



Evaluating the effectiveness of the Gauteng Department of e-Government's e-recruitment system in improving service delivery

KP Selwe



orcid.org/0009-0001-0055-253X

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Supervisor: Dr LE Chigova

Co-Supervisor: Prof C Hofisi

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DECLARATION

I, Kagontle Princess Selwe, student no. 30513529, hereby declare that the dissertation titled "Evaluating the effectiveness of the Gauteng Department of e-Government's e-recruitment system in improving service delivery" is my original work submitted in partial fulfilment of the requirements for the Master's in Public Management and Governance degree at North-West University, Vanderbijlpark Campus.

All sources consulted or quoted have been duly indicated and acknowledged by complete references, adhering to the NWU Policy on Plagiarism.

Signature

KP Selwe

DEDICATION

I dedicate this work to my mother, Mrs. Mapule Selwe, whose unwavering support and constant reminders of why I began this journey kept me going. I also dedicate it to my son, Tshimologo Khotso, whose presence continues to inspire me.

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To my supervisors, Dr. Lewis Chigova, and co-supervisor, Prof. Costa Hofisi, thank you for believing in my potential even when I doubted it myself. I am deeply grateful for your guidance, encouragement, and expertise throughout this process. I also extend my heartfelt thanks to my funders, the Sishen Iron Ore Company – Community and Development Trust (SIOC-cdt), for their financial support, which made this journey possible. Lastly, I give thanks to God for the gift of knowledge and the opportunity to pursue this research.

Philippians 4:13: *“I can do all this through him who gives me strength.”*

ABSTRACT

The emergence of electronic government (e-government) is intimately related to the current digital revolution, which began with the Third Industrial Revolution and will continue into the Fourth Industrial Revolution. One of the primary uses of e-government is electronic recruitment (e-recruitment), which aims to enhance public sector employment practices. While past studies have acknowledged the increased acceptance of e-recruitment, a significant gap remains in understanding its influence on service delivery, particularly in the public sector. This study fills that gap by assessing the performance of the Gauteng e-Government's e-recruitment system in terms of service delivery outcomes. This study employed a qualitative desktop research approach and a case study design to evaluate information-rich documents related to Gauteng e-Government recruitment processes. The findings show that the province's e-recruitment system encourages transparency and the professionalisation of public service. The Gauteng Professional Job Centre operates within a robust regulatory and legislative framework, ensuring users' trust, security, and accessibility. Collectively, these qualities improve the efficiency and fairness of the recruitment process. The study indicates that, when implemented within a supportive institutional framework, e-recruitment can significantly improve service delivery by eliminating human intervention, reducing the risk of patronage, and promoting merit-based recruitment. As a result, the recruitment of qualified staff is more closely connected with the department's overall digital transformation goals. In conclusion, the GDeG's e-recruitment initiative represents a promising model of digital transformation in the public sector. However, sustained investment in infrastructure, targeted support for vulnerable populations, and ongoing policy alignment will be essential for maintaining momentum and ensuring that digital tools genuinely enhance service delivery outcomes across the province. The study recommends focused capacity-building measures, such as specialised training programs and the intentional deployment of qualified people in important positions. The study also recommends that all recruitment processes be carried out solely through the e-recruitment platform to ensure consistency, integrity, and efficiency.

Keywords: e-recruitment, service delivery, e-governance, Gauteng Department of e-Government, effectiveness

LIST OF ABBREVIATIONS

| | |
|-------------------|-----------------------------------------------------------------------------|
| AGoPA | Afrocentric Governance of Public Affairs |
| AI | Artificial Intelligence |
| ATS | Application Tracking System |
| AU | African Union |
| AUDA-NEPAD | African Union Development Agency – New Partnership for Africa's Development |
| AUC | African Union Commission |
| BaSSREC | Basic and Social Sciences Research Ethics Committee |
| COGTA | Cooperative Governance and Traditional Affairs (COGTA) |
| CoJ | City of Johannesburg |
| DOI | Diffusion of Innovation |
| DPSA | Department of Public Service and Administration |
| DTPS | Department of Telecommunications and Postal Services. |
| EMS | Emergency Medical Services |
| EU | European Union |
| G2C | Government to Citizens |
| G2G | Government to Government Agencies |
| GDeG | Gauteng Department of e-Government |
| GDoH | Gauteng Department of Health |
| GPS | Global Positioning System |
| GPG | Gauteng Provincial Government |

| | |
|--------------|--------------------------------------------------------|
| GPT | Gauteng Provincial Treasury |
| HR | Human Resources |
| HRA | Human Resource Administration |
| ICT | Information and Communications Technology |
| ITU | International Telecommunication Union |
| NDP | National Development Plan (2030) |
| NWU | North-West University |
| OECD | Organisation for Economic Co-operation and Development |
| PRC | Presidential Review Committee |
| PRIDA | Policy and Regulatory Initiative for Digital Africa |
| PSC | Public Service Commission |
| SDGs | Sustainable Development Goals |
| SITA | State Information Technology Agency |

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CHAPTER ONE ORIENTATION AND BACKGROUND

1.1 Orientation and Background

The emergence of electronic government, also known as e-government, can be demonstrably linked to the ongoing digital revolution (Blom and Uwizeyimana, 2020:208). This technological transformation, with its roots in the mechanisation and automation advancements of the Third Industrial Revolution (early 1950s- early 2000s), has continued its exponential growth throughout the current era of the Fourth Industrial Revolution (early 2000s-present) (Uwizeyimana, 2020:4). This transformation manifests in the surge of e-government services across the globe (Alsultanny, 2018:151). E-government offers compelling advantages, including cost reduction and improved service delivery compared to traditional methods (Carter and Bélanger, 2005:5). Beyond efficiency gains, e-government fosters citizen engagement through online interaction, leading to a more responsive public sector (Dhindsa, Narang and Choudhary, 2013:121).

One key area of e-government implementation is e-recruitment, which aims to streamline the public sector's talent acquisition process. A study by Koman, Toman, Jankal, and Boršoš (2024:1) highlights the potential of technology to transform public sector recruitment. However, a critical gap remains in understanding the role of electronic recruitment (e-recruitment) in enhancing service delivery. Similarly, Namasaka, Koech, and Monari (2020:317) note that although e-recruitment is increasingly accepted, a disconnect persists between its implementation and the delivery of quality services. This study addresses that gap, focusing on the broader public sector, with an extended interest in the South African provincial government context.

The adoption of online recruitment systems embodies the core principles of traditional public administration theorists, often referred to as the fathers of public administration. The prominent theorist Woodrow Wilson, in his seminal 1887 essay, argued for a politics-administration dichotomy, advocating for the separation of politics and administration and calling for a professionalized and merit-based public service free from political interference (Wilson, 1887). Modern e-recruitment platforms put Woodrow Wilson's vision into action by providing transparent and merit-based recruitment methods, which, in turn, reduce political patronage and promote impartial administration. These e-recruitment platforms are also shaped by Max Weber's bureaucratic model. The platforms reflect his principles of rational-

legal authority and meritocracy, which are rooted in unbiased procedures, adherence to rules, and technical competence (Weber, 1978). E-recruitment systems align with Weber's critique of older administrative systems by promoting fair, consistent, and legally compliant hiring processes. Likewise, the principles of scientific management by Frederick Taylor, which emphasize standardization, efficiency, and productivity through time-saving and mechanized processes, are reflected in the automation functions of e-recruitment systems (Taylor, 1911). These platforms ensure operational effectiveness in public sector hiring by enhancing time efficiency.

Existing literature shows international public sector administrations prioritising digital transformation by incorporating information technologies into their operations, resulting in notably improved performance compared to previous years (Rossidis and Belias, 2021:38). For example, Nokele and Mukonza (2021) demonstrates that the presence of a unified and reliable e- government information system offers significant advantages to government agencies and the public. This study examines whether the primary advantage lies not only in the digitisation of interactions between government and citizens (G2C), government and government agencies (G2G) or in the opportunity for government authorities to gather, handle, and analyse large volumes of data resulting from citizens' activities (Nokele and Mukonza, 2021). Considering the above, the imperative to evaluate the effectiveness of the government recruitment system in improving service delivery becomes essential. It becomes essential, as Štaffenová and Kucharčíková (2023:1) highlight, with digitisation and automation taking center stage, it is crucial to explore how modern information systems and information technologies can be implemented, not just in general but specifically in the critical area of public sector human resource management.

Furthermore, literature by Baykal (2020:414) shows that web-based recruitment has emerged as one of the most prominent and innovative recruitment methods of the 21st century. Likewise, the intensifying global competitive landscape, as highlighted by Tong and Sivanand (2005:103), has driven the need for the public sector to become more skill-centric. Consequently, recruiting and attracting the most suitable candidates at the opportune moment has become increasingly crucial and challenging (Tong and Sivanand, 2005:103). As noted by Tong (2009:281), traditional recruitment methods struggle to meet the demands of timely and effective talent acquisition. However, advancements in communication technologies and computer architecture have ushered in a new era (Baykal, 2020:413).

Baykal (2020:413) emphasises the widespread adoption of network structures, facilitated by data transfer and sharing studies, within business applications. These developments in information technology have significantly transformed both business practices and technology itself (Baykal, 2020:412). The impact extends to job applications and Human Resources (HR) recruitment processes, as noted by Baykal (2020), even in the public sector space.

The landscape of recruitment has undergone a significant transformation with the emergence of e-recruitment. This shift, encompassing official government websites and online job aggregators, has fundamentally altered how public organisations seek and connect with potential candidates (Nivetha and Selvam, 2022:3). E-recruitment, as defined by Rodríguez-Sánchez, Montero-Navarro, and Gallego-Losada (2019:2), leverages the power of the internet to facilitate a groundbreaking approach to personnel hiring and selection. The benefits of e-recruitment are undeniable, with its origins tracing back to the early days of bulletin board systems in the 1980s (Okolie and Irabor, 2017:122). However, a critical gap remains in understanding its long-term impact on service delivery, especially within the context of government agencies. The terminology in this field has evolved, with phrases such as "web-based recruiting" and "internet recruiting" becoming common in scholarly discourse (Boşcai, 2017). However, much of the focus has remained on establishing a shared vocabulary rather than exploring deeper implications.

The current literature, though acknowledging the widespread adoption of e-recruitment across organisations of all sizes (Kumar and Kavitha, 2019:251), offers limited insights into how government agencies can leverage this technology to optimise service delivery. According to Okeke-Uzodike, Okeke-Uzodike, Chitakunye and Phiri (2014:83), the public sector commonly serves as the primary workforce provider in various nations, given its pivotal responsibility in executing government policies, goods, and services. Consequently, implementing a well-planned recruitment strategy is imperative to attract highly competent individuals, enhancing organisational effectiveness and leading to better service delivery and overall government success (Okeke-Uzodike *et al.*, 2014:93). Likewise, African nations have embraced online elements, thereby reducing government expenditure on services and replacing their largely inefficient paper-based record-keeping systems by employing e-government technology (African Union Development Agency – New Partnership for Africa's Development (AUDA-NEPAD), 2022). This shift toward e-government systems is not only

cost-effective and environmentally sustainable in the long run but also leads to improved efficiency and transparency in the delivery of government services due to enhanced communication frameworks (AUDA-NEPAD, 2022).

E-recruitment holds a vital position and is closely linked to the advancement of smart government initiatives, serving as a foundational element in the modernisation of public sector institutions (Koman *et al.*, 2024:1). Additionally, government agencies can gain a competitive edge in attracting qualified talent, a key ingredient for efficient service delivery by leveraging technology (Hashiyana, Ujakpa, Suresh, Mukaya and Mukupi, 2021:2). These innovative systems hold the promise of faster, more accurate, and transparent processes, placing the right people in the right public service roles (Alsultanny, 2018:152). The evolving landscape of intelligent public administration necessitates a shift in recruitment strategies (Koman *et al.*, 2024:8). As Koman *et al.* (2024:8) highlight, governments require professionals with specialised skills in areas like data management and cybersecurity. This trend also suggests a rise in "hybrid" job profiles that combine technological expertise with strong analytical and interpersonal skills (Koman *et al.*, 2024:8). Although studies emphasise the potential benefits of e-recruitment for attracting talent and streamlining processes (Koman *et al.*, 2024:8, Hashiyana *et al.*, 2021:2, Alsultanny, 2018:152), a comprehensive understanding of how e-recruitment translates into improved service delivery is lacking.

South Africa's journey towards the digitisation of government's processes began with the pivotal 1998 Presidential Review Committee (PRC) report (Department of Public Service and Administration (DPSA), 2001:1). This report established the foundation for significant advancements, including the creation of the State Information Technology Agency (SITA) in 1999 (Isaacs, 2007:7). SITA's role in building and maintaining the government's IT infrastructure is crucial, fostering collaboration among departments and citizen participation in government services (Isaacs, 2007:7; Blom and Uwizeyimana, 2020:209). E-services offer numerous benefits, including security, reliability, and cost-effectiveness for delivering services to citizens and businesses (El-Haddadeh, Weerakkody and Al-Shafi, 2013:135). South Africa actively implements e-services to address challenges faced by the government and its citizens (Blom and Uwizeyimana, 2020). For example, the South African Revenue Service's (SARS) e-filing system exemplifies a highly successful e-government initiative, allowing online tax registration and filing (Jankeeparsad, Jankeeparsad and Nienaber, 2016:121). The City of Johannesburg (CoJ) has adopted a mobile app to address road

defects (Joseph and Williams, 2022:71). Launched in October 2021, the Pothole Patrol App allows users to report potholes by pinpointing their location with Global Positioning System (GPS) and attaching a photo (Joseph and Williams, 2022:71). Similarly, the Department of Home Affairs' eHomeAffairs website enables citizens to schedule appointments online for document collection, reducing wait times (Department of Home Affairs, n.d.).

Furthermore, the three tiers of government (National, Provincial, and Local) in South Africa have actively embraced e-government, exemplified by establishing the Gauteng Department of e-Government (GDeG) within the Gauteng Provincial Government (GPG). The GDeG was formally established on 11 August 2015 with the aim of fostering a more connected and accessible government (GDeG, 2020:7). Its mission is to streamline and simplify governmental operations while serving as a driver for sustainable economic development through the implementation of efficient, effective, and customer-focused processes throughout the public sector (GDeG, 2020:7). The GDeG's Human Resource Administration (HRA) unit plays a central role in the implementation and management of digital Human Resource (HR) services across provincial departments (GDeG, 2021:47). Notably, the unit is responsible for the full roll-out of the e-recruitment system to all Gauteng Provincial Government (GPG) departments such as the Gauteng Department of Economic Development, Department of Health, Department of Education etc. The e-recruitment roll-out forms a key component of this digital transformation, underscoring the province's commitment to modernising recruitment processes and enhancing them through digital solutions (GDeG, 2021:47).

Although numerous examples showcase the potential of e-government initiatives (Namasaka, Koech, and Monari, 2020:317), there is a discernible dearth of comprehensive research specifically dedicated to evaluating the efficacy of e-recruitment in the context of public service delivery in South Africa, particularly the GPG. This research aims to bridge this gap by examining the specific case of the GDeG's e-recruitment system, known as the GPG Professional Job Centre.

1.2 Problem Statement

The GPG Professional Job Centre is part of the GDeG's strategy to digitise its services and enhance service delivery by making digital services more accessible and by recruiting more competent and efficient workers through the e-recruitment platform (GDeG, 2020). This study

utilises Rogers' Diffusion of Innovation (DoI) theory, which frames the e-recruitment platform as a new and valuable innovation adopted by the provincial government. The DoI theory provides a framework for understanding how and why innovations such as e-recruitment platforms spread across public institutions (Vargo, Akaka, and Wieland, 2020). The platform reflects the key characteristics of the theory, offering noticeable benefits over traditional hiring practices. These include faster recruitment and hiring times, as well as broader accessibility to candidates from diverse backgrounds and geographical locations (Baykal, 2020; South African Government, 2018). Furthermore, the e-recruitment platform aligns with the South African government's constitutional goal of building a fair and responsive public service (Republic of South Africa, 1996). The platform also improves accessibility and transparency in public sector hiring while reducing costs associated with recruitment when compared to traditional methods (Rossidis and Belias, 2021:38; Carter and Bélanger, 2005:5; Dhindsa *et al.*, 2013:121). These advantages contribute to the platform's growing adoption.

While the benefits of the system have been clearly outlined, several challenges persist. These include algorithmic bias, lack of technological infrastructure, digital access inequality, and cybersecurity risks (Lal Das, 2023; Latupeirissa, Dewi, Prayana, Srikandi, Ramadiansyah and Pramana, 2024:1; Ursillo and Arnold, 2023). Such challenges may hinder the effectiveness of the platform in improving service delivery, particularly in ensuring that all citizens can access the system without barriers. Obstacles such as a lack of internet connectivity, digital illiteracy, algorithmic manipulation that excludes deserving candidates, and public mistrust in uploading personal information all threaten the platform's inclusivity and impact. Although existing studies discuss the general benefits and challenges of e-recruitment systems, there is limited research on how these platforms affect service delivery at the provincial level, specifically in the Gauteng province (Namasaka, Koech, and Monari, 2020:317). This study addresses that gap by focusing on the GDeG's e-recruitment platform. It explores literature on how the system aligns with the province's goal of professionalising the civil service and competent workforce and improving public service delivery outcomes.

1.3 Research Questions and Aims

Research Questions

The primary and secondary research questions for this study are:

Primary Research Question

- How effective is the GDeG's e-recruitment system in improving service delivery?

Secondary Research Questions

- What are the frameworks (policy and legal) supporting the GDeG's e-recruitment role in improving service delivery?
- What are the key challenges faced by the GDeG in improving service delivery through the e-recruitment system?
- What strategies can the GDeG implement to improve service delivery through the e-recruitment system?

Research Aims

The primary and secondary research aims for this study are:

Primary Research Aim

- To evaluate the effectiveness of the GDeG's e-recruitment system in enhancing service delivery.

Secondary Research Aims

- To examine the existing policy and legal frameworks supporting the GDeG role in e-recruitment in improving service delivery.
- To identify the key challenges faced by the GDeG in implementing the e-recruitment system to enhance service delivery.
- To propose strategic recommendations for the GDeG to optimise the e-recruitment system's effectiveness in improving service delivery.

1.4 Central Theoretical Statement

The GDeG's e-recruitment system aims to enhance the efficacy of service delivery. This pursuit is demonstrably influenced by a confluence of factors, including cost-effectiveness,

perceived user utility, and the inherent characteristics of the implemented innovation itself (Lee, 2021).

1.5 Significance of the Study

The literature reviewed in this study underscores the growing relevance of e-recruitment as a tool for modernising public sector recruitment (Alsultanny, 2018:152; South African Government, 2018; Koman *et al.*, 2024:1). Although existing research highlights the potential benefits of e-recruitment, such as increased efficiency and wider access to job opportunities, there remains a noticeable gap in empirical studies that directly link e-recruitment practices to improved service delivery outcomes within the public sector (Namasaka, Koech, and Monari, 2020:317). This study aims to address this gap by investigating the effectiveness of e-recruitment systems, particularly within the context of the GPG, and assessing their impact on improving public service delivery.

According to the Public Service Commission (PSC) (2022:31), ethical recruitment and selection practices are essential for attracting candidates who demonstrate the required skills, knowledge, competencies, and ethical values. These attributes are critical for strengthening institutional performance and ensuring the long-term sustainability of the public sector. In this regard, the implementation of e-recruitment platforms has the potential to professionalise recruitment processes, limit unethical practices, and support the appointment of a capable and fit-for-purpose workforce. Therefore, this study is significant in its evaluation of whether such platforms can serve as a strategic lever for improving both recruitment quality and service delivery in the public sector.

The findings of this study will be disseminated through both academic and practical channels. Academically, the research will contribute to postgraduate studies at master's and doctoral levels and will be shared through seminars and conferences focused on digital innovation in the public sector. These forums will facilitate scholarly engagement, critical feedback, and knowledge exchange. The results will also be submitted for publication in peer-reviewed journals to ensure accessibility to scholars, government departments, human resource practitioners, and policymakers.

1.6 Chapter Layout

This section outlines the study's chapter layout.

CHAPTER ONE: ORIENTATION AND BACKGROUND

This chapter begins by providing an overview and background of the study. First, it explores the emergence of e-recruitment systems as an innovative concept. Subsequently, the author delves into the adoption of these systems by government organisations. The chapter then presents the problem statement, research questions, objectives, and the central theoretical framework guiding this study. It also addresses the significance of the research. Finally, the chapter concludes by discussing the ethical considerations taken into account.

CHAPTER TWO: LITERATURE REVIEW

This chapter begins with a brief introduction to the chapter's structure. The author then defines key concepts related to this study. Subsequently, the theoretical framework guiding the research is outlined. Finally, the chapter concludes by exploring existing literature on the effectiveness of e-recruitment systems in enhancing service delivery.

CHAPTER THREE: RESEARCH METHODOLOGY

This chapter outlines the research methodology used in this study. It clearly delineates the qualitative nature of the research, the research design, the data collection methods, and the data analysis techniques employed.

CHAPTER FOUR: PRESENTATION, DISCUSSION AND ANALYSIS OF RESEARCH FINDINGS

This chapter presents the study's findings, discusses them in detail, and analyses them in comparison to the existing literature presented in Chapter 2.

CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS

This is the final chapter. The author concludes the study, provides recommendations based on the study's findings, and suggests avenues for further research.

1.7 Conclusion

This chapter laid the groundwork for the study by introducing e-government, its importance, and the rise of e-recruitment, highlighting its potential advantages. It also outlined the research problem, gaps, questions, and objectives. Furthermore, the theoretical statement and significance of the study were discussed. The next chapter will review existing literature on e- recruitment platforms in the public sector.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The preceding chapter provided the context, background, research problem, objectives, and significance of this study, concluding with an overview of the chapter layout. This current chapter defines e-recruitment and reviews existing literature on the effectiveness of e-recruitment systems in enhancing service delivery in greater detail. It explores the use of e-recruitment systems as a strategic intervention to mitigate political patronage. Additionally, the study presents case studies of Nigeria and Namibia, countries that have taken the initiative to digitise their recruitment processes to promote transparency. The chapter also reviews the benefits of e-recruitment systems for e-governments, highlighting their speed, efficiency, ability to attract a broader pool of candidates, and cost-effectiveness. Furthermore, it examines the existing policy and legal frameworks that support e-government's role in e-recruitment for improved service delivery. The chapter also identifies key challenges faced by e-governments in implementing these systems. Moreover, it reviews proposed strategic recommendations to optimise the effectiveness of e-recruitment systems in enhancing service delivery. Lastly, the chapter presents the Diffusion of Innovation Theory, which serves as the theoretical framework guiding this study.

2.2 Defining e-Recruitment

The advent of e-recruitment in the 1980s marked a significant milestone in the recruitment landscape (Okolie and Irabor, 2017:119). Since then, it has emerged as a highly effective method for identifying and attracting top talent to fill vacant positions within organizations (Okolie and Irabor, 2017:119). The 21st century has seen a shift towards online recruitment, offering a more unified and ongoing approach to managing the hiring process (Armstrong, 2001). This is a significant improvement over the isolated and sometimes insufficient traditional methods, which involved numerous paper resumes and led to increased administrative costs (Armstrong, 2001). In recent years, e-recruitment has seen significant growth due to the increasing demand for cost-effective, efficient, and scalable recruitment processes (Kumar, Ranjan, Kumari and Shuja, 2023). E-recruitment encompasses a broad spectrum of online tools and methods utilized for attracting and selecting qualified candidates (Daniel, 2019:196). This technology extends beyond simple online application portals, encompassing sophisticated back-end systems that manage the entire recruitment process

(Daniel, 2019:196). The rise of e-recruitment can be attributed, in part, to the limitations inherent in traditional paper-based methods (Omolawal, 2015). E-recruitment streamlines the recruitment process and facilitates broader candidate outreach, making it a powerful tool for organisations aiming to attract top talent (qizi Gulomkodiroma, 2024:32).

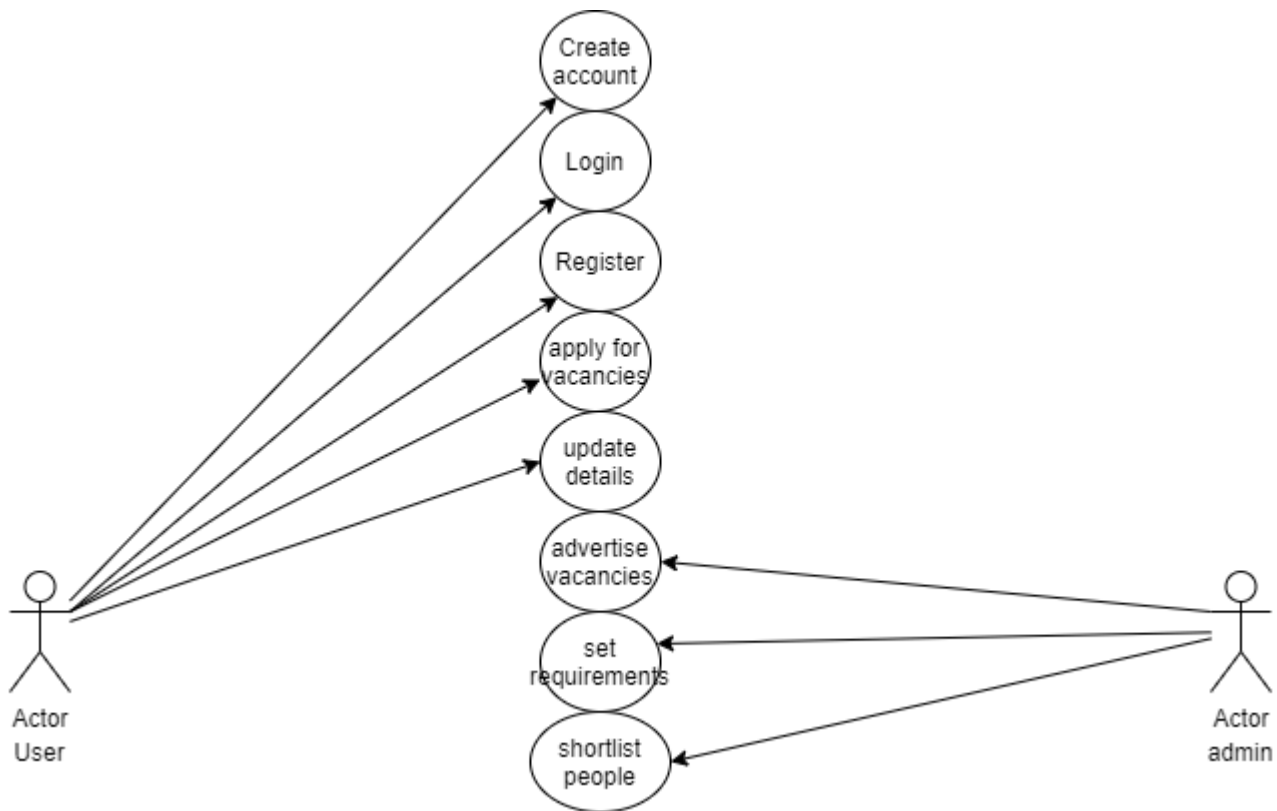
Daniel (2019:195) emphasizes the critical role of effective Human Resource Management practices in organizational success. Even the most advanced technology and infrastructure cannot compensate for a lack of skilled personnel. This principle holds for the public sector as well. The quality of a government workforce directly impacts its ability to achieve its objectives of increased productivity, efficiency, and service delivery (Daniel, 2019:196). E-recruitment empowers governments to attract and recruit qualified individuals, ultimately contributing to a more competent and effective public service sector (Daniel, 2019:196).

The COVID-19 pandemic catalyzed a paradigm shift in public sector HR processes and policies (Public Service Commission, 2024: vii). Government departments were forced to rapidly embrace digitization, particularly within recruitment practices (Public Service Commission, 2024: vii). This emphasis on digital transformation extends beyond the immediate crisis, necessitating a continued focus on innovation and leveraging Fourth Industrial Revolution (4IR) technologies to optimize overall organizational operations (Public Service Commission, 2024: vii).

The use of e-recruitment in public service recruitment is a relatively recent development, with its emergence in Nigeria occurring around 2005 (Omolawal, 2015:4). However, implementation strategies vary across countries. While some organizations utilize their websites for direct candidate recruitment, others, like those in Nigeria, partner with private consultants who manage e-recruitment processes (Omolawal, 2015:4). The latter approach, particularly the use of scratch cards for applications, has been criticized for potentially exploiting job seekers. The digitalization of government services offers numerous advantages, including streamlined communication, improved public access to information, and more cost-effective service delivery (Naidoo and Kuye, 2003:1). E-recruitment aligns with these broader goals by facilitating efficient and transparent recruitment processes. Furthermore, the rise of remote work practices necessitates a shift towards strategic e-recruitment that focuses on attracting, assessing, and onboarding talent with the specific skillsets required for effective public service delivery.

The landscape of government HR is further transformed by advancements in artificial intelligence, big data, and internet technologies (França, São Mamede, Barroso and Dos Santos, 2023). These tools pave the way for "intelligent talent management" a strategic approach that facilitates the recruitment and hiring of the most qualified individuals for government positions (França *et al.*, 2023).

Figure 1: System Flow Chart (Hashiyana, Ujakpa, Suresh, Mukaya and Mukupi, 2021)



2.3 Conceptualizing Service Delivery

Service delivery is defined as the systematic provision of products, goods, or services by state organizations to the people in the country, and it is steered by ethical values of efficiency, productivity, and equality (Brynard, 2020). Within the context of e-recruitment, research views service delivery as the provision of services through a process of digital application within the public sector to hire new staff and advertise job posts. When processing applications and choosing candidates, technological responsiveness, user-centric design, and transparency are prioritized (OECD, 2022). In contrast to classical public administration, where operations within an organisation were bureaucratic, paper-based e-recruitment offers services through a process of automation using data analytics and Artificial Intelligence (AI)

tools to improve efficiency and reduce rigidity, thus enhancing customer satisfaction (National Treasury of South Africa, 2023; Cloete *et al.*, 2021). However, within the field of Public Administration more broadly, the concepts of service delivery extend beyond digital systems as it also encompasses human resource management and includes organisations mechanisms such as the education sector, healthcare, and social welfare upon which issues of irregular expenditures, corruption as well as legacy system at times hinder the process of effectiveness (Cloete, 2021). While e-recruitment places much emphasis on leveraging certain administrative functions using modern state-of-the-art technologies, the provision of public administration services necessitates striking a balance between more general socio-political concerns, such as redress, equity, and constitutional responsibilities (South African Department of Public Service and Administration, 2022).

2.4 The effectiveness of e-recruitment systems in enhancing service delivery

This subsection reviews, in more detail, the factors that make e-recruitment systems effective and enhance service delivery.

2.4.1 Reducing the Influence of Patronage

Cameron (2010:678) describes politicization as manipulating government operations through biased recruitment systems, where family members and loyal allies are given jobs in exchange for their support. Cameron (2010:678) further explains that these recruitment practices prioritize political connections over merit, allowing individuals with access to influential networks to gain an advantage. The long-standing argument on the relationship between politics and public administration may be traced back to Woodrow Wilson's fundamental work, "The Study of Administration" (1887), in which he established a clear distinction between politics and administration. Wilson (1887) stated that politics should be concerned with policy development, whereas administration should be concerned only with the impartial and effective implementation of those ideas. His concept emphasised a professional, merit-based civil service free of political influence, assuring effective and ethical governance.

However, in practice, the distinction is frequently muddled. Cameron (2010:678) claims that politicisation undermines this goal by corrupting public-sector recruitment procedures. Rather than being based on merit and professional qualifications, politicisation prioritises loyalty and

personal ties, resulting in the recruitment of family members and political friends to public sector jobs. This behaviour undermines not only institutional integrity but also the administrative neutrality that Wilson advocated for. Thus, while Wilson's dichotomy continues to be a guiding principle in public administration theory, its application is complicated by real-world governance issues.

Further research by Masuku and Jill (2019:1) identified the politicization of administrative elements in local municipalities as a key driver of poor service delivery, as incompetent individuals are assigned to positions they do not qualify for, undermining the effectiveness of local governance. Their study revealed that the political interference in local municipalities significantly impacts effective administration and growth opportunities (Masuku and Jill, 2019). Contemporary, the advancement or effectiveness of the constitutional state is determined by the level of fulfilling the needs of the citizens. Particularly in the local sphere, i.e. municipal, this behaviour has a way of dampening this objective, based on issues of favouritism, kinships ties and nepotism.

2.4.1.1 E-Recruitment as a Strategic Innovation to Counter Patronage

The public sector's overall mission can be compromised if effective recruitment and selection practices are not implemented (Daniel, 2019:196). Consequently, management must develop and deploy strategic hiring initiatives that attract and secure top talent, ultimately driving the achievement of constitutional mandates and organizational objectives (Daniel, 2019:196). Therefore, the adoption of an e-recruitment system has the potential to serve as a strategic intervention aimed at correcting the issues caused by corruption by eliminating biases and ensuring a more equitable and merit-based selection process, thereby reducing the influence of patronage.

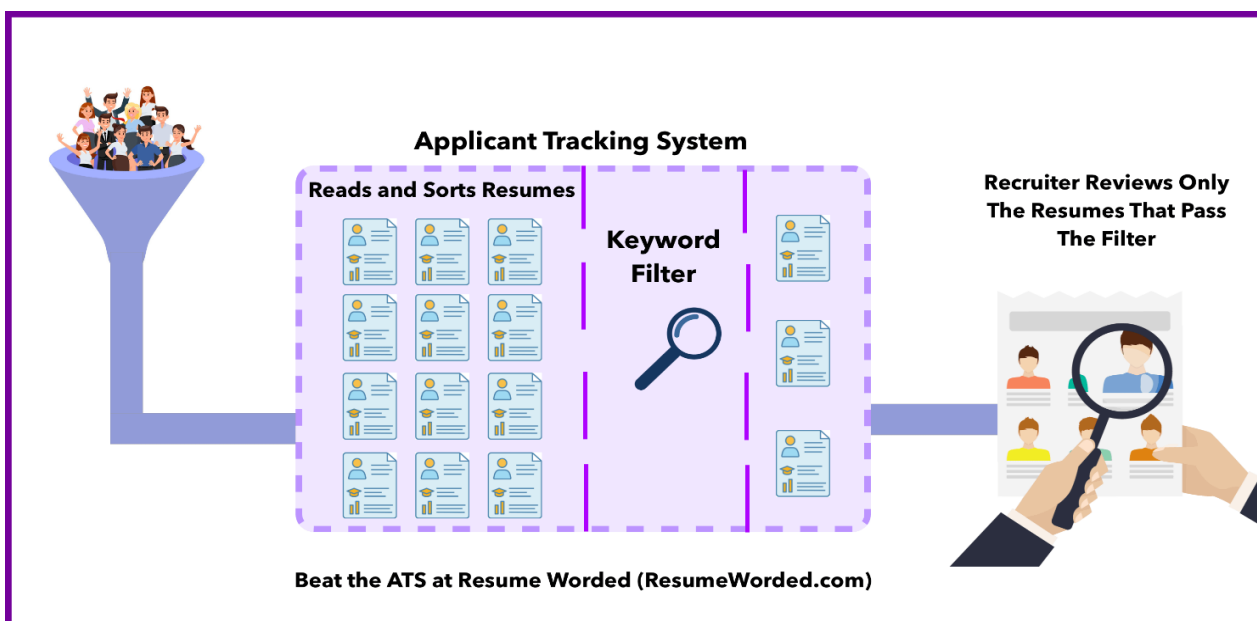
The implementation of e-recruitment systems helps to separate politics from public administration, resulting in a more impartial, efficient, and equitable distribution of services to citizens (Madumo, 2016:82). Additionally, e-recruitment enables public sector human resources to tap into a broader talent pool, identifying and selecting top candidates with exceptional knowledge and skills (Daniel, 2019:198). This digital approach also allows government departments to enhance their brand reputation, increase transparency, and minimize the impact of favouritism and patronage in the hiring process (Daniel, 2019:198). Ultimately, reducing human interaction in hiring processes can help mitigate bias and other

forms of corruption.

2.4.1.2 Application Tracking System

According to Peicheva (2022:7), e-recruitment systems utilize software systems that facilitate the hiring process, such as the Application Tracking System (ATS). The ATS leverages automated intelligence to identify top talent, streamlining the hiring process for vacant positions as illustrated in Figure 1 (Peicheva, 2022:7).

Figure 2: Application Tracking System (Anon, n.d)



Enescu (2020) states that ATS is programmed to screen and eliminate resumes that don't meet the job's specifications or are deemed unsuitable, allowing only qualified candidates to pass through. ATS promotes fairness by standardising the recruiting process (Aznan, 2024). Each candidate follows the same steps methodically from application submission to the final decision. This consistency ensures that all applications are evaluated according to the same criteria, reducing the likelihood of bias or irrational judgment (Aznan, 2024). Research by Peicheva (2022:7) and Rodriguez (2025) indicates that the adoption of ATS has increased over the years, streamlining the hiring process and gaining widespread acceptance among organizations. Therefore, governments recognize that the caliber of their personnel plays a crucial role in achieving enhanced productivity, efficiency, and effectiveness (Daniel, 2019:196). Consequently, they utilize e-recruitment, which utilizes software systems such as the ATS to attract and hire top talent who are qualified, motivated, and equipped to excel,

thereby driving high-performance standards (Daniel, 2019:196).

2.4.1.3 Case Studies

The following case studies are of countries that experience poor service delivery due to political appointments and have migrated to online recruitment, namely Nigeria and Namibia.

2.4.1.3.1 Case Study 1: Nigeria

The use of online recruitment platforms in Nigeria's public institutions, such as the Nigerian Army, Nigerian Police Force, Nigerian Navy, and Nigerian National Petroleum Corporation, among others (Malekano, 2021:197), reflects a strategic measure taken to mitigate corruption in public sector hiring by minimizing human interference and prioritizing merit-based recruitment. This digital transformation in public sector hiring processes addresses long-standing issues of nepotism, political patronage, and incompetence due to the deployment of unqualified individuals, which have negatively impacted the efficiency of government operations and, in turn, affected service delivery outcomes for citizens in Nigeria (Majekodunmi, 2012; Abegunde, 2019). Nigeria's evolution from traditional methods of recruitment to modern e-recruitment systems does not necessarily eliminate the deep-rooted institutional flaws highlighted by Malekano (2021:197); rather, it represents a step in the right direction toward a more civilised, ethical, and efficient public service. The shift to online recruitment in Nigeria promotes a more professional and fairer public sector, as the softwares, such as the ATS, used by e-recruitment platforms filters candidates based on merit and competence. Therefore, the adoption of online recruitment in Nigeria serves as a foundation for effective governance.

2.4.1.3.2 Case Study 2: Namibia

A study by Kalonda and Govender (2021:1) highlighted that, in recent years, municipalities in Namibia have faced intense criticism for failing to provide adequate services to their communities (Kalonda and Govender, 2021:1). Therefore, the Public Service Commission has called on all public institutions in the Namibia to adopt e-recruitment systems and embrace the Fourth Industrial Revolution to enhance transparency, efficiency, and fairness in public sector hiring (Terblanché, 2024).

2.4.2 Increased Efficiency and Speed

Information and Communication Technology (ICT) is crucial in facilitating the rapid exchange of information and knowledge between governments and citizens, ultimately revolutionizing the way they interact, making it more effective, efficient, and direct (Mohele and De Beer, 2007:66). Online recruitment streamlines the hiring process, offering faster candidate evaluation and lower recruitment expenses (Hashiyana, Ujakpa, Suresh, Mukaya and Mukupi, 2021:1). Public sector HR departments leverage online platforms such as LinkedIn, Careers24, Pnet etc., to post job openings within a short timeframe, often mere minutes, compared to traditional methods like newspaper advertisements with limited space and delayed publication schedules (qizi Gulomkodiroya, 2024:32, Maree, Kmail and Belkhatir, 2019:715). This expeditious approach allows for the immediate receipt of applications, fostering a continuous talent pool throughout the recruitment period (qizi Gulomkodiroya, 2024).

However, Brandão, Silva, and Vieira dos Santos (2019:2) argue that while e-recruitment is a rapid process, organizations with large databases and limited technological capabilities may face risks of resource loss. Additionally, current systems struggle to capture the deeper semantic meaning embedded within resumes (Maree *et al.*, 2019:713). This is attributed to the reliance on generic, domain-independent resources that lack the necessary knowledge and coverage for specific fields (Maree *et al.*, 2019:713). Nevertheless, e-recruitment streamlines applicant management, reducing the burden on HR staff (White, 2008; Marr, 2007). Modern career websites eliminate the need for manual sorting of resumes, saving both time and effort (White, 2008; Marr, 2007). Furthermore, these platforms allow HR departments to easily track candidate information, facilitating efficient communication and progress monitoring (Dokey and Abunar, 2021:145). This translates to a more manageable workload for HR personnel, allowing them to focus on strategic talent acquisition efforts (Daniel, 2019:195).

The public sector's antiquated hiring processes, stringent security clearances, and outdated technologies can significantly delay recruitment, often taking up to six months to fill a position (Christoforidis, 2023). The multi-layered approval process, excessive paperwork, and rigid regulations further hinder the process and deter potential candidates. Top talent is unlikely to wait for extended periods, and younger generations, accustomed to efficient, tech-driven

hiring practices, may opt for the private sector when the public sector fails to meet their expectations (Christoforidis, 2023). Therefore, it is imperative to streamline and simplify hiring procedures to address this challenge.

Robust recruitment and selection processes are fundamental to improving service delivery and stimulating economic growth (Konateh *et al.*, 2023: 21). The effectiveness of public services is contingent upon the abilities and dedication of their employees, making effective human resource management, including the implementation of a robust e-recruitment system, essential (Konateh *et al.*, 2023:24). Furthermore, implementing applicant tracking systems (ATS) can enhance efficiency in managing applications, while data analytics can be utilized to analyze recruitment trends, pinpoint bottlenecks, and optimize the overall process (Christoforidis, 2023).

2.4.3 Attracting a Wider Talent Pool

According to Konateh *et al.*, (2023:24), the public sector is often seen as a fair and inclusive employer, treating all citizens equally, regardless of race, ethnicity, or gender. Konateh *et al.*, (2023:24) further argue that a diverse workforce can significantly contribute to achieving development goals by improving efficiency and effectiveness.

Figure 3: Benefits of e-government

Benefits of e-recruitment

3. Broader search, deeper pool- E-recruitment approaches to wide community and search according to geographical area , needs , age , skills and other job requirements.



According to Konateh *et al.*, (2023:24), the public sector is often seen as a fair and inclusive

employer, treating all citizens equally, regardless of race, ethnicity, or gender. Moreover, Konateh *et al.*, (2023:24) argue that a diverse workforce can significantly contribute to achieving development goals by improving efficiency and effectiveness. In this context, e-recruitment serves as a solution as it enables these organizations to reach a larger pool of candidates across wider geographic areas (Radha, 2020:12), thereby increasing the chances of finding the best-suited individuals for the role. Utilizing technology simplifies the recruitment process and facilitates the identification of a diverse range of applicants from various recruitment sources (Radha, 2020:12). Public sector organizations, which often have numerous vacancies, are better equipped to handle a large pool of applicants (Parry and Tyson, 2008).

Unlike traditional approaches, which can be limited by factors such as career level, geographic location, or industry specialization (qizi Gulomkodiroya, 2024:32), online recruitment platforms offer a distinct advantage. E-recruitment platforms boast extensive and active databases of talent encompassing diverse career stages, industries, and geographic regions (qizi Gulomkodiroya, 2024:32). Moreover, these platforms often invest heavily in strategic marketing efforts to ensure their databases are up-to-date, high-quality, and inclusive of a wide range of qualified individuals (qizi Gulomkodiroya, 2024:32).

Furthermore, embracing digital platforms and leveraging diverse recruitment channels, such as online job boards, social media, government portals, and professional networking sites, can help government departments reach a wider pool of candidates (Christoforidis, 2023). This aligns with the broader goals of public service recruitment, as highlighted by Malhotra and Sharma (2015) and Aljadir *et al.* (2022), which is to hire the right people for the right jobs to ensure effective public service delivery. The public sector can not only increase its chances of finding the ideal candidate for a vacant position but also promote a more diverse and representative workforce through the use of online recruitment tools. (Malhotra and Sharma, 2015; Aljadir *et al.*, 2022). A diverse workforce is crucial for achieving development goals as it enhances efficiency and effectiveness (Konateh *et al.*, 2023:27).

Although e-recruitment attracts a large volume of applicants, Agomu and Lifsa (2024:96) argue that many of these applications are unqualified due to mass submissions. E-Recruitment systems, while valuable for record-keeping, are not effective in filtering these unqualified candidates (Agomu and Lifsa, 2024:96). To support this, Kumar *et al.*, (2023)

state that inefficient e-recruitment systems can result in many unqualified applications, extended hiring timelines, and negative candidate experiences. Therefore, it is crucial to optimize e-recruitment system design to align with organizational recruitment goals and enhance the overall candidate experience (Mukherjee, Bhattacharyya and Bera, 2014).

However, Oyeyipo, Ojelabi and Amusan (2018:2887) argue that a robust recruitment and selection system can identify individuals with the necessary skills, qualifications, and competence to carry out public service duties effectively. Afolabi, Oyeyipo, Ojelabi and Amusan (2018:2887) further emphasize that e-recruitment systems facilitate the extraction of relevant information from eligible candidates, generate accurate results, and empower HR to select or reject candidates based on specific criteria. Additionally, e-recruitment systems can automatically disqualify unsuitable candidates and provide timely feedback to those who are not selected (Jayabalan, Zafir, Jenny, Nor and Muhammad, 2019:1881). This automation contributes to significant time and resource savings.

2.4.4 Cost Savings

Every government must have an efficient hiring process because choosing the wrong person can be time-consuming and expensive. Nowadays, the government also employs digitalisation and sophisticated tools in their hiring process to make it more efficient and cost-effective because the traditional methods of hiring no longer work. Research has demonstrated that digital transformation can yield substantial benefits, including reduced costs, enhanced public services, and increased citizen participation, as noted by Henriette, Feki, and Boughzala (2016:3). Traditionally, recruitment involves in-person interactions between recruiters and candidates (Alzhrani, 2020:330). However, the increasing emphasis on cost-effectiveness and technological advancements has led to the emergence of new strategic recruitment approaches (Alzhrani, 2020:330). This approach is significantly more cost-effective than traditional application processes, which often involve considerable expenses related to transportation, printing, and postal services. Consequently, in today's digital age, individuals increasingly prefer online applications over traditional methods due to their cost-effectiveness, time efficiency, and ability to access a wider range of job opportunities (Seemiller and Grace, 2017).

A review of prior research by Barber (2006) and Othman and Musa (2006) demonstrates that e-recruitment offers significant cost savings in several areas, including reduced advertising

expenses, lowered administrative costs, and the elimination of job fair fees. Furthermore, it can improve HR efficiency by streamlining the recruitment process. Sabha (2018) and qizi Gulomkodiroya (2024) further elaborate on the benefits of online recruitment, highlighting cost reduction, enhanced communication, expanded candidate reach, a larger talent pool, improved process standardization and compliance, accelerated hiring timelines, and increasing popularity, particularly among younger job seekers. Additionally, e-recruitment promotes sustainability by reducing paper consumption (Sabha, 2018).

According to qizi Gulomkodiroya (2024:32), e-recruitment can significantly reduce costs, with job postings and candidate searches on online portals costing up to 90% less than traditional methods like recruitment agencies and print advertising (qizi Gulomkodiroya, 2024:32). This can lead to investments in areas that directly impact service delivery for citizens. For instance, cost savings can be used to improve training programs for public service personnel, leading to a more skilled and competent workforce. This, in turn, will enable employees to contribute more effectively to organizational performance, achieve goals, and manage resources efficiently (Buhari, Akyuz, and Opusunju, 2021:41).

E-recruitment automates the storage of job opening data for recruitment management, eliminating the need for physical copies of job advertisements and reducing associated costs (Afolabi *et al.*, 2018). However, Jayabalan *et al.*, (2019:1881) argue that the implementation of e-recruitment systems may present certain challenges in human resources management. One significant challenge is the rapid technological advancements, particularly in artificial intelligence, which necessitate substantial initial investments, ongoing maintenance costs, and regular updates across various industries (Jayabalan *et al.*, 2019:1881). This is particularly true for IT companies, which often have more limited financial resources and investment capabilities compared to larger corporations (Piabuo, Piendiah, Njamnshi and Tieguhong, 2017:3).

2.5 Existing Policies and Legal Frameworks Supporting e-Government's e-Recruitment Role in Improving Service Delivery

South Africa has established several profound legislative and policy frameworks to assist and accelerate the process of digital transformation within the public sector domain. These important strategies offer the foundation for evaluating digital initiatives such as e-recruitment systems in the public sector. These laws or acts together place important emphasis on

matters of service delivery and organizational efficiency, and transparency.

2.5.1 The Digital Transformation Strategy for Africa (2020-2030)

The African Union Commission (AUC) formulated the Digital Transformation Strategy for Africa 2020-2030, which was subsequently approved by the African Union Executive Council in February 2020 (African Union (AU), 2024: 6). This strategy aims to create an inclusive digital society and economy that aligns with both Agenda 2063 and the Sustainable Development Goals (SDGs) (Broadband Commission, 2023). South Africa forms part of the AU and should be leading this transformation, however, progress is hindered by challenges such as inadequate digital infrastructure, limited connectivity, and insufficient digital literacy (Broadband Commission, 2023). Despite these obstacles, South Africa, like other African countries, has the opportunity to skip outdated systems and speed digital development by adopting contemporary and scalable technologies (TechAfrica News, 2024). The country's comparatively low reliance on outmoded infrastructure may, paradoxically, provide an advantage by allowing for the rapid installation of new, digitised solutions (TechAfrica News, 2024).

Recognising the continent's potential for digital transformation, the African Union (AU) continues to provide strategic leadership and coordination to member nations, including South Africa, to capitalise on the Fourth Industrial Revolution's chances (TechAfrica News, 2024). However, the AU (2020a:7) emphasises that successful digital transformation requires strong legislative frameworks and a supportive regulatory environment. South Africa should implement focused changes in vital sectors such as education, healthcare, telecommunications, and public administration. Furthermore, South African regulators and policymakers must traverse an ever-changing digital ecosystem through collaborative and adaptive ICT regulation (AU, 2020a:7). Given the disruptive nature of emerging technologies, South Africa have implemented forward-thinking, innovation-friendly regulatory strategies that facilitates digital transformation while maintaining inclusivity, accessibility, and sustainability (AU, 2020a:7). These strategies are discussed briefly below:

National e-government strategy and roadmap (2017)

The National e-government strategy and roadmap (2017) was established by the Department of Public Service and Administration (DPSA), as well as the National e-Government Strategy

and Roadmap (2017) to function as a bedrock for guiding the aspect of digital transformation within the South African public sector. This strategy was established with the purpose of including people in digitalized public service to foster productivity, effectiveness, and promote transparency in the public sector (DPSA, 2017). The significant aspect of this strategy is to automate human resource processes such as the process of recruitment and selection, to eradicate rigidity and enhance accountability. e-Recruitment systems in the South African public sector align with the mandate outlined in this strategy by making the processes of selection simple and reducing response times to applicants.

National digital and future skills strategy (2020-2030)

The Department of Communications and Digital Technologies (DCDT) is the frontrunner of the National Digital and Future Skills Strategy (2020-2030), which was established to promote the financing of digital literacy and encourage infrastructure development (DCDT, 2021). This strategy is explicitly important to e-recruitment in that it ensures that both public servants and people who apply for jobs have the much-needed digital skills to participate in the digital space. This is done through promoting digital readiness as well as improving matters of usability and inclusivity in the new e-recruitment systems, enhancing the process of digital transformation

Public service regulations (2016) and the public service act (1994)

The Public Service Regulations (2016), a law promoted under the Public Service Act (1994), offers lawful policies for transparency as well as ethical recruitment within the South African public sector. This legislation promotes the use of digital technologies in the public sector to enhance matters of equality and accountability (Republic of South Africa, 2016).

Presidential Commission on the Fourth Industrial Revolution (PC4IR) Report (2020)

The PC4IR Report (2020) demonstrates the need for state departments to adopt innovations to improve service delivery. This strategy advocates for financial investments in e-government platforms to enhance productivity, efficiency, and effectiveness.

2.5.2 Policy and Regulatory Initiative for Digital Africa (PRIDA)

The Policy and Regulation Initiative for Digital Africa (PRIDA) is a collaboration between the African Union (AU), the European Union (EU), and the International Telecommunication

Union (ITU), with funding from the EU's Pan-African Programme (Paris Peace Forum, 2021). The initiative seeks to promote connectivity, digital policy harmonisation, and internet governance throughout Africa. South Africa, a regional pioneer in ICT development, sees PRIDA as a critical opportunity to build its digital infrastructure, align its regulatory environment with continental norms, and increase fair access to high-speed internet.

The ITU focuses on efficient spectrum management to improve digital connectivity, whereas the African Union Commission is in charge of coordinating the implementation of broader digital transformation strategies, such as the creation of a unified digital market and the promotion of effective and inclusive internet governance (Paris Peace Forum, 2021). Participation in PRIDA supports South Africa's national objectives to close the urban-rural digital divide and increase economic inclusion through better digital access.

The PRIDA initiative is a collaborative effort between the African Union, the European Union, and the International Telecommunication Union (ITU), backed by the EU-funded Pan African Program (Paris Peace Forum, 2021). The ITU focuses on improving connectivity by managing spectrum resources, while the African Union Commission oversees the implementation of strategies related to digital transformation, a unified digital market across Africa, and effective internet governance (Paris Peace Forum, 2021). The PRIDA initiative seeks to make high-speed internet widely available and affordable throughout Africa. This will pave the way for everyone to benefit from online services (AU, 2020b). To achieve this, PRIDA aims to simplify and improve the laws and regulations governing information and communication technologies (ICTs) for economic and social progress (AU, 2020b). A key focus is to create a more unified ICT market across the African continent (AU, 2020b). The European Commission (nd) highlights PRIDA's significant achievements, including the development and implementation of a tool to effectively monitor and evaluate progress in harmonizing internet-related policies across different countries (European Commission, nd). The PRIDA program also aligns with the United Nations' Sustainable Development Goals, particularly Goal 9 (building resilient infrastructure and fostering innovation) and Goal 16.8 (enhancing developing countries' participation in global governance) (European Commission, nd).

2.6 Key Challenges Faced by e-Governments in Improving Service Delivery through the e-Recruitment Systems

This section discusses the primary challenges that e-governments face when implementing e-recruitment systems, including bias in algorithms, access and digital divide, cybersecurity risks, and, finally, cost considerations.

2.6.1 Bias in Algorithms

The global trend of integrating algorithmic decision-making into public services, especially within developing nations' digital transformation agendas, raises critical concerns regarding fairness and competency (Lal Das, 2023). Application Tracking Systems (ATS) are being used more and more to improve public sector human resource management efficiency; however, their use carries a high risk of algorithmic bias and the selection of unqualified applicants. While adopting algorithmic solutions, developing nations face unique data governance challenges (Lal Das, 2023). Crucially, these nations have been largely excluded from developing accountability, transparency, and fairness standards for algorithmic decision-making (Lal Das, 2023). This exclusion exacerbates the risk of pre-existing social biases being embedded and perpetuated within these systems, as evidenced by research on e-recruitment (Nzobonimpa, 2023:220).

Although Applicant Tracking Systems are designed to make the hiring process more efficient, it is unclear how well they can evaluate important aspects like culture fit and candidate fit (Kalidindi and Kunte, 2024:112). Relying solely on digitization can overlook potential drawbacks and ethical implications (Kalidindi and Kunte, 2024:112). ATS can reject highly qualified candidates due to non-qualificational factors, such as resume formatting errors or the absence of specific keywords (Suraj, Kumari, and Chandran, 2019:229). This can include rejections due to perceived "improper language" or the failure to include specific industry terminology (Suraj *et al.*, 2019:229). Technical issues, such as improper scanning and software limitations, can also lead to the misinterpretation and rejection of resumes (Suraj *et al.*, 2019:229; Durai and Keetticka, 2017:809). This indicates that the system's shortcomings are causing qualified candidates to be overlooked, and one significant effect is that applicants who are adept at using keyword manipulation to get past ATS filters do not possess the abilities and knowledge needed for the position. This might lead to the hiring of an inexperienced workforce, which would have a detrimental effect on output, quality, and the

general functioning of the government.

2.6.2 Access and Digital Divide

Initially gaining international recognition through United Nations reports, the digital divide has become a central concern for scholars, policymakers, and organizations across various disciplines (Ganesh and Barber, 2009:853; Van Dijk, 2020). The widespread adoption of digital technology in the public sector may inadvertently exclude certain groups, particularly those with limited access to or proficiency in digital platforms (Latupeirissa, Dewi, Prayana, Srikanthi, Ramadiansyah and Pramana, 2024:1). These risks exacerbate existing inequalities by creating a digital divide that leaves behind individuals who cannot access digital services.

The advent of the digital age has irrevocably transformed the landscape of human interaction and societal participation. Technology has emerged as an indispensable tool, facilitating engagement in diverse facets of modern life, including social, political, and economic activities. Moreover, it has become an integral component of essential government digital services, such as e-recruitment (Manda and Backhouse, 2016). However, the digital divide, in its various forms, poses a significant threat to social equity and economic opportunity (Ragnedda, 2017). Ragnedda (2017) underscores the potential of the digital divide to either amplify or diminish citizens' capacity to participate in society and access social and economic benefits. Manda and Backhouse (2018:465) further caution that digital exclusion can have cascading effects, leading to broader social and economic disadvantages.

As defined by Soomro, Kale, Curtis, Akcaoglu and Bernstein (2020:2), the digital divide refers to the disparity in access to ICT, with some individuals having adequate resources and others lacking entirely. For example, older adults, less educated individuals, and those with lower incomes are less likely to have consistent internet access, both at home and on their mobile devices (Scanlan, 2024). Conversely, younger job seekers tend to have better internet access and digital skills (Scanlan, 2024). They are more likely to use the internet, including social media, to find jobs and submit applications (Scanlan, 2024).

The COVID-19 pandemic has compelled people to rapidly adopt digital technologies in their daily lives (Livari, Sharma and Ventä-Olkkonen, 2020). This shift has led to new ways of life where the world heavily depends on the internet and digital tools (Lythreathis, Singh and El-Kassar, 2022). However, due to limited resources and ineffective digital usage, the pandemic

has further marginalized those who lack internet access, leaving them excluded and disadvantaged and posing significant challenges to recruitment efforts (Pandey and Pal, 2020; Bradway and Årsand, 2022:812). Many citizens faced barriers to online recruitment due to financial constraints, security concerns, technological limitations, or a lack of familiarity with technology (Bradway and Årsand, 2022:812).

Research by Chan, Lau and Pan (2008) and Manda and Backhouse (2016) highlights a critical barrier to inclusion in today's "smart societies": a lack of digital literacy and skills, sometimes referred to as low "e-readiness" (Chan *et al.*, 2008; Manda and Backhouse, 2016). This digital divide is particularly concerning in developing nations, especially across Africa, where a significant portion of the population remains marginalized due to low e-literacy and e-skills (International Telecommunications Union, 2017; Firth and Mellor, 2005).

2.6.3 Cybersecurity Risks and Data Breaches

Internet recruitment is a recent technological advancement that has revolutionized the way governments and businesses approach hiring and selection (Mauchi, Manomano, Njanike, Mutengezanwa, Damiano, Gopo, Gombarume, Chazuza and Ngoni, 2011:225). It offers significant potential to improve efficiency and effectiveness in the recruitment process (Mauchi *et al.*, 2011:225). However, this system also presents a range of challenges. Organizations that connect to the internet become potential targets for cyberattacks (Ursillo and Arnold, 2023). Cyber threats and data breaches are increasing, affecting organizations across industries and sizes (Ursillo and Arnold, 2023). Lawmakers have implemented various measures to safeguard against data breaches, including breach notification laws, increased cybersecurity funding, reporting requirements, and mandatory data privacy regulations to mitigate these risks (Sen and Borle, 2015). However, cyber threats and data breaches continue to occur with increasing frequency (Ogbonna, 2020:2).

The recruitment industry, which handles extensive sensitive data, is particularly vulnerable to cyberattacks (James, 2024; Duckett, 2023). A data breach, defined as unauthorized access to personal information, can have severe consequences for both organizations and individuals (Sen and Borle, 2015; Gray, 2023). Affected individuals may suffer identity theft, financial loss, and emotional distress. Additionally, organizations may face significant financial penalties, reputational damage, and legal action from regulatory bodies and affected individuals (Ursillo and Arnold, 2023).

As e-recruitment systems gain popularity and collect increasing amounts of personal data, safeguarding data privacy during information exchange becomes paramount (Cherukri and Doguparthi, 2017). Additionally, Ali, Islam, Rauf, Din, Guizani and Rodrigues (2018) emphasize that security strategies are designed to protect user privacy, and security techniques are based on privacy principles.

2.6.4 Cost Considerations

The emergence of modern web-based e-recruitment methods has transformed how e-governments advertise job openings, track potential candidates, and manage online applications (Aljuaid, 2021:i). However, these advancements come with associated costs for both initial setup and ongoing maintenance (Aljuaid, 2021:i). As Veneck (n.d) emphasizes, digital transformation is not a one-size-fits-all solution that can be achieved through a single software purchase. It demands substantial investments of time, resources, and strategic planning (Veneck, n.d). Moreover, regular software updates and patching are essential to mitigate known vulnerabilities that cybercriminals could exploit.

The public sector faces substantial challenges as technology rapidly advances towards artificial intelligence (Jayabalan *et al.*, 2019:1881). Implementing e-recruitment systems and other e-services requires significant initial investments, ongoing maintenance costs, and regular updates (Jayabalan *et al.*, 2019:1881). Small and medium-sized organizations may find the cost of implementing technologically advanced e-recruitment systems to be too high (Blommaert, Coenders and Van Tubergen, 2014). Therefore, e-recruitment is not only a strategic decision but also a financial challenge for the public sector and all other industries seeking to digitize their operations (Jayabalan *et al.*, 2019:1881). Nonetheless, Vogen (2024) argues that while maintenance costs can be high, they are essentially investments that extend the life of equipment, boost productivity, and improve employee safety. Moreover, the adoption of innovative maintenance technologies can lead to substantial cost reductions in maintenance programs (Vogen, 2024).

2.7 Strategies e-Governments can implement to improve service delivery through e-recruitment systems

This section explores a range of strategies that can be employed to address the challenges associated with recruitment in e-governments.

2.7.1 Prioritising Data Security

Successful e-recruitment hinges on prioritizing strong data security measures (Healey, n.d.). However, balancing efficient data management with strict privacy regulations presents a significant challenge for recruitment agencies. To address this, agencies must implement a layered approach to data security, encompassing robust data retention policies, secure storage solutions, lawful data processing practices, and restricted data access to authorized personnel (Healey, n.d.).

A data retention policy, as defined by Gagliardi (2023), serves as a company's formal framework for managing data in compliance with legal and contractual obligations. This policy must outline specific guidelines for data storage, including retention periods and secure disposal procedures (Gagliardi, 2023). Moreover, a study by Zendata (2024) underscores the critical importance of minimizing data retention periods. The risk of data breaches is significantly reduced when access to sensitive information is limited (Zendata, 2024). Furthermore, employing secure data deletion techniques that permanently erase information prevents unauthorized access to deleted data (Zendata, 2024).

Proactive measures are also crucial to address the threat of data scraping. This necessitates implementing preventative technologies, raising awareness among employees and candidates about the risks, and enforcing clear terms of use that prohibit unauthorized data collection (Healey, n.d.). Research by Zenzero (2023) highlights that preventing data scraping is essential for safeguarding valuable data and maintaining a secure online presence. The study emphasizes the importance of implementing robust security measures and regularly reviewing privacy settings to protect candidate data from unauthorized scraping activities (Zenzero, 2023). Furthermore, the study recommends encouraging candidates to utilize strong, unique passwords for all online accounts associated with recruitment websites (Zenzero, 2023). This proactive measure significantly increases the difficulty for hackers to compromise candidate data. Finally, a study by Inc (2024) emphasizes the critical role of a robust security framework in safeguarding an organization's data. The study highlights that establishing a security framework is a cornerstone of effective data security practices. With a structured approach, a security framework ensures that data security strategies are aligned with overall business objectives.

2.7.2 Promoting Inclusivity

According to Banahan (2024), digital exclusion poses a significant challenge, particularly within the public sector, where it prevents many individuals from accessing crucial services and opportunities. Governments and organizations can implement policies that increase access to affordable technology to bridge the digital divide (Banahan, 2024). This could involve providing subsidies for internet access or establishing public spaces equipped with free Wi-Fi and access to digital devices (Banahan, 2024). This is supported by research from Christoforidis (2023) which emphasizes the need for governments to partner with service providers to offer more affordable data plans, device subsidies, and discounted internet packages to low-income residents and underserved communities. Furthermore, governments must make it a priority to develop and expand robust and reliable digital infrastructure, such as high-speed broadband networks, with a particular focus on underserved areas. Investing in internet infrastructure enables governments to bridge the digital divide, extending connectivity to remote regions, schools, hospitals, and underserved communities (Christoforidis, 2023).

Policymakers are increasingly concerned about broadband access due to the widening digital divide that threatens to leave rural communities behind (Valentín-Sívico, Canfield, Low and Gollnick, 2023:1). According to Bergeron (2024), the lack of broadband access has significant negative impacts. Internet access is crucial for job seekers, as it is essential for submitting applications, accessing online training resources, and finding employment opportunities (Bergeron, 2024). Limited internet access restricts these opportunities, contributing to higher unemployment rates and increased financial hardship (Bergeron, 2024). A study by Whitacre, Gallardo and Strover (2014) demonstrates that increased broadband adoption in rural areas leads to a decrease in unemployment growth and a positive impact on income levels.

Addressing digital exclusion effectively requires a community-centered approach. According to Bon, Saa-Dittoh, and Akkermans (2024:290), the development of digital services for underserved communities with limited resources is more effective when those communities are directly involved in the development process. Empowering local users through active participation in decision-making processes is essential for achieving the desired goals and objectives of the digital service (Bon, Saa-Dittoh, and Akkermans, 2024:289). Successful

implementation requires digital technology to be contextualized, meaning it must be adaptable and flexible to overcome local barriers like language, literacy, infrastructure limitations, and economic constraints (Bon, Saa-Dittoh, and Akkermans, 2024:289).

2.8 Theoretical Framework

The Diffusion of Innovation Theory provides a valuable framework for understanding the adoption of e-recruitment in the public sector. The theory is explored further below regarding its relevance to this study.

2.8.1 Diffusion of Innovation (DOI) Theory

The Diffusion of Innovation Theory (DOI) was first developed by Everett Rogers in 1962, offers the perfect lens for evaluating the Gauteng Department of e-Governments' e-recruitment system, which is situated within a broader understanding of how innovations are adopted and institutionalized within social systems to improve public service delivery. According to Rogers (2003), diffusion is defined as a process by which innovation is communicated through distinct avenues over a period to people of a social system. In support, Vargo, Akaka, and Wieland (2020) state that the theory of diffusion in innovation adopts as well as spreads the use of current emerging digital technologies to advance matters of service delivery. Within the DOI, four relevant components are identified to be important in understanding innovation adoption: the innovation itself, communication channels, time, and the social system (Rogers, 2003; Lee, 2021). Through this context, the innovation is the shift from traditional, paper-based recruiting to an online, digital e-recruitment system that seeks to improve and expedite the employment process in the public sector (South African Government, 2018). To spread information about job openings and encourage system utilization, communication channels such as official websites and professional networking sites like LinkedIn are essential. Additionally, the perception of the usefulness of new e-recruitment systems is important in driving transformation to their adoption within the public sector. A media statement by the South African Government (2018) adds to the notion that e-recruitment systems provide important prospects, including reduced application costs, enhanced convenience, as well as the eradication of geographical challenges, therefore contributing to new, transparent, effective, and inclusive recruitment processes. Social media influence also adds enormous value to the adoption of innovations, and broader acceptability in the public sector setting can be fostered by excellent user

experiences and noticeable efficiency gains. Therefore, using the DOI theory offers significance and a theoretical lens to assess how effectively the e-recruitment system has been adopted and whether it contributes meaningfully to enhancing service delivery in the Gauteng Department of e-Government.

Table 1: Factors influencing the uptake of e-recruitment platforms for talent acquisition (Parry and Olivas-Lujan, 2011:166).

| Factor | |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Relative advantage | Reach (the expectation that the method reaches more job seekers than others) Targeting (the ability to get the right people) Convenience Speed to hire Organizational image (the impact on the company’s customer and employee facing image) Relative cost Ability to create a talent database (by storing candidate details for future use) Impersonal nature |
| 2. Compatibility | Compatibility with working practices Compatibility with technological systems |
| 3. Complexity | Complexity (difficulty of identifying which jobs boards to use or of setting up a recruitment page on a corporate website) |
| 4. Trialability | Trialability (ease of experimenting with jobs boards but not with corporate websites) |
| 5. Other | Volume of recruitment Competitive adoption (adoption by a company’s competitors) Job seeker adoption (adoption by target job seekers) |

Governments are more likely to migrate from traditional methods of recruitment to e-recruitment systems when they see the noticeable benefits of this innovation, as illustrated in Table 1.

2.9 Conclusion

This chapter began by defining e-recruitment and then explored existing literature on the effectiveness of e-recruitment systems in improving service delivery. It also examined case

studies from Nigeria and Namibia, where public institutions have digitally transformed their recruitment processes. Additionally, the chapter reviewed the policies and legal frameworks that support e-government's role in enhancing service delivery through e-recruitment. The key policies examined include the Digital Transformation Strategy for Africa (2020–2030) and the Policy and Regulatory Initiative for Digital Africa (PRIDA). Furthermore, the chapter identified several challenges e-governments face in improving service delivery through e-recruitment systems. These challenges include bias in algorithms, issues of access and the digital divide, cybersecurity risks and data breaches, and cost considerations. It also explored strategies that e-governments can implement to enhance service delivery via e-recruitment, with a focus on prioritising data security and promoting inclusivity. Finally, the chapter discussed the Diffusion of Innovation theory, which serves as the theoretical framework guiding this study. The following chapter will present the research methodology in more detail.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

The previous chapter defined e-recruitment and reviewed existing literature on the effectiveness of e-recruitment systems in enhancing service delivery. It also outlined the Diffusion of Innovation theory, which serves as the guiding framework for this study. This chapter presents the research methodology. It begins by discussing the research philosophy and the research approach. The chapter further explains the research design, purposive sampling, data collection methods, data analysis procedures, and ethical considerations.

3.2 Research Approach

In this desktop study, a qualitative research approach was employed to evaluate the effectiveness of the GDeG's e-recruitment system in improving service delivery. This approach is well-suited for this study as it focuses on understanding phenomena through words and narratives rather than relying solely on numerical data or standardized measurements (Cropley, 2022:9; Ugwu and Eze, 2023). The author examined how publicly accessible materials explained e-recruitment procedures and challenges to obtain a deeper understanding of e-recruitment efficacy. These resources included official documents and strategies about the digital hiring efforts of the GDeG. In particular, the study looked at the terminology used to explain recruitment efficiency and departmental objectives.

3.3 Research Design

This study adopted a qualitative case study design to understand the effectiveness of the GDeG's e-recruitment system in improving service delivery (Coombs, 2022). According to Yin (2009), case study research is beneficial for addressing "how" and "why" questions because it allows for a thorough analysis of a phenomenon in its actual setting. The effectiveness of the GDeG's e-recruitment system is the primary objective of this study, and a case study approach enables a thorough examination of the procedures, challenges, and experiences that influence its service delivery results.

3.4 Purposive Sampling

Because this is a qualitative study, a purposive sampling technique was employed as a

strategic approach to selecting information-rich documents for in-depth analysis (Hassan, 2022). This technique aligns well with the qualitative nature of this study, allowing for the targeted identification of relevant materials that directly address the research objectives (Nyimbili and Nyimbili, 2024:90). Official government papers that shed light on the efficacy of the GDeG's e-recruitment system were specially sampled for the study. These materials include:

- Gauteng Department of e-Government. 2023. *Annual Performance Plan for 2023/2024*.
- Gauteng Department of Health. 2024. *Annual Report 2023/2024*. Gauteng Provincial Government.
- Public Service Commission
- Gauteng Provincial Government Website etc.

These documents were chosen because they offer in-depth analyses of the department's e-recruitment policies, tactics, and performance, assisting in determining how well it works to enhance service delivery.

3.5 Data Collection

The researcher chose the data collection methods that were best suited to answer the research questions and that fit within the available resources.

3.5.1 Document Analysis

This study primarily employed document analysis as the data collection method. Publicly accessible sources, including the GPG website, Google Scholar, ScienceDirect, and ResearchGate, were utilized to gather secondary data. A comprehensive analysis of published articles, doctoral dissertations, master's theses, and relevant government reports (such as mid-term and annual reports, annual performance plans, long-term strategic plans and GPG official website) was conducted. To ensure the relevance and quality of the documents, the following inclusion and exclusion criteria were applied:

3.5.1.1 Inclusion Criteria

The study utilized publicly accessible sources; documents were selected based on their direct relevance to the specific research topic. The primary focus was on documents published between 2018 and 2024, with exceptions made for historically significant publications before this timeframe. The research was delimited to the Gauteng province, South Africa. Only documents written in English were considered.

3.5.1.2 Exclusion Criteria

Materials that required specific rights to access or were not publicly available were not included in the study to preserve its integrity and relevance. Papers that did not specifically discuss the efficacy of digital service delivery or e-recruitment in the Gauteng e-Government framework were not included. Specifically, records released from 2018 to 2024 were the main focus. Unless they have historical significance for the research setting, materials published after this period were not included. Given the study's geographic focus, documents that addressed areas outside of South Africa's Gauteng province were disregarded. English-language documents were the only ones considered; documents released in other languages were not included.

3.6 Data Analysis

There are different types of data analysis methods, and one specific method of qualitative data analysis used for this research is content analysis.

3.6.1 Content Analysis

Content analysis is relevant for this study as it provides a relatively objective approach to analysing various types of communication messages within relevant documents (Kovac and Jukic, 2016:78). These documents include the GDeG's Annual Performance Plan for 2023/2024, Gauteng Province Annual Report 2022/2023, GDeG Revised Strategic Plan 2020-2025, and other pertinent GPG annual reports.

To extract relevant data, the analysis involved searching for specific words and phrases using keywords such as "e-recruitment", "policies", "challenges", "strategies", within the above-mentioned documents (Thattamparambil, 2020). Articles, thesis and dissertations were screened based on their titles, abstracts, and full texts to verify that they meet the established inclusion criteria. This ensured that only pertinent information was extracted from the selected documents.

3.7 Ethical Considerations

The researcher, in conducting this study, adhered to a stringent set of ethical considerations, encompassing the following key principles:

3.7.1 Ethical Clearance

The primary objective of this study was to fulfill the academic prerequisites for the attainment of a master's degree. In preparation for this research study, the researcher attended the North-West University (NWU) Faculty of Humanities' Ethics Training and has obtained an ethics training certificate of attendance. The study was approved by the NWU Afrocentric Governance of Public Affairs (AGoPA) Scientific Committee and Basic and Social Sciences Research Ethics Committee (BaSSREC), evidenced by an Ethics Approval Letter of Study with Ethics number: NWU- 01060-24-A7. This training has equipped the researcher with the requisite knowledge and skills to ensure the ethical conduct of the research.

3.7.2 Avoiding Plagiarism

The researcher avoided plagiarism and acknowledged all sources used for secondary data, kept good track of all sources used, understood the different types of plagiarism, and was honest and ethical in all aspects of the research. The study further utilized Turnitin plagiarism

detection software on the NWU e-Fundi website to verify the originality of the work and detect any potential plagiarism. Furthermore, the researcher consistently employed a recognised and widely accepted citation style, such as the NWU Harvard referencing style, to uphold these principles. This approach ensured that all sources were meticulously cited, attributing credit to the original authors and their contributions.

3.7.3 Utilisation of Openly Accessible Data

The researcher ensured that all resources utilized for this study adhered to ethical guidelines for secondary data analysis because it depended on publicly available documents. None of the sources were proprietary or confidential, and they were all chosen for their openness and study-relatedness.

3.8 Conclusion

This chapter presented the research methodology that guided this study. It began by discussing the research philosophy and approach, noting that this study is both a desktop study and a qualitative study. The chapter further explained the research design, which is based on a case study method of GDeG. It also described the use of purposive sampling, stating that the study relied on information-rich documents related to the effectiveness of e-recruitment systems in improving service delivery. The data collection methods were discussed, specifically document analysis, along with the inclusion and exclusion criteria. The chapter discussed the data analysis method employed in the study, which is content analysis. Finally, the chapter outlined the ethical considerations that were addressed in the completion of this study.

CHAPTER FOUR: PRESENTATION, DISCUSSION AND ANALYSIS OF RESEARCH FINDINGS

4.1 Introduction

The previous chapter outlined the research methodology that informed and guided this study. This chapter presents the analysis and interpretation of the findings, based on data collected through document analysis and official government websites. The presentation of the data and the interpretation of the findings are aligned with the research objectives outlined in Chapter One, which are restated below.

4.2 Restatement of the Research Objectives

- Evaluate the effectiveness of the GDeG's e-recruitment system in enhancing service delivery.
- Examine the existing policy and legal frameworks supporting the GDeG's e-recruitment role in improving service delivery.
- Identify the key challenges faced by the GDeG in implementing the e-recruitment system to enhance service delivery.
- Propose strategic recommendations for the GDeG to optimise the e-recruitment system's effectiveness in improving service delivery.

4.3 Research Experience

The Gauteng e-Government's official materials mostly describe numerous ICT services in general, hence, it wasn't easy to find documentation that directly addressed the e-recruitment system. There was very little information specifically addressing the e-recruitment system, even though it is a component of the department's larger ICT initiatives. The department's ICT scope includes e-recruitment, as was made clear during the study process; however, official documentation lacked specifics regarding its implementation, functioning, and impact. With an emphasis on how the e-recruitment system fits within this mission, the researcher examined the department's broader involvement in digital transformation within government services to meet this challenge. The researcher presented a summary of the department's goals in modernizing public service recruitment and looked at related government initiatives

to ensure that the study stayed focused on e-recruitment while recognizing how it fits into the department's larger digital strategy.

4.4 The Presentation and Discussion of Findings

The usage of the e-recruitment system by Gauteng's e-Government to improve public services was evaluated in this research objective.

4.4.1 Evaluating the effectiveness of the GDeG's e-recruitment system in enhancing service delivery.

This research objective aimed to investigate the effectiveness of the e-recruitment system by the Gauteng e-Government to enhance service delivery.

4.4.1.1 The Influence of Patronage

The research findings reveal that the Gauteng Department of e-Government (GDeG) has made profound transformations and advancements in changing the landscape of public sector recruitment through its modern, tech-driven Gauteng Provincial Government Job Centre. This e-recruitment platform is established using modern, state-of-the-art technologies to streamline and digitize the employee recruitment process within the public service, thereby enabling a reduction in spending and improving administrative efficiency. For example, the Gauteng Department of Health (GDoH) reported that quick recruitment turnaround times for hospital posts were made online in the year of 2023, following the application of e-recruitment in their system. The GDoH has witnessed a huge reduction in backlogs as well as an increase in the healthcare service delivery since they have started to utilize the e-recruitment platform (GDoH, 2024:178). Similarly, the Gauteng Department of Education implemented the use of e-recruitment to control the appointment of teachers in high-demand schools within the Gauteng province, thereby enhancing the delivery of services for disadvantaged communities.

This digital service aims to provide a more transparent, accountable, accessible, and efficient recruitment service to citizens (GDeG, 2020:19). The GDeG, which is responsible for the functioning of the e-recruitment platform, is guided by the National Development Plan (NDP) (GDeG, 2020). Based on the analysed National Planning Commission document, the NDP 2030 highlights a crucial objective, which is to stabilize the relationship between political

leadership and administrative functions (National Planning Commission (NPC), 2012:410). This stabilization aims to cultivate a highly professional public service. The study noted that such a service would effectively support the government while maintaining enough independence to shield itself from political favouritism (NPC, 2012:410). Achieving this requires a clearer division of responsibilities between those in political office and the heads of administrative departments. The implementation of the NDP mandates in the adoption of the e-recruitment platform advocates for depoliticised, merit-based hiring practices and corresponds with Rogers' notion of compatibility, that is, the extent to which an innovation is aligned with the values and needs of potential adopters. Additionally, by enhancing transparency and limiting direct human interaction in recruitment, the system helps address long-standing institutional issues such as weak administrative capacity and inefficient bureaucratic processes, as identified in the NDP 2030 (National Planning Commission, n.d:45). Moreover, the Gauteng Provincial Treasury (GPT) has implemented action plans aimed at reducing conflicts of interest, including recruitment irregularities such as nepotism (GDoH, 2024:137). These measures include strict monitoring and enforcement of human resource management policies, public advertising of job openings through the GPG Professional Job Centre and conducting thorough pre-employment screening and vetting of all prospective employees (GDoH, 2024:137). Additionally, the GDoH has implemented these measures to maintain the prioritisation of service delivery while working to fill vacant positions with qualified and appropriate candidates (GDoH, 2024:178).

However, the use of e-recruitment has come with challenges, as research has uncovered. For instance, in the Gauteng province, a plethora of municipalities have not begun using e-recruitment systems, and thus continue using traditional methods of recruitment. The Independent Committee of Inquiry (COGTA,2021) found that about 25% of high municipal managers lack the necessary skills and qualifications to occupy the positions they hold. This shortfall reveals either the failure to use the system effectively or the lack of necessary skills and competencies to recruit the much-needed managers for the positions offered. The same report further found that ineffective municipal human resource recruitment systems and the issue of political interference are at the forefront of the department's failure to recruit the best candidates, and they are also major issues of irregular expenditure within the department. Evidence from the document report shows that many officials avoid discussing issues of political interface despite the prospects of digital solutions offered by the present e-

recruitment system. These challenges demonstrate some of the important issues found in Gauteng municipal departments and the lack of skills to leverage new digital recruitment systems.

The findings note both the various prospects and challenges of employing the e-recruitment system to improve public service delivery. Through providing a depoliticized recruiting process, it also operationalizes Wilson's case for keeping politics and administration apart as discussed in section 2.4.1. Wilson highlighted that politics is concerned with the formulation of policies, while administration is responsible for implementing those policies. However, inconsistent application and weak enforcement of meritocratic criteria undermine the system's efficacy. The Public Service Commission (PSC, 2024) supports the use of digital recruitment systems to ensure there is sectoral competency, yet evidence of research and reports reveals that the municipalities are filled with employees without the much-needed skills or qualifications, causing a huge gap in policy and practice (COGTA, 2021). To fully realise the GPG Professional Job Centre's influence on Gauteng's service delivery, institutional commitment to its utilization must be strengthened across all government agencies and municipalities.

4.4.1.2 Increased Efficiency and Speed

The study's findings show that the GPG Professional Job Centre is an excellent example of technology innovation and operational effectiveness in the public sector (GPG, 2024). According to the GPG news release, this e-recruitment platform has emerged as a key component of the GDeG's overall digital transformation strategy, indicating a deliberate shift away from old, paper-based recruitment procedures and towards more innovative, technology-driven processes (GPG, 2024). This digital transition enhances public service delivery by increasing the efficiency, timeliness, and accessibility of recruiting services. Citizens can apply for jobs and receive relevant services online, avoiding the need to visit government offices (South African Government, 2025b). This not only saves applicants time and money, but it also helps to reduce travel congestion, carbon emissions, and paper use, all of which are in line with environmentally sustainable practices. Overall, the platform encourages greater transparency, efficiency, and citizen-centered public service delivery.

The findings are consistent with what was reviewed in section 2.4.2, where White (2008) and

Marr (2007) highlighted that e-recruitment reduces paper-based procedures in the public sector human resource management, thereby reducing the administrative burden on HR staff. This reflects international transitions in public administration, as governments are digitising recruiting and human resource management functions to improve transparency, user experience, and operational effectiveness (OECD, 2020:7). The study found that by integrating cutting-edge digital infrastructure, the system has modernised the recruitment process, providing a streamlined, user-centric experience for both applicants and administrative professionals (GPG, 2024). This transition has not only increased accessibility and transparency in government recruiting but has also helped improve response times, data integrity, and process standardization which is very imperative in departments like the Department of Health when the issue of shortage of staff can be addressed in a short period as hiring times in online recruitment are quicker. Consequently, the e-recruitment platform emphasises the GDeD's commitment to reinventing public service delivery through digital innovation.

The incorporation of sophisticated digital infrastructure into GDeG's recruitment system is consistent with the objectives outlined in the OECD Digital Government Policy Framework, which emphasises digital-by-design governance, user-driven services, and data-informed decision-making (OECD:2020:7). To further substantiate these findings, Mohele and De Beer (2007:66) agree, emphasising the critical role of ICT in redefining government-citizen interactions for improved openness, efficiency, and effectiveness. The GDeG's implementation of a user-centric web platform for recruitment highlights this strategy, which streamlines public service delivery while respecting core ICT ideals.

Furthermore, the study's findings show that the GDeG efficiently uses data analytics to support HRM programs such as the e-recruitment system, considerably enhancing its speed and increasing the department's overall effectiveness (PSC, 2024:42). Specifically, the e-recruitment system has greatly accelerated the hiring process, minimised bureaucratic delays and increased operating efficiency within the department (GPG, 2024). The e-recruitment platform enables administrators to handle vacancies more efficiently, filter applications systematically, and find top talent with better precision by combining automated procedures and real-time data analytics (GPG, 2024). This digital capability enables quick decision-making and optimises resource allocation, indicating a significant change towards a more agile and responsive public sector recruitment process (GPG, 2024). This is

consistent with Gauteng Province's commitment to enhancing municipal operations through data-driven solutions, as seen by the prioritisation of the Data-Driven initiatives. According to the article analysed, Minister Hlabisa's construction of the National Strategic Hub in Gauteng, which uses digital technologies and data to expedite service delivery, exemplifies the province's emphasis on data-driven public sector administration (South African Government, 2024).

The GDeG's use of real-time data analytics to support recruiting processes is consistent with the claims of Christoforidis (2023) and Konateh *et al.* (2023:24) as discussed in section 2.4.2, who claim that data-driven HRM leads to more targeted hiring and process optimisation. The capacity to monitor application flows, detect bottlenecks, and estimate staffing requirements demonstrates the province's increasing e-governance capabilities. This is consistent with the Data-Driven Districts project and Minister Hlabisa's development of the National Strategic Hub, demonstrating the province's strategic alignment with data-informed service delivery.

4.4.1.3 Attracting a Wider Talent Pool and Cost Effectiveness

The study's findings reveal that the GPG Professional Job Centre has proven to reduce the costs associated with job applications and has enabled the provincial government to attract a broad pool of candidates from diverse backgrounds (GDeG, 2020:19). For example, the GDoH recruited 1,150 Emergency Medical Services (EMS) interns through the GPG Professional Job Centre to expand the pool of market-ready EMS candidates and enhance service delivery within the province (GDoH, 2024:62). Additionally, Gauteng provincial government departments, such as the GDoH and the Gauteng Department of Economic Development (GDeD), took part in the NASI iSPANI recruitment initiative, which forms part of the provincial strategy aimed at job creation and the empowerment of unemployed youth. All related job opportunities are advertised on the GPG Professional Job Centre (GDoH, 2024:27). The study also noted that the GDeG's 2020-2025 strategy views online recruitment as an innovation that can enhance service delivery while increasing digital inclusion and accessibility of services across Gauteng Province (GDeG, 2020:19). Additionally, the study found that the e-recruitment platform aims to provide employment opportunities in the public sector for all South Africans by being non-discriminatory and inclusive of all races, beliefs, political affiliations, and other personal characteristics (Dyomfana, 2023). This implies that the e-recruitment platform promotes inclusivity and demonstrates its commitment to making

services accessible and efficient, particularly in public sector employment, as well as its commitment to the values of non-discrimination and diversity in public sector recruitment.

The objectives of the e-recruitment system, as outlined on its official platform, clearly align with the GPG's strategic goals. These goals include creating jobs within an inclusive economy and promoting economic growth and an efficient, effective, and development-oriented public service (South African Government, 2025). This reflects a deliberate policy-level integration of digital recruitment strategies with broader provincial socioeconomic and governance priorities. To reinforce these findings, a media release by Minister Dlodlo at the launch of the Public Service e-Recruitment System in 2018 reiterates the government's commitment to simplifying the job application process, especially for young people, through the development of an e-recruitment platform (South African Government, 2018). Minister Dlodlo further stated that this method aims to reduce the cost of job applications and recruitment by eliminating the need for multiple paper copies and by improving access through the introduction of a digital Z83 form (South African Government, 2018).

Furthermore, the study's findings show that the National e-Government Strategy and Roadmap highlights the government's vision to digitise services to ensure universal access for all citizens, regardless of location or background (Government Gazette, 2017:5). Moreover, the e-recruitment system's objectives align with the Employment Equity Act (1998), which promotes equitable access to services, reduces unfair discrimination, and supports the development of a representative and diverse workforce that contributes to economic growth and improved public sector performance (Republic of South Africa, 1998:2). These findings are consistent with the literature reviewed in Section 2.4.4, where Alzhrani (2020:330) argued that e-recruitment emerged as a solution to reduce recruitment costs. Similarly, Radha (2020:12) noted that e-recruitment enables governments to access a broader and more geographically dispersed talent pool. Based on these findings, the department can further promote diversity and inclusivity by reaching a wider range of individuals, particularly those from marginalised communities, thereby increasing the likelihood of attracting top talent from diverse backgrounds.

The findings of this study also align with key features of the Diffusion of Innovation Theory, which suggests that innovations such as the GPG Professional Job Centre are more likely to be adopted when their advantages are evident, when they are compatible with existing

values and practices, and when they are perceived as easy to use (Rogers, 2003). The GPG Professional Job Centre embodies these attributes as its benefits are visibly demonstrated through cost-effectiveness, broad accessibility, and its role in promoting equity in public sector hiring. Its alignment with existing national strategies and policies enhances its compatibility, while its digital interface and streamlined process improve its usability and visibility. These elements collectively contribute to the platform's successful institutional uptake and growing acceptance among job seekers.

4.5 Examining the existing policy and legal frameworks supporting the GDeG's e-recruitment role in improving service delivery.

This research objective sought to explore the policy and legal frameworks that underpin GDeG's involvement in e-recruitment and its role in enhancing service delivery. The policies and legal frameworks supporting the GDeG offer a firm foundation for the GPG Professional Job Centre through a number of important policy instruments, and they are discussed in detail below.

4.5.1 Frameworks Driving E-Recruitment Effectiveness in the GDeG

The study's findings reveal that the success of the GPG Professional Job Centre is rooted in a robust legislative and regulatory environment that ensures trust, security, and digital accessibility. Central to this framework is the Electronic Communications and Transactions Act (Act No. 25 of 2002), which underpins South Africa's digital governance model (GDeG, 2022:14). This Act governs electronic communications and transactions, offering both the public and private sectors a secure and dependable digital infrastructure (RSA, 2002). It also provides a legal framework that fosters innovation in technological human resource practices.

The GDeG's policies align closely with the objectives of this Act, particularly in promoting digital transactions, expanding public access to services, shaping national digital policy, and advancing digital literacy (South African Government, 2021). These objectives materialise in initiatives such as the GPG Professional Job Centre, an online platform designed to streamline public sector hiring and enhance service accessibility for citizens. The GDeG ensures that the platform operates in a secure, structured, and inclusive digital environment, improving reliability, usability, and operational efficiency.

Furthermore, the GDeG's Strategic Plan 2020–2025 underscores the importance of digital accessibility, cybersecurity, and public service modernisation, reinforcing the province's commitment to building a resilient digital ecosystem (GDeG, 2020). This plan positions digital transformation, supported by solid policy and legislative frameworks, as a key enabler for enhancing service delivery through improved transparency, efficiency, and citizen responsiveness.

In this context, the findings confirm that integrating the Electronic Communications and Transactions Act with provincial digital policies is essential to advancing Gauteng's e-recruitment efforts. This integrated framework ensures that digital platforms meet not only technical standards but also principles of fairness, inclusivity, and data protection. This aligns with existing literature asserting the critical role of legal and institutional frameworks in driving public sector digital transformation. The effective implementation of the GDeG's e-recruitment system, anchored in these frameworks, affirms the argument that secure and inclusive digital governance depends on clear regulatory underpinnings.

This is also consistent with the African Union's Digital Transformation Strategy for Africa 2020–2030, which advocates for an enabling legal and institutional environment to support accessibility, trust, and innovation in digital services (AU, 2024:6; Broadband Commission, 2023). Moreover, the AU stresses that successful digital transformation, especially in contexts like South Africa, requires not only technological adoption but also adaptive and collaborative ICT regulation (AU, 2020a:7). Gauteng's alignment with national and provincial digital strategies (GDeG, 2020; 2022) reflects this integrated approach. TechAfrica News (2024) further affirms that South Africa's ability to modernise outdated systems is contingent upon supportive regulatory conditions, despite infrastructural limitations.

Thus, the study validates the notion that legal clarity, the protection of digital rights, and inclusive digital design are not merely administrative considerations but foundational drivers of effective and fair public service delivery in the digital age. However, despite the existence of strong legislative frameworks, notable challenges remain. The Protection of Personal Information Act (POPIA, 2013) imposes stringent data management requirements on e-recruitment systems, and some departments face difficulties achieving full compliance (RSA, 2013). Van der Merwe and Rudman (2021) also note that while e-recruitment enhances transparency, digital exclusion in underserved areas continues to pose a barrier, despite

interventions such as the National Broadband Policy (2013). Additionally, a 2022 audit by the Public Service Commission (PSC) revealed that many departments continue to operate in silos, inconsistently applying digital platforms and hindering the full realisation of e-recruitment benefits (PSC, 2022).

The findings indicate that for the GPG Professional Job Centre to reach its full potential, it must be supported by rigorous policy implementation and adequate digital infrastructure. The National Development Plan (2030) emphasises the transformative potential of digital technologies in public service, but its success relies on closing implementation gaps (NPC, 2012). Comparative international evidence, such as from Estonia, demonstrates that successful e-recruitment systems are built on sustained investments in digital infrastructure and skills development (AU, 2020). For South Africa, this requires aligning the National Digital and Future Skills Strategy with e-recruitment objectives and reinforcing accountability through regular audits, as advocated by the Public Service Commission (2022).

The study's findings highlight the Gauteng Office of the Premier's adoption of the GPG Professional Job Centre for recruitment purposes and the introduction of a Succession Policy (GPG, 2023b:117). This policy seeks to identify promising individuals, develop their skills, and ensure a consistent talent pipeline to support uninterrupted service delivery (GPG, 2023b: 117). The success of this e-recruitment platform is rooted in a robust legislative and regulatory environment that ensures trust, security, and digital accessibility. Central to this framework is the Electronic Communications and Transactions Act (Act No. 25 of 2002), which underpins South Africa's digital governance model (GDeG, 2022:14). This Act governs electronic communications and transactions, offering both the public and private sectors a secure and dependable digital infrastructure (RSA, 2002). It also provides a legal framework that fosters innovation in technological human resource practices.

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4.6 Key challenges faced by the GDeG in implementing the e-recruitment system to enhance service delivery.

This research objective examined the challenges the Gauteng Department of e- Government faced in improving service delivery through the e-recruitment system.

4.6.1 Infrastructural Deficiencies

The study found that the e-recruitment system is important to the GDeG's overall digital transformation agenda. However, substantial issues remain despite the system's conformity with the province's digital modernisation goals. Based on the document analysed, the study uncovered that infrastructure delays, particularly in updating Wide Area Network (WAN) and Local Area Network (LAN) systems, have emerged as key challenges (GDeG, 2023:29, 61). The department's publicly available annual reports from 2023 to 2025 indicate patterns of infrastructural deficiencies, which have been recognized as barriers to the system's responsiveness and overall operational efficiency, thereby denying Gauteng residents access to critical Information and Communication Technologies (ICT) services (GDeG, 2024). Infrastructure inefficiencies represent the digital gap between cities and rural areas. Remote and underprivileged communities frequently lack access to high-speed internet, electricity, and ICT infrastructure, complicating universal service delivery. The findings are

consistent with existing literature that highlights how inadequate infrastructure contributes significantly to the widening of the digital divide. Scholars such as Manda and Backhouse (2016) and Ragnedda (2017) contend that digital exclusion can intensify pre-existing social and economic inequalities, ultimately limiting the transformative capacity of digital initiatives such as e-recruitment. This suggests that the infrastructural challenges experienced by the GDeG are not isolated to the provincial context but rather reflect a broader, global concern widely acknowledged in the academic discourse.

4.7.1 Proposing strategic recommendations for the GDeG to optimise the e-recruitment system's effectiveness in improving service delivery.

The findings of the study reveal that the Gauteng Department of e-Government (GDeG) is actively working to increase digital inclusion through several targeted interventions. These include the expansion of free Wi-Fi access across the province, with 30 new hotspots launched in December 2024 to enhance public access to e-services such as the e-recruitment platform (Illidge, 2025). This initiative is consistent with Banahan's (2024) assertion that digital exclusion presents a significant challenge in the public sector, where it limits access to essential services and opportunities. Banahan (2024) recommends the creation of public spaces equipped with free Wi-Fi and digital devices an approach that the GDeG has adopted to bridge the digital divide.

Further aligning with Christoforidis (2023), who emphasizes the importance of affordable internet access and the expansion of robust digital infrastructure, the study shows that the GDeG has connected 1,226 provincial sites to the Wide Area Network (WAN) and 701 sites to the Local Area Network (LAN). These efforts demonstrate a commitment to improving end-to-end connectivity across Government of the Provincial Government (GPG) locations, particularly in underserved areas. This infrastructure development is critical, as Valentín-Sívico et al. (2023) and Bergeron (2024) note that a lack of broadband access exacerbates social and economic inequalities, especially in rural or disadvantaged communities.

Moreover, the GDeG's approach to digital inclusion goes beyond infrastructure. The department also provides training and support to help individuals particularly those new to digital tools and people with disabilities navigate online platforms. This user-centered strategy reflects Bon, Saa-Dittoh, and Akkermans's (2024:289–290) recommendation that

digital services must be developed in collaboration with the communities they intend to serve.

4.7 Conclusion

This chapter presented and discussed the research findings in relation to the study's objectives and existing literature. The following chapter will provide a summary of the key findings, draw conclusions based on the research objectives, and offer practical recommendations aimed at strengthening the GDeG's implementation and utilisation of its e-recruitment system.

CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The previous chapter presented and interpreted the study's findings, drawing comparisons with the existing literature discussed in Chapter 2. This chapter provides a summary of the key research findings and offers recommendations aimed at addressing the challenges identified in the implementation and utilisation of the e-recruitment system by the GDeG. These recommendations are intended to enhance the effectiveness, accessibility, and sustainability of digital recruitment initiatives within the province's public sector.

5.2 Summary of Findings

The study's findings are summarized below:

Objective 1: To investigate the utilisation of the e-recruitment system by the Gauteng e-Government to enhance service delivery.

The first objective of this study was to examine the extent to which the Gauteng e-Government utilises its e-recruitment system to enhance service delivery. This objective was addressed through a qualitative analysis of a range of official sources, including the GDeG's Strategic Plan, National Planning Commission, GDoH annual report and the Independent Committee of Inquiry by COGTA. The analysis revealed that the department has taken meaningful steps toward digital transformation by introducing the GPG Professional Job Centre, a dedicated e-recruitment platform aimed at streamlining public sector hiring.

The findings indicate that the platform fosters greater transparency in recruitment processes and reflects a strategic shift toward the professionalisation of the provincial public service. This initiative directly responds to challenges such as limited institutional capacity, fragile administrative systems, and undue political interference issues identified in the literature review as key contributors to ineffective service delivery. The Gauteng e-Government's alignment with the National Development Plan (NDP) 2030 and the Public Service Commission (PSC), which advocates for a capable, ethical, and developmental state, reinforces this direction. The e-recruitment platform embodies this commitment by minimising human intervention, thus promoting fairness and efficiency in hiring.

Furthermore, the study highlights a clear transition from traditional, paper-based recruitment

methods to a technology-enabled system that facilitates faster decision-making, reduces bureaucratic inefficiencies, and enhances the overall effectiveness of the department. The e-recruitment platform is also recognised for its affordability and accessibility, broadening opportunities for a diverse range of applicants and contributing to more inclusive hiring practices.

Objective Two: To examine the existing policy and legal frameworks supporting the Gauteng e-Government's role in e-recruitment and its contribution to improving service delivery.

The second objective of the study to examine the policy and legal frameworks underpinning the Gauteng e-Government's role in e-recruitment and its impact on service delivery was achieved through a qualitative analysis of key government documents. These included the Gauteng Department of e-Government's Annual Performance Plan, Strategic Plan, and a consolidated version of the Electronic Communications and Transactions Act. The study found that the Gauteng e-Government operates within a robust regulatory and legislative framework that fosters trust, security, and accessibility on the GPG Professional Job Centre platform. Additionally, the study revealed that the policies implemented by the department ensure that digital platforms not only meet technical standards but also uphold core values such as justice, accessibility, and user protection. These components are critical in ensuring that public service delivery is both effective and equitable, which directly addresses the second research purpose.

Objective Three: Identify the key challenges faced by the GDeG in implementing and utilising the e-recruitment system to enhance service delivery.

The third objective of this research was to investigate the challenges faced by the Gauteng Department of e-Government in improving service delivery through the e-recruitment system. This objective was addressed through the qualitative analysis of relevant documents, such as the Gauteng Department of e-Government's Annual Performance Plan and Quarterly Performance Report. The findings indicate that one of the key challenges has been delays in the rollout of the broadband network, an issue that has persisted over the years, as reflected in the department's annual reports. Based on this analysis, the objective was achieved by identifying a critical area of weakness in the e-recruitment system.

Objective Four: Propose strategic recommendations for the GDeG to optimise the e-recruitment system's effectiveness in improving service delivery.

The study reveals that the Gauteng Department of e-Government (GDeG) has made significant progress in promoting digital inclusion and enhancing connectivity across the province. The GDeG has expanded free public Wi-Fi, including the launch of 30 new hotspots in December 2024, to improve access to digital government services such as the e-recruitment platform. The department connected 1,226 provincial sites to the Wide Area Network (WAN) and 701 sites to the Local Area Network (LAN), ensuring broader and more reliable digital connectivity within the public sector. GDeG offers training and digital literacy support, particularly for first-time users and people with disabilities, aiming to make digital services inclusive and user-friendly. These initiatives directly address issues of digital exclusion and align with broader policy recommendations advocating for affordable internet, community participation, and the development of user-centered digital infrastructure.

5.3 Conclusions

This study set out to examine the utilisation, policy context, challenges, and strategic opportunities associated with the Gauteng Department of e-Government's (GDeG) e-recruitment system as a tool for enhancing public service delivery. The conclusions presented here are drawn directly from the research objectives and the evidence-based findings. Firstly, the study concludes that the GDeG has made commendable progress in institutionalising digital recruitment practices through the implementation of the GPG Professional Job Centre. This platform represents a strategic and systemic shift from traditional hiring processes to a digital, transparent, and efficiency-driven approach. Its design and function reflect a strong alignment with national priorities, such as those articulated in the National Development Plan (NDP) 2030, and broader public sector reform goals. The e-recruitment system contributes to the professionalisation of the provincial public service and the promotion of fair and inclusive hiring practices by reducing manual intervention and increasing accessibility. Secondly, the success of the e-recruitment platform is underpinned by a robust legislative and policy framework. The study found that the Electronic Communications and Transactions Act (Act No. 25 of 2002) plays a pivotal role in providing legal certainty, data security, and regulatory oversight, all of which are essential for public trust and the effective functioning of digital platforms. The GDeG's alignment with this

framework ensures that its systems are not only technically sound but also ethically grounded in values of accessibility, justice, and user protection.

Thirdly, while notable progress has been made, the study highlights persistent infrastructural challenges, most notably, delays in the broadband rollout. These delays pose a significant barrier to the optimal utilisation of the e-recruitment platform, particularly in remote or underserved areas. Such limitations threaten to undermine the equitable access and efficiency that digital transformation aims to achieve. Lastly, the GDeG has taken meaningful steps to address digital exclusion by expanding public Wi-Fi access, improving digital infrastructure, and offering digital literacy support. These initiatives are in line with global best practices and academic recommendations that emphasize community participation, infrastructure investment, and user-centric service design. The GDeG is actively working to close the digital divide and extend the benefits of e-government services to a broader cross-section of the population by prioritising digital inclusion. In conclusion, the GDeG's e-recruitment initiative represents a promising model of digital transformation in the public sector. However, sustained investment in infrastructure, targeted support for vulnerable populations, and ongoing policy alignment will be essential for maintaining momentum and ensuring that digital tools genuinely enhance service delivery outcomes across the province.

5.4 Recommendations

The final objective of this study is to propose strategic recommendations for the GDeG to optimise the effectiveness of the e-recruitment system in improving service delivery. The recommendations are discussed in detail below:

Automated Recruitment Platform

According to the PSC (2022:iv), the Public Service is confronted with several challenges in its human resource management (HRM) practices. Although robust legislative and regulatory frameworks exist, persistent ethical and moral concerns continue to undermine the integrity of efforts to build a capable and developmental state (PSC:iv). As such, there is a pressing need for an innovative recruitment system that fully automates the recruitment, shortlisting, and selection processes. The current platform only partially automates these functions, with considerable human involvement remaining, which increases the risk of appointing unsuitable candidates.

Enhancing Accessibility and User experience

The GDeG must place importance on establishing a mobile-first, platform-based multilingual e-recruitment using digital chatbots and an easy navigation system. This way will aid in promoting accessibility to people from environments that are digitally limited. Evidence shown in the Gauteng Provincial Government's 2023 paperless recruitment pilot, that AI offers avenues to reduce administrative issues by 30%, through increasing participation as well as accessibility. Through departments adopting the use of digital tools, the re-recruitment system will aid in decreasing issues of potential employees applying for jobs or positions.

Implement Data-driven Recruitment

Through incorporating real-time analytics into the e-recruitment system, key performance indicators (KPIs) like applicant dropout rates and time-to-hire may be properly tracked. In 2023, the Public Service Commission reported that data-driven hiring processes might cut vacancy durations in the public sector by as much as 40%, tackling one of the most enduring issues in government hiring. Data analytics may help HR departments make better judgments, expedite the hiring process, and fill important roles more quickly.

Strengthen University Government Partnerships

In order to match graduate capabilities with the demands of the public sector, the GDeG should formally establish partnerships with universities and TVET colleges. The importance of organized collaborations with academic institutions is demonstrated by the success of the Western Cape's "Jobs Connect" project, which saw an increase in qualifying applicants. These partnerships could involve early talent identification efforts, curriculum co-development, and internship programs, guaranteeing a consistent supply of qualified applicants for government service delivery.

Strengthen Cybersecurity Measures

The GDeG must use POPIA-compliant encryption, biometric verification, and frequent security audits to safeguard sensitive application data. 60% of government systems have serious vulnerabilities, according to the SITA's 2023 Secure Digital Government Services Report, which calls for immediate security updates. Strong security measures are necessary

in an age of growing cyberthreats to preserve public confidence in the e-recruitment system and guarantee the integrity of the hiring procedure.

Launch Digital Literacy Campaigns

To increase the uptake of e-recruitment platforms, the GDeG ought to implement digital skills training initiatives across the country. Statistics Due mostly to deficiencies in digital literacy, only half of job seekers use online platforms, according to SA's 2023 Household Digital Access Survey. In order to ensure fair access to public sector employment prospects, targeted training initiatives that are based on successful programs like SARS's eFiling might greatly expand platform utilization, especially in rural and underprivileged regions.

Improving Digital Infrastructure

Firstly, delays in infrastructure upgrades may be attributed to ineffective project management and procurement inefficiencies, which hinder the timely implementation of critical digital infrastructure. In response, this study recommends strengthening internal capacity within the Gauteng Department of e-Government, particularly in project management and procurement functions. Capacity-building efforts should include targeted training programmes, the recruitment of qualified personnel, and the strategic appointment of skilled professionals in key roles. Furthermore, in line with the study's findings, it is proposed that all recruitment processes be conducted exclusively through the department's e-recruitment platform. The use of digital recruitment minimises human interference, thereby reducing the risk of patronage and enhancing the merit-based selection of competent staff who are equipped to drive the department's digital transformation agenda.

Secondly, it is recommended that a structured project execution framework or "flight plan" be adopted to ensure effective implementation of infrastructure projects. This plan should clearly define timelines, deliverables, and responsibilities at each stage of the infrastructure rollout process. Additionally, a legally enforced accountability mechanism should be established to hold personnel responsible for the fulfilment of their assigned duties. To further strengthen oversight, the department should establish an internal monitoring and evaluation committee tasked with tracking the progress of key projects, particularly those related to the deployment of Wide Area Network (WAN) and Local Area Network (LAN) systems. Such a measure would not only enhance transparency and accountability but also significantly

reduce, if not eliminate, the delays currently experienced in infrastructure implementation. Moreover, to safeguard the integrity and effectiveness of public service delivery, disciplinary measures should be enforced against underperforming or incapable staff. This approach will ensure that only competent personnel remain in roles critical to the department's digital transformation agenda.

Thirdly, prioritising investment in network infrastructure and digital literacy is essential for bridging the digital divide, particularly in the context of e-recruitment, where the majority of users are unemployed and may lack reliable access to digital resources. The department should forge strategic partnerships with telecommunications service providers to offer affordable data plans, subsidised devices, and discounted internet packages specifically targeted at low-income individuals and underserved communities to promote inclusive access. Such initiatives will help to ensure that all citizens regardless of their socio-economic status have the opportunity to engage with digital public services, thereby advancing equity and preventing the marginalisation of vulnerable groups in the digital era.

Lastly, the Gauteng Department of e-Government's Professional Job Centre is an important tool for expediting the recruiting process, but it is cloaked in mystery due to a lack of detailed, publicly available documentation. This opacity demands additional research to understand its operation's complexities and impact. A thorough examination of the system's mechanics could reveal useful insights into its effectiveness and indicate areas for improvement. For example, understanding how the e-recruitment system interacts with existing infrastructure and technology could aid in hiring process optimisation. Furthermore, an in-depth analysis of how e-recruitment can address issues of nepotism and political hires is needed.

5.5 Limitations of the Study

One of the limitations of this study was the restricted availability of publicly accessible documents specifically focused on the GPG Professional Job Centre. The official publications from the Gauteng Provincial Government and the Gauteng Department of e-Government tended to address ICT services in general, without offering detailed insights into the e-recruitment platform as a standalone initiative. As a result, the analysis was limited to broader digital service delivery frameworks. It is acknowledged that the inclusion of fieldwork, such as interviews with departmental officials or user surveys, could have provided more nuanced insights into the practical effectiveness, user experiences, and operational

challenges of the GPG Professional Job Centre. Therefore, future research incorporating primary data collection is recommended to strengthen and deepen the findings.

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ANNEXURE A: CERTIFICATE OF ATTENDANCE



CERTIFICATE OF ATTENDANCE

This certificate is awarded to
K Selwe 30513529

In recognition of attending the Faculty of Humanities' Ethics Training Session
on Tuesday, 18 April 2023

Professor Mirna Nel
Deputy Dean Research and Innovation
Faculty of Humanities

Professor Susan Coetzee van Rooy
Chairperson: ECLM

Professor Erhabor Idemudia
Chairperson: BaSSREC and HSSREC

18 April 2023
Date



ANNEXURE B: LETTER OF STUDY



Private Bag X1290, Potchefstroom
South Africa 2520

Tel: 018 299-1111/2222
Fax: 018 299-4910
Web: <http://www.nwu.ac.za>

**Basic and Social Sciences Research Ethics
Committee (BaSSREC)**

**Faculty of Humanities Ethics Office for Research,
Training and Support**
Tel: 018 285 2457

Email: Ernabor.Idemudia@nwu.ac.za

Senate Committee for Research Ethics
Tel: 016 103 4446
Email: Fezwe.Mselele@nwu.ac.za

19 November 2024

ETHICS APPROVAL LETTER OF STUDY

Based on approval by the **Basic and Social Sciences Research Ethics Committee (BaSSREC)** on **18/11/2024**, the Basic and Social Sciences Research Ethics Committee hereby **approves** your study as indicated below. This implies that the North-West University Senate Committee for Research Ethics (NWU-SERC) grants its permission that, provided the special conditions specified below are met and pending any other authorisation that may be necessary, the study may be initiated, using the ethics number below.

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|--------------|---|---|---|---|------|---|--------|---|---|---|---|---|-------------|--|--|--|--------------|--|--|--|--|------|--|--------|--|--|--|
| Study title: Evaluating the effectiveness of the Gauteng Department of e-Government's e-recruitment system in improving service delivery. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Study Leader/Supervisor (Principal Investigator)/Researcher: Dr. L. Chigova and Prof. C. Hofisi | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Student/Research Team: K.P. Selwe (30513529) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ethics number: | <table border="1"> <tr> <td>N</td><td>W</td><td>U</td><td>-</td><td>0</td><td>1</td><td>0</td><td>6</td><td>0</td><td>-</td><td>2</td><td>4</td><td>-</td><td>A</td><td>7</td> </tr> <tr> <td colspan="3">Institution</td> <td></td> <td colspan="4">Study Number</td> <td></td> <td>Year</td> <td></td> <td colspan="4">Status</td> </tr> </table> <p>Status: S = Submission; R = Re-Submission; P = Provisional Authorisation; A = Authorisation</p> | N | W | U | - | 0 | 1 | 0 | 6 | 0 | - | 2 | 4 | - | A | 7 | Institution | | | | Study Number | | | | | Year | | Status | | | |
| N | W | U | - | 0 | 1 | 0 | 6 | 0 | - | 2 | 4 | - | A | 7 | | | | | | | | | | | | | | | | | |
| Institution | | | | Study Number | | | | | Year | | Status | | | | | | | | | | | | | | | | | | | | |
| Application Type: Single study | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Commencement date: 18/11/2024 | Risk: <input type="text" value="No risk"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Expiry date: 18/11/2025 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Approval of the study is initially provided for a year, after which continuation of the study is dependent on receipt and review of the annual (or as otherwise stipulated) monitoring report and the concomitant issuing of a letter of continuation. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

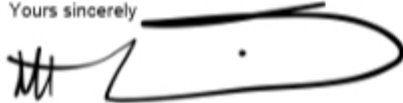
Special in process conditions of the research for approval (if applicable):

| |
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| <p>General conditions:</p> <p>While this ethics approval is subject to all declarations, undertakings and agreements incorporated and signed in the application form, the following general terms and conditions will apply:</p> <ul style="list-style-type: none"> The study leader/supervisor (principal investigator)/researcher must report in the prescribed format to the BaSSREC: <ul style="list-style-type: none"> annually (or as otherwise requested) on the monitoring of the study, whereby a letter of continuation will be provided, and upon completion of the study; and without any delay in case of any adverse event or incident (or any matter that interrupts sound ethical principles) during the course of the study. |
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- The approval applies strictly to the proposal as stipulated in the application form. Should any amendments to the proposal be deemed necessary during the course of the study, the study leader/researcher must apply for approval of these amendments at the BaSSREC, prior to implementation. Should there be any deviations from the study proposal without the necessary approval of such amendments, the ethics approval is immediately and automatically forfeited.
- Annually a number of studies may be randomly selected for an external audit.
- The date of approval indicates the first date that the study may be started.
- In the interest of ethical responsibility, the NWU-SCRE and BaSSREC reserves the right to:
 - request access to any information or data at any time during the course or after completion of the study;
 - to ask further questions, seek additional information, require further modification or monitor the conduct of your research or the informed consent process;
 - withdraw or postpone approval if:
 - any unethical principles or practices of the study are revealed or suspected;
 - it becomes apparent that any relevant information was withheld from the BaSSREC or that information has been false or misrepresented;
 - submission of the annual (or otherwise stipulated) monitoring report, the required amendments, or reporting of adverse events or incidents was not done in a timely manner and accurately; and / or
 - new institutional rules, national legislation or international conventions deem it necessary.
- BaSSREC can be contacted for further information or any report templates via BaSSREC-Admin@nwu.ac.za.

The BaSSREC would like to remain at your service as scientist and researcher, and wishes you well with your study. Please do not hesitate to contact the BaSSREC or the NWU-SCRE for any further enquiries or requests for assistance.

Yours sincerely



Prof. E. Idemudia

Chairperson NWU Basic and Social Sciences Research Ethics Committee

Original details: (22351930) C:\Users\22351937\Desktop\ETHICS APPROVAL LETTER OF STUDY.docx
8 November 2018

File reference: 9.15.4.2