Promoting Research and Innovation Funding as a Catalyst for Socio-Economic Development: Perspectives from The Gambia

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Abstract

Rapid developing economies rely on research and development activities to support sectoral development and productivity. Universities and Research and development institution are niches of innovation and entrepreneurship growth and development (Herron & Wolfe, 2021).

They continue to provide skills and competencies towards the introduction of products and processes as well as providing structures for promoting employability, job creation, and commercialization avenues. At the industry and start-ups, the drive to create jobs and businesses remain critical in the overall socio-economic drive of developing economies (Stenberg & Westerlund, 2008).

To support the promotion of research, innovation, entrepreneurship, and commercialization, countries globally are introducing research and innovation funds that will be used to promote innovation, entrepreneurship, creativity, and creation of new ventures.

The Gambia, cognizant of this new innovative drive, is introducing a National Research and Innovation Fund in line with the Ministry of Higher Education Strategic Plan and its corresponding sector financing strategy (MoHERST, 2023).

Critically analyzing best practices, this paper seeks to discuss on the role, modalities of implementation, and impact of a research and innovation fund towards sectoral development as well as the overall socio-economic development of The Gambia.

Keywords: Research and Innovation Activities, Support fund, Socio-Economic Development, The Gambia.

Introduction

The Government of the Gambia as part of its drive towards promoting the development impact of research and innovation, is introducing a National Research and Innovation Fund (NRIF) that will be utilized by researchers, innovators and entrepreneurs in their projects and programmes in the different sectors of the economy.

The introduction of this fund is being done in line with the global trend of providing funds for exploiting new products and processes towards improving sectoral development and productivity.

Prior to the introduction of this Fund, there were no specialized dedicated funds to be accessed by researchers and innovators. This created a huge funding gap and a resultant effect on The Gambia innovation output locally and within the Global Innovation Index.

At the level of policy, there have been weak strategies towards the establishment of such a fund, even though the NSTIP and the related ICT Policies being implemented by MoHERST and Digital Economy Ministry respectively articulated pronouncements towards a NRIF. Also, the recently validated National Research Policy (2024 – 2029) has identified priority focus in terms of research and development, which means these sectors will be prioritized during the implementation of this fund.

Research and development institutions as well as other actors of the innovation ecosystem including entrepreneurs, start-ups, tech-hubs, and fintech, as well as creative industries have continued to be derailed in their development drive due to lack of timely funding.

Research and Development

As at January 2024 there are 5 public and 4 private research and development institutions that operates in The Gambia as per information sources from the MoHERST database. These institutions rely predominantly on external donor funded projects, which usually is not aligned to the national development priorities.

These institutions are predominantly in health, agriculture, Information Communication Telecommunications (ICTs), energy, and education including STEM and related fields, in line with the Green Recovery National Development Plan.

In all sectors, different basic research activities are undertaken mostly in policy and studies to inform government decisions.

However, within the NRP, greater focus has been placed on experimental research and the establishment of laboratories and structures to support research, innovation, and entrepreneurial development in The Gambia.

To support the provision of equipment, reagents, as well as building capacities, funds are needed to that effect, and this is where the research and innovation fund will come to compliment and reverse the current trend.
Innovation and Entrepreneurship Development

The National Science Technology and Innovation Policy (2016 – 2025) has made key pronouncements on supporting and strengthening the national innovation ecosystem. It provides for the Minister to promulgate a bill that can be enacted to support the national innovation system, predominantly in providing funding and seed money to researchers and innovators.

Since 2022, MoHERST has been engaging constantly with relevant stakeholders in conducting Innovation Surveys as well as stakeholder meetings, in which the establishment of a National Innovation Fund in line with international best practice, and the European Union through its Organization of African, Caribbean and Pacific States (OACPS) funded a Policy Recommendation Paper (PPR) that set the stage for the establishment of the National Innovation Fund for The Gambia (MoHERST & OACPS, 2022).

Conscious of the important role that entrepreneurship plays in supporting innovation, MoHERST is institutionalizing entrepreneurship training in all institutions of higher learning in The Gambia. This will ensure that students acquire skills necessary to support the factors of production, which consists of human, physical, and information resources and doing so in an efficient manner (Isenberg, 2010).

Based on the Policy Recommendation, a draft Bill has been developed and already approved a Cabinet. This Bill will now be sent to the National Assembly for enactment, proposing viable and reliable funding sources for research and innovation in The Gambia.

Within the prefix of the tertiary and higher education transformation agenda, innovation has been identified as a critical player and for this in the new USET, an innovation lab with state-of-the-art equipment is being established for use by students and innovators across the country.

Role of Research and Innovation Funds

The debate on the importance of funding for research and innovation is gaining momentum, at a time when sub-Saharan African governments and grappling with challenges of un-employment, weak industries, and growing youth populations that are increasingly migrating to Europe in search of better opportunities.

In the middle of this menace, it has become imminent that options are needed to create strong scientific and technological institutions that can respond to the needs and aspirations of these youth. Core to this is the availability of funding to promote research, innovation, and entrepreneurship activities.

The establishment of such strong institutions and timely availability of funds will ensure the introduction of innovative technologies and create creative industries that will support sector development and at the same time produce enough jobs ask competences of individuals will be built during this process.

Regionally, the ACE Impact Project came to support the building of institutions through the establishment of Africa higher education centres of excellence. In which countries are provided the opportunity to establish institutions based on their national development targets. Key to this is the centre of excellence being established at USET, in which the introduction of innovation and entrepreneurship as part of institutions
curricula, as well as establishing innovation entrepreneurship hubs forms a core pillar of the university. These hubs bridge the gap between industry and academia and has been found to be useful in providing skills and competencies for industries as well as provide feedback to academic institution in terms of the curricula that they deliver.

In The Gambia, being a member of this regional project, the primary focus is to ensure innovation and entrepreneurship is embedded in the core engineering programme that is being delivered at the University of Applied Science Engineering and Technology (USET). To support the delivery of this programme, state-of-the-art innovation and intrapreneurship hub has been established to provide niche support towards internship industrial placement as well as business development including commercialization activities involving in institutions as well as students in the programme.

As discussed by (Sowe & Mwila, 2023), the concepts of the innovation and entrepreneurship curriculum deliver approach in USET, as well as the national policy drive on institutionalizing innovation and entrepreneurship education as part of national education curricula (Sowe, 2023), forms a solid foundation for the introduction and effective implementation of such a fund.

**Institutional Arrangements and Alignment to National Development Plan**

In every country, there will be many sectors involved in research and innovation activities, hence, there will be a need to identify a sector lead for the development, implementation, and monitoring of a research and innovation fund.

In The Gambia, MoHERST is the custodian of Gambia's National Science, Technology, and Innovation System Policy (NSTIP) that follows the widely adopted (and adapted) innovation systems approach (MoFEA, 2018). The NSTIP notes that the Gambia Government recognizes STI's crucial role in socio-economic transformation. Thus, developing and enhancing the nation's STI system will be essential to ensure that the exponential pace no longer disadvantages the citizens in STI developments that they are witnessing today.

The National Development Plan (NDP) and the goals of the National Science, Technology and Innovation Policy are crucial for the successful functioning of the National Research and Innovation Fund. MoHERST is mandated to drive human capital and skills development programmes across innovation hubs, business incubators, academia, and government sectors to increase opportunities for innovation.

The systems approach argues that innovation arises from mutual interaction among enterprises, universities, and public research institutions. This Triple Helix model allocates a privileged status to universities as the fount of new knowledge (Makasi & Govender, 2015).

Another relevant parameter of the Quadruple Helix model is that it includes civil society and social entrepreneurs as a fourth strand. The Quadruple Helix model draws attention to the vital interaction of the Triple Helix actors with communities, the informal sector, and other social partners who are both users of innovation and innovators themselves.
Sources of Funds and Sustainability for RIF

Globally, research and innovation funds are financed predominantly by governments through a statute. The funds usually are appropriated annually through government contributions, private sector, intergovernmental agencies.

Governments drive such funds and map out stakeholders that will commit funds that will be utilized to conduct research, innovation activities, or processes involving entrepreneurial and commercialization ventures.

In establishing such a fund, it is crucial that a critical analysis of how such funds have been implemented and managed in countries with similar characteristics like the Gambia is done. This will ensure lessons are highlighted, which will guide and support the effective implementation of the fund.

Development Impact of Research and Innovation Fund: Lessons from Other Countries

A case study report by (Babu et al., 2020) on youth entrepreneurship in agribusiness sector in Nigeria proposed that developing a multi-stakeholder initiative in a business ecosystems approach is needed to help entrepreneurs undertake personal initiatives to network and expand their business. This ensures that the STI ecosystem serves as a vibrant catalyst for sustainable socio-economic development.

In next door Ghana, (Dzisi & Odoom, 2017) in their review of the entrepreneurship education highlighted that there is a need for more depth and rigor in terms of content in relation to the curricula in ensure that entrepreneurship courses, materials, and research are of high quality and reflective of local ecosystem.

As a developing country grappling with many donor actors for STI financing, it has been observed that the lack of a coordinating approach has resulted in poor impact of the projects and programmes (ITC, 2020). This has created a need for a coordinating approach that will ensure all funds earmarked for research and innovation are put in one basket and managed by a competent authority. The management of this fund will have respective stakeholder representatives that will focus the interest of researchers, innovators, entrepreneurs, and technologists are catered for in the process of distributing the funds.

As best practice, it has been observed in Ghana that the governance of such funds should be handled by an independent entity that is not under the direct control and management of government, but administered by a separate entity which will seek policy targets and priorities from the Government. Priority projects, programmes, and activities will be determined by those sectors given prominence in the prevailing national development plan of the country.

The fact that the sources of funds are divergent, this reduces the pressure on government to be the main source of funding, as well as bridge the funding gap and challenges in case government is not in position to provide funds at any given point in time.
The Gambia’s Readiness for a Research and Innovation Fund

For a National Research and Innovation Fund (NRIF) to be effectively implemented, there should be institutional readiness to ensure effective adoption and utilization of the allocated funds, as well as their corresponding vibrance for an enhanced innovative productivity within the STI ecosystem.

The Gambian innovation ecosystem needs a Fund and governance to play a critical role in transitioning the country to compete. In concordance with the country’s challenges on pressing economic and social transitions due to lack of incentives to support innovation for development.

In promoting innovation, MoHERST has been continuously conducting awareness campaigns across all levels in the quadruple-helix of government, academia, industry, and society. The purpose of enhancing interlinkages is to spur demand-led innovation activities and further encourage collaboration among universities, the public and private sector actors, and civil society.

Research and Innovation Ecosystem

As part of support towards research and innovation, the Ministry of Finance and Economic Affairs in The Gambia through the national budget allocates over the past years an average of USD 50,000 towards research and innovation activities (MoFEA, 2023). However, due to the financial regime, these monies are hardly disbursed in totality as per planned monthly cash allocation to the Ministry of Higher Education Research Science and Technology, making it conclusive that there are limited funds towards research and innovation.

On the other hand, the fact that other institutions get little appropriation on research which could have been all streamlined in one vote to serve as a fund with limited restriction of allocation, disbursement, and utilization.

Additionally, at the programmatic level, there are weak linkages in terms of coordination towards implementation of research and innovation activities. Different supports are in place which could have been leveraged in joint sectoral ventures and projects that could lead to more desired outcomes. This can easily be done by utilizing and cross-fertilizing capacities including human and infrastructure towards joint projects.

Absorption Capacity

Barriers towards research and innovation, according to stakeholder interaction, revealed that access to funding for research and innovation remains a significant challenge (Liyanage et al., 2018). This is due to the existence of lending practices with high interest rates and unfavourable terms on credit and stiff collateral conditions. Hence, there is a need to have a strong policy support towards the creation of incentives towards research innovation, which needs to be further enhanced by increasing motivation to carry out research and innovation activities.

Within the STI priority sectors of education, medical and health, energy, agriculture and natural resources, and digital economy, there are laboratories with limited infrastructure, inadequate trained personnel to run and manage research and innovation projects. However, these are predominantly in the sectors of medical and health, and there is a need to bring in research and testing labs in digital economies sector. In addition to these labs, the key next stage to innovation is commercialization, and the need to exploit and untap the intellectual property assets of the innovations.
This requires the establishment of technology transfer and commercialization support structures in universities and research institutions.

The new curriculum approach putting innovation and entrepreneurship in all curricula within tertiary and higher education institutions, will create a niche for innovation to be productive as well as strengthened the STI ecosystem. Additionally, it will create an enabling environment for skills and competencies needed in the implementation of the fund.

**National Drive Towards Improved Innovation and Creativity**

The establishment of a National Research and Innovation Fund that will support and promote scientific research, technological development, as well as innovation and entrepreneurship projects in The Gambia.

The establishment of the University of Applied Sciences, Engineering and Technology (USET) and institutionalization of Innovation and Entrepreneurship hubs to spur innovation and creativity as well as support business development and serve as niche for bridging the gap between academia and industry.

The proposed amalgamation of the Intellectual Property Office and the Copyright Office into one standalone unit for the purposes of coordination of IPR issues sits positively in the step up towards supporting commercialization of innovative products and processes in The Gambia.

**Conclusions**

It is agreeable that the Gambia hosts a modest research and innovation system that displays weak linkages among the local actors, universities, public research organizations, enterprises, and civil society. The expectation is that the creation of a fund to support the development impact of research and innovation activities including entrepreneurial and commercial activities will help redress this weak linkages and low absorption capacities.

Based on the lessons learnt from other countries, disbursement will be done in priority sectors of the economy for an increased generation of new knowledge, technologies, and innovations that contribute to the country’s socio-economic growth and development. This will be supported and enhanced by a governance and administrative structure which will be established to manage the fund in line with an Act to be enacted by the National Assembly of The Gambia.

In addition to a monitoring and evaluation dashboard to be established to track the progress of disbursed funds, there will be a need to do assess the impact of the implementation of this fund to see how it has contributed to the STI output and outlook of The Gambia.

**References**


