

Understanding tacit knowledge loss in public enterprises of South Africa



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Orientation: South African state-owned enterprises (SOEs) are facing a perpetual struggle of institutional tacit knowledge loss, which poses a risk to these entities and threatens their sustainability. The research project endeavoured to tackle these challenges from knowledge management (KM) and human resource management (HRM) perspectives and proposes a plethora of integrated knowledge-driven HRM processes to mitigate risks associated with loss of tacit knowledge.

Research purpose: The study provides an integrated understanding of the issues relating to the causes of enterprise tacit knowledge loss and extent to which there is recognition of company knowledge loss in selected SOEs in South Africa.

Motivation for the study: There is limited research that provides an integrated approach to tacit knowledge loss from KM and HRM standpoints.

Research approach/design and method: The exploratory sequential mixed-methods research design was used in this study. In the qualitative phase of this research, data were collected from the annual reports of the SOEs and unstructured interviews with 20 purposively selected human resource (HR) managers, which was subsequently analysed thematically using ATLAS.ti software. The quantitative data from 145 out of 585 respondents were analysed statistically using Statistical Analysis Software (SAS).

Main findings: The study revealed that organisational tacit knowledge loss is largely caused by voluntary and involuntary employee turnover and a lack of retention strategies. This adversely affects the knowledge base and the knowledge absorptive and protective capacities of the SOEs.

Practical implications/managerial implications: The study concludes that the journey for ensuring effective knowledge transfer and retention of valuable enterprise knowledge starts with the appreciation of knowledge as a key firm-specific strategic issue.

Contribution/value-add: This study offers an integrated understanding of the causes of tacit knowledge loss for effective management in SOEs researched interdependently from KM and HRM perspectives.

Keywords: knowledge loss risks; human resource management; knowledge management; knowledge-based theory; resource-based theory; South Africa; state-owned enterprises.

Introduction

The catchphrase 'knowledge is power' lingers as a myth, except that knowledge is transferred for its continuous use, because knowledge becomes an influential tool only when it is disseminated and applied to organisational problems. Therefore, knowledge should be transferred; otherwise, it will be lost as organisational human resources (HRs) quit, retire, pass away or are retrenched. In an organisational context, loss of enterprise tacit knowledge means loss of company-specific strategic competitive advantage, superior performance, innovation capacity and sustainability (Durst & Zieba, 2020). As a result, organisations need to develop an integrated understanding of the causes and the extent of the recognition of knowledge loss in their environments. A turnover, whether voluntary or involuntary, and an ageing workforce increase the vulnerability of the affected companies (Phaladi, 2021, 2022a; Phaladi & Ngulube, 2022). The phenomenon of organisational tacit knowledge loss remains a dominant issue in the knowledge management (KM) literature and practice (Mariano et al., 2020). Moreover, the problems associated with its creation, application, sharing and retention are also a central problem in the theoretical and empirical literature on KM (Sumbal et al., 2018). In any organisation, knowledge is contingent on its HRs (Gürlek, 2020). Consequently, tacit knowledge loss in companies is strictly related to employee turnover.

Tacit knowledge, unlike explicit or codified knowledge, is defined as a type of knowledge that is deeply ingrained in the minds of the individual employees, which includes intangible assets such as know-how and know-why forms of knowledge that are complex to transfer and retain in a tangible matter without losing its value (Polanyi, 1958). Critical organisational intangible assets such as the knowledge, skills and experience of individual employees offer companies with a sustainable competitive advantage. Employees are sources of these intangible enterprise-specific knowledge assets. Therefore, whenever these enterprise-specific HRs leave their jobs, they take away the firm-specific knowledge, expertise, abilities and skills, built over the years while on employment. Such developments within companies present a KM conundrum in the shape of enterprise tacit knowledge loss risks. Nonetheless, enterprise tacit knowledge loss is not considered a burning challenge by human resource management (HRM) establishments within the technology development organisations (Gürlek & Çemberci, 2020). A lot of important tacit knowledge leaves organisations as a result of a lack of attention given for effective management of the enterprise knowledge (Mariano et al., 2020). All organisations must guard against knowledge loss including state-owned enterprises (SOEs), which are major key players in the economic growth and sustainability of their respective states (Benassi & Landoni, 2019).

In South Africa, the public enterprises perform a central role in the economy and these institutions are the critical instruments for contributing on the state's developmental mandate and job creation opportunities. Globally, the literature asserts that, over the last decade, the SOEs have increasingly had a serious influence on the economy and are considered the foundation stone of the knowledge-based economy and competition (Vlasov & Panikarova, 2015). In developing economies such as South Africa, public enterprises are at the vanguard of driving economic growth, building a democratic and developing state and advancing the country in the knowledge-based economy and competition (Gumede et al., 2011). Nevertheless, faced with the challenges of organisational knowledge loss, a skills shortage, an ageing workforce and employee turnover, SOEs are in a difficult situation to position the country in the knowledge economy.

Problem statement

The literature characterises the loss of organisational tacit knowledge as a global problem (Jennex & Durcikova, 2020; Singh & Gupta, 2020). Organisations need to be aware of the risks posed by a loss of knowledge, because such loss can negatively affect the business performance and sustainability across all levels (Nehari-Talet et al., 2021). However, there is scant literature that methodically, empirically and analytically explores the causes of tacit knowledge loss or the extent to which it is recognised across sectors of the economy (Sumbal et al., 2020). Moreover, the existing frameworks on the organisational tacit knowledge loss phenomenon,

as shown in the literature (Sumbal et al., 2020), do not systematically and methodologically explore the problem of tacit knowledge loss by providing an integrated perspective from both the KM and HRM processes in addressing the risks inherent with such loss. Moreover, loss of tacit knowledge impacts several industrial market sectors across the world, for instance, the energy sector (Sumbal et al., 2018), the manufacturing industries (Sumbal et al., 2020), the defence firms (Singh & Gupta, 2020), SOEs (Liophanich, 2017; Phaladi, 2021, 2022a) and the project management environments sector (Rashid et al., 2020). Lin, Chang and Tsai (2016, p. 1757) assert that loss of knowledge negatively impacts the absorptive capacity, protective capacity and sustainability of the enterprise. A lack of understanding about tacit knowledge loss will adversely affect the organisational capability to mitigate risks associated with its loss. Knowledge loss will negatively affect their ability to produce goods and services to sustain performance in the global knowledge-based competition and economy.

The phenomenon of enterprise tacit knowledge loss in the public enterprises sector remains a pertinent problem area for research, as the SOEs are now significant drivers playing an important part in the key economic sectors and infrastructure projects rollout and advancing South Africa as a developmental state. When the company loses its HRs, it loses knowledge, skills and experience, which form much of its corporate memory. Losing employees creates enterprise knowledge attrition and this adversely affects and erodes the knowledge base of the enterprise. The challenge of knowledge loss, as a complex research area, has not been sufficiently explored interdependently from HRM and KM standpoints. The scant literature shows that it is mostly researched independently as either KM or HRM (Rashid et al., 2020).

Objectives of the study

The purpose of this research project was to obtain an integrated understanding of the causes of tacit knowledge loss and recognition thereof in the selected SOEs of South Africa. The project endeavoured to tackle these challenges from both KM and HRM perspectives and based on the views of the participants proposes a plethora of integrated knowledge-driven HRM processes to mitigate risks associated with loss of tacit knowledge (Phaladi, 2021). From a resource-based view (RBV) of the enterprise, employees in the organisations are sources of sustained superior productivity and performance, while from the knowledge-based view (KBV) of the organisation, company-specific knowledge resources provide sources of sustainable competitive advantage (Gürlek, 2020). Therefore, both these theories, as well as strategic management philosophies, have a central part to play in developing the understanding, management and reduction of tacit knowledge loss. In order to realise the purpose of the paper, the following objectives were explored:

1. To identify causes of enterprise tacit knowledge loss in the selected South African public sector enterprises.

2. To ascertain whether enterprise knowledge and employees are recognised as drivers of sustainable competitive advantage in the selected public enterprises of the study.
3. To determine whether enterprise knowledge loss and its sharing are recognised and considered as an integral part of HRM and organisational performance in the selected public entities.

Literature review

From both RBV and KBV of the firm, firm-specific human and knowledge assets are considered drivers of higher performance. Human resource management is deeply rooted in resource-based theory, while KM and its relevant theories have their roots in knowledge-based theory. The two theories of the firm are intertwined in that there can never be knowledge resources without the employees in the organisations. For the purpose of and central to this paper, knowledge is theorised as 'a fundamental asset', while also theorising employees as 'firm-specific resources' and 'sources of that tacit knowledge' (Gürlek, 2020). It is therefore no wonder that KBV commentators argue for absorptive capacity and protective capacity (Andersén, 2012; Cohen & Levinthal, 1990) towards ensuring the transfer, preservation and protection of these firm-specific resources. Staff turnover and loss of tacit knowledge have serious implications for all these management philosophies.

Resource-based view theorists such as Gürlek (2020) and Durst and Zieba (2020) view employees within firms as important organisational resources for ensuring performance and sustainability of the companies. Teixeira et al. (2019) consider knowledge as the most vital resource for ensuring superior business performance, innovation capacity and sustainable competitive advantage. State-owned entities are considered knowledge-intensive companies. Roome (2012, p. 12) posits that many SOEs, as knowledge-intensive companies, operate in tight competitive labour marketplaces, wherein the demand for knowledge, experience and skills is greater than the demand for supplies. According to Benassi and Landoni (2019, p. 220), SOEs are the pillars of economic growth, infrastructural and manufacturing capabilities and innovation activities in both emerging and developed economies. The SOEs are perceived as knowledge-explorer agents and knowledge sharing entities in the knowledge economy (Benassi & Landoni, 2019). Liophanich (2014) views them as knowledge-oriented firms, whose superior performance and sustainability are so much dependent on knowledge, expertise and skills of their HRs. In South Africa, they are facing business difficulties such as significant employee attrition rates, knowledge loss, the brain drain, corporate governance issues, an ageing workforce, knowledge-unfriendly culture and structures and poor management and financial control issues (Fourie, 2014; Phaladi, 2022b; Phaladi & Marutha, 2023; Phaladi & Ngulube, 2022).

The KBV emphasises the importance of organisational intangible assets, such as knowledge, skills, experience and abilities, as key strategic interests for firms (Grant, 1996). This perspective suggests that knowledge-oriented HRM (KM) should be integrated into public enterprises to drive economic growth opportunities. Human resources are crucial for sustainable competitive advantage and innovation capacity (Gürlek, 2020). The attrition of knowledge workers in knowledge-dependent and intensive organisations creates risks. Resource-based view theorists argue that firms must invest in developing and retaining knowledge workers to achieve a sustainable competitive advantage. In South Africa, many SOEs face knowledge risks, making it difficult for them to achieve a developmental state and industrialisation-based economy (Phaladi & Ngulube, 2022). The RBV posits that thriving enterprises obtain superior business performance through the exploitation, development and protection of their unique assets and capabilities, which can be tangible or intangible (Andersén, 2012). The loss of organisational tacit knowledge because of employee turnover negatively impacts the foundation of sustained competitive advantage or superior performance. Knowledge-based theorists suggest investing in building absorptive capacity to replenish knowledge assets and stocks. Ensslin et al. (2020) highlight the importance of knowledge transfer and retention, which includes taking care of critical knowledge, skills, experience and abilities even when they leave the organisation.

Knowledge transfer is a KM process, which emphasises that tacit knowledge should be extracted to avoid its discontinuity upon the departure of the organisational HRs (Durst & Zieba, 2020). The knowledge transfer process denotes the sharing of tacit knowledge to avoid such knowledge being lost when employees, who possess such knowledge, leave their employers (Singh & Gupta, 2020). Knowledge retention is a KM process that seeks to ensure tacit knowledge is maintained and not lost to rival companies (Sumbal et al., 2020). Loss of valuable organisational knowledge has dire consequences such as decreased performance or loss of productivity, reduced sustainability, reduced innovation capacity, poor customer satisfaction, inefficiencies and a resultant high cost of doing business (Sumbal et al., 2018). Moreover, loss of tacit knowledge will adversely affect the knowledge absorptive capacity and knowledge protective capacity of the organisations facing such a predicament (Andersén, 2012; Cohen & Levinthal, 1990; Phaladi, 2023; Phaladi & Ngulube, 2022).

Absorptive capacity or the absence of it can be a cause of knowledge stickiness in the organisations and affect its transfer. Cohen and Levinthal (1990, p. 128) define absorptive capacity as the extent to which an enterprise retains prior or associated knowledge and the capacity to control, share and use new knowledge. Argote and Ingram (2000, p. 161) assert that the recipient's ability to grasp knowledge causes stickiness in the transfer process. The more knowledge becomes sticky, the greater the degree of difficulty for the outside world or competitors to access that knowledge.

Protective capacity is a theory that advances knowledge protection or retention within firms. It argues that much of the literature on organisational KM has focused on knowledge development, transfer and assimilation, neglecting the protection of knowledge assets, including their sources. Andersén (2012) suggests that companies should develop strategies and invest in developing protective capacity around their knowledge assets to ensure their retention. This capacity, called 'protective or retentive capacity', refers to the ability of organisations to maintain or decrease the speed of devaluation of knowledge-based intangible assets by avoiding being targeted, imitated and poached by rival companies (Andersén, 2012). This capacity helps minimise knowledge loss.

Methodology

This research paper adopted mixed-methods research (MMR) as its methodological approach. Exploratory sequential design was used as the chosen research design. The rationale for the choice of the exploratory sequential MMR design was for the scholars to generate a comprehensive, diverse and balanced picture, from different viewpoints and theoretical lenses, regarding the complex issue of corporate tacit knowledge loss in particular South African public sector enterprises. Ngulube (2020) and Creswell and Creswell (2018) contend that MMR is most appropriate for exploring complex research phenomena from different standpoints because of its ability to present complementarity, completeness, mixture in the data gathering and analysis procedures. Phaladi (2022a) and Ngulube (2019) also call for the use of MMR in the KM field in order for KM scholars to take a methodological turn and adopt a variety of research approaches including MMR. The study adhered to ethical standards in both qualitative and quantitative research strands. Ethical considerations were maintained in both qualitative and quantitative research phases, including obtaining approval from the participating SOEs and obtaining informed consent from participants, as per Creswell and Creswell (2018).

The research project followed two distinct methodological approaches, qualitative research in the first strand and quantitative research in the second strand. Qualitative data were gathered from nine public enterprises in the five industry sectors, using an interview schedule with 20 purposively selected HR managers and analysis of their respective annual reports. Kumar (2014, p. 247) posits that probability sampling and sample size do not play a central part in the choice of the sample for the qualitative strand; what matters most with the unstructured qualitative interviews is the examination and probing of the research phenomenon and related issues or research questions of the study (Creswell & Creswell, 2018). Human resource managers were more relevant and knowledgeable to assist researchers exploring HRM practices for the effective management of organisational knowledge loss risks in the SOEs. The analysis of the annual reports also formed part of the qualitative data collection phase. The main aim of the

qualitative interview and document analysis was to explore the research problem with purposively selected HR managers. In the first strand, the researchers collected and analysed data, which were gathered through the unstructured interviews and annual reports. The qualitative data were analysed thematically using ATLAS.ti. The research results from the qualitative component were used for the development of a survey instrument for testing in the second and quantitative strand. The survey instrument (a Likert scale questionnaire) that was deployed to collect data in the second strand of the project was then circulated to 585 employees in three SOEs that volunteered to participate in the survey component. The quantitative data were analysed statistically using Statistical Analysis Software (SAS).

The questionnaire used for the collection of quantitative data was found to be reliable, with a Cronbach's alpha of 0.94% and 25% (145) response rate. The questionnaire is regarded reliable or consistent if the coefficient is more than 0.70 or equal to 0.70. The response rate of 25% was adequate for the exploratory factor analysis (EFA), which was important in identifying variables that are critical in the development of a model on knowledge loss reduction. Hair et al. (2014, p. 115) contend that a response degree of 100 or more respondents is adequate for EFA research projects.

Ethical considerations

Department of Information Science Ethics Review Committee, University of South Africa References #: 2020-DIS-0018, DIS Registration #: Rec-20200715.

Results and discussion of findings

Taking into account that this scholarly work is a mixed-methods project that applied an exploratory sequential design, the research results are presented in two phases, starting with results from the interviews and document analysis in the qualitative research strand, followed by the survey results in the quantitative strand. The progression of data gathering unfolded in phases as follows: (1) interviews conducted with managers in the HRM establishments; (2) document analysis of their 2018 annual reports (both methods were used in the first qualitative strand) and (3) an online questionnaire in the survey strand that was circulated to both the employees and KM practitioners in the public sector.

Presentation of the qualitative research results

The presentation of the qualitative results is divided into the following three subsections, namely: (1) causes of the organisational tacit knowledge loss; (2) human resources and knowledge as drivers of sustainable competitive advantage and, lastly, (3) recognition and handling of organisational tacit knowledge loss in the selected public enterprises.

Causes of organisational knowledge loss

The qualitative research data collected through the interviews and document analysis in the first strand revealed a number

of variables that added to the loss of tacit knowledge in the public enterprises. Voluntary turnover in the form of resignations and involuntary turnover related to an ageing workforce, such as retirements and deaths, as well as HR-related terminations, such as dismissals, are examples of the challenges contributing to the landscape of knowledge loss in SOEs. The majority of the participants cited voluntary staff turnover as the major contributor of enterprise tacit knowledge loss, especially in those utilities with a higher turnover level. About 80% of the HR managers posited that resignations were the major contributor of tacit knowledge loss in the SOEs. Moreover, the non-existence of a HR retention strategy to keep knowledge workers in scarce skills areas complicated the status quo relating to enterprise tacit knowledge loss. The participant from water utility made a reference to this as follows:

‘Yes, also the voluntary turnover as well (*sic*), because we do not have the retention strategy, whereby we say that we will retain this scarce, critical skill, those technical skills.’ (Participant 19, Gender: Female, SOE5, 2019)

Loss of organisational knowledge through voluntary turnover is a serious area of concern in the majority of the SOEs. Nevertheless, two of the nine SOEs (SOE1 and SOE3) alluded to the fact that turnover was not an issue in their organisations. On the contrary, it must be pointed out that in the review process of the annual report of one of these two companies (SOE3), a contrasting picture was revealed as far as this point is concerned. In 2018, this SOE had a staff complement of 220 employees and their annual report observed 26 (2.8%) voluntary turnover for the period under review. This finding shows that even though there is a high retention rate among the HR managers in SOE3, the voluntary turnover in the organisation remains a challenge. SOE1 was the only exception in terms of the HRs retention.

Retirement as a method of unintentional turnover (involuntary) was another serious cause of tacit knowledge loss in the participating SOEs. A lack of a KM strategy for transferring knowledge of an ageing workforce, approaching retirement, was identified as a serious problem area and this complicated the conditions of organisational knowledge loss. Unlike resignations, retirement forces HRs to leave organisations. One participant, from SOE5, summed it up in this way:

‘With retirement, you are forced to leave. You do not have an option, so it is involuntary. Let me put it this way, you do not leave because you are ready, you leave because the situation forces you to leave. The question is, what have we done to document the skills, or for the skills to be transferred.’ (Participant 20, Gender: Female, SOE5, 2019).

The phenomenon of an ageing workforce was a common problem in the majority (90%) of the SOEs. Nonetheless, SOE3 was an exceptional case, in that it is a young state-owned entity. Their reviewed annual report indicates that the average age of its staff complement was 35 years.

The participants in the interview also observed that, besides voluntary and involuntary turnover and lack of retention strategies, other factors that contributed to tacit knowledge loss in the public entities include the constraints related to the employment equity (EE) policy, fixed-term employment contracts, the absence of information and communication technologies (to capture tacit knowledge) and knowledge-unfriendly organisational cultures and structures. Phaladi (2022b) infers that most SOEs did not exhibit knowledge-driven cultures and structures because of a lack of structures and roles dedicated to drive KM philosophy and KM vocabulary. Phaladi and Marutha (2023) established that a lack of knowledge-based leadership contributes to knowledge-unfriendly organisational cultures and structures in most South African SOEs. For a number of the HR managers interviewed, EE remained such a controversial issue. Some of these participants argued that EE forces employees to look for employment opportunities outside the confines of their companies, therefore adding to voluntary turnover causing the loss of valuable organisational knowledge. In South Africa, EE is a regulated employment policy and it was a controversial subject in the interviews with the HR managers. Nevertheless, there were differing opinions and perspectives on EE as a contributory factor to voluntary employees’ turnover and resultant tacit knowledge loss risks.

Fixed-term employment contracting was a serious problem in two of the state entities functioning in the research and development space. This challenge served to complicate the situation pertaining to the loss of HRs and the resultant knowledge loss in these SOEs.

Recognition and treatment of organisational workers and their knowledge as sources of sustainable competitive advantage

The recognition and treatment of organisational employees and their knowledge as valuable firm-specific assets should present an important trigger for retention interventions. The majority of the HR managers concurred that employees are viewed as important resources to ensure sustainable competitive advantage. The evidence from the reviewed annual reports supports this view, as it shows that the SOEs value their staff as fundamental firm-specific resources towards achieving superior performance and sustainability. The annual reports of the SOEs were littered with the slogan ‘staff as important assets’. Nonetheless, the same cannot be said of enterprise tacit knowledge as a source of sustainable competitive advantage and superior productivity.

In spite of this finding from the reviewed annual reports, the qualitative research findings, as presented in the previous section, revealed a contrasting picture. Though the staff is viewed as an important resource, the SOEs are experiencing a high turnover and they lack retention strategies to retain valuable firm-specific HRs. State-owned entity 1 is an exceptional case, as in this organisation the staff and their knowledge are put right at the centre of the business strategy.

It is important to note that, though employee turnover is a serious issue, affecting the majority of the SOEs, SOE1 presented a different picture. In this particular enterprise, with a KM structure, one of the interviewees hypothesised the view as follows:

‘Yes, and that is the reason why we would talk about retention. With retention, it says, “let us keep the knowledge in (*sic*) as much as we can and let us share the knowledge [*within the organisation*]”. Therefore, they definitely see it as a key strategic issue.’ (Participant 1, Gender: Female, SOE1, 2019)

What can be deduced from the above statement is that companies that view their HRs and knowledge as sources of organisational performance and innovation invest in structures and systems to ensure retention. This finding, however, does not apply to the majority of the SOEs in this study, who are facing high turnover rates and an ageing workforce. Consequently, many valuable firm-specific intangible knowledge assets (knowledge, skills and experience) in mission critical areas are lost amidst all these challenges. Recognition of employees, as important firm-specific resources, did not translate into the retention of these employees.

There is a limited view on recognition of HRs as sources of sustainable competitive advantage and superior productivity in some of the SOEs. Furthermore, if organisational knowledge resources were viewed and recognised as a key strategic issue, that should have translated in proper systems for retention and transfer. As such, this creates a contradiction within their systems, thus resulting in a strategy paradox as far as putting workers and their knowledge at the core of the business strategy. Moreover, it seems that, although many HR managers agreed that their SOEs constructively regard and prioritise staff and their knowledge in the organisational strategy as sources of productivity and sustainable competitive advantage, some held a completely different position on the matter. One HR manager summarised this as follows:

‘We have a lot of people who are knowledgeable in this organisation ... but these people, they feel like dwarfs, if I may use the word “dwarf,” because they are not properly utilised. They are just bounced into the roles that they are appointed into.’ (Participant 18, Gender: Male, SOE5, 2019)

The recognition of HRs and their valuable organisational knowledge does not always result in the better utilisation of their skills, knowledge and abilities.

Recognition and treatment of tacit knowledge loss in public entities

Recognition or realisation of knowledge loss is an important trigger for a better management intervention. Knowledge management functions were lacking in the majority (67%) of the public enterprises that took part in the study. Regarding the interview question about whether public entities recognise and treat knowledge loss as an important strategic issue, almost all the HR managers asserted that tacit

knowledge loss is an organisational key strategic issue requiring the accountability of everyone, including all managers and their direct reports, to reduce the risk of losing such knowledge. All 20 interviewees shared the sentiment and concurred that knowledge loss is not an issue that had to be dealt with only by the HRM department or KM department. Although knowledge loss is recognised as a key strategic issue, this did not translate into more efficient interventions to address knowledge loss or proper management strategies in the majority of the participating organisations.

Additionally, the data revealed that the majority of managers in HR departments have not taken ownership and management of organisational knowledge loss in their respective SOEs. Human resource managers in the minority (33%) of the SOEs indicated that they have institutionalised the management of organisational knowledge through relevant KM structures, systems and processes, and therefore the ownership of knowledge loss was evident in these organisations.

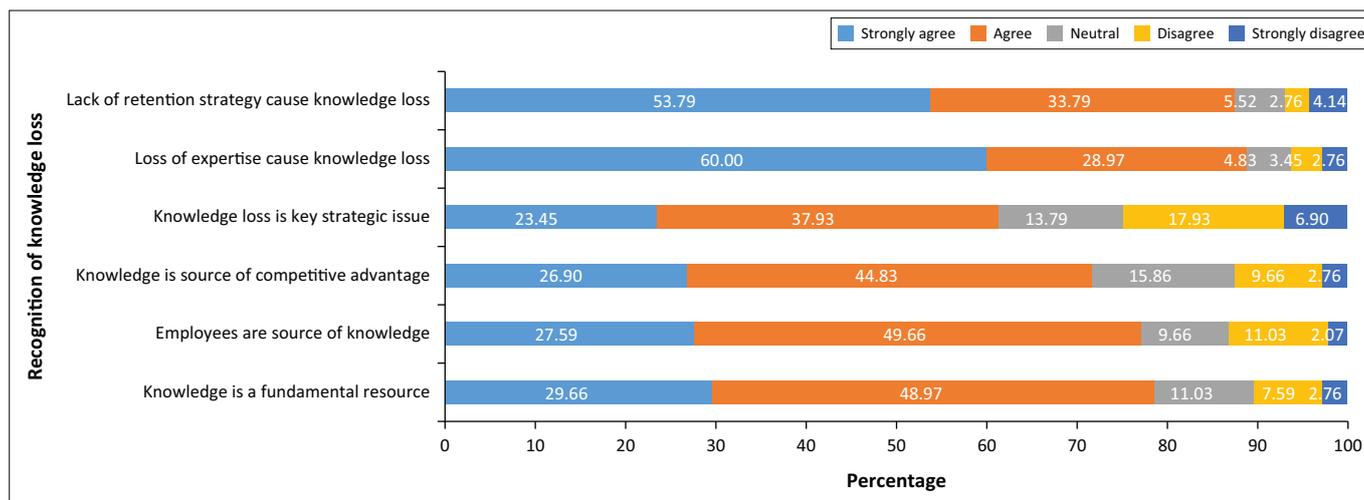
Presentation of the quantitative research results

A statistical analysis of the 145 respondents is presented in this section. The responses were randomly obtained with a survey questionnaire from 145 employees in three SOEs that participated in the survey phase of the study.

Recognition and causes of organisational knowledge loss

Figure 1 provides a diagrammatic demonstration of the responses. The data indicate that more than 80% of the respondents agreed that a loss of expertise (89%) and lack of a retention strategy (88%) contributed to the landscape of knowledge loss in the state entities. In contrast, a small number of the employees (6%–7%) were of the opinion that organisational tacit knowledge loss is not triggered by the absence of retention practices or strategies and a loss of expertise, while 4%–5% did not express their opinions about the variables. On the recognition and treatment of HRs and knowledge as fundamental firm-specific resources, the survey data demonstrated that 79% of the workers of the SOEs that took part in the study recognised knowledge as an important asset and 75% of the respondents recognised workers as a source of organisational knowledge.

Moreover, knowledge, as a firm-specific resource, was recognised as a foundation of sustainable competitive advantage by 72% of the survey participants. Additionally, knowledge loss was viewed as a key organisational strategic issue by 61% of the survey participants. A noticeable share of the participants (25%) in the survey did not consider it as a key strategic issue and only a small percent of the participants (14) remained neutral, indicating that they were less informed about the variable.



Source: Phaladi, M.P. (2021). *Framework for integrating knowledge management and human resource management for the reduction of organisational knowledge loss in selected South African state-owned enterprises*. PhD thesis. University of South Africa, Pretoria.

FIGURE 1: Demonstration of responses.

Discussion of the research findings

The position pertaining to enterprise-specific tacit knowledge loss in the SOEs is complex, because various factors contribute to such loss. The study found that resignations as a type of voluntary turnover and retirements as a form of involuntary turnover and the absence of retention practices were the chief contributors to knowledge loss in the public entities. Though resignations, retirements of an ageing workforce and non-existence of retention strategies ranked very high as the main triggers of knowledge loss in the SOEs, other factors such as fixed-term employment contracts or elapsing employment contracts, organisational culture and structures, deaths and dismissals and lack of systems dedicated to organisational KM were not helping the situation. The findings of this research project confirmed existing research by Ensslin et al. (2020) and Rashid et al. (2020) on the causes of tacit knowledge loss in organisations. Loss of organisational tacit knowledge is contingent on employee turnover, regardless of whether it is voluntary or involuntary.

In knowledge-intensive firms like the SOEs, turnover means losing more than just employees. Their firm-specific knowledge base, knowledge absorptive capacity and protective capacity are at the stake. In South Africa, the loss of the company-specific workers and knowledge resources will adversely affect the SOEs, specifically in regard to their capability to deliver on their developmental mandate for the country. The literature alludes to the fact the HRs and knowledge assets in these organisations are sources of sustainable competitive advantage and organisational productivity (Gürlek, 2020). Thus, it is inevitable that losing much-needed, company-specific human and knowledge resources will adversely affect the performance and sustainability of the SOEs. According to Durst and Zieba (2020, p. 1), institutional knowledge loss and its related inherent risks adversely affect the sustainability of firms. The KBV of the firm theorists asserts that organisations can show superior performance and innovation, in comparison to their opponents, if they guarantee a better management

of organisational knowledge as the most key strategic resource (Gürlek & Çemberci, 2020).

Moving on to the recognition and treatment of organisational staffs and knowledge as sources of sustainable competitive advantage, the majority of state entities in South Africa are resource-intensive in nature and, as such, incline to count on their tangible (employees) and intangible resources (knowledge assets) to propel their economic developmental agenda. This finding aligns well with the view put forward by both the resource-based theory and knowledge-based theory on companies as a collection of resources (Gürlek, 2020). Knowledge-based view views knowledge assets (knowledge, skills and experience) as intangible and non-substitutable resources (Liophanich, 2014). The qualitative and quantitative research findings of this mixed-methods study affirmed this view that people within the SOEs are fundamental resources and sources of organisational knowledge. Indeed, these views prevail and align with the majority of the South African SOEs, because they place and prioritise HRs and knowledge at the core of the business strategy and both are recognised as important drivers of sustainable competitive advantage.

Nonetheless, for the majority of the SOEs, who stand by the slogan 'staff as important resources', which was copiously used in their annual reports, this is just a myth, largely because they are losing a lot of their employees and knowledge to the competitors. If they were real in terms of prioritising knowledge and their HRs in their business strategy, as sources of sustained competitive advantage, they would have put systems and processes in place to ensure retention. The absence of retention strategies is a serious issue in the majority of the SOEs. Ideally, the recognition of institutional knowledge as a key strategic resource that is valuable, rare and non-substitutable should set off a trigger to find solutions to manage and prevent such a loss. Nevertheless, the majority of the SOEs were found lacking in so far as the management and prevention of organisational knowledge loss were about. The minority (33%) of the state

entities that partook in the study recognised knowledge as a key organisational strategic issue, as they had structures, processes, systems and strategies in place to manage it.

Regarding the recognition and treatment of tacit knowledge loss in the participating public-owned companies, the findings of the study with regard to the research objective are congruent with previous studies. Both the qualitative and survey data affirmed the existing literature that recognised organisational knowledge loss as a source of sustainability. The majority of the survey participants in the quantitative stance of this MMR study saw knowledge as a key enterprise strategic issue. However, the loss of this key strategic resource and the impact of this on the ability to ensure sustained competitive advantage remains a serious area of concern for the researchers. The researchers assert that SOEs should move beyond recognising HRs and knowledge as valuable enterprise-specific resources to be at the strategic nucleus for the management, prevention and reduction of risks associated with tacit knowledge loss.

The knowledge loss risks that are prevailing in the South African SOEs will continue to make these entities weak and defeated in the face of rivalry and their agenda to contribute to the developmental mandate of the state. Extant literature (Durst & Zieba, 2020; Jennex & Durcikova, 2020) posits that knowledge loss by firms to their opponents or rival companies will cause those firms to be defeated in the competition battle and they will lose their superior position and sustainability in their market industry sector. Knowledge in the SOEs is contingent on their employees, when their staff decides to leave, their knowledge leaves with them. Pertaining to known HR involuntary attrition such as retirements. It was also apparent from the results that there was a lack of strategies to retain and share tacit knowledge of the known retiring employees in mission critical areas. The absence of such strategies could be attributed to underdeveloped KM capability in the majority of the SOEs.

The findings of this study do indeed contribute to the ongoing discourse in the literature of knowledge loss, on theories regarding the RBV, KBV, knowledge transfer and retention theoretical lenses such as knowledge absorptive capacity and retentive capacity. The study established that recruitment and training and development practices facilitated the selection and development of the enterprise-specific human and knowledge resources. Despite their shortcomings, these HRM practices were found to be playing a crucial part in facilitating acquisition of knowledge, therefore increasing knowledge absorptive capacity in the public enterprises. Qualitative data from the interviews and annual reports show that SOEs invest heavily in training and development initiatives. Nevertheless, the same cannot be said of the HRM retention practices in facilitating knowledge retentive capacity. The purpose of the study was therefore not only limited to developing an integrated understanding of the causes and the extent of the recognition of tacit knowledge loss in the selected public enterprises of South Africa but also

build on the relevant theories relevant in the investigation of phenomenon.

Conclusion and recommendations

The study concludes that the journey for ensuring effective knowledge transfer and retention of valuable enterprise knowledge starts with the appreciation of knowledge as a key firm-specific strategic issue. This should ideally mean that the genesis of the way in which SOEs effectively prevent enterprise knowledge loss starts with the appreciation of it as a key organisational strategic issue. Company-specific human and knowledge assets are the cornerstones of the organisational performance, productivity and sustainability. Furthermore, the researchers infer that the loss of tacit knowledge is contingent with staff turnover in the organisations. The research findings uncovered that the position pertaining to tacit knowledge loss in South African SOEs is a complex issue, mainly because several factors informed the phenomenon.

Resignations, retirements of an ageing workforce, the absence of retention strategies, fixed-term employment contracts, the confines of the EE policy, organisational cultures and a lack of KM strategies contribute to the situation regarding knowledge loss in public entities of South Africa. The SOEs need to prioritise the formulation of employee retention strategies as well as knowledge transfer and retention strategies to contain the risks associated with knowledge loss. There is a dire need for the SOEs to invest in the creation of highly committed cohorts of employees, especially in the mission critical areas of their businesses.

Moreover, keeping knowledgeable employees in the core competence areas should be at the nucleus of HR retention system. A knowledge-oriented remuneration regime should be in place to acknowledge and reward the valuable personal knowledge, skills and experience that employees offer to the organisation. State-owned entities need to develop strategies to retain the much-needed domain-specific knowledge, skills and expertise of their ageing workforce. There is a dire need for some SOEs to put the EE policy, as a labour compliance issue, into perspective. This should be addressed to achieve a greater understanding of its implications and application in the workforce. Employment equity does not compel you as an employer or an HR officer to conclude, 'Let me get rid of certain staff members so that I can create spaces for other people to come in'. Getting rid of employees in mission critical positions on the basis of labour compliance could lead to dire consequences in that it forces the affected staff members to look employment opportunities elsewhere, thus in the process losing valuable firm-specific tacit knowledge unshared and retained. This could be worse in SOEs that are lagging behind in key KM practices to retain and share knowledge. Lastly, in order to realistically mitigate the risks inherent in the loss of company-specific knowledge assets, KM professionals should collaborate with HR managers.

Limitations and suggestions for further studies

Like it is the case in any other scholarly communication project, this research tract has several limitations. The qualitative interviews were undertaken with HR managers, in nine public entities, across five market sectors. The quantitative phase of the project was a cross-sectional, limited process and conducted in only three SOEs of South Africa. Consequently, the findings of the project should be used with restraint in other different types of the companies. Furthermore, other potential research projects in this area may include a longitudinal form of research that includes related SOEs and other sectors of the economy. The findings should be deduced and used prudently by the SOEs at the provincial and local levels. A similar study could be undertaken in the SOEs operating in local and provincial contexts. As earlier stated, both the qualitative and quantitative data were collected only in the SOEs across five specific economic sectors of South Africa such as the developmental financial sector, water utility sector, regulatory compliance market, service-oriented sector and research and development sector. Hence, the research findings should not be generalised for use in other countries and their specific economic contexts. Nevertheless, it is possible to generalise the research findings to other SOEs in similar market sectors. The researchers suggest that future studies may be undertaken in other nations, taking into account their industrial and national contexts.

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Competing interests

The authors have declared that no competing interest exists.

Author's contributions

M.P. conceptualised study including collecting and analysing the data. P.N. supervised the project and assisted in its conceptualisation. Their share of contribution to this paper was 60% and 40%, respectively.

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Data availability

The data used in this study are available and can be shared when required or necessary upon reasonable request from the corresponding author M.P.

Disclaimer

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