

P O L I C Y B R I E F

DR. SIBALISO MHLANGA | JUNE 2025

Innovative Financing for International PhD Scholarships: Strengthening South Africa's Knowledge Capital through Strategic Fund Sourcing



Executive Summary

It is an undeniable fact that countries at the forefront of generating and owning intellectual property— particularly in the form of new information, knowledge, and technological innovations (including data assets) – hold a significant advantage in the global landscape. Thus, investing in research and development scholarships carries serious implications for advancing the pace of contemporary socioeconomic development in any country. The evolution of societies has led to the creation and refinement of knowledge-based societies, where knowledge and data have become invaluable currencies in today's world. Driven by the Fourth Industrial Revolution (4th IR), concepts, such as the knowledge economy, machine learning, data science, quantum computing, artificial intelligence (AI), have emerged, showcased through advancements in information and communication technology (ICT) innovations. In the face of competing priorities, the availability and scarcity of funding for university doctoral scholarships— key to research and knowledge production – becomes vital in the realm of knowledge production, which serves as the true 'currency' in the knowledge economy. It becomes critical for authorities to develop pragmatic and adaptive funding models that enable the government to ef-

ficiently consolidate and allocate resources. These models should aim to strengthen research capacity, foster a new generation of scholars, and capitalize on international scholarship opportunities.

- **Diversified fund-sourcing model:** South Africa should adopt a multi-faceted approach to financing international PhD scholarships by leveraging public, private, and international funding sources. These include government budget allocations, corporate investments, philanthropic contributions, university co-financing, and alumni-driven crowd funding.
- **Equity and inclusivity in funding:** A targeted funding strategy is essential to addressing historical disparities, ensuring that financially disadvantaged and historically marginalized students have greater access to international PhD opportunities.
- **Sustainable fund management and oversight:** Establishing a structured fund management system within the NR, comprising a Fund Management Board, a Funding Allocation Committee, and a Partnership Development Unit, will guarantee transparency, equitable resource distribution, and long-term sustainability.

Outcomes-based collaborations between the public and private sectors define contemporary program management and implementation. Co-creation and co-investment (funding), including accountability and reporting, could serve as a solution to securing new funding data generation. The distinction in conceptualizing and realizing strategic funding for PhD scholarships may lie in forming innovative partnerships that engage the private sector, as well as in adopting effective co-funding approaches or frameworks.

This policy brief highlights the need for universities to connect innovation and enterprise through knowledge transfer and application, benefitting both the public and private sectors. For investment to support strategic funding research and innovation, doctoral scholarship should be solutions-focused, addressing practical socioeconomic challenges and generating futuristic insights and applicable technologies.

Introduction

South Africa's pursuit of enhanced global research engagement and innovation capacity critically depends on increased financing for international PhD scholarships for its citizens. Competing priorities and public policy choices in government have led to insufficient funding mechanisms are insufficient, preventing many qualified students from accessing opportunities due to financial constraints. This policy brief outlines a comprehensive fund-sourcing strategy that leverages public, private, and international resources to establish a sustainable financing model for PhD scholarships. By diversifying funding sources and prioritizing equity, South Africa can significantly increase access to international education, particularly for historically disadvantaged students. The proposed model not only addresses immediate financial barriers but also lays the groundwork for long-term academic and economic growth.

This policy brief proposes a strategic fund-sourcing framework that addresses the financial barriers faced by South African students seeking to pursue PhD studies abroad. A robust research ecosystem is vital for South Africa to effectively address pressing social and economic challenges. However, insufficient funding prevents many talented students from pursuing advanced studies. This brief will detail innovative funding mechanisms that can be employed to ensure a sustainable and diverse financial foundation for an international PhD scholarship programme. By harnessing the collective resources of government, industry, and philanthropic organizations, South Africa can significantly enhance its research capacity, knowledge transfer and foster a new generation of scholars equipped to contribute to the global knowledge economy.

Policy context

The current funding landscape for international PhD studies in South Africa is largely dependent on national grants and self-financing, limiting opportunities for many students who lack sufficient resources. While national funding agencies like the National Research Foundation (NRF) provide essential scholarships, their scope, amount, and availability remain limited, especially for students from historically disadvantaged backgrounds. Research indicates that 33% of PhD candidates self-financing for their studies, while only 22% receive support from national funding agencies.

The competitive nature of international scholarships further deepens disparities in access. For example, while programmes like German Academic Exchange Service (DAAD) and Fulbright provide valuable opportunities, they are highly competitive leaving many talented South Africans unable to benefit. Furthermore, part-time students with full-time jobs often face unique challenges, primarily relying on self-financing to support their work commitments. This reliance highlights a significant gap in the current funding structure – the need for a model that accommodates both employed and unemployed candidates, ensuring that financial barriers do not restrict access to quality education.

Without a diversified funding strategy, the current framework will struggle to meet the growing demand for doctoral education abroad. Innovative funding mechanisms that emphasize inclusivity and sustainability are urgently needed. This policy brief calls for a systemic shift towards a multi-faceted fund-sourcing model to comprehensively tackle these challenges.

Research method and approach

This policy brief emerges from an in-depth analysis of existing data sources, such as strategies, annual progress reports, other publications of the relevant entities, such as the National Research Foundation (NRF), the Department of Science and Innovation (DSI), the Department of Higher Education and Training (DHET) and the South African Medical Research Council (SAMRC), and respective policies and strategies.

Results and policy implications

Recent studies highlight the precarious financial situation faced by doctoral candidates in South Africa. Among those surveyed, 33% rely on self-financing, often through loans or family support, while, 30% receive financial assistance from their universities. Only 22% of respondents reported receiving scholarships or bursaries from national funding

agencies, such as the NRF or the SAMRC. Notably, only 8% of respondents receiving financial assistance from international organizations, highlighting the limited resources available to students pursuing studies abroad.

The disparity in funding sources is pronounced among different demographic groups. For instance, Black students reported great reliance on national funding agencies (22%), whereas white students were more likely to self-finance, with 60% depending on their own resources. This inequity underscores a critical need for targeted funding initiatives to address the historical disadvantages faced by Black students and other marginalized groups. Funding dynamics are further complicated by employment status – doctoral students employed full-time are more likely to self-finance their studies (32%), whereas unemployed candidates tend to rely on national funding (20%).

Moreover, many students report that they receive multiple forms of financial support, such as a combination of university assistance and personal funding. This highlights the potential a diversified funding approach to not only enhance accessibility but also provide a more tailored funding experience suited to individual needs. To build a diverse and capable scholarly community, South Africa must adopt a fund-sourcing strategy that integrates multiple financial streams, including public funds, private sector investments, and international partnerships.

Proposed fund-sourcing mechanism: Options and alternatives

To develop a sustainable fund-sourcing model, the following strategies are proposed:

1. Government and multilateral budgeting: A significant portion of the fund should come from government budget allocations, structured within the Department of Science and Innovation (DSI) and the Department of Higher Education and Training (DHET). Collaborating with multilateral funding sources, such as UNESCO and the African Union, will enhance the budget, especially for capacity-building initiatives.

2. Corporate investment and industry collaboration: South Africa's corporate sector, particularly in technology, mining, and engineering, should be incentivized to invest in the programme through tax breaks or corporate social responsibility (CSR) initiatives. By forging partnerships, these industries stand to benefit from the development of highly-skilled professionals who can drive innovation within their sectors.

3. Targeted philanthropic contributions: Approaching

large foundations, such as the Bill & Melinda Gates Foundation or the Mastercard Foundation, can yield substantial grants aimed specifically at supporting African students in international PhD programmes. Many of these organizations prioritize education and capacity-building, aligning with South Africa's goals.

4. University partnerships and co-Financing: Strategic partnerships with international universities can enhance available funds. Many top global institutions have endowments aimed at fostering diversity and supporting students from developing countries. Co-financing agreements would significantly reduce the financial burden on South African funders.

5. Crowd-funding and alumni networks: Engaging alumni who have benefitted from international education can generate financial support. Crowd-funding platforms can attract smaller donations from individuals interested in promoting higher education.

Organizational structure for fund management

To efficiently manage the funds and ensure transparency, the following structure is proposed:

- **Fund Management Board:** A dedicated board within the NRF, comprising representatives from public and private sectors, philanthropic organizations, and academia, will oversee fund allocation and management, ensuring equitable distribution in line with programme priorities.
- **Funding Allocation Committee:** Responsible for vetting scholarship applications, this committee will match students with appropriate funding sources based on their field of study, merit, and financial need.
- **Partnership Development Unit:** This team will foster and maintain relationships with international universities, private sector partners, and philanthropic organizations, actively seeking new funding opportunities and managing existing partnerships

Policy recommendations: Who should do what?

1. Government (Department of Science and Innovation (DSI) and Department of Higher Education and Training (DHET)):

- Allocate dedicated funding to support international PhD scholarships.
- Introduce tax incentives to stimulate private sector investment in PhD funding.
- Establish an endowment fund with initial seed funding to ensure long-term sustainability.

2. National Research Foundation (NRF):

- Establish and oversee a Fund Management Board to ensure transparency and equitable distribution of resources.
- Develop and implement funding allocation criteria that prioritize inclusivity and sustainability.
- Conduct regular monitoring and auditing of funding mechanisms.

3. Corporate sector and industry partners:

- Contribute to the fund through Corporate Social Responsibility (CSR) initiatives and co-financing agreements.
- Provide industry-specific scholarships and fellowships aligned with national research and innovation priorities.

4. International universities and philanthropic organizations:

- Co-finance scholarships through partnerships with South African institutions.
- Provide matching grants and endowment contributions to support long-term sustainability.

5. Alumni and public engagement initiatives:

- Mobilize alumni networks to contribute to the scholarship fund through donations and mentorship pro-

grammes.

- Implement public awareness campaigns to attract contributions from individuals and corporate donors.

Conclusion

Developing countries face a serious shortage of highly skills specialists, scientists, and innovators, especially in fields like engineering, technology, and data sciences. Targeted investments in post-graduate research capacity and quality training are essential. This brief explores effective ways through which international doctoral scholarships could be funded to enhance knowledge production and bridge critical skills gaps. Potential and emerging researchers, individually or a cohort, can benefit greatly from creating digital research profiles. These profiles enhance their visibility and help them connect with a diverse network of potential international supervisors and funders. In this way, they can stay ahead of the competition. Ultimately, the goal should be to generate research innovations –knowledge and data –that inspire diverse socioeconomic development and drive progress.

Author

Sibaliso Mhlanga,

PhD, Post Doctoral Fellow, NRF Business Advancement Division, University of Western Cape

