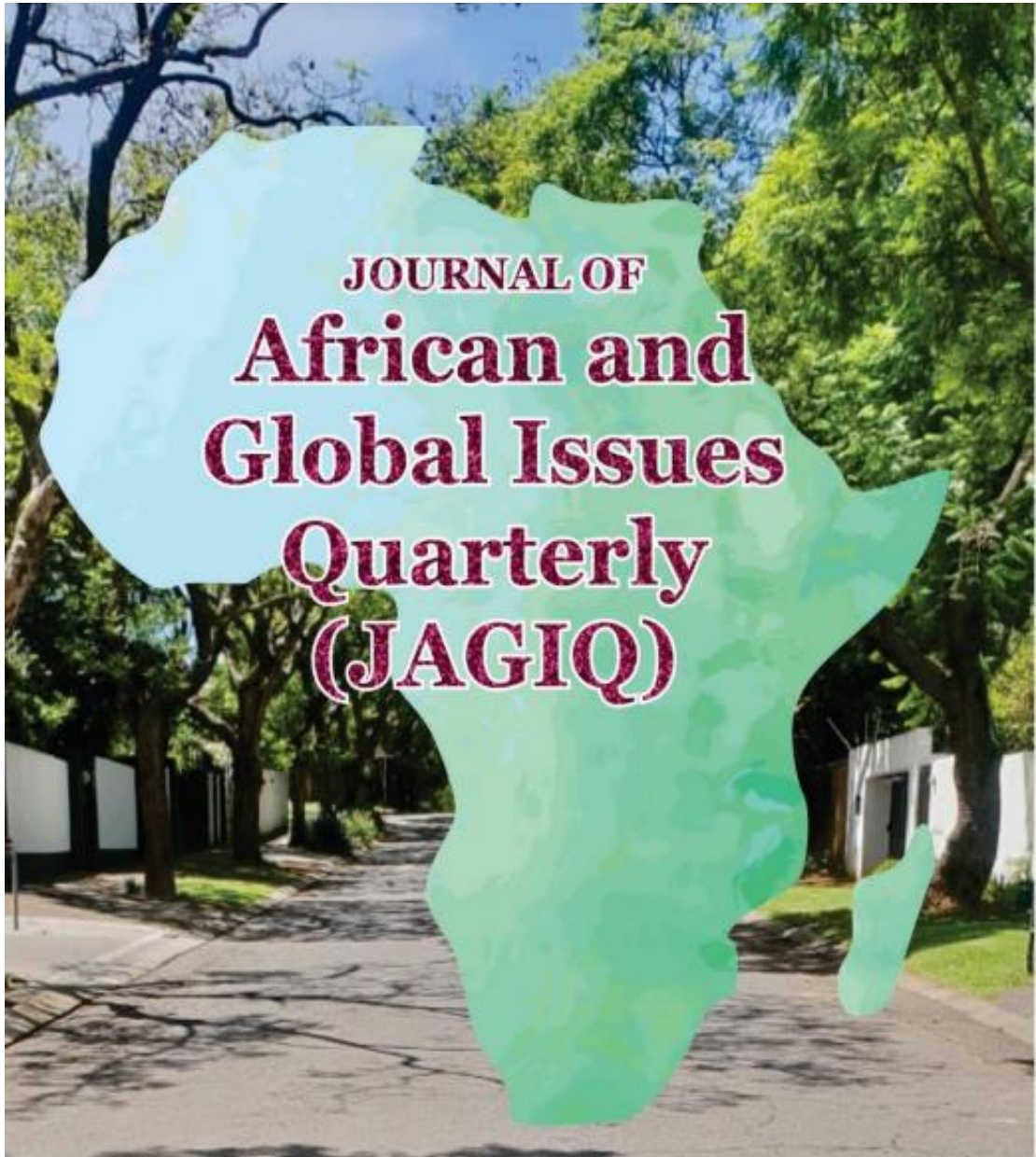




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EDITORIAL NOTE

This volume represents concerted calls within and outside Africa on the need for multidisciplinary collaboration and research output. Specifically, papers were drawn from all disciplines and research focuses, which has further increased the quality of research and collegial engagement. Hence, topics covered in this volume cut across the areas of economics, politics, security, ICT, indigenous knowledge, development studies, finance, trade, youth engagement, agriculture, democratization, and nation-building, among others.

For instance, Thizwilondi Josephine Mudau in ***African Youths and the Promotion of Sustainable Development through the Lens of Indigenous Knowledge (IKS) in the 21st Century*** employed qualitative desktop research methodology in synthesizing existing literature to argue that IKS represents a dynamic body of wisdom encompassing sustainable agriculture, natural resource management, and community resilience and offers proven, contextually grounded solutions to modern challenges like climate change and food insecurity. The analysis highlights youth-led initiatives across the continent that are revitalizing indigenous crops, integrating traditional ecological knowledge with climate adaptation strategies, and using digital platforms for cultural preservation. Mudau concluded that for Africa to achieve authentic and sustainable development, a concerted effort is needed to empower youth through inclusive education, supportive policy frameworks, and intergenerational dialogue, thereby transforming indigenous knowledge from a cultural heritage into a living toolkit for a resilient future.

Masila Joshua Masipa in ***Beneficiaries of Corruption? An analysis of the function of South African banks in handling and making money from crime proceeds*** adopted institutional theory and the political economy of corruption and a qualitative research design that combines semi-structured interviews with compliance officers, financial regulators, and civil society actors with document analysis of Zondo Commission and Financial Intelligence Centre (FIC) reports, legal statutes, and policy papers in examining how, in spite of strict anti-money-laundering (AML) and anti-corruption laws, South African banks may profit from, handle, or ineffectively stop the flow of monies associated with corruption. Specifically, with an emphasis on whether banks directly or indirectly benefit from the proceeds of crime, Masipa investigated the relationship between financial institutions and illegal financial flows within the following objectives: (1) assess the regulatory framework that oversees AML compliance; (2) examine high-profile cases of corruption in which banks are implicated; (3) evaluate due diligence and institutional accountability; and (4) suggest changes to improve ethical banking governance.

Then Sipho Patrick Bhengu-Mancosa & Andrisha Beharry-Ramraj in ***Advancing Small, Medium, and Micro Enterprise Growth through Digitalized Enterprise and Supplier Development in South Africa*** examined the current state of Enterprise and Supplier Development (ESD) in South Africa, investigated the role of digitalization in enhancing ESD, identified the challenges and opportunities in digitalizing ESD, and provided recommendations for policymakers, corporates, and Small, Medium, and Micro Enterprises (SMMEs). A qualitative secondary data approach was employed, drawing on thematic analysis of existing literature, reports, and industry initiatives. For key findings, Bhengu-Mancosa & Beharry-Ramraj indicated that ESD adoption remains limited; digitalization (Mancosa) significantly enhances market access and supplier diversity; infrastructure and skills gaps persist; and strategic digital integration can unlock growth opportunities for SMMEs.

Lere Amusan & Ebenezer O. Oni, in their study, ***Disinvestment of Multinational Corporations (MNCs) in Developing Areas: An Assessment of Shoprite Disengagement in Nigeria, started by reflecting on why***, at the global level, many MNCs have started to disengage from their host states. In a bid to respond to the possible reasons, Amusan & Oni pushed further into examining possible reasons that could explain why Shoprite, a large South African retailing company, disinvested from Nigeria after operating in the country for about 15 years, using secondary sources supported by primary data and personal observations. For them, the reasons range from political, economic, marketing, and legal to civil society attitudes towards their business. Employing the twin theories of neoliberalism and oligopoly that facilitate globalization, Amusan & Oni concluded that, aside from losing litigation to its erstwhile Nigerian business partners, competition from domestic and foreign retail companies contributed in no small measure to why Shoprite exited the Nigerian market.

In A sober teacher is a problem”: Unpacking Political Ideology and Emancipatory Struggles Within teacher unionism, Zwane Thembinkosi Trevor & Matsepe David adopted the grounded postcolonial theory in examining how teacher unions embody and deploy political stances and ideologies to promote the emancipation and freedom of education, as well as the broader communities they aim to serve. Clearly, Trevor and Matsepe employed a qualitative interpretivist approach to analyze data from narrative interviews with unionized educators, along with further examination of public union discussions. Key findings of their research indicated four interrelated themes: (1) political consciousness as both a threat to order and a driver of democratic emancipation; (2) teacher unions functioning as a counter-hegemonic force challenging neoliberal geopolitics and political norms; (3) the ideological repositioning of teacher unions as intellectual activists rather than compliant officials; and (4) tensions between political agency and professional identity.

Douglas Nyath in Rural Youth and the Future of Farming in Sub-Saharan Africa: Revisiting the Abandonment Debate explored whether rural youth are truly abandoning agriculture or are instead redefining their involvement through diversified livelihood strategies. It examines the socio-economic, institutional, and cultural factors influencing youth decisions and analyzes how emerging hybrid forms of engagement—such as agripreneurship and part-time farming—are reshaping rural economies. A systematic desktop synthesis of peer-reviewed literature (2000–2025) was conducted using databases like Google Scholar, Scopus, and Web of Science. Nyaath observed that youth disengagement from agriculture is not uniform but context-specific, and the key determinants to such disengagement include land scarcity, education, labor market structures, gender norms, and limited access to finance and technology.

Then, in ***Equal Ideals, Unequal Realities: Gender Dynamics in the Workplace of an International Religious Non-governmental Organisation in Eswatini***, Thembumenzi Jomo Ntshalintshali & Innocent Simphiwe Nojiyeza examined attitudes, experiences, and organizational practices regarding gender roles, power dynamics, and inclusivity by drawing on in-depth interviews and focus groups with 20 employees from a range of departments and hierarchical levels. The results of their findings show that male participants, who were primarily ideologically devoted to gender equality, showed conflicted feelings about shifting power dynamics. Unconscious bias, policy implementation gaps, and organizational culture were equally identified as the primary obstacles to change. The results emphasize that in order to guarantee changes in gender equality, context-specific solutions are required that go beyond the adoption of policies.

In Indigenous Knowledge Systems and Environmental Conservation *Ngugi's Petals of Blood*, Thabo Prince Zondo started by reflecting on members of the impoverished and socio-

economically disadvantaged community who are distressed by incessant drought and who consult a seer and offer sacrifices to seek solutions. Using this as a point of departure, Zondo explored how text gestures and Indigenous Knowledge Systems (IKS) address the real dilemmas faced by Africans following the extensive and cross-generational crises that accompany coloniality. In this, Zondo provided an ecocritical reading of the text, drawing on relevant postcolonial/decolonial ideas to illustrate the ways in which indigenous African epistemologies can indeed boost efforts at environmental conservation and poverty alleviation in rural communities today.

Also, **Rendani Tshifhumul** in *Exploring the Role of African Indigenous Knowledge Systems in Healing Practices and Resilience During the COVID-19 pandemic in Thohoyandou*, presented a narrative inquiry into the experiences of individuals who survived COVID-19 without requiring hospitalization, based on in-depth interviews with three respondents. For Tshifhumul, among the identified practices were the inhalation of steam treated with stones and salt, as well as the application of various herbal concoctions, including *Tshiumbeumbe*, *Musese*, *Mufula Musudzungwane*, *Miora*, and *Mubomo*, guava leaves, and lemon grass tea, including a mixture that comprises onion, ginger, lemon, honey, and garlic. Therefore, Tshifhumul concludes that these findings not only shed light on the adaptive strategies employed by individuals in response to the pandemic but also underscore the significance of traditional healing practices in the context of contemporary health crises. Khulisile Judith Nkuna & Sikhumbuzo Sibuso Khoza, in their work, *Capturing Cultural Heritage: Exploring the Poetic Elements of Domesticated Animal Praise*, carried out an analytical analysis of the lyrical components found in the praises of Siswati domestic animals. Nkuna & Khoza observed that expressing gratitude to animals for their contributions to human life remains a significant goal of animal praise. Reflecting on case studies, they noted that the Nguni people view domestic animals as very close environmental companions, particularly for those who live in rural areas. Praise poetry's primary goal is to commemorate great men's accomplishments. However, the reverse is the case for the Swati people, who have a tradition of honoring non-human animals in their poetry, including the wild animals they encounter in their environs as well as the domestic livestock they raise.

Intaher M. Ambe, Ellsworth C. Jonathan, Phathutshedzo D. Lavhelani,* and David H. Selby, in their study, *Exploring the landscape of demand management practices in the public health sector in the Gauteng Province, South Africa: An Empirical Analysis*, employed secondary sources in determining what demand management practices are employed within Gauteng, South Africa, and public health sector institutions. Findings in their study revealed substantial obstacles in organizational structure, demand management techniques, budget, and alignment between demand planning and strategic goals, as well as supply chain management (SCM) rules, regulations, and specifications. They conclude that the paucity of demand management implementation in public sector organizations reveals a misalignment between strategic goals, demand management, and demand planning, resulting in a loss of value for public sector organizations.

Aderinsola E. Kayode, Shalini Sing, & Patricia P. Badenhorst's research, *ICT for Indigenous Knowledge Dissemination and Education in Africa: A Systematic Review*, conducted a systematic review of literature published between 2015 and 2025 to examine how ICT tools and platforms have been deployed to support indigenous knowledge dissemination and education in African contexts. The findings of their research indicated that ICT can enhance indigenous knowledge preservation, improve youth engagement, facilitate intergenerational learning, and broaden global visibility of African knowledge systems when implemented with community participation. However, challenges remain regarding digital

access, cultural sensitivity, intellectual property rights, and the sustainability of technology-driven initiatives.

In ***Donald Trump-Twitter Diplomatic Disruptions And Impact On The Post-World War II International Order.***, Ndivhoniswani Aaron Tshidzumba & Puseletso Nthate examine how President Donald Trump's unprecedented use of Twitter as a direct channel for foreign policy communication disrupted established diplomatic norms inherited from the post-World War II international order. Through content analysis of Trump's social media communications, examination of foreign policy outcomes, and comparative analysis with traditional diplomatic practices, Tshidzumba & Nthate demonstrated that Trump's social media presidency constituted a significant departure from institutional diplomacy and contributed to broader challenges facing the established international order. Further findings reveal that digital direct engagement by heads of state bypasses institutional constraints, undermines multilateral consensus-building, and creates new vulnerabilities in international relations.

Furthermore, in ***Determinants And Effect Of Small-Scale Livestock Production On Household Income In Malawi: Evidence From Fifth Integrated Household Survey***, Gladson Andrew Chipala, Christopher Chombo & Hannah Dunga examined the determinants and effects of small-scale livestock production on household income among farmers in Malawi, using cross-sectional data from the Fifth Integrated Household Survey (IHS5) with a sample of 8,795 households. Their key findings indicate that household size, access to credit, access to extension services, landholding size, distance to the market, and location in the Northern region significantly increase the likelihood of participation in livestock production. Notably, households engaged in livestock production earned, on average, an additional MWK 36,405.76 compared to non-producing households, demonstrating its important role in improving economic welfare.

In ***Navigating Artificial Intelligence Personalization and Consumer Privacy in Digital Marketing across South Africa and Global Contexts***, Suraksha Moothura and Andrishah Beharry-Ramraj critically examined how AI-driven hyper-personalization in digital marketing influences consumer privacy, with a specific focus on its ethical implications and regulatory challenges in South Africa in comparison to global standards using desktop literature review methodology. Moothura & Beharry—Ramraj observed that ethical concerns such as manipulation, algorithmic bias, and reduced consumer autonomy were found to be inadequately addressed in South Africa, where legal instruments like POPIA lack the specificity and enforcement capacity evident in global standards like the GDPR. Taleat, Bisiriyu Abiodun & Lukamba, Muhlya Tshombe's article, ***Energy Sustainability and Sustainable Development Agenda: The Role of Public-Private Partnership in South Africa***, investigated the role and effectiveness of Public-Private Partnerships (PPPs) in South Africa's energy development towards sustainability using a qualitative desk research methodology to analyze secondary data from policy documents, scholarly literature, and government publications. For Abiodun & Tshombe, key findings demonstrate that PPPs have attracted a substantial amount of private investment and benefited the economy through job creation and community development. However, institutional and systemic barriers, e.g., Eskom monopoly, regulatory uncertainty, grid integration constraints, and institutionalized dependency on coal, impede the full implementation of PPPs in accelerating the energy transformation. Hence, they recommend policy stability, energy regulation reform, enhancing financial methods, and ensuring that social equity consideration is factored into PPP structures.

For Olukayode Idris Lasisi in *The Governance–Development Nexus in Nigeria: A Conceptual Synthesis of Good Governance and Policy Discourse Theories*, a qualitative, conceptual, and desk-based review approach was employed, relying on the literature, policy documents, and theoretical frameworks in reevaluating the governance development interface in Nigeria in terms of the role of institutional weaknesses, the inconsistency of policies, and discursive framing in the determination of sustainable development outcomes. Findings revealed that weak institutions, corruption, bureaucratic inefficiencies, low accountability, and marginalization in policymaking processes bedeviled Nigeria’s sustainable development, thereby distorting policy implementation and weakening effective service delivery. Lasisi concludes by calling for the need to strengthen institutions, improve transparency, guarantee policy sustainability, encourage civic participation, and apply digital governance solutions, which is essential to attaining sustainable development.

Eyitayo Francis Adanlawo & Mpho Chaka in *The Effect of Ethnicity And Politics on the Democratization of African Nations* examined the theoretical challenge that ethnicity poses to the African state and the challenges it poses for democratization on the continent. To guide the discourse, critical questions are raised: What kind of connection exists in Africa between politics and ethnicity? Under what conditions may ethnicity either support or undermine democracy? Can citizenship rights be reconciled with ethnicity? . Furthermore, Adanlawo & Chaka explored the evolution of ethnicity from the viewpoints of development communication and provided it with a psycho-social meaning. In their conclusion, Adalanwo & Chaka posited that, if ethnicity has an informative component, we should anticipate that voters' reliance on ethnic cues will decrease when certain forms of higher-quality information become available.

Lindokuhle Senamile Ntuli & Innocent Simphiwe Nojiyeza in *Does Resource Scarcity Constrain Rural Women’s Entrepreneurial Performance in KwaZulu-Natal, South Africa?*, examined whether resource scarcity significantly constrains the entrepreneurial performance of rural women in KwaZulu-Natal (KZN), South Africa. Anchored in the Resource-Based View (RBV), the study adopts a quantitative research design using survey data collected from 273 rural women entrepreneurs across uMhlabuyalingana, Big5Hlabisa, and eJozini municipalities. **Ntuli & Nojiyeza** revealed statistically significant relationships between entrepreneurial performance and seven resource-based constraints: leadership skills, financial institutional barriers, entrepreneurial experience, regulatory constraints, access to financial resources, technological limitations, and limited training opportunities. Lastly, in *Transformative Governance Frontiers: Relational Public Administration for Smart City Inclusivity*, Melvin Diedericks examined the conceptualization of informal systems in the context of South African smart city initiatives. By repositioning informal systems as co-creators in urban governance, this study advocates for a paradigm shift from technocratic optimization to relational inclusion. This reframing aligns with South Africa's constitutional and developmental goals, enabling transformative governance and the effective localization of SDGs in sustainable cities.

It is expected that these works compiled in this volume will further enrich the discourse and provide policy options to individuals, governments, and countries, particularly in Africa.

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EXPLORING THE LANDSCAPE OF DEMAND MANAGEMENT PRACTICES IN PUBLIC HEALTH SECTOR IN THE GAUTENG PROVINCE, SOUTH AFRICA: AN EMPIRICAL ANALYSIS

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Abstract

This paper aims to examine the demand management practices implemented within public health sector institutions in Gauteng, South Africa. The study adopted a quantitative survey approach, where structured questionnaires were distributed to 235 demand management practitioners across various public health facilities in the province. A total of 207 completed questionnaires were returned, resulting in a high response rate of 88.08%, which strengthens the reliability and credibility of the findings. The results indicate that, although demand management practices are formally recognised within the public health sector, their implementation remains constrained by several significant challenges. These include weaknesses in organisational structures, ineffective demand management techniques, limited budget allocations, and poor alignment between demand planning and institutional strategic objectives. Furthermore, inconsistencies in the application and interpretation of supply chain management (SCM) policies, regulations, and specifications were identified as additional barriers affecting effective demand management. The limited and inconsistent implementation of demand management in public sector organisations highlights a concerning misalignment between strategic goals, demand planning, and operational processes. This misalignment ultimately leads to inefficiencies and a potential loss of value for public institutions, particularly in a sector as critical as public health. Strengthening coordination between strategic planning and demand management processes is therefore essential to enhance service delivery, optimise resource utilisation, and improve overall organisational performance. Since the study was confined to Gauteng Province, the findings may not fully represent the situation in other provinces. Future research should be conducted in other regions of South Africa to provide comparative insights and determine whether

similar challenges exist across the broader public health sector. Such studies could contribute to the development of more standardised and effective demand management frameworks at a national level.

Keywords: demand practices, supply chain management policies, supply chain management regulations, implementation of demand management, challenges in implementing demand management.

Introduction

Gauteng Province, home to approximately 25.1% (15.83 million people) of South Africa's population, reflects the growing tension between rising healthcare demand and constrained public resources (Stats SA, 2024). Rapid population growth, urbanisation, and cultural diversity continue to expand the demand for public health services. The COVID-19 pandemic further exposed systemic fragilities within the provincial healthcare system, necessitating the addition of approximately 2,200 emergency beds and placing significant strain on available resources (Gauteng Department of Health, 2022; Rispel et al., 2021). Despite substantial fiscal allocations—approximately R67 billion for the 2025/26 financial year the sector continues to experience inefficiencies in resource distribution and service delivery (Gauteng Department of Health, 2024).

Demand management (DM) plays a critical role in addressing these pressures by aligning healthcare demand with available resources to ensure efficient service delivery. Effective demand management begins with understanding patient needs and translating them into appropriate planning, forecasting, and supply chain decisions (Tlhaku et al., 2024). In healthcare settings, this includes optimising patient scheduling, maintaining stable medicine and medical supply availability, and improving coordination across supply chain processes (Hawkins, 2021). However, public healthcare institutions in Gauteng continue to face shortages of essential equipment, pharmaceuticals, and infrastructure, exacerbated by a high disease burden, including significant HIV

and hypertension prevalence (Govender et al., 2021; Endler et al., 2022).

Globally, research demonstrates that advanced analytical tools such as predictive modelling, machine learning, simulation modelling, and stochastic programming significantly improve demand forecasting and resource allocation. Studies from Finland, Canada, Tunisia, Bangladesh, and other settings report measurable reductions in waiting times and operational costs through optimised demand-supply alignment (Tenhunen et al., 2018; Abid et al., 2023; Yao et al., 2024). Evidence further suggests that health systems in low- and middle-income countries can achieve efficiency improvements of up to 18–22% through enhanced demand-supply integration (Atun et al., 2020).

Within South Africa, however, research remains fragmented. Studies examining Gauteng's eHealth systems and waiting time interventions reveal persistent challenges in decision-making, demand prioritisation, and system integration (Moonsamy & Singh, 2024; Nwagbara et al., 2024). While initiatives such as the Ekurhuleni Chronic Dispensing Unit have demonstrated improvements in patient access and workload reduction, systemic inefficiencies remain (Ngende & Davis, 2023). Existing literature acknowledges resource limitations and policy misalignment but provides limited empirical insight into how organisational structures, supply chain management practices, and budgetary constraints affect demand management implementation in Gauteng's public health institutions.

Given Gauteng's high population density, significant disease burden, and post-pandemic resource pressures, a context-specific empirical investigation is necessary. This study therefore seeks to examine the demand management practices employed within the Gauteng Provincial public health sector and to identify the key barriers that impede their effective implementation.

Specifically, the study addresses the following research questions:

- What are the dominant demand management practices observed in the Gauteng Provincial public health sector?
- What barriers restrict the practical implementation of these demand management practices in healthcare service delivery?

By generating empirical evidence from demand management practitioners, this study contributes to improving demand forecasting, resource allocation, and service delivery within Gauteng's high-demand public health system. The findings further provide strategic insights for policymakers and healthcare administrators seeking to enhance operational efficiency.

The remainder of this paper is structured as follows: Section 2 reviews the relevant literature; Section 3 outlines the research methodology; Section 4 presents and discusses the findings; and Section 5 concludes with recommendations for policy and practice.

Literature review

Demand Management in Public Health

Demand management techniques in public health sectors vary significantly between industrialised and developing nations, primarily due to differences in resources, infrastructure, and policy frameworks. Developed countries generally possess more sophisticated systems that enable improved demand management tactics (Li, Guo, Liu, & Yao, 2025). Conversely,

emerging nations often face challenges such as limited financial resources and inadequate infrastructure, which hinder their ability to meet demand efficiently (Galvin et al., 2023). Demand management in public health sectors is essential for effective resource allocation, patient flow regulation, and personnel optimisation (Redda & Surujlal, 2020). These strategies are critical for optimising healthcare outcomes, minimising expenses, and elevating patient satisfaction. This response analyses the dominant demand management strategies in industrialised nations, such as the USA and the UK, alongside those in developing regions, like Africa, India, and Brazil.

Resource Allocation Practices

Resource allocation is key to demand management in public health, involving the distribution of limited resources, such as beds, staff, and equipment, to meet patient needs and optimise outcomes. In advanced nations, the distribution of resources is frequently directed by data, employing advanced analytics to predict demand and enhance distribution (Loveday et al., 2020). Throughout the COVID-19 pandemic, healthcare facilities in the USA and the UK utilized optimization models to assign beds and resources, consequently decreasing surge capacity needs by as much as 98% (Parker, Ganjkanloo, Martínez, & Ghobadi, 2024). Hospitals must allocate limited capacity by reallocating beds, staff, and schedules and control demand through triage, transfers, cancelling elective procedures, or reverse triage (Hajjar et al., 2021). These measures affect patient outcomes, staff workload, and hospital operations.

In developing regions, resource allocation is challenged by limited infrastructure and an uneven distribution of healthcare workers. In rural India, the availability of health workers has marginally improved since the implementation of the National

Rural Health Mission (NRHM) (Moulick, 2025). In Tanzania, the demand for facility-based care is predominantly influenced by demand-side variables (76%) rather than supply-side problems (24%), including healthcare accessibility and personnel availability (Binyaruka et al., 2023). Policy solutions should prioritise demand-driven approaches, such as health education, to enhance awareness among less educated and high-parity groups, hence improving the quality of interpersonal care.

Developed nations employ sophisticated models and data-driven techniques for resource allocation, whereas developing regions face obstacles such as infrastructural constraints and resource disparities. Both realms benefit from optimisation, resulting in cost reductions and improved outcomes.

Patient flow management

Efficient management of patient flow is crucial for optimizing the movement of patients within the healthcare system. By streamlining operations, it is possible to significantly decrease waiting times and enhance the overall quality of service. Both governments and scholars strive to address the deficit in medical resources through various strategies. Governments are increasing healthcare expenditures to improve services, build facilities, and procure equipment. China's initiative, "Health China 2030," aims to establish a comprehensive healthcare system across the nation (Yu et al., 2023). To lower maternal and neonatal mortality rates, there is a consensus that women must have access to high-quality and timely facility-based delivery care provided by qualified healthcare professionals (Candidori et al., 2024). Nevertheless, there is considerable variation in access to skilled or facility-based births both within and between countries. In 25 out of 80 low- and middle-income countries (LMICs), the percentage of deliveries attended by skilled birth attendants surpassed 90% (Ward, Atun, King, Sequeira Dmello, & Goldie, 2023).

Conversely, in 11 of these countries, this figure was reported to be below 40% (Collins et al., 2025). Additionally, in 25 sub-Saharan African countries, the percentage of skilled birth attendants varied from 24% in Chad to 97% in South Africa (Bobo, Asante, Woldie, Dawson, & Hayen, 2021). Effective management of patient flow and demand must consider the systemic inequalities that impact marginalized groups. The incorporation of equity-focused strategies can help to reduce disparities and improve the delivery of inclusive care.

Barriers to effective demand management

Outdated healthcare policies hinder the integration of emerging technologies, particularly in care for individuals with intellectual disabilities, because regulatory frameworks are designed for obsolete systems (MacNeil, Juzwishin, & Stolee, 2021). Centralised data management systems also pose risks of single-point failures during disruptions. In the year 2023, the leading platforms used by consumers include Facebook (69%), YouTube (57%), Instagram (45%), TikTok (33%), and Twitter (30%) (Jeyaraman et al., 2023). Nevertheless, issues such as violations of patient confidentiality and unprofessional behaviour continue to exist. Social media has revolutionized medical education by providing opportunities for networking and professional development (D'Souza, Hooten, & Murad, 2021). However, concerns exist about the spread of false information and a lack of regulation to verify content accuracy.

Policy-related barriers pose additional challenges that hinder the effective implementation of demand management strategies in healthcare. These obstacles derive from regulatory frameworks, policy deficiencies, and the intricacies of healthcare systems.

The intricacy of healthcare systems obstructs effective demand management.

The implementation of policy plays a vital role in enhancing successful interventions for the prevention and management of chronic diseases (McGinty et al., 2024). Policy can aid in scaling up by either mandating or providing incentives for the adoption of interventions; nevertheless, the execution of a policy is only the first step. A comprehensive execution of a policy designed to promote health interventions generally requires multiple supporting implementation frameworks, including health IT systems, as well as various techniques, such as training (Bullock, Lavis, Wilson, Mulvale, & Miatello, 2021). Decision-makers require policies that foster the acceptance of interventions and strategies for their implementation (Martins et al., 2021). However, there is a scarcity of research on policy implementation, which necessitates the development of innovative approaches.

Infrastructure and demand management challenges within Gauteng's Public Health Sector

The Gauteng Department of Health, the most populous province in South Africa, provides healthcare services at over 400 facilities across the province (Gauteng Department of Health, 2022). This sector includes hospitals, clinics, and community health centres and is responsible for

fulfilling the healthcare needs of a vast and diverse patient population (H. F. Chan et al., 2020). These facilities must manage a dual burden of disease (communicable and noncommunicable), compounded by financial constraints and human resource limitations (Ukoha, Mtshali, & Adepeju, 2022). In reaction, Gauteng has broadened the Ideal Clinic Initiative and incorporated the National Health Insurance (NHI) pilot to enhance accessibility and standardize service quality (Rispel, Marshall, Matiwane, & Tenza, 2021b). Despite all obstacles, the healthcare sector in Gauteng continues to provide critical services to the public. Additionally, efforts are being undertaken to improve the quality of therapy and its accessibility.

Table 1 summarises the composition of public health facilities in Gauteng. These include 13 district, eight regional, and 19 specialised hospitals, as well as four central and three tertiary hospitals. The network is anchored by three major academic hospitals—Chris Hani Baragwanath, Steve Biko, and Charlotte Maxeke —affiliated with leading South African universities. Collectively, they offer over 5,500 beds and serve as national centres of excellence for advanced clinical services, medical training, and research (Mawela, & Razwiedani, 2022).

Table 1: Category of Gauteng health facilities

The category of hospital	Type of healthcare provided	Quantity
District hospital	Generalist care	13
Regional hospital	Specialist care	8
Specialised hospital	Specialised care for certain specialised groups of patients	19

Tertiary hospital	Highly specialised care	3
Central hospital	Very highly specialised care for multi-speciality clinical services, innovation and research	4
Community Clinics	Primary health community health facilities	377

Source: Researchers' compilation (2022)

The Gauteng Department of Health is tasked with the allocation of scarce resources to improve the quality of public healthcare services for the residents of the province, even considering the increasing population and difficult economic conditions. Consequently, it is imperative for the South African public sector to refine its demand management strategies.

A Strategic Framework for Healthcare Demand Management

Demand management refers to the practice through which businesses, governments, and other organisations seek to influence and regulate the flow and timing of consumer demand (Govindan et al., 2020). The primary objective of demand management is to ensure that supply aligns effectively with consumer demand. Strategic demand planning, which forms part of demand management, aims to enhance financial performance through various activities, including pricing decisions, inventory management, and forecasting to anticipate and respond to changing customer needs (Ambe, 2011). Demand management seeks to optimise supply chain performance in response to demand fluctuations. In addition, demand management also comprises employing data science and technology to monitor demand trends, anticipate demand, and improve inventory levels (Mukucha, Manyika, Madhuku, & Chari, 2017). By understanding customer needs and preferences, demand management enables companies to tailor their offerings to meet

market demand and gain a competitive edge.

In the process of producing accurate estimates, demand management encompasses multiple stages. It operates as a pull system where the flow of the supply chain management (SCM) process is dictated by demand (Halvorsen, Koutsopoulos, Ma, & Zhao, 2020). According to Basson et al. (2019), demand management synchronizes SCM capabilities with consumer demand. Demand management assists organizations in balancing supply and demand, mitigating risk, and optimizing resource utilization (Christian, 2022). From the definitions provided, it can be concluded that demand management allows organizations to procure goods and services at the most advantageous time, location, and price. In accordance with the concepts outlined, Figure 1 depicts demand management as an integral part of supply chain management (Damoah, 2022).

- Demand management necessitates the examination of consumer demand patterns and the prediction of future demand levels. This analysis enables supply chain managers to effectively organize manufacturing and distribution processes, ensuring that products are available when and where consumers require them.
- To plan, demand managers investigate consumers' past demand patterns. Supply chain

managers may utilise this data to enhance their ability to forecast demand and respond accordingly.

- For demand management to be effective, suppliers and distributors in the supply chain must collaborate. Sharing data and information on demand trends and customer requirements might benefit supply chain partners.
- Another facet of demand management is the flexibility of a company's supply chain in the face of demand changes. This requires the flexibility to quickly

adjust production volumes, product lines, and distribution strategies in response to changes in customer demand.

- Lastly, demand management must be conducted frequently and is constantly developing. Supply chain managers should regularly examine demand data to identify process improvements, such as implementing precise forecasting or enhancing communication methods with their strategic partners.

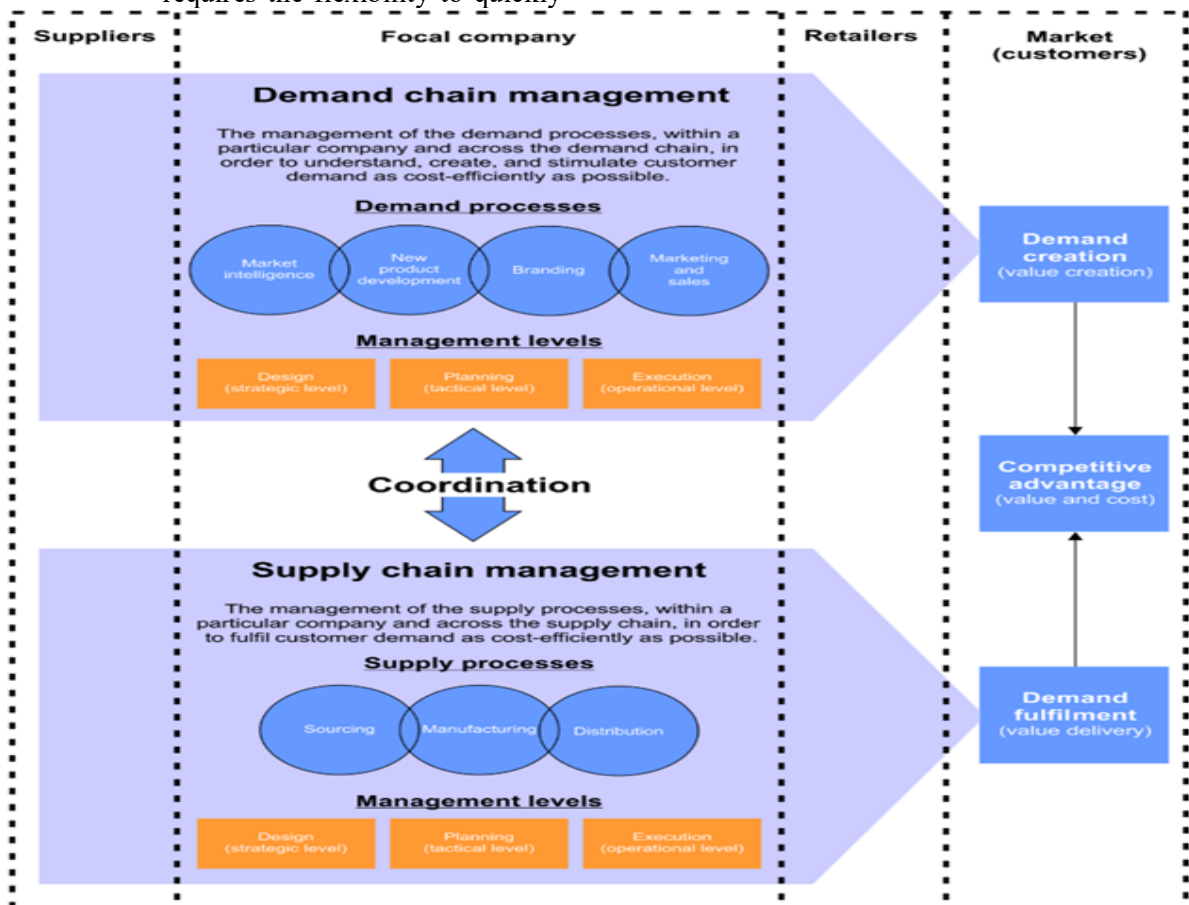


Figure 1 Demand management as an integral part of supply chain management

Source: Ivanov (2021).

Public Sector Demand Management Practices in Gauteng

Demand management guarantees that the resources required to fulfil defined strategic goals during extensive planning sessions are obtained in adequate quantity,

quality (Setino & Ambe, 2016), and timely manner (Setino & Ambe, 2016). Strengthening healthcare service delivery efficiency is the primary objective of

demand management in the Gauteng public health system (Murphy & Moosa, 2021). Ensuring appropriate healthcare in South Africa's Gauteng province is challenging due to high demand (Dwijendra et al., 2022; Murphy & Moosa, 2021). The following solutions may assist with demand management planning;

- Two fundamental health education and promotion components are developing public awareness and instructing the public on disease prevention and healthy living. This may lessen the need for medical therapy, especially for readily preventable illnesses.
- Primary health care emphasises that enhancing these services may reduce the need for subsequent, more expensive treatment. This may be accomplished by increasing the number of clinics and community health centres.
- Referral systems: Developing effective referral systems may contribute to ensuring patients receive the appropriate level of treatment, and this may reduce the demand for specialist hospital treatments and wait times.
- With an appointment system, service demand might be managed better, shortened wait times for patients and accelerated access to the necessary medical assistance.
- Telemedicine enables remote patient monitoring and management and may reduce the need for in-person consultations.
- Investments in infrastructure, equipment, and human resources may improve the health system's performance, provide services, and meet demand.

Elements of Supply Chain Management (SCM) that should be integrated into the public sector encompass demand management, acquisition management, logistics management, disposal management, risk management, and performance management (Moeti, 2020). The significance of demand management within the Supply Chain Management business model is illustrated in Figure 2. As depicted in Figure 2, the essential elements of the SCM model are interrelated, forming a cohesive SCM framework that adheres to supply chain management best practices (SCMBPs) (Ansah & Akipelu, 2021). It is crucial that each component provides value to achieve optimal outcomes. The SCM business model includes monitoring and optimization tools designed to improve the SCM regulatory framework (Basson et al., 2019). To aid end-users in determining the frequency of requests, demand management specialists within a public sector organization must possess a comprehensive understanding of both current and anticipated demand (Mukucha et al., 2017). Demand management is vital for budgeting, ensuring that the planned acquisition of products, services, and works aligns with the budgetary constraints. Consequently, demand management professionals are required to assist end users in implementing demand management strategies by conducting assessments of needs, expenditures, commodities, markets, and industries (Setino & Ambe, 2016). Initial market analysis and the lack of demand plans present challenges for public sector organizations, leading to ineffective demand planning (Williams, 2019). Insufficient needs assessments are initiated, and future demand is often overlooked in demand plans.

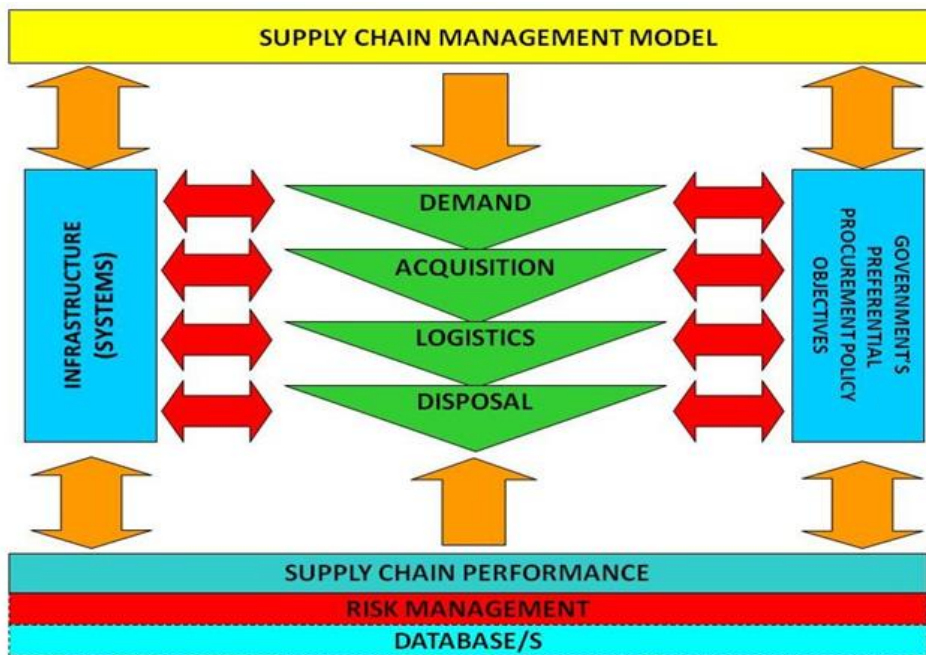


Figure 2: The Role of Demand Management in the Supply Chain Management Business Model Source: Moeti (2020)

Practitioners in demand management are required to assist end users in formulating precise specifications for commodities and terms of reference for services. They must also provide ongoing guidance to stakeholders regarding challenges in demand management, including the resolution of these issues (Strydom et al., 2022). It is essential to compile specifications that clearly articulate customer requirements in order to prevent any ambiguous or misleading descriptions.

Research Methodology

To fulfil the objectives of this study and address the research inquiries, it was necessary to conduct a survey to collect insights from a broad range of respondents regarding enhancements in demand management processes within the Gauteng Provincial public sector. Survey research is a quantitative approach frequently employed in the social sciences, marketing, and business fields to obtain data from either a population or a sample of individuals. The primary goal of survey research is to gather information concerning the attitudes, beliefs, behaviors, opinions, and other

characteristics of a specific group. To meet the research objectives, the researcher utilized the GDoH database and selected employees at level seven and above as participants, as defined by the human resource grading system. This grading encompassed SCM directors, managers, and practitioners from all GDoH institutions. An online questionnaire was employed to gather data from 235 demand management practitioners within the target population across 47 provincial health facilities. The database contains approximately 5,300 SCM practitioners throughout the province, of which 235 are identified as demand management practitioners. This study adopted a whole-population sampling method, a purposive sampling approach that investigates the entire population with particular characteristics. A questionnaire featuring several open-ended questions was crafted to collect data for the present study. A five-point Likert scale was utilized to assess the responses, with measurements ranging from 1 = strongly disagree to 5 = strongly agree (Harpe, 2015). The data collected were systematically organized and analysed descriptively using the Statistical

Package for the Social Sciences (SPSS) version 27 to uncover common relationships and trends in enhancing demand management processes within the Gauteng Provincial public health sector. Pearson's chi-squared test was employed to ascertain all relationships between pairs of categorical variables, and descriptive statistics were presented as frequencies, expressed as percentages (Turhan, 2020). All inferential statistics were interpreted with a specified error rate.

Results and Discussion

The findings of the study and their possible implications are elaborated upon in the comprehensive discussion section, which clarifies the data. The overall response rate for this survey was 207 out of a potential 235, equating to 88.08% of the entire research population. This participation level was considered adequate by the statistician involved in the study. Pearson's chi-squared test was employed to ascertain all relationships between pairs of categorical variables, while descriptive statistics were presented in terms of frequencies, expressed as percentages (Turhan, 2020). All inferential statistics were analysed with a significance level of 0.05. To assess internal consistency, Cronbach's alpha was applied with a cutoff of 0.7, and factor analysis

was conducted to condense the data. The results will be examined by analysing descriptive statistics pertinent to demand management practices in order to address the research question. The analysis of the responses utilized the following abbreviations: SD for 'strongly disagree', DA for 'disagree', DN for 'neither agree nor disagree', A for 'agree', and SA for 'strongly agree'. The mean scores were interpreted as follows: 0–1.50 indicated strong disagreement, 1.50–2.50 indicated disagreement, 2.50–3.50 indicated neutrality, 3.50–4.50 indicated agreement, and scores above 4.50 indicated strong agreement. Three primary variables were identified to assess demand management practices within Gauteng's public sector institutions: the consideration of demand management, the formulation of specifications and terms of reference, and the involvement of key stakeholders.

Demand management considerations

Participants were requested to evaluate the seven statements utilizing a five-point Likert scale regarding the degree of demand management issues within the Gauteng Provincial Health Sector. Table 2 illustrates the viewpoints of the respondents on demand management elements, organized by the highest mean score.

Table 2 Considerations for managing demand

Practice	Mean	Median	Std. dev.	Skewness	Kurtosis
We consult with our end users to understand their specific requirements	4.48	5.00	0.723	-1.636	3.062
We implement effective sourcing strategies	3.96	4.00	1.210	-0.954	-0.346
We analyse supplier cost structures	3.81	4.00	1.265	-0.889	-0.394

We hold suppliers accountable for poor performance	3.73	4.00	1.381	-0.676	-1.003
We analyse BAS reports weekly	3.41	4.00	1.296	-0.385	-1.048
We analyse SAP reports daily	3.41	3.00	1.219	-0.364	-0.737
We identify suppliers for subcontracting opportunities	3.30	3.00	1.417	-0.242	-1.275

Source: Researchers' compilation (2022)

Concerning the perceptions of respondents regarding demand management considerations, Table 4 reveals that most respondents ($M = 4.48$, $SD = 0.723$) concurred that end-users were consulted to ascertain their specific needs. This was succeeded by the statement, "Effective sourcing strategies are implemented" ($M = 3.96$, $SD = 1.210$), which suggested that the cost structures of suppliers were examined ($M = 3.81$, $SD = 1.265$), that accountability was enforced for suppliers who underperformed ($M = 3.73$, $SD = 1.381$), and that BAS reports were reviewed on a weekly basis ($M = 3.41$, $SD = 1.296$). Additionally, SAP reports were scrutinized daily ($M = 3.41$, $SD = 1.219$). The responses that received the lowest rankings indicated that suppliers were identified for subcontracting purposes ($M = 3.30$, $SD = 1.417$). The findings related to demand management considerations produced a mean score that varied from 4.48 to 3.30. The elevated mean score indicates that most institutions within the GDoH health sector have adopted demand management considerations. These findings align with the guidelines set forth by the National Treasury (2015), which stipulates that demand management practitioners should incorporate demand management considerations by motivating

end users to conduct analyses of needs, budgets, commodities, markets, and industries.

Development of specifications and terms of reference

The formulation of specifications and terms of reference represents a pivotal activity in demand management. To enhance the understanding of how demand management is applied within public hospitals, participants were requested to evaluate eight statements using a five-point Likert scale, assessing the degree to which demand management has established specifications and terms of reference in accordance with SMART principles. Table 5 displays respondents' opinions about creating requirements and terms of reference. To gain a deeper understanding of the application of demand management in public hospitals, respondents were asked to rate eight statements on a five-point Likert scale regarding the extent to which demand management has developed specifications and terms of reference in line with SMART principles. Table 3 displays respondents' opinions about creating requirements and terms of reference.

Table 3 Creation of specifications and terms of reference

Practice	Mean	Median	Std. dev.	Skewness	Kurtosis
The Bid Specification Committee (BSC) is designated by the Head of Department (HOD).	4.17	4.00	0.993	-1.277	1.144
The Bid Specification Committee (BSC) incorporates acceptable standards within its specifications.	4.16	4.00	0.931	-1.100	0.779
The Bid Specification Committee (BSC) formulates specifications impartially.	4.14	4.00	1.036	-1.105	0.359
Irregular spending is communicated to the Loss Control Unit	4.11	4.00	1.074	-1.234	0.863
The Bid Specification Committee (BSC) formulates terms of reference in alignment with the SMART criteria, which stands for Specific, Measurable, Agreed, Achievable, Realistic, and Time-Bound.	4.07	4.00	1.024	-0.969	0.048
The Bid Specification (BSC) consolidates specifications in accordance with the SMART criteria, which stands for Specific, Measurable, Agreed, Achievable, Realistic, and Time-Bound.	4.06	4.00	1.055	-0.918	-0.187
Ineffective and unproductive spending has been reported to the Loss Control Unit	3.99	4.00	1.115	-1.021	0.195
BSC (Bid Specification Committee) attend meetings regularly	3.93	4.00	1.101	-0.824	-0.321

Source: Authors' compilation (2022)

The responses were ranked from the highest to the lowest average score. Table 3 illustrates that the majority of participants ($M = 4.17$, $SD = 0.993$) concurred that the Head of Department (HOD) appoints members of the Bid Specification Committee (BSC)—a commendable action, as it supports the notion that experts are involved in the specification development process. The second-highest rating ($M = 4.16$, $SD = 0.931$) reflects that the BSC establishes

suitable standards, while the third-highest rating ($M = 4.14$, $SD = 1.036$) implies that the BSC formulates requirements in an objective manner. This finding suggests that the South African public sector is progressing positively towards ensuring an equitable Supply Chain Management (SCM) process. Following this, $M=4.11$, $SD=1.074$, indicates the presence of unusual expenditures reported to the Loss Control Unit, whereas $M=4.07$, $SD=1.024$, signifies that the BSC

generates terms of reference in alignment with SMART criteria. The scores of $M=4.06$ and $SD=1.055$ denote that the BSC creates specifications in accordance with SMART principles, while $M=3.99$ and $SD=1.115$ reveal that the Loss Control Unit is made aware of unnecessary and wasteful expenditures. In terms of regular attendance at BSC meetings, the lowest score recorded was $M=3.93$, $SD=1.101$. The average score for the preparation of specifications and terms of reference varied from 4.17 to 3.93. The elevated score suggests that the majority of

hospitals within the Gauteng Department of Health (GDoH) have established requirements and terms of reference that are consistent with SMART principles. These findings align with the assertions made by the National Treasury (2016), which emphasizes that specifications should be crafted in a manner that does not favor any specific vendor. In accordance with the supply chain standards set forth by the National Treasury (NT), the responsibility of demand management is expected to be executed by key stakeholders.

Table 4 Crucial participants in the demand management process

Practice	Mean	Median	Std. dev.	Skewness	Kurtosis
The Chief Financial Officer (CFO) is designated as the chair of the Bid Adjudication Committee (BAC)	4.54	5.00	0.652	-1.304	1.416
We employ the demand plan for the acquisition of goods	4.39	5.00	0.822	-1.789	4.254
The Head of Department (HOD) grants approval for contracts exceeding R1 million.	4.38	5.00	0.803	-1.425	1.816
Cost centre managers are responsible for approving all procurement requests.	4.25	4.00	0.849	-1.120	0.806
The Bid Evaluation Committee (BEC) assesses bids based on established evaluation criteria.	4.21	4.00	0.802	-0.859	0.314
The Bid Adjudication Committee (BAC) is well-versed in the regulations of Supply Chain Management (SCM).	4.15	4.00	0.906	-0.944	0.148
We guarantee that only the items specified in the on-demand plans are acquired.	4.09	4.00	1.111	-1.180	0.531

The Bid Specification Committee (BSC) assembles the criteria for evaluation.	3.94	4.00	0.912	-0.505	-0.569
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Source: Authors' compilation (2022)

Utilizing a five-point Likert scale, Table 4 illustrates the viewpoints of survey participants regarding the critical role of individuals involved in the demand management process. The responses were ranked from highest to lowest based on the mean scores. As depicted in Table 4, the most significant number of responses (M=4.54, SD=0.652) indicated agreement that the CFO serves as the chairperson of the BAC, followed by M=4.39, SD=0.822, which reflects that the demand plan is employed for the procurement of goods; M=4.38, SD=0.803, which signifies that the HOD approves contracts exceeding R1 million; and M=4.25, SD=0.849, which implies that cost centre managers are responsible for approving contracts above R1 million. The sixth-highest score (M=4.15, SD=0.906) indicates that the BAC is knowledgeable about SCM regulations, followed by M=4.09, SD=1.111, which suggests that only the commodities specified in the demand plan are procured. The criterion for the BSC compilation assessment received the lowest mean scores (M=3.94, SD=0.912). The results concerning the primary role-players engaged in demand management processes ranged from an average of 4.54 to 3.94. The elevated score suggests that a majority of respondents perceive hospitals as playing a vital role in the demand management process. These findings align with those of De Villiers and Niemann (2022), who contend that the involvement of key role players in the demand management process is crucial.

Conclusions

This study sought to explore demand management strategies within public sector organizations in Gauteng, South Africa. To this end, research was conducted among supply chain professionals in public hospitals. Three

key areas were identified and examined: demand issues, specifications and terms of reference, and significant stakeholders. The data indicated that the highest-rated demand management strategies were 'crucial role players', followed by 'demand considerations', 'specifications', and 'terms of reference', with scores ranging from 4.54 to 4.17.

In the public sector of Gauteng, methods involving essential role players were recognized as the most employed demand management techniques. The elevated score for demand management highlights the critical role of key stakeholders in the process. Demand management considerations ranked as the second most frequently applied strategy, with a high score reinforcing their adoption. The findings revealed that most hospitals fulfilled requirements, which included analyses of expenditures, commodities, markets, industries, and suppliers. Specifications and terms of reference were identified as the third most utilized demand management strategy. The high score validated the development of specifications and terms of reference that adhere to SMART principles. The findings indicated that several hospitals generate objective specifications and terms of reference based on SMART concepts. Furthermore, the results uncovered significant challenges related to organizational structure, demand management practices, budgeting, alignment between demand planning and strategic objectives, as well as supply chain management (SCM) rules, regulations, and specifications.

Declarations

Study Limitations

An essential limitation of this research was its confinement to public health sector

institutions in Gauteng. As facilities relied on the GDoH, several replies were expected to be comparable.

The researcher recognised these assumptions and made efforts to prevent generalisations. Subsequent studies ought to utilise different research methodologies

to enhance comprehension of demand management practices, adherence to SCM regulations, and the synchronization of demand planning with strategic objectives and financial plans. Additionally, future research should be conducted in various public health sector facilities across other provinces in South Africa.

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