THEORETICAL ASPECTS OF MEASUREMENT AND MANAGEMENT OF COMPANY'S PERFORMANCE

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Abstract. The concept of performance is one of the most important categories of economic analysis, it has been extensively used and it has a broad interpretation. To describe the concept of performance, the related words are used, linked by the noun “performance”: performance management, performance measurement, and performance assessment. In Latvia, these concepts have not been analysed and assessed; therefore, there is a necessity to carry out a theoretical investigation into the concept of performance as well as the concept of performance measurement and management. The research is based on the analysis of foreign scientific publications and special literature devoted to the concept of performance and issues of performance measurement and management. The aim of the research is to carry out a theoretical investigation into company’s performance and performance measurement and management. General research methods are employed in this research: the monographic or descriptive research method, the comparative research method, carrying out exploration of the concepts “performance” and “performance measurement and management framework”, based on the extensive study of literature. As a result of the research, the investigation into the concept of performance has been carried out, systematization of the performance measurement and management frameworks and systematization of the small and medium-sized companies’ performance measurement and management frameworks have been performed.

Keywords: framework, management, measurement, performance
JEL code: M10, M21

Introduction

To describe the results of business activities, the concept of performance is exploited in the foreign research and academic literature. The Commission of Terminology of the Latvian Academy of Science offers to use the following terms for translation of this term in the Latvian language: izpildijums, veikums; sniegums, veiktspēja (Terminoloģijas jaunumi, 2003). In the report on the quality improvement of the higher education, A.Rauhvargers uses Latvian translation of the concept of performance – “sniegums”, providing also the definition of the terms (Verbraak et al., 1999). The concept of performance has been extensively used and it has a broad interpretation. The concept of performance seems to be taken as something of a given, especially in its contextual...
use; it can have a certain degree of ubiquitousness that suggests that it has become something of a semantic shorthand, similar in its all-pervasive generality to such terms as “model”, “framework”, or “development” — with all the terms opulently scattered throughout the research literature without having, it seems, many limiting effects. The topics of performance measurement/management/assessment/evaluation have received relatively little examination from initial foundations that consider the terms that comprise the concepts themselves in the context in which they are placed (Folan et al., 2007).

The topic, provided in the paper, has not been thoroughly investigated in Latvia; the above mentioned statements indicate the necessity to explore the concept of performance as well as performance measurement and management, exploiting the analysis of special literature and foreign academic publications as a base.

The aim of the research is to carry out a theoretical investigation into the company’s performance and performance measurement and management. The following tasks are formulated to accomplish the aim:

1) To investigate the concept of performance;
2) To systematize and evaluate performance measurement and management frameworks;
3) To systematize and evaluate small and medium-sized companies’ performance measurement and management frameworks.

Research object: company performance

Research hypothesis: Understanding of the concept of performance and performance measurement and management promotes the application of objective procedures to evaluate company's business activities.

The research is based on the analysis of foreign scientific publications and special literature devoted to the concept of performance and the issues related to the performance measurement and management. General research methods employed in the research are the monographic or descriptive research method, the comparative research method, carrying out exploration of the framework of such concepts as “performance” and “performance measurement and management” based on the extensive study of literature.

**Interpretation of the concept of performance**

The concept of performance has several meanings and the all-encompassing nature as well as extreme popularity as an expression in regular speech. Performance is a fact of life. In work or in play, indeed in any activity which we pay even momentary attention to, performance can
be felt or, at least, deduced if necessary (Folan et al., 2007). Lebas (1995) considers that performance is never objective; it is only a way of defining where one wants to go. “Performance” (Berger, Luckmann, 1966) is an interesting concept. “Performance” is not an objective reality out there somewhere waiting to be measured and evaluated. “Performance” is a socially constructed reality.

One of the company’s priorities is the achievement of a specific aim (Folan et al., 2007; Winstanley, Stuart – Smith, 1966), furthermore, the company is assessed according to its future goals, referring to the targets the company intends to achieve. Laitinen (2002) defines performance as an ability of an object to produce results in a dimension determined a priori, in relation to a target. Thus it is necessary to have, first, an object whose performance is to be considered; second, a dimension in which one is interested; and, third, a set target for the result. Folan (2007) supposes that the performance is governed by the following three priorities: (1) It is always made as per the deemed relevance of an entity to a particular environment (thus, we commonly assess a company on its impact, for example, in a particular market…); (2) It is always made with a relevant objective in mind (thus, we commonly assess a company as per some set future vision on what the company wants to achieve…); (3) It is always reduced to relevant, recognisable characteristics (thus, we commonly assess a company on competitive parameters, such as cost, quality, time, etc., and more harder-to-measure competitive priorities, such as flexibility, or sustainablility, because they are relevant and recognisable etc.).

To describe the concept of performance, the related words are used, linking them with the noun “performance”: performance management, performance measurement and performance assessment. Performance management is management of a system put in place by an entity (with a pre-determined socially constructed reality) that has chosen a relevant viewpoint of itself (its objective) towards which it means to progress, using a set of recognisable characteristics as its measurement apparatus (performance measurement) to monitor this progress (Folan et al., 2006). This definition makes the requisite distinction between performance management and performance measurement. The performance management process is the process by which the company manages its performance in line with its corporate and functional strategies and objectives (Bititci et al., 1997) and performance measurement and performance management follow one another in an iterative process; management both precedes and follows measurement, and in doing so creates the context for its existence (Lebas, 1995).
There are several preconditions set for the performance measurement. Stalk and Hout (1990) offer two rules for performance measures: (1) the measure should be kept physical (i.e. quantitative) and (2) the measure should be taken as close to the customer as possible. Band (1990) considers that performance measurement needs to: have top management support; involve employees in their development (particularly customer satisfaction measures) and etc. Maskell (1992) suggests that new world-class performance measures should: primarily use non-financial performance techniques; vary between locations; change over time as the company needs change; are intended to foster improvement rather than just monitoring. Performance management (Lebas, 1995) precedes and follows performance measurement, in a virtuous spiral and performance management creates the context for measurement, so they are not separable.

Performance measurement can be defined as the process of quantifying the efficiency and effectiveness of actions, but a performance measurement system can be defined as the set of metrics used to quantify both the efficiency and effectiveness of actions (Neely, 2005). Mouzas (2006) considers that efficiency and effectiveness are central terms used in assessing and measuring the performance of organisations. Performance measurement by using particular quantitative indicators as efficiency and effectiveness could be characterised as an operations perspective (Zeglat, 2012).

The relationships between the company’s performance measurement, using the DuPont model, efficiency, and effectiveness are shown in Figure 1.

![Fig.1 The use of the DuPont model in performance measurement; generated by the author, based on the scientific views of Ho, Zhu (2004) and Ozcan (2008)](image-url)
Functional effectiveness can influence economic efficiency and vice versa, as well as functional and economic efficiency can affect the company’s performance. Applying the DuPont model and the company’s performance, it is possible to express Return on Assets (ROA) as a measurement of functional effectiveness (sales profitability) and economic efficiency (total assets turnover ratio).

Performance assessment (Bourguignon, Chiapello, 2005) may be defined as “a process by which an authorized person formulates a judgement, producing various consequences – on the value of some attributes of another person, by the way of appropriate instrumentation and three steps that may be identified as follows:

1. **Instrumentation** – defines preconditions of the performance measurement and includes performance definition, measurement selection, which will be used in Step 2 and references (e.g., data on the past or the budget).
2. **Evaluation** – measuring, based on the selected indicators that could be both quantitative (financial performance) and qualitative (non-financial performance), and assessment value, which depends on information, reference, and evaluator.
3. **Consequences** – includes distribution decisions related with the wage and premiums, change of position in the company, awarding financial resources in the future.

The relationship model between three terms – performance management, performance measurement and performance assessment, their mutual reciprocation and importance, both in common and separately, shown in Figure 2. In Figure 2, it could be seen that the performance assessment implies more than simple measurement; assessment if performed only at the middle stage of the model provided, after the preparatory seeds have been sown in the first step “instrumentation”. Performance assessment itself is an actively employed tool of the performance management environment, which, as we determined earlier, encompasses performance measurement and results in an evolving performance management arena, progressively changing as the strategic objective is evaluated and updated (or reset) for the future (Folan et al., 2007). Complexity of the performance not just points out that none of the terms – performance management, performance assessment and performance measurement – could be examined separately; it also indicates that, for instance, the choice of a particular performance measurement method defines the choice of assessment and management methods.

The performance measurement system that is depicted in Figure 2 could be used as a tool to cascade performance metrics down to achieve
the strategies and objectives of a company and also to align processes with strategic goals as well as objectives could be described as a strategic perspective (Zeglat, 2012).

![Diagram of performance management and measurement]

The author concludes that company's performance can be described as the ability of the company to represent itself to the outside, using the performance indicators that characterise activities and achievements of the company in relation to its goals, thus creating an overall opinion about the company.

**Investigation of performance measurement and management frameworks**

Interest about the issues of the performance measurement and management has increased during the last two decades (Taticchi et al., 2010; Susilawati et al., 2013; Yadav, Sagar, 2013). Indian researchers (Yadav, Sagar) have performed a historical analysis of performance measurement and management frameworks, pointing out three development stages: management accounting perspective (from the beginning of the 19th century till 1920), financial perspective (1920-1970); and, since 1970 – integrative perspective. The historical study of the performance measurement and management was focused on the period from 1991 to 2011; it was argued that the choice of the research period was determined by the revolutionary changes in the performance
measurement, deriving from the factors such as increasing competition, changes in external demand, the growing role of information technologies, etc. The researchers of Thailand and New Zealand (Srimai et al., 2011) have presented evolutionary paths referred to the performance measurement and showed four paths of the performance measurement – from operations to strategy, measurement to management, static to dynamic and economic-profit to stakeholder focus.

The performance measurement frameworks have the strongest impact on the performance measurement. The term framework refers to the active employment of particular sets of recommendations: for example, a set of measurement recommendations may suggest the development of a structural framework (e.g. Balanced scorecard (Kaplan, Norton, 1992; 1993; 1996b, 2006.) or they may give rise to a procedural framework (e.g. Wisner, Fawcett (1991) framework). A performance measurement framework (Rouse, Putterill, 2003) assists in the process of performance measurement system building, by clarifying performance measurement boundaries, specifying performance measurement dimensions or views and may also provide initial intuitions into relationships among the performance measurement dimensions.

The author has summarized the performance measurement and management frameworks in Table 1, providing characteristics of the performance measurement systems used; it has to be mentioned that it is complicated to identify particular performance measurement dimensions of the process performance measurement systems. The performance measurement frameworks that were analysed characterize performance measurement disregarding the size of enterprise.

Table 1 Performance measurement and management frameworks, compiled by the author

<table>
<thead>
<tr>
<th>Performance measurement and management framework / model</th>
<th>Dimensions of performance measures</th>
<th>Author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance Measurement Matrix</td>
<td>Financial, non-financial, internal, external</td>
<td>Keegan et al., 1989</td>
</tr>
<tr>
<td>Performance Measurement Questionnaire</td>
<td>*</td>
<td>Dixon et al., 1990.</td>
</tr>
<tr>
<td>Framework</td>
<td>Performance Dimensions</td>
<td>Authors/References</td>
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<td>--------------------------------------------------------------------------</td>
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<tr>
<td>The Results and Determinants Framework</td>
<td>Financial performance, Quality, Competitiveness, Flexibility, Resource utilization, Innovation</td>
<td>Fitzgerald et al., 1991; Fitzgerald, Moon, 1996.</td>
</tr>
<tr>
<td>Integrated Performance Measurement System</td>
<td>*</td>
<td>Bititci et al., 1997</td>
</tr>
<tr>
<td>Integrated Dynamic Performance Measurement System</td>
<td>Financial measures, Customer satisfaction, Cycle time, Defect rate, Quality, Delivery, Process technology, Education and training</td>
<td>Ghalayini et al., 1997</td>
</tr>
<tr>
<td>Kanji's Business Scorecard</td>
<td>Stakeholder values, Process excellence, Organizational learning, Delighting stakeholders</td>
<td>Kanji, Sà, 2002.</td>
</tr>
<tr>
<td>Holistic Performance Management Framework</td>
<td>Stakeholder, Market, Supply chain management, Value creation</td>
<td>Andersen et al., 2006.</td>
</tr>
<tr>
<td>Flexible Strategy Game – card</td>
<td>Situation, Actors, Process, Performance, value in offerings and relationships</td>
<td>Sushil, 2010</td>
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*specific dimensions of performance are not defined
In the changing business environment, which is mainly influenced by the global competition, development of the technologies and liberalization of the economy, the company’s existence is more complicated as ever before. Changes in the business environment determine the necessity to develop and strengthen the competitive advantages, hence, changing the mode of the company’s performance measurement. An active use of the performance measurement system is a precondition for its evolution (Kennerley, Neely, 2002).

The author, assessing the development of performance measurement and management frameworks, concludes that the multidisciplinary aspects of the frameworks are discovered. In the period from 1989 to 2000, rapid development and changes of the performance measurement and management frameworks could be observed. The performance measurement and management frameworks that have been analysed indicate that their authors had an intention to create a process or a mechanism that would help the company’s management to increase the company’s competitiveness and, in a long-term, to focus on the achievement of the company’s objectives. Whereas the performance measurement dimensions were mainly focused on the financial measurements, quality, customer satisfaction, competitiveness; if changed, it was a change from merely financial perspectives to integrated perspectives.

From 2001, the advancement of the Balanced Scorecard approach actualized. The transition from a set of stakeholders’ interests to the all-stakeholders’ interests occurred. The researchers realised that a lack of casual relations, intrinsic to the Balanced Scorecard, could be eliminated by the system methodology. The application of simulation methods to find the most appropriate future intervention policy could help to identify and to adjust the objectives in accordance with the performance measures. Dynamic, integrated performance measurement and management systems were developed in the companies.

The analysis of the performance measurement and management frameworks, summed up in Table 1, allows the author to conclude that the performance measurement dimensions include characteristics both of the financial and non-financial performance of the company.

On the basis of the views of researchers (Taticchi et al., 2010; Yadav, Sagar, 2013), the author arranges performance measurement and management frameworks, analysed in Table 1, in the following groups:

- Classical and dominant performance measurement and management frameworks: Balanced Scorecard, Strategic Measurement Analysis and Reporting Technique (SMART), the European Foundation for Quality Management’s Business...
Excellence Model, the Performance Prism. Contribution of these frameworks is related with the integration of non-financial measures, introduction of quality, self-evaluation, and involvement of stakeholders in the performance measurement process.


- The approaches upgrading the Balanced Scorecard approach: Kanji’s Business Scorecard, Holistic Scorecard, Total Performance Scorecard, System Dynamics-based Balanced Scorecard. These approaches advance the Balanced Scorecard approach, taking into account the company’s point of view, a system development methodology and modelling, intellectual and social perspectives.


Investigation of the performance measurement and management frameworks of small and medium-sized enterprises

The first performance measurement model for large companies was developed in 1980 (Economic Added Value Model), though, the first research studies on the performance measurement in small and medium-sized companies (SME) emerged only in the second half of the 1990s. At the beginning of the 2000s, there were 2 directions in the research studies on the SME’s performance measurement: (1) adaptation of the performance measurement models originally developed for large companies and (2) development of the specific models designed for SMEs (Taticchi et al., 2010).
The performance measurement issues in SMEs have been explored by the researchers of Portugal (Barreiros, 2013), Malaysia (Jamil, Mohamed, 2011) South Africa (Phihlela, Odunaike, 2012), Italy (Garengo et al., 2005; Taticchi et al., 2008; Cocca, Alberti, 2010; Bianchi et al., 2013), etc.

The views of the researchers on the performance measurement in SMEs differ. There is an opinion that most SMEs apply performance measurement systems passively due to the lack of capital and human resources, severe competition, and because SMEs do not recognize advantages provided by the performance measurement systems (Barnes et al., 1998). Hudsone (2001) emphasizes that companies have to apply measures that are relevant to the size and the needs of an organization. Despite the measurement performance assessment, insufficient attention is paid to the performance measurement in SMEs; most of the research studies are devoted to the application of the performance measurement systems in large enterprises. In many performance measurement research studies, the size of a company is not considered at all (Garengo, Bititci, 2007). Specific parameters, including the financial and non-financial indicators, optionally defined main performance indicators that take into account the common value chain, should be defined as a requirement to be covered by the performance measurement systems, disregarding the size of an enterprise, thus fostering the communication of the results (Kueng et al., 2000).

The performance measurement in SMEs is affected by: limited human resources and capital resources; management capacity; insufficient strategic planning; lack of a management system and formal management processes; an incorrect idea regarding the performance measurement, lack of understanding about its advantages (Garengo et al., 2005).

Companies can focus on the financial and non-financial measures to assess their performance. Massalla (1994) and Monkhouse (1995) consider that SMEs pay more attention particularly to the financial indicators. Along with the development, the traditional performance measurement systems that are based only on the financial indicators gradually are being replaced by the systems that include the non-financial indicators as well (Kaplan, Norton, 1992; 1996b). Some research studies strive further and attempt to assess SMEs performance by adjusting the performance measurement systems to SMEs (Laitinen, Chong, 2006). Regarding the performance measurements, the SMEs depend mainly on the accounting data and financial indicators (Carpinetti et al., 2008); there is a mistaken opinion among the SMEs regarding
It is proposed to classify the performance measurement and management frameworks in accordance with Taticchi’s et al. (2010) classification amended by the author:

- Applications/adaptation of the performance measurement models developed for the large enterprises: Model for quality-based performances (Noci, 1995), Balance Scorecard application to SMEs (Chow et al., 1997; Bergen, Benco, 2004; Yang, 2009; Monte, Fontenete, 2012), Computer Integrated Manufacturing in SMEs (Marri et al., 1998), Activity-based costing in SMEs (Gunasekaran et al., 1999), Quality models in an SME context (McAdam, 2000), Benchmarking of SMEs performance measurement (Monkhouse, 1995; St-Pierre, Delisle, 2006) and Contingency approach to performance measurement (Garengo, Bititci, 2007).

- Development of the specific performance measurement models for SMEs: Customer orientation and performance (Appiah-Adu, Singh, 1998), Computer-based performance measurement in SMEs (Kueng et al., 2000) and A Business Process Improvement framework and Performance Assessment Methodology for SMEs (Khan et al., 2007).

- Integrated performance measurement and management frameworks for SMEs: System for organizational performance measurement (Chennell et al., 2000), Effective performance measurement in SMEs (Hudson et al., 2001a) and Dynamic integrated performance measurement system (Laitinen, 2002).

- Interesting research studies on the performance measurement and management frameworks for SMEs: Performance measurement based on SME owner’s objectives (Jarvis et al., 1999; Watson et al., 2000), Theory and practice in SME performance measurement systems (Hudson et al., 2001b), Indicators for performance measurement in SMEs (Hvolby, Thorstenson, 2001), Practice of performance measurement (Sharma et al., 2005) and a performance measurement model based on the grounded theory approach (Chong, 2008).

SME performance measures should include financial and non-financial measures (Bianchi et al., 2013), comprising three dimensions: competitiveness, financial, and social. Competitiveness dimension is oriented towards the satisfaction of market needs, offering better products/services than competitors do. The aim of the financial dimension is to increase the company’s profitability, supporting future
investments and paying to the shareholders. *Social dimension* has to ensure balance among the investments of the stakeholders (employees, customers, founders, shareholders, state) and the benefits provided them by the company (wages, quality of products/services, dividends, taxes, etc.).

The author, after carrying out the evaluation of the SMEs’ distinctiveness and analyzing the performance measurement and management frameworks for the large and small and medium-sized enterprises, concludes that their evolution demonstrates attempts towards the consolidation of the financial performance perspective and the non-financial performance perspective.

**Conclusions**

The company’s performance can be described as an ability of the company to represent itself to the outside, using the performance indicators that characterize activities and achievements of the company in relation to its goals, and thus creating an overall opinion about the company.

The performance measurement and management frameworks could be arranged in the following groups: classical and dominant performance measurement and management frameworks, holistic and integrated performance measurement and management frameworks, frameworks adapting the Balanced Scorecard approach, and other essential performance measurement and management frameworks.

The SME performance measurement and management frameworks could be arranged in the following groups: application/adaptation of the performance measurement models developed for large enterprises, development of the specific performance measurement models for SMEs, integrated performance measurement and management frameworks for SMEs, and interesting research studies on the performance measurement and management frameworks for SMEs.

On the basis of the evaluation of the SMEs’ distinctiveness and analysis of performance measurement and management frameworks for the large and small and medium-sized enterprises, it can be concluded that their evolution demonstrates attempts towards the consolidation of the financial performance and non-financial performance perspectives.

The research hypothesis is proven to be true, since the understanding of the concept of company’s performance and awareness of the performance measurement and management frameworks provide the companies’ managers with the possibility to assess the company’s measurement and management frameworks and to select the one, which,
in the company manager’s opinion, could enhance an objective evaluation of the company's performance.

References


88 Latgale National economy research


UZŅĒMUMA SNIEGUMA MĒRĪŠANAS UN VADIŠANAS TEORĒTISKIE ASPEKTI

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Kopsavilkums


Pētījuma rezultātā veikta snieguma jēzdiena izpēte, snieguma mērīšanas un vadišanas ietvaru sistematizācija, mazo uzņēmumu snieguma mērīšanas un vadišanas ietvaru sistematizācija. Snieguma mērīšanas un vadišanas ietvarus var iedalīt šādās grupās: klasiskie un dominējošie snieguma mērīšanas un vadišanas ietvari, holistiskie un integrētie snieguma mērīšanas un vadišanas ietvari, Balanced Scorecard pieeju pilnveidojošie ietvari: un citi būtiski snieguma mērīšanas un vadišanas ietvari. Mazo un vidējo uzņēmumu (MVU) snieguma mērīšanas un vadišanas ietvarus var iedalīt šādās grupās: lielājiem uzņēmumiem izstrādāto snieguma mērīšanas modeljā pielietošana/adaptācija, specifisku snieguma mērīšanas modeljā MVU attīstība, integrēti MVU snieguma mērīšanas un vadišanas ietvari un interesanti pētījumi snieguma vadišanas un mērīšanas ietvariem MVU.

Izvērtējot mazo un vidējo uzņēmumu īpatnības un snieguma mērīšanas un vadišanas ietvaru analīzi gan lielajiem, gan arī mazajiem un vidējiem uzņēmumiem var secināt, ka to snieguma evolūcijā novērojama virzība uz finanšu un nefinanšu snieguma perspektīvu apvienošanu.

Atslēgas vārdi: ietvars, vadišana, mērīšana, sniegums.