Perspectives on South Africa's GIN Performance

Bok Marais & Andre Buys

University of Pretoria

2 September 2010

INGINEUS "Impact of Networks, Globalisation, and their INteraction with EU Strategies" is sponsored by the 7th Framework Programme of the European Commission. www.ingineus.eu

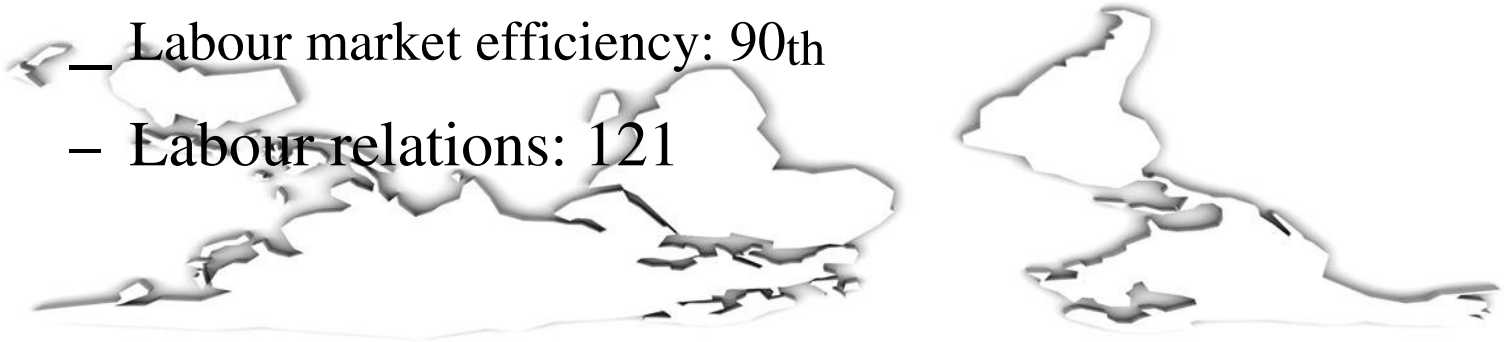
Overview

- **Approach**:
  - Policy > Data (Mark)
  - Perspectives on reasons why SA's GIN achievements are what they are
- **Themes**:
  - Context of the STI system
  - Nature of the system
  - Evaluation of the system
  - Recent developments
  - Future

Context of the STI System

- Two-level economy:
  - First: 48%
  - Second: 52%
  - (Unemployed + other: 32%)

  Gini: 0.666
- Global Competitiveness (*N*=133):
  - Overall: 45th
  - Fin market sophistication: 5th
  - Business sophistication: 36th
  - Business x university: 25th
  - Innovation: 41st
  - Labour market efficiency: 90th
  - Labour relations: 121

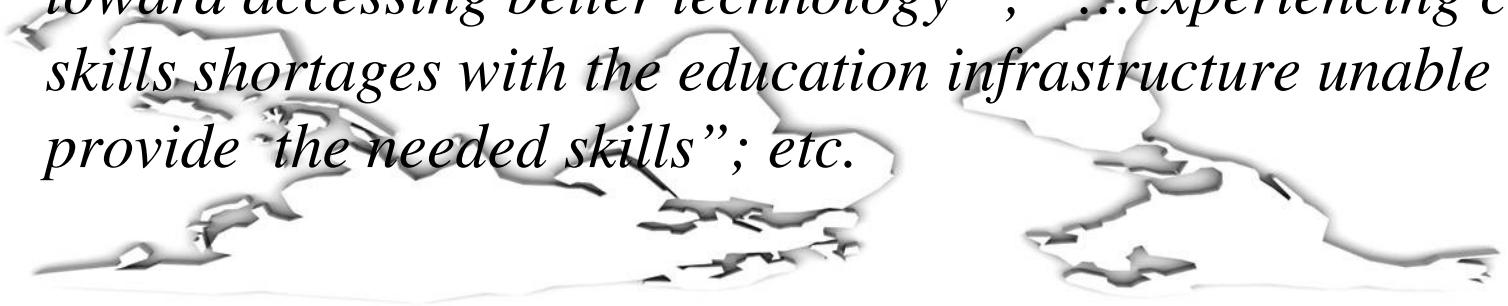


Nature of the STI System

- *Structure:* System embedded in formal structures; provides for all the functions normally associated with a STI system; and is reasonably well populated (institutions, strategies, etc.)
- *Researchers:* 385/million
- *Expenditure:* GERD/GDP: 0.93%
- *Productivity:* Relatively low (secondary and tertiary S&M; PhDs; publications; patents; etc.)

Evaluation of the System

- OECD: *"…a system in transition" and "Too little connection between strategies and their implementation."*
- Marais: *"…the radical political change South Africa underwent since 1994 impacted extensively on the STI system of that country. (...) the government has, however, not succeeded in giving effect to all its STI intentions."*
- Mark Knell: *"…getting increasingly involved in the global networks" ; "scepticism toward foreign ownership as a means toward accessing better technology" ; "…experiencing critical skills shortages with the education infrastructure unable to provide the needed skills"; etc.*



Business Developments (*'Responses'*)

- *R&D:* Business **funds** 45% and **performs** 58%
  – Large firms performed 72% (20% multinationals)
- MNEs seem to do little tech transfer
- Large SA enterprises 'internationalise' into Africa and elsewhere: Mining, manufacturing, financial institutions, etc.
- National partnerships: 40% of innovative firms
- International partnerships: 13%
- Growing commitment to advanced education

Recent Official Developments (*'Responses'*)

- Commitment to increase GERD/GDP: 1.5% (2014)
- Launching of Technological Innovation Agency
- Dedicated programmes (e.g. SARChI, PhD, IPR, tax rebates)
- Intensified promotion of international collaboration
- Ministerial Committee (June-September): "*to review the science, technology and innovation landscape and its readiness to meet the needs of South Africa (and to) assess whether South Africa is making optimal use of its existing strengths and whether it is appropriately positioned to respond rapidly to a changing global context and thus meet the country's needs in the next 10 to 30 years*"

The Future?

- More horizontal coordination and vertical integration of the STI system
- Increasing attention on innovation for development (internal within NSI)
  - Broad-based innovation
- Increased knowledge production & innovation transfer to Africa
- Relatively little change vis-à-vis **GIN** over medium term – depending on outcome of ministerial committee

Thanks for your attention

Bok Marais (hc.marais@up.ac.za)

Andre Buys (aj.buys@up.ac.za)

Graduate School of Technology Management

INGINEUS "Impact of Networks, Globalisation, and their INteraction with EU Strategies"
is sponsored by the 7th Framework Programme of the European Commission. www.ingineus.eu

SEVENTH FRAMEWORK PROGRAMME