we wanted to find the attitudes of managers in industrial companies. For some questions, a five-step scale of significance has been used. The communication was done by sending e-mails to the economic departments of the industrial enterprises; the processing of the questionnaires was carried out in a JMP and EXCEL database. Description of respondents in questionnaire survey is described in Table 1.

Table 1. Information about the respondents of the survey

| | |
|--------------------------------------|------------|
| Form of Business | |
| Number of companies (Slovakia) | 50 |
| Number of companies (Czech Republic) | 50 |
| Companies | 37% |
| Limited liability companies | 12% |
| Other form of business | 51% |
| Number of employee | |
| 0- 49 | 4% |
| 50 - 249 | 53% |
| 250 | 43% |
| Revenue | |
| to 2 million euro | 5 % |
| 2-10 million euro | 36% |
| 11-50 million euro | 36% |
| more than 50 million euro | 23% |
| Industry | |
| Engineering industry | 27% |
| Chemical industry | 16% |
| Automotive industry | 12% |
| Rag trade | 10% |
| Electro technical industry | 10% |
| Building industry | 10% |
| Wood industry | 6% |
| Metalworking industry | 5% |
| Printing industry | 4% |

Source: questionnaire research

Research area deals with the area of using managerial instruments for performance management in industrial enterprises. In the first step we obtained areas of performance management in industrial enterprises. In the literature, the need to measure performance across multiple business areas is often highlighted. Very important tools are financial and nonfinancial indicators for small and medium

enterprises in Slovakia [14]. In this research we monitor financial indicators that the enterprises in Slovakia and the Czech Republic monitor due to the requirements of legislation of accounting and taxation. In the third step we obtain information of non-financial indicators and managerial instruments that the enterprises implemented in praxis.

4. Results and Discussion of Research of Managerial Instruments in Slovakia and the Czech Republic

In the first step we obtained areas of performance management in industrial enterprises in Slovakia and the Czech Republic. Results of the research are presented in Table 2.

Table 2. Information about the respondents of the survey

| Area of PM | Slovakia | Czech Republic |
|--------------------|----------|----------------|
| Marketing | 14% | 26% |
| Internal processes | 39% | 60% |
| Suppliers | 49% | 53% |
| Customers | 53% | 80% |
| Technology | 63% | 78% |
| Product | 71% | 80% |
| Employees | 82% | 75% |
| Finance | 86% | 90% |

Source: questionnaire research

Performance is measured mostly in the financial area, 86% in Slovakia and 90% in Czechia. A high percentage of enterprises measures employee performance, 82% in Slovakia and 75% in Czechia, 71% in Slovakia and 80% in Czechia of the enterprises said that performance is measured in the product area, 63% in Slovakia and 78% in Czechia are in the technology and innovation area, 53% in Slovakia and 80% in Czechia are in the consumer area. For industry and manufacturing businesses, skilled workforce, product quality, technology tracking, and customer opinions are important. Significant area in Czechia are customers, product and finance. Significant areas in Slovakia are product, employees and finance, 49% in Slovakia and 53% in Czechia of the enterprises monitor performance indicators related to suppliers, 39% and 60% the internal processes, 14% and 26% monitor marketing, which is not a sufficient indicator for industrial production in terms of output. Financial area is very important part of financial accounting in Slovakia and the Czech Republic and this is the reason, why companies mostly use the financial indicators. The instrument for financial area is control and it is used in Slovakia and the Czech Republic [3].

Controlling is very important instrument for companies and it is modern toll of company control. This instrument is implemented in companies as part of performance management around the world [15].



Figure 1. Area of performance management in Slovakia and Czechia.

Source: questionnaire research

The Czech Republic more uses the areas of performance management than Slovakia. Slovakia has a problem with the areas of marketing and internal processes. In the Czech Republic marketing is crises area too. The focus on individual areas is closely related to the legislative provisions that are similar in both countries.

The second step of the questionnaire research deals with relationships in performance management processes. The question was: What are the causal relationships in the process of measuring and managing performance and the impact of various factors on business performance? Since we assumed that a significant area of performance measurement would be finance, we were interested in the importance that business attaches to selected financial performance indicators. We select the most frequently used financial indicators of accounting and taxation law. Based on the survey of industrial enterprises in Slovakia and the Czech Republic, we found out that the most financial indicators are sales, revenues, costs, cash flow, profitability and indebtedness indicators. Results of the survey are presented in Table 3. Financial indicators are used in all area of business in Slovakia and in the Czech Republic because they follow the laws in business.

Table 3. Financial indicators of the research in Slovakia and the Czech Republic

| Financial indicators | Slovakia/ 50 | Czechia /50 |
|--------------------------|-----------------|----------------|
| Return of investment | 35 | 48 |
| Market value | 37 | 45 |
| Market share | 38 | 43 |
| Average costs of process | 37 | 49 |
| Liquidity | 45 | 50 |
| Profit | 46 | 50 |
| Profit margin | 42 | 45 |
| Added value for employee | 42 | 45 |
| Work productivity | 45 | 46 |
| Profitability | 48 | 49 |
| Indebtedness | 46 | 50 |
| Total costs | 47 | 50 |
| Cash flow | 43 | 48 |
| Revenues | 49 | 50 |
| Sales volume | 44 | 50 |

Source: questionnaire research

Financial indicators are used very often in Slovakia. The most used factors are: revenues, profitability, profit, indebtedness, total costs, liquidity, cash flow, sales volume and work productivity. Those factors are very important indicators for performance of business and competitiveness in Slovakia [14]. Less consideration is given to market indicators – market share, market value and return of investment. In Slovakia most often are used profitability, total costs, revenues, profit, liquidity, work productivity and sales. In the Czech Republic most often are used liquidity, profit, indebtedness, total cost, revenues, sales and cash flow. In both countries, financial indicators focusing on entrepreneurship and business profitability are used.

The graphical representation of the financial indicators of both countries shows that more Czech industrial enterprises use financial indicators than Slovak enterprises. From the 100 industrial enterprises in Slovakia and the Czech Republic, it can be seen that most Czech industrial enterprises work with financial indicators. The use of financial indicators is also closely linked to business owners and the business market. International business owners require financial reporting through financial indicators. It is possible to analyze the financial situation in the industrial enterprises using a very diverse set of methods and most often it is financial indicators that are used in Slovakia and in the Czech Republic and globally in the world.

A set of financial indicators allows analyzing critical aspects of a financial situation of the

industrial enterprises. Financial indicators are used in insurance, banking, public administration, industry but also in education and health. Financial indicators are a general tool for managing business performance.

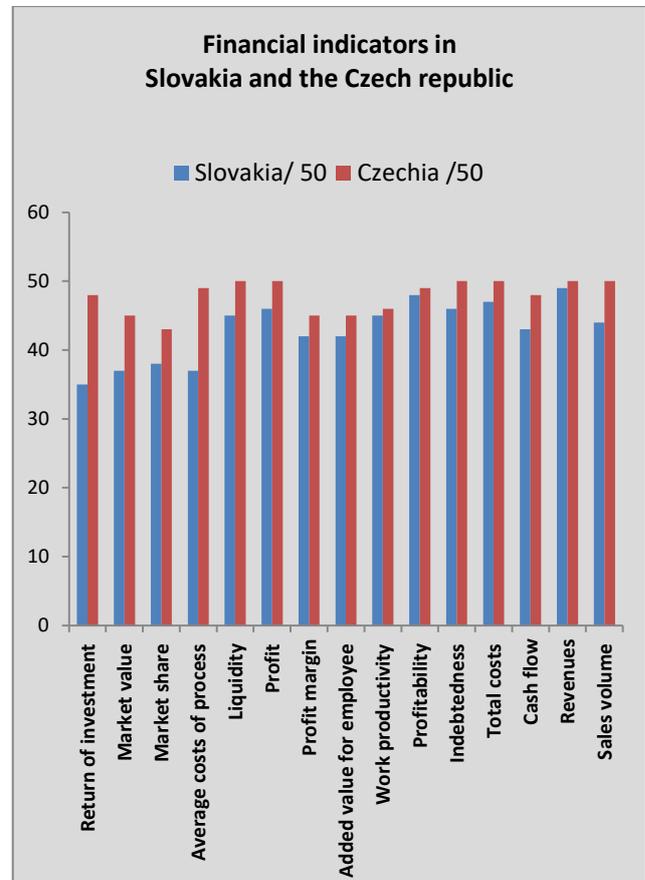


Figure 2. Financial indicators in Slovakia and Czechia
Source: questionnaire research

The third step of the questionnaire research deals with managerial instruments of performance management in the industrial enterprises. The question was: What is the situation in the area of measuring and performance management in Slovakia and the Czech Republic industrial enterprises as compared to professional literature and other research? Results of using managerial instruments in industrial enterprises are presented in Table 4.

Several studies conducted in the Slovak Republic and the Czech Republic indicate a rather weak extension of modern and systemic tools and concepts used in measuring and performance management. The most used tool is quality management systems, such as the introduction of the ISO systems. Because we are addressing industrial and, to a large extent, manufacturing companies, there is extensive use of quality management systems. The second most used tool is project management, which is also understandable given the industrial nature of the addressed businesses. The positive result is that more than a third of enterprises use the modern financial

indicator - EVA tool. The most important managerial instruments in Slovakia and in the Czech Republic are quality management system, project management, EVA.

Table 4. Managerial instruments of research in Slovakia and the Czech Republic

| Managerial instruments | Slovakia | Czech |
|---------------------------|----------|-------|
| Performance Prism | 0% | 2% |
| ABB | 0% | 5% |
| EFQM | 4% | 5% |
| BPR | 4% | 6% |
| ABM | 4% | 7% |
| CVA | 8% | 9% |
| Value management | 12% | 12% |
| Six sigma | 12% | 15% |
| TQM | 16% | 25% |
| ABC | 16% | 16% |
| Kaizen | 18% | 20% |
| BSC | 22% | 25% |
| SPC | 24% | 36% |
| Controlling | 24% | 30% |
| JIT | 29% | 45% |
| Benchmarking | 33% | 35% |
| Process management | 35% | 54% |
| EVA | 37% | 35% |
| Project management | 43% | 65% |
| Quality management system | 65% | 85% |

Source: questionnaire research

35% in Slovakia and 54% in the Czech Republic of the respondents use process management and benchmarking. Controlling is used by more than 24% of the enterprises in Slovakia and 30% in the Czech Republic. Basic task of the firm's management is to state goals, to plan, to realize the plan, to compare the plan with reality, to control results, to suggest and realize measurements for stated goals achievement and for those activities controlling is suitable [3]. Use of controlling is at low level in the industrial enterprises. Abroad, the often-used Balanced Scorecard concept is used by 22% and 25% of businesses. The EFQM concept is rather weak. The Asian concept of Kaizen is used by 18% and 20% of industrial enterprises, which can also be related to the activities of the Korean companies in the industrial area of Slovakia and the Czech Republic. Statistically-oriented tools, often used in manufacturing, as SPCs, use 24% and 36% of the enterprises, and Six Sigma is used by 12% and 15% of the enterprises. No enterprise in Slovakia uses the Activity Based Budgeting (ABB), in the Czech

Republic 5% of the enterprises and the Performance Prism is used in Czechia by 2%, which are generally not widely used in practice or in the scientific field. The ABM approach is used by 4% and 7% of the enterprises. This instrument is very important for the firm because it reduces costs. Cost reduction is connected with efficiency and functionality of all business processes. High level of efficiency and functionality built base of continual improvement and costs decreasing [3].

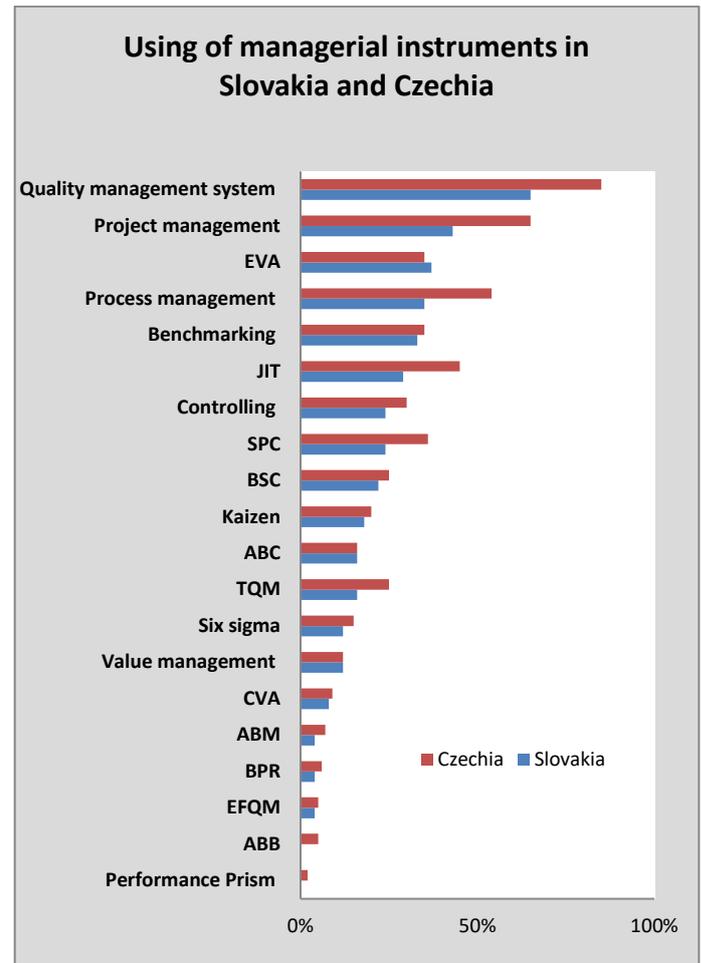


Figure 3. Use of managerial instruments in Slovakia and the Czech Republic

Source: questionnaire research

New management tools and non-financial indicators are used to a small extent and rarely by industrial enterprises in Slovakia. The most common barrier to the implementation of the new management tool is the preservation of the indicators already used, the companies are satisfied with the performance measurement method and do not see the reason for introducing additional methods of measuring the performance, especially of non-financial indicators. The second most significant barrier is the high cost associated with the introduction of new management tools. Other barriers surveyed by companies are time consuming

and staffing. Some businesses are unwilling to implement management tools due to an unstable market situation and due to insufficient facts about the benefits of managerial tools in industrial enterprises in Slovakia. Most businesses consider these tools to be just a "trend" or are unnecessary. Measuring enterprise performance is an important measure of enterprise competitiveness and innovation activity [19]. Several authors highlight the importance of the competitiveness of national economies and point to the importance of the competitiveness of enterprises in their respective countries, and the very competitive enterprises increase the competitiveness of national economies [11].

5. Conclusion

The area of measurement and performance management is a very large and still up-to-date topic, which is addressed by many authors. It is clear that there is no universal tool that would be used by all businesses, but there are some common features that should include proper measurement and performance management. Those indicators of performance management are used in education at university and its opportunities for removing of the barriers. The authors agree that measuring performance in the financial area and the area of economic value is inadequate and the non-financial indicators that bring added value must also be monitored. Over the last few years, several complex systems have been developed or improved to manage and measure performance. Slovak and Czech industrial enterprises use a large amount of financial and non-financial key indicators to measure performance. However, it is clear from the results that few companies use the Balanced Scorecard system, which is most widely used in the world and in industrial enterprises. The use of the Six Sigma method in the EFQM system in Slovakia and the Czech Republic lags behind the use of these approaches in the world. On the contrary, the widespread use of quality management systems is found in several studies. The biggest barriers to the deployment of these tools and concepts were the most common satisfaction with current performance measurement, high deployment costs, and lack of staff and time resources. However, it is positive that most businesses are positive about their use and see benefits despite their implementation barriers. Through research, we have confirmed that strategic thinking in an enterprise has a positive impact on the use of system measurement and performance management. Businesses that have their growth-focused goals are more likely to use non-financial performance indicators. Business performance measurement is today a key tool for tracking competitiveness and maintaining enterprise stability,

and a tool for growth and business development. The introduction of new modern performance measurement tools is a prerequisite for building new business models of enterprise.

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