

RETHINKING THE RESEARCH FUNDING MANDATE: STRIKING A BALANCE BETWEEN ADDRESSING SOCIETAL NEEDS AND ACADEMIC FREEDOM

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ABSTRACT

What is new?

Public funding agencies are increasingly expected to balance their support between policy-driven research and fundamental science, aiming to promote societal impact without compromising academic freedom. The article advocates for the strengthening of dual support systems, such as targeted funding for applied projects alongside investigator-initiated basic research, to maintain this balance effectively. It emphasises the importance of transparent funding criteria and stakeholder engagement to ensure research aligns with societal needs while safeguarding scholarly independence.

What was the approach?

The approach used in this opinion piece is primarily analytical and argumentative, as it evaluates the roles and challenges of public funding agencies and advocates for a balanced strategy. It incorporates examples and evidence from various global and regional initiatives to support its points.

What is the academic impact?

The academic impact of this article lies in its contribution to the discourse on balancing policy-driven research with academic freedom, offering insights into how public funding agencies can foster innovation while safeguarding scholarly independence. It provides evidence-based examples from both regional and global contexts, enriching scholarly understanding of effective research funding strategies.

What is the wider impact?

The article emphasises the importance of aligning scientific research with societal needs, which can influence policymakers, funding bodies, and research institutions worldwide. Its normative arguments advocate for a

nuanced approach to funding, promoting sustainable innovation and societal benefit. A more integrated and responsible research ecosystem that benefits both academia and society at large is encouraged.

Keywords

Science for Society; Academic Impact; Academic Freedom

INTRODUCTION

Public funding agencies are essential components of the research ecosystem, providing critical financial support that facilitates scientific inquiry and technological development (Geuna et al., 2009). They also serve as a crucial advisory pillar for policymakers and are increasingly offering support to facilitate the implementation of scientific research (Smits and Denis, 2014). In the African context, this goes beyond resource allocation; they help shape research agendas, influence government priorities, and drive societal progress (Mouton and Marais, 2012). Their strategic involvement is essential for promoting innovation and tackling regional development challenges.

Funding agencies such as the National Research Foundation (NRF) of South Africa, the National Science Foundation (NSF) in the United States, the European Research Council (ERC), and other publicly-funded agencies worldwide are instrumental in supporting both basic and applied research. Their strategic objectives are designed to advance national interests, enhance economic competitiveness, and address societal challenges, while simultaneously safeguarding the independence of scholarly inquiry. As noted by Chataway (Chataway et al., 2019), the tension between supporting policy-driven research and preserving academic freedom remains a central theme in science policy discourse, demanding continual scrutiny to ensure that these agencies fulfil their dual mandates effectively.

For the African continent, the role of agencies was enhanced with the establishment of the Science Granting Councils (SGCs) initiative. Spearheaded by the NRF the initiative sought to build capacities of funding agencies on the African continent (Ndebele et al., 2023). To show the level of interest in the running of SGCs, some countries such as Ghana, Côte d'Ivoire, Botswana and Burkina Faso joined the initiative through government science and technology ministries and participate actively to advance Research and Development (R&D) in their respective countries.

Governments face criticism for prioritising national objectives in their funding decisions, leading to critiques that the allocation of funds is not transparent or accountable and fail to meet the basic needs of researchers (Mazzucato, 2018). The critics caution that an overemphasis on immediate policy goals may marginalise basic science, which often lays the groundwork for unforeseen innovations. In this commentary I argue that public funding agencies have no choice but to ensure that they guide researchers to undertake research that is impactful to society. I further argue that this can be achieved without compromising the principle of academic freedom. The two can co-exist in an equitable balanced relationship.

WHY SUPPORTING NATIONAL POLICY IMPERATIVES MATTERS

Funding agencies support the social contract by channelling taxpayer funds to impactful results and by making sure policymakers use research findings to inform their decisions (Pielke, 2007). To ensure alignment with national interests, agencies should therefore reflect strategic priorities through comprehensive planning, policy directives, and innovation agendas. The Practical Guide to Implementing Responsible Research Assessment (RRA) from the Declaration on Research Assessment (DORA) offers actionable, discipline-agnostic guidance to move beyond metrics-focused evaluation toward holistic, fair, and inclusive practices, tailored to diverse organisational contexts (Allen et. al., 2025). The guide stresses the importance of leadership involvement and clear communication to gain buy-in from all stakeholders, and it provides practical tips for making meaningful improvements in research and assessment processes for impact. Diko and Bantwini (2013) argue that forging closer linkages between government researchers and policymakers will help researchers gain a broader understanding of social and political systems.

Based on my experience of working in a funding agency as a research manager for a period of time, I can confirm that some research outcomes influence policy making. As an example, the development of the 'Maropeng' site was largely driven by significant scientific research and discoveries within the Cradle of Humankind World Heritage Site, particularly in the nearby Sterkfontein Caves. Maropeng is the visitor centre for the Cradle of Humankind, a UNESCO World Heritage Site in Gauteng, South Africa. The site provides context for these discoveries and acts as a starting point to explore nearby caves and fossil sites, especially the Sterkfontein Caves. This research was funded largely by the South African government and was led by the Wits University research group (Broom and Robinson, 1947; Rightmire, 1984). The development of Maropeng is linked to regional economic development, utilising science, conservation, and tourism as economic drivers, a testament of science for impact.

Also, during the COVID-19 pandemic, governments worldwide allocated substantial resources through funding agencies to develop solutions and inform policy responses. For example, the COVID-19 Africa Rapid Grant Fund (CARGF) exemplified a significant multilateral research initiative led by the National Research Foundation (NRF) under the auspices of the Science Granting Councils Initiative (SGCI) in sub-Saharan Africa. Established to support Africa's response to the pandemic, the CARGF was supported by multiple partners, including the NRF, the Department of Science and Innovation (DSTI) of South Africa, Canada's International Development Research Centre (IDRC), Fonds de Recherche du Québec (FRQ) and other funders. Such collaborative funding efforts highlight the critical role of funding agencies in mobilising scientific research to inform public health policies during global crises. The COVID-19 pandemic was a clear example of how government interventions encouraged collaboration among researchers, policymakers, and service providers, creating pathways for research evidence to inform policy decisions directly (Smits and Champagne, 2020). CARGF mobilised a broad coalition of funders beyond NRF. This pooling of resources enabled a rapid, regionally-

focused response that no single country could have funded alone. By prioritising COVID-19 studies with clear pathways to inform public health policies, CARGF bridged researchers, policymakers, and service providers. The grant design emphasised actionable study results intended to directly influence decision-making processes, guidelines, and resource allocation during the crisis.

Another example of the integration of policy and research is the adoption of the Sustainable Development Goals (SDGs) by the United Nations in 2015. Research under SDGs has helped reframe national policy agendas by creating measurable, cross-sector targets and a common language for development planning, e.g. studies by Biesbroek (2021). The active involvement of policymakers helped redefine research priorities to address development challenges that encompass environmental, social, and economic objectives, establishing these as universal challenges for governments worldwide (Biermann et. al., 2022). Since the SDGs' launch, hundreds of scholarly articles have been published on related topics, illustrating how policy can positively shape scientific research. This influence is effectively disseminated through publicly-funded agencies, many of which align their programmes with the SDGs to ensure that research efforts support these global priorities (Le Blanc, 2015).

The 2024 study by van Driel et al. (2024) found that the Sustainable Development Goals (SDGs), particularly SDG 12, have significantly influenced global policies by fostering international institutionalisation and using goal-setting to drive policy development in sustainable consumption and production (SCP). The study identified mechanisms and conditions that facilitated this impact, noting that the SDG framework acted as a key tool to expand the 10-Year Framework of Programmes (10YFP), which then evolved and was integrated into the High-Level Political Forum, increasing global focus on SCP policies. As Gibbons et al. (1994) argued in their knowledge production framework, research increasingly occurs within societal contexts, emphasising applied outcomes that can directly influence policy and economic development. Consequently, funding agencies' support for policy imperatives enhances societal relevance, fostering public trust and justifying continued taxpayers investments in research.

STRIKING THE BALANCE BETWEEN POLICY AND ACADEMIC FREEDOM

It is undeniable that basic research often leads to innovation in many instances as argued by Ceccagnoli et al. (2024). They have shown through a study that basic research can influence the type of innovations that firms can commercialise. The argument is therefore not about whether basic research has value or whether policy driven research is important. The question is how do we strike the balance between the two.

The challenge for public funding agencies lies in maintaining a delicate equilibrium, i.e. supporting applied science and innovation aligned with national priorities while preserving the intellectual freedom necessary for basic research. Academic freedom, the freedom of scholars to pursue knowledge without undue restriction, remains a cornerstone of scientific progress. Most agencies and government ministries ensure

that funding mechanisms are not inadvertently stifling curiosity-driven research, which often lacks immediate policy relevance but is crucial for long-term scientific advancement. For an example, in 2016, the Department of Science Technology and Innovation (DSTI) of South Africa published the Basic Sciences Development and Support Framework to guide support for basic sciences in South Africa (DSTI, 2016). Within the guidance of this framework, the NRF had, for example, a funding instrument supporting Blue Skies research which provided resources for fundamental research, emphasising imaginative, critical thinking and the potential for unpredictable scientific and scholarly breakthroughs, while also supporting strategic programmes such as the Square Kilometre Array (SKA) and the Global Change research. Key impacts from one of the bilateral instruments supported by the NRF include increased research publications, improved international collaboration, capacity building for the next generation of scientists, and the development of cutting-edge research infrastructure (Senona & Nxumalo, 2018).

Fostering a culture that values both applied and basic research within funding agencies can catalyse a more nuanced approach to innovation. As Mazzucato (2018) emphasises, governments and public agencies should act as "market makers", nurturing innovative ecosystems that support high-risk, high-reward research. The author argues against the common view that innovation mainly comes from the private sector. She further argues that governments have historically played a crucial, often pioneering, role in developing foundational technologies for major advances like the internet and the iPhone. The "Entrepreneurial State" actively invests in and shapes markets, rather than merely correcting market failures. By debunking myths of public sector inefficiency, it promotes a view of the public, academia and private sectors as vital partners, collaborating to drive innovation and economic growth.

CONCLUSION

Publicly-funded research should play a critical role in addressing national needs and societal challenges, especially in regions like Africa where strategic development is crucial for progress. Aligning research priorities with policy imperatives ensures that scientific endeavours produce tangible benefits, such as economic growth, public health improvements, and sustainable development, which are vital for societal well-being. The examples of initiatives like the COVID-19 response and the SDGs demonstrate how targeted research funding can directly influence policy outcomes and foster societal resilience, emphasising the importance of strategic alignment between research and national interests.

At the same time, it is vital to also maintain a balance between policy-driven research and academic freedom for fostering innovation and long-term scientific advancement. Fundamental or curiosity-driven research often leads to unforeseen breakthroughs that can revolutionise industries and inform future policy directions. Funding agencies must therefore adopt support models that fund both applied and basic research, ensuring that scientific inquiry remains vibrant and unrestricted. Transparent decision-making

processes and stakeholder engagement are key strategies to uphold this balance, allowing research to serve immediate societal needs without stifling the pursuit of knowledge for its own sake.

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BIOGRAPHY

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