A research grounded in examining the use of knowledge management technologies in civil service organisations in Mauritius

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Abstract
Knowledge management focuses on an organisation's capacity to adjust, persist, and compete in a dynamic and evolving environment. Knowledge management can be understood as the distinctive attributes of knowledge that provide a corporation with a competitive advantage. Furthermore, knowledge management (KM) is seen as a characteristic of an organisation that enables communication both within the organisation and with external parties. It enhances the effectiveness of the supply chain and leads to significant returns on investment, cost savings, and unique marketing efficiencies. Nevertheless, Trinidad's economy, despite its expertise and understanding, encounters numerous problems. The effectiveness of public service organisations may be contingent upon organisational learning when viewed from this perspective. Inconsistent implementation of knowledge management might result in its adoption for various purposes, catering to diverse goals and stakeholders. This study investigates the present condition of knowledge management (KM) inside the Mauritius public service organisation to determine the crucial aspects that impact organisational learning.

Keywords: IT manager, knowledge management, Mauritian civil service productivity and efficiency

1. Introduction

Organisational learning is an essential component of every firm. According to Khan (2014) and Jelenic (2011), knowledge is the predominant economic asset, surpassing capital, labour, and natural resources. According to Hegazy and Ghorab (2014), knowledge is a highly significant and valuable resource. The collection and utilisation of knowledge has become a vital economic asset due to the increasing significance of communications and the prevalence of popular education. According to Cho and Korte (2014), knowledge has proven to be an effective incentive for firms to implement knowledge management. This study centres on KM, which stands for knowledge management. The researcher identified three specific areas of interest. Primarily, it is imperative that we acquire a deeper understanding of knowledge management (KM) and its precise definition. What is the precise definition of that? From where does it come? Furthermore, to ensure more effective utilisation and output, it is crucial to ascertain how civil service organisations might strengthen their competence.

The standardisation of the definition of knowledge management has been a subject of debate. According to Neef (1999), knowledge management (KM) has been defined as a subject, instrument, philosophy, or method/policy by various scholars, such as Martensson (2000) and Wiig (1997). Additionally, Smit (2015) argues that KM cannot be understood solely from a human perspective due to its strong association with information technology (IT). Nevertheless, the conventional concept of knowledge management was questioned by a branch of knowledge management known as second-generation knowledge management (SGKM) and a modified version dubbed "New Knowledge Management" (TNKM) (Firestone and Mc Elroy 2003). Conversely, citizens of Mauritius have higher demands and expectations of the public sector.

However, there are significant challenges for a knowledge-based economy such as Mauritius. Thus, organisational learning might be crucial to public service organisations' performance. If knowledge management is implemented differently, it might take on a range of functions to serve various audiences and goals. These duties include developing effective government engagement in decision-making processes, enhancing society's intellectual capital to advance public service efficacy, developing competitive resource capacities, and developing an information-driven labour force.

1.1. Research Problem

Mauritius is currently witnessing a significant transformation in its public sector, which is garnering unprecedented attention. The objective of this transition is to enhance service delivery and optimise the overall customer experience.
Unfortunately, the research does not uncover any framework that offers a genuine illustration of the "developing knowledge" that can be implemented in the context of the public service in Mauritius. The existing methodologies employed in the global context provide theoretical explanations but fail to account for practical realities. In addition, the majority of previous studies suggest frameworks that are applicable to privately owned businesses rather than government organisations. Within the Mauritius setting, KM studies were conducted at financial institutions, colleges, and universities based on a restricted study and genuine research. Higher education institutions in Mauritius operate under the jurisdiction of the Ministry of Education, whereas commercial banks are privately owned.

Research conducted in higher education institutions has identified several challenges in the field of knowledge exchange. These include the absence of a structured framework for sharing knowledge, limited participation of society in various forms, insufficient funding for knowledge-related initiatives, and a lack of a clear vision due to frequent changes in management that hinder the development of a knowledge-sharing society (Abbas, 2017; Ramjeawon and Rowley, 2020). Similarly, Abbas (2017) noted that both academics and executives lacked sufficient introspection on knowledge management. He emphasised the urgent necessity for educational organisations to modify and reassess their methods to achieve organisational excellence. The Mauritius National Government faces numerous challenges, including inadequate service provision, centralised hierarchical management, deficient accountability and transparency, diminished performance, decreased morale, resistance to change, vaguely defined roles and responsibilities, inadequate coordination, overly formalised processes, insufficient specialised skills, and insufficient funding. The politicisation of policy decisions also hampers the accumulation of intellectual resources in the public sector.

1.2. Research Aim

This research's aim is to identify how civil service organizations characterise knowledge management. The research will allow the researcher to construct a knowledge management framework for the Mauritian Civil Service Organisation.

1.3. Research Questions

The study is centred on the following specific research questions:
1. Which policies and guidelines regulate the information management and sharing procedures of the government department?
2. How effective are the current knowledge governance procedures?
3. How extensively does the public sector actually utilise software for knowledge management?
4. What benefits may civil service organisations derive from their information procedures?
5. What strategies might be suggested to enhance the operational effectiveness and efficiency of public service organisations?

1.4. Research Hypothesis

The research hypotheses that were formulated and tested for this study are listed below.
1. Ho: There are no organisational learning instruments available to the national government.
2. Ho: Senior management executives in public service do not contribute much to strategic knowledge management.
3. Ho: Knowledge management is not a known term for executive managers in public service.

2. Materials and Methods

This section offers a thorough examination of the current body of literature pertaining to the selected subject.

2.1. Literature review

While knowledge has always been present, Purnamawati, Jie, Hong, and Yuniarta (2022) contend that businesses should prioritise being knowledge-based and knowledge-oriented. They emphasise the importance of utilising intellectual capital, particularly consumer, structural, and human capital. Human capital, in particular, is identified as the crucial element that propels both economic growth and organisational achievement. Neef (1999) and Mohamed, Lui, and Nie (2022) argue that understanding knowledge management requires considering shifts in the global economy. The book "Breakthrough Inventions in Medical and Drug Research" by Neff (1999) provides illustrative examples to contextualise the remarkable advancements and rapid progress achieved in the past two decades.

- The shift from a large-scale mainframe computer to a smaller desktop computer.
- The internet rapid growth, along with the telecommunications boom, has led to the emergence of an electronic marketplace.
- Restructuring the organisation and reallocating funds.
- Alterations to work schedules.
- The rise of "tiger economies."

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The UNDP (2022) has advocated for organisations to consider the following knowledge dimensions to effectively generate and sustainably manage knowledge: education, research, technical progress, innovation, and a supportive environment. The knowledge dimensions were built upon the foundation of the Global Knowledge Index Framework. Today’s organisations are experiencing significant technological transformation and a wide range of client demands. The three essential skills in this context are innovative performance, dynamic capabilities, and information absorption, which encompass culture, structure, and technology (Feng, Zhao, Wang, and Zhang, 2022). Undoubtedly, knowledge management necessitates the successful and efficient management of these skills.

Knowledge-based economies rely on the integration of information and communication technologies, human capital, and the efficient generation, distribution, and utilisation of knowledge and information (Aparicio, Iturralde, and Rodriguez, 2021). The former delineates distinctions among an extensive array of knowledge types, including the following:

1. Knowledge that is similar to information is referred to as "know-what," indicating a collection of factual details.
2. Understand the underlying reason for (relating to the scientific comprehension of natural laws and principles).
3. Within an organisation, know-how refers to the expertise and competency required to perform a task.
4. The term "know-who" denotes an individual who possesses certain connections and is aware of the appropriate actions or individuals involved.

Conventional hierarchical relationships between bosses and subordinates need to be replaced with collaborative interactions inside contemporary organisational systems. Collaboration and the effective management of knowledge have demonstrably favourable effects on the process of organisational learning (Espejo and Flores, 2021).

Previous endeavours to define knowledge, including other similar attempts, reveal the absence of a singular definition or perspective. This lack of consensus is a significant barrier for scholars and practitioners of knowledge management in their pursuit of establishing a unified strategy. The New Knowledge Management (TNKM) School has made significant contributions to our understanding of knowledge in enterprises. Regardless of the specific definition utilised, it is clear that in the field of management, knowledge is considered an operational concept that is well suited for the business environment and serves as a strategic resource for management (Bolisani and Bratiani, 2018). Subsequently, the researcher delves into the ongoing discourse regarding the delineations of knowledge, wisdom, information, and data.

2.2. History of knowledge management

In 1964, Drucker was the first to introduce the term "information employee". Senge (1990) defined a teaching organisation as one that has the ability to learn from past experiences and store that knowledge in its organisational memory. The work undertaken in the late 1970s by Everett Rogers at Stanford on innovation diffusion and Thomas Allen at MIT on information and technology transfer has contributed to our comprehension of how knowledge is created, consumed, and shared inside organisations. According to Leonard-Barton of Harvard Business School, Chaparral Steel is considered a successful example of knowledge management. The company has been employing a very effective method for information management since the mid-1970s (1995).

By the mid-1980s, most corporations had developed strategies and methodologies. However, organisations still lack knowledge, management plans and procedures. As a result, there was increasing concern about how to manage such a significant resource. The method incorporated computer technology, which had previously posed difficulties in managing and understanding terabytes of data. IT solutions that are easy to use and understand are being offered to help various knowledge management projects.

During the 1990s, there was an increase in knowledge management (KM) projects due to the potential offered by the internet. Not only did prominent American, European, and Japanese organisations establish specialised knowledge management programmes, but various management consulting firms also initiated their own internal knowledge management projects. In 1991, Tom Stewart authored the article "Brainpower" for Fortune magazine. The book "The Knowledge-Creating Company: How Japanese Companies Create the Dynamics of Innovation," authored by Ikujiro Nonaka and Hirotaka Takeuchi in 1995, is highly popular in the field.

Loghi and Jadoon (2022) identify two primary methodologies for organisational learning: the personalisation approach and the social media network method. The social network approach has a significant impact on learning, offering possibilities for problem solving and fostering the development of innovative ideas. This is likely to stimulate creativity, consolidate all resources, and promote synergy. In contrast, the personalisation approach is associated with the individual who originated and spread knowledge through direct, in-person encounters. Kotarba (2011) created a process method for knowledge management due to the lack of practical rules, strategies, and available resources. This approach aligns more closely with ISO standards and emphasises the importance of staff members understanding the "what" to improve the "how" of its execution. The performance criteria are linked to the processes. Sharma (2021) suggested that a viable approach to effectively utilise resources for clients and stakeholders both within and outside the organisation is to employ knowledge technology for knowledge management. In addition, there are knowledge management approaches that can be classified as behaviourist, systemic, or mechanistic, as identified by Sokoh and Okolie in 2021.

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2.3. History of the Mauritian Civil Service

During the period of French colonial rule from 1715 to 1810, the District Assembly was under the leadership of the Governors. Additionally, a small number of officials from the French East India Company provided assistance in governing the island. This marked the inception of the Mauritius National Government. Subsequently, the island experienced significant expansion through the establishment of ports, highways, roads, clinics, colleges, tribunals, jails, and garrisons. Decentralised bodies were established inside the districts, while the Council gradually grew in size. The responsibility for constructing infrastructure and maintaining law and order was entrusted to the civil administration. To ensure a secure establishment, French dignitaries and migrants were incentivised to participate in the governance of the colony through local council control. The independence movement of the early 20th century led to several significant advancements, such as the establishment of the Council of Ministers system in 1957, the Inner Self in 1965, the acceleration of the Mauricianization process within the executive and British expatriates, and other developments. Upon achieving independence on March 12, 1968, the civil service continued to provide a strong example, instilling confidence in minority groups that their interests would be protected during the transition. An important aspect of the public sector in impartial Mauritius is the creation of an Impartial Public Service Commission (PS Commission). This commission ensures that individuals from all backgrounds are treated equitably in matters related to recruitment, promotion, disciplinary actions, and overall human resource development. The Public Service Commission was established under Section 88 of the Mauritians Constitution Order, 1968. The committee consists of four additional members, appointed by the governor of the Republic in consultation with the leader of the Opposition Party and the Party itself, in addition to a chairperson.

The Public Service Board is selected to ensure that the government and the resistance address the concerns of different socioeconomic classes and work without bias. Since the country gained independence, the Committee has consistently chosen senior leaders from the public sector and distinguished former public employees who have demonstrated a strong commitment to diversity and inclusivity, encompassing many racial and ethnic backgrounds. Consequently, the Mauritius National Government has upheld its reputation as a reputable, independent, and democratic institution.

2.4. Knowledge Management and Information Technology in Civil Service Organisations

Information technology has fundamentally transformed the manner in which businesses handle and disseminate information. The advent of technology has facilitated the ability of civil service organisations to establish global connections and gain access to a vast amount of previously inaccessible knowledge. Over the past few years, the significance of information technology in the field of knowledge management has grown significantly. Information technology (IT) can enhance the ability of public service organisations to generate, store, exchange, and disseminate knowledge in a more efficient and effective manner. Additionally, it has the potential to enhance decision-making, communication, and collaboration within organisations (Alshurideh et al., 2019). Various knowledge management systems exist, although they all possess certain shared characteristics. These components encompass a database or repository of information, tools for organising and retrieving the information, and a systematic procedure for generating, revising, and disseminating the information. Many knowledge management systems utilise technology, such as Web 2.0 technologies, to establish a collaborative environment for sharing and updating knowledge. Additionally, certain systems employ artificial intelligence technology to facilitate the identification of pertinent knowledge and provide recommendations to users within civil service organisations (Alshurideh et al., 2019). The role of IT in knowledge management systems is always evolving with the emergence of new technologies. It is a crucial component of every organisation's strategy for properly managing and utilising knowledge. Information technology (IT) is essential in knowledge management (KM) because it serves the purpose of storing and facilitating the sharing of knowledge. Typically, databases and knowledge bases are web-based, enabling access from any location. Civil service employees have the option to utilise collaborative tools, such as chat and video conferencing, to instantly exchange knowledge with one another. Additionally, IT aids in the automation of certain knowledge management duties, such as the management of documents and control of versions. Utilising this approach facilitates the monitoring of information and guarantees its currency (Alshurideh et al., 2019).

2.4.1. The Role of Information Technology (AI) in Knowledge Management Systems

Due to fierce competition, abundant data, limited resources, and the need for quick decision-making, many companies are adopting artificial intelligence (AI) tools. This is mainly driven by the observed benefits demonstrated by leading digital businesses (Wamba-Taguimdje, 2020).

- Artificial intelligence (AI) has proven to be highly beneficial in facilitating the exchange of knowledge. They have facilitated the development of a culture of knowledge sharing among public service organisations. In this culture, knowledge is disseminated among employees throughout the entire organisation. The dissemination of knowledge within organisations has facilitated enhancements in performance and increased competitiveness.
Artificial intelligence (AI) has proven to be highly beneficial in the realm of problem solving. It has facilitated expedited problem solving and enhanced decision making for organisations. Knowledge management systems have additionally facilitated organisations in minimising the expenses associated with problem solving.

Artificial intelligence (AI) has proven to be quite beneficial in the process of making decisions. They have facilitated organisations in enhancing decision-making processes by delivering timely and pertinent information. Knowledge management systems have additionally facilitated organisations in minimising the expenses associated with decision-making.

The user’s text is a symbol, specifically the symbol "en". The utilisation of AI in knowledge management systems has proven to be highly beneficial in fostering innovation. They have facilitated the development of novel products or services for organisations. The integration of AI in knowledge management systems has facilitated cost reduction in innovation for civil service organisations.

Artificial intelligence (AI) has proven to be highly beneficial in facilitating the transfer of knowledge. Artificial intelligence has facilitated the flow of knowledge among employees within organisations. Integrating AI into knowledge management systems has also facilitated cost reduction in knowledge transfer for civil sector organisations.

Artificial intelligence (AI) has proven to be quite beneficial in facilitating communication. It has facilitated improved communication among organisations. The use of AI in knowledge management systems has also facilitated organisations in decreasing communication expenses.

2.4.2. Challenges of Using Information Technology in Knowledge Management Systems

- The primary obstacle is security. Given the vast amount of electronically stored information, the likelihood of security breaches is significantly greater. Cybercriminals have the ability to infiltrate and retrieve confidential data. If these data end in unauthorised possession, they can be exploited for malicious intentions.
- Another obstacle is the issue of excessive data. Given the abundance of information, it might be challenging to sort through it all and identify the specific criteria that civil service organisations are seeking. This might result in feelings of irritation and even an excessive amount of information, which can have a negative impact on your business.
- In addition, another obstacle is the unwillingness to change. Individuals are inclined to establish routines and frequently exhibit reluctance toward alterations, even when those alterations are advantageous. When public service organisations implement new information technology, they are likely to face opposition from personnel who are accustomed to traditional methods.
- Despite these difficulties, information technology has the potential to be a highly effective instrument for managing knowledge. Civil service organisations can leverage information technology for their benefit by remaining informed about current developments and maintaining strong security measures.

3. Methodology for Conducting Research

This chapter provides an overview of the research technique. The purpose is to address the study’s objectives and establish the appropriateness of the chosen research approach. The present study provides an overview of the research approach employed, encompassing the chosen research methodology, sampling technique and data collection processes.

3.1. Determination of Research Design

A research design refers to the systematic structure or blueprint employed in a study to gather and analyse data. According to Rajasekar et al. (2018), a research plan may be defined as the systematic approach employed to acquire knowledge and outline the working strategy for conducting an inquiry. The existing body of literature indicates that there are three prevalent research methodologies, namely quantitative, qualitative, and mixed-method research. According to Creswell (2018), mixed methods refers to a research methodology employed in the fields of social sciences, behavioural sciences, and health sciences. This strategy involves the collection, analysis, and integration of both quantitative and qualitative data within a single study, with the aim of addressing the research inquiries at hand. According to Cooper and Schindler (2011), the utilisation of a mixed-method approach facilitates the identification of research findings of high quality, since it allows for the precise evaluation of variables through a diverse range of studies. Consequently, the integration of quantitative and qualitative data allows the researcher to derive comprehensive insights and validate findings, thereby mitigating the limitations inherent to each individual technique.

3.2. Justification of Selected Research Method

The primary objective of this study is to empirically examine a series of hypotheses in order to ascertain and explore the impact of the constructs utilised in the models. The primary research strategy chosen for this study is a quantitative method, which will be used to examine and assess the theoretical study context. The study conducted a comprehensive examination by targeting certain clusters and conducting interviews with users and management, in order to gain insights from their perspectives. In addition, it was determined that a qualitative approach was suitable for assessing the qualitative aspects of...
this study methodologies (Bulsara, 2015). Based on the aforementioned rationale, a mixed-method approach incorporating both quantitative and qualitative methodologies was selected as the most suitable strategy for achieving the objectives of this study.

3.3. Data collection

A community is defined as any organisation that needs to collect specific types of data. A target group is usually a group of individuals who are important to a certain study and who share a particular trait (Fraenkel et al., 2022). Any size group can be the target group, which is the actual group to which a researcher wishes to generalise his findings. A list of ministers was generated using the Public Sector Service Guide (2019 edition) database, yielding a total of 25 ministers. The researcher is solely interested in Civil Service Organisations and has excluded Government Owned Companies, Parastatal Bodies, and Statutory Bodies due to time constraints. To gather relevant data on management participation in organisational learning, the research population for this study consisted of the following personnel from the 25 ministries. Table 1 below displays the population sizes of the various staff categories among the 25 ministries based on available records. There are 172 employees in all. This is displayed in Table 1 below:

Table 1 Population size.

<table>
<thead>
<tr>
<th>Staff</th>
<th>Population size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assistant/Permanent Secretaries</td>
<td>40</td>
</tr>
<tr>
<td>ICT Manager</td>
<td>26</td>
</tr>
<tr>
<td>HR Manager</td>
<td>28</td>
</tr>
<tr>
<td>Finance Manager</td>
<td>26</td>
</tr>
<tr>
<td>Director</td>
<td>25</td>
</tr>
<tr>
<td>Procurement and Supply Manager</td>
<td>27</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>172</strong></td>
</tr>
</tbody>
</table>

*Source:* Primary Data.

3.3.1. Dimensions of the sample

Numerous techniques are available for calculating the population sample size. For this investigation, the RASOFT online large sample calculation was used with a 95% sampling error and a 5% error margin. The calculator then indicated that the sample size was 120.

![Raosoft Sample Size Calculation](source)

*Source:* Primary Data.

3.3.2. Methodology of Choosing the Sample

According to Palinkas et al., (2015), sampling refers to the deliberate selection of particular data sources from which data are gathered in order to address a given study purpose. There exist two distinct categories of sampling procedures, namely probabilistic and non-probabilistic. In this study, a combination of probability and non-probability sampling approaches was employed to ascertain the selection of respondents. The qualitative examination employed interviews and focus groups as research methods. The goal-directed selection methodology was used to pick participants for these interviews and focus groups. Additionally, the stratified casual sample method was employed to select workers from different ministries for the examination.

The methodology of stratified random sampling involves selecting smaller subgroups for the sample in proportion to their representation in the population. The purpose of this method is to guarantee the inclusion of particular demographic groups in the sampling procedure. Consequently, the researcher successfully classified distinct cohorts and thereafter employed a random sampling technique to select a suitable quantity from each cohort, according to the size of the respective cohort within the population.
The researchers employed purposive sampling in order to carefully pick participants who possessed the necessary knowledge and expertise to offer the desired information during the interviews and focus groups. Purposive sampling is a commonly employed method in qualitative research to deliberately pick and include examples that possess a wealth of information or possess expertise in phenomena that are of interest. This approach is particularly useful when resources are restricted, as it allows for the most efficient allocation of available resources (Palinkas et al., 2015). Therefore, this approach was favoured due to its ability to conveniently reach the participants.

3.4. Data collection Technique and choice

The collecting of precise data is of utmost importance in upholding the credibility of research, facilitating well-informed business choices, and guaranteeing the assurance of quality. Utilising a mixed methods approach, the researcher employed a survey methodology, employing structured questionnaires and interviews, to gather pertinent information that aligns with the aims of the analysis. According to Gray (2018), the questionnaire is primarily employed as a tool for acquiring information and is considered the most suitable option for targeting a large number of participants within a limited time frame. The survey predominantly consisted of closed-ended questions. Additionally, some unresolved inquiries were included to provide the participants with an opportunity to articulate their thoughts and provide a thorough portrayal of the subject being investigated. In contrast, the closed questions were designed to reduce the possibility of misinterpretation by restricting answers to predetermined possibilities. The closed questions included several options, such as multiple-choice, multiple-choice, and five-point Likert scales, all of which are related to the suggested paradigm. The survey was partitioned into sections, facilitating readability and submission. The survey commenced with a clear delineation of its objectives, the significance of the study, and the issues around confidentiality. Conversely, the interviews were conducted using a predetermined set of semi-structured questions and took place in a one-on-one format. The rationale for adopting this approach may be substantiated as it affords the respondent the opportunity to elucidate any queries that may be perplexing to them.

3.5. Data analysis techniques and justification

The arrangement or structure of the data collected from the surveys served as the primary source of information and was analysed using SPSS software, specifically version 21. The researcher chose to utilise SPSS as the primary tool in the study due to its familiarity and capacity to handle and analyse complex data. In order to analyse and evaluate quantitative data, the researcher employed both descriptive and inferential methodologies. In order to address the dispersion of the data, mean scores and standard deviations were employed. Furthermore, in order to establish the demographic characteristics of the participants, descriptive analyses were conducted, which involved the calculation of frequencies and percentages. The results of the descriptive study were presented in textual form, as well as through the use of graphs and tables. In the context of inferential statistics, the research employed chi-square, correlation, regression, and ANOVA to evaluate any associations or differences among the variables under investigation. Furthermore, the assessment of significance and hypothesis testing was conducted utilising the p-value as a measure, with a threshold of less than 0.05 indicating statistical significance. Several commonly used tests for inferential analysis include:

- Correlation and Chi Square Analysis are statistical techniques used to assess the internal consistency of data and test underlying assumptions.
- The Analysis of Variance (ANOVA) is a statistical method employed to discern variations among variables across many groups. The F-ratios are employed to assess the presence of any significant differences among the comparison groups. The present study utilised analysis of variance (ANOVA) to investigate whether various ministries exhibit differential performance in terms of transfer methods and outcomes.
- Regression Analysis and Multiple Regression Analysis - The primary objective of regression analysis is to investigate the relationship between variables and test hypotheses. This study employed regression analysis to examine the extent to which instruments, measurements, and knowledge quality influence relocation operations.

3.6. Research Limitations

Gray (2018) identifies several primary factors contributing to the occurrence of errors in survey data collection. These factors include:

- The respondents' limited ability to accurately understand and interpret the survey questions as intended;
- The respondents' lack of motivation or interest in providing accurate and thoughtful responses;
- The interviewers' various shortcomings, such as their tendency to alter the wording of questions, failures in properly demonstrating survey methods, and the use of incorrect sampling techniques.

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Some employees may be engaged in temporary employment arrangements, while others may have transitioned into retirement. The potential consequences of this situation may manifest in the compromised integrity of the collected data and the inherent limitations of the sample.

The practicality of the survey strategy was assessed based on the respondents' desire and level of engagement, as this method is specifically developed to gather data from individuals.

The survey methodology mainly depends on verbal communication. Respondents have the potential to offer inaccurate or deceptive information. Consequently, the poll is susceptible to mistakes in respondents' answers.

The aforementioned survey was susceptible to the inherent errors associated with assessing attitudes, abilities, and conduct.

4. Results and Discussion

The aim is to develop a Civil Service Knowledge Management Model that enhances efficiency and productivity. The data was organised and analysed using SPSS (Statistical Package of Social Sciences) software. Various statistical techniques were employed to the analysis of quantitative data, including descriptive statistics such as frequency distribution and percentages, Chi-square tests, correlations, ANOVA, Analysis of Regression, Factor Analysis, and Dependability Analysis. The analysis of qualitative data was conducted by examining the participants' comments, explanations, and descriptions. Following the transcription of the replies obtained from both the interviews and focus groups, a comprehensive review of the subject matter was conducted in order to enhance our understanding of the experiences being investigated.

4.1. Data interpretation and conversation

This section presents the results of a survey carried out among senior officers in the Mauritius Civil Service who were requested to complete questionnaires. The addressed themes encompass knowledge collection, dissemination, guidance and training, as well as knowledge management plans and strategies. Additionally, the topics include management, incentives, and the advantages of knowledge management. The challenges in implementing knowledge management (KM) are overcome to provide a framework for knowledge management in civil services that improves productivity and efficiency. This study employed descriptive statistical analysis, namely, frequency distribution and percentages, in combination with the Statistical Package of Social Sciences (SPSS) to analyse the data.

4.2. Descriptive Data Analysis

4.2.1. Respondents' demographic attributes

The sample consisted of 56% male respondents and 44% female respondents, as indicated by the demographic parameters of the participants (Figure 1). The results indicate that 2.1% of the respondents have a PhD, 46.3% have postgraduate degrees, 35.8% have degrees, and 15.8% have diplomas. The majority of respondents, specifically 61%, were above the age of forty. Additionally, 3% fell within the age range of thirty to forty, 2% fell between twenty-five and twenty-nine, and another 3% fell between thirty and forty. Additionally, 2.1% of the individuals were aged 18-24 years. Figure 4.1 shows that 26.6% of the participants had been employed by their current employer for more than 31 years. Additionally, 27.7% had a tenure between 21 and 30 years, 22.3% had worked for a period ranging from 10 to 20 years, and 23.4% had a tenure of less than ten years.

4.2.2. Respondents' individual obligations

According to Figure 2, 20% of the respondents held the positions of additional secretary or senior undersecretary (AS/PAS), 15% worked as purchasing and logistics administrators, 14% as IT supervisors, 17% as HR managers, 17% as financial burden managers, and 16% as managers.

4.2.3. Organisational size among the respondents

Of the twenty-five ministers surveyed, thirty, 5% stated that their department employed between 101 and 300 workers, and 21.1% said that their organisation employed more than 300 individuals. Of the participants, 35.8% stated that their company was 100 or less in size, while 12.6% stated that it was 101–200 in size. This is what Figure 3 depicts.

4.2.4. Knowledge management awareness

A total of 98.9% of the participants were aware of their organisation's goals and mission. Although 83.2 percent of respondents stated that they were aware of the idea of organisational learning, 85.3 percent felt that neither management nor employees truly grasped it.
4.2.5. Knowledge Management versus Policy and Strategy Involvement

Figure 1 Demographic characteristics of the respondents. Source: Primary Data.

Figure 2 Personal responsibilities of respondents. Source: Primary Data.

Figure 3 Organisational size of departments. Source: Primary Data.
According to staff members, their ministry does not have a well-organised strategy or plan for managing information, despite 57.9% of participants claiming to have a role in decision-making regarding policies and strategies (Figure 4). According to the poll, 89.5 percent of the respondents reported that their ministry lacked a defined set of values that encouraged the exchange of information. This finding corroborates the findings of Lartey, Shi, Santosh, Afriyie, Gumah, Husein, and Bah (2022), who asserted that the process of exchanging information among businesses is arduous.

Figure 4 Policy and Strategy Involvement vs. Knowledge Management. Source: Primary Data.

4.3. Examining theories

Getting relevant data on knowledge management in civil organisations was one of the key objectives of the study. The accompanying hypotheses were developed and subsequently assessed in accordance with the stated purpose of the study. Here, the findings of the hypothesis testing are examined;

First hypothesis (Ho): The civil service lacks a knowledge management system.

To determine whether there was a relationship between the public service's knowledge management policy and staff members' routine information-sharing and recording activities, a Pearson chi-square test (Table 2) was employed. Given that the p value of 0.126 was above the significance criterion of 0.05, the result was considered significant. We might therefore conclude that the null hypothesis is not rejected.

Table 2 Chi-square tests.

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymp. Sig. (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>2.340</td>
<td>1</td>
<td>.126</td>
<td>.153</td>
<td>.123</td>
</tr>
<tr>
<td>Continuity</td>
<td>1.369</td>
<td>1</td>
<td>.242</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correction</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood Ratio</td>
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<td>1</td>
<td>.148</td>
<td>.153</td>
<td>.123</td>
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<tr>
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<tr>
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<td>2.315</td>
<td>1</td>
<td>.128</td>
<td></td>
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<tr>
<td>N of Valid Cases</td>
<td>95</td>
<td></td>
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</tbody>
</table>

This finding is very important because it is found to be useless to have a knowledge management system without the necessary mechanism in place in the organisation (Benbya & Belbaly, 2005).

Hypothesis 2: Top management executives in public service have no role in strategic knowledge management.

A random chi-square test (Table 3) was used to determine whether there was any significance, and the results showed a p value of 0.016, which is less than the relevant threshold (0.05). Consequently, since we have sufficient evidence to conclude that the top leadership of the public sector is crucial to strategic knowledge administration, we may conclude that we disagree with the null hypothesis.

This result is consistent with that of Mohajan (2017), who proposed the creation of a new post in upper management known as the knowledge manager, whose primary responsibility is to lower obstacles and hurdles to the adoption of KM in organisations by creating appropriate procedures, technologies, resources, and organisational culture. The knowledge management framework developed by Stankosky and Baldanza proposes the importance of leaders overseeing knowledge management processes, methods, and practices.
Table 3 Chi-square tests on the role of top management in KM.

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymp. Sig. (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
</tr>
</thead>
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<td>Pearson Chi-Square</td>
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<tr>
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<tr>
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<td>.014</td>
<td>.025</td>
<td>.013</td>
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<td>Fisher's Exact Test</td>
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<tr>
<td>Linear-by-Linear Association</td>
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<td>N of Valid Cases</td>
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</tbody>
</table>

Hypothesis 3: Knowledge management is not well known to civil service executive managers.

A Pearson chi-square test (Table 4) was utilised to investigate the hypotheses and determine whether any links could be found. We can conclude that the null hypothesis is not rejected and that public service managers lack understanding of the idea of knowledge management based on the p value of 0.782 and the significance threshold of 0.05. This result is consistent with that of Litvaj et al. (2022), who found that management personnel in organisations lacked adequate knowledge of how to apply knowledge management practically to decision-making as a managerial function and in an effective manner related to quality management.

Table 4 Chi-square tests on the concept of KM by managers.

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymp. Sig. (2-sided)</th>
<th>Exact Sig. (2-sided)</th>
<th>Exact Sig. (1-sided)</th>
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<td>Fisher's Exact Test</td>
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<td>Linear-by-Linear Association</td>
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<tr>
<td>N of Valid Cases</td>
<td>95</td>
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4.4. Synopsis of results

Determining the state of knowledge management (KM) in Mauritius’s civil service organisations was the main goal of the study. The intriguing conclusions drawn from the data analysis and hypothesis testing are summarised as follows.

1. According to 85.3% of respondents, KM is not well known or understood by management or staff.
2. A total of 77.9% of workers reported that there was no formal knowledge management strategy or policy in place at their ministry.
3. A total of 89.5 percent of participants stated that their ministries do not have a set of values that promotes the sharing of information.
4. Only 8.4% of the participants indicated that their knowledge management strategy aligned significantly with the goals of their firm.
5. A total of 52.1 percent of those surveyed stated that partnerships or strategic relationships are how their ministries obtain knowledge.
6. A total of 96.8% of participants reported having a communication reason gateway.
7. Eighty-three percent of those surveyed stated that they did not regularly share and document information.
8. Sixty-one percent of workers claimed that their ministry forbids them from working on projects with outside experts.
9. The primary e-government operations of their ministry, according to 78.9% of respondents, were centred on service delivery.
10. A total of 21.1% reported that the formulation and consultation of policies were the main emphases of these activities.
11. Ninety-five percent of the respondents stated that they could download administrative forms and applications, acquire publications and reports, obtain statistics, and access administrative information and information about current events.
12. According to 71.6 percent of participants, their ministries do not have a defined plan or strategy in place to improve e-governance.
13. Ninety-seven percent of respondents said they could not make payments online via their ministry’s current portal, and sixty-five percent said they could not fill out paperwork electronically.
14. Sixty-two percent of the respondents said that knowledge management was crucial to enhancing delivery.
15. According to 40.9 percent of the respondents, KM will provide prompt solutions for pressing business issues.
16. A total of 62.1 percent of participants believed that effective knowledge management could lead to improved decision-making.

4.5 Qualitative Results

Based on the findings from the interviews of Top Executives and senior management level, it is evident that there exists a deficiency or insufficiency in the level of awareness and understanding pertaining to knowledge management (KM) and its associated advantages. Individuals in positions of senior and middle management typically possess a level of familiarity with these terminologies and possess some understanding of knowledge management (KM); nonetheless, they may lack clarity regarding its specific components and implications. Consequently, employees, particularly those in lower hierarchical positions, possess an inadequate understanding of the concept of Knowledge Management (KM). From this standpoint, Permanent Secretary highlighted: “The officers who have been employed in my department for an extended period of time, some of whom have attained senior positions and higher remuneration, lack a comprehensive understanding of the concept of knowledge management.” The aforementioned issue is a significant challenge as the limited understanding of knowledge management impedes my ability to enact meaningful enhancements throughout the organisation.

Furthermore, there is a lack of established organisational structures dedicated to KM, indicating that KM within the Civil Service is still in its nascent stage and has considerable progress to make in its KM endeavours. During the interviews conducted with Permanent Secretaries, a consensus was reached that employees exhibit a general reluctance towards engaging in knowledge management activities.

Based on the findings from interviews, it has been determined that there is a lack of adequate training and money for knowledge management (KM) training. Annually, the government allocates a substantial portion of its budget towards staff training; yet, there exists a dearth or complete absence of resources and funding specifically designated for knowledge management (KM) initiatives. However, it is the perspective of Permanent Secretaries that the training of staff in the execution of knowledge management necessitates a substantial investment that may not initially result in significant returns on organisational development.

The findings of this analysis show that a lack of information on knowledge management (KM) and its advantages, as well as the challenge of persuading individuals to share knowledge instead of hoarding it, are the main obstacles to putting knowledge management techniques into practice. Important issues included attracting and retaining great people, a lack of commitment from senior management, and a considerable emphasis on overcoming technological limitations.

The majority of government organisations have implemented websites and have embraced the use of information technology for the purpose of storing data, procedures, and reports. According to the interviews conducted, it was found that individuals also had the capability to utilise the internet, intranet, and e-mail as tools for information retrieval. In contrast, individuals often encounter challenges and expend significant amounts of time in their efforts to locate the necessary information. Despite the implementation of e-government portals by several governments to facilitate online service provision, traditional business practises continue to be the norm. The implementation of E-Government or similar initiatives as technical platforms is of utmost importance to Knowledge Management (KM) due to their substantial influence on the delivery of government services. Nevertheless, the mere presence of technological progress is inadequate in achieving effective knowledge management.

The results of this study were taken into account. The following deductions are made:

1. All businesses, especially those in Mauritius's government sector, must determine where their internal knowledge bases are and how to make them available to interested personnel.
2. Companies should have effective internal mechanisms in place for disseminating best practices throughout the company.
3. Companies should clearly acknowledge knowledge as a crucial component of their long-term planning activities.
4. Multidisciplinary cross-functional teams are essential to decision-making and problem-solving within businesses at this time, as they may be quite motivating.
5. All employees should receive sufficient training on the use of laptops for rapid knowledge tasks in the office.
6. To foster a shared culture of knowledge, management's first duty is to provide the time and resources necessary to take part in the teaching and sharing process.

4.6 Management consequences

Based on the study's findings, the following managerial conclusions about the Mauritius Civil Service Organisations might be made:

1. Strong internal procedures should be in place to transfer best practices throughout the business. Knowledge should be explicitly recognised as a major component of strategic planning activities. All firms, especially those in the public sector of Mauritius, must identify sources of expertise within their organisations and determine ways to share that information with affected personnel. At this point, incentives can be very powerful.
2. In business, interdisciplinary, cross-functional teams are essential for decision-making and problem-solving.
3. It is important that all employees obtain adequate training on using computers in the office to share information quickly.

4. Building a culture of knowledge sharing requires management to allocate time and resources towards participating in the learning and sharing process.

4.7. Suggestions

Opponents of the Mauritius Civil Service Organisations have been steadfast for decades. The objective of this research project is to enhance the productivity, efficiency, and success of public service organisations in Mauritius by identifying deficiencies in knowledge management (KM) and developing a strategic framework for knowledge management. When an information management plan is in place, all the essential aspects of KM, including accountability, procedures, technology, and administration, are present and integrated. This ensures the system’s comprehensiveness and facilitates the seamless sharing of data within the organisation. To address the knowledge management gap identified in the Civil Service Organisations of Mauritius, an investigator from the Public Service Company developed a knowledge management framework.

4.8. Research Restriction

The public sector in Mauritius comprises government-owned enterprises, parastatal entities, and civil services. In recent years, the government has been striving to overhaul the public sector to provide exceptional services to its citizens. Nevertheless, this study is restricted to a few 25 ministries. The implementation of the suggested framework may be limited in its effectiveness due to its lack of suitability for various organisational contexts within civil service. The findings of the present investigation, however, may provide valuable insights into the entire service and could be relevant, if not universally applicable, to all enterprises.

5. Conclusions

No specific knowledge management strategy has been developed and effectively used to facilitate discussions on information sharing inside public services. This conclusion is derived from the results obtained through the empirical investigation of hypotheses. The current methods employed by civil services to collect, store, and distribute information have not significantly enhanced internal competitiveness. Furthermore, the departments do not have a well-outlined plan or strategy for enhancing e-government. Moreover, the primary obstacles identified were a dearth of specialised IT education, insufficient study time, and an inability to select suitable IT products. The participants noted a significant association between several success variables, such as the amount of resources allocated to knowledge management methods and the allocation of resources. The participants noted a significant association between several success variables, such as the allocation of resources to knowledge management techniques and the assignment of responsibility for these practices. Therefore, there is clearly a need to develop a comprehensive knowledge management plan. To effectively adopt best practices in government community organisations, it is crucial to prioritise the important factors that contribute to success.

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Ethical considerations

Prior to conducting the survey, ethical considerations such as fairness, plagiarism, accurate representation of information, honesty, confidentiality, support, privacy, respect for respondents' privacy, professionalism, and informing participants about potential study complexities will be taken into account. Throughout the procedure, consent was obtained from the participants, and measures were taken to guarantee their privacy. The participants were informed of the various aspects of the study. Participants were also informed about the need to provide thoughtful and unique responses prior to the administration of the questionnaires. During the course of the study, diligent efforts were made to ensure that participants were contacted in a manner that minimised the risk of causing physical or emotional harm. This was achieved by employing language that was both harmless and polite while avoiding any kind of coercion, discrimination, or unfair treatment. The researcher took measures to ensure that his own thoughts on the subject did not impact either the responses or the final results. The selection of the interview sample population for this study was based on its significance to the research subject matter rather than its accessibility. I confirm that I have obtained all the
consent required by the applicable law to publish any personal details or images of the patients, research subjects, or other individuals used.

**Conflict of interest**

The author declares no conflicts of interest.

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