



## Evaluating Alternative Infrastructure Financing for Local Economic Development in South Africa

Tonderai Kapesa<sup>1</sup> , Neo Mokone<sup>2</sup> 

Department of Taxation, University of South Africa, Preller St, Muckleneuk, Pretoria, South Africa<sup>1</sup>  
Centre on African Philanthropy and Social Investment (CAPSI), Wits Business School, University of the Witwatersrand, Johannesburg, South Africa<sup>2</sup>

### Info Articles

### Abstract

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**Purpose:** The study evaluates alternative financing models, including Public-Private Partnerships (PPPs), municipal bonds, blended finance, and pooled instruments, to address South Africa's critical municipal infrastructure backlog. It aims to identify feasible and scalable pathways to support Local Economic Development (LED) in a context where traditional national fiscal transfers have become unsustainable.

**Design/Methodology/Approach:** The research employs a qualitative desk-based methodology, synthesizing data from peer-reviewed academic literature, National Treasury reports (2021–2025), and Auditor-General findings. The desk study is supported with 8 key informant interviews. The analysis is theoretically grounded in Public Choice Theory, Transaction Cost Economics, and Developmental State Theory to explore how political incentives and governance structures shape municipal financing decisions.

**Findings:** Results reveal a systemic crisis exacerbated by R467.2 billion in municipal consumer debt and a 22.5% underperformance in capital expenditure. Significant disparities exist; while large metros account for 58% of total expenditure and 90% of long-term borrowing, secondary and rural municipalities are hindered by poor credit ratings and high transaction costs. Furthermore, PPP uptake remains below 10% due to regulatory complexity and institutional capacity deficits.

**Practical Implications:** The study recommends a tiered strategy rather than a uniform approach, suggesting that complex market instruments be reserved for metros while intermediate cities utilize pooled financing and Development Finance Institution (DFI) support.

**Originality/Value:** This study contributes to the literature by integrating empirical municipal data with an LED framework, providing a comprehensive evaluation of multiple instruments tailored to the structural inequalities of South African local government.

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Address Correspondence:

E-mail: [kapest@unisa.ac.za](mailto:kapest@unisa.ac.za) or [tonykap09@gmail.com](mailto:tonykap09@gmail.com)<sup>1</sup>  
[Neo.mokone@wits.ac.za](mailto:Neo.mokone@wits.ac.za)<sup>2</sup>

## INTRODUCTION

Local Economic Development (LED) remains a central pillar of South Africa's developmental agenda, aimed at fostering inclusive growth, employment creation, and poverty reduction (Rogerson, 2017). A robust and reliable system of economic infrastructure, encompassing transport, energy, water and sanitation services, and digital connectivity, is widely recognised as a foundational enabler of LED. Infrastructure investment supports spatially grounded enterprise development, enhances productivity, attracts private investment, and strengthens public service delivery. Yet, despite its strategic importance, municipal infrastructure in South Africa faces deepening structural deficits that increasingly undermine local economic performance and developmental outcomes.

South Africa's municipal infrastructure backlog, estimated at approximately R300 billion, reflects decades of underinvestment, rapid urbanisation, institutional weaknesses, and the deterioration of existing assets (National Treasury 2021). Sector-specific shortfalls are acute. In the water sector, investment gaps have contributed to rising supply disruptions and persistent non-revenue water losses, undermining both household welfare and business continuity. Energy infrastructure similarly requires substantial upgrading to expand generation capacity, modernise transmission networks, and rehabilitate municipal distribution systems. Chronic failures in electricity supply constrain productivity, deter investment, and limit prospects for local economic diversification.

These infrastructure deficits are compounded by mounting fiscal pressures. Municipal consumer debt has escalated significantly in recent years, with households accounting for the largest share (National Treasury 2024). Structural drivers of non-payment, including affordability constraints, weak billing systems, and limited enforcement capacity, erode municipal revenue bases and restrict funds available for capital investment and maintenance. At the same time, municipalities have displayed persistently low utilisation rates of conditional infrastructure grants, reflecting systemic governance challenges, capacity constraints, and inefficiencies in project planning and procurement. Under-expenditure coexists paradoxically with growing backlogs.

A further dimension of the crisis lies in inadequate asset maintenance. Municipal spending on repairs and maintenance remains well below internationally recommended benchmarks (Auditor-General South Africa 2024). Under-maintenance accelerates asset degradation, increases long-term lifecycle costs, and perpetuates a cycle of service interruptions and infrastructure failure. Collectively, these financial, operational, and governance weaknesses reveal a systemic infrastructure challenge that directly undermines LED objectives and exacerbates spatial and socio-economic inequalities.

The limitations of traditional public financing mechanisms have become increasingly evident in this context. Reliance on intergovernmental transfers, conditional grants, and constrained own-revenue sources has proven insufficient to address widening infrastructure gaps (Kapesa 2024a). As fiscal pressures intensify, attention has shifted toward alternative financing models capable of mobilising additional capital, transferring appropriate risks, and leveraging private-sector expertise (Kapesa 2024a). Globally, a range of mechanisms, including Public-Private Partnerships (PPPs), municipal bonds, blended finance instruments, pooled financing facilities, and impact investment structures, have emerged to supplement conventional public funding and expand infrastructure investment in developing and middle-income countries (Grimsey and Lewis 2004; Kapesa 2024b).

Among these, **Public-Private Partnerships (PPPs)** have been widely adopted to enhance efficiency, improve risk allocation, and broaden access to long-term finance. International experience from countries such as India, Brazil, and Kenya demonstrates both the potential and the risks of PPP arrangements, particularly where governance and regulatory systems are uneven (Hodge & Greve 2007; World Bank 2020). Although South Africa has established a formal PPP regulatory framework under the auspices of the National Treasury, municipal uptake remains limited. Fewer than 10 percent of municipalities have implemented PPP projects, largely due to regulatory complexity, insufficient technical capacity, and weak project preparation processes (Ramolobe and Khandanisa 2024).

**Municipal bonds** represent another important instrument for long-term infrastructure financing. In countries such as the United States, India, and Mexico, municipal bond markets have supported large-scale local infrastructure investment, underpinned by transparent financial management and credible credit enhancement mechanisms (Peterson 2012; Liu & Waibel 2008). In South Africa, selected metropolitan municipalities have issued green and sustainability-linked bonds to align infrastructure investment with climate and service delivery objectives. However, most smaller municipalities face significant barriers, including limited creditworthiness, weak financial reporting systems, and low investor confidence.

**Blended finance**, which combines concessional or public funds with private capital to de-risk infrastructure projects, has gained prominence in developing economies. Experiences from Kenya, Uganda, Indonesia, Bangladesh, and Vietnam demonstrate how concessional funding can enhance project bankability and crowd in commercial investment (OECD 2018). In South Africa, development finance

institutions, including the Development Bank of Southern Africa, have piloted blended instruments in sectors such as renewable energy and water (Kapesa, Mugano and Fourie 2021). Nevertheless, these initiatives remain insufficiently scaled, and systematic evaluations of their long-term developmental impact are limited.

**Pooled financing mechanisms** offer additional possibilities, particularly for smaller or financially weaker municipalities. By aggregating borrowing needs and diversifying risk, pooled funds can reduce transaction costs and improve access to capital markets. International examples, including state-level pooled bond programmes in the United States and urban development funds in India, demonstrate the potential of this approach to address creditworthiness disparities. Given the pronounced inequalities across South African municipalities, similar credit enhancement and pooled financing facilities may provide viable pathways for expanding infrastructure finance beyond large metropolitan areas.

Despite the promise of these alternative financing mechanisms, international and domestic scholarship consistently emphasises that institutional capacity and governance quality are decisive determinants of feasibility. Municipalities require robust financial management systems, credible revenue streams, transparent procurement processes, and strong contract management capabilities to successfully structure and manage complex financing arrangements. In South Africa, well-documented weaknesses in financial planning, billing systems, project preparation, and regulatory compliance constrain the effective adoption of PPPs, bonds, and blended finance instruments (Rogerson 2017; SALGA 2020). Comparable patterns are observed in other developing countries, where administrative capacity gaps and regulatory fragmentation have limited municipal access to credit-based financing and private participation.

Regulatory frameworks further shape implementation outcomes. While South Africa's PPP framework is comprehensive, its procedural complexity, including extensive feasibility assessments and multilayered approval requirements, often exceeds municipal administrative capacity. Similarly, bond issuance requires stringent disclosure standards and credit ratings that many municipalities struggle to meet. Global evidence suggests that enabling conditions such as political commitment, institutional coherence, risk-mitigation instruments, and coordinated support from higher spheres of government are essential to sustainable infrastructure financing.

The theoretical framework of this study is constructed upon three complementary perspectives that elucidate the complexities of municipal infrastructure financing.

Public Choice Theory Pioneered by Buchanan and Tullock (1962), Public Choice Theory posits that political incentives, electoral cycles, and bureaucratic self-interest fundamentally drive public-sector decision-making. In the context of municipal finance, this lens suggests that officials may prioritize "short-termism," opting for financing arrangements that offer immediate fiscal relief or political capital while potentially externalizing higher long-term costs (Buchanan & Tullock 1962). This perspective is vital for understanding why municipalities might avoid transparent, long-term debt obligations in favour of opaque or deferred fiscal strategies.

Transaction Cost Economics (TCE) As advanced by Williamson (1985), Transaction Cost Economics (TCE) evaluates how governance structures, such as Public-Private Partnerships (PPPs) or bond issuances, are selected to mitigate costs under conditions of bounded rationality and uncertainty. Municipal infrastructure is characterized by high asset specificity and extensive contract durations, which inherently elevate transaction costs related to monitoring and enforcement (Williamson 1985 1996). Consequently, TCE provides a rigorous framework for assessing whether a municipality possesses the institutional and technical capacity to manage complex risk allocations without incurring prohibitive administrative costs.

Developmental State Theory Finally, Developmental State Theory, associated with Evans (1995) and Stiglitz (1989, 1998), frames infrastructure finance as a strategic instrument for socio-economic transformation rather than a mere fiscal entry. From this viewpoint, the state must play an active role in correcting market failures and mobilizing capital toward inclusive growth (Stiglitz 1998). This theory emphasizes that successful Local Economic Development (LED) outcomes depend on "embedded autonomy", the state's ability to coordinate with the private sector while maintaining the institutional integrity required to direct finance toward long-term developmental goals (Evans 1995).

Although the literature confirms the potential of PPPs, municipal bonds, blended finance, and pooled instruments to augment infrastructure investment, significant gaps remain. Much of the South African scholarship focuses narrowly on PPPs, with limited comparative analysis of multiple financing mechanisms within an integrated LED framework. There is also a paucity of recent systematic evaluations of blended and pooled finance models at municipal level. Moreover, questions of feasibility, enabling conditions, governance design, and alignment with LED objectives remain insufficiently explored in combination.

Against this backdrop, this article undertakes a desk-based review of academic literature, policy documents, and institutional reports to examine which alternative financing models can feasibly support municipal infrastructure development and strengthen LED in South Africa. By integrating political economy analysis, governance theory, and comparative international evidence, the study seeks to evaluate the

opportunities, risks, and policy implications associated with alternative financing pathways, and to contribute to ongoing debates on how municipalities can mobilise sustainable infrastructure finance in a context of fiscal constraint and developmental urgency.

## **METHODS**

This study adopts a qualitative research methodology combining desk-based research and key informant interviews to examine municipal infrastructure financing and local economic development (LED) in South Africa. The study integrates secondary data analysis with insights from eight expert stakeholders to strengthen contextual understanding and triangulate findings.

### **Research Design**

A qualitative research design was employed, combining systematic desk research with semi-structured key informant interviews. This approach is suitable for analysing complex institutional, governance, and financing dynamics, while enabling comparative assessment of infrastructure financing models within the South African municipal context.

### **Data Sources and Collection Procedures**

The study utilised both secondary and primary data sources. Secondary data included National Treasury reports (2020-2025), Auditor-General reports, and peer-reviewed academic literature on infrastructure finance and LED. Data were collected through systematic keyword searches across databases such as Scopus and JSTOR. Primary data were collected through semi-structured interviews with eight stakeholders selected using snowball sampling. Participants included municipal finance practitioners, infrastructure specialists, and policy experts. The interviews explored governance challenges, financing constraints, PPP experiences, and opportunities for improving municipal infrastructure investment.

### **Analytical Framework and Theoretical Underpinning**

Data were analysed using thematic content analysis to identify recurring themes related to governance capacity, regulatory barriers, financing mechanisms, and institutional readiness. Findings from documentary analysis and interviews were triangulated to enhance analytical rigour and contextual interpretation. The analysis was guided by three theoretical lenses:

- a) **Public Choice Theory** to assess political and institutional influences on municipal financial decision-making;
- b) **Transaction Cost Economics** to evaluate risks and contractual complexities in PPPs and blended finance arrangements; and
- c) **Developmental State Theory** to examine the strategic role of the state in directing infrastructure investment toward LED outcomes.

### **Ethical Considerations**

Ethical standards were maintained through voluntary participation, confidentiality, and non-attributable reporting of interview data. Academic integrity was ensured through proper citation of sources, while data reliability was strengthened through the use of credible government, institutional, and peer-reviewed sources.

### **Limitations**

The study is limited by reliance on secondary data, which may not fully capture recent municipal operational realities or local political dynamics. Variations in the quality of municipal financial reporting may also affect comparability. Additionally, the relatively small interview sample may not reflect all municipal perspectives. Despite these limitations, the combined use of documentary analysis and expert interviews provides a robust basis for evaluating municipal infrastructure financing pathways in South Africa.

This section evaluates the qualitative data through thematic content analysis and comparative synthesis. The discussion is structured to transition from an exploration of diverse financial instruments available to South African municipalities to a critical assessment of their operational viability. Finally, the results are synthesized into strategic frameworks aimed at unlocking infrastructure-led growth and enhancing local economic development.

## RESULTS AND DISCUSSION

### Structure of Municipalities in South Africa

After the most recent demarcation changes, **South Africa currently has 257 municipalities** which are categorised as presented in Table 1.

**Table 1.** Classification of Municipalities in South Africa

Municipality Category	Sub-category	Brief Description	Number of Municipalities
<b>Category A (Metropolitan)</b>	Metro	Large urban municipalities with full executive authority	8
	B1 (Secondary cities)	Large, economically significant local municipalities	19
<b>Category B (Local Municipalities)</b>	B2 (Large towns)	Municipalities centred on major towns	38
	B3 (Small towns)	Smaller municipalities with limited economic base	69
	B4 (Rural municipalities)	Predominantly rural, low-income municipalities	66
<b>Category C (District Municipalities)</b>	C1 & C2	District municipalities coordinating multiple locals	44
<b>Total</b>			<b>257</b>

Source: Research Findings (2026)

South Africa's local government system is structured into three constitutionally defined categories, metropolitan (A), local (B), and district (C) municipalities, as shown in Table 1. Metropolitan municipalities are the country's largest urban centres, with exclusive authority over all municipal functions. They have strong administrative systems, diversified economies, and significant own-revenue sources. The second tier and biggest classification is the local municipalities which vary widely in economic strength and institutional capacity, which directly affect their financing options. Lastly, district municipalities are responsible for coordinating development and service delivery across multiple local municipalities. Some district municipalities also act as water service authorities, giving them important infrastructure responsibilities. While this classification reflects governance responsibilities, it also strongly determines financial capacity and access to infrastructure financing.

### Audit Findings of Municipalities as indicators for Access to Alternative Infrastructure Finance

The financial health of municipalities in South Africa which has implication on the ability of the municipalities to access different alternative infrastructure financing mechanisms is varied, and an examination of the audit outcomes for the past 3 years are presented in Table 2.

**Table 2. Key Audit Indicators**

Indicator	Value
Clean audits	13%
Unqualified with findings	43%
Municipalities with compliance findings	86%
Municipalities with performance weaknesses	45%
Disclaimed opinions	5%
Financial statements submitted on time	94%
High-quality financial statements	25%
Performance reports unreliable	48%

Source: Research Findings (2026)

Table 2 captures the overall health of municipal auditing. The very low clean audit rate (13%) contrasted with high compliance findings (86%) indicates that most municipalities fail to meet basic governance and legislative standards, which are key necessities for accessing alternative infrastructure

finance. While timeous submission rates are high (94%), the quality gap (only 25% credible statements) shows that compliance is often procedural rather than substantive. The audit outcomes of the prior periods are summarised in Table 3.

**Table 3. Municipality Audit Outcomes for 2024**

Year	Unqualified audit opinion with no findings (clean)	Unqualified with findings	Qualified with findings	Adverse with findings	Disclaimed with findings	Outstanding audits	Total
2020-21	41	100	83	4	28	1	257
2022-23	34	110	91	6	15	1	257
2023-24	41 (16%)	99 (39%)	90 (35%)	6 (2%)	11 (4%)	10 (4%)	257

Source: Research Findings (2026)

Table 3 depicts that the best-performing municipalities in South Africa, frequently recognized for financial sustainability, clean audits, and service delivery, are primarily located in the Western Cape, led by Saldanha Bay, Swartland, and the City of Cape Town. Other top-tier municipalities include Midvaal in Gauteng and Drakenstein in the Western Cape.

### Empirical Assessment of the Municipal Landscape

The analysis of National Treasury data highlights a widening ‘infrastructure gap’ driven by spending inefficiencies. By December 2025, capital expenditure reached only R28.1 billion against a budget of R78.9 billion, a 22.5% underperformance (National Treasury 2025). Furthermore, expenditure is highly concentrated: metropolitan municipalities account for 58% of total municipal spending, while rural municipalities account for just 6% (National Treasury 2024).

### Alternative Financing Models Relevant to South African Municipalities

The literature review and document analysis identified four principal alternative financing models with relevance for addressing South Africa’s municipal infrastructure gap and their benefits as highlighted in literature are summarised in Table 4.

**Table 4. Alternative Financing Models Relevant to South Africa**

Financing Model	Core Mechanism	Primary Benefit
PPPs	Long-term contracts with private operators	Risk transfer; operational efficiency
Municipal Bonds	Debt securities issued to capital markets	Access to large-scale, long-term capital
Blended Finance	Combining concessional/public and private funds	Project de-risking; improved bankability
Pooled Financing	Aggregating borrowing needs across entities	Reduced transaction costs; risk sharing

Source: Research Findings (2026)

Table 4 summarizes the principal financing models identified in literature. Table 4 provides a comparative assessment of instrument applicability based on municipal category in the South African context.

### Public–Private Partnerships (PPPs)

Public–private partnerships (PPPs) are the most extensively documented alternative financing mechanism in both South African and international literature, with evidence from developing and middle-income countries indicating that PPPs can mobilise private capital, improve risk allocation, and enhance operational efficiency when institutional conditions are supportive (Grimsey and Lewis 2004; Hodge and Greve 2007; Ramolobe and Khandanisa 2024). In South Africa, PPPs are underpinned by a well-developed regulatory and policy framework, notably the Municipal Finance Management Act (MFMA) No. 56 of 2003 and the National Treasury PPP Manual issued in 2004. This framework sets out detailed requirements for feasibility assessments, affordability, value-for-money tests, and risk transfer, aimed at safeguarding public finances. At the municipal level, practical examples include the Mbombela (formerly Nelspruit) water concession, initiated in 1999 as one of South Africa’s earliest municipal PPPs, which involved a long-term partnership with a private operator for water and sanitation services. Similarly, the City of Cape Town’s solid waste management and wastewater treatment plant upgrades have incorporated PPP elements since the 2010s, demonstrating how municipalities with stronger governance and technical capacity can leverage private sector participation within the existing regulatory framework.

Despite this enabling policy environment, the uptake of PPPs at the municipal level remains extremely limited, with fewer than 10 percent of municipalities having successfully implemented PPP projects (Mhlongo & Nkomo 2019; SALGA 2020). Most PPP activity continues to be concentrated at national and provincial levels, particularly in sectors such as transport and energy, where institutions like SANRAL and Eskom possess greater technical and financial capacity. At the local government level, numerous municipalities have struggled to move PPPs beyond the planning stage. For example, proposed municipal PPPs in wastewater treatment and waste-to-energy projects in cities such as Buffalo City and Nelson Mandela Bay during the late 2010s faced prolonged delays due to capacity constraints, complex approval processes, and difficulties in demonstrating affordability and risk transfer (Ramolobe and Khandanisa 2024). This pattern highlights a persistent disconnect between the availability of a sophisticated PPP policy framework and the practical implementation capacity of municipalities, reinforcing the conclusion that institutional strength, rather than regulatory design alone, determines the feasibility of PPPs in South Africa's local government context.

### **Municipal Bonds**

Municipal bonds were identified as a potentially powerful financing instrument, particularly for large metropolitan municipalities with established revenue bases and financial management systems. International experience from the United States, India, and Mexico demonstrates that municipal bonds can provide long-term, low-cost capital for infrastructure investment when supported by strong creditworthiness and transparency (Peterson 2012; Liu & Waibel 2008).

In South Africa, the City of Cape Town's issuance of green and sustainability-linked bonds illustrates the feasibility of this model in select contexts (World Bank 2023). However, the analysis indicates that municipal bonds remain inaccessible to the majority of municipalities, especially smaller and rural ones, due to weak balance sheets, poor audit outcomes, and limited investor confidence. A summary of the City of Cape Town's Green Bond issuance success story and the preliminary requirements is presented in Box 1:

#### **Box 1. Case Study of the Issuance of a Green Bond by the City of Cape Town**

The City of Cape Town issued South Africa's first certified municipal green bond in 2017, raising ZAR 1 billion to finance environmentally sustainable and climate-resilient infrastructure. The issuance represented a significant milestone in sub-sovereign green finance in Africa and demonstrated the feasibility of mobilising private capital for climate action at the municipal level in an emerging market context.

The green bond was issued during a period of heightened climate risk, notably the 2015–2017 drought that severely threatened the city's water security. In response, Cape Town sought to align its long-term infrastructure financing with its climate change strategy by using a green bond as a dedicated instrument for funding water, sanitation, energy efficiency, and climate adaptation projects. The bond was listed on the Johannesburg Stock Exchange's Green Bond Segment and certified under the Climate Bonds Initiative standards, ensuring compliance with internationally recognised green finance principles.

Market reception to the bond was exceptionally strong. The issuance was approximately four times oversubscribed, reflecting high investor demand for credible, well-governed green municipal debt. Independent certification and a GB1 (Excellent) green bond assessment by Moody's played a critical role in enhancing investor confidence, particularly within an emerging market characterised by broader sovereign and municipal credit risks. The bond's structure, which clearly defined eligible projects and ring-fenced proceeds, further strengthened its credibility.

Proceeds from the bond were allocated to projects already included in the city's approved capital investment programme, thereby reducing execution risk. Key investments focused on water and wastewater infrastructure, energy efficiency improvements in municipal operations, sanitation upgrades, and climate adaptation initiatives. The strong link between the use of proceeds and tangible environmental outcomes reinforced the bond's legitimacy and appeal to environmental, social, and governance (ESG)-oriented investors.

The success of the City of Cape Town's green bond can be attributed to several interrelated factors. These include strong institutional capacity and financial governance, alignment between the bond and existing climate and development strategies, high-quality external certification and verification, and clear commitments to transparency and post-issuance reporting. In addition, the timing of the issuance coincided with growing global demand for green financial instruments, which further supported strong investor uptake.

Source: Research Findings (2026)

As shown in Box 1, the Cape Town City green bond illustrates that municipalities in emerging economies can successfully access green capital markets when supported by robust governance frameworks, credible project pipelines, and internationally recognised standards. The case provides important lessons for other cities and municipalities seeking to mobilise private capital for sustainable and climate-resilient local infrastructure development.

### **Blended Finance**

Blended finance has emerged as a particularly relevant financing model in South Africa's municipal context, where fiscal stress, weak balance sheets, and governance risks deter private investors from participating in infrastructure delivery. International evidence demonstrates that the strategic use of concessional public or donor funding alongside private capital can enhance project bankability by reducing risk and improving expected returns, particularly in sectors such as water, sanitation, energy, and climate-resilient infrastructure (OECD 2018; World Bank 2021). In South Africa, this approach has been applied through development finance institutions (DFIs), most notably the Development Bank of Southern Africa (DBSA). A practical example is the uMhlathuze Water Reuse Project in KwaZulu-Natal, implemented in the mid-2010s, which combined municipal funding, DBSA financing, and private sector investment to deliver recycled water infrastructure for industrial users. The blended structure reduced fiscal pressure on the municipality while ensuring long-term operational sustainability, demonstrating how risk-sharing arrangements can unlock private participation in essential municipal services.

More recently, blended finance has been advanced through national initiatives such as the Infrastructure Fund (established in 2018) and the DBSA-managed Water Partnerships Office, which have supported municipalities with project preparation funding, concessional loans, and credit enhancements. For example, between 2019 and 2022, several municipalities in Limpopo and the Eastern Cape accessed blended finance packages for bulk water and sanitation projects, combining grants from national government with DBSA loans to improve affordability and reduce borrowing risks. Despite these successes, the evidence suggests that blended finance initiatives remain fragmented and insufficiently scaled, often operating as ad hoc project interventions rather than being systematically embedded within municipal infrastructure planning and budgeting processes. The absence of standardised frameworks and limited internal municipal capacity to structure blended finance transactions have constrained broader replication, highlighting the need for stronger institutional coordination and integration to fully realise the potential of blended finance in South Africa's municipal sector.

### **Pooled Financing Mechanisms**

Pooled financing mechanisms were identified as an underexplored but potentially transformative option for South Africa's fragmented municipal landscape. Evidence from India, the United States, and Uganda shows that pooled funds can enable smaller municipalities to access capital markets by spreading risk and reducing transaction costs (Kumar and Prasad 2018; Peterson 2012). The analysis suggests that pooled financing could be particularly valuable in South Africa, where stark disparities exist between financially strong metropolitan municipalities and distressed smaller municipalities. However, no formal pooled municipal financing facility currently exists in South Africa, representing a significant policy gap. Pooled financing has been successfully deployed in developing countries such as Tamil Nadu, India (see Box 2) for a brief case study for learning purposes for South African municipalities.

#### **Box 2. Case Study of the Water and Sanitation Pooled Fund in Tamil Nadu, India**

In Tamil Nadu, India, the Water and Sanitation Pooled Fund (WSPF) provide a concrete example of a pooled financing mechanism successfully enabling smaller urban local bodies (ULBs) to access capital for infrastructure. Established in 2002 as the first pooled finance vehicle in the country, the WSPF mobilised approximately ₹807.40 crore (~USD 100 million+) through pooled bonds and other borrowings to finance urban water and sanitation projects across multiple ULBs. By 31 March 2022, a net ₹433.58 crore had been provided as loans to 10 municipal corporations and 21 municipalities, demonstrating how the aggregation of financing needs can improve access to long-term capital for municipalities that would otherwise struggle to borrow independently. All bond service payments and debt obligations under the fund framework were honoured on schedule, underpinned by structured credit management such as escrow arrangements and systematic debt servicing oversight (Tamil Nadu Urban Infrastructure Financial Services Ltd., 2026; Policy of MA&WS, 2024).

Today, the WSPF remains operational as one of several funds managed by Tamil Nadu Urban Infrastructure Financial Services Limited (TNUIFSL) (<http://tnuifsl.com/aboutus.asp>), which continues to act as fund manager for pooled and other urban infrastructure financing instruments alongside initiatives like the Tamil Nadu Urban Development Fund (TNUDF) and climate resilience programs. The ongoing activity of TNUIFSL indicates sustained institutional capacity to administer pooled finance mechanisms

and mobilise resources for municipal infrastructure (Tamil Nadu Urban Infrastructure Financial Services Ltd., 2026). Although the absolute size of new pooled bond issuances under the WSPF has not been recently reported publicly, its existing portfolio and integration with broader state financing programs illustrate the continuing relevance of pooled finance in supporting urban development projects in smaller and mid-sized local governments. This experience offers a demonstrable model for contexts such as South Africa, where pooled finance could likewise help smaller municipalities overcome fragmented access to capital markets.

Source: Research Findings (2026)

The success of the WSFP initiative showcased in Box 2 highlights the potential of pooled financing to bridge gaps in municipal access to long-term capital markets and provides a practical example that could inform similar innovations in contexts like South Africa’s fragmented and diverse municipal finance landscape. Based on the foregoing discussion and case studies given in the discussion above, Table 5 summarises the authors’ assessments of the applicability of the various alternative infrastructure financing instruments for the different types of municipalities in South Africa.

**Table 5.** Financing Instrument Applicability: Metros vs. Smaller Municipalities

<b>Instrument</b>	<b>Large Metropolitan Municipalities</b>	<b>Smaller / Rural Municipalities</b>
<b>Municipal Bonds</b>	High; established credit ratings and treasury functions (e.g., Cape Town, Joburg).	Low; lack of creditworthiness and investor confidence.
<b>PPPs</b>	Moderate; higher technical capacity to manage complex 20+ year contracts.	Very Low; prohibitive transaction and monitoring costs.
<b>Blended Finance</b>	Moderate; useful for de-risking large catalytic projects.	High; essential when supported by DFIs (e.g., DBSA) to bridge funding gaps.
<b>Pooled Finance</b>	Low; metros can borrow more cheaply on individual merits.	High; necessary to aggregate small needs and diversify lender risk.

Source: Authors' analysis based on National Treasury (2025) and SALGA (2020)

Table 5 demonstrates that the applicability of alternative infrastructure financing instruments in South Africa is strongly shaped by municipal capacity, fiscal health, and institutional maturity as discussed above. While metropolitan municipalities are better positioned to utilise municipal bonds and PPPs due to stronger creditworthiness and technical expertise, smaller and rural municipalities are inclined to depend more heavily on blended and pooled financing mechanisms, which help mitigate financial risk, overcome funding constraints, and compensate for limited institutional capacity through support from development finance institutions such as the DBSA (National Treasury 2025; SALGA 2020).

### Feasibility Assessment of Alternative Financing Models

Feasibility of each financing model was evaluated using criteria derived from the literature, that is, institutional capacity, fiscal sustainability, regulatory complexity, risk allocation, and alignment with LED objectives.

#### Institutional and Governance Capacity

Across all financing models considered, institutional and governance capacity emerges as the most decisive factor shaping feasibility at the municipal level. South African municipalities have long exhibited weaknesses in project preparation, long-term financial planning, procurement management, and contract oversight, which directly undermine their ability to implement complex financing instruments (Rogerson 2017; SALGA 2020). The audit findings are also present an indicator of the governance challenges faced by Municipalities in South Africa and the 2024/2025 findings presented in Table 6 highlight the main governance challenge indicators.

**Table 6: Governance Challenge Indicators**

<b>Indicator</b>	<b>Value</b>
Municipalities with repeat findings	83%
Weak IT controls	62%
Ineffective IT governance	51%
Poor consequence management compliance	51%
Fraud cases not investigated promptly	84%

Source: Research Findings (2026)

As shown in Table 6, governance weaknesses remain persistent across South African municipalities, with the high rate of repeat audit findings (83%) indicating limited implementation of corrective measures. Weak IT systems and poor consequence management further reflect ineffective internal controls, undermining municipal readiness to access alternative infrastructure financing. These governance deficiencies are particularly evident in the uneven uptake of public–private partnerships (PPPs) and market-based borrowing. While metropolitan municipalities such as the City of Cape Town and the City of Johannesburg have successfully developed bankable projects and complied with National Treasury requirements, many secondary municipalities continue to struggle with feasibility studies, project preparation, and retaining skilled personnel. The Auditor-General repeatedly associated poor audit outcomes in municipalities such as Mangaung, Lekwa, and Emfuleni between 2018 and 2023 with weak governance structures, skills shortages, and high staff turnover, all of which constrain institutional readiness for complex financing arrangements (Auditor-General South Africa 2023).

PPPs and municipal bonds place significant technical and administrative demands on municipalities, making institutional capacity a critical determinant of feasibility. Municipal bond issuances in South Africa have therefore remained largely confined to metropolitan municipalities with stronger financial management systems. Johannesburg successfully issued bonds in 2004, 2010, and 2014, while Cape Town issued bonds in 2017 and 2018, supported by credible financial reporting, effective revenue collection, and stable governance. In contrast, financially weaker municipalities have faced substantial implementation difficulties. The Mbombela (formerly Nelspruit) water concession, initiated in 1999, exposed challenges related to contract management and regulatory oversight, ultimately resulting in the termination of the concession in 2019 following disputes over tariffs, service standards, and affordability. These experiences support Transaction Cost Economics, which argues that where institutional capacity is weak, the costs of negotiating, monitoring, and enforcing complex contracts may outweigh their efficiency benefits (Williamson 1985).

By comparison, blended finance and pooled financing mechanisms appear more adaptable within South Africa’s uneven municipal landscape because they centralise technical expertise and risk management functions. Since the late 2010s, institutions such as the Development Bank of Southern Africa (DBSA) and the Infrastructure Fund have supported water and sanitation projects in smaller municipalities through blended finance structures combining grants and concessional loans. For example, municipalities in the Eastern Cape and Limpopo accessed blended funding for bulk water infrastructure between 2019 and 2022, relying on DBSA-led project preparation and oversight rather than internal municipal capacity alone. These arrangements reduce the administrative burden on municipalities while maintaining accountability through standardised frameworks. The findings therefore suggest that financing mechanisms which embed technical support at higher institutional levels are more feasible for South Africa’s fragmented municipal system, particularly where governance and administrative capacity remain uneven (SALGA 2020).

### **Fiscal Sustainability and Creditworthiness**

Results obtained in the study confirm that fiscal stress is a significant constraint on municipal access to alternative financing mechanisms in South Africa. Fiscal sustainability and creditworthiness are central indicators of municipal financial health, as they reflect a municipality’s capacity to generate adequate revenue, manage debt responsibly, and meet financial obligations without undermining service delivery. However, many municipalities have experienced persistent operating deficits and deteriorating liquidity in recent years, largely due to weak revenue collection, unfunded budgets, and inadequate financial controls. Table 7 presents the key risk indicators of the financial health of local governments in South Africa.

**Table 7.** Financial Risk Indicators Metrics

<b>Indicator</b>	<b>Value</b>
Municipalities with unfunded budgets	42% (108)
Municipalities in financial distress	30% (74)
Municipalities overspending revenue	37%
Cash flow shortages	54%
Debt collection period	152 days
Irregular expenditure	R27.59 billion
Unauthorised expenditure	R24.12 billion

Source: Auditor General South Africa (2026)

Table 7 reveals systemic financial instability across South African municipalities, limiting access to alternative infrastructure financing, particularly for smaller municipalities. High levels of unfunded budgets,

overspending, long debt collection periods (152 days), and irregular expenditure indicate weak financial planning, poor revenue management, and inadequate fiscal discipline, making alternative financing either inaccessible or prohibitively expensive due to elevated risk.

In the 2022/23 financial year, municipalities recorded operating deficits of approximately R27 billion and liquidity shortfalls of about R84.5 billion, severely constraining infrastructure maintenance and service delivery. These pressures are linked to governance failures and weaknesses in budgeting and financial reporting (Ratings Afrika 2024; National Treasury 2024). The crisis is further reflected in the 2025 suspension of intergovernmental grants to 39 defaulting municipalities and municipal debt to Eskom reaching approximately R120 billion, developments that continue to erode investor confidence and increase fiscal risk (Allan 2025).

Despite widespread distress, some municipalities demonstrate that disciplined financial management can sustain fiscal health and creditworthiness. Midvaal and Mossel Bay, for example, have consistently achieved strong Municipal Financial Sustainability Index (MFSI) scores through prudent budgeting, liquidity management, and sound financial practices (Ratings Afrika 2023; BusinessTech 2025). Similarly, the City of Cape Town has maintained comparatively strong audit outcomes, unlike municipalities such as Johannesburg, Tshwane, Buffalo City, Mangaung, and Nelson Mandela Bay, which continue to face qualified or adverse audit opinions linked to financial misstatements and unfunded budgets (Auditor-General South Africa 2025). These contrasts highlight the importance of transparent financial reporting and effective revenue management in sustaining municipal creditworthiness.

Overall, weak revenue collection, rising consumer debt, and persistent deficits continue to undermine investor confidence and restrict access to financing instruments such as municipal bonds, while PPPs and blended finance mechanisms require substantial risk mitigation to attract private investment. From a Public Choice Theory perspective, fiscal mismanagement and short-term political incentives further weaken long-term investment planning and reinforce dependence on intergovernmental transfers rather than sustainable market-based financing mechanisms (Buchanan and Tullock 1962).

### **Regulatory and Procedural Complexity**

South Africa's public-private partnership (PPP) framework is comprehensive and robust, but its procedural complexity often limits municipal implementation. The Municipal Finance Management Act (MFMA) No. 56 of 2003 and PPP Regulations (2005) require municipalities to conduct detailed feasibility studies, demonstrate affordability, value for money, and risk transfer, and obtain approvals from municipal councils and National Treasury. Although these safeguards protect public finances, they create significant administrative and technical burdens, particularly for smaller and financially distressed municipalities. Section 120 of the MFMA, for example, requires Treasury approval before PPP agreements can proceed, resulting in delays and high compliance costs that have caused several municipal PPP projects to stall or be abandoned (Mhlongo and Nkomo 2019; National Treasury 2022).

Similarly, municipal bond issuance is constrained by stringent reporting, transparency, and disclosure requirements under the MFMA and the Local Government: Municipal Systems Act No. 32 of 2000. Consequently, only financially stronger metropolitan municipalities such as Johannesburg, Cape Town, and eThekweni have successfully issued bonds, reflecting international trends where municipal bond markets are dominated by large cities with strong governance systems (Ahluwalia 2019; Liu and Waibel 2008).

In contrast, blended finance and pooled financing mechanisms appear more suitable for South Africa's uneven municipal landscape, particularly when supported by development finance institutions (DFIs) and government guarantees. Existing MFMA provisions permit grants, guarantees, and on-lending arrangements that can reduce investor risk, while institutions such as the Development Bank of Southern Africa (DBSA) and the Infrastructure Fund have increasingly supported blended finance solutions for municipal infrastructure. Although South Africa lacks a formal pooled financing facility, the legislative framework allows such arrangements, suggesting that institutional coordination rather than legal feasibility is the primary constraint. Simplifying procedures and strengthening intergovernmental support could therefore improve municipal access to alternative financing mechanisms.

### **Alignment with Local Economic Development Objectives**

The analysis indicates that infrastructure financing models most supportive of local economic development (LED) are those aligned with targeted, place-based investments in strategic sectors such as water, energy, transport, and digital infrastructure, which are essential for economic productivity, industrial growth, and employment creation. In South Africa, blended finance initiatives have produced stronger developmental outcomes where infrastructure investments are integrated with spatial planning priorities and LED strategies. Key informants consistently emphasised that infrastructure finance should be viewed not only as a technical or financial intervention, but also as a tool for stimulating inclusive local economies. As one municipal official observed, "Infrastructure investment only contributes to LED when projects are

linked directly to economic activity, jobs, and long-term service sustainability rather than simply closing infrastructure backlogs” (Key Informant Interview 1 2026).

The uMhlathuze Water Reuse Project in KwaZulu-Natal provides a notable example of this approach. Implemented through collaboration between the municipality and private operators, the project supplies recycled water to industrial users in Richards Bay, supporting industrial expansion, protecting jobs, and reducing pressure on potable water resources (uMhlathuze Local Municipality 2016; DBSA 2020). Stakeholders highlighted its broader developmental value, noting that improved water security increased investor confidence and linked environmental sustainability with economic development objectives (Key Informant Interviews 3 & 8 2026).

Similarly, the City of Cape Town’s energy procurement programme, accelerated from 2022 through power purchase agreements (PPAs) with independent power producers (IPPs), demonstrates how PPPs and blended finance can support energy security while advancing LED and green economy objectives. These initiatives strengthened renewable energy value chains, improved electricity reliability, and enhanced the city’s economic competitiveness (City of Cape Town 2023). Key informants emphasised that energy resilience had become central to business sustainability and investment attraction under persistent load-shedding conditions (Key Informant Interviews 2 & 4 2026).

However, the findings also reveal that alternative financing mechanisms may prioritise commercially attractive projects over socially inclusive development where policy coordination and spatial targeting are weak. PPP initiatives in sectors such as broadband, transport, and waste-to-energy have often concentrated on high-revenue urban areas, with limited benefits for peripheral townships and rural communities. Similar concerns were raised in municipalities such as Johannesburg and Tshwane, where some private-sector-led infrastructure projects were criticised for insufficient alignment with spatial transformation and inclusive growth objectives in Integrated Development Plans (IDPs). Respondents noted that without clear developmental safeguards, private investors tend to favour commercially viable areas, potentially reinforcing existing spatial inequalities (Key Informant Interviews 2 & 6 2026).

To address these coordination challenges, the national government introduced the District Development Model (DDM) in 2019 to improve integrated planning, budgeting, and infrastructure investment across government spheres and better align financing decisions with local development priorities (Department of Cooperative Governance 2019). Within this framework, infrastructure financing is increasingly expected to demonstrate developmental impact beyond financial viability alone. As one provincial official explained, “the DDM was introduced precisely because infrastructure decisions were too fragmented and often disconnected from local developmental realities” (Key Informant Interview 7, 2026).

Overall, the findings suggest that blended finance and PPPs can support LED effectively when supported by clear policy safeguards, spatial targeting, and developmental performance criteria that ensure infrastructure investments promote inclusive, place-based growth rather than narrow commercial returns (Evans 1995; Stiglitz 1998). This aligns with the observation by one key informant that “the developmental value of infrastructure finance depends less on the financing instrument itself and more on whether the state is able to direct investment toward broader social and economic objectives” (Key Informant Interview 5 2026).

### **Implications for Policy and Practice**

Drawing on the findings, the study identifies several practical policy and institutional implications for enhancing the adoption of alternative financing models. First, the results underscore the need for differentiated financing strategies. No single model is universally applicable; instead, financing instruments must be matched to municipal capacity, fiscal conditions, and infrastructure needs. Large metropolitan municipalities may pursue bonds and complex PPPs, while smaller municipalities require pooled and blended mechanisms.

Second, the findings highlight the central role of the state, consistent with Developmental State Theory (Evans 1995). National government and DFIs must act as strategic enablers, providing credit enhancement, guarantees, standardised contracts, and technical support to reduce transaction costs and risks. Third, strengthening project preparation capacity emerges as a prerequisite for success. Without credible feasibility studies, financial models, and governance systems, alternative financing mechanisms will remain underutilised regardless of policy intent. Finally, the study finds that alternative financing must be embedded within integrated LED planning frameworks to ensure that infrastructure investment supports inclusive growth rather than reinforcing existing inequalities.

### **CONCLUSION**

This study set out to evaluate alternative financing models capable of addressing South Africa’s municipal infrastructure deficit and supporting Local Economic Development (LED) in the context of severe

fiscal, institutional, and governance constraints. Drawing on a desk-based qualitative analysis of peer-reviewed literature, policy documents, and institutional reports supported with key informant interviews, the study finds that while a range of alternative financing mechanisms, namely Public–Private Partnerships (PPPs), municipal bonds, blended finance, and pooled financing instruments, are theoretically viable and internationally proven, their practical applicability within South African municipalities is highly uneven.

The findings demonstrate that institutional capacity and fiscal sustainability are decisive determinants of feasibility. PPPs and municipal bonds tend to be accessible only to financially strong metropolitan municipalities with advanced technical, legal, and financial capabilities. In contrast, most secondary cities and rural municipalities remain structurally excluded due to weak creditworthiness, limited project preparation capacity, and persistent governance challenges. This reinforces existing evidence that infrastructure delivery failures in South Africa are less a consequence of policy absence than of implementation deficits and institutional fragility (Rogerson 2017; SALGA 2020).

Blended finance and pooled financing mechanisms emerge as the most promising and scalable options for the broader municipal system. These models offer greater flexibility, reduce risk for private investors, and allow for the centralisation of technical expertise through development finance institutions and intermediary entities. Importantly, the study confirms that alternative financing mechanisms only contribute meaningfully to LED when infrastructure investments are strategically aligned with place-based development objectives and supported by an active, coordinating state, as emphasised in Developmental State Theory (Evans 1995).

Overall, the study concludes that alternative financing models are not substitutes for sound public financial management but rather complements to strong institutions and developmental governance. Without sustained investment in municipal capacity, improved fiscal discipline, and regulatory reform, the potential of innovative financing instruments to close infrastructure gaps and advance LED will remain largely unrealised.

### **Recommendations**

Based on the findings, the study proposes the following policy and practice-oriented recommendations:

- a) **Strengthen Municipal Project Preparation and Technical Capacity-** Municipalities should prioritise the establishment or strengthening of project preparation capabilities, including feasibility analysis, financial modelling, and contract management. National government and development finance institutions should expand structured project preparation facilities to support municipalities, particularly smaller and financially distressed ones. Evidence from international experience suggests that well-prepared projects significantly improve the success rates of PPPs, blended finance initiatives, and bond-funded infrastructure (OECD 2018; World Bank 2021).
- b) **Scale Up Blended Finance as a Core Municipal Infrastructure Instrument-** Blended finance should be institutionalised as a primary mechanism for municipal infrastructure delivery, especially in economically marginalised and high-risk contexts. National Treasury and development finance institutions such as the DBSA should develop standardised blended finance frameworks that combine grants, concessional loans, and private capital. This approach would enhance project bankability while safeguarding developmental outcomes, particularly in sectors critical to LED, such as water, energy, and transport.
- c) **Develop Pooled Financing Facilities for Smaller Municipalities-** Given the stark inequalities in municipal financial capacity, South Africa should explore the establishment of pooled municipal financing mechanisms, drawing on lessons from India and other emerging economies. Such facilities would enable smaller municipalities to access long-term capital markets through collective borrowing, credit enhancement, and centralised risk management. This would broaden access to infrastructure finance beyond a limited number of metropolitan municipalities and promote more spatially inclusive LED outcomes.
- d) **Simplify and Differentiate Regulatory Frameworks for Municipal PPPs-** While maintaining fiscal safeguards, the regulatory framework governing municipal PPPs should be streamlined and differentiated according to municipal capacity and project scale. Simplified approval processes, standardised contracts, and targeted technical support could significantly reduce transaction costs and improve municipal participation. This recommendation aligns with Transaction Cost Economics, which highlights the need to minimise governance and contracting costs in complex institutional environments (Williamson 1985).
- e) **Align Alternative Financing with Local Economic Development Strategies-** Municipalities should explicitly integrate alternative financing models into their LED strategies and Integrated Development Plans (IDPs). Infrastructure investments financed through PPPs, bonds, or blended instruments should be assessed not only on financial viability but also on their potential to stimulate local enterprise development, employment creation, and spatial inclusion. This requires stronger coordination between

infrastructure planning, economic development units, and financial management functions within municipalities.

- f) **Reinforce the Developmental Role of the State-** Consistent with Developmental State Theory, national and provincial governments must play an active coordinating role in shaping municipal infrastructure finance ecosystems. This includes providing policy certainty, risk mitigation instruments, guarantees, and strategic guidance to crowd in private investment toward developmental priorities. Without such coordination, alternative financing mechanisms risk reinforcing existing inequalities rather than advancing inclusive LED.

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### Author contribution (as applicable):

The authors equally contributed during the article development as indicated in the table below:

Conceptualization:	Tonderai Kapesa
Methodology:	Tonderai Kapesa and Neo Mokone
Validation:	Neo Mokone
Formal analysis:	Tonderai Kapesa and Neo Mokone
Investigation:	Tonderai Kapesa and Neo Mokone
Resources:	Tonderai Kapesa and Neo Mokone
Data curation:	Tonderai Kapesa and Neo Mokone
Writing – original draft:	Tonderai Kapesa and Neo Mokone
Writing – review & editing:	Tonderai Kapesa and Neo Mokone
Visualization:	Tonderai Kapesa
Project administration:	Tonderai Kapesa

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