

## **Strategic Performance Measurement and Management Chronology, Evolution and Revolution: A Systematic Review**

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### **Abstract**

**Purpose**—There has been a substantial amount of literature on strategic performance measurement and management (SPMM) especially following the so called “performance measurement revolution” of the 1980s and 1990s. However, the bulk of it pertains the private sector. This paper explores the genesis and trajectory of SPMM and dispenses with some common equivocations on the subject thereby contributing to scarce public and third sector SPMM literature

**Design/Method/Approach** - The study utilised a systematic literature review to conduct a thematic analysis on the precedents and antecedents of SPMM in the private, public and third sectors.

**Findings** – SPMM is centuries old and has existed since ancient civilisations or human trade. Earliest mention of private sector SPMM was around 220 AD. Public sector SPMM dates to around 1900 through the work of the New York Bureau of Municipal Research, while third sector SPMM is traceable to post-WWII, accelerating in the 1960s and 1970s. SPMM therefore developed in a phased and parallel manner between the public and private sectors since around 1900 and for all three sectors since the 1960s. During the 1990s, there was wholesale implementation of modern multi-dimensional SPMM systems, first in the private sector then concurrently in the public and third sectors. Since then, SPMM evolved with emphasis on embracing new managerial innovations and customising then to purpose-fit based on diverse sectoral, institutional and country contexts driven by fast-paced change in the environment.

**Research Limitations** - Research was too broad, the literature too diverse hence the systematic review was cumbersome and time-consuming considering attendant constraints and could impact replicability.

**Practical Implications** –The paper makes a direct contribution to strategic performance measurement and management theory and practice which is invaluable since SPMM is a highly practitioner dependent field.

**Originality/value** – The systematic review was a marathon study which interrogated the development and trajectory of the field of SPMM in the private, public and third sectors. The study constitutes the single most comprehensive application of systematic literature review to the SPMM field, which concurrently explores the rarely covered yet crucial aspects of public and third sector SPMM, thereby providing unique insights and contributions to literature.

**Keywords:** Strategic, Performance management, Performance measurement, Performance measures, Performance measurement systems, Performance management systems

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### **I. Introduction**

Strategic performance measurement and management (SPMM), in any of the many terms and their permutations various authors adopt in literature, has existed for long as management practices (Carneiro-da-Cunha, Hourneaux & Corrêa, 2016; Franco-Santos & Bourne, 2005; Franco-Santos, Lucianetti, & Bourne, 2012; Goshu & Kitaw, 2016; Johnson & Kaplan, 1987). Authors in the field are widely agreed that SPMM practice rationally evolved from the traditional “cybernetic view” (based on mainly on financial measures) to the more modern “holistic view” (based on multiple measures) principally in response to internal and external influences (Carneiro-da-Cunha et al., 2016; Chenhall & Lang-Smith, 2007; Henri, 2004; Johnson & Kaplan, 1987; Kennerly & Neely, 2002; Waggoner, Neely & Kennerley, 1999; Neely, 2005, 1999; Neely, Gregory, & Platts, 1995; Taticchi, Tonelli, & Cagnazzo, 2010). The criticality of SPMM in organisations is uncontested in literature transcending the public, private and third sectors. Performance measurement and management has been widely recognized as an important success factor for high performing organisations (Pasch, 2012), is transforming forward-thinking organizations (Dresner, n.d) and improves the capability of business (Mendez, 2016). It has become a key mechanism for managing firm performance (IOJPM, 2016). SPMM efforts are quintessentially targeted at organisational performance improvement (Bititci, Carrie & McDevitt, 1997; Mendez, 2016; Pasch, 2012) resulting in increased efficiency and shareholder wealth maximisation (Dresner, 2017), the ultimate goal of any enterprise.

It is also widely agreed that SPMM has been top of modern day management agenda of the last four decades in which the body of performance management research grew dramatically indicating increased interest among managers and researchers around the globe in understanding the secrets of high performing organisations which became known as the “performance measurement revolution” (PMR) of the late 1980s to early 2000s (Carneiro-da-Cunha et al., 2016; Neely, 1999, 2007; Pasch, 2012; Wanderley & Cullen, 2013). The debate around SPMM has raged fueled by major transformations in the organisational environment which occurred over the years. The PMR which began with the publication of Johnson and Kaplan’s highly influential 1987 “*Relevance Lost*” book, was necessitated by the pace of change in traditional management accounting control systems being too slow to fulfill the informational demands of the fast changing organisational environment (CIMA, 2008; Gao, 2015; Johnson & Kaplan, 1987; Kennerly & Neely, 2003; Nudurupati, Bititci, Kumar, & Chan, 2011; Neely, 1999; Neely, et al, 2000; Wanderley & Cullen, 2013).

Highly noteworthy is that the convergence of scholar and practitioner interest in the SPMM field permeates for-profit, public and non-profit arenas. SPMM systems in one form or another have been adopted in companies, governments, non-governmental organisations, local authorities, schools, hospitals and universities. Equally, they are widely used in pharmaceutical and health science sectors, clinical performance management and product demand forecasting, financial sector, manufacturing areas, supply chain planning and manufacturing performance management, aerospace and defense management, retail performance management, vendor management, police performance management and the public sector (Mendez, 2016) - virtually all sectors.

Additionally, the beneficial contribution of the multi-disciplinary nature of SPMM is found in the rich pickings in literature which contains an assortment of perspectives from performance measurement experts across multiple disciplines like finance, marketing, HR, strategy, operations management, organisational behavior and supply chain (e.g. Neely, 2002). This has provided a comprehensive discussion of performance measurement theory, practice and developments that draws on a lively combination of international, multi-disciplinary viewpoints. This evidences that SPMM is of interest across a range of business-related fields and provides opportunities for cross-pollination of ideas beyond conventional functional boundaries. The multi-pronged (management, consultancy and academic), multi-sectoral (private, public and third sector) and multi-disciplinary (diverse functions) nature of SPMM makes it a unique yet suitable and interesting field of business and management research. The rest of this paper is structured as follows:

- Section 2 provides a theoretical review of SPMM;
- Section 3 outlines the systematic literature review method employed in this study;
- Section 4 presents the research findings
- Section 5 is a discussion of the findings
- Section 6 articulates the papers’ implications, recommendations and conclusions.

## **II. State of the Science**

Since SPMM research is about four decades old, it is still relatively embryonic compared to other management research. Since Johnson and Kaplan (1987), there have been lots of journal publications on the subject of SPMM thematically covering the design, implementation, application of performance measurement in practice, empirical studies on the impact of performance measurement on performance, theoretical papers and literature reviews (Bititci et al. 1997; Bourne, Mills, Wilcox, Neely 2000, & Platts; IOJPM, 2016; Neely, 2005; Neely et al., 1995; 2000). Below we trace the status of a couple of key concepts relevant to this research namely; definition of SPMM and conceptual considerations leading to articulation of the research gaps and research questions.

### **2.1 Terminology and definition of strategic performance measurement and management**

It is mandatory to review the terminology and definition of strategic performance measurement and management upfront. The term “performance management” first appeared in management literature in the late 1970s but became widely recognized after mid-1980s (Matinez, 2001) when it was adopted in several disciplines and its connotation has contextually evolved over time. The literature review revealed the following common and inter-related, yet glaring shortcomings in SPMM:

*i) Fragmented terms / nomenclature:* There is a proliferation of SPMM terms in the field. This study revealed several different terms for SPMM which were used in diverse circumstances, either contextually or interchangeably by different authors. Surprisingly, no single author in the studied literature mentioned terminological diversity and how it has negatively impacted the development of SPMM as a standalone field of research.

*ii) Lack of universal definition of SPMM:* Directly linked to i) above, there is no universally agreed definition of SPMM, and it is not clear whether it is just a management process or activity, a field or discipline or just another management fad and/or fashion. Most authors often picked a preferred SPMM term without defining it at all. Where defined, the definitions are inconsistent, incomplete or they are used contextually by the authors i.e.

based on their specific purpose and as influenced by their functional background. Numerous associated definitions were identified during the systematic review.

Not surprisingly, some authors have highlighted the causes of the terminological and definitional diversity (e.g. Franco-Santos et al., 2007; Goshu & Kitaw, 2016; Matinez, 2001) and the importance of efforts towards convergence (Franco-Santos et al., 2007; Ratnayake, 2009; Tangen, 2003). This because they negatively impact on the development of SPMM into a distinct research field. This paper will assume the generic term “strategic performance measurement and management” to refer to all SPMM phenomena contained in the literature. However, we do not adopt any specific SPMM definition. We argue that the SPMM terminological and definitional diversity is contentious matter and should be separately researched and should not distract from the objectives of this paper.

## **2.2 Conceptual considerations**

The literature review revealed that a lot of early SPMM theories and concepts were borrowed from management accounting literature. This is not surprising given the influential role of this literature stream in early SPMM systems and practices dating back centuries which centred around the use of performance measures for divisional and managerial performance evaluation or for controlling manufacturing operations (Chenhall & Lang-Smith, 2007; Henri 2004; Johnson & Kaplan, 1987; Kaplan, 1984; Metawie, 2005; Waweru, 2010; Wanderley & Cullen, 2013;). This may explain why most historical SPMM systems were relied on finance-based measures (Henri, 2004; Kaplan & Norton, 1992; Metawie, 2005; Neely, 1995) coupled with use of predominantly economic frameworks and theories (Metawie, 2005; Otley, 1999) and became a fiery debate subject during the last quarter of the 20<sup>th</sup> century.

Some studies reviewed SPMM evolution and innovations by several authors through examination of study topics, theories applied, and methods used in the literature to gain understanding of the trend and development of management accounting and control research (Franco-Santos et al., 2012; Wanderley & Cullen, 2013; Waweru, 2010;Zawawi & Hoque, 2008). The studies revealed that various researchers in the field have drawn from a wide range of theories including traditional positivistic theories, such as contingency theory, economic theory, institutional theory and lots others leading SPMM to be labelled a “heterogenic” research field characterised by a “non-dominant paradigm” (Wanderley & Cullen, 2013, p.303). The same studies also established the field’s eminence in use of varied methodologies from traditional functionalist, interpretivist, positivist, and critical researches coupled with various research methods including case and field studies, quantitative surveys, literature reviews, multiple methods and extra “conventional quantitative approach” such as “contingency-type studies” (Wanderley & Cullen, 2013; Waweru, 2010; Zawawi & Hoque, 2008). The SPMM field’s theoretical and methodological diversity is considered to pose some serious challenges in terms of synthesising theoretical development of the field by some portion of literature.

From a theoretical perspective, SPMM is primarily founded in the very core of strategic management and is essentially a corporate governance issue because it strikes at the core of how those who are entrusted with organisational resources (management) to deploy them towards attainment of corporate mandate. This thrusts agency theory to the forefront and its primary assumption that there exists a contractual relationship between the organisation’s principals (shareholders) and agents (executive management) (Kaplan, 1984; Van Thiel & Leeuw, 2002; Waweru, 2010). Under principal-agent theory, shareholders delegate decision making authority to management who must conduct certain functions in return for a reward (executive remuneration) and it can be argued that SPMM is one such key management practice under management’s purview. While agency theory seems clear as pertains the private sector, its strict application to the public and third sectors is more complex due to some sectoral nuances (Dixit,2002; Propper & Wilson, 2003). Other theories related to corporate governance in general and specifically SPMM include stakeholder theory, goal setting theory and performance prism theory which are not discussed here.

## **2.3 Knowledge gap and research questions**

According to Williams (2003), the early history of performance measurement is not well known. Bouckaert's (1990, 1992) work on productivity improvement history, thinly supported by marginal performance measurement literature asserted the disputed view that early innovators were “concerned exclusively with reducing the cost of government services and explicitly denies that they addressed outcomes” (1992, p.17). SPMM has constantly changed especially since the 1980s’ PMR and it is necessary to review some of these changes for us to establish the state-of-the-art in the three sectors. While there exist substantial amounts of literature on public sector SPMM (e.g. Mimba, Van Helden, & Sandra, 2007; Mackie, 2008; Pazvakavambwa & Steyn, 2014; Ross, 2011; Ross, 2012; Thomas, 2006; Tudor & Mike, 2013), the private sector is still considered as the core reference point for SPMM theoretical frameworks and empirical research. According to Rashman, Withers and Hartley (2009) this poses conceptual constraints on comprehending the evolution and status of

organisational SPMM. Rashman et al. (2009) concluded that organisations' sectoral commonalities and differences require "conceptualisation and research" to be responsive to contextual variations (p.463).

There have been some significant literature contributions to the progression and comprehension of SPMM, but some incongruities must still be addressed with, one of which is that over time academic theory development has failed to adequately respond to the demands of practice (Waweru, 2010). Waweru (2010) further concurs that theoretical developments in the SPMM field have occurred through empirical implementation or organisational practices and through organisations implementing or incorporating "concepts, models and theories from various disciplines" in both the private and public sectors of developed and developing countries. SPMM evolved from its original use in production and operations to more complex and operational contexts including proliferation to public and third sectors in response to changes in organisational context and operational settings (Neely et al., 1995; Bititci et al., 1997). These changes in the organisational context and operational setting means SPMM is continuing to evolve hence the need for continued development of a new theoretical base for the emerging practices to maintain the relevance of academic contribution to the upcoming field (IOJPM, 2016) and considering that SPMM as a field relies heavily on practice (Bourne, 2015).

This paper explores the chronology, evolution and revolution of SPMM through a comprehensive systematic review, a widely-used approach in SPMM research. It aims to answer the following research questions:

- What is the evolution and status of strategic measurement and management of performance and what key insights can be drawn from the literature?
- Based on the evolution, what is the broad research agenda that can be predicted over the next decade?

The main aim of the systematic review is to explore how SPMM theories, concepts and practices have evolved with a view to extracting specific lessons from and understanding of this phenomenon from the literature. The specific objectives of the review are to:

- Review the evolution and current status of SPMM research and practice in the private, public and third sectors; and
- Explore the specific concepts and measures that are used in SPMM literature and how they have evolved over time and predict the future research agenda.

The paper contributes to the ultimate attempts to constantly restate the academic relevance of SPMM theoretical and conceptual underpinnings considering its continuous evolution and the fast-paced change in the external operational environment resulting and resulting emergent SPMM practices and the symbiotic nature between academia and practice in this field (Bourne, 2015). Therefore, the paper will contribute to theory development and provide greater insights on the evolution of SPMM, current status of the field and predict directions for research.

### **III. Method**

This paper adopted the systematic literature review and for brevity, we begin by briefly articulating the protocol. We also provide the justification for utilising the systematic review and conclude by outlining exactly how the systematic review was conducted.

#### **3.1 Systematic literature review protocol**

Systematic literature review (SLR) was originally utilised in medical science research since the early 1990s. It was first adopted in management research at the beginning of 2000s (Denyer & Tranfield, 2006; Franco-Santos & Bourne, 2005; Franco-Santos, et al., 2007; Franco-Santos et al., 2012; Hall, Beecham, Bowes, Gray, & Counsell, 2012; Kareithi & Lund, 2012; Pfefferkorn, Bititci, & Jackson, 2017; Tranfield, Denyer, & Smart, 2003). It is considered a pioneering research methodology which is methodical, transparent, replicable and provides holistic insights through theoretical synthesis of the study subject which according to Franco-Santos and Bourne (2005), is much more rigorous and less susceptible to researcher bias compared to traditional "narrative" reviews. SLR is usually conducted as a genuine scientific inquiry since it provides full details about the review process, nature and source of documents reviewed which facilitates replicability. Denyer and Tranfield (2006) state that SLRs are underpinned by "real world evidence" which demonstrably boosts the link between academia and practice for conducting relevant "evidence-based" research. The SLR process comprises three main stages (planning, conducting and reporting the review) and twelve phases outlined in Tranfield et al. (2003), applied in this paper and summarised in Table 2.

### 3.2 Rationale for adopting SLR protocol

Systematic review was chosen because it goes way beyond the traditional “narrative” literature reviews and has been extensively used in the field of SPMM since the turn of the century (e.g. Bourne et al., 2003; Carneiro-da-Cunha et al, 2016; Franco-Santos & Bourne, 2005; Franco-Santos, et al., 2007; Neely, 1999; Mackie, 2008; Mimba et al., 2007; Pfefferkorn et al., 2017; Taticchi et al., 2010;Taticchi, Balachadran, & Tonelli, 2012; Wanderley & Cullen, 2013). Furthermore, SLR was considered most suitable since it is primarily framed around research questions and the literature inclusion and exclusion criteria are clearly defined upfront (Bititci et. al., 2012; Denyer& Transfield, 2009). As this research will synthesise the documented evolution of SPMM with a view to establishing the “state of the art” and establishing a research agenda, application of a systematic methodology is considered suitable.

### 3.3 Systematic review for the study

The first stage was to systematically extract the thematic pillars to be pursued by the review which was to interrogate the chronology, evolution and revolution of SPMM in the private, public and third sectors and associate research agenda. The second stage involved six steps which were undertaken as per the SLR process.

**Step 1: Scoping study:** Identified 19 publications on the SPMM subject which included several “state-of-the art” literature review papers by some key researchers in the field.

**Step 2: Literature search:** Involved the following three activities.

**Hand search and citation tracking:** Involved perusing papers from the scoping exercise and internet search and using cross-references to conduct additional internet searches. Using studies’ reference lists, a further 21 relevant studies we identified and retrieved.

**Electronic search and database strategy:** This activity revealed the bulk of the literature and involved further internet searches using EBSCO, J-Stor and Google Scholar electronic databases. The databases were used progressively to complement each other using various permutations (AND, OR, \*) of the following keywords identified during the scoping phase: “performance measurement”, “performance management”, “performance measures”, “performance measurement systems”, “performance management systems”, and “management accounting control systems”. The literature database search exercise revealed 727 studies on SPMM covering numerous distinct disciplines and encompassing the public, private and third sector organisations.

**Key journal search:** Several key dedicated journals on the SPMM field were identified during the electronic search. However, given the multidisciplinary nature of the SPMM field, we could not rely solely on dedicated journals and this resulted in a large disciplinary spread of journals and articles. An additional 15 papers were harvested from key journal search. A key source of “grey literature” were professional institutes and management consultancy firms that are considered “thought leaders”, “think tanks” in the SPMM field.

**Step 3: Identification and extraction of data:** All literature material that was identified and downloaded was carefully logged into an excel spreadsheet to facilitate further analysis. The information recorded included key details such as author, year, title of article, abstract and other journal details. Title and abstract analysis was undertaken and a total of 483 papers were subjected to set inclusion and exclusion criteria.

**Step 4: Applying inclusion and exclusion criteria:**The criteria for selecting the studies to constitute the primary data set for the systematic review was defined based on the insights extracted from the initial literature review, research questions refining process, scoping study and the SLR itself. The inclusion and exclusion criteria below (Table 1) was drawn with the objective of narrowing down the scope of the literature and to facilitate replication.

**Table no1:** Shows the literature inclusion and exclusion criteria for the systematic review (Adapted from Kareith & Lund, 2012; Pfefferkorn et al., 2017)

Inclusion Criteria	Exclusion Criteria
<ul style="list-style-type: none"> <li>Published and unpublished papers and other “grey” academic and empirical literature on SPMM.</li> <li>Literature review studies on SPMM chronology, evolution and revolution as identified during the scoping study.</li> </ul>	<ul style="list-style-type: none"> <li>Any SPMM literature outside the four themes identified during the first stage of the review.</li> </ul>

**Steps 5 and 6:**A total of 266 papers were appraised involving a double phase, single review process. The first phase was during refinement of the research questions and the second and final review was during the main SLR, which involved a thematic analysis and synthesis of the primary articles with the insights categorised and reported according to the four pre-identified themes. Most SLRs are restricted to peer-reviewed journal papers since they constitute scientifically authenticated knowledge with the highest influence on the field (Armstrong, Cools, & Sadler-Smith, 2012; Podsakoff, MacKenzie, Bachrach, & Podsakoff, 2005). However, this SLR

utilised both published scientific articles and relevant “grey” literature<sup>1</sup> because: Firstly, there is generally a limited amount of peer reviewed articles specifically on public and third sector SPMM, especially in developing countries. Secondly, we deliberately adopted bibliometric protocol because SPMM is a highly practitioner-dependent field (Bourne, 2015; IJOPM, 2016) and to benefit from a lot of non-published but high quality and value-adding work from practitioners. Thirdly, according to ProQuest’s (n.d.), a global scholarly platform, modern researchers progressively require more than just scholarly journals to undertake thorough and effective research, as the literary diversity adds to the rigour and quality of the research results (Bourne, 2015; IJOPM, 2016).

### 3.4 Definition of the primary dataset

Phase 6 of the strict SLR protocol is “selection of primary studies” and consequently most research SLR-based research has applied this methodology exclusively to scientific articles. We opted to rechristen stage 6 “selection of the primary dataset” to reflect the adopted bibliometric protocol which requires “grey” literature (ProQtest, n.d.; Bourne, 2015; IJOPM, 2016). Table 2 below summarises the main stages and phases of the SLR as outlined in Tranfield et al. (2003), reflecting the adjustment to Phase 5 as applied in this paper. For a more detailed outline of the systematic literature review protocol please refer to Franco-Santos et al. (2012), Hall et al. (2012), Kareith and Lund, (2012); Pfefferkon et al. (2017) and Tranfield et al. (2003). Figure 1 below is a schematic illustration of the systematic review process while Table 3 below is the panel description of literature sources. The next section presents and discusses the findings of the systematic literature review.

**Tableno.2:**Reflects the methodology for conducting the systematic literature review(Hall et al., 2012 ; Pfefferkorn et al.,2017; Tranfield et al., 2003)

Stage	Phase
Planning the review	1. Identification of the need for a review 2. Specifying the research question(s) 3. Scoping Study 4. Developing and evaluating a review protocol
Conducting the review	5. Identification of studies 6. Selection of the primary dataset <sup>2</sup> 7. Study quality assessment 8. Data extraction and monitoring 9. Data synthesis
Reporting the review	10. Specifying dissemination mechanisms 11. Formatting the main report 12. Evaluating the report

## IV. Findings

To gain a holistic and contextual understanding of the evolution of SPMM we reviewed its transition as a generic field to gain insights into how it’s concepts, theories and practices have emerged over time. The knowledge gap revealed that there are numerous misconceptions which constrain the understanding of the SPMM subject and consequently detract from the development of theories which would otherwise promote the advancement of the field. This section presents the systematic review’s key findings on the chronology, evolution and revolution of SPMM in the private, public and third sectors in terms of key developments or contributions to the field. The findings are presented on sectoral basis. Some of the themes naturally overlap and are highly inter-dependent reflecting that as the field evolved so did the various related concepts, theories and practices.

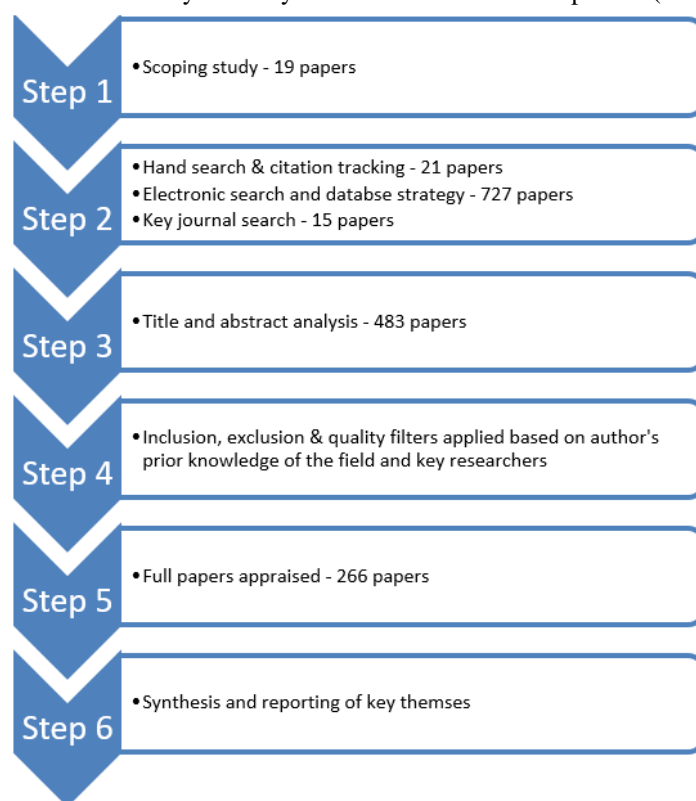
### 4.1 Strategic performance measurement and management in the private sector

The evolution of SPMM in the private sector is well-documented compared to that of the public and third sectors. The systematic review revealed three categories of SPMM evolution literature, namely: i) Totally excluded the evolution and delved straight into the specific issue of interest. ii) Briefly mentioned the history of SPMM and traced it to period of interest to their study, and iii) Described the evolution of SPMM in some detail and summarised the literature and organised it into distinct eras based on specific themes (e.g. Bititci et al, 2012; Johnson, 1981; Johnson & Kaplan, 1987; Kaplan, 1984; Noreen, 1987; Ridgway, 1956).

<sup>1</sup>Published literature included scholarly (peer reviewed) journals, books, book chapters and book reviews. Unpublished literature included trade journal articles, research, studies, audit, management and consultancy reports, working papers, conference papers and proceedings, symposia, working papers and briefs, academic theses and dissertations, professional websites and newspapers.

<sup>2</sup> “Selection of primary studies” in original SLR protocol by Tranfield et al. (2003)

**Figure 1:** Shows a summary of the systematic literature review process (Muravu, 2020)



The literature (e.g. Bititci et al., 2012; Bourne & Neely, 2000; Bourne et al., 2000; Neely, 2005; Nudurupati et al., 2011) revealed that the performance measurement evolution and revolution progressed through five broad phases (i.e. problem identification, proposed frameworks, methods of application, empirical investigation and theoretical verification) based on dominant periodic themes. The various authors' periodic taxonomies of the SPMM evolution are reflected in Table 4 below. The systematic review used the second and third categories to identify and name eight major phases which coincided with key developments in the evolution of SPMM. The following is an articulation of the evolutionary phases, the related key developments and contributions made to the SPMM field. The periods are not discrete and some of them evidently overlapped.

**Phase 1 - Pre-industrial age:** Covered the period prior to 1800, and specifically from early to mid-third century (221-265AD) through the middle ages (5<sup>th</sup> century to around 1453AD) until the early years of the industrial revolution (1760-1800). The literature does not agree on the exact date when records originated but there is consensus that accounting records have existed as far back as human trade or ancient civilisations with the earliest mention being early 3rd century until the Industrial revolution. The unsophisticated accounting records-based systems, invented before the contemporary factory era, were not meant for decision making and control but for recording straightforward market transactions and inventories by individuals and individual businesses (Bititci et al., 2012; Bourne, 2004; Bourne, Neely, Mills, & Platts, 2003; Goshu & Kitaw, 2016; Johnson, 1981; Johnson & Kaplan, 1987, Kennerley & Neely, 2003; Noreen, 1987).

**Phase 2 - The industrial age:** Covered the period from around 1800 to about 1925. The early SPMM practices, albeit being based on financial measures, were devised by practitioners and not academic researchers and were complemented by cost accounting concepts later appearing in influential academic literature. The actual managerial accounting records revealed that accounting simply kept pace with the informational needs of large single-

**Table no3:**Is the panel description of literature sources for the systematic review (Muravu, 2020)

Literature Source	Prior to 1980	1980 to 1989	1990 to 1999	2000 to 2009	2010 to 2018	n.d.*	Total Papers
<b>1. Published literature</b>							
<b>Peer Reviewed Journals</b>							
Public Administration & Development	-	-	-	2	-	-	2
Accounting Horizons	-	1	-	2	-	-	3
Accounting, Organizations & Society	-	-	2	1	-	-	3
Advances in Management Accounting	-	-	-	1	1	-	2
European Journal of Business & Management	-	-	-	-	3	-	3
Evaluation	-	-	1	1	-	-	2
Harvard Business Review	-	1	5	-	-	-	6
International Journal of Business Performance Management	-	-	-	1	2	-	3
International Journal of Humanities and Social Science	-	-	-	-	2	-	2
International Journal of Operations & Production Management	-	-	3	10	-	-	13
International Journal of Productivity & Performance Management	-	-	-	3	2	-	5
International Journal of Public Sector Management	-	-	1	3	1	-	5
Journal of Cost Management	-	-	1	1	-	-	2
Journal of Healthcare Management	-	-	-	2	-	-	2
Journal of Public Administration Research & Theory	-	-	-	3	-	-	3
Management Accounting	-	2	-	-	-	-	2
Management Accounting Research	-	-	-	3	3	-	6
Measuring Business Excellence	-	-	-	-	5	-	5
Production, Planning & Control	-	-	-	2	-	-	2
Public Administration	-	-	1	2	-	-	3
Public Administration Review	-	-	-	2	-	-	2
Public Money & Management	-	-	1	-	1	-	2
Public Performance & Management Review	-	-	-	3	-	-	3
The Accounting Review	-	2	-	-	-	-	2
The Australian Journal of Public Administration	-	-	-	1	1	-	2
Other Peer Reviewed Journals**	1	-	11	32	40	-	84
<b>Books, Book Chapters &amp; Book Reviews</b>	<b>3</b>	<b>-</b>	<b>3</b>	<b>7</b>	<b>1</b>	<b>-</b>	<b>14</b>
<b>Total Published literature</b>	<b>4</b>	<b>6</b>	<b>29</b>	<b>82</b>	<b>62</b>	<b>-</b>	<b>183</b>
<b>2. "Grey" Literature</b>							
Conference Papers***	-	-	4	10	7	1	22
Internet website/Online Repository	-	-	-	3	8	8	19
Professional/Workshop Reports****	-	-	2	21	13	2	38
Thesis/Disse rtations	-	-	-	2	2	-	4
<b>Total "Grey" Literature</b>	<b>-</b>	<b>-</b>	<b>6</b>	<b>36</b>	<b>30</b>	<b>11</b>	<b>83</b>
<b>Total Published and Non-published Literature</b>	<b>4</b>	<b>6</b>	<b>35</b>	<b>118</b>	<b>92</b>	<b>11</b>	<b>266</b>
<b>% Per period</b>	<b>2%</b>	<b>2%</b>	<b>13%</b>	<b>44%</b>	<b>35%</b>	<b>4%</b>	<b>100%</b>

\*This relates mainly to “grey” or unpublished literature that is undated. Common “grey” literature refers to literary materials and research produced by institutions other than traditional commercial or academic publishers and distributors (GreyNet, 1999; Wikipedia, 2019).

\*\*These are peer reviewed articles from 84 journals which had one article each.

\*\*\*Conference papers include symposia, working papers and policy briefs.

\*\*\*\*Professional and workshop reports include studies, audit, consultancy or management reports by governmental and non-governmental organisations, think tanks, professional institutes, and consultants.

**Table no4:**Reflects the taxonomy of the evolution of SPMM in literature (Muravu, 2020)

#	Author(s)	Number of periods/ phases/ dimensions	Description
1	Kaplan & Norton (1987); Noreen (1987)	3 periods	Pre-1800, 1800 to 1925 and 1925 to 1980s
2	Bourne et al. (2000); Neely (2005)	5 life-cycle stages	These are “problem identification” (1980s period “relevance lost” discussion), “proposed frameworks” (search for potential solutions in early 1990s), “methods of application”, “empirical investigation” (calls for more robust empirical and theoretical analysis of SPMM frameworks in early 2000s) and “theoretical verification” (test evidence from “empirical investigation”).
3	Amaratunga & Baldry (2002)	3 roles	Contemporary (post-1990) literature acknowledged the role of traditional SPMM as facilitating monitoring and organisational control while modern SPMM systems must be employed as key agent of change to facilitate improved quality and service.
4	Henri (2004)	2 views	SPMM evolved from "cybernetic view" based mainly on financial measures and treated as a sub-component of the planning and control cycle to a "holistic view" premised on multiple measures and where it is an autonomous process integrated into a broader set of managerial practices.



5	Henri (2004)	3 roles	Revealed a “stakeholder approach” which defines performance measurement contribution in terms of three roles namely: coordination, monitoring and diagnosis.
6	Eckerson (2009)	4-step virtuous cycle	1. Strategise (mission, values, goals, objectives, incentives, strategy maps) 2. Plan (budgets, plans, forecast, models, initiatives, targets) 3. Monitor/analyse (performance dashboards, reports, analytical tools) 4. Act/adjust (interpret, collaborate, assess, decide, act, adjust, track)
7	Bento & White (2010)	3 three distinct and progressive phases	Classified SPMM evolution into phases based on SPMM systems focus, namely; the “how-to” phase (concerned with design of SPMM systems) (Neely, Gregory, & Platts, 1995; Neely, Mills, Platts, Gregory, & Richards, 1996; Kaplan & Norton, 1996), the “what-else” phase (concern with factors affecting success or failure of SPMM implementation) (Bititci, Carrie, & McDevitt, 1997; Bourne, Neely, Mills, Platts, & Wilcox, 2000) and “so-what” phase (focused on impact of SPMM systems on organisational performance)( Behn & Riley, 1999; Banker, Potter, & Srinivasa, 2000; Ittner, Larcker, & Randall, 2003; Burney & Widener, 2007). These periods coincide with early to mid-1990s, mid to late-1990s and 2000s decade respectively.
8	IFAC, (1998); Waweru (2010)	4 Stages	Stage 1 – Prior to 1950, focused on cost determination and financial control. Stage 2 – By 1965, focused on provision of information for management planning and control. Stage 3 – By 1985, focused on reduction of waste in resources in business processes. Stage 4 – By 1995, focused on generation or creation of value through effective resource use.
9	Bourne et al. (2000); Nudurupati et al (2011)	3 stage life cycle	Covered design, implementation and utilisation and update of SPMM systems.
10	Bititci et al., (2012)	4 stage/phase life cycle	Development, adoption and implementation of SPMM frameworks implied that Meredith’s (1993) description–explanation–implementation–testing cycle applied to SPMM evolution consistent with Neely’s, (2005) generic SPMM life cycle (5, above).
11	Franco-Santos et al., (2012); Goshu & Kitaw (2016)	2 distinct periods	Divided the SPMM revolution into period before and after the revolution which provided a natural divide for respective use of “traditional” and “contemporary” SPMM systems.
12	Goshu & Kitaw (2016)	4 broad phases	Based on purpose and focus of SPMM: productivity management (19 <sup>th</sup> century to 1940), budgetary control (1940-1980), integrated PMS (1980-2000) and integrated performance management (2000 onwards)
13	Goshu & Kitaw (2016)	2 life-cycle stages	Identified progressive SPMM evolution from design of strategic performance systems in the mid-1900s to implementation of SPMMs in the late 1990s to early 2000s
14	Carneiro-da-Cunha et al., (2016)	5 “great eras”	Classified SPMM evolution into eras based on crucial time-frames used to evaluate the evolution of important elements of the research field: performance focus, strategic perspective, measurement scope, measurement usage amplitude, economic nature and accountability, namely; first half of the 20th century, the ‘50s, ‘60s and ‘70s; the ‘80s; the early ‘90s; the late ‘90s to date
15	Goshu & Kitaw (2016)	4 main ways	From operations to strategic, measurement to management, static to dynamic and economic profit to stakeholder focus
16	Goshu & Kitaw (2016)	5 major elements	SPMM changes during revolution progressively occurred in focus, dimensions, drivers, targets and desired benefits leading to replacement of “traditional” performance measurement systems with more balanced PMM systems and an evident shift towards total corporate and SPMM systems (or contemporary SPMM systems).

activity manufacturing concerns of the time (Johnson & Kaplan, 1987; Kaplan, 1984; Noreen, 1987).

**Phase 3 - The innovation inertia period:** From around 1925 to 1950 the literature is agreed that there was minimal to no major innovation but does not agree on the timing which ranges from about a decade to six decades. The French *Tableau De Board* was a major invention of this time which interestingly is omitted from Johnson and Kaplan’s numerous and highly influential works but was mentioned by a few authors who branded it as the *de facto* first ever documented multi-dimensional SPMM model. It had been in practical use six decades before the much-hyped integrated SPMM frameworks of the 1990s such as the Balanced Scorecard (BSC). The “innovation stagnation” period may have afforded corporate America the opportunity for diffusion of the then existing SPMM techniques. (Bourne et al., 2003). Furthermore, the apparent convergence of authors on the period for stagnation is hardly surprising simply because most of them based their accounts on Johnson & Kaplan’s incomplete historical works until 1987 (Bourne et al., 2003;Carneiro-Da-Cunha et al., 2016; Chenhall & Lang-Smith, 2007; Johnson & Kaplan, 1987, 1987b; Kaplan, 1984; Marr & Schiuma, 2003; Noreen, 1987).

**Phase 4 - Early stages of globalisation:** Covered the period from 1950s to 1960s. Since the time of Du Pont during the 1900s and General Motors in the 1920s, we see another major corporation, General Electric in the 1950s being a major innovator of new SPMM systems supported by the “dysfunctional consequences of performance measurements” movement who vigorously criticised existing systems (e.g. Argyris, 1947; Drucker,

1954; Ridgway, 1956) thereby laying the foundation for “multidimensional measures” albeit actual implementation was from the 1960s and henceforth (Bititci et al., 2012; General Electric, 1981; Kaplan, 1984).

**Phase 5 - The early multi-dimensional age:** Covered the period from 1960 to around 1980. The introduction of the principal-agent or agency theory to management accounting literature in the early to mid-1970s was a game changer in solving management accounting problems and those for SPMM by extension. Agency theory’s key assumption on accounting information as the backbone of contracting between economic agents formed a key theoretical framework for SPMM. Furthermore, the debate on incorporating multiple dimensions of performance had been ongoing for decades but from the literature it became much more protracted and the resultant traction directly set the stage for the upcoming “performance measurement revolution” (PMR) of the 1980s.

**Phase 6 - The “performance measurement revolution”:** This period covered late 1970s to early 2000s. The PMR literary space is highly congested as most authors attempted to provide what they deemed was evidence that the revolution occurred. The increased interest in SPMM or the topic of high performing organizations was evidenced by increased research and publications by academics, consultancy firms/professional institutes and constant growth in conferences / seminars conducted on the topic, emergence and rapid growth of SPMM related bodies and their memberships in Europe and in US transforming it into a multimillion dollar business (Carneiro-da-Cunha et al., 2016; Neely, 2007; Pasch, 2012). This ostensibly reflected the re-ignited interest by academics and practitioners in measurement of performance and productivity than at any other point in the history of development of the subject.

Notwithstanding some noted statistical methodological weaknesses, the above clearly showed that since mid-1980s SPMM gained hitherto unknown popularity in practice and research to warrant Neely (1999) to coin the term “performance measurement revolution”. The literature provides no easy and ready answers as to why there was a PMR specifically during the 1980s and 1990s given that the debate on adequacy, or lack thereof, of traditional financial measures had been an “on again” and “off again” phenomenon for up to five decades earlier. Given its importance in the developmental trajectory of SPMM, the PMR period was divided into three sub-eras which coincided with “developments within developments” in the SPMM domain. It was based on key themes and the accelerated pace of developments and dynamic changes in the competitive and operational environment making organisations’ obligations onerous and more complex (Bititci et al., 2012; Goshu & Kitaw, 2016) especially since the new millennium.

The PMR generally represented convergence of performance measurement literature with previous strategic management and control works with fundamental focus on effective strategy execution i.e. whether strategy was being executed as planned and if intended outcomes were being achieved (Bento & White, 2010; Bititci et al., 2012; Carneiro-da-Cunha et al., 2016; Goshu & Kitaw, 2016; Kaplan & Norton, 1996; Neely, 1999; Nudurupati et al., 2011; Ratnayake, 2009; Ridwan, Harun, An & Fahmid, 2013). We crucially reviewed the sub-eras of the PMR because this was the time which completely changed SPMM discourse and practice forever. If the other eras from conception of SPMM had represented an orderly evolution, this period indeed signified a revolution in every aspect. The identified sub-periods are; the “relevance lost” period (late 1970s to early 1990s), the integrated performance measurement system (IPMS) period (early 1990s to mid-1990s) and the SPMM period (mid-1990s to early 2000s). The PMR saw the consequential rise of contemporary SPMM systems signaling the shift from traditional finance-based measures to more “balanced measures” incorporating non-financial multidimensional aspects in the 1990s.

**Phase 6.1 - The “relevance lost” period:** Covering the late 1970s to early 1990s, this period somewhat represents an “overflow” of the multi-dimensional age, albeit not acknowledged in most literature of the day, when the “financial” vs. “non-financial” debate raged. It was a period of re-awakening when academics and practitioners suddenly realized that they had short-changed the SPMM field by holding onto traditional systems which worked perfectly well during the industrial age but that were patently no longer adequate during the information age. The eventual introduction of Japanese TQM practices in the Western corporate domain led to assimilation of quality as an integral part of SPMM. The calls for new balanced measures saw the development of new innovative cost management and SPMM techniques to try and mitigate against some of the criticisms directed at traditional management accounting. This saw introduction of *activity-based costing* (ABC) in 1987 and the *performance measurement matrix* in 1989, thus truly consummating the era of the strategic performance measurement system (Carneiro-da-Cunha et al., 2016; Cooper & Kaplan, 1987; Cooper & Kaplan, 1988; Cooper, 1987, 1988a, 1988b, 1989; Jeans & Morrow, 1989; Hayes & Abernathy, 1980; Kaplan, 1984; Keegan, Eiler, & Jones, 1989; Neely, 2005; Troxel & Weber, 1990).

**Phase 6.2 - The IPMS period:** Covered the period from early 1990s to mid-1990s in which following the “re-awakening period” there was a scramble to “do the right things apart from doing things right” (Drucker, 1994). During this period organizational performance measurement started to amalgamate with earlier strategy works. The SPMM design and implementation phase, which began in earnest with Kaplan and Norton’s (1992) seminal BSC article, was preoccupied with recommending various innovations which practitioners could

potentially opt for to assist in implementing strategies for their complex organizations. The literature from this period concentrated on “how-to” issues on the design, implementation, use and continuous update of performance measurement systems during the final decade of the 20<sup>th</sup> century. Researchers did not question if SPMM systems could be considered as a pre-conditions for execution of strategy because they felt value proposition of SPMM was assumed since most private, public and non-profit sector organisations had adopted it (Amaratunga& Baldry, 2002; Bento& White, 2010; Bourne & Neely, 2000; Bourne et al., 2003; Carneiro-da-Cunha et al., 2016; Folan & Browne, 2005; Lebas, 1995; Kaplan & Norton, 1996; 2001a; 2004; Neely et al., 1995, 1996, 2000; Nudurupati et al., 2011; PEA, 1999; Taticchi et al. 2010).

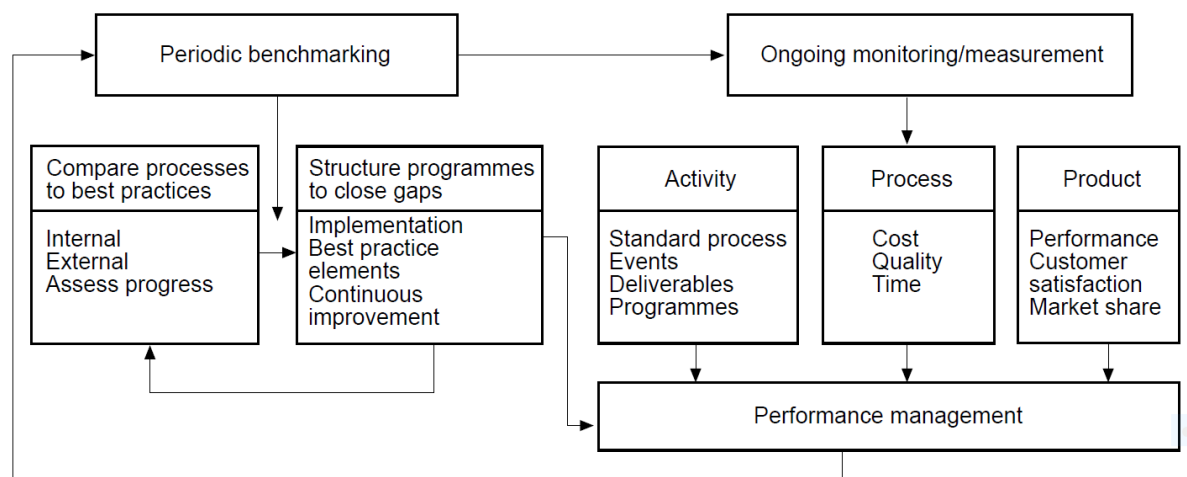
**Phase 6.3 - The SPMM period:** Covered the period from mid-1990s to early 2000s in which SPMM literature shifted its focus to reviewing design and implementation processes to identify implementation successes and failures to be resolved from the change management perspective. This was based on few published early and later detailed theoretical and empirical studies because the much hyped integrated SPMMs ranged from partial success i.e. giving inadequate results to outright failure (Bourne & Neely, 2000). The studies in the “**what-else**” period of the late 1990s (Bento& White, 2010)concluded that certain variables and processes were key for successful implementation of SPMM systems and mandatory to achieve continuous strategic alignment of SPMM systems. When combined with a well-defined strategic success model, they could value add to the strategic management process through challenging the status quo and the strategy per se (Bititci et al., 1997; Bourne & Neely, 2000; Folan & Browne, 2005; Kaplan, 2001; Kennerley & Neely, 2003; Lebas, 1995; Murby& Gould, 2005; Neely et al., 2000; Nudurupati& Bititci, 2005; Taticchi et al., 2010; Waggoner et al., 1999).

Neely et al. (1995) recommended a closed loop performance management system (Figure 2) to resolve the then prevailing IPMS “design” problems. Since then the literature shifted to addressing the "knowing-doing" gap or dealing with the “challenge of moving from performance measurement to performance measurement and management” which was a milestone development in SPMM evolution. There was continued articulation and further refinement of the performance measurement and management concept - a process in which performance measures facilitate the management of organisations’ performance - during this period. The concept eventually transformed into “strategic performance measurement and management” or the broader SPMM concept we know today.

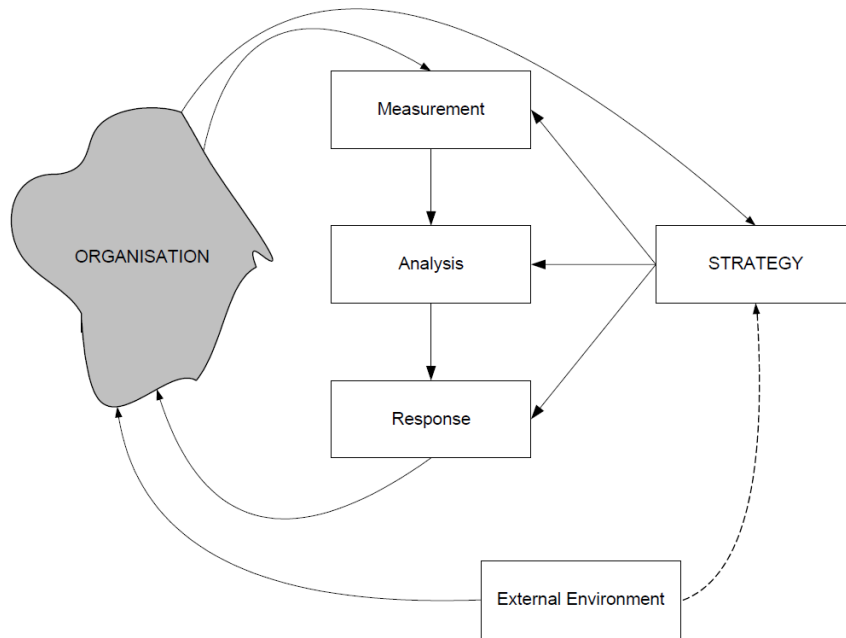
Perhaps the importance of the evolution from performance measurement through performance measurement, and management to strategic performance measurement, and management is personified through the evolution of Kaplan & Norton’s(1992) balanced scorecard through several successive generations (Folan & Browne, 2005; Nudurupati et al., 2011). Figure 3 below illustrates the repetitive state and circumstantial reality of SPMM.

A key development this period was the emergence of Kaplan and Norton’s (1992) balanced scorecard (BSC) and how it outpaced any other known multi-dimensional PMS developed during this era as a key SPMM tool.

**Figure no 2:** Shows a closed loop performance management system proposed to deal with problems of effectiveness of IPMS systems (Source: Neely et al., 1995 & 2005; Oge & Dickinson, 1992)

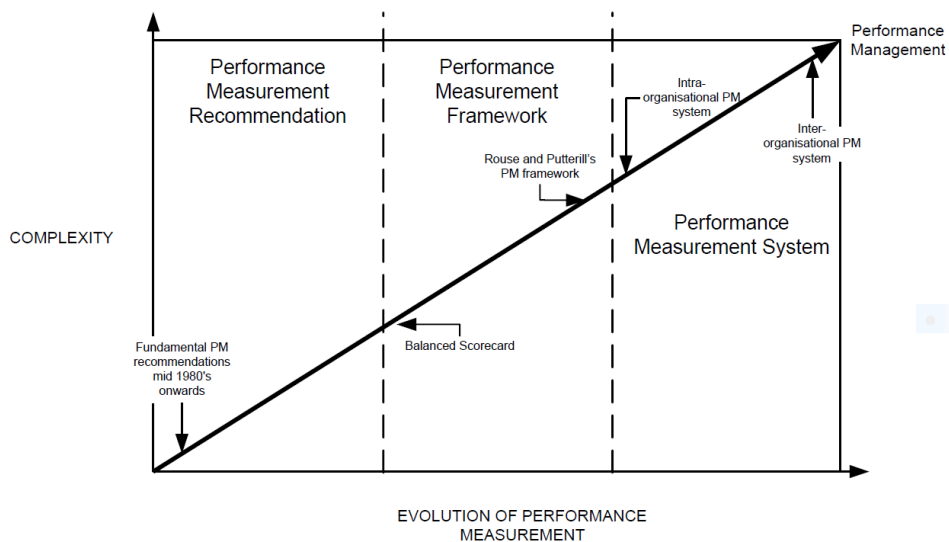


**Figure 3:** Illustrates the strategic performance measurement and management process(Folan & Browne, 2005)



**Phase 7 - The inter-organisational SPMM period:** Covered the period from early 2000s to around 2010 in which Taticchi et al (2010) argued that the development and evolution of SPMM research was entering "a phase of new directions" which could be conceptualized by context, theme and challenge. Bento & White (2010) claimed that the 2000s saw the SPMM literature focusing on effectiveness of SPMM system implementation or impact on organisational performance. Folan & Browne (2005) identified the external environment as the "next frontier" of SPMM and predicted that the supervening years were expected to see a significant increase in inter-organisational SPMM developments. Supply chain SPMM and, more particularly, Extended Enterprise SPMM was a key development in determining the direction of SPMM from that time to date. It required closer SPMM co-ordination of independent organisations and their linked vendors something considered foreign to the traditional view of the conventional autonomous organisation with distinct boundaries and restricted associations with other organisations and has been more concerned with "internal efficiency and effectiveness only" (Folan & Browne, 2005) (Figure 4). This fundamentally impacted organisational SPMM practices and it began to reflect in SPMM literature trends on complex collaborative organisations (Folan & Browne, 2005). The question was whether these complexities were hindering inter-organisational SPMM developments, itself an aspect which required further research.

**Figure 4:** Is an illustration of the evolutionary process of performance measurement (Folan & Browne, 2005)



Despite the identification of extended SPMM as emergent and highly promising in the then existing context, with need for more empirical research to explore these aspects, the systematic review revealed that there has not been much progress in that regard to date. Whilst there has been some progress in the external environment this has largely been disappointing to say the least when compared to expectations in which significant increases in Extended Enterprise SPMM had been foreseen in the literature (e.g. Folan & Browne, 2005). Most literature on EE SPMM in the late 1990s and early 2000s concentrated on supply chain SPMM systems while EE SPMM was relegated to obscurity at least until in the later 2000s (Forlan & Browne, 2005; Neely et al., 2000).

**Phase 8 - The innovative/disruptive SPMM age:** 2010s to date was a major turning point with Bititci (2011) and Bititci et al. (2012) emerging as very influential pieces in SPMM evolution. They recognised the increased complexity of the organisational external environment, that while extended SPMMs had been foreseen, even they became much more complex and were exacerbated by emergence of disruptive technologies. This called for not only a complete change of mindset by researchers but need for a complete overhaul in existing approaches to SPMM research. They called for a holistic and systematic approach incorporating multiple dimensions to match the complexity of the operational environment which practitioners ordinarily grapple with daily building on Nudurupati et al. (2011) and Folan and Browne (2005). The authors concurred that things are now fast changing compared to before, due to advanced technological improvements, rise of climate change, environmental and global sustainability as topical issues, amplified rate of globalisation, removal of trade restrictions, shift of economic prowess from the Triad to emerging economies (e.g. BRICS) and increased civic voice in governance. This literature was a comprehensive and provided detailed and useful insights into contextual trends and potential future changes in SPMM considering the stated change factors. The systematic review also established the realisation of a new *modus operandi* which resulted in a fresh trend of ICT-based “next generation” SPMM systems or models which are context-sensitive, predictive, multi-dimensional, composite and multi-sectoral (Amaratunga & Baldry, 2002; Bititci et al., 2012; Carneiro-Da-Cunha et al., 2016; Folan & Browne, 2005; Stefanovic, 2014; Watts & McNair-Connolly, 2012)

**Parallel developments in SPMM:** There were significant developments which concurrently occurred with evolution of the field of SPMM, namely; diffusion of SPMM into other fields, emergence of SPMM subfields, debate on the professionalization of SPMM into a stand-alone academic field, emergence and dominance of BSC as a concept and core SPMM tool and “performance beyond measurement” which are briefly discussed below and are certainly worth of independent academic inquiry.

**Diffusion of SPMM into other fields:** The diffusion of SPMM into other fields resulted in the need to coordinate, communicate and harmonise various approaches to SPMM design and use and explore how emerging novel manufacturing techniques exerted new challenges for SPMM and control (Chenhall & Lang-Smith, 2007). The increased uptake of what had traditionally been considered as core strategic management models, techniques and theories into the realm of SPMM cemented the transformation of traditional performance measurement into strategic performance management. Early concepts such as Porter's SWOT analysis and Five Forces Model and the BCG Matrix are now being widely tested, in the current contextual environment and are providing robust empirical evidence of the existence of a positive causal relationship between formal strategic planning and attainment of optimal organisational performance. Interestingly, these strategic management models were developed many decades earlier and only assumed turbulent operational environments which makes them relevant to today's disruptive operational environment way more than before.

This lends them to fulfill the statement that “management models are adopted in practice only when institutional circumstances conspire with them” (Cardoso, 2014) and consistent with Kuhnian proposition “that progress only happens through successive and abrupt shifts of paradigm” (Ratnayake, 2009, p152). The role of Taylorism and its historical influence on SPMM are very apparent in the literature and there is clear evidence that the practices are still prevalent in modern SPMM. The results to date support the literature claims that scientific management (SM) was the “paradigm shift” underpinning evolution of modern performance measurement research (Ratnayake, 2009; Uddin & Hussain, 2015) and that the modern high performance organisation simply retained SM core concepts subject to evolving environmental and contextual circumstances. The evolving managerial demands for SPMM systems that could cope with assessing the effectiveness and efficiency in specific disciplines/functions forced practitioners to develop performance measures that were relevant to their management domains leading to mushrooming of different approaches to designing performance measures (Chenhall & Lang-Smith, 2007).

**Emergence of SPMM subfields and specialty:** The emerging subfields of SPMM, such as SME, public sector and non-profit sector SPMM provide a conducive environment for future scholarly and empirical research. This may include development of relevant SPMM theories and empirical testing to support managerial practice.

**Professionalisation of SPMM:** During the SPMM revolution, a parallel debate raged as to whether the field was ripe to transform into a standalone academic discipline, Henri (2004) claims that the evolution is

superficial and “is not borne out in research” (p.xx) while Folan and Browne’s (2005) content that most SPMM literature describes a linear evolution which “has not occurred in reality”. The basis of such strong assertions is not clear from the literature itself. Clearly, such radical perceptions may have had some credence previously but decades of thorough theoretical and empirical SPMM research, seem to strongly support that indeed a PMR occurred. The debate has enraged with some scholars proffering reasons why the performance measurement field has not and cannot crystallise into a distinctive profession (e.g. Chenhall & Lang-Smith, 2007; Kaplan, 1984; Neely et al., 1995, 2005). Other authors acknowledge the legitimate challenges of SPMM’s multidisciplinary aspect but believe that they are not insurmountable as the literature (e.g. Bititci, 2011; Bititci et al. 2012; Chenhall & Lang-Smith, 2007) already reflect several successful multidisciplinary works. This group of authors offer some requirements for professionalisation of SPMM field (e.g. Chenhall & Lang-Smith, 2007; Folan & Browne, 2005; Marr & Schiuma, 2003; Neely, 2005).

**Dominance of BSC as a concept or strategic management tool:**The dominance of Kaplan and Norton’s (1992) BSC as an SPMM tool was so prominent in the SPMM systematic review such that it is widely considered the real “take off point” of the contemporary SPMM revolution. Evidence of the BSC’s unprecedented superiority over other SPMM systems include its extensive implementation in all sectors (private, public and third sectors), its acknowledgement as the most cited performance measurement tool of all time and the numerous implementations and case studies thereof. The landmark BSC’s unprecedented popularity, success, superiority, its widespread adoption as an SPMM system ever designed and implemented as the literature testified could not be ignored in this study. The question as to what drove so-called BSC superiority is relevant to this study given that the dysfunctional consequences of managing solely with financial measures had been known for many decades, hence there is need to establish what had changed since then. This dates back to the introduction of the French *Tableau de Bord* in the 1930s, then the multi-dimensional measures fronted by General Electric and scholars such as Peter Drucker in the early 1950s. While particularly relevant and interesting these issues pertaining to the BSC unfortunately fall outside the purview of this study, however the following should seriously be considered for independent inquiry:

- Application and use of the BSC
- Similarities and differences between the BSC and *Tableau de Bord*
- Criticisms of the BSC
- Does the balanced scorecard have a future?

**Performance beyond measurement:**The chronology, evolution and revolution of SPMM seems to be fairly established in the systematic review from multiple dimensions and angles but this will be incomplete without mentioning what Bititci et al. (2012) refer to as an “increasingly popular and somewhat controversial view of performance measurement”. Johnson and Kaplan’s *Relevance Lost* (1987) is established as the foundation of contemporary performance measurement in most SPMM literature premised on the assumption that organizations need to use relevant performance measures to improve their performance. Yet some authors argue that the eventual goal of performance measurement should be learning rather than control. Johnson and Broms (2000) argue a well-performing organisation can be managed perfectly well without measuring its performance. Both sides for and against appear to agree that increased control does not produce good results and that the organizations must learn to perform, with or without measures. This is a very interesting debate which can not be ignored because it touches the very core or *raison detre* of SPMM which may lead to question why organisations invest millions of dollars, time and effort in establishing resource-intensive SPMM if they can achieve same without.

#### **4.2 Strategic performance measurement and management in the public sector**

Nyhan and Marlowe (1995) asserted that public administration forms the foundation of performance measurement. Lynch and Day (1996) attribute the genesis of contemporary public sector performance measurement to the “progressive” and “scientific management” movements towards the end of the 20th century. Brignall and Modell (2000) reckoned lack of unanimity among scholars with some arguing that the public sector was a role model / exemplary in performance measurement while others accused the public sector performance measurement systems of measuring numerous “things” but the wrong ones driven by the need to pacify its multiple stakeholders. Marr (2008) concluded that public sector organisations are obsessed with measuring performance thus replaying Power’s (1997) “audit society” or “desire to quantify”. Shipley (2009) acknowledges that most governments are using SPMMs “to help direct decisions, policies, and service delivery” but warned at the huge disconnect “between what the measures indicate and how government performs” (p.72). Bouckaert and Peters (2002) state that SPMM has been an essential element in modernising the public sector but also highlights that it is not new at all. They further assert that the emergence of SPMM systems, somewhat considered to be “development and integration in policy and management of performance measurement systems” received a lot of attention in public sector modernisation or the “Anglo-Saxon performance

measurement” model which became popular during the last 20 years of the 20<sup>th</sup> century in what was called the New Public Management (NPM) (Pollitt& Bouckaert, 2000; Salem, 2003).

The systematic review revealed evolutionary SPMM trends like those experienced in the private sector with several distinct periods emerging from various author’s historical accounts of public sector SPMM development. Most authors traced public sector SPMM evolution to related public sector antecedents while a few related it to the private sector PMR and the new advanced SPMM systems introduced in the 1990s (Metawie, 2005; Ruzita, Azhar, & Hasan, 2012; Salem, 2003) such as the Balanced Scorecard. Some authors provided a detailed account of public sector SPMM (e.g. Lynch& May, 2005; Nyhan& Marlowe, 1995;Williams, 2003). The following were the identified seven evolutionary periods based on key developmental themes and purpose.

**Phase 1 - The genesis of governmental performance measurement:** This period covered the late 19th century to early 20th century. Some significant literature provided detailed historical accounts of the work of the New York Bureau of Municipal Research (The Bureau) and early theorists and practitioners influence on the development of governmental performance measurement focusing on efficiency in public administration and work measurement from around 1900s. This is of-quoted as the real genesis of governmental performance measurement and management which lends the Bureau itself to be widely acknowledged in literature as the pioneer of public sector SPMM. There is evidence from the account on the Bureau’s work that some NPM principles and early public sector SPMM practices and concepts were already applied at the start of the 20th century. We reckon these early developments may sound petty, but they constituted the “cutting edge” governmental reform then and form the conceptual foundation for modern day public sector SPMM. Understanding the components of the then empirical approach to government management helps us develop a robust understanding of these measurement practices and how they influenced modern day governmental reform such as NPM. From the Bureau’s work, linked with that of International City/County Management Association (ICMA) and the Urban Institute, we can draw how governmental reform and SPMM practices evolved in response to various demands and changing circumstances not least confirm that the profound collective impact these institutes had on modern public administration. The literature also acknowledges the influence of the work of the scientific management and productivity movement who concentrated on developing administrative procedures and practices to facilitate efficient services’ delivery. Taylorism was concerned with defining objective performance standards/measures (means) and had primary interest in improving performance (Nyhan& Marlowe, 1995; Lynch& Day, 1996; Fryer& Antony, 2009; Williams, 2003).

**Phase 2 - Public sector innovation inertia:** Covered the period from the 1940s to 1950s. The public sector SPMM experienced its own version of innovation inertia between 1940 and 1960, when despite introduction of operations research induced techniques, public sector SPMM efforts dwindled and no specific reason is provided for this in the literature. Some authors traced the history of public sector SPMM to the 1960s and 1970s and this group of authors conceivably limited their historical accounts to emergence of use of the term “performance” in the 1970s since the literature is clear that even in the public sector SPMM dates back at least to around 1900 although it may not have been referred to by that specific term then. The recommendations of the 1949 first Hoover Commission represented earlier attempts to promote governmental performance measurement in in the United States. (Nyhan& Marlowe, 1995; Lynch& Day, 1996; Williams, 2003).

**Phase 3 - Public services/systematic social measurement era:** This phase covered the period from the 1960s and 1970s. The early public-sector performance measurement efforts waned during World War II but renewed interest in the subject peaked through the "social indicators movement" of the 1960s. Several authors agreed that,public services' measurement was improved through the use of cost benefit analysis, output budgeting, Planning, Programming, and Budgeting Systems (PPBS) and Management by Objectives (MBO) strategies especially by the Johnson and Nixon administrations in the 1960s and became a major concern of government in the 1970s due to the declining U.S. productivity on the global arena. While SPMM was long considered to have been successful in the private sector, previously it was considered impossible to measure performance in the public sector. Some early attempts are traced to evaluation and review and the abortive large scale strategic planning in the 1970s until the emergence of NPM reforms introduced by governments in the 1980s and 1990s after which public sector SPMM was firmly established. The period represented a long interval of almost twenty years when there was much talk but little to no action about introducing public sector performance management. SPMM was concerned with “inputs” measurement and this practice that was later criticized and mostly abandoned as these early systems, although focused on results, came short on the detailed implementation processes. This resulted in introduction of the Logical Framework approach to better track process in the 1970s (Boland& Fowler, 2000; Fryer& Antony, 2009; Lynch& Day, 1996; Metawie, 2005;Nyhan& Marlowe, 1995; Salem, 2003;Thomas, 2006; Williams, 2003).

**Phase 4 - New Public Management 1 (economy, efficiency and effectiveness):** This phase covered the period from the 1980s to early 1990s and constitutes the phase 1 of the NPM era. It is widely covered in lots of literature. NPMwas the fundamental pillar of public sector transformation in OECD countries from the 1980s. It

was founded in Anglo-Saxon countries hoping that it would lead to increased economy, improved efficiency, greater standards of public service, deeper 'ownership', and increased independence for public managers/ service providers and greater sensitivity by staff to all public service users. Western countries were pressured to become more competitive, efficient and effective in resource utilisation and service delivery to ease taxpayer burden by achieving "more with less" or to achieve performance improvements and increased accountability. NPM-based public sector reforms became popular and were later to diffuse globally

The literature highlighted that NPM was openly advocated by Western political leadership believing it would be the ready-made remedy to existing public management challenges but its effectiveness (or lack thereof) was to become a huge debate which has lasted more than two decades and arguably remains unresolved to this date. The direct linkage between NPM and public sector SPMM is widely documented (e.g. Salem, 2003) both in practice and research(e.g.) Christensen and Yoshimi (2003) such that public sector performance reporting is considered as an NPM technique which provides a beneficial theoretical framework for public sector performance evaluation and extensive contextual base for SPMM research. Metawie (2005) adds: "performance measurement is a central aspect of the public-sector reform" (p8). These affirmations confirm that it is virtually impossible to exhaustively / conclusively interrogate public sector SPMM without exploring NPM. (Aucoin, 1990; Binnendijk, 2000; Brignall & Modell, 2000; Christensen & Yoshimi, 2003; Fryer & Antony, 2009; Hailey & Sorgenfrei, 2004; Harun & Kamase, 2012; Hood, 1991, 1995; Kouzmin, Loffler, Klages and Korac-Kakabadse, 1999; Lynch & Day, 1996; Macki, 2008; Marr & Creelman, 2011; Moynihan, 2006; Northcott & Taulapapa, 2012; Nyhan & Marlowe, 1995; O'Flynn, 2007; Otrusina & Pastuszkova, 2012; Pollitt, 1995; Ridwan et al. 2013; Ross, 2011; Sanderson, 2001; Williams, 2003).

**Phase 5 - New Public Management 2 (quality and consumer satisfaction):** This covered the period from 1990s onwards (NPM2) to reflect the fact that this period saw sustained implementation of NPM reforms but under different and new dimensions of quality and customer satisfaction. The literature coalesced around the theme of SPMM implementation in the public sector particularly the BSC laying credence to its so called "superiority". It highlighted the differences between the private and public sectors and the need for BSC customisation to purpose-fit in the public sectors. Concomitantly, there was a spill-over of literature that challenged the precedence of the BSC from private sector SPMM to its criticism in the public sector. The period also signifies acknowledgement of public sector benchmarking as a key SPMM tool in the literature. However, we already saw elements of benchmarking in early governmental reforms in the Bureau's early 20<sup>th</sup> century work. Benchmarking as a concept was invented in the private sector in 1979 and it also has its roots in the public sector of the mid-1980s in local authorities and early 1990s in national agencies in the UK and some EU countries but became much more pronounced in the 1990s.

During this period a fundamental shift in public sector SPMM occurred due to observations that there was lack of meaningful progress in implementing SPMM systems attributable to two likely fundamental causes, i) apparent failure of existing performance measures to improve organisational performance and ii) lack of comparability of measures across dissimilar programs and organisational units. Evidence showed that performance measures tended to focus on outputs instead of results and it became a big issue in the public sectors. Stakeholders accused the governments of "little performance reporting" and when some literature appeared which supported this claim and 'limited application of performance measures', this can be considered the turning point to focus on improved quality and customer satisfaction as the second generation NPM. Williams (2003) states that during the 1990s, "performance measurement", "productivity improvement", and "performance budgeting" became part of US government performance measurement initiatives (Behn, 1995; Lynch & Day, 1996; Kouzmin et al., 1999; Nyhan & Marlowe, 1995; Osbourne & Gaebler, 1992; PEA, 1999; Salem, 2003; Sanderson, 1996).

**Phase - 6 Public sector SPMM implementations and empirical studies:** In the late 1990s and 2000s we see a trend where empirical studies are conducted on the implementation of SPMM systems in the public sector worldwide particularly the BSC and RBM. The BSC adoption makes interesting reading for two reasons. Firstly, it was designed originally as a performance measurement tool for the private sector and later metamorphosed into an SPMM system. Secondly, concurrently with its diffusion into the public sector saw widespread implementation under NPM-led government reforms which led several scholars to claim that public sector SPMM implementation spilled over from the private sector (Gadanne & Sharma, 2009; Greatbanks & Tapp, 2007; Kaplan, 2001; Macnab, Carr & Mitchell, 2010; Marr, 2008; Mayne, 2007; Metawie, 2005; Niven, 2002; Northcott & Llewellyn, 2004; Northcott & Taulapapa, 2012; OAGC, 2000; O'Neill, 2006; Pasaribu, Andika, Rachmanda, & Wibisono, 2016; Parrado & Loeffler, 2013; Pazvakavambwa & Steyn, 2014; Ridwan et al., 2013; Thomas, 2006; Wachira, 2013).



**Phase 7 - The innovative/ disruptive SPMM age:** Covered the period from 2010s to date and characterised by emergence of complex, predictive, ICT-driven new generation extra-organisational or extended SPMM models and KPIs which predict future directions for SPMM. These proactive SPMM models are responsive to fast the changing contemporary operational environment and will play a greater role than hitherto envisaged in supporting 21<sup>st</sup> thriving societies following the disappearance of mountains and rivers due to globalisation, increased connectivity as a result of enhanced technological innovations in communication and transport. (CIMA, 2012; Lawson, 2006)

#### **4.3 Strategic performance measurement and management in the third sector**

**Brief history of third sector organisations:** Third sector organisations (TSOs), also referred to as non-profit, not-for-profit or non-governmental organisations, refer to the range of organisations that are neither public sector nor private sector and includes voluntary and community organisations, social enterprises, mutuals and co-operatives (NAO, n.d.). The systematic review established that the early recorded history of TSOs dates back to around mid- 19<sup>th</sup> century with the formation of the World's YCMA (1844), the Red Cross (1864), and the Sierra Club (1892) among the first to respond to various pressing social needs (Glaeser & Shleifer, n.d.). TSOs are a crucial contributing sector to the globalised economy and assist central government in pursuing social objectives. They execute social programmes resulting in positive social change hence they have become a prominent feature in many countries (Salamon & Anheier, 1997; Brickley & Van Horn, 2000; Muravu, 2011, 2020). NPOs more than tripled in the last 3 decades of the 20<sup>th</sup> century (Ebrahim 2003) and rapid growth was attributed to donors' confidence that NPOs are more cost effective than governments in delivering key social services, had better reach to society's underprivileged and poor, and play a key democratisation role globally. Arguably, NPOs play a self-evident critical role in society's political and socio-economic development.

The literature is clear about the imperative for TSO performance measurement which echoes the that for SPMM implementation in both private and public sectors. This includes, improving TSO work given the complex numerous problems they face in program and service delivery in dynamic environment, to ascertain their organisational effectiveness in achieving mutually identified socio-development goals, facilitate cross-organisation performance comparisons to satisfy increased funders and regulators requirements. Anheier (2000) and Muravu (2011, 2020) claim that NPO models range from approximating a government agency; resembling a business firm to being slightly more than a mere informal network. Admittedly, TSOs' performance has been handled through various conceptual frameworks and utilised in different managerial processes. The systematic review identified and named the following six phases of evolutionary development.

**Phase 1 - "Ethical-social motivation" and "technical professionalism" era:** Covered the period from mid-19th century to 1945. Traditionally, the work of TSOs was primarily based on "ethical-social motivation" and "technical professionalism" and delivered by professionals in international development cooperation in response to natural catastrophes or humanitarian disasters. During this period "ethical-social motivation" and "technical professionalism" was adequate to justify their TSOs' that no one even questioned their performance (Anheier, 2000; Glaeser & Shleifer, n.d.; Ramadan & Borgonovi, 2015).

**Phase 2 - Efficiency and effectiveness era:** Covered the period from around 1945 to the 1970s. Following WWII, TSO performance was brought to the fore after their performance challenges were first uncovered and examined. The sector was criticized for lack of professionalism and failure to meet performance targets. 1960s to 1970s saw increased growth in number of TSOs since they were considered more efficient in delivering public services and implementing development policies. Going forward, TSOs were now required to evaluate their efficiency and effectiveness in deploying the limited resources allocated to them especially by the donors. Additionally, their dynamic and high risk operational environments require that they "assess and enhance their strategies and performance" while their overall effectiveness means that they must meet increasing and complex demands of various stakeholders by implementing effective SPMM systems. Their success can be guaranteed via the implementation of realistic SPMM systems coupled with managing and evaluating their performance from various perspectives. Since this time both ethical-social motivation and technical professionalism were no longer considered adequate hence performance of the third sector was thrust in the spotlight. The TSOs needed to justify the original perception of efficiency and effectiveness (Haily & Sorgenfrei, 2004; Ramadan & Borgonovi, 2015).

**Phase 3 - TSO M&E systems era:** Covered the period from the 1970s to the 1990s. Some TSO SPMM initiatives date back to late 1970s and 1980s but performance information from both performance measurement and evaluations is still scant in management and budgeting systems. The 1970s saw the adoption of the Logical Framework (LF) in the third sector and its widespread use in the 1980s. Some TSOs adapted the LF to facilitate a more participatory approach to objective setting and problem analysis. LF analysis has remained a key element defining relations between official donors and TSOs to this day. During the 1980s, called "the lost decade", several issues were raised on official aid effectiveness, quality of programming and planning processes, ability of traditional top-down monitoring and evaluation (M&E) systems to assess success of development

interventions while bottom up participatory approaches became more popular. There was a shift from project-based work to integrated long-term programming which required new techniques, such as stakeholder analysis and even more sophisticated participatory approaches. This signified the move from focusing on 'output' to 'outcome' and from 'product' to 'process' which in turn led to more emphasis on 'qualitative' as opposed to 'quantitative' indicators. Furthermore, in the 1980s political pressure to reduce the role of the state and emphasis on cost-effectiveness ironically resulted in the rapid rise in the third sector. The need to define relations with the public sector through contracts meant that the third sector became a new service provider and driver of improved performance in the supposedly newly competitive public sector. The contractual climate was characterised by emphasis on targets and performance indicators through the New Managerialism (Brickley & Van Horn, 2000; Haily & Sorgenfrei, 2004; Mayne, 2007; Salamon & Anheier, 1997; Williams, 2003).

**Phase 4 - TSO SPMM implementations:** Covered the period from the early 1990s to the late 1990s. Many governments, especially OECD, developing countries and IDOs adopted SPMM as a tool for integrating performance information into budgeting, managing and reporting in the context of good public management. After the adoption of modern SPMM in the private sector, they concurrently spilt into the public and third sectors, as later verified by empirical studies for BSC and RBM implementation in these sectors. Since the 1990s, the role of TSOs in international development has grown and, with it, great focus on NGO performance from various stakeholders. This implies that TSO research was still relatively embryonic, and that NGOs were making credible efforts to demonstrate their performance. These efforts were necessitated by increasing strict official aid requirements and increased internal desire for "accountability, self-motivation and improvement" (Kareith & Lund, 2012).

From 1990s, focus in TSOs moved to "accountability, impact and effectiveness". This period also saw increased interest around implementation of different SPMM systems in the non-profit sector. The literature shifted to interrogating SPMM from a practical process level (e.g. identifying appropriate performance indicators). This generation of literature centered around adaptation of the systems to the unique organisational missions and specific operational environment of the third sector. There was also debate around methodological challenges of "measuring effectiveness and impact of complex development programmes" and performance of inherently complex aid interventions like "advocacy and capacity building" in uncertain and highly dynamic environments. This required establishment and adoption of alternative indicators and approaches as well as RBM strategies integrating traditional SPMM systems with broader programmatic goals. Thus empirical studies also covered the benefits of SPMM systems, problems reported in performance measurement and recommendations to address identified SPMM design problems in the third sector (Awadallah & Allam, 2015; Binnendijk, 2000; Haily & Sorgenfrei, 2004; Kareithi & Lund, 2012; Mayne, 2007; Micheli & Kennerley, 2005; Murby & Gould, 2005).

**Phase 5 - Tripartite collaboration era:** From mid-1990 onwards, increased global competition for external funding, technological advances and public demands for more transparency have resulted in TSOs facing new challenges and pressures. Literature has explored the role of accountability and performance management in TSOs but still lacked evidence on best practices implemented around them. Some authors attempted to collect and present the evidence for the first time including offering insights to assist NPOs face the new challenges head-on. They focused on both conventional and contemporary issues facing TSOs supported by state-of-the-art evidence from field's key authors. They scrutinised the design and execution of accountability, and key performance indicators, among others providing both lagging and leading views, as well as accounting and performance critiques in a TSO environment. They also evaluated the changing role of SPMM in the sector. They provided a contextual analysis of the rise of NPM and the BSC leading to a rationale for better SPMM, changing existing practices and adoption of new fundamentals to SPMM applicable to the third sector.

The UK's 'Third Way' presented government with an opportunity for greater partnership across economic sectors and services through the creation of a new role for the third sector from being a simple choice in public services' provision to being directly involved in local and national policy development. Regrettably, the practical realities on the ground were not conducive for full realisation of the initiative's potential. This signaled a shift of the sector to a more prominent role. The UK's successor government's 'Big Society' Agenda saw the third sector playing an even bigger role in bidding to provide services as "a vital and vibrant part of civil society". The 2008 global financial crisis increased the third sector's role in a 'tripartite arrangement' with the public and private sectors, due to contracting out of more public services. This was potentially contradictory because the public sector was skimming itself through spending cuts, yet the third sector became a beneficiary of the resultant increased business outsourcing by the public sector. According to Broekcling (2010), whilst benchmarking became a popular SPMM practice in the private and public sectors of the 1980s and 1990s, Keehley & Abercrombie (2008) customised the technique and abbreviated it to suit the third sector's needs through "solution-driven" benchmarking (Hoque & Parker, 2015; NCVO/LSE, n.d.; Anheier, 200; Manville et al, 2003). Notably, the Tripartite Collaboration Era encroached TSO SPMM implementations on the one hand and TSO SPMM empirical studies on the other and may still be applicable to this day.

**Phase 6 - TSO SPMM empirical studies:** Covered the period from early 2000 onwards. The start of the 2000s decade saw introduction of literature on existing BSC and RBM-based SPMM frameworks and implementation in the public sector following its instant success in companies, some TSOs and governmental entities across the world. They noted that the practical SPMM challenges for TSOs, just like in PSOs, emanated from the key challenge of TSOs existing chronic failure in clearly defining their strategy. They reviewed existing SPMM frameworks and concluded that only a few were targeted at public and third sector organisations and, even then, they still did not meet the sectors' specific needs. They further reviewed SPMM systems that were developed and implemented in these sectors to identify requirements of a suitable frameworks for monitoring and enhancing the performance of PSOs and TSOs. They noted that the differences between PSOs and TSOs and their commercial counterparts and concluded that while attempts at customisation of private sector frameworks was justified, they did not fully capture the peculiarities such that no customised model existed that encompassed all the aspects requiring evaluation. Since 2000, focus has been on both continued implementation and empirical studies of SPMM systems in the third sector. The evaluation of existing SPMM frameworks implemented in TSOs was also done to establish, just like the public sector, if they met their specific needs given that they were originally intended for the private sector and to recommend systems which could be applied to monitor and enhance their performance considering the sectoral differences (Kaplan & Norton, 2001a; Micheli & Kennerley, 2005).

#### 4.4 Whither SPMM Research?

After tracing the development of SPMM spanning centuries, the pertinent question which have been asked in literature (Neely, 2005; Bititci, 2011; Bititci et al., 2012) since over a decade ago remains: what is the future of strategic performance measurement and management, if any? Frankly, this is a more direct version of the question raised on the potential professionalisation of SPMM into an independent academic field and attendant challenges. The literature responded by outlining a substantial research agenda for potential future SPMM research. These issues articulated several developments or future directions for SPMM research and coincidentally fall within the themes that were verified in the systematic review and are reflected in Table 5 below.

Bititci (2011) and Bititci et al. (2012) present a damning allegation against SPMM researchers, accusing them of rushing to focus on and attempting to understand a single phenomenon in a predominantly complex eco-system which is tantamount to shortchanging practitioners who are left to deal with all the daily multi-dimensional and complex SPMM practical issues concurrently.

**Table no5:** Reflects the future of the SPMM field based on trends emanating from the literature (Muravu, 2020)

<b>Proposed area of research</b>	<b>Theme from systematic review</b>	<b>Author(s)</b>
Designing and deployment of organisational SPMM systems as opposed to just performance measurement systems	From performance measurement to SPMM; growing utilisation of strategy and alignment to guide SPMM models and shifting from transaction focus.	Neely (2005); Carneiro-da-Cunha et al. (2016)
Measuring inter-organisational SPMM as opposed to intra-organisational SPMM considering identified contextual trends and potential future changes which included global cultural and multicultural aspects of SPMM and global collaborative networks, autopoietic networks, sustainability and open innovation, increased servitisation, global sustainability and the shift to service-dominant logic	Supply chain, green supply chain, extended, stakeholders and collaborative enterprise SPMMs	Neely (2005); Folan & Brown (2005); Carneiro-da-Cunha et al. (2016); Bititci et al. (2012); Nudurupati et al (2011); Mutingi, Mapfaira, & Monageng (2014)
Measuring intangible and tangible assets for internal management and external reporting	Tangible and intangible assets SPMMs (internal and external)	Neely (2005)
Developing dynamic rather than static SPMM systems	Predictive/dynamic SPMMs	Neely (2005); Stefanovic, (2014)
Enhancing flexibility of SPMM systems to cope with continuous organisational changes.	Flexible/Disruptive SPMMs	Neely (2005)
SPMM research to recognise the integrative and incorporate multidimensional nature of challenges faced in the field	Holistic systems-based approach to SPMM. New SPMM systems such as the so-called "next generation" performance scorecards e.g. the Performance Wheel and the Small Business Performance Pyramid	Bititci et al. (2011) & (2012); Watts & McNair-Connolly (2012); Carneiro-da-Cunha et al. (2016)
Diffusion of SPMM into other fields due to its increased role as change agent and aid towards productivity improvements, strategic development and learning, creating learning organisations and maintaining the performance management knowledge repository	Multidisciplinary SPMMs (Facilities Management, New Industrial Management, TQM, R&D, Environmental and CSR, MIS, Knowledge management, change management, lean production, MBO, functional SPMMs,	Amaratunga & Baldry (2002); PEA (1999); Ratnayake et al., (2009); Kaplan & Norton, (1996, 2001b); Bititci et al., (2012); Chenhall & Lang-Smith, 2007; Nudurupati et al., (2011); Bento & White, (2010);

Emergence of new SPMM subfields	Emergence of new SPPM trends from the literature, namely; SME, public sector, TSO; environmental and social performance; SPMM from people and team viewpoint; extended enterprise SPMM; SPMM for innovation and intellectual property; and SPMM as a social system.	Bititci et al., (2012); Franco & Bourne (2003); Goshu & Kitaw (2016); Nudurupati et al., (2011); Taticchi et al., (2010); Franco-Santos et al., (2007); Kaplan & Norton (2001b)
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He threw a major challenge for future SPMM research, when he proposed that, given the fast paced and disruptive nature of change in global organisational and contextual sense since the turn of the century, then effective SPMM research must be responsive accordingly. They advocated that research must comprehensively incorporate real practical day-to-day issues faced by practitioners’ and their actual responses to these issues which should result in enhanced understanding and explanation of “causal relationships”. This is supported by other authors (e.g. Nudurupati et al., 2011; Forlan & Browne, 2005) and the increased role of epistemological communities in promoting SPMMpractice, research and thought leadership.

## V. Discussion

The classification of identified evolutionary phases into more restricted phases, unlike in the past studies, was done to ensure that some nuances which may have been compromised in previous attempts due to potential lumping of some extended periods with different key themes, were magnified accordingly. This is exemplified by the fact that one key innovation in the 1930s, the *Tableau De Bord*, is omitted in most evolution accounts as that period was lumped with the time when there was general slow-down in SPMM innovation to none.

### 5.1 Private Sector SPMM Evolution

The systematic review presented a detailed account of the contemporary descendants and traditional antecedents of SPMM in the private sector which revealed an overall “on-again” and “off-again” trend. Ratnayake (2009) put it more succinctly:

The history of PM&M thought proceeds in jumps and advances by revolutions. Crisis, periods of stagnation, and slow-downs are admitted... This approach, which views the evolution of knowledge as passing through revolutions ... as caused by the accumulation of anomalies within the dominant paradigms, seems extremely useful in tackling the evolution of the PM&M concepts (p.160).

The systematic review revealed that SPMM evolved in successive periods in response to changing operational environmental circumstances and requirements. A couple of issues spin off from this study. Firstly, SPMM systems and measures, as developed from time to time, met the requirements of the time. However, new problems due to changing circumstances and developments (Bititci et al., 2012) resulted in these systems and measures being inadequate and being questioned. New models and measures were developed to address new challenges, but in the process new problems were inadvertently created (Ridgway, 1956; Neely, 2005) whilst the new cycle of environmental changes necessitates further improvements and continuation of the cycle. Notably, the solutions proffered to the challenges such as new systems and measures developed were not the panacea, as they often led to negative overall unintended consequences for the implementing organisations. Ridgway (1956) used the ‘penicillin analogy’ to highlight this challenge, clarifying that while penicillin was considered a wonder drug at first it turned out that it had much more serious negative consequences! Secondly, SPMM challenges are as old and enduring as the SPMM field itself. A review of the evolution of the field would help, understanding how the research has progressed, and the associated challenges and how they evolved and to position both future research and practice into context.

Following their 1987 classic, *Relevance Lost*, Johnson and Kaplan, in an interview with *Management Accounting* journal, were asked what they thought SPMM professionals would learn from the history or their “roots” as chronicled in their book that would assist them in creating relevant systems. Johnson’s response was:

The ultimate purpose of historical writing is to describe the past and to explain the conditions that made things as they were. Historians don’t study the past in order to prescribe solutions for the present. However, astute individuals realise that knowledge about the past provide important insights into the options that we face in the present (pp.26-27).

In applying this wisdom to this study, we hope that this chronology, evolution and revolution of SPMM constitutes the interrogation of SPMM “roots” which will enable present day practitioners and scholars to gain historical insights which necessitated development of certain SPMM systems, process and practices for which they may now be in charge. They must reflect and use this information to evaluate the relevance of these systems under existing conditions to establish whether their outputs still serve the day’s purpose. History alone will not be enough; today’s academia and practitioners must continuously challenge conventional assumptions daily. Another equally important aspect raised by Kaplan, in supporting Johnson’s view, is that understanding the roots helps the contemporary practitioner and scholar to appreciate that extant systems worked perfectly fine

in their time and for the purposes which they were designed. The author had a feeling that this aspect is not apparent in the criticisms of the legacy SPMM systems such as what occurred with finance-based systems immediately before the “performance measurement revolution”. It appeared these systems were never useful at any point in time and that the contemporary generation was being overly critical of the older generation who invented these systems as if they owed future generation the obligation to create systems with perpetual relevance and functionality.

To close this discourse, we refer to a phenomenon in organisational behavior borrowed from the work of Greiner (1972 & 1998). According to Greiner, organisations grow through evolution punctuated by protracted epochs of growth with no major turmoil in the organisation’s practices and revolution encompassing periods of substantial turbulence in an organisation’s life cycle. Greiner (1972) reckons that, “Each evolutionary period creates its own revolution” (p.38) and “each evolutionary period is characterised by the dominant management problem that must be solved before growth can continue” (Greiner, 1998 p.60). What is of striking relevance to this SPMM study is, not only the challenge that dominate each evolutionary period, but the fact that the nature of management’s response to each evolutionary period influences the organisation’s capability to step up to the next evolutionary growth stage until at least all Greiner’s phases of evolution and revolution are completed. We also notice the six phases of Greiner’s Organisational Life Cycle (Greiner, 1972, 1998) being replicated in the identified SPMM developmental phases. Greiner’s framework, consistent with the findings of this study, as well as articulated by Johnson and Kaplan in the 1987 *Management Accounting* interview, explains why certain management styles, organisational structures and coordination mechanisms work in certain phases and yet may not work in others. Added to the characterisation of SPMM as having evolved from “cybernetic view” to a “holistic view” (Henry, 2004), from traditional to contemporary SPMM systems (Bititci et al., 2012), “broadened by compounding multiple purposes” (Bititci et al., 2012) and other various SPMM life-cycle stages and dimensions by several authors (Table 4 above), we gain a remarkably rich and holistic theoretical understanding of how the evolution is deemed to have occurred.

## **5.2 Public sector SPMM evolution**

The systematic review revealed that public sector SPMM evolution essentially occurred in parallel path to the private sectors influenced by various developments and contextual trends in the various public services across the world from the turn of the 20<sup>th</sup> century. The seven distinguishable key phases reflected both similarities and differences due to the unique environment of the public services.

Some authors envisage that the evolution of NPM, the public sector’s version of the PMR, occurred through generations of public sector management reforms beginning with the 1980s NPM reforms through business managerialism in the late 1980s and 1990s to contemporary public management, or ‘integrated governance’. These reforms were applied in different ways, in different places and at different times globally but pointed to some consensus among governments in integrating SPMM systems in public policy development and execution. Evidence from the UK, a country considered to have applied NPM principles more consistently than any other country for over a quarter of a century suggest that there has been a shift in public sector SPMM form over time, with most systems gravitating towards the BSC approach.

We witness public sector performance evolution as also having occurred through successive public sector reforms in countries over time due to combination of various drivers of change. Different countries took various reform routes (different ways, in different places at different times) due to differing change drivers but there were some common policies which featured more in significant public sector reform initiatives such as NPM (1980s to date), The Washington Consensus (1980s –2010) and The Seoul Development Consensus for Shared Growth (2010 onwards) which replaced The Washington Consensus (1980s – 2010).

The 2008-9 credit crunch resulted in evolution to non-negotiable NPM reforms as opposed to voluntary reforms of the 1990 to 2000s due to forced spending cuts under the “better for less” maxim implemented by Western governments to achieve fiscal consolidation. This demanded that PSOs either deliver the same level of service with less resources or doing better with the same. At this stage the key challenges for public sector managers was venturing into uncharted waters - dealing with hitherto unseen challenges

The literature also provides important insights in how early public-sector attempts at SPMM systems implementation were unsuccessful which revealed that just like the private sector before it, the public sector needed to shift from performance measurement to strategic performance measurement and management through use of modern integrated SPMM systems and performance management methodologies to effectively manage organisational performance in the public agencies thereby mirroring developments in private sector SPMM evolution around the same time.

There is also some interesting literature which brings in a totally new dimension in local governmental performance management. From it one can conclude that local government performance in the 21<sup>st</sup> century matters not just from a social responsibility perspective for current citizens but from a global competitiveness context because they should strive to create the best and most livable communities which can attract global skilled employees and create localities where business want to expand: such places and communities are

destined to prosper and grow in a "flat world". The literature highlights the increased role of SPMM and how just like big government, localities should now focus on performance and outcomes lest they face long term extinction and risk putting their citizens at competitive disadvantage. According to the literature, "Performance measurement can help communities determine where they are, and more important, where they want to go".

In the final analysis, it is not surprising to see the growth of a body of empirical literature which emerged out of the dire need to test the apparent match between the integrated SPMM systems in public-sector performance management since their introduction in the 1990s. Most studies also examined the issues and challenges in relation to implementation of these systems. Our view is that adoption of SPMM systems and other performance management practices and techniques that are ordinarily considered to have originated in the private sector such as BSC, benchmarking, TQM etc allowed the public sector to leapfrog and narrow the gap in SPMM practice between with the private sector and it may seem this is what makes a lot of scholars seem to conclude that SPMM started in the private sector when this study does not seem to support so.

We also see an elevated role of international development institutions in public sector reform in which the notable players include aid agencies, donor countries, global institutions such as the United Nations, International Monetary Fund, The World Bank Group and some influential standard setting bodies such as International Public Sector Accounting Standards Board. Some of these institutions draw a lot of influence from their role as providers of both funding and technical assistance to periphery countries. A key lesson drawn from this study is that with SPMM the role of lessons learned from early adopters is indicative not instructional. This is evidenced in that, while some countries have done well and are often cited as exemplars in various aspects of public sector reform, experts have warned against wholesale importation of solutions from these countries. They have claimed that such "first mover" experiences provide good general principles to be instructional or a model in specific elements which may help improve the quality, efficiency and cost effectiveness of the public services.

Finally, the literature recognised the challenges and complexities associated with implementation of SPMM in the public sector and in some cases attempted to provide practitioner driven potential strategies for addressing common public-sector SPMM issues. But they are all not a magic wand and as already discussed revolve around interrogating and understanding what makes certain aspects of the public sector (e.g. outcomes) difficult to measure, developing and tracking measurable outcome goals, identified short-term and intermediate out-put oriented milestones and how they contribute to long-term outcome goals, roadmaps, impact assessments, linking lower-level outputs to higher level output measures, balancing output and outcome measures to avoid perverse incentives, use of performance measures and national standards to promote "joint" accountability for results and ensuring appropriate tools for evaluating administrative or process oriented program, benchmarking with other agencies or against private sector and encouraging development of common measures for common administrative functions across agencies.

The level of success or lack thereof has differed by reason, jurisdiction and organisation. Some literature paints a grim picture that "the challenges are quite real, and many are formidable". These range from complexity associated with change in focus, from outputs to outcomes, lack of required fundamental changes in "organisational management" for bureaucratic public-sector behemoths, long gestation period for SPMMs and its resource intensiveness. Whilst acknowledged, we get the comfort of a stream of literature from experts with many years of working with both private and public sector who have concluded that the challenges are not insurmountable. Overall, the paper revealed that the demand and enthusiasm for public sector performance improvement will not diminish soon.

### **5.3 Third Sector SPMM Evolution**

Even though the earliest TSOs revealed by the systematic review date back to mid-19<sup>th</sup> century, there is not much literature on third sector SPMM at least until the sector's exponential growth since the 1970s. TSO SPMM trend followed widespread implementation of SPMM in the private sector and it occurred concurrently with implementations in PSOs in the 1990s and increased rapidly since the 2000s. At the start of 21<sup>st</sup> century, we see literature that interrogated the implementation of the new SPMM systems to the third sector just like we saw with the public sector. Similarly, issues of differences with the private sector and their impact on applicability of the new SPMM systems in the third sector were equally raised. A key issue raised by the inventors of the BSC system was that from their first-hand experience working with TSOs, they lacked strategies and where they had, they were not well-articulated. Encouragingly, though the literature had highlighted that public sectors faced challenges adopting the BSC given their inherent inability to clearly articulate their strategy, they presented evidence that several TSOs successfully implemented customised BSC versions making them strategy-driven and giving them competitive advantage.

The literature provided conclusive evidence of the need for effective SPMM in the third sector and that it was not abating especially as, since the 1990s, governments started outsourcing the delivery of services to the third and private sectors under a 'tripartite' working arrangement which pressured TSOs to demonstrate their

societal worth. The 2008 global financial crisis and resultant increased government austerity cuts meant changes to welfare provision. An unforeseen consequence of the spending cuts to local authorities was increased demand for private sector outsourcing. This forced increased downstream business as the private sector had to work, engage and collaborate with the third sector and subsequently sub-contracted delivery of public services to it. Increased collaborative working spanning across public, private and third sectors provided potential for the three sectors to collaboratively address SPMM and to this end there have already been calls for ‘impact measurement’ in the third sector – under which the sector is required to focus on measuring ‘the difference being made’ and focusing on outcomes instead of outputs. It may have been early days, hence a poor response from TSOs, but the concept has potential and needs to be refined and popularised for effective future implementation.

Finally, some literature reviewed current strengths of TSOs and argued they could provide the basis for the biggest development in SPMM since Kaplan and Norton’s (1992) BSC. They reckon that despite the strengths of the BSC’s four perspectives, there were concerns on its application in TSOs which led to them “hit(ing) the target but miss(ing) the point”. They claimed TSOs have implemented best practice SPMM which can be used as a model for wider non-profit and public-sector adoption. It advocates for the public sector to learn from the third sector, as opposed to learning from the ‘distant’ private sector. This is a rare perspective it has traditionally been assumed that the third sector should learn from the public sector and not the other way round. Should the public sector harness the strengths of SPMM from the third sector, this should contribute to a better understanding and be of mutual benefit to the two sectors and facilitate knowledge sharing and experiential learning. What makes SPMM in TSOs of profound interest is their unique nature of sharing similarities and differences with both government and the private enterprise. This hybrid nature of NPOs makes SPMM implementation a relevant and appealing subject of academic inquiry.

#### **5.4 The future of the SPMM field - trends emanating from the literature**

Did SPMM research live to the expectations of the research agenda which has been well outlined over the last decades? Based on systematic review findings, there is indeed progress e.g. supply chain and extended SPMMs, but our view is that the progress has been way too slow. There are some pockets of progress such as on predictive SPMMs as well as “new generation” or predictive SPMMs, but the rate of development has been significantly outpaced by the rate of change in the disruptive operational environment. Our conclusion is that perhaps the research agenda was over-ambitious and that a more aggressive yet pragmatic approach to SPMM research is needed if the field is to survive in the age of disruption let alone ever be professionalised.

The proposed holistic systems-based approach to SPMM research (Bititci, 2011; Bititci et al., 2012) is very unique yet interesting as it challenges researchers to adopt the new approach. This implies that academics will provide practitioners with more relevant and practical solutions that are closer to reality and likely to be more useful in future. This will in turn reshape approaches to future SPMM research. Furthermore, the new approach moved a notch further from merely identifying research agendas which dealt with valid contemporary SPMM issues to considering the rapidly emerging trends and anticipates practical and challenges thereby providing the SPMM research community with opportunities for developing proactive and integrative, holistic research programmes that anticipate potential headwinds for future performance measurement and management.

An interesting development is that some proposed “next generation” SPMM models fuse and attempt to rectify the identified shortcomings of previous models into comprehensive models which, they claim, can be customised to meet the needs of literally any organisation. We sincerely question the practical applicability of such evidently complex models. Empirical and theoretical findings appear to suggest that the less complex the model, the easier it is to implement and the more generic it is across organisations. The more complex the models, the more difficult it is to implement across entities and sectors. Since some of the proposed models are already ICT-based one hopes that their success relies on robust deployment of ICT capabilities. So the potential for deployment of data extraction predictive analytics as a new approach to create proactive SPMM models that are responsive to modern day business environment is quite an interesting prospect which seem to point to the direction SPMM is likely to take in the foreseeable future and the critical role of multi-faceted, multi-level, forward-looking, ICT driven third generation SPMM models and in the general management of organisations.

## **VI. Managerial Implications, Recommendations and Conclusions**

This paper ends with articulation of managerial implications and overall conclusions of the systematic review.

### **6.1 General conclusion on SPMM chronology, evolution and revolution**

This paper traced the development of SPMM from its genesis and how it has evolved in the various sectors. This is because there are so many misconceptions which constrain the understanding of the subject and consequently detract from the development of theories which would otherwise promote the advancement of the field. There is a notion that SPMM was invented in the for-profit sector before it spilt into the public and third sectors. Some literature attributes the genesis of SPMM to Lord Kelvin’s 1883 statement: “When you can measure what you are speaking about, ... you know something about it; but when you cannot measure it, ...

your knowledge is of a meagre and unsatisfactory kind...”This study has proved that such notions are at best half-truths or outrightly inaccurate.

In concluding this study of evolution of SPMM, we raise several important points:

Firstly, the paper managed to clarify some inconsistencies on the history and evolution of SPMM caused by deliberate time delimitation to gross misunderstanding by authors. For example, by 1900s governments were already engaged in evaluating their own performance and in so doing were looking external to the organisation. The last decade of the 20<sup>th</sup> century saw knowledge transfer from the private sector when many governments and TSOs adopted and adapted BSC or RBM-type SPMM systems which were originally meant for the private sector as tools for integrating performance information into budgeting, managing and reporting in the context of good public management. This may have led most scholars to conclude that SPMM in the public sector was “borrowed” from the private sector, a notion this study has proved is not true at worst and inaccurate at best.

Secondly, it can be concluded that there was a parallel evolution and revolution of SPMM in the private, public and third sectors within which there has been some commonalities and differences. The systematic review identified eight, seven and six parallel evolutionary phases for the private, public and third sectors respectively. While SPMM may have been quite distinctive between the private and public sectors for example at 1900 due to different purposes, stakeholder and environmental demands this line gets blurred with time leading to convergence seen in implementation of largely the same SPMM methodologies and tools in the 1990s and increased collaboration between the three sectors since then. The emergent cross-sector collaboration could provide provides a strong opportunity for extended or collaborative enterprise SPMM across these sectors something hitherto unforeseen. This marks a positive shift for the three sectors to address SPMM in a more collaborative and holistic manner.

Thirdly, the study reaffirmed the significance of SPMM as a tool for performance improvement, organisational innovation and accountability transcending the private, public and third sectors and in the process also highlighted the “self-organization, adaptive and evolutionary” process of SPMM in complex environments. All three sectors acknowledged the importance of SPMM in driving corporate objectives.

Fourthly, all sectors have achieved notable successes and encountered different challenges with SPMM systems and the resultant performance information use. Lots of lessons were learned along the way. The challenges may have been unique depending on various variables such as sector, location, size, complexity etc but all empirical results have shown that there are definite benefits to be had from implementing reasonable and fit-for-purpose SPMM systems and that there are no signs of this appetite waning anytime soon.

Fifthly, there is need for anticipation of even more complex challenges in all sectors ahead due to emerging trends, some of which the literature identified and forecast such as globalisation and the inherent disappearance of geographical boundaries due to increased global connectivity, cyclical global economic crises, and the transformational global communication and transport networks which as a collective or individually have resulted in increased uncertainty due to global interaction and influences. There are already questions around whether simple linear organisations will respond in the uncertain and turbulent knowledge-oriented era and their capability to face the current randomness and uncertainty as already seen with disruptive technologies. What will be the impact of this on SPMMs as we know them today? Some hints from the literature point to migration to SPMM systems that are based on multiple assessments and feedbacks and a higher degree of dependence between the organisations and its external environments than what exists today thus creating a more diversified interface relationship. This will require a change of course for organisational SPMM and a shift in mindset for management and staff, something the literature called “new measurement methods and mentalities”

Sixthly, benchmarking was identified as one valuable SPMM concept which started in the private sector in 1979 and was transplanted to the public and third sectors where it became highly popular.

Seventhly, a clearly visible aspect of public sector models is the central role played by consultants, accounting firms, and professional institutes in either developing SPMM models and in providing implementation support to the participating agencies at national and/or international level. These networks have extensive, practitioner and research in international performance measurement and management. These numerous epistemological communities or “think tanks” have been at the forefront of both theory development and empirical studies therefore getting insights from key practitioners is important and certainly contributes to the richness and robustness of the research.

Eighthly, this paper cannot be complete without illuminating the commonalities and differences in the evolutionary development and trends of SPMM in the three sectors. The similarities included:

- a) Early SPMM concepts were developed by practitioners / professionals such as engineers, sociologists and later appeared in literature.
- b) SPMM evolved and responded to the external environment and major contextual developments such as the industrial revolution, scientific management and progressive movements, Fordism and post-Fordism, “social indicators movement”, operations research and quantitative techniques, agency theory,



large scale strategic planning, business managerialism or NPM, finance-based vs. non-finance-based debate (“performance measurement revolution”), multi-dimensional systems and lately digital transformation.

- c) The evolution followed broad themes which allowed classification by theme, context and challenge.
- d) Organisations played a key part in institutionalisation of SPMM:
  - Corporations such as Du Pont, General Motors credited with development of most finance based performance measures in early 19th century;
  - The New York Bureau of Municipal Research credited with genesis of governmental performance measurement in the early 20th century;
  - General Electric’s “MeasurementProject” which introduced multi-dimensional measures in the 1950s;
  - International City/County Management Association (ICMA) for complementing Bureau’s work since 1940s, carried forward by the Urban Institute in the 1970s and the Research Triangle Institute in the 1980s onwards;
  - US Department of Defense is credited for inventing the Logical Framework in the 1970s which became ubiquitous in public and third sectors and remains in broad use to date;
  - Xerox Corporation for inventing benchmarking in 1979
  - Major NGOs such as UNDP and DFID are renowned for advocating for Results-Based Management (RBM) methodologies and developing other M& E models employed by most governments and NGOs since the 1990s.
- e) Convergence of SPMM in all three sectors attributable to implementation of multi-dimensional systems in the 1990s and thereafter

The following were the differences:

- a) Private sector SPMM is centuries old dating back to early 3rd century B.C., public sector SPMM about a century old with its genesis traceable back to early 1900s while third sector SPMM is only decades old dating back to post-WWII (1960s and 1970s).
- b) The differing objectives between the private sector on the one side and public and third sectors on the other (profit maximisation vs welfare maximisation) have meant customisation of SPMM systems to purpose-fit e.g. while the BSC was originally meant for private sector entities over time it was customised to suit purposes in the public and third sectors. RBM evolved from use in the private sector as Drucker’s MBO on the 1950s through the Logical Framework in the 1970s to RBM and Integrated RBM.
- c) The 2008-9 credit crunch resulted in NPM moving from voluntary to more forced cuts for public sectors to do “better for less”
- d) Conversely, the same 2008-9 credit crisis resulted in increased business for the private and third sectors as most public sectors were forced to outsource more services to the latter sectors through the so called “tripartite” arrangements.
- e) Legislation of performance measurement in the public sector is one of the major differences and certainly a shift from private sector whose motivation is directly related to profit maximization while third sector is ordinarily governed through donor covenants.

Finally, the issue of proliferation of terminology and definitions of concepts is a real pain in SPMM literature and research. Whilst widely mentioned in literature and various justifications provided by authors, what is clear is that the existing nomenclatural and definitional diversity is potentially detracting from professionalisation of the field into a distinct field by some sections of the literature. Yet surprisingly, decades later, nothing practical seems to have been done about it and warrants a separate study.

## **6.2 Managerial Implications and Recommendations**

This section considers the study’s conceptual and managerial implications, and originality value.

a) SPMM is a critical organisational requirement with the caveat that it can solve challenges but concurrently create new ones. Adopting a range of new management practices and techniques not supported by adequate SPMM systems in any sector could be worse than having none. It could potentially result in a false sense of security and accomplishment which itself could lead to misallocation of resources or focusing on wrong priorities. Ridgeway’s (1956) “penicillin” analogy fits perfectly. Managers need to balance benefits and the numerous unintended consequences of SPMM, to ensure the latter don’t outweigh the former.

b) The literature was unanimous that SPMM is a critical success factor for “high performance organisations” and for nearly four decades now, SPMM research has advanced leading to robust theoretical frameworks and the much hyped PMR. Yet concurrently, most contingency-type studies conducted during this period on how SPMM impacts performance have been inconclusive. Why is that so? The literature review

further revealed these frameworks are well-outlined and so are the common organisational success factors such as strategy alignment, customer orientation and personnel excellence (Pasch, 2012). However, it does not appear that the same level of success perceived to have been enjoyed by academia or “paper success”, as we call it, in the field of SPMM has not crystallised in practice. There thus seems to be a glaring academic-practitioner gap in SPMM achievement which needs to be filled.

c) The 21<sup>st</sup> century manager needs to gain an in-depth comprehension of performance success factors necessary to facilitate them setting up projects and delivering desired solid results for their specific entity. The key managerial concern for today, therefore, remains: which high performance characteristics does their company possess and what is the best way to manage them? Higher learning institutes and professional consultants may have sprung to assist by developing robust procedures, models and frameworks to identify and quantitatively describe these characteristics (Pavlov & Bourne, 2011; Pasch, 2012) but to what practical ends? A practitioner of many years in diverse organisations, the author can testify that it is not that simple and straightforward in practice.

d) The foregoing is consistent with the fact that practitioners in the SPMM field are being proactive and moving full speed ahead through conducting of annual international conferences, workshops and symposia where emerging trends and developments in SPMM are considered. Consequently, there have been lots of developments and new approaches being adopted and Bourne (2015) reckons conferences are a key activity in the SPMM field as practitioners continually endeavor to glue together the “disparate set of academic disciplines that make up, or contribute to the field of, performance measurement and management”. Bourne (2015) further acknowledges that as a highly practice reliant field, continued engagement between leading SPMM practitioners and academia is crucially important. As a result top journals such as *International Journal of Management Reviews* (IJMR), *International Journal of Operations and Production Management* (IJOPM) and *Measuring Business Excellence*, and SPMM think tanks such as the Performance Measurement Association (PMA), international accounting firms such as PWC and KPMG, international consultancy firms such as McKinsey & Co. have played a key role in international SPMM conferences including, in addition to ongoing publication of SPMM, special issues of the journals on the SPMM subject alone targeting specific conferences. Their interest has been to provide a platform for moving forward theory in the field, which is a glaring gap in SPMM research at the same time providing opportunities for promotion of practice. By specifically soliciting top notch papers in the field of SPMM on i) case and field study-based theory development, ii) challenging, modifying or refining existing theory based on empirical research, and iii) empirical testing of existing theory, they provide a strong link between theory and the real operational world with relevant practical or managerial implications, something which this paper hopes to have made a meaningful contribution to.

e) The proposed holistic systems-based approach to SPMM research is unique yet interesting and is recommended read for any potential SPMM researcher particularly on the major developments from business trends and impacts on performance measurements and the holistic SPMM research framework (Bititci, 2011; Bititci et al, 2012). They constitute an undoubtedly crucial and mandatory piece in any future researcher’s toolbox.

f) The three core economic sectors of society, private, public and third sectors may have had a parallel SPMM evolution but its convergence in the 1990s just but confirmed the symbiotic relationship between the three. Contrary to the traditional view that the three are competing, they can and must co-exist in the global political, socio-economic ecosystem as each has a key and unique societal role to play. If they have competed actively or passively in the past, then they ran an unnecessary ‘race’. Our view is that we have now entered an era where the differences between the private and public sectors matters only to the extent to which it helps us to understand the context and scope of SPMM for each sector. One expected future trend from the study, due to increased sectoral collaboration, is development of extended enterprise or collaborative SPMM within and across three sectors.

g) A key managerial recommendation spawning out of this study is that there is need for provision of SPMM implementation guidelines especially in the less resourced public and third sectors which has worked very well in public sector SPMM implementation in countries such as Malaysia. This results in an orderly SPMM implementation and at the same time ensure that nothing, is taken for granted to become problematic later.

### **6.3 Originality Value**

The overall contribution and originality value of this paper is that it is, to our knowledge, the most sequential, thorough, methodical and efficient articulation of SPMM chronology, evolution and revolution than any other to date. It is also one of the first detailed application of the systematic literature review process in SPMM covering all three sectors. The adoption of the bibliometric protocol which required the refinement and rechristening of Phase 6 of the SLR from “selection of the primary dataset” to “selection of primary studies” to

incorporate valuable “grey” literature in addition to the oft used peer reviewed literature was game-changing. It significantly improved the richness of the study and facilitated a much more rigorous research by considering substantial top notch, but unpublished, research especially empirical studies by corporates and epistemological communities who have been at the forefront of SPMM practice for decades. Overall, the paper contributed to strategic performance measurement and management theory and practice in the three sectors in this highly practitioner dependent field.

#### **6.4 Limitations and Future Research**

The following are the study’s limitations:

Even though covering relevant areas, the research was too broad, and it was challenging to get to detailed levels hence a lot of information had to be prioritised and abbreviated. The literature covering 266 SPMM documents was too diverse, the analysis over a seven month period too cumbersome and time-consuming considering the severe time constraints. This called upon lots of judgement calls which could result in bias and impact replicability.

#### **6.5 Directions for Future Research**

A lot of prospective areas for future SPMM research have already been covered in the paper, but the following are additional specific issues arising from this research that may require independent academic pursuit:

*Private sector SPMM:* Despite numerous researches and studies on the performance consequences of SPMM, empirical evidence has not been conclusive, if anything it has been at best blurred and at worst inconsistent. For instance, some authors claim that SPMM is valuable and results in organisational performance gains, while others claimed no impact, yet others found adverse effects. Worse still, some literature talks about “performance beyond measurement”, arguing organisations can still perform well without SPMM. Other literature talks about the “audit society” or the so-called obsession with performance measurement, raising the question, when is SPMM just enough? We argue that the inconclusive empirical evidence about whether SPMM is essential, just desirable or not at all does not only constraint theory development but more critically does not assist practitioners who are left to navigate their operations with uncertainty and confusion on how to deal with daily operational issues.

*Public sector SPMM:* As the public sector followed suit in implementing private sector SPMM managerial innovations, numerous studies have interrogated the contemporary SPMM implementations and adaptation (especially BSC and RBM) but not much has been unraveled about these new managerial practices and performances and their practical effects in the public sector. Further research in this area will help enrich the SPMM literature particularly in cross-sector evidence-based decision making, policy creation and execution.

*Third sector SPMM:* The literature has demanded for increased and more thorough NGO research, warning that trends in NGO performance are grounded in ideological assumptions as opposed to empirical verification. Insufficient research on NGO performance, scholars further argue, means this study domain will remain immature making it tough to acquire precise and detailed data which may negatively impact funding decisions. While development NGO performance research escalated in the 1990s, still not much is known pertaining to the idiosyncratic characteristics of the existing body of knowledge on NGO performance. The author can subsidise this view since he had difficulty in accessing academic literature on SPMM, due to the dearth of published documents on SPMM in the third sector which offers huge opportunities for future research.

#### *General SPMM*

i) SPMM Conceptual, behavioral and contextual factors: The literature highlighted that the effectiveness of SPMM systems is impacted by variety of conceptual, behavioral and contextual factors in addition to the technical issues addressed in this paper. The contextual and behavioral dimension comprise power imbalances, the influence of culture and context and concerns about how to measure change in increasingly complex situation. Interestingly, the literature separately highlighted the importance of culture and the contextual importance of SPMM explicitly warning against the challenges of transferring models and methodologies across different organisations, sectors, cultures and context. They also talked briefly about incorporating complexity in SPMMs and all these areas have been foreseen as the anticipated trends in SPMM research in the supervening years. Additionally, SPMM models acknowledge the criticality of human factors in the development, application and use of performance measures such as need for executive sponsorship, a supportive central and managerial environment, a participative ‘bottom up’ involvement to instill a performance management culture that’s responsive to citizen requirements and organizational goals. Further research is required on these SPMM conceptual, behavioral and contextual domains.

ii) Professionalisation of SPMM: This paper briefly discussed the issue of transformation of SPMM into a distinct academic field including the constraints that have supposed made it fail to organically professionalise. The literature provides some suggestions on what can be done to facilitate such professionalisation. Regrettably,

there has been no resultant traction from these calls, and nothing has been done to try and address this crucial academic lacuna. There is need for additional research through “theoretical essays” and “think-pieces”. Theoretical essays are based on comprehensive literature reviews and consisting “of a logic and critical exposition and discussion of a specific issue that is considered an important topic for debate” (Wanderley & Cullen, 2013). Think-pieces are aimed at igniting the interest of and stimulating a discussion by the SPMM community of academicians and practitioners on the importance of SPMM field professionalisation (Bell, 2008). Hopefully this will result in the field taking decisive action which contribute to further SPMM discourse.

iii) SPMM Conceptual-philosophical issues: The paper revealed several “conceptual-philosophical issues” around generic SPMM which included lack of nomenclatural and definitional convergence on key SPMM terms and concepts within and across various sectors. This included, among others, numerous terms and definitions for “performance measurement and management”, “performance”, “performance measures”, “public sector”, “key performance indicators”. These conceptual challenges pose serious challenges in the understanding and implementation of SPMM systems especially for purposes of inter-organisational, inter-sectoral and international performance comparisons. According to Van de Walle (2008), the importance of conceptual discussions is generally diminished such that these challenges have been “defined away” as opposed to being resolved. Our view is that these conceptual blind stops must be dispensed with in order to deal with the numerous data quality issues that have been encountered as well as in challenges in setting KPIs in various organisational, sectoral and country settings. Theoretical essays or think-pieces discussed above are recommended in trying to address these longstanding conceptual challenges with the hope this will ignite the field to taking decisive action and drift towards terminological and definitional convergence for key SPMM terms and concepts and contribute towards SPMM theory development.

vi) Dysfunctional effects of SPMM systems: The arguments for dysfunctional behavior from SPMM systems and performance measures dates to the 1930s and latterly there is support for the view that, from certain cultural contexts and that ultimately use of performance measures may result in poor overall performance. They articulated that from a “system thinking perspective, performance measures and targets create a command and control culture” which is criticized for being costly and demoralising staff. This inquiry pipeline provokes debate around cultural controls which were beyond the purview of this paper. The literature stress that the introduction of the BSC by Kaplan and Norton in 1992 afforded the SPMM field the opportunity to move to new management systems which required new measurement methods and a “new mental revolution”. Linked to this, van Thiel and Leeuw (2002) suggested that explanatory social and behavioral theories can help us to understand and explain why some institutional conditions result in more obstinate unintended consequences or effects of SPMM systems than others. These remain open areas for future in-depth research.

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