Performance Measurement and Formalization in Small and Medium Sized Enterprises: A Systematic Literature Review

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Abstract

Performance measurement (PM) has been recognised as one of the main managerial processes used to enable organisation alignment, clarity, and achievement of short and long-term objectives. Given the important role of Small and Medium Sized Enterprises (SMEs) in the development and growth of national economies, scholars across the management domain have emphasised the importance of providing these organisations with systems and processes that could facilitate their growth and survival. As such, few studies have focused on utilising PM in SMEs. Research stresses the difficulties and issues of designing, implementing, and utilising performance measurement in SME, yet finding a solution has been a point of contention among scholars and practitioners. Also, despite the potential benefits of PM, authors have emphasized that SMEs rely extensively on informal processes and the use of PM systems could make them too rigid, thus hindering their flexibility and innovative capabilities. Many frameworks and methods to efficiently implement PM in SMEs have been proposed, yet the take up of PM in SMEs remains low. We take notice that the PM literature has not been able to progress at the same rate as other research in SMEs. In this paper, we review research into performance measurement in SMEs, aiming to better understand how PM has been studied in this context and whether this has affected the success of proposed PM frameworks and implementation methods in these organisations. We identify existing themes, provide a discussion around the limitations of PM literature, and close with suggestions for future research.

Keywords: Performance Measurement, Formalisation, Small and Medium Sized Enterprises

Introduction

Small and medium-sized enterprises have been referred to as “lifeblood of economies” and “engines for economic growth” because of their contribution towards employment and turnover of national economies (Bititci et al., 2015).On the other hand, studies suggest that majority of SMEs fail in the first few years of their existence (Nobel, 2014). Hence, particularly over the last two decades, academics and practitioners have

increasingly focused on investigating factors that could enable SMEs to survive and grow (Miao et al., 2017). As such, Performance Measurement (PM) has been reported to enable organisation alignment, clarity, and achievement of objectives (Micheli et al., 2011). However, SMEs to date face difficulties in implementing management control systems such as PM systems has been a point of concern for scholars in the field of performance measurement.

Several authors have emphasised that SMEs' reliance on informal processes and systems, while helpful in making them flexible and capable to adapt to changing business environments (Escrig & de Menezes, 2016), can inhibit their growth and ability to enhance their efficiency and effectiveness (Grimes, 2010). However, an excessive use of formal processes may result in making them too rigid and in stifling their creativity. Hence, as SMEs go through the formalisation process, they are faced with a tension, requiring them to use processes and systems that enable organisational clarity and alignment, yet do not impair organisational flexibility. To manage this tension, it is important to better understand how formal and informal mechanisms could be appropriately designed and deployed (Cardinal et al., 2017).

Despite the long-standing interest, the body of research around PM in SMEs has not evolved effectively and failed to answer the questions. The research in this literature tends to rely extensively on the existing frameworks and attempting to implement/adopt these in SMEs. Through this paper, we demonstrate how the PM literature – in the context of SMEs – has evolved. We aim to identify existing themes within the literature as well as avenues for future research.

Methodology

Systematic reviews of the literature intend to enable scholars to position their contribution to the literature and create coherent, rational and substantiated assertions (Tranfield et al., 2003). A systematic literature review aims to produce research using a clear and explicit protocol, which can be reproduced with similar results (Greenhalgh, 1997). Hence, systematic literature reviews are regarded as the most dependable method of review. Figure 1 illustrates the process of the review undertaken in this study, which includes three main phases of search, select, and analyses and disseminates as suggested by Tranfield et al. (2003).

The initial search was conducted in four databases (i.e. ABI ProQuest, Scopus, Web of Science, and Emerald), using the designed search string. To capture content related to performance measurement, we used the following keywords: performance measurement, performance management, performance evaluation, management control, management accounting, control system, performance indicator, Balanced Scorecard, and KPI. To capture the organisation's size and growth we used SMEs, entrepreneurship, and organisational growth. The initial search resulted in 3,941 articles. We excluded articles with ABS rating of less than 2 to ensure only high-quality studies are reviewed; this returned 1,664 articles. After the review of results, the search string was revised and keywords such as organisational change, small, and SMART were removed from the string. Conducting the search using the revised search string, after removing the article with ABS ranking of two or less, resulted in 516 articles.

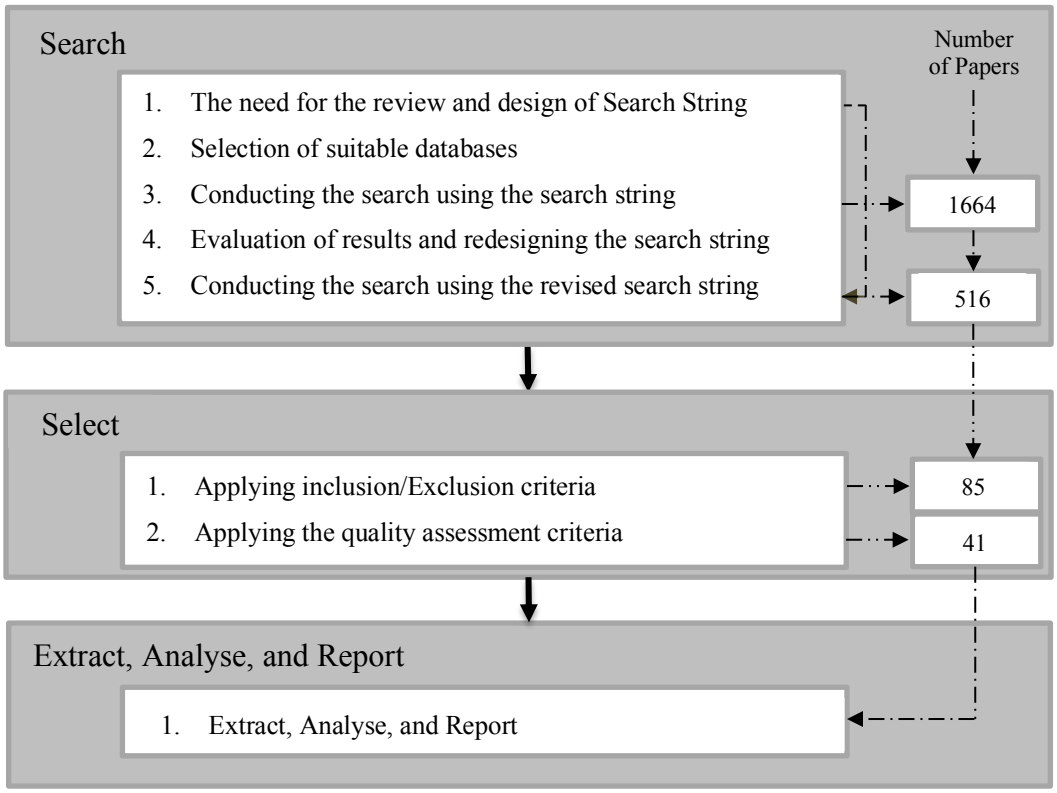

Figure 1: The process of systematic literature review

In order to select the suitable studies a set of inclusion/exclusion criteria were applied. The inclusion criteria consisted of any publication year, peer-reviewed publications, publication within the management domain, and English language. Despite, the careful and revised design of search string, the result included articles focusing on management control systems within the large entrepreneurial organisation that were not related to PM, hence, the exclusion criteria were consisting of large entrepreneurial organisations and management control systems that did not relate to PM. Applying the inclusion/exclusion criteria resulted in 85 articles.

Next, we removed 16 duplicates and applied a set of quality assessment criteria to the remaining 69 articles. The assessment criteria aimed to filter out any articles that did not satisfy the quality level of this study. The criteria aimed to assess each article based on theory robustness, methodological rigour, and contribution to knowledge, generalisability, and practical implications rating from low to high. We rated the articles from 0 to 3 (i.e. low to high) in each criterion, we took into account that each criterion might not be applicable for the article and removed that criterion from consideration. The articles did not pass the quality assessment if it was rated low in all criteria. The quality assessment was done objectively, to ensure that the assessment was reliable (Miles & Huberman, 1994). After this step, we reviewed the remaining 41 articles.

Findings and discussion

Small and Medium Sized Enterprises

SMEs are defined as organisations with less than 250 employees and less than £50 million turnover (European Commission, 2017). The important role of SMEs in development and growth of both developed and developing economies has been a point of agreement among scholars across all management domains (Garengo & Sharma,

2014; Garengo *et al.* , 2005; Ghobadian and Gallear, 1997; Parida *et al.*, 2012; Taticchi *et al.*, 2013; Toni and Nassimbeni, 2003). As such, design, implementation, and adaptation of managerial systems and processes that can facilitate SMEs survival and growth has been a point of discussion in the recent years (Smith & Smith, 2007). Indeed, scholars have suggested that a lack of managerial systems and processes is one of the "major barriers to growth" and a "key cause of failure" in SMEs (Pešalj et al., 2018, forthcoming). Moreover, research points toward the important role of such systems in enabling SMEs to pursue both short-term and long-term objectives and support the process of growth. As such, utilisation of PM has been reported to enable to SMEs to achieve organisational objectives. (Gomes & Yasin, 2011).

Performance measurement

Performance measurement literature roots can be traced back to an early 19th century – the industrial age – when organisations started to measure/record the productivity of employees. The progress of PM literature continues until late 19th century when Kaplan and Norton introduced a new and comprehensive performance measurement framework – BSC – that aimed to measure both financial and non-financial performance of organisations (Kaplan & Norton, 1992). Over the last three decades, many performance measurement systems have been introduced to measure the business performance of large organisations enabling organisational alignment, clarity, and achievement of objectives (e.g. Balanced scorecard, performance Prism, Smart, etc.). There exist many definitions for performance measurement (e.g. See Franco-Santos et al. (2007)). In this research, we define performance measurement as "*a formal process, which aims to obtain. Analyses, and express information about an aspect of a process, an activity, or a person*" (Gray et al., 2015, p.14). Indeed, the effects of PM on the performance of organisations has been a point of contention (Franco-santos *et al.,* 2012). The PM process has been reported to positively affect the performance of the organisation (Atkinson, 1998; Chenhall, 2005; Kennerley & Neely, 2002), while the failure of performance measurement initiatives due to inadequate design, implementation, and use have been reported as well (Bourne et al., 2000). The effect of PM on performance depends on a variety of factors (Franco-Santos et al., 2007; Micheli & Manzoni, 2010). Nonetheless, positive effects of performance measurement can be summarized as monitor and control (Kaplan, 2010), maximising and driving improvements (Umit Bititci et al., 2012), more informed decision making (Kennerley & Neely, 2002), strategic alignment (Micheli & Manzoni, 2010), and communication (Micheli and Mura, 2017; Neely and Adams, 2001). Furthermore, scholars have reported that use of PM can "align attitudes, behaviours, and lead to the attainment of organisational goals" (Micheli & Mura, 2017).

Performance measurement research in the context of SMEs has been a point discussion since the early 1990s (Neely et al., 1994). Reviewing empirical studies of PM in SMEs, McAdam (2000) argued that, although most studies are theoretically valid, they do not take into account key differences between SMEs and large organisations. Over the past two decades, scholars have attempted to provide a solution by which SMEs can take advantage of the PM process, however the take-up of PM practices in these organisations has remained low (Bititci et al., 2012). As such, it is important to review the extant PM literature in SMEs, to better understand the underlying assumptions that has resulted in slow progress of the research.

The results of this literature review show that two main themes exist in the literature: application/adaptation of existing PM processes and development of new models and frameworks. Afterwards, we provide a discussion around the limitations of this literature and propose avenues for future research.

One key message that emerges from the literature is that although there exist various suggestion for efficient implementation of PM or new models and frameworks, SMEs still face issues when attempting to utilise PM frameworks (Hudson et al., 2001). Indeed, scholars have argued that performance measurement and processes can enable SMEs to effectively motivate and direct the attention of employees to move towards achieving the organisational goals (Davila, 2005). In particular, performance measurement systems have been found to enable the achievement of organisational objectives (Micheli & Mura, 2017). Yet, SMEs still need to be flexible and formal processes such as performance measurement could hinder their flexibility and innovative capabilities (Heinicke *et al.*, 2016). Thus, it seems necessary to better understand what causes these issues, and how SMEs can benefit from the process of PM efficiently. The first theme is the application and/or adaptation of existing frameworks to match the characteristics of SMEs. The research recognises that existing models and frameworks are designed for implementation and utilisation in a large organisation. Hence, to implement the existing models and frameworks in SMEs, the characteristic differences of these organisation should be taken into account (Fernandes et al., 2006; Patrizia Garengo, 2009; Patrizia Garengo & Sharma, 2014; Jungman et al., 2004; Murphy et al., 1996; A. Neely et al., 1994; Smith & Smith, 2007; S. D. Sousa et al., 2005; Taylor & Taylor, 2014; Turner et al., 2005).

The second theme focuses on the development of new and specific models, which are specifically designed to meet the characteristic differences of SMEs (Alfaro et al., 2007; Garengo, 2009; Hudson et al.,2001; Hudson et al., 2001; Kutucuoglu & Hamali, 2001; Laitinen, 2002; Marri et al., 2000; McAdam, 2000; Simpson et al., 2012; Sousa & Aspinwall, 2010). Moreover, a small number of studies in this theme aim to design PM frameworks to face specific issues rather than the organisation as a whole (Alfaro et al., 2007; Appiah, Adu & Singh, 1998; Gumbus & Lussier, 2006; St Pierre & Delisle, 2006). Studies in both themes, recognise that SMEs are characteristically different when compared to large organisations and in order to efficiently utilise PM in these organisations, we need to identify and take into account these characteristic differences. In this context, the research into PM in SMEs identifies specific characteristics of SMEs that could hinder the process of PM – implementation or utilisation – and propose that by addressing these characteristics – in some cases limitations – the process of PM could be carried out in these organisations. Collectively, in both themes of literature, the most common characteristic differences of SMEs among scholars are:

1- Lack of human and financial resources - SMEs tend to lack human and financial resources. Staff are usually involved in the day to day activities and have very limited time and require more financial resources when using/implementing a PM system (McAdam, 2000). Additionally, these organisations usually lack a software platform to support the use/implementation of formal systems (Hudson *et al.*, 2001).
2- Lack of formal managerial capacity - SMEs tend to favour informal managerial processes, while PMs are formalised systems (Garengo & Biazzo, 2012).
3- Responsive approach - SMEs are commonly characterised by lack of formalised decision-making process and strategy. This results in responsive behaviour and short-term vision (Garengo et al., 2005).
4- Informal processes and tacit knowledge - SMEs tend to favour informal managerial processes, which acts as a barrier to developing formalised managerial systems. Also, SMEs knowledge tend to be context specific and tacit, which makes it more difficult to implement PMS (Garengo & Bernardi, 2007)

5- Fallacy surrounding PMS - SMEs tend to view PM as a source of bureaucracy and obstacle for flexibility, while scholars propose that PMSs can only be used/implemented if the organisations recognise the benefits of such systems (McAdam, 2000).

Additionally, a group of studies, instead of focusing on the characteristic differences of SMEs, tend to emphasise the contingent factors that are important, when proposing a new framework, namely corporate governance structure, management information systems, strategy, organizational culture and management style, external environment, and company size (Garengo & Bititci, 2007). While most scholars tend to recognise the pre-mentioned characteristic differences of SMEs, there seems to be one significant assumption, when proposing a new framework or more efficient methods to implement/adopt PMSs in these organisations. It being that SMEs are able to adopt an overly formalised system, despite the fact that they do not have the necessary structure to support such a system or cope with the sudden changes occurring in the managerial practices of the organisation. Particularly, SMEs operate within turbulent and highly competitive markets and tend to take on responsive approach, resulting in continues change in their managerial structure and need for a dynamic or a balanced process that can effectively cope with such changes. Additionally, scholars suggest that more than 50% of start-ups and small organisations (i.e. less than 50 employees) will continue in the process of growth as they need to achieve a "*minimum scale of efficiency that allows survival*" and require to evolve their existing informal processes to a more formal process (Sutton, 1997). With this regard, SMEs will reach a point in their life-cycle that requires them to adopt more formal processes.

In an effort to enable effective coordination and control in an organisation, the performance measurement literature in general – and in the specific context of SMEs – has a coherent and rational view on PM and focuses on the structural mechanisms of the organisation. As such, PM is acknowledged as a rational and bureaucratic management control process, while it can be argued that performance measurement is a social construct, created by values and beliefs of the organisation's employees. In short, the PM is recognised as a formal system/process, while it is also consist of informal systems/processes. From the organisation control point of view, a management control system – here performance measurement system – can only be effective if both formal and informal system/process are efficiently utilised, in other words, if formal and informal systems/processes co-exist in balance (Kreutzer et al., 2016). Hence, scholars believe that in order to best understand and utilise control systems in an organisation, it is imperative that creation and evolution of these managerial systems are studied and understood (Cardinal et al., 2004; Kreutzer et al., 2016).

To date, the evolution of management processes (i.e. performance measurement) in SMEs is generally ignored in this literature. Arguably, lack of emphasis on this issue could be identified as one of the main barriers to efficient utilisation of managerial processes in SMEs (Pešalj et al., 2018).

Given this premise, understanding the configuration of formal and informal processes in the creation and evolution of any managerial practice (i.e. performance measurement) becomes imperative. Thus, to better understand the process of PM in SMEs and facilitate the efficient use of PM process, while necessary, it is not enough to consider the characteristic differences of the organisation and contingent factors but to understand the creation and evolution of the managerial systems within the organisation.

Limitations and Avenues for future research

Based on the discussion presented earlier, we identify the limitations of PM literature in the context of SMEs and suggest avenues for future research.

First, although some studies have explored the creation of balanced use of formal and informal control mechanisms and processes in SMEs, its evolution or development process remains unexplored. While large organisations tend to have reached a stable stage in their growth process, SMEs will face growth either in size or managerial structure, and it became imperative to understand how formal and informal mechanisms evolve over time. Additionally, SMEs operate within a turbulent environment, and it is important to better understand the how PM systems vary to enable these organisations effectively compete within the turbulent and uncertain environment.

Second, although few attempts have been made to explore the simultaneous use of formal and informal systems/processes, the majority of the studies tend to focus on the formal mechanisms of performance measurement, which is suitable for a large organisation. Yet, SMEs tend to rely on informal processes and tacit knowledge, and an overly formalised systems or a process will hinder their flexibility and innovative capabilities. As such, it is necessary to understand how co-existence of balanced PM – formal and informal – can facilitate organisational alignment, clarity, and achievement of long and short-term objectives, while facilitating organisational flexibility and innovative capabilities.

Lastly, while it is important to investigate the creation and evolution of PM, the majority of research into performance measurement in SMEs tend to use a cross-sectional approach investigating this phenomenon. A snapshot of managerial systems and process simply cannot provide the necessary information and can possibly misdiagnose substantial aspects of the managerial processes and systems. In particular, SMEs tend to operate within the turbulent environment and display responsive behaviours, which results in changing the balance of formal and informal processes/systems. Thus, the future research should use longitudinal approach, to have a better understanding of these processes within SMEs.

Conclusion

Based on the review of PM literature, it can be concluded that The knowledge in the area of performance measurement in the context of growing SMEs is scarce (Smith & Smith, 2007; Taylor & Taylor, 2014). Most studies in this field have looked at design, implementation, and use of PMS in large organisations. Although numerous studies support the adaptation of PM process in SMEs by proposing new models and methodological solutions, the take-up of PM remains low and it is imperative that new approaches are identified to satisfy the specific needs of SMEs. However, fewer studies investigate the interplay of control processes in place. Similarly, there is very little known about this phenomenon in the context of growing SMEs. In specific, growing SMEs will reach a point in their life cycle at which they require processes and mechanisms that enable organisational alignment, yet this should not impair the organisation's flexibility. Therefore, they require a system that brings together both formal and informal processes and does not restrict their organisational flexibility. The review of PM literature emphasises the importance of investigation of the simultaneous use of both formal and informal mechanisms, and to better understand the configuration and dynamic interplay between them. Hence, achieving a holistic view of control processes in the growth process of the organisation. In particular, studying the point at which SMEs face the tension requiring them to develop formal mechanism as the informal mechanisms are not sufficient anymore.

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