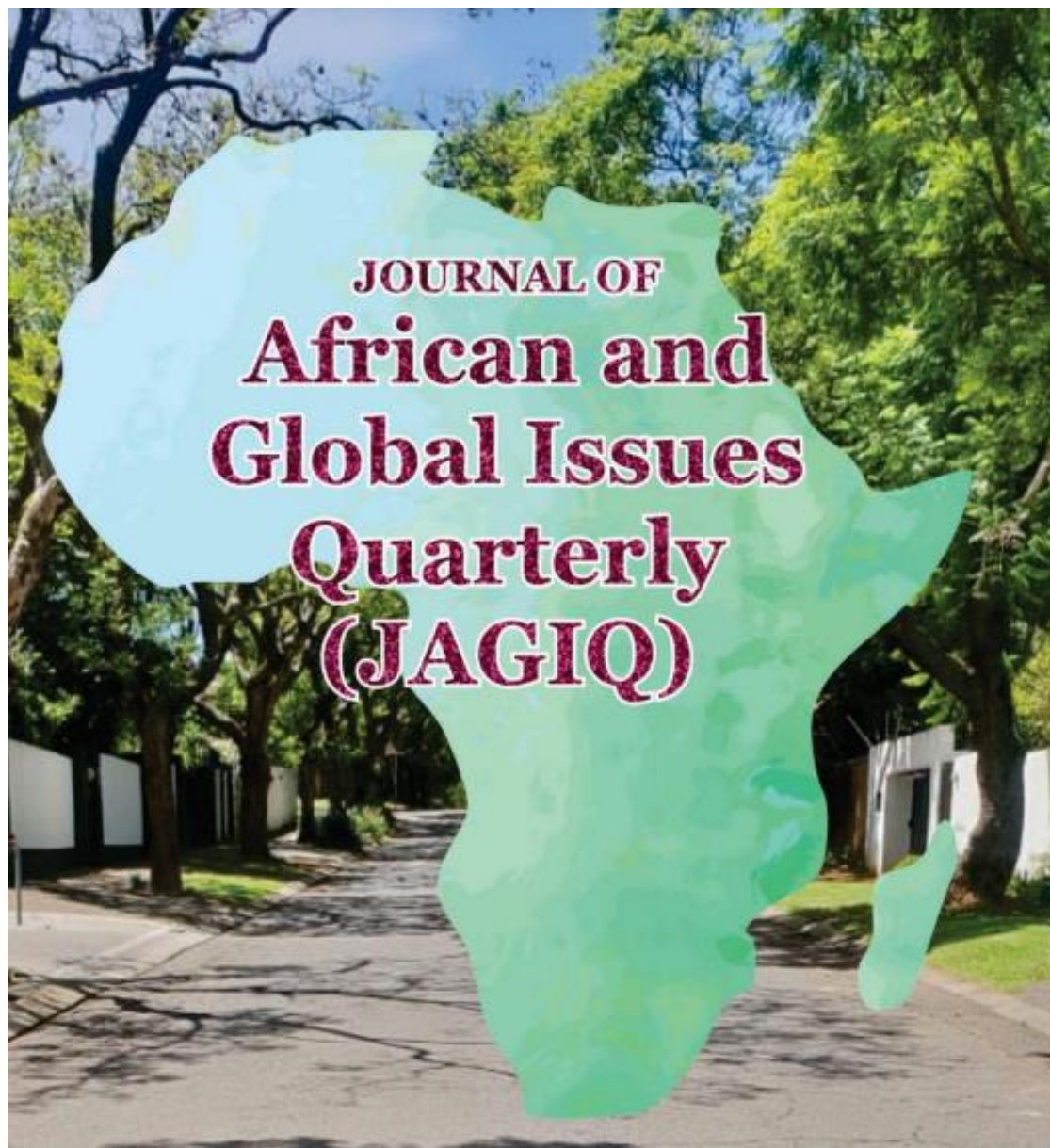




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EDITORIAL NOTE

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 & Andrishah 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 Andrisha 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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ENERGY SUSTAINABILITY AND SUSTAINABLE DEVELOPMENT AGENDA: THE ROLE OF PUBLIC-PRIVATE PARTNERSHIP IN SOUTH AFRICA

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Abstract

This paper investigates the role and effectiveness of Public-Private Partnerships (PPPs) in South Africa's energy development towards sustainability. Due to the high dependence on coal, the generation of numerous greenhouse gases, and greater energy requirements, the use of renewable energy is highly crucial towards achieving climate, social and economic objectives. PPPs are now an alternative strategic means of getting private financing, operational expertise, and innovative technologies to collaborate with the government on energy infrastructure. The study used a qualitative desk research methodology to analyze secondary data from policy documents, scholarly literature, and government publications. These 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. The paper recommends policy stability, energy regulation reform, enhancing financial methods, and ensuring that social equity consideration is factored into PPP structures. The results of this research provide viable advice to the policy-makers, business investors and civil societies who are interested in investing in the public-private partnerships (PPP) methods to have a fair and sustainable renewable energy future in South Africa.

Keywords: *Public-Private Partnership, Sustainable Development, Regional Development, Renewable Energy, Energy Policy*

Introduction

Public-Private Partnerships (PPPs) is a new paradigm in public management practice, having evolved

as a means for the public sector to share responsibilities and effectively deliver services to the populace. Like other developing countries, PPP has become a cornerstone of the South

African government's approach to addressing energy challenges and driving sustainable development in all its spheres. The main focus of the United Nations' 2016 statement on Sustainable Development Goal 7 is people's access to sufficient, modern, reliable, affordable, and adequate renewable energy, as this is essential towards achieving the Sustainable Development Goals agenda. The SDGs confirmed that energy is essential to accomplishing nearly all other sixteen SDGs (United Nation, 2017). Therefore, the private sector must be integrated to play a significant role in achieving the Sustainable Development Goals. For example, SDG 17 (Revitalise global partnerships for sustainable development) recommends collaborations among the public, private, and civil society sectors. As a result, public-private partnerships serve as a means of encouraging private sector involvement in the implementation of infrastructural projects related to renewable energy (Yescombe, 2017). For the development, planning, financing, construction, operation, and maintenance of a renewable energy infrastructure project. PPPs serve as a mobiliser of private sector resources, operational and technological expertise (World Bank, 2020).

Like most developing countries, South Africa has a twofold problem to tackle: high energy demands and, at the same time, changing the trajectories towards sustainable development (Ukoba, et al., 2025). This implies a decisive move out of fossil fuel reliance into renewable energy sources, which is not an easy task that may require the efforts of the private sector in many cases (Abe and

Azubike, 2024). The Public-Private Partnerships, as a result, become an essential tool to help overcome the financial, technological and infrastructural divides of this transition. The urgency of such relationships is explained by the unproductiveness of the South African model of energy economy of the past, based on coal, synthetic liquid energy sources, and nuclear energy, as well as caused major environmental effects and unequal distribution of clean energy (Bekun, et al., 2023)

The existing legal and regulatory environment in South Africa, nevertheless, poses significant obstacles to the massive commercial implementation of renewable energy, which tends to hamper the goal of PPPs to be realized (Nel and Komendantova, 2015). This is why stronger political determination and streamlined regulatory frameworks are suggested to be the key to the transformation of the potential of PPPs in the South African energy sector and the ensuing promotion of energy justice and sustainable development objectives (Tata and Nweke-Eze, 2025). One would want to know how properly constructed PPPs, through bringing in project investments and managing land use, can improve energy availability and hasten the world's transition to renewable sources of energy, hence ensuring sustainable growth (Kim and Oh, 2017). This practice is consistent with the global best practices in energy transitions which are more and

more focused on the multi-stakeholder partnerships in order to overcome the systemic barriers and enable innovative solutions to the problem of sustainable energy systems.

Furthermore, the topic of the effectiveness of the current policies on energy in facilitating the process of sustainable energy development and the common access to electricity should be researched, and it is urgent to consider the need to conduct the energy transition in a just manner, introducing a significant percentage of renewable energy into the national grid. South Africa has reached increased awareness of the importance of renewable energy, but in 2022, the country continued to largely depend on coal, although utility-scale renewable energy generated 7 per cent of its energy (Booyens et al., 2023). This shortfall highlights the critical role of effective policy measures and a greater investment in diversified renewable energy sources, as well as the transition towards a more sustainable energy future through the establishment of public-private relations (Alex-Oke, et al., 2025). The fact that fossil fuel industries are entrenched makes this transition even more problematic, as it has dictated the political economy and institutional structures in the country since the 1920s (Essex et al., 2023). Such a long-standing historical dependency has brought about serious inertia surrounding decarbonization measures, with multiple facets

associated with economic gains, employment stability, and the adoption of alternative energy regimes.

The political aspects of electricity production also pose a considerable challenge, with Eskom, which is a state-owned utility, being a key factor in the electricity crisis in the country and indicative of larger tensions in the post-apartheid political economy (Booyens et al., 2023). The interdependent operational, financial, maintenance and governance crises in the utility are further complicated by the disagreements amongst different interest groups that only prolong the much-needed policy changes, regardless of the fact that the access to electricity has improved since 1994. To handle such complex issues, a considerable assessment of strategies that may work efficiently in de-risking the private investment in renewable energy initiatives is important, especially in formidable public-private partnership schemes. These models play a key role in utilizing the resources of the private sector, financial investments, and expertise to overcome the financial and technical barriers of the massive deployment of renewable energy in an environment with strong state capacity limitations (Adelakun, et al., (2024).

As a consequence, such PPPs have the potential to enhance the required grid modernization and growth that will enable a greater inclusion of the variable renewable energy sources

that is essential to meet the South African lofty renewable energy objectives (Abrahams, Fischer, Martin, and McDaid, 2013). Therefore, this paper examines the application and success of PPPs in facilitating sustainable energy projects in different parts of South Africa, the main achievements, difficulties, and the political consequences. Moreover, the research undertaking will endeavour to give practical suggestions towards streamlining the regulatory setting and implementation policies to improve the efficacy of PPPs in a sustainable energy environment in the country. The end goal of this study is to enlighten the strategic alignment of the political, market and community interests to create a successful and sustainable implementation of the renewable energy projects in the South African context. The results will shed light on what works well and what traps to avoid in the other developing countries that are also undertaking similar changes in the energy sector. This study will thus play a pivotal role for stakeholders in governmental bodies, the private industry and the civil society in enabling them to make informed decisions on a more sustainable and equitable energy future of South Africa.

Literature review

The absence of coordination and political stability in policies have been proved to hinder the spreading of renewable energy technologies and

evolution of a long-term energy policy even though there has been an increasing awareness of the role of renewable energy in solving climate change and energy security issues. It has also created a lot of infrastructural and institutional apathy due to the dependency on coal, and therefore, the transition to a renewable-based energy system is especially challenging (Clark and McGregor, 2024). This deep addiction has led to South Africa being among the most per-capita emitters of greenhouse gases in the world yet its renewable energy potential is very high (Adelakun, et al., (2024). The technical challenges of implementing intermittent renewable energy sources into the current grid infrastructure also complicate the energy transition, which requires highly complex grid management solutions and energy storage technologies to be reliable and stable (Yeboah, et al., 2025). Moreover, the lack of appropriate institutional capacity in the government and other organizations is a major obstacle in the successful execution of the climate action and renewable energy plans (Ahmed, et al., 2025).

The recent legislative and policy frameworks in South Africa, although trying to tackle the issue of decarbonization of the energy sector, are challenged by the fact that there is little consistency in the implementation process especially considering that coal-fired power plants are the ones that generate

electricity in the country. This dependency, along with abundant solar and wind resources of this country, has created a paradox that the shift to sustainable energy is urgent but has significant systemic problems (Booyens et al., 2023). The urgency to just transition to a green source of energy is further supported by the fact that the energy availability factor of the coal plants of Eskom is also declining and this company is approaching the end of the economic lifespan of its coal plants, which requests urgent attention to alternative power generation strategies (Clark and McGregor, 2024).

Renewable energy resources in the country, especially solar and wind energy, provide a decent option to reduce the negative effects on the environment and improve the availability of energy services in the remote regions not connected to the centralized grid (Jain and Jain, 2017). The combination of these decentralized renewable energy networks would go a long way towards enhancing access to energy, especially in rural settings, and can help to advance socio-economic development interests on a wider level (Oyewo et al., 2019). This transition, however, is also complicated by the socio-economic implications of the communities relying on the coal sector, and requires all-inclusive plans to not only resolve the issue of job creation, reskilling, and local development but also to make the shift just (Abe &

Azubike, 2024). South Africa has a substantial renewable energy potential, comprising of solar, wind, hydropower, biomass, geothermal, ocean wave energy and with these sources, there has been a great opportunity to serve the increasing energy requirements and diversify the energy base.

Nevertheless, the reality of these resources is relative to the substantial obstacles in their actual implementation caused by the infrastructure constraint and the high capital cost of new energy projects. South Africa has a strong socio-economic environment, which is highly influenced by its coal industry, and the coal industry has strong interest groups that influence the policy-making process because of the power of coal in the production of energy. Such a fixed mindset has resulted in a high level of political and economic inactivity, and the shift toward renewable energy is a complicated process which needs to overcome properly instilled interests (Hanto et al., 2022). The current predicaments of the ageing power plants that are coal-fueled, not to mention the rising electricity tariffs, only contribute even more to the urgency of the competitive bidding procedures to ensure the faster implementation of renewable energy. Even though the increase in electricity prices will probably increase the competitiveness of renewable energy technologies, the large-scale commercialization of renewable energy technologies will

still require significant government subsidies due to the long-term nature of investments in the energy market.

The absence of legislative tools and regulatory evaluation also adds to the uncertainty of investors, further underinvestment in renewable projects and the failure to meet renewable energy goals (Obeng-Darko, 2019). The key to stimulating the use of renewable energy and bringing about long-term carbon emissions is therefore effective policy and regulatory frameworks, taking into consideration the prevailing policy barriers that restrain concerted national efforts to roll out renewable energy (Byrnes et al., 2013). This is particularly important considering that South Africa has traditionally been using coal to produce electricity, which has resulted in the sector being a major emitter of greenhouse gases, although the country has considerable yet underexplored renewable sources of energy like wind, solar, and biomass.

Role and Effectiveness of PPPs in South African Sustainable Energy

This section of the paper examines the complex role played by Public-Private Partnerships in developing and executing sustainable energy projects in various areas of South Africa, and the effectiveness of this in meeting the renewable energy and socio-economic development objectives. In South Africa, the PPPs program, which was intended to attract private investment into the production of grid-connected

renewable energy sources, has been successful in purchasing major wind and solar photovoltaic capacity, which can be converted into substantial investment (Eberhard and Naude, 2016). This capital inflow has not only diversified the country's energy mix but has also made South Africa a regional pioneer in the use of renewable energy (Adelakun, et al., (2024).

A good example of an effective PPP model is the Renewable Energy Independent Power Producer Procurement Program led by the South African government that has brought in massive private investment and technical skills in the energy generation sector through the use of competitive bids (Kolker et al., 2014). In 4 years, 92 projects contracting over 6300 MW of renewable energy, mostly of wind and solar, have been enabled by this program, which has resulted in investment of more than US\$19 billion (Alex-Oke, et al., 2025). This outstanding result highlights the program as effective in directing the investment into sustainable energy development via the mobilization of the private capital and is frequently viewed as the international model of how renewable energy should be acquired (Montmasson-Clair & Ryan, 2014). The government of South Africa itself acknowledged that Eskom did not have the necessary financial and technical capabilities to satisfy the needs of the country's electricity and achieve energy security, which is why the involvement of independent electricity producers in the electricity market was necessary. This change of

strategy underlined the importance of the PPPs to reduce the deficits in the energy supply and achieve a more diversified and robust energy sector (Eberhard et al., 2014).

The Renewable Energy Independent Power Producer Procurement Program was the direct reaction to this necessity, which provided the means of gaining the extra generation capacity and developing the local renewable energy (Eberhard, et al., 2014). This project, which was initiated in 2011, made use of competitive bidding to reduce the price of renewable energy sharply, as prices of wind and solar photovoltaic dropped by 46 and 71 per cent respectively in nominal terms (Eberhard and Kabaker, 2016). The efficiency of well-designed competitive procurement programs in the ability to attract private investment and achieve technological innovation in the renewable energy industry is evidenced by this significant reduction in costs (Walwyn & Brent, 2015). This strategic plan is reflected in the Renewable Energy Independent Power Producer Procurement Program (REI4P), which seeks to install renewable sources of electricity with 17.8 GW capacity between 2012 and 2030, which includes wind, solar, biomass, biogas and hydropower (Walwyn & Brent, 2015).

The Renewable Energy Independent Power Producer Procurement Program (REI4P) has been effective in procuring 6,422 MW of 112 preferred bids by the end of 2018

since the program was launched in 2011 to increase the renewable energy footprint in the country (Mosaka et al., 2021). The program, which started with the act of the Minister of Energy, that is the Electricity Regulation Act Number 4 of 2006, specifically required the 3,725 MW of renewable energy, a move that aimed at boosting the socio-economic growth and the development of the renewable energy sector (Ndlovu & Inglesi-Lotz, 2019). This was reinforced by the Integrated Resource Plan of Electricity 2010-2030 released by the government in 2011, which established a huge target of incorporating 17,800 gigawatts of renewable energy into the national grid by 2030, an enormous move considering that this country used to rely heavily on coal-generated power (Pressend, 2023). Such a change of paradigm highlights a conscious attempt to diversify the energy portfolio and reduce carbon emissions, which are consistent with the global approach to sustainable development (Uhunamure & Shale, 2021).

Although the REIPPPP has achieved huge milestones, the actual use of the renewable energy initiatives has been faced with delays, with less than 2 per cent of the overall electricity production currently being of a renewable source, noting the long-term delays in the implementation of the project (Musango et al., 2014). This slowness in the adoption is especially notable considering that South Africa has one of the most promising renewable energy sources and possesses positive policies that promote their usage (Adelakun, et al.,

<https://journals.glotanjournals.com/index.php/AGIQ/index>

(2024). Such delays are usually a result of a complicated combination of regulatory risks, grid integration problems, and socio-economic conditions, which hinder the full development of the renewable energy potential in the country. However, even with the tremendous advancements in the use of renewable energy via the Renewable Energy Independent Power Producers Procurement Program, renewable energy remains a very low percentage of the overall energy in South Africa (Anekwe, et al., 2025). In 2022, the

renewable energy technologies added 6.2 GW to the total capacity and contributed to 7.3% of the overall energy mix, which also shows that the country still depends on traditional fossil fuels (Adelakun, et al., (2024). See table one as socio-economic and development effect of PPPs in South African Sustainable energy as above discussed.

Table I: Effect of PPPs in South African Sustainable Energy

S/N	Aspect	Effect
1.	Employment	38,500 job created
2.	Community development funding	ZAR 19bn reported in year
3.	Industrialization	Local Manufacturing and skill
4.	Energy Diversification	Reduced coal dependence
5.	Climate benefits	CO ₂ displacement from wind/solar

Source: Researcher’s construct (2025)

Successes, Challenges, and Policy Implications of PPPs on Sustainable Energy

The successes which have been made in increasing the capacity of renewable energy by using PPPs, the challenges that persistently hinder full implementation of the strategy, and the policy changes which would be needed to speed up the just energy transition in South Africa were critically analyzed. These aspects are critical factors that need to be assessed critically in the understanding of the effectiveness of the present strategies, in addition to information which will guide future policy interventions to enhance the effects of PPPs in ensuring energy sustainability. Certain major achievements have included the

massive size of renewable energy capacity, which has been inspired through competitive bidding of the Renewable Energy Independent Power Producer Procurement Program, an initiative that has seen significant private capital investment, and a technology-driven development (Adelakun, et al., (2024). This program has proved to reduce the cost of renewable energy, which is more competitive than traditional fossil fuels and made South Africa a pioneer in the application of renewable energy on the continent.

Even in the light of such success, there are several obstacles that need

to be surmounted, such as grid integration challenges, regulatory uncertainties, and socioeconomic factors which hinder the full harnessing of renewable energy potential in the country. To cite an example, South Africa is the top emitter of greenhouse gas emissions on the continent, and the energy sector alone contributes to about 86 percent of them in 2019, and this is most likely because it uses coal-fired power plants (Qu, 2023). Besides, the processes of the energy sector and corruption have often interfered with the mechanisms that should promote a fair energy transition and complicate the process of coal replacement even further (Mirzania et al., 2023). To resolve these systemic challenges, it is essential to make a concerted effort to ensure that there is more transparency, that governance structures are more effective, and that there is more equitable stakeholder participation in the system of energy transition. The widespread presence of the interests of fossil fuels, especially in the strong coal lobby, is an important barrier to the broader application of renewable energy technologies and the fair sharing of its fruits among the South African population (Todd and McCauley, 2021). This system has long dominated the politics of policymaking, where investment in sustainable alternatives is frequently second-fiddle to coal production and use, thus disrupting the decarbonization process and making environmental degradation a more severe issue (Hanto et al., 2022). Such vested interests also cause policy inertia, which prevents the

needful legislative and infrastructural changes that can achieve a quick and equitable energy transition (Essex et al., 2023).

Moreover, the current legal and policy standards in South Africa have failed to effectively capture the broad impediments to popular renewable energy utilization, which represents a vital deficiency to investor motivation and market penetration by foreign companies (Murombo, 2016). South Africa does not have a political climate that is favorable to the mass production of the sustainable renewable energy industry, even in the face of the global awareness of the fact that policy support gadgets are needed to help in the proliferation of these technologies (Sebitosi & Pillay, 2008). The legal inconsistencies and institutional inefficiencies worsen the situation as they discourage potential investors and delay the rate of renewable energy implementation (Onuh et al., 2024; Murombo, 2016). The difficulties in terms of institutional capacity at the sub-national level, coupled with dependency on few professionals make this situation more problematic and more prone to breach, which causes system weaknesses and vulnerability (Mthembu & Nhamo, 2022). The complex nature of the political economy with the historical hegemony of the "Mineral Energy Complex" and strong resistance of the influential unions only makes the process of transition off coal more complex, as it is deeply rooted in the economies and social status of the

nation (Nel et al., 2023; Hanto et al., 2022; Essex et al., 2023).

This multifunctional resistance highlights why so complex, interdisciplinary solutions involving political, social, and technological skills are needed to maneuver the energy transition in a successful way (Todd and McCauley, 2021). Such systemic and entrenched structural and institutional obstacles will require a paradigm shift in the governance system to focus on decentralized decision-making and enhancement of the participative role of local governments in support of community-based renewable energy initiatives (Söylemez and Söylemez, 2024). Breaking down these firmly established hurdles requires strong policy changes, good governance, and long-term investment in human capital and technological infrastructure to guarantee a sustainable and fair energy future for South Africa. This involves enhancing more public-private collaborations, which are carefully designed to reduce risks and equitable benefits, as well as coming up with new financing models specific to the economic conditions of the emerging markets (Chipangamate & Nwaila, 2023). Such partnerships are essential in attracting local and global investment, which is not enough in the renewable energy sector at the moment.

The main issue to address is the high initial cost of renewable energy-related projects, which means that the government should take active measures to stimulate their use and

make them economically feasible (Olabi, et al., 2023). Moreover, the successful adoption of these initiatives will depend on the need to overcome the legal and regulatory gaps, institutional inefficiency, and technical problems that pose a hindrance to the adoption of renewable energy (Onuh et al., 2024). At the same time, improving the organizational and institutional capacity, especially the local government, is essential to effectively implement and administer sustainable energy projects, as the lack of skills in the area is currently stalling the spread of renewable energy (Söylemezet al., 2024). In addition, the application of biomass exploitation as one of the viable solutions is capable of dealing not only with energy requirements but also with the destruction of the environment, which is a promising trend in the bio-refinery sector (Mignogna, et al., 2024). Such a solution is not only a means of ensuring energy security, but it also limits the volumes of solid waste by turning agro-waste biomass into useful sources of energy, which, in turn, leads to a circular economy. To do so, it is paramount to create a new energy policy that will require supplying electricity based on renewable resources and offer incentives to municipalities that become active participants in the process of reducing demand and implementing renewable energy. The paradigm shift at hand will require a powerful system of overseeing and assessing the proficiency of such policies, so that they can remain

flexible to the changing technology and the socio-economic environment.

Theoretical Framework

This paper has based itself on the institutional theory as the theoretical foundation to explain the performance of the Renewable Energy Independent Power Producer Procurement Programme (REIPPP) in the most convincing way by viewing the development of renewable energy as a product of the quality of governance other than of technological diffusion. According to institutional scholars, uncertainty and transaction costs can be minimized through formal rules, believable commitments, and enforcement, which facilitate the investment behavior by the privates (Scott, 2014). Using REIPPPP, it is possible to note that the initial success of the programme (over 6,400 MW procured), US\$19 billion mobilised, and a reduction in solar tariffs by 71 percent were attributed to transparent auctions, standardized power purchase arrangements (PPAs), and predictable regulation, all of which signified a credible policy and reduced risk premiums among investors (Eberhard and Naudé, 2016). These institutional arrangements raised the intensity of competition and enhanced price discovery that is why costs were rapidly reduced and jobs created. On the other hand, delays in the signing of PPAs during the post-implementation period and coordination issues with the state actors undermined the reliability of institutions, the perceived risk, and

the pace of its deployment (Martin and Winkler, 2012). Therefore, institutional variations in performance indicate movement in institutional strength, but not resource or market constraints. Through its systematic relationship between governance design and the patterns of investment flows and prices, Institutional Theory changes the direction of the analysis to a causal argument: plausible and stable institutions are the determining factor of successful energy transitions in emerging economies.

Methodology

The study adopted a descriptive research design to explore the success of activities between private and Public sector, known as Public-Private Partnerships (PPPs), in achieving renewable energy developmental and sustainability results in South Africa. A desk-based documentary approach was employed to allow critical examination of institutional set-ups, regulatory institutions and governance procedures that influence PPP implementation. The government policy documents, procurement reports, academic literature, publications of the development finance institutions and multilateral agencies were used as sources of data. The literature search on the keywords involved PPPs, renewable energy, and energy transitions to collect the data. Sources were filtered in terms of credibility, relevance and recency. The content and thematic analyses were used qualitatively to discover the recurring patterns, in respect to investment performance, regulatory

challenges, and effects of development. Multiple sources Triangulation also increased validity. Despite the lack of primary data, the method offers a strong assessment policy-level of the contribution of PPP towards sustainable energy transition.

Results

As discussed in the reviewed literature, Public-Private Partnerships (PPPs) have emerged as a pillar in the South African renewable energy policy. The country has been in a position to receive a large amount of private investment, diversify its energy sources, and catalyze the development of the renewable energy industry through systems like the Renewable Energy Independent Power Producer Procurement Program (REIPPPP). This energy program supported the acquisition of above 6,422 MW of renewable energy in 112 projects, which attracted over US\$19 billion of private capital between 2011 and 2018 (Eberhard and Naudé, 2016; Mosaka et al., 2021). This fact underscores the capacity of PPPs in bridging the capacity gap that exists in the funding and development of massive energy infrastructure projects by the public sector. The outcomes also prove that the REIPPPP has been specifically effective in lowering the prices of renewable energy technologies. The competitive bidding structure of the program caused the price of solar PV to reduce by 71 per cent and wind power tariffs

to drop by 46 per cent in the years 2011-2014 (Eberhard and Kabaker, 2016). This coincides with the international best practices of procurement in which competitive tendering is known to lower the costs of renewable energy and promote technological innovation (Walwyn and Brent, 2015). The case of South Africa, therefore, demonstrates that PPPs can mobilize resources by helping to make renewable energy sources affordable and efficient.

The result also indicates that the PPPs have been instrumental in the diversification of the historically coal-based energy mix in South Africa. In 2011, the government published its Integrated Resource Plan for Electricity 2010-2030 (IRP2010), which projected that 17,800 MW of renewable energy would be incorporated by 2030 (Department of Energy [DoE], 2011). REIPPPP is already taking strides in this direction with lots of wind and solar capacity to the grid. The relative increase in the electricity generation in South Africa in 2022 showed that renewable energy has contributed to the increase in the supply, where the supply reached 7.2% as compared to 2010, with less than 1% (Booyens et al., 2023; Adelakun, et al., 2024). As a result, the energy security was increased and the risk of relying too much on coal was limited, whose declining availability has led to regular power outages (Clark & McGregor, 2024). In addition, the integration of renewable energy has

also led to regional energy resiliency, as decentralised solar and wind power systems have increased electricity access to the communities not well served by the national grid (Oyewo et al., 2019). These findings indicate the usefulness of PPPs as a critical facilitator of energy access, especially in rural regions where the state-owned utility, Eskom, has been traditionally incapable of providing a reliable power supply.

The other significance of PPPs is that it has produced huge socio-economic impacts other than energy production. REIPPPP was created using local content, employment, and community development needs, and it is tailored so that renewable energy investments will help in wider development goals (Montmasson-Clair and Ryan, 2014). The program contributed to some 38,500 job-years and channelled over ZAR 19 billion (US\$1.3 billion) on community development activities between 2011 and 2018 (Eberhard et al., 2014). This has been in tandem with Sustainable Development Goal 7 (SDG7) on affordable and clean energy, and SDG17 on partnerships, because the implementation of renewable energy is associated with socio-economic improvement. Moreover, the solar and wind technologies have triggered local production, which contributes to South Africa starting to create a green industry (Kolker et al., 2014). These findings emphasize that the PPPs, in an organized format, can generate a multiplier effect that rises beyond the

energy sector to employment, skill creation and economic development of the region.

Although there have been these successes, the results show that PPPs in South Africa are characterized by institutional, regulatory, and political challenges. Policy and regulatory instability have been cited as a major inhibiting factor that has, on numerous occasions, led to loss of investor confidence. As an example, the failure to sign power purchase agreements (PPAs) between 2015 and 2018 caused a renewable energy market crunch, which stopped projects and caused losses (Murombo, 2016; Tata, et al., 2025). The monopoly of the state-owned utility, Eskom, has also become an important challenge. The financial crisis, governance weaknesses, and technical shortcomings of Eskom have restricted its capacity to add new renewable projects to the grid (Booyens et al., 2023). Moreover, the historical levels of dominance of Eskom are indicative of the more general conflicts in the post-apartheid political economy of South Africa, in which coal vested interests and trade unions still stand in the way of decarbonisation processes (Essex et al., 2023; Hanto et al., 2022). These results demonstrate that PPPs can be useful in mobilising resources, but their effectiveness is limited due to the wider political economy of energy, which has been largely determined by the so-called mineral-energy complex. The result of this

dynamic has been an impeded policy reform, opposition by vested interests, and a reduced potential of renewable energy efforts to transform.

The findings also indicate that grid integration issues are a significant impediment to the effective implementation of renewable energy using PPPs. The electricity grid in South Africa is not flexible to support high proportions of variable renewables, including wind and solar, since it was mainly designed to support large coal-fired plants (Yeboah, et al., 2025). This has led to a reduction in the renewable projects and other expenses of the expansion of the grids and storage solutions.

Moreover, poor institutional capacity, especially at the sub-national level, has been a hindrance to the successful implementation of renewable energy projects. Municipalities also do not have the technical capacity and funds to participate fully in PPP frameworks, and this constrains the possibility of having a decentralised renewable energy solution (Mthembu & Nhamo, 2022). Such infrastructural and institutional bottlenecks highlight what is needed: more capacity-building efforts and more specific investments in grid modernisation.

Environmentally, this result shows that the contribution of PPPs to the reduction of greenhouse gas emissions has been positive, but at a small scale. In Africa, South Africa is the biggest emitter of carbon dioxide

with its energy sector contributing 86% of the total carbon dioxide injected in 2019 (Qu, 2023). Nevertheless, REIPPPP projects have already replaced multiple million tonnes of CO₂ per year by producing renewable energy, which proves that PPPs can help governments meet national climate commitments (Uhunamure and Shale, 2021). However, in 2022, the electricity supply of renewables amounted to only 7 per cent, while the increase in coal remains devastatingly more than 80 per cent (Anekwe, et al., 2025). Such an imbalance represents the political opposition to the phase-out of coal, as well as the institutional logistical difficulties of expanding renewables in the current institutional context of South Africa. This result consequently indicates that although PPPs have the capacity to decarbonise, they cannot do so in the absence of concomitant policy, regulation and governance reforms. An analysis of the world experience shows that the PPP structures applied in South Africa have been quite effective in attracting foreign investment, but not in ensuring lasting viability. As a case in point, using a mix of PPPs and robust policy instruments, well-organised regulatory frameworks, and decentralised governance structures, countries like India and Brazil have been able to pursue rapid renewable energy expansion (Jain and Jain, 2017; Ahmed, et al., 2025).

The experience of South Africa shows that although competitive bidding systems have the capacity to reduce costs and marshal capital, the lack of long-run policy support and grid readiness destroys long-term benefits. Moreover, the socio-economic environment of coal addiction renders the South African transition rather a unique case among the emerging economies. This comparison indicates that South Africa requires such a hybrid model, a combination of PPPs and larger-scale structural changes in governance, energy justice, and industrial policy as a way of realising the vision of renewable energy.

In summary, the findings highlight the fact that PPPs could become a key driver in supporting a fair energy transition. PPPs can reduce part of the socio-economic risks of coal phase-out by connecting the implementation of renewable energy with community development, employment creation, and industrialisation. The findings also show that these benefits are not evenly shared. The local communities are frequently delayed in the delivery of the promised development benefits, and employment created is also often low-skilled and temporary (Montmasson-Clair and Ryan, 2014). To make the most of their contribution to a just transition, PPPs should thus be reorganised to be more equitable and inclusive, especially within a vulnerable group that relies on coal. This led the local government to reinforce the increase in transportation towards the

procurement of materials and the integration of PPP and community-ownership models into the system (Söylemez, et al., 2024).

In most cases, the findings have shown that PPPs have achieved a lot in terms of mobilising private capital, diversifying the South African energy mix, and lowering the cost of renewable energy. They have also helped in socio-economic development in terms of employment and communal gains. The fact remains, though, that their transformative potential is limited by regulatory uncertainty, grid integration problems, the coal interests and institutional capacity gaps. The results indicate that PPPs do not have enough strength to make South Africa transition to energy. PPPs have to be surrounded by a larger policy stability framework, governance reform, grid modernization, and socio-economic justice to realize their full potential. In this way, South Africa will be able to use PPPs not only as financial tools, but also as the means of a genuinely sustainable and reasonable energy future.

Discussion

The findings affirm that Public-Private Partnerships (PPPs) have proved to be a suitable tool in supporting renewable energy growth in South Africa. With the Renewable Energy Independent Power Producer Procurement Program (REIPPP), PPPs have been able to garner over

US\$19 billion in privately held capital in the period between 2011 and 2018, which has served as an avenue of technological innovation and decreased the cost of renewable energy considerably (Eberhard and Naudé, 2016; Mosaka et al., 2021). The adopted competitive bidding system under REIPPPP is a testament that PPPs, when designed with transparency, can promote effectiveness and low cost, which is in tandem with global best practices (Walwyn and Brent, 2015). The case of South Africa shows how competitive bidding minimized the costs of solar and wind power and, in the process, affordability was met, and innovation was fueled. However, as the findings indicate, these advantages are eroded by the systemic loopholes in governance, pointing out that without an enabling policy and institutional system, PPPs will not be able to work efficiently. The government Integrated Resource Plan of Electricity 2010–2030 (IRP2010) established a high target on renewable energy, 17,800 MW of renewable capacity by 2030 (Department of Energy [DoE], 2011). Coherence in policies and clear signals on investments was initially achieved by aligning PPPs with IRP2010. Nonetheless, this coherence was undermined by the further delays of the procurement rounds and unequal policies (Murombo, 2016).

The findings underscore the fact that investor confidence was destabilized when Eskom took more time to sign

power purchase agreements (PPAs) between 2015 and 2018. This proves that policy frameworks in and of themselves cannot go any further without regular implementation. The IRP2010 gave a roadmap, which was, however, compromised by the absence of political commitment, which was not sustained. Nevertheless, PPP has been integrated by several countries. For instance, India, which encourages constant policy implementation that offers a long-term certainty (Jain and Jain, 2017). This difference highlights the fact that the process of policy implementation in South Africa has been characterized by stop-and-go methods that have curtailed the occurrence of the transformative potential of PPPs.

The findings underscore the effectiveness of PPPs to diversify South Africa's energy system, which is traditionally reliant on coal. Renewables contributed 7.3 per cent of all electricity generation by 2022, which is significantly higher than 0.1 per cent in 2010 (Booyens et al., 2023). This is an indication of the long-term impact of the so-called mineral-energy complex, which has long integrated the South African economy with coal and coal-intensive industries (Fine and Rustumjee, 1996; Essex et al., 2023). Structurally, according to political economy, there is a systemic resistance to PPPs due to vested interests in coal, labour unions and political actors with interests in the status quo. In this

sense, PPPs can diversify the energy mix in an incremental manner, but by itself, will not be able to break up established regimes of energy.

Among the most notable observations is that, PPPs have provided the socio-economic benefits of creating jobs, local content and community development provisions. REIPPPP developed 38,500 employment years and redistributed ZAR 19 billion to communities. This validates that the just energy transition (JET) can be supported by PPPs and the association of decarbonisation and social equity. Nevertheless, the payoffs of this are disproportionate. The work that was generated was usually temporary and low-skill, whereas the announcements of community development funds have been delayed in their implementation (Montmasson-Clair and Ryan, 2014). This leads to the question of whether PPPs are efficiently working towards dealing with deep South Africa socio-economic inequalities.

To make PPPs play a full-fledged role in a just transition, governance structures need to be transparent, act equitably in sharing benefits, and have meaningful local ownership. Otherwise, PPPs are prone to recreating historical tendencies towards inequality with a new renewable energy rule. The findings indicate that grid constraints are still one of the largest challenges to the growth of renewable energy. The grid in South Africa was overloaded with large centralised coal power plants,

rather than variable renewables, hence the curtailments and delays (Yeboah, et al., 2025). This is echoed by the socio-technical transitions framework (Geels, 2002), which emphasizes the interconnection between technology, infrastructure and institutions. PPP can develop renewable capacity, although, unless there are concomitant investments in grid modernisation and storage technologies, it is limited in scope. The world has witnessed the significance of integrated planning. Lack of coordinated planning in South Africa has constrained the effectiveness of PPPs, and supports the application of systemic integration over isolated project-related interventions.

The findings indicate that PPPs have decreased the amount of greenhouse gas emissions, but to a low extent. Coal is still dominant, and South Africa continues to have the highest emitter in Africa (Qu, 2023). The PPPs have proven to be able to replace millions of tonnes of CO₂, yet without a powerful political will to speedily phase out coal, South Africa is likely to miss its Nationally Determined Contributions (NDCs). Comparative analysis demonstrates that PPPs in South Africa are comparatively superior in investment mobilisation factors and relatively inferior in the stability of governance. Other countries have combined PPPs and more general reforms, such as decentralisation, explicit renewable goals, and tariff subsidies, including

India, Chile, and Brazil (Jain and Jain, 2017; Ahmed, et al., 2025). The centralised procurement practice has killed flexibility in South Africa and the lack of policy consistency has slowed down progress. The moral of the story is that PPPs can work best when they are entrenched in a favourable governance ecosystem. Elsewhere, hybrid models of PPPs and state-led building capacity and community-based ownership have brought more sustainable outcomes.

The governance issue is a critical matter. The findings indicate that the monopoly and financial crisis of Eskom is still the biggest constraints towards PPP integration. The hesitation of Eskom to approve PPAs and its inadequate grid capacity highlights the institutional struggle between the objectives of PPP and the effort of state utilities (Booyens et al., 2023). The general lesson is that PPPs are effective in their mobilisation of capital and technology but not in themselves to provide the energy transition in South Africa. They have to be incorporated into a multi-dimensional framework that deals with the reform of governance, grid infrastructure, socio-economic justice, and climate imperatives.

Thus, this discussion has noted that PPPs have recorded great achievements in the renewable energy sector in South Africa, especially by the REIPPPP. They have harnessed individual capital, minimised technology prices and have generated socio-economic advantages. Their

influence is, however, curtailed by the instability of governance, monopoly by Eskom, gridlock and coal vested interests. The observation generated through the review of extant literature is that, within a reliable socio-economic reform and policy framework, PPPs can be effectively implemented. In the case of South Africa, it implies implementing an integrated approach to governance that incorporates PPPs into the larger just energy transition agenda. In the absence of these reforms, there is a risk that PPPs can continue as a hodgepodge of interventions that can reduce the symptoms without changing the structural energy system.

Conclusion

The results of this paper have indicated that Public-Private Partnerships (PPPs) is an important mechanism towards supporting renewable energy infrastructure in South Africa. PPPs have brought together large amounts of private sector investment through programs like the Renewable Energy Independent Power Producer Procurement Program (REIPPPP), cost reductions in renewable technologies, and a diversified South African energy mix through these efforts. The transformative nature of the program is evidenced by its success in attracting in excess of US\$19 billion of investment, acquiring more than 6,000 MW of renewable power and its contribution to the socio-economic development by creating jobs and benefiting communities. The research also found that PPPs are challenged with major

structural and institutional issues which limit their performance. The lack of policy consistency, the monopolist and financial instability of Eskom, grid integration constraints and deep-rooted coal addiction complicate the scalability of renewable energy initiatives. These challenges demonstrate the fact that though PPPs can be effective in resource mobilization, they cannot solely create the systemic change needed in the South African just energy transition (JET). The general conclusion here is that PPPs is an imperative but not the sole necessary condition for the South African renewable energy future. They should be a part of a broader policy agenda that incorporates the reform of governance, modernization of the grid, inclusion of socio-economic, and environmental sustainability. At that point alone can PPPs become real agents of change? The current study helps to comprehend how PPPs contribute to the energy transition in South Africa through the identification of both the successes and shortcomings. Although PPPs have achieved a lot of investment mobilization and development of renewable energy, they are anchored in a weak institutional and political environment. Without reforms dealing with the dominance of Eskom, policy inconsistency and socio-economic inequality, PPPs will be limited. The current policy idea is to reform PPPs to become a bigger system that will integrate the government reforms, grid investment and energy fairness. The future energy environment of South Africa will not be determined by the PPPs themselves, but rather the degree to which they are aligned with the national climate commitments, national development priorities, and

national goals of just transitions. Finally, PPPs should not be regarded as just contractual tools of interaction between state and non-state actors but as strategic tools to distribute financial capabilities, technological skills, and social purposes to a sustainable and inclusive energy future.

Recommendation

The following recommendations are proposed based on the findings of the study.

Strengthening the regulatory and policy framework

PPP policy inconsistency and delays in the procurement processes have been among the key obstacles to PPP success. To deal with this, the government should ensure that there is stability of the policy over a long period through consistent implementation of the Integrated Resource Plan (IRP), without delays in procurement processes. To decrease investor uncertainty, regulatory bodies like the National Energy Regulator of South Africa (NERSA) need to increase the degree of transparency in the process of licensing and approving tariffs. A legislative framework which binds renewable energy engagements to political influences must be introduced so that the procurement cycles are predictable and reliable.

Eskom reorganization and energy governance

The findings affirm that the monopoly and the financial crisis of Eskom are the biggest obstacles to the integration of PPP. To deal with this,

it needs a structural change. The process of unbundling Eskom into different generation, transmission and distribution needs to gain pace, enabling an equal competition among its independent power producers (IPP). Creation of an Independent Transmission System and Market Operator (ITSMO) needs to be a priority so that grid operations are transparent and can be incorporated with renewables. City councils must be given the autonomy to buy renewable energy at the level of IPPs, as has been introduced recently in the policy reforms, and this will decentralize energy management and diminish the gatekeeping position of Eskom.

Infrastructure and grid expansion

Renewable integration will not be able to occur without major grid upgrades. To make technical preparations. Massive investments in grid modernization should also be a priority, such as upgrading transmission, smart grid and flexible grid management systems. The government needs to encourage the use of energy storage systems, including batteries and pumped hydro, to counter the unpredictability of wind and solar. A special fund known as the Grid Expansion Fund, which is funded by PPPs, development banks, and green bonds, may be created to expedite the investment in infrastructure.

Implementation of principles of Just Energy Transition in PPP Agendas

To allow PPPs to play a useful role in social equity, the just transition principles should be embedded in the design and implementation of PPPs. The PPP contracts ought to have compulsory community ownership shares so that the community gains direct benefits out of the renewable projects. Renewable projects should develop skills programs that particularly target regions that are heavily reliant on coal so that they can shift to green jobs. In addition, clear monitoring systems should be implemented so that the community development funds can be paid fairly and in a timely. Institutionalization of social dialogue platforms must be established, with significant input from trade unions, communities, and civil society, in the process of making the energy transition.

Financing capacity expansion and De-Risk investment

Although REIPPPP has been able to bring private investment, it requires expansion of renewables through wider financing mechanisms. The government ought to come up with blended finance models, whereby guarantees are issued by governments together with the capital of the private investors to de-risk investment in risky projects. Tax incentives, green bonds and concessional loans ought to be increased to encourage domestic and foreign investment. To boost the catalytic role of financing PPP renewable projects, the public development finance institutions, including the Development Bank of Southern Africa (DBSA), should be strengthened.

Energy Policy and Climate Inclusion

Priority should be on the Global Best Practices

The findings indicate that the use of renewable energy is not entirely appropriate to the climate objectives of South Africa. To close this gap. The Nationally Determined Contributions (NDCs) of the Paris Agreement should clearly be aligned with renewable energy PPPs. The Presidential Climate Commission (PCC) is to be empowered further to oversee the climate and energy policy integration, seeing that the coal phase-out is to be aligned with the renewable growth. An expanded national Carbon Pricing Mechanism can even be used to encourage renewables more and to deter the use of energy sources that emit carbon and other harmful gases.

International experience can guide South Africa on how to overcome the transition to renewables faster through the use of PPPs. Similar to India, South Africa could create renewable energy zones, streamline the approval process and provide infrastructure support. Similar to Chile, the transparent auction systems might be improved with long-term contracts to obtain investor confidence and safe, competitive tariffs. Experiences in Brazil indicate that community-based renewable models can be deployed in a decentralized manner that can supplement PPP models and guarantee inclusiveness and ownership.

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