


Science for society

Research and development for a knowledge-based economy



A photograph showing a man in a white sweater and dark beanie sitting on a wooden stool. He is looking towards the right. Next to him is a rusty metal cart or trolley loaded with various items, including a large orange bucket, a green tarp, and other miscellaneous objects. The background is a weathered, light-colored wall with some peeling paint and a clear blue sky. The ground is dirt.

The link between innovation and social and economic development is the subject of much of the research undertaken by the HSRC. Studies conducted in this area reflect the global movement of economies to a more knowledge-intensive orientation. They also highlight new data collection techniques using mobile technology, being pioneered by the HSRC.

Indicators for research and development

The focus

Since 2002, the Centre for Science, Technology and Innovation Indicators (CeSTII) has completed six full research and experimental development (R&D) surveys on behalf of the department of science and technology (DST) and reported on the 2007/08 survey during the reporting year.

The R&D survey results for 2007/08 indicate that although South Africa's R&D expenditure increased from R16.5 billion in 2006/07 to R18.6 billion in 2007/08, this did not keep pace with the growth of South Africa's GDP and R&D expenditure, as a percentage of GDP fell slightly from 0.95% of GDP in 2006/07 to 0.93% in 2007/08.

In terms of the number of full-time equivalent researchers per 1 000 total employment, South Africa scores a low of only 1.5 researchers per 100 total employment, compared to 1.9 for China, 2.9 for Argentina and 9.5 for Korea. This is indicative of the general shortage of skilled workers in South Africa.

The bigger picture

CeSTII has undergone the South African Statistical Quality Assessment Framework (SASQAF) with Statistics South Africa and the department of science and technology and its joint Quality Management Plan (QMP), and is on the verge of being approved by Statistics South Africa. Hence, the R&D surveys are now a component of South Africa's official statistics. The results of the surveys are also published internationally by the OECD and UNESCO.

The work informs government's strategic planning processes and provides inputs for policy-makers. Expenditure on R&D as a percentage of GDP and the number of researchers measured through the survey comprise Development Indicator number 10 on future competitiveness in the Development Indicators 2009, produced by the Presidency.

Mobile phones for data collection

The focus

Using mobile phones as a platform for data collection, Child, Youth, Family and Social Development has pioneered innovative data collection techniques as well as faster ways of delivering essential services to health facility clients and data to researchers.



The data curation project has focused solely on SASAS data and has achieved the following outputs:

- Data and metadata for SASAS 2003 have been disseminated on a web portal.
- Data and metadata have been curated and archived for SASAS 2004 to 2006.

All data is preserved in ASCII-fixed format and is converted to other data formats such as SPSS, SAS and STATA.

The bigger picture

All the remaining social attitudes surveys, including client surveys undertaken by the HSRC, will be curated and preserved to ensure future accessibility of data with prior approval. Documents such as terms of reference, project proposals and any supplementary documentation containing information about a project will also be digitally preserved and maintained for further use and analysis.