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# A Review of Knowledge Management in the Public Sector: A Taxonomy

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#### Structured Abstract

**Purpose** – Public organisations today face management challenges to cope with current markets in what's known as a knowledge era. They primarily face adaptive challenges. Changes in communities, markets, business behaviour, competition, and most importantly technology around the globe are forcing all organisations to clarify their strengths, develop knowledge strategies, and learn new ways of managing their human capital. Governmental organisations also exhibit tendencies towards unusual and bureaucratic cultures mired in hierarchical structures, which create peculiar challenges that confront Knowledge Management (KM) efforts within the public sector. As public firms attempt to effectively manage their knowledge, organisational culture and structure have been identified as crucial defining factors in the successful assimilation and dissemination of knowledge. Often the toughest task for managers in effecting change in the public sector is mobilising people throughout the organisation to do adaptive work. The purpose of this article is to review the body of public sector research available in a KM context with a view to ascertaining and classifying previous research efforts and then identifying critical issues and avenues for future thinking.

**Design/methodology/approach** – This working paper marks the first phase of a review which encompassed all publications pertaining to the public sector within most cited KM peer-reviewed journals (i.e. *Journal of Knowledge Management* and *Knowledge Management Research and Practice*). A total of 80 articles addressing the public sector and published in peer-reviewed academic journals were carefully analysed and classified according to their nature, purpose and scope within a KM context.

**Originality/value** – A new three-fold taxonomy of published research in the public sector domain is presented in order to provide researchers and practitioners with new insights for

theory and practice. It also identifies a number of imperative issues that need to be addressed within this area.

**Findings/Implications** – Ideally, this review will prompt a more objective look at KM studies performed within public sector organisations. These studies can be classified into three main types; Descriptive, Prescriptive, and Attributional studies. Although *descriptive studies* offer illustrative narrative accounts of KM initiatives in the public sector, they appear to be short in providing conclusive recommendations. *Prescriptive studies*, on the other hand, propose frameworks that are tailored to enhance KM within the public domain and attempt to overcome its sector-specific obstacles. Finally, *attributional studies* investigate the effect of specific public sector organisational characteristics on the success or failure of KM. There is a great need for continuity of research in KM with emphasis on the public sector and for new good approaches where theory-practice gaps are apparent.

Keywords - Knowledge Management, Public Sector, Organisational culture

#### 1 Introduction

Knowledge has been defined as an eclectic mix of experiences, information, insight and intuition that can provide an organisation with a framework for incorporating new information and experiences (Davenport and Prusak, 1998). It has also been described as the most important driver of organisational performance, ahead of assets such as land, labour and production (Armistead & Meakins, 2007). Organisations today essentially measure a significant proportion of their self-worth in terms of their knowledge assets, also referred to as Intellectual Capital (Huang et al., 2011). With such an emphasis on the value of knowledge and its central role in organisational performance, it is imperative that it is well understood in order for it to be effectively used. Debate around the fundamental constructs of knowledge is as old as history, and delineating these constructs has engaged philosophers for centuries. Nevertheless, the work of Polyani (1966) in distinguishing tacit and explicit knowledge (Patriotta, 2004), and Nonaka and Takeuchi (1995) in constructing a model to illustrate the dynamics of knowledge flow are still regarded as pivotal in knowledge research. Organisational attempts to manage the creation, sharing and exploitation of knowledge have given rise to the field of Knowledge Management (KM). Knowledge exists in organisations, but it is essential that the organisational processes to maximise its full value are specifically articulated (Barclay & Murray, 2000), Moreover, KM is seen as an integration of tools that harnesses the value of knowledge and engages it in integrative processes with people, processes, and organisational infrastructure (Al-Adaileh & Al-Atawi, 2011).

This working paper seeks to examine the current body of KM literature in the most prominent KM journals, particularly as it pertains to the Public Sector (PS). Studies and frameworks on the subject of KM in the private sector are extremely topical and research on the subject is growing (Serenko & Bontis, 2013), to the point where KM is an established discipline (Chong & Chong, 2009). The study of KM has now become the

subject of specialised foci such as the study of how to share, preserve and refine it (Coakes & Bradburn, 2005). With its credential's established, it is to the implementation and embedding of knowledge that focus is turning. Formalising knowledge makes it easier to communicate and share it (Garavelli et al., 2004), but in the PS the cloistered structures and unusual hierarchies create challenges for the management of intangibles, especially in the KM arena (Da Conceição Marques, 2005).

Despite its significant importance, KM research into the PS remains limited (Garlatti, et al., 2014). Although there are considerable research efforts in other KM areas, there is a dearth of evidence on conclusive change brought about by KM initiatives in the PS. There is also lack of awareness of the impact and relevance of KM on the performance metrics of PS organisations (Cong & Pandya, 2003). However, due to increasing government accountability and commensurate budgetary constraints, the PS is under increased scrutiny to echo it's private sector counterpart in terms of productivity and service quality (Parker & Bradley, 2000), and this has brought a new urgency to PS research to recognise the role of knowledge and engage in KM endeavours to achieve strategic goals. For example, by implementing and improving knowledge sharing processes in the PS, service provision in areas such as healthcare and education will commensurately improve (Gorry, 2008). This paper will examine the body of PS KM available with a view to ascertaining and discerning a new taxonomic framework that will be useful for further research by those analysing the PS. It also identifies a number of imperative issues that need to be addressed within this area.

#### 2 Methodology

An extended review of publications pertaining to the PS was carried out on the basis of a research plan. A total of eighty articles were analysed for this study. The criteria for inclusion was current top ranking articles pertaining to the PS within major knowledge management journals including the Journal of Knowledge Management and Knowledge Management Research and Practice, The International Journal of Public Sector Management the Journal of Intellectual Capital, and the International Journal of Public Sector Management. The selection of publications also reflected Serenko and Bontis (2013) Journal ranking expert survey method, where each journal is weighted according to an "overall score" amalgamating the grouping of expert survey and journal citation relevance (Garlatti et al. 2014) with the top six publications analysed. A search was also carried out on the EBSCO host database with the first 200 returns analysed. The search criteria were (public+sector+knowledge+management). This focus on the most important KM journals gives a scope to the limited literature available. The reason for the journals selected is to find a balance between the number of citations and the quality of the journal (Serenko & Bontis, 2013)

The ultimate aim of review such as this however is to provide insights through the abstraction of data into various groupings and sub groupings (Tranfield et al., 2003). This paper was also predicated on the fact that growing debate and research on the PS is contrasted by the limited number of publications available, which gives rise to the need for a simple but effective taxonomic grouping to aid future research (Garlatti et al., 2014).

It should be noted, however, that the scope of this work could not cover the entire PS field nor does it cover KM literature in its entirety since an exhaustive review of the subject would not be possible due to the subject's vast scale (Kalling, 2003) and thus this study is limited to the publications listed. Nevertheless, it was felt that the salient and most representative KM and PS journals were included in this paper and are indicative of the overall public sector KM field. PS traits notwithstanding, it is from this overall map of the KM landscape that an iterative review process can begin. The inductive approach was used to classify articles and was not based on a predefined classification (Ragab & Arisha 2013). As the review progressed, the basis of the taxonomic structure took shape and the literature was again iteratively reviewed.

#### 3 Literature Classification

PS literature work can be broken down into three broad categories; Descriptive, Prescriptive, and Attributive. Descriptive studies, which offer illustrative narrative accounts of KM in the PS, but do not necessarily provide conclusive recommendations. Prescriptive studies on the other hand propose frameworks that are tailored to enhance KM within the PS and often attempt to overcome its sector specific obstacles. Finally, Attributive studies investigate the effect of specific PS organisational characteristics on the success or failure of KM incentives or initiatives.

#### 3.1 Descriptive Studies

Descriptive studies are primarily designed to capture the spread of specific variables within certain organisations. They generally do not crossover or impinge on other hypotheses, but they can be categorised by specific research selections (Grimes et al., 2002). These can include but are not limited to the style of the study that is being undertaken, the subject and the types of data that is being collected (Blessinget al., 1998). Descriptive studies of a qualitative nature intend to bring to the reader a summary of the types of data under scrutiny. They also attempt to rationalise particular techniques and styles of data collection such as taxonomic structures (Sandelowski, 2000). For this study, the descriptive aspects of PS literature were initially identified. This was literature that illustrated or posited information on the PS that was descriptive but not necessarily conclusive. This research focused on areas of the PS under scrutiny such as knowledge sharing, performance measurement, productivity, knowledge transfer, and the role of knowledge champions.

The literature in this category also serves to detail studies on the PS that may merit further research. Descriptive research into PS performance has noted considerable difficulties in knowledge transfer and the conversion of knowledge into action (Bate & Robert, 2003), and cited that the establishment of communities of practice could aid as an incentive to employee engagement in knowledge practices the PS (Amayah, 2013). These types of studies have also highlighted that implementing KM in the PS can be a challenging issue in the main due to its cloistered hierarchical and fundamentally politically sponsored structure (Chong et al., 2011), and illustrated the difficulties of

knowledge retention due to large-scale retirements of public servants, difficulty in transferring knowledge across government sectors, and ever increasing accountability in the public eye (Cong & Pandya, 2003). Delineating PS literature in a study such as serves to make the direction clearer for future study. Descriptive literature is explicit and will focus research in specific knowledge areas such as structural processes within the PS, which can be designed to enhance and support new PS standards (Willem & Buelens, 2007).

## 3.2 Prescriptive Studies

Researchers have proposed many models in relation to KM processes, and these have aided understanding of the ideas and implications of KM (Chawla & Joshi, 2010). In the context of this study, prescriptive readings ostensibly revolve around these types of KM frameworks and models. The essential purpose of these is to aid in understanding the role of KM and the quantitative measurement of its effectiveness. There are many KM processes, and research has even suggested that to illustrate and categorise them all, a precise process or cyclical model should be implemented (Chong et al., 2011). Prescriptive attributes are generally conclusive in that they suggest improvements to PS knowledge processes as a result of the specific research and analysis undertaken. Research studies in the prescriptive category have used analytical and normative models for evaluating strategic business performance. Researchers have attempted to inculcate the results of analysis and research into PS structures such as transforming PS organisations into units of learning through the use of the "MATE" process (Sotirakou & Zeppou, 2004). Knowledge sharing has also increased as a result of successful research based around methodological programmed efforts in government departments (Zhang & Dawes, 2006).

Drawing on Nonaka's seminal work, the Inukshuk KM model proposed by Girard and McIntyre comprises elements of technology, leadership, culture, measurement and process, and generically maps the use of KM in PS bodies (Girard & McIntyre, 2010). These models typify the prescriptive attribute of PS research. As relevant as descriptive studies are, without a clear direction by way of clear measurement or process, which is the remit of prescriptive studies, it is more difficult to implement KM in public bodies. (Lee et al., 2012). Research into knowledge sharing in the PS has also resulted in conceptual framework analysis to determine the level of knowledge transfer among PS staff (Tangaraja et al., 2015). As relevant as descriptive studies are, without a clear direction by way of measurement or process which is the remit of prescriptive studies, it is more difficult to implement KM in public bodies (Lee et al., 2012).

### 3.3 Attributive Studies

Attributes, or "roles", provide for description of people, motivation, intrinsic behavioural traits, or simply allow for researchers to attempt to identify semantics. The attempts to research or measure individual representation typify a large proportion of research into KM in the PS (Schmidt-Schauß & Smolka, 1991). Attributive analysis inductively investigates the effect of specific organisational characteristics on the success

or failure of KM. In the context of this study, the essential attributes, characteristics or roles of the public service are primarily its efficacy of purpose and its accountability. Attributes are the primary cause of success and failure with regards to the attainment of goals (Weiner, 1985). The literature in this category also falls into a unique construct, as it places a specific emphasis on the attributive qualities of the PS and its employees as compared to the private sector. The attributive quality and recognition of tacit knowledge is regarded as less pronounced in the PS as compared to the private domain (Cong et al., 2007), and in the field of knowledge capture, the PS is generally considered more adept at capturing knowledge at the middle and higher ranks of management as compared to the private sector (Syed-Ikhsan & Rowland, 2004). The PS, notwithstanding its uniqueness by virtue of its government mandate is set apart from its private sector counterpart, not least by the appraisal of the performance of its employees who are generally operating in the service delivery field (Cong & Stonehouse, 2007). This is contextualised by public awareness and an increased need to regulate the use of public monies. The element of competition has recently entered the public service domain and this has led to expectations of increased accountability and openness in policy direction (Riege & Lindsay, 2006).

The culture of the PS is also attributive in that it falls into the area arena of individual knowledge. Research on PS culture has suggested that there is a lack of understanding around the topic in PS organisations and this has been detrimental to the realisation of strategic objectives in the past (Riege & Lindsay, 2006). The culture of the PS has been historically viewed as insular and difficult to change and this has led to concern with regards to the implementation of new public management initiatives. Research has suggested that this will lead to a conflict in cultural values and attitudes in the future (Parker & Bradley, 2000).

## 4 Discussion and Conclusion

All organisations are knowledge intensive (Oliver & Kandadi, 2006), and some organisations cite knowledge as the core source of competitive advantage, and others some organisations provide knowledge to the public which becomes the main basis of their transactional activities. Some organisations provide knowledge by way of knowledge champions, or knowledge experts (Willem & Buelens, 2007). Most PS organisations have characteristics that echo the above. However, they exist in a singularly unique paradigm. There is an overwhelming pressure on them to transform, but there appears in the literature to be little evidence of how to transform successfully (Sotirakou & Zeppou, 2004). Recent research suggests that PS organisations are, as discussed, fundamentally different from private sector organisations. This is on a myriad of levels, including goal diversity, access to resources, and organisational pressures and constraints (Scott and Falcone, 1998, Parker & Bradley 2000). The challenges and pressures on PS organisations are not just to reform but to develop particular and specific KM systems that suit their bureaucratic hierarchies (O'Riordan, 2005), to integrate inter organisational research with their private sector counterparts, and to adopt similar communication and business processes to the private sector (Considine, 1990). The PS exhibits unique

organisational characteristics and this is reflective of both its employees and their work practices. To analyse this succinctly, it is pertinent to extrapolate "direction" from the current literature. The threefold taxonomy presented in this working paper aims to focus future research on the specific tenets of PS study that coagulate into this simple overview from which to conduct research. Descriptively, the PS is well catered for in the literature and direct comparisons between the public and private sectors are well documented.

Prescriptively, the models of KM in the PS are not specifically tailored for it due to the recursive bureaucratic nature of its hierarchies, however, the gap is narrowing between the public and private sector with similar metrics being employed to measure progress and increased pressure to conform and account for their actions (Salleh et al., 2013). There is also evidence illustrating that models which were traditionally used to measure performance in the private sector, are now being adapted to PS organisations. For example, the balanced scorecard approach by Kaplan and Norton, would appear to be incompatible with PS organisations are adapted to PS use by "rearranging the scorecard to place customers or constituents at the top of the hierarchy" (Kaplan et al. 2008).

Attributively, there are specifics in PS organisations that make KM practices difficult to implement. The pressure of competitiveness and the efforts to diminish costs are less important than in the private sector, and the PS has been shown to be insular in nature, with knowledge sharing less evident than in the private sector (Seba et al., 2012). More recently, KM research has indicated that the practices of sharing and transferring knowledge should be adapted to specific organisations. (Jennex, 2005; Willem and Buelens, 2009)(Seba et al. 2012. This is a departure from traditional thinking which suggests that the PS particularly should adapt and change to "conform" to private sector thinking, and transform from its traditional bureaucratic structures to a more market-driven model(Sandhu, Jain, & Ahmad, 2011).

Focusing on people is a key factor for future research. Individuals generally do not offer knowledge freely (Barachini, 2009), and perhaps a key area for future research would be to examine the differences in the employee characteristics of private and PS organisations (Salleh et al., 2012), and this may serve to explain or understand the resistance that is encountered in PS organisations in attempts to adapt the cultural characteristics of the private sector counterparts. (Parker & Bradley, 2000). The challenge for the PS is to move forward away from isolated interventionist approaches, and develop common strategies with the private sector in the approach to KM and KM initiatives (O'Riordan, 2005). There is also an emphasis and impetus on the PS to overcome the historical cultural barriers that permeate it structures, as research has suggested traditionally, PS organisations have been hesitant to explore and assimilate KM processes (Edge, 2005). Through this simple taxonomic structure it is hoped that researchers will be able to discern more easily the specific traits of PS literature and use this simple structure as a basis for future pertinent research.

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