INNOVATION AND INEQUALITIES: IS THERE A TRADE OFF?

International Conference on Innovation for Inclusive Development

Cape Town 21 November 2012

Michael Kahn
CREST, Stellenbosch University, Matieland 7602, South Africa
mikejkhahn@gmail.com
How does innovation policy develop frontier sectors and activities? Do these approaches increase performance gaps across firms?

Does policy foster dissemination and innovation performance of laggard businesses? Do policies target the informal sector?

Are social issues and inequalities part of national innovation agendas?
A set of small agriculture-based colonies on the periphery

Minority hegemony: exclusion accelerated by mining-led industrialization from 1870s.

Two wars then 1910 Union: The Crown wins the economy; Afrikaners win the peace; Africans lose the land

Apartheid, industrial diversification, self sufficiency

Small system of innovation responsive to crisis signals;

Who’s in and who’s out?

Employment in Mining

Employment in Agriculture

Mechanization in Agriculture
Pre 1994 social contract between S&T and society

- Linear model: ‘Research cannot be dictated and organized from above; it must grow from within the organization’ → supply side
- S&T for the warfare state
- Freedom to do basic research – an ‘own affair’
  - Journal subsidy
  - Researcher rating scheme
  - High barrier of entry to the Republic of Science
  - School science & mathematics restricts supply
- An excluding system of innovation?
End of isolation; globalization; accession to WTO

Member G-20; BRICS April 2011

Modernization and redress: doing all the rights things

Open economy; 40% JSE foreign owned

#1 financial market development

Exports: Minerals and commodities >60%

#133 primary education

Middle income trap? Binding constraints?

Innovation system approach + supply side
Infectious diseases, internationalization and impact

Big science

Karoo Array Telescope

"Joule" electric car

S A Large Telescope

Pebble Bed Modular Reactor

http://ska.ac.za/index.php
Major player in Africa; Higher Education hub of SSA

Massive demographic change in government sector

‘Own affair’ science continues

- Journal subsidy; rating individuals
- + New supply side instruments
- + Research Chairs Initiative

Science systems take long to build; may often seem to function in ways that are self-serving (Nelson, 2003)
Census 2011: a glass half full?

- Formal dwelling occupancy up from 68% (2001) to 78%
- Access to clean water now 91%
- Electricity for lighting now 85%
- Adult population with schooling now 91%
- Adults with higher education now 11% (2001= 8%).
- Household incomes increased quicker than CPI - White incomes increase half as fast as Africans so gross racial inequalities gradually reduced.
- Social safety net with 16 million beneficiaries
The Dutch brought Malay slaves to the Cape...
What drives growth? What are the trade-offs?


- Kaplinsky (2011): innovation reduces poverty through growth, use of capital and labour, environmental spillovers, and enhanced technological capability.

Innovation System 1.1

Developmental State II
Evolving inclusive polity

CRITICAL JUNCTURE: CONSTITUTIONAL DEMOCRACY

Innovation System 1.0

Developmental State I
Extractive polity

CRITICAL JUNCTURE: UNION OF SOUTH AFRICA

So where to?

CRITICAL JUNCTURE: CHRISTIAN NATIONALISM

CRITICAL JUNCTURE: DIRIGISTE

WARFARE STATE

WELFARE STATE

DIRIGISTE

Laissez Faire

MINING OLIGOPOLIES

DIVERSIFICATION

TNCs
A new social contract: Vision for 2030

From passive citizenry receiving services from the state to systematically include the socially and economically excluded, where people are active champions of their own development

- Redress the injustices of the past effectively
- Faster economic growth, higher investment & employment
- Improve education, health and social protection
- Strengthen links between economic and social strategies
- Effective and capable government
- Collaboration between the private and public sectors
Innovation policy for inclusion

- S&T key to development - innovation the primary driver of technological growth
- Investment climate - incentive structures
- Encourage R&D; increase size and effectiveness of the innovation system; closer alignment with companies that operate in sectors consistent with the growth strategy
- Massive investments in infrastructure
- Shift toward a low carbon economy
Ministerial Review of the STI Landscape

- National Council on Science and Innovation (NCRI) for **DEMAND SIDE** prioritization and agenda setting
- **COORDINATION** through the Research and Innovation Vote
- **FINANCING** via Sectoral Funds based on resource rents
- Office of Research and Innovation Policy to replace NACI and support NCRI with tools for **POLICY LEARNING**
- Build and reward **RESEARCH GROUPS**
- Prioritize **SOCIAL DEVELOPMENT AND INNOVATION**
The long walk to freedom