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Is Performance Measurement System Going Towards Sustainability in SMEs?

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Abstract

Small and medium enterprises (SMEs) are important to maintain economic growth. However, how to sustain their performance in the long term is a big challenge. As for today's SMEs it is fundamental to manage their social and environmental responsibility, sustainability reporting is a common practice to respond to stakeholders' expectations. The implementation of new theoretical performance measurement methods passes over with rational usage of internal resources in SMEs. This paper aimed at providing a systematic literature review of scientific works on performance measurement system (PMS) and sustainability reporting (SR) in SMEs, applying content analysis, in order to highlight literature gaps and to contribute at mapping, consolidating and developing a research agenda for the integration of SR and PMS in SMEs. The literature review shows that there is a clear need to stimulate the development of PMS in SMEs by expanding its functions, adopting a structure suitable for sustainability reporting.

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Introduction

Sustainability reporting has become an increasingly common practice in companies' attempts to respond to expectations and criticisms from the stakeholders who want to be better informed about the social and environmental impacts of business activities (Boiral, 2013). Traditional measurement and management systems are not designed for a balanced view of financial, environmental and social metrics. On this basis, the challenge for

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performance measurement system (PMS) is to supplement operational and strategic levels with useful tools and sustainability can play the role of “trigger” for change in PMS (Leite, Van Aken, Martins, 2012).

Small and medium enterprises (SMEs) are important to maintain strong economic growth. However, how to sustain their performance in the long term is a big challenge (Ates et al., 2013). For SMEs, the adoption of advanced managerial practices in the main business processes is a key to the successful improvement of their business performance and competitiveness. According to position of SMEs, the implementation of new theoretical performance measurement methods passes over with rational usage of internal resources. Therefore, there is a clear need to stimulate the development of performance measurement system in SMEs considering the factors characterising these companies (Fuller-Love, 2006). Thus, there is a strong interest to search for new possibilities in developing performance measurement system in SMEs. A number of well-recognised characteristics differentiate SMEs from larger organisations (Gilmore et al., 2001), inevitably affecting performance measurement process. Enderle (2004) points out that, overall, sustainability reporting standards or management systems might be inappropriate for small organisations because such standards have been developed with great reference at large businesses. Besides, from the SMEs perspective, the possible ineffectiveness of informal tools might be explained by the requirement of a greater investment in term of time, funds and energy. By disclosing the relationship between PM and SR Kloviene and Speziale (2014 a, b) highlighted the literature gaps in several areas, but a special focus was paid on PM and SR in SMEs. According to this aspect, there is a need to disclose the possible changes in PMS in order to reduce undue complexity and to keep it reactive and useful as a system for SMEs. This paper examines the fundamentals of PMS and SR in SMEs, in order to identify the characteristics that are seen as necessary and/or sufficient for the existence of PMS (Franco-Santos et al., 2007; Choong, 2014) and to categorise the contents of the articles in terms of common characteristics based on systems approach (Choong, 2014).

This paper aimed at providing a systematic literature review in order to find out the state of the art in the fundamentals of PMS and SR in SMEs, to provide literature gaps, and to contribute at mapping, consolidating and developing a research agenda for the integration of SR and PMS in SMEs.

1. Methodology and statistical analysis of selected papers

Literature review is defined as primarily qualitative synthesis and a fundamental step within the overall research process, which should be conducted in a rigorous, transparent and systematic way, in order to guarantee the traceability of the research. In this respect, content analysis offers a sound methodological frame for leading a high quality literature review and can be seen as a four-step process (Seuring and Gold, 2012): (1) Material collection; (2) Descriptive analysis; (3) Category selection; (4) Material evaluation.

With regard to material collection, our literature sample consists of English-speaking peer-reviewed papers on the performance measurement system and sustainability (or social and environmental) reporting in small and medium enterprises, covering the fifteen-year-period from January 2000 to September 2014 (excluding the papers in press). The literature search was based on the following pair of keywords, jointly found in title, keywords or abstract: (1) “performance measurement”, “measurement system”, “measuring system”, “measure system”, “performance measuring”, “performance system” and (2) “sustainability reporting”, “sustainability report”, “social and environmental reporting”, “triple bottom line”, “social reporting”, “environmental reporting” both crossed with “SME”, “small and medium enterprise”, “small enterprise”, “medium enterprise”. In total we searched 48 combinations. The separate search for performance measurement in SMEs and sustainability reporting in SMEs could be explained by the purpose to discover the most common content of each area and only then to identify the possible integration points, areas. The keyword search was carried out in major databases: Academic Search Complete and Business Source Complete (EBSCO), Scopus and Science Direct (Elsevier), Emerald, and Proquest Central. We found 81 documents (80 papers published in peer-reviewed journals and one book chapter), 75 of which (74 papers and one book chapter) are deemed relevant in order to answer our research question.

Dividing the observed time span in three-year periods, we notice that prior to 2002 the presence of papers on these subjects is almost irrelevant (only two papers on PM in SMEs), while it has rapidly grown in the following years and especially from 2012 onwards.

As the second step, a descriptive analysis was conducted by providing information about the distribution of the papers, both on PMS and on SR, across various journals and presenting the analytic findings. The third step is

represented by the selection of the following categories of analysis: country and sector/industry of the investigated organizations. Finally, all available peer-reviewed papers have been carefully reviewed looking at PMS from systems approach and fundamental characteristics point of view, which can be categorized in terms of: (1) systems aspects of PMS; (2) measurement and performance aspects of PMS; (3) features of PMS; (4) stakeholders of PMS; (5) communication and information aspects of PMS and (6) management aspects of PMS (Choong, 2014). The first fundamental refers to the question: “Is the PM actually a system?” The second fundamental prescribes performance measurement as an improvement in meeting set targets (goals). The third fundamental - the features of PMS - consists of data (variables), measuring (measurement) system and the underlying infrastructure (methods) used for measurement (Franco-Santos et al., 2007). The fourth fundamental refers to internal and external stakeholders. The fifth fundamental refers to reporting, decision-making, feed-forward and feedback processes. The sixth fundamental prescribes that performance measurement is aimed towards a more effective management (Choong, 2014).

2. Findings and research agendas

The results of the analysis are based on the selected papers concerning all fundamentals of PMS in SMEs. The results and outcomes of literature review are the identification of practical applications problems and research gaps and a proposal of research opportunities. The proposed directions for future research are based on the identified gaps and the RAs are based on the six key fundamentals of PMS and SR in SMEs (see Fig. 1).

Moreover, much of the theoretical and practical researches in the literature on PMS within the context of SMEs are covering different context and area of usage. This paper manages to find many common areas of analysis with the purpose to create theoretical usefulness and indicate the most important areas for future researches, mainly research agendas.

Starting from the first fundamental, which refers to the question “Is the PM actually a system?”, 12 out of 49 (24%) selected papers describe the PMS as a system but from different point of views (Cocca and Alberti, 2010; Garengo, Biazzo, Bititci, 2005; Garengo, 2009; Gadenne and Sharma, 2009; Giovannoni and Maraghini, 2013; Taylor and Taylor, 2014). This suggests that there is no formal structure, framework or concept of PM as a system for SMEs. There is a possible set of content units - sub-systems - (instruments, functions or processes) that could be selected according to the specific purposes of an organisation. Looking at the SR, 5 out of 26 selected papers (19%) present SR as a part of a system or framework. According to literature analysis (Burke and Gaughran, 2007; Wahid, 2013; Staniškis, Arbačiauskas, Varžinskas, 2012), it could be stated that PM can expand its concept of PMS by integrating it with all management systems. Thus: **RA1: How SR could be framed within the PMS?**

Analysing the second fundamental, 37 out of 49 selected papers (76%) present different directions and possibilities to improve the performance measurement process or approach in SMEs or consider the usage of performance measurement in SMEs (Gomes and Yasin, 2011; Molnár and Dolinsky, 2013; Ramos et al., 2013; Anggadwita and Mustafid, 2014; Kantabutra, 2014; Olaru et al., 2014; Rahman and Hussain, 2014; Pekkola, Saunila and Ukko, 2013, 2014; Chalmeta, Palomero, Matilla, 2012). However, there is no final or general directions that explain and help to use performance measurement in the most effective and efficient manner in SMEs. Looking at sustainability reporting, 8 out of 26 selected papers (31%) focus on a process for setting indicators and creating sustainable value (Bos-Brouwers, 2010; Gelbmann, 2010). Thus: **RA2: How PM could help to improve social and environmental performance in the most effective and efficient manner in SMEs?**

Furthermore, in this paper, the features of PMS are identified within the context of SMEs and, in 30 out of 49 selected papers (61%), they are understood as data/variables (indicators/metrics/measures), measuring (measurement) system, and the underlying infrastructure (methods) used for measurement (Isaksson and Garvare, 2003; Rao et al., 2006; Ciemleja and Lace, 2011; Clarke - Sather et al., 2011; Rahman and Hussain, 2012; Molnár and Dolinsky, 2013; Kantabutra, 2014; Olaru et al., 2014). The implementation of different measurement features could be ensured using performance measurement methods. Also, the use of non-financial measures in SMEs shows the diversity in performance goals. By comparing the results of the second and the third fundamentals, it could be stated that indicators/metrics/measures could be used as a tool to evaluate if targets are met. This suggests that a clear relationship between goals/objectives, measurement and measures could be identified. Since performance goals need to be effectively implemented, if selected indicators/metrics/measures reflected set goals, performance

measurement could help to meet them. Looking at sustainability reporting, 9 out of 26 selected papers (35%) focus on the main variables that influence SR or on measurements and indicators, infrastructures, and methods for SR (Beckers, Marz, Kolbe, 2013; Scagnelli, Corazza, Cisi, 2013). Thus: **RA3: What are the features to measure social and environmental performance in SMEs?**

According to the fourth fundamental, it could be stated that there is no final agreement about the stakeholders of PMS. The analysis of 9 out of 49 selected articles (18%) shows that they could be classified into internal and external users. Traditionally, PMS has the purpose to demand information for internal users, but the growing awareness of customers and the society have prompted their demand for more information concerning organizations (Gadenne and Sharma, 2009; Tan and Smyrniotis, 2011). As SMEs need to be more open by supplying information for external stakeholders, PMS should expand its content and functions by providing wider information suitable to report to external stakeholders. Looking at sustainability reporting, 4 out of 26 selected papers (15%) analyse the impact of SR on the stakeholders of SMEs, mainly as an area of improvement to better meet their needs (Jenkins and Karanikola, 2014). Thus: **RA4: How to adapt and expand the content and functions of PMS to the needs of SMEs stakeholders?**

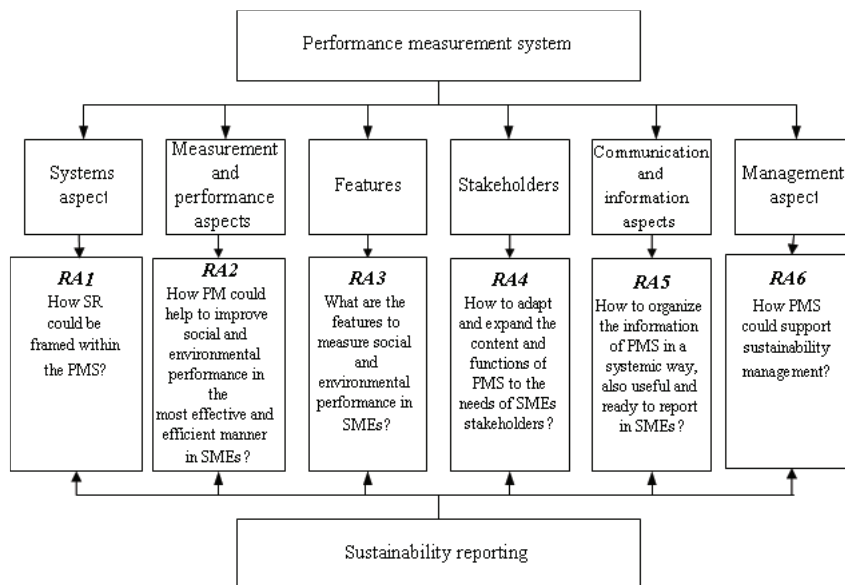


Fig. 1. The research agendas (RA) for PMS and SR in SMEs.

According to the fifth fundamental, in 12 out of 49 selected papers (24%) communication and information issues are discussed. Since the PMS researchers have not conceptualised the usage of PMS information, only some main directions could be generalised, such as strategic planning decisions, corporate decision-making, feedback that could modify the strategic/tactical behaviour of the SMEs and – the most recent and the most important – the source to prepare sustainability reports or even to ensure a sustainability evaluation and reporting system in SMEs (Simpson, Padmore, Newman, 2012; Rahman and Hussain, 2012; Ramos et al., 2013; Scagnelli, Corazza, Cisi, 2013). This suggests that there is a gap in SMEs in understanding and using performance measurement information for communication purposes, as a possible tool to report results to the stakeholders. Looking at sustainability reporting, 11 out of 26 selected papers (42%) investigate SR mainly as a tool of information and communication. Thus: **RA5: How to organise the information of PMS in a systemic way, also useful and ready to report in SMEs?**

Finally, 34 out of the 49 selected papers (69%) indicate that performance measurement is aimed to a more effective management (Saunila and Ukko, 2013; Saunila, Pekkola, Ukko, 2014; Anggadwita and Mustafid, 2014; Molnár and Dolinsky, 2013; Ramos et al., 2013). According to this aspect, it could be stated that performance

measurement and management in SMEs are closely linked. Also, the integrated performance measurement systems could help to achieve organisational integration and suggests potential ways to overcome the challenges of management process in order to enhance long - term success for SMEs. On the other hand, 5 out of 26 selected papers (19%) adopt the perspective of management, presenting a possible framework for sustainability management, showing the relationships with environmental management and evaluation systems, or focusing on the need to improve environmental management accounting (Burke and Gaughran, 2007; Gallucci, Lagioia, Dimitrova, 2009). Thus: **RA6: How PMS could support sustainability management?**

Conclusions

This paper finds that the field of PMS is broadly analysed in the context of SMEs, but there is no general structure or framework for the usage of PMS in the most effective and efficient manner in SMEs. On the other hand, the field of SR is not so broadly analysed in the context of SMEs and mostly researches were developed in recent years. This shows the importance of the research area. Therefore, there is a clear need to stimulate the development of performance measurement system in SMEs by expanding its functions, adapting its structure, focusing on the most important issues. In this regard, future researches are required to disclose the possible changes in PMS in order to reduce undue complexity and to keep it reactive and useful as a system. This could help to attain the sustainable performance, as SMEs need to translate their overall strategy into specific practices for each identified key performance area and to specify measurement indicators to assess the actual achievement of these practices.

The results of this study contribute to the existing literature by presenting the current state of developments and researches about PMS and SR in SMEs and by providing research agendas for a possible integration of SR into PMS in SMEs, on which future research can be built.

Throughout this literature review, some limitations are raised, firstly, when keywords were selected. The concept of performance measurement system was disclosed only by its main function – to measure. Performance measurement concept also could be disclosed according to its content, tools and other functions using further keywords, such as strategy, decision-making, planning, control or Balanced Scorecard (BSC). Secondly, the search was fulfilled in a limited number of databases – Academic Search Complete and Business Source Complete (EBSCO), Scopus and Science Direct (Elsevier), Emerald, and Proquest Central. Lastly, not all selected papers are available to be downloaded, leading to narrower content analysis.

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