



Innovation in South Africa – The role of the Technological Innovation Agency

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Research turns money into knowledge, whereas innovation turns knowledge into money. This simplistic description of the difference between research and innovation makes the key distinction between producers of knowledge on one hand, and social and economic entrepreneurs on the other. A more formal definition by the Organisation for Economic Co-Operation and Development states that

an innovation is the implementation of a new or significantly improved product (goods or service), or process, a new marketing method, or a new organisational method in business practices, workplace organisation or external relations.

This definition extends the concept of innovation beyond the pure economic realm to that of social and organisational renewal, which is especially important in the African context.

South Africa's Technological Innovation Agency (TIA) was launched in Johannesburg on 29 October 2010. In terms of the TIA Act [No 26 of 2008], the

object of the agency is to support the state in stimulating and intensifying technological innovation in order to improve economic growth and the quality of life of all South Africans by developing and exploiting technological innovations.

An essential aspect of innovation is the generation of new and context specific knowledge, so the agency's mandate is to promote innovation to address the unique situation in South Africa, and the African continent at large. A key aspect of this unique situation is South Africa's young population with a median age of about 20 years. This unique demography provides exciting innovation opportunities in the delivery and content of tertiary education and training. It also stresses the importance of an integrated vocational training system involving government and industry.

Another innovation opportunity presents itself in the emerging relationships between South Africa and Brazil, China, Russia and India, as formalised by the recent invitation for South Africa to join these BRIC countries. Other areas where local innovation should make an impact are centred around healthcare policies, the impact of global change on the livelihood of communities, and the way in which the financial crisis in the 'developed world' affects trade and aid.

South Africa has responded to these challenges by a number of measures. Firstly, the 'Ten-Year Innovation Plan of South Africa' was conceived by the Department of Science and Technology in 2008 to 'help drive South Africa's transformation towards a knowledge-based economy, in which the production and dissemination of knowledge leads to economic benefits and enriches all fields of human endeavour'.

Secondly, the National Industrial Policy Framework Industrial Policy Action Plan announced in 2007 sets out the government's broad approach to industrialisation in the context of the Accelerated and Shared Growth Initiative for South Africa, and has set the target of halving unemployment and poverty by 2014 through accelerated growth of at least 6% from 2010 onwards. Lastly, the Medium-Term Strategic Framework of the Presidency, published in July 2009, sets out 10 strategic priorities including the need to 'speed up economic growth and transform the economy to create decent work and sustainable livelihoods'.

The TIA could be viewed as a facilitating body that bridges the gap between the primary producers of knowledge and the social and economic entrepreneurs. According to their mission statement, the agency will apply a number of instruments to bridge this gap. Amongst these instruments are 'appropriately structured financial interventions, human capacity development, leveraging local and international partnerships and building a national culture of innovation'.

The major challenge to the TIA is to position and structure itself to expedite the dynamic, complex, non-linear and fractal process of innovation rather than establishing another monolithic,



bureaucratic silo. People are the most effective vector of innovation, and at best innovation occurs stochastically within loosely structured networks.

A systems approach should be implicit in the development of a national innovation strategy. Rather than just being another actor in the innovation space, the TIA should position itself to be a clearing-house of ideas and a repository of information pertaining to the national innovation system containing the following elements¹: the actors (government agencies, industry, knowledge providers), the activities (research and development, human capacity, knowledge transfer), the linkages (collaboration, contracts, grants), the outcomes (jobs, growth, wealth) and the impacts (well-being, culture change, regional and global change).

The TIA should set up funding structures that encourage network building, collaboration and exchange of individuals between the strategic components of the innovation system. The funding aim should be to expose a wide range of individuals to a variety of research and innovation activities across public and private institutions at a national and international level.

So far the effect of TIA on the innovation landscape has not been apparent. On the contrary, quite a number of funding

initiatives incorporated into the TIA have been abruptly ended, leaving research institutions responsible for personnel and running costs and in some cases even resulting in the loss of highly skilled personnel. In addition, the payments of many research contracts are in arrears, leaving institutions liable for payments to subcontractors and international collaboration partners. Apart from the financial implications, this situation has serious international reputational risks for the South African innovation system.

Nevertheless, if the TIA can succeed in setting itself up as an open, flexible structure that provides a clear mapping of the innovation landscape in South Africa it would provide a valuable service to practitioners and policymakers. Furthermore, if the agency could obtain sufficient funds and establish mechanisms to encourage collaboration and exchange of individuals between the different actors in the innovation space, it would expedite the process. Lastly, the TIA should focus on funding projects that simultaneously integrate all aspects of its mission: research, innovation and human capital development.

Reference

1. Gault F. Innovation strategies for a global economy: Development, implementation, measurement and management. Cheltenham: Edward Elgar and Ottawa: IDRC; 2010.