

# **DETERMINANTS, MEASUREMENT AND MANAGEMENT OF PERFORMANCE IN SMALL AND MEDIUM-SIZED ENTERPRISES**

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**Abstract.** *Small and medium-sized enterprises (SMEs) are considered the backbone of economic growth, as they play a vital role in the economic development of any country, they contribute to the provision of job opportunities and act as suppliers of goods and services to large companies. Despite the role of SMEs in national economies, as well as their importance in promoting competitiveness and employment, the author believes that the SMEs performance determinants and their impact on performance measurement and management have not been sufficiently studied in Latvia. The aim of the research is to explore the SMEs performance determinants and their impact on performance measurement and management. The research is based on the analysis of scientific research papers. General research methods are used in the research: information analysis and synthesis, the logical construction, monographic, data grouping and graphical representation methods. As a result, the impact of the SMEs performance determinants on the measurement and management of SME performance were explored, and the conceptual framework for measuring and managing SME performance was developed.*

**Keywords:** *small and medium enterprises, performance, growth, performance measurement and management.*

**JEL code:** M10, M20.

**Received:** 2 November 2022 **Revised:** 20 November 2022 **Accepted:** 30 November 2022  
**Published:** 19 December 2022

## **Introduction**

At the end of 2020, the economically active SMEs in Latvia accounted for 99.87% of the total number of economically active companies in the market sector. It is important that micro-enterprises are also included in the SME group in Latvia, they made up the largest share or 93.53% of the total number of SMEs in 2020 (*Oficiālās statistikas portāls, 2022*).

SMEs can be described as the catalysts of the future economy. It is necessary to accelerate the growth of SMEs and improve their competitiveness (*Forsman, 2008*). SMEs contribute to regional economic development, create new jobs, provide investment opportunities and create economic capital and the potential necessary for sustainable economic growth (*Koudelková &*

*Svobodová, 2014; Belas et al., 2015*), as well as support socio-economic policies that promote sustainable development (*Todericiu & Stăniț, 2015; Gonçalves et al., 2019*).

SMEs are the driving force of the European economy, they create jobs, contribute to economic growth and ensure social stability. Nine out of every ten companies are SMEs, and SMEs create two out of every three jobs. SMEs also stimulate the spirit of entrepreneurship and innovation across the EU, so they play a vital role in boosting competitiveness and employment (*Eiropas Komisija, 2020*).

Despite the role of SMEs in national economies, as well as their importance in promoting competitiveness and employment, the author believes that the SMEs performance determinants in Latvia are insufficiently studied and revealed.

The research aim is to assess the SMEs performance determinants and their impact on performance measurement and management.

The research tasks:

- 1) to study theoretical aspects of the specific characteristics of SMEs;
- 2) to evaluate the factors determining performance of SMEs;
- 3) to assess the dimensions of SME performance measurement and management frameworks (PMMF).
- 4) develop conclusions and proposals

Research hypothesis – the SMEs performance determinants affect the performance measurement and management in SMEs.

General research methods – information analysis and synthesis, the logical construction method, the monographic, data grouping and graphical representation methods – are used in the research. The research is based on the analysis of scientific research papers.

## **Research results and discussion**

Based on their size and capabilities, the key characteristics of SMEs can be identified; they could be both positive, and negative, and could hinder implementation of a performance measurement and management framework (PMMF).

The main characteristics of SMEs can be divided into two main categories: the external environment and the internal environment. The external environment can be described as the environment where the company operates and it cannot be affected. The external environment can be divided into two main subcategories: markets and customers. The internal environment includes

characteristics the company manager can control, such as resources (both labour and financial) and the way the company is managed (management practices) (Cocca & Alberti, 2010).

Regarding the *external environment*, SMEs operate in highly competitive, uncertain and rapidly changing market conditions (Garengo et al, 2005), and their main objective is to survive in a competitive market (Levy et al., 1999). Creativity and innovation are the main conditions for SMEs to survive in competitive conditions (Machová et al., 2016). It must be admitted that there is no unambiguous opinion regarding the role of innovation in the operation of SMEs. There is an opinion that innovation can become one of the key success factors of SMEs (Ehrenberger et al., 2015), which can help to differentiate the product, beat the competition and attract more customers. B. K. Mabenge et al. (Mabenge et al., 2020) consider that newer and larger companies should be advised to use innovation as an instrument to improve their performance. In contrast, older and smaller companies are advised to be cautious when trying to improve their performance through innovation. The economic, environmental and social dimensions of SMEs' sustainable innovation initiatives are mainly reviewed in the manufacturing sector, offering different indicators used by SMEs to measure and monitor the performance of different sustainable innovation initiatives (Dasgupta, 2021). Despite the fact that the manufacturing sector SMEs make a significant contribution to economic growth, most researches on innovation management in the manufacturing sector are focused on large organizations (Terziovski, 2010).

SMEs usually do not have control or influence in the market, so they need to adapt to market changes (Hudson, 2001; Garengo et al., 2005). Owners and managers of SMEs usually have a good knowledge of the local market and customer needs; customer relations and after-sales services are often more intensive than in large organizations. It is possible for SMEs to concentrate on specific market niches, as it is easier to focus on a specific number of customers and satisfy them with customized products and personalized services (Taticchi et al., 2008b). SMEs rely on a limited range of customers, they are usually closer to their clients and able to develop more personal relationships with them (Machová et al., 2016). Delays in payments by SME customers creates fluctuations in cash flow, which reduces the ability to control the future (Hudson, 2001).

As one of the key problems of the SMEs' *internal environment* and a typical characteristic of SMEs, the insufficiency of resources is emphasized, reviewing the concept of "resources" not only from personnel, i.e.,

management side but also from the point of view of financial stability and security.

SMEs have limited human resources and capital resources, difficulties in ensuring financial stability, insufficient application of information technology, lack of data and legal restrictions also cause problems (*Watts & Bards, 2005; Levy et al., 1999; Madsen, 2015; Garengo, 2009; Garengo & Sharma, 2014*). There is a strong relationship between the entrepreneur's knowledge (level of education, work experience, knowledge of functional requirements, self-confidence) and SME performance (*Omerzel & Antoncic, 2008*). In SMEs, the role of intellectual capital is essential because SMEs have less available material resources compared with larger companies, and thus they rely more on intangible resources (*Demartini & Beretta, 2020*).

Not just employees (*Singh et al., 2008*), but owners as well have limited skills – managers often lack management experience or organizational skills, and this determines weak business strategic planning and human resource management (*Pansiri & Temtime, 2008; Garengo, 2009; Garengo & Sharma, 2014*). New employees are considered an additional cost rather than an investment (*Reijonen & Komppula, 2007*), thus human resources are not a strategic factor (*Melo & Machado, 2013; Jafari-Sadeghi et al., 2020*).

The organizational structure with just a few management levels facilitates mutual relations and simplifies communication processes and provides the manager with a clear understanding of the processes, as well as the opportunity to directly influence employees (*Yusof & Aspinwall, 2000; McAdam, 2000a; 2000b; Wiklund & Wiklund, 1999; Singh et al., 2008; Madsen, 2015; Pekkola et al., 2016*). Managers are often also the owners of the company, thus the control of SME is primarily in the hands of one or a few individuals with a high degree of autonomy and personal authority (*Storey & Skyes, 1996; Pansiri & Temtime, 2008; Garengo et al., 2005*). The lack of time and the ubiquity of the entrepreneur are emphasized, since the owner-manager is a part of every business activity (*Reijonn & Komppula, 2007; Garengo et al., 2005; Olsson, 2011*). SMEs tend to have a lower level of bureaucracy, which allows for faster problem solving and decision making (*Yusof & Aspinwall, 2000; Castka et al. 2004; Murillo & Lozano, 2006; Battaglia et al. 2010*). SMEs are characterized by flexibility, adaptability and the speed with which it is possible to adapt to a changing environment (*Garengo et al., 2005*).

The operation of SME can be significantly influenced by the organizational skills of the owner-manager, as decisions are largely based on the manager's personal skills and intuition, rather than information

analysis. The owner-manager usually applies a personalized management style, following a "react and adapt" philosophy, "firefighting" strategies and the learning by doing approach, he/she focuses on short-term goals, but rarely engages in strategic planning (Kueng, et al., 2000; Hudson et al., 2001b; Garengo et al., 2005; Madsen, 2015). SMEs use a reactive approach, characterized by poor strategic planning and informal decision-making processes. Strategic management and long-term priorities may fall on tomorrow's to-do list when pressing day-to-day operational issues and customer needs arise (Ates et al., 2013).

There is a close relationship between the skills of owner-managers and the financial performance of the company. Higher financial performance is observed in companies when the owner-manager possesses entrepreneurial rather than administrative skills (Wijewardena, et al., 2008). SMEs mainly rely on financial and operational rather than intangible aspects such as innovation, research and development (Bititci et al., 2012; Garengo & Biazzo, 2013), mainly using financial measurements (Madsen, 2015).

Based on the above, the author identifies the main advantages of SMEs:

- the owners of the company are usually also its managers;
- the organizational structure promotes mutual relations and simplifies communication processes in the company;
- a lower level of bureaucracy, easier management and control, and the ability to ensure faster problem solving and decision-making;
- knowledge of the local market and customer needs, flexibility and ability to quickly adapt to market changes;
- operates in specific market niches, offering customers customized products and personalized services.

The main disadvantages of SMEs are:

- the manager's decisions are largely based on the manager's personal skills and intuition rather than information analysis;
- companies operate in limited, i.e., local market;
- high competition, uncertainty and rapidly changing market conditions;
- insufficient financial and labour resources;
- delays in customer payments can lead to financial instability;
- insufficient strategic planning.

The concepts of growth, success and performance are often closely related and are sometimes used as synonyms in business research (Reijonen & Komppula, 2007), for example, financial measurement – profit as an indicator of performance and success. Performance, growth and success are affected by the factors related to the characteristics of the entrepreneur, organization or

environment. It should be noted that success is often measured subjectively, while performance and growth are usually measured more objectively. The growth of SMEs is hindered by limited funding opportunities (*Moscalu et al., 2020*).

There is still a lack of consensus among researchers on how to measure performance (*Watson, 2003*). It follows that until there is a common understanding of what performance actually means to SME owners, efforts to identify the factors associated with SMEs performance and efforts to separate successful entrepreneurs from less successful entrepreneurs will be imprecise. The idea of the academic conceptual model (*Simpson et al., 2012*) predicts that performance measurements in the form of feedback could change the strategic/tactical behaviour of SME owner-managers. The model combines, on the one hand, the concept of the company including characteristics of the entrepreneur and the company and the business environment affecting them and, on the other hand, the company's influence on the key success factors and definitions of success, linking them to performance measurements (financial and non-financial). This model defines the theoretical relationships of SME success.

Most of the identified SME performance factors (*Babakus et al., 2006*) are endogenous in nature, referable to the company's internal environment and include factors such as owner-manager's personal virtues and vices or strengths and weaknesses specific to the company's financial and operational management. On the other hand, exogenous factors (i.e., those outside the company) can create significant constraints and contingencies, and can affect competitiveness and survival.

Understanding of the SME performance can provide guidance to both individual business owners and government tasked with promoting economic growth (N.D., 2014). The compilation of SME performance factors (see Table 1) confirms that the key factors influencing performance are directly related and result from the recognition of the above-mentioned advantages of SMEs and the elimination of shortcomings.

Characteristics of an entrepreneur include such individual factors as the owner-manager's *age, education, management skills, experience and motivation*. In a description of a company, the company's *duration, size, location, industry, organisational culture, internal communication and organizational structure* are reviewed as criteria. Strategic planning, as *a mind map or a documented strategic plan*, is an important condition for successful company management, as it provides an opportunity to follow and evaluate the company's progress towards a previously set goal. Human resources include the *owner-manager's attitude, human resource management practices such as selection, appraisal,*

training, motivation and incentives. Funding as a factor affecting performance of SMEs is characterized by *availability of financial capital, i.e., personal and family funds, bank loans, government support, and other financial sources*. Business networks/ partnerships can contribute to the development of a company both locally and internationally and include *various forms of cooperation and internationalization*. The business environment factor includes *economic, technological, legal, and ecological aspects* affecting the company's operation. As previously mentioned, the role of innovation in the operation of SME is not evaluated unambiguously, nevertheless, *innovation, creativity, product diversification and product market development* are considered within the framework of innovation as a factor affecting performance of SMEs.

**Table 1 Factors affecting performance in small and medium-sized enterprises (Compiled by the author)**

<b>Performance factors</b>	<b>Authors</b>
Entrepreneur	<i>Dobbs &amp; Hamilton (2007); Ahmad &amp; Seet (2009); Fadahunsi (2012); N.D. (2014); Sarwoko &amp; Frisdiantara (2016); Al-Tit et al. (2019); Rodrigues et al. (2021).</i>
Company	<i>Dobbs &amp; Hamilton (2007); Ahmad &amp; Seet (2009); Fadahunsi (2012); N.D. (2014); Sarwoko &amp; Frisdiantara (2016); Al- Tit et al. (2019); Rodrigues et al. (2021).</i>
Strategic planning	<i>Dobbs &amp; Hamilton (2007); Fadahunsi (2012); N.D. (2014); Nuel et al. (2020); Rodrigues et al. (2021).</i>
Human resources	<i>Dobbs &amp; Hamilton (2007); Ahmad &amp; Seet (2009); Fadahunsi (2012); Sarwoko &amp; Frisdiantara (2016); Chikweche &amp; Bressan (2018); Al-Tit et al. (2019); Rodrigues et al. (2021); Nuel et al. (2020);</i>
Funding	<i>Dobbs &amp; Hamilton (2007); Ahmad &amp; Seet (2009); Fadahunsi (2012); Sarwoko &amp; Frisdiantara (2016); Al-Tit et al. (2019); Rodrigues et al. (2021).</i>
Business networks/ partnerships	<i>Dobbs &amp; Hamilton (2007); Fadahunsi (2012); N.D. (2014); Al-Tit et al. (2019); Rodrigues et al. (2021).</i>
Business environment	<i>Dobbs &amp; Hamilton (2007); Fadahunsi (2012); Sarwoko &amp; Frisdiantara (2016); Al-Tit et al. (2019).</i>
Innovation	<i>Ahmad &amp; Seet (2009); N.A. (2014); Alfoqahaa (2018); Nuel et al. (2020); Rodrigues et al. (2021).</i>

The identified obstacles for implementation of the performance measurement system in SMEs (*Papulová et al., 2021*) relate both to the specific characteristics of SMEs and to the factors influencing performance:

- human resources – limited human resources, employees in companies often perform several duties and do not have time for other activities, such as implementation of a performance measurement system;
- managers and their abilities – horizontal organizational structure where the owner/ manager is occupied with operational or management functions and lacks time for other management functions;
- financial resources – limited financial resources make implementation of the performance measurement system more expensive;
- reactive approach – weak strategic planning and informal decision-making processes;
- insufficient formalization of processes – lack of management systems and formal processes increases difficulty of collecting the necessary information for implementation and use of the performance measurement system;
- misperception and misunderstanding of the performance measurement system – performance measurement systems can be implemented and used effectively if the employees of the company perceive its benefits. However, owner-managers of SMEs often do not understand the potential benefits of implementing a performance measurement system and perceive it as an obstacle to organizational flexibility.

Successful implementation of a performance measurement system is not a simple matter and may take several years (*Papulová et al., 2021*).

Despite the significant contribution of SMEs to economic growth, the share of employees, or the superiority of SMEs over large companies, a small number of theoretical and empirical studies have been conducted on the implementation of performance measurement systems in SMEs (*Papulová et al., 2021*). Insufficient attention is paid to the performance measurement in SMEs, the majority of research is focused on the application of the performance measurement system in large companies (*Hudson et al., 2001a, 2001b; Fouad, 2013*), the adaptation of the performance measurement systems to SMEs (*Laitinen & Chong, 2006*); however, performance measurement systems used by large companies are not suitable for SMEs because their operating environment is less complicated and they have fewer resources than large companies (*Gonçalves et al., 2019; Cocca & Alberti, 2010; Garengo et al., 2005; Pekkola et al., 2016*). Many researches on performance measurement do not consider the company's size (*Garengo & Bititci, 2007*), yet implementing PMMS is essential for improving performance regardless of the company's size (*Melnyk et al., 2014; Nudurupati et al., 2016*). The company's size affects the implementation of the performance measurement system, as the practices enabling implementation of performance measurement systems in large companies are



not necessarily the most appropriate for SMEs, and vice versa (Taylor & Taylor, 2014).

In Table 2, the author provides an overview of the characteristics of individual SME performance measurement systems, based on the key dimensions (Garengo et al., 2005) that characterises models of modern performance measurement systems.

**Table 2 Key dimensions of performance measurement and management frameworks for small and medium-sized enterprises**

(Compiled by the author)

Performance measurement and management frameworks	Authors	Strategy alignment	Strategy development	Focus on stakeholders	Balance	Dynamic adaptability	Process orientation	Depth	Breadth	Causal relationship	Clarity and simplicity
System for organizational performance measurement	Chennell et al., 2000	○		●	●		●	●	●		○
Effective performance measurement in SMEs	Hudson et al., 2001a	●	●	●	●	●		○	●	○	●
Dynamic integrated performance measurement system	Laitinen, 2002	○		○	○	○	●		○	●	○
(Benchmarking of SMEs performance	St-Pierre & Delisle, 2006	○			●	●	●			●	○
Performance measurement model based on the grounded theory approach	Chong, 2008	○		○	●					○	●
Integrated approach to performance measurement Systems in SMES	Taticchi et al., 2008a	○	○		●	●	○		○	○	○
Circular methodology of balanced scorecard for SMES	Garengo & Biazzo, 2012.	●	●		○	●			●	●	●
Methodology to develop a performance measurement system in SMES	Chalmeta et al., 2012	●	●	○	●	●	●	●	●	●	○
Measurement Framework to Assess SME Performance	Phihlela et al., 2012	●	●	●	●	●	●		○	●	●

Continuation of the Table 1

Dynamic Performance Management Approach to Evaluate and Support SMEs Competitiveness	<i>Bianchi et al., 2015</i>	●	●	●	●	●	●		●	●	○
Assessment methodology for improving performance in SME's	<i>Ahmad &amp; Alaskar, 2014</i>	○		●	●	●	●	●	●	●	●
Continuous performance measurement for small enterprises	<i>Waśniewski, 2017</i>	●	●	●	●	●		○	●	○	●
Continuous performance measurement for small enterprises	<i>Midovska-Petkoska et al., 2019</i>	●	●	●	●	●	●	●	●	●	●

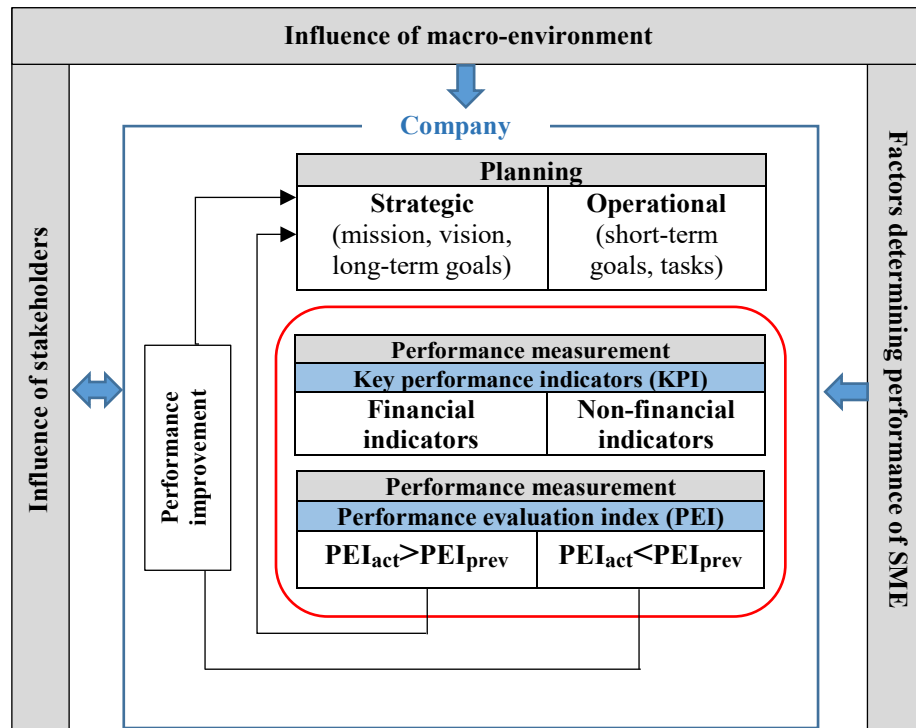
- - fully describes
- - partially describes

The most common feature of the SMEs performance measurement systems analysed is the balance-sheet dimension. This aspect has become important since the creation of the concept of the balanced scorecard system. All models, albeit in different dimensions, reflect the strategic focus of performance measurement, and some also consider the impact of performance measurement on strategy development. The next feature included in all concepts is clarity and simplicity, which relates to the need to inform employees about the principles and the need for performance measurement in an understandable and transparent way. It should be noted that almost all performance measurement systems describe causal relationships between performance and its determinants, which allows the used performance indicators to better meet the company's requirements.

In Figure 1, the author presents the PMMF conceptual framework for manufacturing SMEs, which includes identification and assessment of the factors affecting the company: macro environment, stakeholders, and performance determinants. It should be noted that there is a feedback loop for stakeholders.

The measurement of the company's performance, or key performance indicators (KPI), in general, should include both financial and non-financial indicators, and a performance evaluation index (PEI) should be developed and used for performance evaluation. If the actual performance of the company based on the calculation of PEI is, for example, 7.5 and it is higher than the planned or PEI of the previous period, then it can be assumed that the company has been successful. On the other hand, if the company's actual performance,

based on the PEI calculation, is lower than the planned or PEI of the performance has deteriorated and performance improvement measures should



**Figure 1 Conceptual framework for performance measurement and management of small and medium-sized enterprises**  
(Created by the author)

be taken, evaluating changes in KPI. Performance evaluation, including KPI and PEI, is the most important component of PMMF or the concept of manufacturing industry SMEs.

### **Conclusions and suggestions**

The SMEs performance is closely related to identifying the main advantages of SMEs: the owners of the company are usually also its managers; the organizational structure simplifies communication processes in the company; there is easier management and control, as well as ability to ensure faster problem solving and decision-making and elimination of deficiencies. Managerial decisions are largely based on the manager's personal skills and intuition rather than information analysis. The company operates in a limited, i.e., local market; there is high competition, uncertainty, insufficient strategic planning and rapidly changing market conditions; there is a possible insufficiency of financial and labour resources, etc.

The implementation of PMMF is determined by the key characteristics of SMEs, the factors determining performance: entrepreneur, company, strategic

planning, human resources, funding, business networks/ partnerships, business environment, and innovation. The identified obstacles to the implementation of the performance measurement system in SMEs: human resources, managers and their abilities, financial resources, reactive approach, insufficient formalization of processes, misperception and misunderstanding of the performance measurement system.

The following dimensions should be considered in the development of SME PMMF: strategy development and its alignment, focus on stakeholders, balance, dynamic adaptability, process orientation, depth and breadth, causality, clarity and simplicity.

Owners and managers of manufacturing SMEs are advised to apply the author's conceptual framework for measuring and managing the performance of SMEs in order to more effectively measure and manage the company's performance.



The research was elaborated with financial assistance of EU ESF project No. 8.2.2.0/20/I/005 "To strengthen the Academic Staff of Rezekne Academy of Technology, Ventpils University of Applied Sciences and Vidzeme University of Applied Sciences in the fields of strategic specialization"

## References

1. Eiropas Komisija (2020). *Lietotāja rokasgrāmata par MVU definīcijas piemērošanu*. <https://ec.europa.eu/docsroom/documents/42921/attachments/1/translations/lv/renditions/pdf>
2. Ahmad, M.M., & Alaskar, O. (2014). Development of assessment methodology for improving performance in SME's. *International Journal of Productivity and Performance Management*, 63(4), 477 – 498. <http://dx.doi.org/10.1108/IJPPM-06-2013-0108>
3. Ahmad, N.H., & Seet, P-S. (2009). Understanding business success through the lens of SME founder-owners in Australia and Malaysia. *International Journal of Entrepreneurial Venturing*, 1(1), 72-87.
4. Alfoqahaa, S. (2018). Critical success factors of small and medium-sized enterprises in Palestine. *Journal of Research in Marketing and Entrepreneurship*, 20(2), 170-188. <https://doi.org/10.1108/JRME-05-2016-0014>
5. Al-Tit, A.A., Omri, A., & Euch, J. (2019). *Critical Success Factors of Small and Medium-Sized Enterprises in Saudi Arabia: Insights from Sustainability Perspective*. *Administrative Sciences*. <https://doi.org/10.3390/admsci9020032>
6. Ates, A., Garengo, P., Cocca, P., & Bititci, U. (2013). The development of SME managerial practice for effective performance management. *Journal of Small Business*

- and Enterprise Development, 20(1), 28-54.  
<https://doi.org/10.1108/14626001311298402>
7. Babakus, E., Yavas, U., & Haahti, A. (2006). Perceived uncertainty, networking and export performance: A study of Nordic SMEs. *European Business Review*, 18(1), 4-13.  
<https://doi.org/10.1108/09555340610639815>
  8. Battaglia, M., Bianchi, L., Frey, M., & Iraldo, F. (2009). An Innovative Model to Promote CSR among SMEs Operating in Industrial Clusters: Evidence from an EU Project. *Corporate Social Responsibility and Environmental Management*, 17, 133-141.
  9. Belas, J., Bilan, Y., Demjan, V., & Sipko, J. (2015). Entrepreneurship in SME segment: case study from the Czech Republic and Slovakia. *Amfiteatru Economic Journal*, 17(38), 308-326.
  10. Bianchi, C., Cosenz, F., & Marinkovic, M. (2015). Designing dynamic performance management systems to foster SME competitiveness according to a sustainable development perspective: empirical evidences from a case-study. *International Journal of Business Performance Management*, 16(1), 84-108. DOI: 10.1504/IJBPM.2015.066042
  11. Bititci, U. S., Garengo, P., Dörfler, V., & Nudurupati, S. S. (2012). Performance measurement: challenges for tomorrow. *International Journal of Management Reviews*, 14(3), 305-327. <https://doi.org/10.1111/j.1468-2370.2011.00318.x>
  12. Castka, P., Balzarova, M. A., Bamber, C. J., & Sharp, J.M. (2004). How Can SMEs Effectively Implement the CSR Agenda? A UK Study Perspective. *Corporate Social Responsibility and Environmental Management*, 11, 140-149.  
<https://doi.org/10.1002/csr.62>
  13. Chennell, A.F., Dransfield, S.B., Field, J.B., Fisher, N.I., Saunders, I.W & Shaw, D.E. (2000). OPM®: A system for organisational performance measurement. *In conference proceedings performance measurement*, Cranfield University, 96.-103.
  14. Chikweche, T., & Bressan, A. (2018) A systematic review of future research challenges and prospects of organizational learning research in small medium size enterprises, *Journal of Small Business & Entrepreneurship*, 30(2), 175-191,  
<https://doi.org/10.1080/08276331.2017.1362523>
  15. Chong, H.G. (2008). Measuring performance of small-and-medium sized enterprises: the grounded theory approach. *Journal of Business and Public Affairs*, 2(1), 1.-10.  
<https://ssrn.com/abstract=3542952>
  16. Cocca, P., & Alberti, M. (2010). A framework to assess performance measurement systems in SMEs. *International Journal of Productivity and Performance management*, 59(2), 186.-200. <https://doi.org/10.1108/17410401011014258>
  17. Dasgupta, M. (2021). Sustainable innovation initiatives by small and medium enterprises: a systematic literature review. *Journal of Small Business & Entrepreneurship*, <https://doi.org/10.1080/08276331.2021.1898177>
  18. Demartini, M.C., & Beretta, V. (2020). Intellectual capital and SMEs' performance: A structured literature review. *Journal of Small Business Management*, 58(2), 288-332,  
<https://doi.org/10.1080/00472778.2019.1659680>
  19. Dobbs, M., & Hamilton, R.T. (2007). Small business growth: recent evidence and new directions. *International Journal of Entrepreneurial Behavior & Research*, 13(5), 296-322. <https://doi.org/10.1108/13552550710780885>

20. Ehrenberger, M., Koudelkova, P., & Strielkowski, W. (2015). Factors influencing innovation in small and medium enterprises in the Czech Republic. *Periodica Polytechnica. Social and Management Sciences*, 23(2), 73-83. doi: 10.3311/PPso.7737
21. Fadahunsi, A. (2012). The Growth of Small Businesses: Towards A Research Agenda. *American Journal of Economics and Business Administration*, 4(1), 105-115. <https://doi.org/10.3844/ajebasp.2012.105.115>
22. Forsman, H. (2008). Business development success in SMEs: a case study approach. *Journal of Small Business and Enterprise Development*, 15(3), 606 – 622. <https://doi.org/10.1108/14626000810892382>
23. Fouad, M. A. A. (2013). Factors affecting the performance of small and medium enterprises (SMES) in the manufacturing sector of Cairo, Egypt. *International Journal of Business and Management Studies*, 5(2), 157-166. <https://dergipark.org.tr/en/pub/ijbms/issue/26065/274584>
24. Garengo, P. (2009). A performance measurement system for SMEs taking part in Quality Award Programmes. *Total Quality Management*, 20(1), 91-105. <https://doi.org/10.1080/14783360802614307>
25. Garengo, P., & Biazzo, S. (2012). Unveiling Strategy in SMEs Through Balanced Scorecard Implementation: A Circular Methodology. *Total Quality Management & Business Excellence*, 23(1), 79–102. <https://doi.org/10.1080/14783363.2011.637800>
26. Garengo, P., & Biazzo, S. (2013). From ISO quality standards to an integrated management system: an implementation process in SME. *Total Quality Management and Business Excellence*, 24(3), 310-335. <https://doi.org/10.1080/14783363.2012.704282>
27. Garengo, P., & Bititci, U. (2007). Towards a contingency approach to performance measurement: an empirical study in Scottish SMEs. *International Journal of Operations & Productive Management*, 27(8), 802-825. <https://doi.org/10.1108/01443570710763787>
28. Garengo, P., & Sharma, M.K. (2014). Performance measurement system contingency factors: a cross analysis of Italian and Indian SMEs. *Production Planning and Control*, 25(3), 220-240. <https://doi.org/10.1080/09537287.2012.663104>
29. Garengo, P., Biazzo, S., & Bititci, U.S. (2005). Performance measurement systems in SMEs: A review for a research agenda. *International Journal of Management Reviews*, 7(1), 25–47. <https://doi.org/10.1111/j.1468-2370.2005.00105.x>
30. Gonçalves, J. M., Ferreira, F. A. F., Ferreira, J. J. M., & Farinha, L. M. C. (2019). A multiple criteria group decision making approach for the assessment of small and medium-sized enterprise competitiveness. *Management Decision*, 57(2), 480–500. <https://doi.org/10.1108/MD-02-2018-0203>
31. Hudson, M. (2001). *Introducing integrated performance measurement into small and medium sized enterprises*. PhD thesis, University of Plymouth, Plymouth
32. Hudson, M., Lean, J., & Smart, P.A. (2001a). *Improving control through effective performance measurement in SMEs*. *Production Planning & Control: The Management of Operations*, 12(8), 804-813. <https://doi.org/10.1080/09537280110061557>
33. Hudson, M., Smart, A., & Bourne, M. (2001b). Theory and practice in SME performance measurement systems. *International Journal of Operations & Production Management*, 21(8), 1096 – 1115. <https://doi.org/10.1108/EUM0000000005587>

34. Jafari-Sadeghi, V., Dutta, D.K., Ferraris, A., & Del Giudice, M. (2020). Internationalisation business processes in an under-supported policy contexts: evidence from Italian SMEs. *Business Process Management Journal*, 26(5), 1055-1074. <https://doi.org/10.1108/BPMJ-03-2019-0141>
35. Koudelková, P., & Svobodová, P. (2014). Knowledge creation & sharing as essential determinants of SMEs innovation. *International Economics Letters*, 3(1), 12-20.
36. Kueng, P., Meier, A., & Wettstein, T. (2000). Computer-based Performance Measurement in SMEs: Is there any option? *1<sup>st</sup> International Conference on Systems Thinking in Management*, 318.-323.
37. Laitinen, E.K. (2002). A dynamic performance measurement system: evidence from small Finish technology companies. *Scandinavian Journal of Management*, 18(1), 65-99. [https://doi.org/10.1016/S0956-5221\(00\)00021-X](https://doi.org/10.1016/S0956-5221(00)00021-X)
38. Laitinen, E.K., & Chong, G. (2006). How do Small Companies Measure Their Performance? *Problems and Perspectives in Management*, 4(3), 49-68.
39. Levy, M., Powell, P., & Galliers, R. (1999). Assessing information systems strategy development frameworks in SMEs. *Information & Management*, 35(5), 247-261. [https://doi.org/10.1016/S0378-7206\(99\)00020-8](https://doi.org/10.1016/S0378-7206(99)00020-8)
40. Mabenge, B.K., Ngorora-Madzimure, G.P.K., & Makanyeza, C. (2020). Dimensions of innovation and their effects on the performance of small and medium enterprises: the moderating role of firm's age and size. *Journal of Small Business & Entrepreneurship*, <https://doi.org/10.1080/08276331.2020.1725727>
41. Machová, R., Huszárík, E.S., & Šimonová, M. (2016). Selected aspects of innovation policy for small and medium sized enterprises, *Journal of International Studies*, 9(2), 219-232. DOI: 10.14254/2071-8330.2016/9-2/17
42. Madsen, D. Ø. (2015). The Balanced Scorecard in the Context of SMEs: A Literature Review. *Review of Business Research*, 15(3), 75-86,. <https://ssrn.com/abstract=2673096>
43. McAdam, R. (2000a). Quality models in an SME context: A critical perspective using a grounded approach. *International Journal of Quality & Reliability Management*. 17(3), 305 - 323. <https://doi.org/10.1108/02656710010306166>
44. McAdam, R. (2000b). The implementation of re-engineering in SMEs: a grounded study, *International Small Business Journal*, 18(4), 29-45. <https://doi.org/10.1177/0266242600184002>
45. Melnyk, S.A., Bititci, U., Platts, K., Tobias, J., & Andersen, B. (2014). Is performance measurement and management fit for the future? *Management Accounting Research*, 25(2), 173-186, <https://doi.org/10.1016/j.mar.2013.07.007>
46. Melo, P.R.N., & Machado, C.F. (2013). Human resource management in small and medium enterprises in Portugal: rhetoric or reality? *International Journal of Entrepreneurship and Small Business*, 20(1), 117-134. DOI: [10.1504/IJESB.2013.055696](https://doi.org/10.1504/IJESB.2013.055696)
47. Midovska- Petkoska, M., Odzaklieska, D., & Lazaroski, S. (2019). Designing an Integrated Framework for Measuring Organizational Performance in the Companies of the Food Industry in the Republic of North Macedonia. *Proceedings of the 24<sup>th</sup> International Scientific Conference Strategic Management and Decision Support Systems in Strategic Management*. [https://doi.org/10.46541/978-86-7233-380-0\\_52](https://doi.org/10.46541/978-86-7233-380-0_52)

48. Moscalu, M., Girardone, C., & Calabrese, R. (2020). SMEs' growth under financing constraints and banking markets integration in the euro area. *Journal of Small Business Management*, 58(4), 707-746, <https://doi.org/10.1080/00472778.2019.1668722>
49. Murillo, D., & Lozano, J.M. (2006). SMEs and CSR: An Approach to CSR in their Own Words. *Journal of Business Ethics*, 67, 227-240. DOI: [10.1007/s10551-006-9181-7](https://doi.org/10.1007/s10551-006-9181-7)
50. N.D. (2014). Ten top tips for small to medium enterprise (SME) success: 21st century entrepreneurs are profiting from the SME owner-manager model. *Strategic Direction*, 30(2), 14 - 17. <https://doi.org/10.1108/SD-02-2014-0005>
51. Nudurupati, S.S., Tebboune, S., & Hardman, J. (2016). Contemporary performance measurement and management (PMM) in digital economies. *Production Planning and Control*, 27(3), 226-235. <https://doi.org/10.1080/09537287.2015.109261>
52. Nuel, O.I.E., Ezimma K.N., & Pat, A. (2020). Critical success factors for SMEs performance: empirical evidence. *International Journal of Advanced Academic Research*, 6(12), DOI: [10.46654/ij.24889849.s6122](https://doi.org/10.46654/ij.24889849.s6122)
53. Oficiālās statistikas portāls (2022). *Tirgus sektora ekonomiski aktīvi uzņēmumi sadalījumā pa uzņēmumu lieluma grupām pēc nodarbināto skaita un galvenajiem darbības veidiem (NACE 2. red.)*. [https://data.stat.gov.lv/pxweb/lv/OSP\\_PUB/START\\_ENT\\_UZ\\_UZS/UZS030](https://data.stat.gov.lv/pxweb/lv/OSP_PUB/START_ENT_UZ_UZS/UZS030)
54. Olsson, E. (2011). *Small Firms are Not Little Big Firms: A Study of Corporate Social Responsibility in Swedish Small- and Medium-Sized Enterprises*. Lund University Center for Sustainability Studies, Lund, Sweden.
55. Omerzel, D.G., Antoncic, B. (2008). Critical entrepreneur knowledge dimensions for the SME performance. *Industrial Management & Data Systems*, 108(9), 1182 - 1199. <https://doi.org/10.1108/02635570810914883>
56. Pansiri, J., & Temtime, Z.T. (2008). Assessing managerial skills in SMEs for capacity building. *Journal of Management Development*, 27(2), 251 - 260. <https://doi.org/10.1108/02621710810849362>
57. Papulová, Z., Gažová, A., Šlenker, M., & Papula, J.,(2021). Performance Measurement System: Implementation Process in SMEs. *Sustainability*, 13(9), 1-19. <https://doi.org/10.3390/su13094794>
58. Pekkola, S., Saunila, M., & Rantanen, H. (2016). Performance measurement system implementation in a turbulent operating environment. *International Journal of Productivity and Performance management*, 65(7), 947-958. <https://doi.org/10.1108/IJPPM-01-2015-0018>
59. Phihlela, T.R., Odunaike, S.A., & Olugbara Durban, O.O. (2012). A Measurement Framework to Assess SME Performance. *Proceedings of the Information Systems Educators Conference*, New Orleans Louisiana, USA, 29, 1.-9.
60. Reijonen, H., & Komppula, R. (2007). Perception of success and its effect on small firm performance. *Journal of Small Business and Enterprise Development*, 14(4), 689-701. <https://doi.org/10.1108/14626000710832776>
61. Rodrigues, M., Franco, M., Silva, R., & Oliveira, C. (2021). Success Factors of SMEs: Empirical Study Guided by Dynamic Capabilities and Resources-Based View. *Sustainability*. 13(21):12301. <https://doi.org/10.3390/su132112301>
62. Sarwoko, E., & Frisdiantara, C. (2016). Growth Determinants of Small Medium Enterprises (SMEs). *Universal Journal of Management*, 4(1), 36-41. DOI:[10.13189/UJM.2016.040105](https://doi.org/10.13189/UJM.2016.040105)



63. Simpson, M., Padmore, J., & Newman, N. (2012). Towards a new model of success and performance in SMEs. *International Journal of Entrepreneurial Behavior & Research*, 18(3), 264-285. <https://doi.org/10.1108/13552551211227675>
64. Singh, R.K., Garg, S.K., & Deshmukh, S.G. (2008). Strategy development by SMEs for competitiveness: a review. *Benchmarking: An International Journal*, 15(5), 525 – 547. <https://doi.org/10.1108/14635770810903132>
65. Storey, D., & Skyes, N. (1996). Uncertainty, innovation and management. in Burns, P. and Dewhurst, J. (Eds), *Small Business and Entrepreneurship*, Macmillan Press, NY, 73-93. [https://doi.org/10.1007/978-1-349-24911-4\\_4](https://doi.org/10.1007/978-1-349-24911-4_4)
66. St-Pierre, & J., Delisle, S. (2006). An expert diagnosis system for the benchmarking of SMEs performance. *Benchmarking: An International Journal*, 13(1/2), 106-119. <https://doi.org/10.1108/14635770610644619>
67. Taticchi P., Balachandran K.R., Botarelli M., & Cagnazzo L. (2008a). Performance measurement management for small and medium enterprises: an integrated approach. *Journal of Applied Management Accounting Research*, 6 (2), 57–71.
68. Taticchi, P., Cagnazzo, L., Botarelli, M. (2008b). Performance Measurement and Management (PMM) for SMEs: a literature review and a reference framework for PMM design. *Annual Conference La Jolla*.
69. Taylor, A., Taylor, M. (2014). Factors influencing effective implementation of performance measurement systems in small and medium-sized enterprises and large firms: a perspective from contingency theory. *International Journal of Production Research*, 52(3), 847-866. <https://doi.org/10.1080/00207543.2013.842023>
70. Terziovski, M. (2010). Innovation practice and its performance implications in small and medium enterprises (SMEs) in the manufacturing sector: a resource-based view. *Strategic Management Journal*, 31(8), 892-902. <https://doi.org/10.1002/smj.841>
71. Todericiu, R., & Stăniț, A. (2015). Intellectual Capital – The Key for Sustainable Competitive Advantage for the SME's Sector. *Procedia Economics and Finance*, 27, 676–681. [https://doi.org/10.1016/S2212-5671\(15\)01048-5](https://doi.org/10.1016/S2212-5671(15)01048-5)
72. Waśniewski, P. (2017). A performance measurement system for small enterprises – a case study. *Zeszyty Teoretyczne Rachunkowości*, 93(149), 211- 233. DOI: 10.5604/01.3001.0010.3197
73. Watson, J. (2003). Failure rates for female-controlled businesses: are they any different? *Journal of Small Business Management*, 41(3), 262–277.
74. Watts, T., & McNair-Connolly, C.J. (2012). New Performance Measurement and Management Control Systems. *Journal of Applied Accounting Research*, 13(3), 226.-241. <https://doi.org/10.1108/09675421211281308>
75. Wijewardena, H., Nanayakkara, G., & Zoysa, A.D. (2008). The owner/manager's mentality and the financial performance of SMEs. *Journal of Small Business and Enterprise Development*, 15(1), 150 – 161. <https://doi.org/10.1108/14626000810850892>
76. Wiklund, H., & Wiklund, P.S. (1999). A collaboration concept for TQM implementations in small and medium sized enterprises. *International Journal of Applied Quality Management*, 2(1), 101-115. DOI: 10.1016/s1096-4738(99)80006-2
77. Yusof, S.M., & Aspinwall, E. (2000). A conceptual framework for TQM implementation for SMEs. *The TQM Magazine*, 12(1), 31–37. <https://doi.org/10.1108/09544780010287131>