

TRENDS IN PERFORMANCE MANAGEMENT: COMPARISON AND SUMMARY OF SURVEYS

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Abstract

This paper deals with development and trends in performance measurement and management. Based on the comparison and summary of three surveys, carried out in the years 2011 - 2013 in the Czech manufacturing and non-manufacturing companies, are identified three key research areas. First area deals with models or frameworks that businesses currently use for performance management, second discusses the specific performance measurement areas and indicators that are used and in the third area are identified key elements of successful performance management that need to be fulfilled. Through these research areas is mapped current form of performance management process in the Czech companies and are also identified characteristics which should be met in the future to create effective performance management system. The findings of this summary and comparison are evaluated within the context of theoretical assumptions and results of similar research studies. The paper was created on the basis of literature review and 46 case studies analysis. The case studies were worked out by analyzing internal company materials and by conducting semi-structured interviews with the top management.

Keywords: performance measurement, performance management, framework, measures, comparison

JEL Classification: M14, M21, M29

1 INTRODUCTION

In today's business environment, companies are confronted with the continual and quickly ongoing changes. The dynamic development of the business environment has a major influence to the development of approaches to performance measurement and management "Within the next five years, every company will have to redesign how to measure its business performance" (Eccles, 1991). To be able to do this change, managers need a comprehensive understanding of trends and deeper knowledge of new approaches in performance management and measurement. The main aim of this paper is to contribute toward building such an understanding and knowledge.

Specifically, we investigate the models and frameworks that are currently used to measure and manage company performance. In the past two decades, a wide variety of performance measurements systems have been developed and implemented to overcome the limitations of traditional financial measures. All, in different ways, are designed to provide a "balance" overview of the company's performance. Therefore, we further explore which particular areas and measures are used to monitor performance. As stated Stivers et al. (1998) although much is being written about nonfinancial performance measures, very little is known about actual current practices. Another equally important study objective is to determine the key elements that have to be met by companies to design effective PMS having regard to the global trends.

The performance management system could be examined according to Neely et al. (1995) at three different levels: at the level of particular performance measures, at the level as an entity (multi-dimensional measures, measures at the operational level, the integration of measures

across the organization's functions and through its hierarchy, inclusion of cause-effect linkages), at the level of relationship between the PMS and environment within which it operates (strategy re-formulation, the consistency with the existing recognition and reward structure). Within this paper the performance management systems of selected Czech companies at the level as an entity is examined.

2 PERFORMANCE MEASUREMENT AND MANAGEMENT FRAMEWORKS: LITERATURE REVIEW

2.1 Characteristics of effectively created management frameworks

For successful performance management in companies are used systems, which can be understood as a comprehensive and universal set of activities and methods of measurement (Wagner, 2009), so called performance measurement system (PMS). These systems are the heart of the process of performance management, support its philosophy and are necessary for the effective and efficient functioning (Lebas, 1995). For companies that use PMS as the basis for their activities and development, the health of the companies depends on the effectiveness of the PMS (Najmi et al., 2005).

Therefore, in order to consider a performance measurement system as effective must fulfill specific roles. For example Lima et al. (2010) identified these roles based on interviews with experts and with the help of the Delphi Method. The most frequently cited PMS roles in the literature are: strategy implementation and revision, providing connections, performance measurement and evaluation, monitoring progress and be a tool for internal communication and motivation. (Gimbert et al., 2010; Micheli, Manzoni, 2010) In the last two decades the attention was paid especially to the role - implementation and revision of the strategy. Most surveys have focused on the area of transforming strategy into action, thus confirming that the PMS is a useful tool in this regard. (Kaplan, Norton, 1996; Simons, 2000)

The basis for the creation of an effective performance management framework is to create an effective performance measurement system. Neely et al. (2007) identify six following key characteristics of chosen PMSs listed before 2002:

- The set of performance measures used by the company must provide a "balanced" company image.
- The use of a PMS should provide a brief overview of the company's performance.
- The need for companies to establish a set of performance measures which are multi-dimensional.
- A measurement and performance management system will provide a comprehensive view of the entire company.
- Performance measurements should be integrated into all activities of the organisation through its hierarchy.
- A PMS should help to understand how the results are affected by different determinants.

Moreover Gomes et al. (2011) created from available literature on performance measurement in the last two decades following summary of relevant features and characteristics of performance measures and PMSs:

- Must reflect relevant non-financial information, based on key success factors of each organization.
- Should be implemented as means of articulating strategy and monitoring organization results.

- Should be based on organizational objectives, critical success factors and customer needs and monitoring both financial and non-financial aspects.
- Must accordingly change dynamically with the strategy.
- Must meet the needs of specific situations in relevant manufacturing operations, and should be long-term oriented, as well as simple to understand and implement.
- Must make a link to the reward systems.
- Financial and non-financial measures must be aligned, and used within a strategic framework.
- Should stimulate the continuous improvement processes.
- Must be easy to understand and to use.
- Must be clearly defined and have a very explicit purpose.
- Should allow a fast and rigorous response to changes in the organizational environment.

2.2 Development and trends in performance measurement and management

The development of an approach to companies' performance management is dependent on the development of the economic environment. This development can be seen in all components of PMSs, and is especially noticeable in defining performance measurements and in establishing the methods of measurement (Wagner, 2009). According to opinion of Dluhosova (2007) depends the success of performance measurement and management, above all, on the choice of correct performance measures and of an instrument to measure as well as on the possible use in corporate management. The main determinants of this development can be identified as: technical-economic model of the economy, globalisation trends, the development of modern technologies, the impact of intellectual assets, the degree of knowledge of economic systems etc. (Dluhosova, 2007). Huyett and Viguerie (2005) defined another determinants: the combined pressure of global competition, technological advancements, interconnectivity and economic liberalization.

The history of performance measurement dates back to the early 19th century, when the increasing industrialization led to the measurement of the productivity performance management (Bititci et al., 2012). Performance measurement was based on Accounting Standards and Cost Accounting. Since 1920, financial ratio indicators (ROI, ROE, ROCE) have been particularly used for measuring performance, and are still widely used as a diagnostic tool for measuring the financial health of a company.

Due to the fact that the product manufacturers and service providers can be consider as service operations; so traditional accounting measures and the static view of costs are no longer appropriate in modern business environment. (Quinn et al., 1990) Based on the findings that traditional financial measures are no longer sufficient for understanding performance in a dynamic business environment because they promote short-termism leading to a lack of strategic focus and failure to provide data on quality (Dixon et al., 1990, Bititci, 1994, Kagioglou et al., 2001, Robinson et al., 2005, Wagner, 2009) were developed and implemented wide variety of performance measurement systems – eg. Performance Measurement Matrix (PMM) (Keegan et al., 1989), the results and determinants framework (Fitzgerald et al., 1991), Economic value add (Stewart, 1991), SMART Performance Pyramid (Lynch, Cross, 1991; Tangen, 2004), Economic value add (Stewart, 1991), Balanced Scorecard (Kaplan and Norton, 1992), EFQM Business Excellence Model (EFQM, 2003), Dynamic performance measurement system (Bititci et al., 2000), Integrated performance measurement framework (Medori and Steeple, 2000).

The SMART model (Lynch, Cross, 1991) developed in 1988 represents a significant change in the approach to performance measurement. It is the first time when attention was focused

on linking strategy to operations, the use of external and internal performance measurements and modelling of the company as an integrated system. At the beginning of 1990, the MVA model (Stewart, 1991) introduced a completely new approach that viewed performance measurement exclusively from a market perspective. This was followed by the BSC model (Kaplan and Norton, 1992), which includes both financial and nonfinancial performance measurements. This has gained great attention over the last fifteen years and has been successfully applied in many sectors. Several years later the EFQM model (EFQM, 2003) was developed for the needs of European companies.

Sureshchandar and Leisten (2004) argue that BSC framework do not take account of many other important stakeholders. Also, Neely et al. (2001) claim that organizations have strategy to bring value to a set of stakeholders. On the basis of this criticism was created Performance prism. This framework integrates stakeholder perspective under five facets - stakeholder satisfaction, stakeholder contribution, strategies, capabilities and processes.

Figge et al. (2002) argue that many organizations begin to integrate social and environmental perspective into their systems of performance measurement and management along with the traditional perspective. The era post 2000 generates a lot of frameworks updating the BSC approach – eg. Kanjis business scorecard, argues that BSC approach should be consistent with business excellence and TQM (Kanji and Sá, 2002); Total performance scorecard, integrated personal and organizational scorecard with PDCA cycle (Rampersad, 2005); Dynamic multi-dimensional performance Framework, which is composed of five performance dimensions – financial performance, customer, process, people and future (Maltz et al., 2003). The other recent development brings – eg. the flexible strategy game-card that highlights the dual perspectives of performance - enterprise perspective and customer perspective (Sushil, 2010); System dynamics based balanced scorecard – connecting traditional BSC and system dynamics principles (Barnabe, 2011); Sustainability performance measurement system, which describes phases of evolution of corporate sustainable PMS. (Searcy, 2011) Current systems of performance measurement and management are based on system dynamics, sustainability and simulation view of performance. (Yadav et al., 2013)

3 OBJECTIVES AND METHODOLOGY OF THE INVESTIGATION

In the years 2011 – 2013, three research surveys were carried out, each time lasting a period of 3 months (October to December). In general, everything was focused on mapping the current form of PMSs in Czech companies and identifying the characteristics that an effective performance management system should meet. Even though each survey had its specific objective, each one specifically investigated three consistent areas:

- 1. Models or frameworks that businesses currently use for performance management,*
- 2. The specific performance measurement areas and indicators that are used,*
- 3. Key elements of successful performance management that need to be fulfilled.*

To fulfil the objectives of the research investigation, the method of analysing case studies was selected, as it was necessary to obtain a large amount of data from specific companies. In total, 46 companies were examined, of which there were 35 manufacturing and 11 providing services. The criterion for selection was the size of the company by number of employees and turnover, and previous experience with measurement and performance management, which were determined using previously conducted secondary analyses. Medium and large businesses were included in the research investigation, among which the assumption was established that a systematic approach to performance management was used.

The case studies were worked out by analyzing internal company materials relating to the area studied and by conducting semi-structured interviews. The data collection phase of the study began with a general examination of relevant literature and research studies, to provide the researchers with sufficient theoretical background. After that the characteristics of basic information about company, vision, values and strategy, performance management and measurement system in selected companies was performed on the basis of all available internal documents. Interviewing was the second technique used for data collection.

The semi-structured interview was conducted based on the methodology and rules presented by Allhoff (2008) and Scharlau (2010). A total of 60 interviews were conducted with mid-level managers (quality manager, HR manager, manager for strategic development) and top level management (general director, financial and sales director) of selected companies. Content analysis was used to process the data.

More detailed characterisation of individual research investigations:

1. Key features of Strategic Performance Management Systems - year 2011

The main goal of this research study was to investigate the features of PMS in Czech large size manufacturing companies from two points of view. First was to identify and analyze the current form (models, features, roles, strengths and weaknesses) of PMS in selected manufacturing companies. Second was to determine the requirements that have to be met in the future to design effective PMS. The attention was also paid to factors that affect performance of the manufacturing enterprises and to aspects (characteristics, components, crucial elements) of successful performance management. Totally six large manufactures (automotive, electrical, glass and chemical industry) were analysed by the method of semi-structured interviews with the usage of the 10 open questions (Striteska, 2012).

2. Current Performance Management Systems and Factors affecting their Quality - year 2012

The aim of the investigation was to determine the form of current performance measurement systems in selected Czech manufacturing companies (the level at which it operates, the significance of specific financial and nonfinancial indicators for decision-making, and satisfaction with the information provided). A great deal of attention was also paid to identifying the key factors that affect the quality of the process of performance management.

Interviews and analysis were conducted in eleven middle and nine large-size manufacturing companies (metal working industry, plastic processing, manufacturing of packaging, food processing industry, electrical engineering, the energy, the petrochemical and tobacco industry). The interviews covered 10 open questions (Jelinkova, Striteska, 2014; Striteska et al., 2014).

3. Strategic performance management with Focus on Customer – year 2013

The main objective of the investigation was to determine whether the companies surveyed had set a long-term strategic concept including objectives and processes focused on the customer and whether the strategy was implemented by means of the strategic performance measures. Partial objectives of this investigation were also to identify the attitude of the companies to monitoring and measuring customer satisfaction, the use of customer satisfaction measurement as an input in the process of continuous improvement and identifying the ways in which the companies determine their competitive position. Consequently, an analysis was made of how the information gathered is used in the company.

The final sample for interviewing included a total of 20 managers, 11 of which were at the highest management level and 9 were at mid-level management of the companies, the

activities of which were manufacturing, process manufacturing, chemical processing, energy, automotive, information technology, transportation, health, banking, insurance and other services. The selected companies can be divided into 9 large companies and 11 medium companies (Striteska, Jelinkova, 2014).

4 FINDINGS AND DISCUSSION

4.1 Approach, model or framework used for performance measurement

After more detailed analysis, the individual models or methods for measuring performance can be divided into separate groups, which are: comprehensive approaches, a set of Key Performance Indicators (KPI) and performance measurement based on financial indicators. As comprehensive approaches are considered the Balanced Scorecard model and EFQM, which are instruments for measurement and evaluation as well as performance management.

The following table (Tab. 1) shows the frequency (in %) of the use of the different models/methods for measuring the performance of the companies surveyed in 2011-2013.

Tab. 1 – The frequency of the use of models/methods. Source: own processing

Set of models	The frequency of the use of models in the year		
	2011	2012	2013
Comprehensive approaches	33%	15%	10%
Set of KPI	50%	40%	50%
Financial indicators	17%	45%	40%

The table above clearly shows that there is still a large percentage of Czech companies using primarily financial indicators to measure performance, supplemented at most by monitoring customer satisfaction. In the first year of the survey, this percentage was the lowest, as only large manufacturing companies were examined, based on the assumption that at the beginning (1991-2000) the main development of performance measurement systems related to manufacturing operations (Sushil, Sagar, 2013) . At the same time, there is here the highest percentage of the use of comprehensive approaches, namely the BSC methods.

In further investigations, at least half of the companies have always been medium-sized businesses, and this is reflected in the given results. A somewhat surprising finding is little use of comprehensive approaches to performance measurement. Of all the companies surveyed, only one uses an EFQM model to measure performance, the other approach based on the BSC method.

Companies that were included in the group measuring performance based on a KPI set were subjected to a detailed analysis. The areas investigated were those in which the individual KPIs were defined. Overall it could be stated that two-thirds of them have measures set in all the main perspectives of the BSC method (finance, customers, processes and employees). So far, one-third consistently omits measuring the performance of employees.

Although many research studies have confirmed the strong relationship between human resources management and the attitude of the employees on the one hand and the performance of the organization on the other hand Armstrong (2007) provides a number of relevant research surveys, HRM indicators are not yet the norm in examining the effectiveness of human resources management and its impact on company results (Guryn, 2006).

Very often, however, these companies apply specific tools which will also contribute to improving performance such as Lean Management, process analysis and benchmarking.

If we summarise the results obtained, it can be stated that comprehensive approaches are still little used in Czech companies. Trunecek et al. (2005) conducted a survey in 2005 among 139 Czech companies and found that only 11% of them fully utilise the BSC model and 40% do not even know it. For more than five years, our results are similar; a higher percentage of the use of BSC is only among large manufacturing companies. An interesting finding is that the companies surveyed, with one exception, do not even use an EFQM model that was created for the needs of European businesses and is often used in Western Europe.

Nevertheless, we can identify an ever-growing trend in the use of a KPI set, which seeks to provide a “balanced” view of a company’s performance evaluation. Performance management solely on the basis of financial indicators is now declining and less than 40% of the companies surveyed use it. Compared to the previously conducted studies (Fibirova (2007), Horova a Hrdy (2007), Kral et al. (2007) or Skodakova (2009), where management on the basis of financial indicators still predominated in the practices of Czech companies, among the companies we surveyed performance measurement prevails based on a set of KPIs.

4.2 Specific areas of measurement and types of performance indicators

The survey of Stivers et al. (1998) conducted in U.S. Fortune 500 companies and in Canadian Post 300 companies examined the degree to which executives identify particular nonfinancial performance measures as important and whether the companies are measuring them. They revealed that customer service factors are perceived to be the most important measures. On the other hand, factors in the innovation and employee involvement categories were perceived to be less important in goal setting. Chow and Van der Stede (2006) stated that in a study carried by Wm. Schiemann & Associates, the executives widely acknowledged the limitation of traditional financial measures. Nevertheless, they still favored them over nonfinancial measures because they saw them as being generally less ambiguous. The ever increasing application of nonfinancial measurements closely related to areas in which performance is measured using them. In the context of these research studies, it was interesting to take a closer look at the areas and performance measures used by surveyed companies.

Tab. 2 – Specific performance measures and frequency of their use. Source: own processing

Performance measurement area	2011	2012	2013
<i>Financial performance</i>			
Traditional financial indicators	100%	100%	100%
Value based indicators (EVA, MVA, CFROI)	33%	15%	10%
<i>Customer performance</i>			
Complaints	100%	90%	75%
Customer satisfaction	100%	75%	95%
Customer retention	33%	35%	20%
<i>Internal process</i>			
Innovation process	33%	20%	40%
Operating process (quality, time, costs)	100%	100%	100%
<i>Employee performance</i>			
Employee satisfaction	50%	35%	30%
Labor productivity	83%	70%	60%
Employee retention	17%	20%	25%
Employee Skills	33%	35%	25%
Employee engagement	17%	10%	25%

The above mentioned results in many aspects still correspond with the survey of Lingle and Scheemann from 1996, who found that financial performance measures are included in regular management review in 98% of surveyed companies, operating efficiency in 82%, customer satisfaction in 76% and employee performance in 57%.

Strong critique of traditional performance measurement systems and confidence of managers in financial indicators have led to place greater emphasis on „modern“ financial indicators based on value management. However as stated (Venanzi, 2012), more than 10 years later, this scenario seems to have changed only a little, paradoxically. International evidence as well as our survey indicates that managers remain anchored to traditional financial metrics and other metrics like EVA are used rarely (Graham et al., 2005). The unchanged behaviour in financial performance measurement confirmed also recent study conducted by the U.S. National Association of Corporate Directors boardrooms which investigated that only 16% use economic value measure as financial metric in compensation plans (Daly 2011).

Yadav et al. (2013) stated that in the era post 2000 can be seen some new performance measures, such as leadership, training, education, innovation, capabilities, knowledge, personal improvement, etc. Unfortunately all of these measures are rarely seen in the PMSs of monitored companies.

4.3 Key requirements that have to be met in the future to design successful performance management system

At the end of interviews, managers always got room for expressing their own opinion, how effective PMSs that respond to global trends and changing roles of business should be developed or enhanced. In the discussion it was often found that managers are not fully aware of all the components that should modern performance measurement system include, as stated the literature. It was quite complicated for managers to finding answers to this question. Despite their opinions regarding key characteristics of effectively created performance management system could be summarized to following points:

- simple and clear performance system that strengthen the monitoring of all strategic goals,
- engagement of all hierarchical levels, measures should be integrated through its hierarchy,
- interconnection with the remuneration policy – instrument for employee motivation,
- It systems that enable the collection, analysis and reporting of requested data,
- well trained employee.

On the other hand surprisingly not once has been mentioned the establishment and checking the validity of linkages (cause and effect relationships) among particular strategic performance measures. In the companies that do not use comprehensive performance management approaches no relationship is revealed between the skills and motivations of employees or key processes and the development of customer satisfaction. And if these relations are examined in a company, they usually remain at the level of apparent hypotheses. This fact is closely related to the finding that the indicators mapping the human resources are not yet the norm in examining the effectiveness of human resource management and its impact on corporate results (Guryn, 2006).

Another important characteristic of effective PMS which was not mentioned is that measures should be conceived as part of fast feedback management systems and should be designed for stimulating continuous improvement capability rather than simply monitor operations strategy (Maskell, 1991). The PMS should be regularly reviewed and updated in order to remain

flexible. The latest trends stated in the current literature, which are system dynamics, modelling and simulation, were mentioned within the interviews only once.

5 CONCLUSION

In the Work of Yadav et al. (2013) that deals with the research trends of the last two decades of the performance measurement and management frameworks, the writers came to the conclusion that industrial economies have experienced structural changes and so as the changes have been experienced in PMS research. As a key transformation in the period 1991 - 2000 can be considered the development of an integrated and balanced system of performance measurement and management. For the second decade 2001 - 2011 is typical integration of multi-stakeholder perspective and dynamism of system. Current literature mainly focuses on flexible strategy game-card usage and integration of sustainability in company performance management system.

Compared to the previously conducted research studies our surveys revealed continuously increasing trend in the use of set of KPI, which seeks to provide a “balanced” view of a company’s performance evaluation. Unfortunately, comprehensive approaches to performance management are still not frequently used in surveyed companies. Therefore, the focus of companies should be redirected from performance measurement to performance management.

It is not surprising finding that all monitored companies use traditional financial measures, however surprising is that modern financial indicators base on value management are still used rarely. In customer area measures such as complaints and customer satisfaction are already used routinely, on the contrary customer retention, which for example Nenadal (2004) identify as advance degree of excellence of performance measurement in relation to customer, monitor less than a third of surveyed companies. The same situation occurs in the area of internal processes where all companies measure operational processes but approximately only third of them define measures in innovation processes. In employee performance area three quarters of companies monitor labor productivity, but measures like employee satisfaction, employee retention or employee skills are disproportionately less used. In general measures aimed at improving of performance (lead measures) like employee engagement and innovation process are currently used rarely.

According to Gomes et al. (2011) the recent dramatic environmental and market changes have fundamental influence to the performance measurement literature. The most recent literature highlight, that is necessary to approach to performance management from a more open systems perspective. Some of the relevant issues raised in the literature recently are introduced below:

- Should capture the dynamic nature of the market and environment and include it in the PMS.
- The organizational focus should be redirected from performance measurement to performance management.
- Should be changed from an internal/closed to an external/open perspective, measuring across supply chain and networks.
- Information systems and technology should be facilitators of the performance measurement and management process.
- New processes, initially developed for large organizations, should be found to implement PMS in small and medium enterprises.
- A stakeholder oriented approach should be created, balanced in its perspective.

- PMS should take in consideration the human factor, including new and innovative incentive/reward systems, and their links to performance measurement in order to involve employees in the performance measurement process.

The disappointing for the authors of the survey is that some of the main trends identified in the current literature are not recognized by the Czech managers. Notably the dynamics and flexibility of PMS, which should stimulate continuous improvement of company performance as well as focus on sustainability and all stakeholders are missing. In the surveyed companies (large manufacturing companies) we revealed only performance measures relating to the environment. In other words, still there a wide gap exists between what is used in practice and what is considered as effective in research.

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