The Need for Capacity Building in Innovation Policy;

Managing the Politics of Innovation with Informed Perspectives

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Thinking ahead with SPRU

- Brief:
  - New ways of thinking about innovation and long-term transformative change in Africa, and the role that research, scholarship, **capacity building** can play in tackling this challenge
- Interpretation:
  - **paradox** of innovation policy and how policy has been variously influenced by the political imperatives since 1994
  - the future **requirements** for innovation policy evaluation and learning (broadly)
  - how learning can be supported by a **theoretical framework** linking innovation to the post-1994 socio-political imperatives.

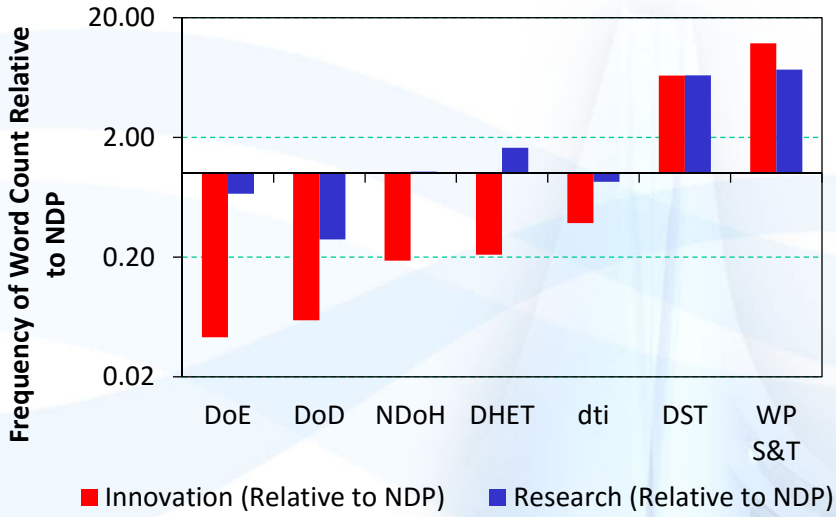
Bibliography

- Lundvall, B. A. 2007. National innovation system: analytical focusing device and policy learning tool. *ITPS Swedish Institute for Growth Policy Studies Working Paper,* 4**,** pp 1-59.
- National Advisory Council on Innovation. 2015. Review of the White Paper on Science and Technology. National Advisory Council on Innovation (Pretoria).

The Innovation Policy Paradox

- Market-driven innovation leads to increases in productivity (TFP) and capital employed, but decreases in direct labour
  - income rises per person employed
  - preference of medium and high skilled employees
- The political imperatives are reducing employment and eliminating poverty (in addition to economic growth)
  - who will employ large numbers of unskilled persons?
- Innovation seen as anti-poor?

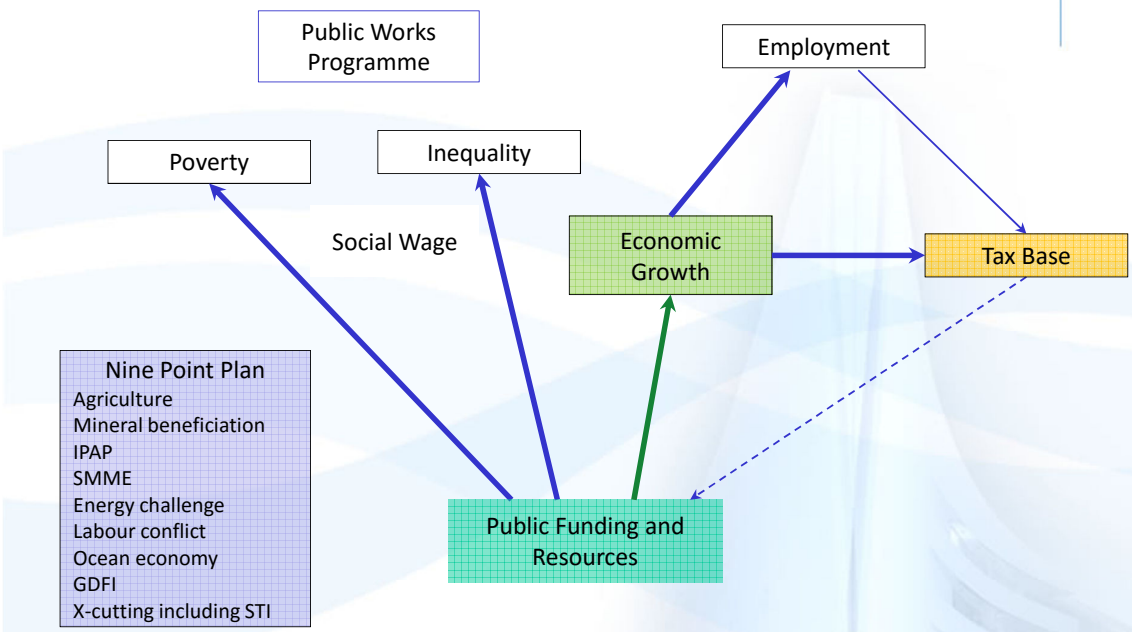
Limited Recognition of Innovation in Strategy



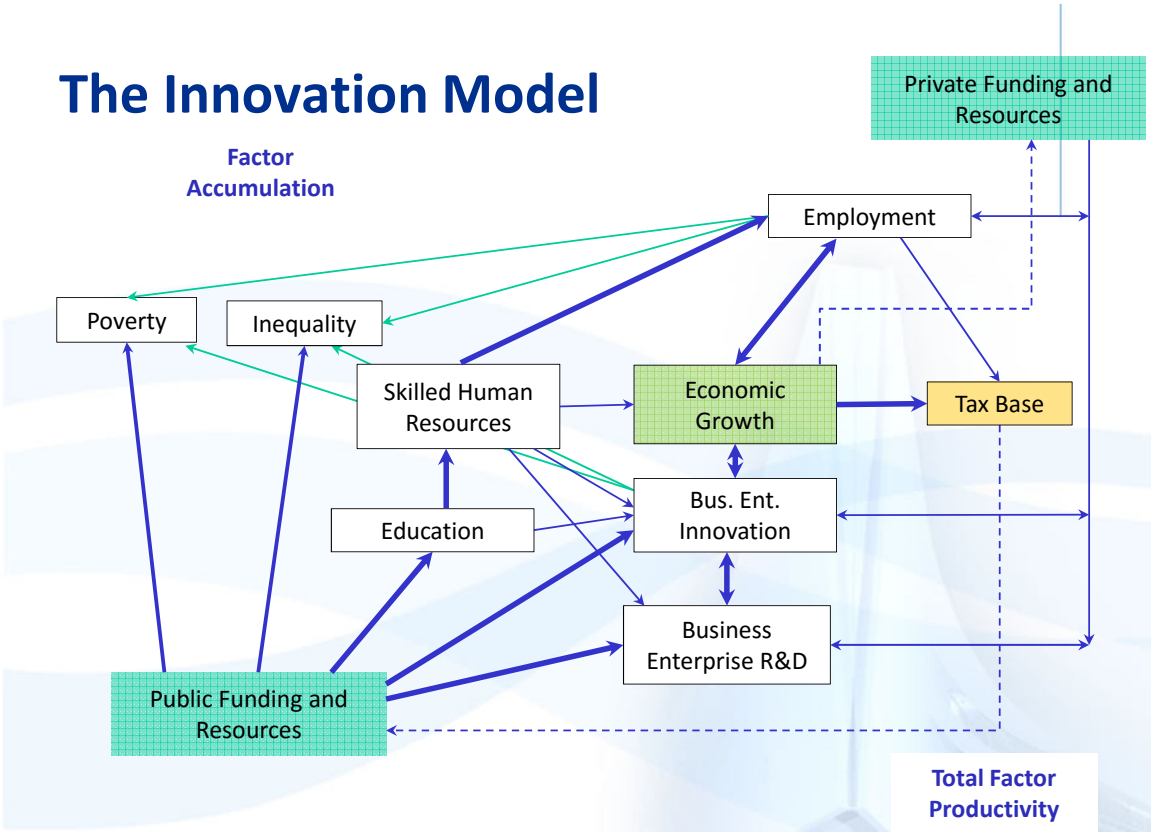
Logic Diagramme

- From the State of the Nation Address 2016:
  - When the economy grows fast it delivers jobs
  - Workers earn wages and businesses make profits
  - The tax base expands and allows government to increase the social wage and provide education, health, social grants, housing and free basic services - faster and in a more sustainable manner.

Implied Model



The Innovation Model



Transformative Change

- Transformation is about developing balanced systems of social wages, public works programmes, private enterprise, efficient state-owned entities.
  - public sector acts in multiple ways, not just as a regulator and facilitator
  - transformation, like democracy, is a process, not an outcome
- Proposition: innovation is a crucial component of transformation and economic growth
  - 2 aspects covered as a consequence (normative principles, and policy mix)

Supporting the Proposition

- "without a basic understanding of the combination of organisational and inter-organisational learning (ed .. system of innovation), it is impossible to establish the link from innovation to economic growth"

  (Lundvall, 2007)

Normative Principles for Systems of Innovation

i. Firms (or more broadly business enterprises) are at the centre of innovation.
ii. Development is the consequence of learning and innovation.
iii. As a result, knowledge is a critical resource together with finance and skilled human resources, and access to knowledge in a developing country through the provision of the appropriate infrastructure should be prioritised.
iv. Although knowledge may not be the single most important resource, in all countries the most critical process is learning.
v. There are three types of learning within systems of innovation, namely learning through DUI, learning through ST4I and formal competence building.

Principles II

vi. Innovation is a matching process resulting from the confluence of knowledge with opportunity, the latter mainly but not exclusively market opportunity.
vii. The economic performance of many countries, and particularly developing countries, is primarily the consequence of DUI-mode incremental innovation in low technology, 'following' firms, subsequent to the processes of **technology transfer**, diffusion and absorption; as a result, governments should focus on incentivising the conditions for effective DUI.
viii. ST4I is typically strongly linked to R&D, possibly leading to radical innovation and undertaken by firms that are often 'early adopters' since R&D is strongly associated with a capacity for high rates of absorption. Such firms are crucial in sector-wide productivity improvements.

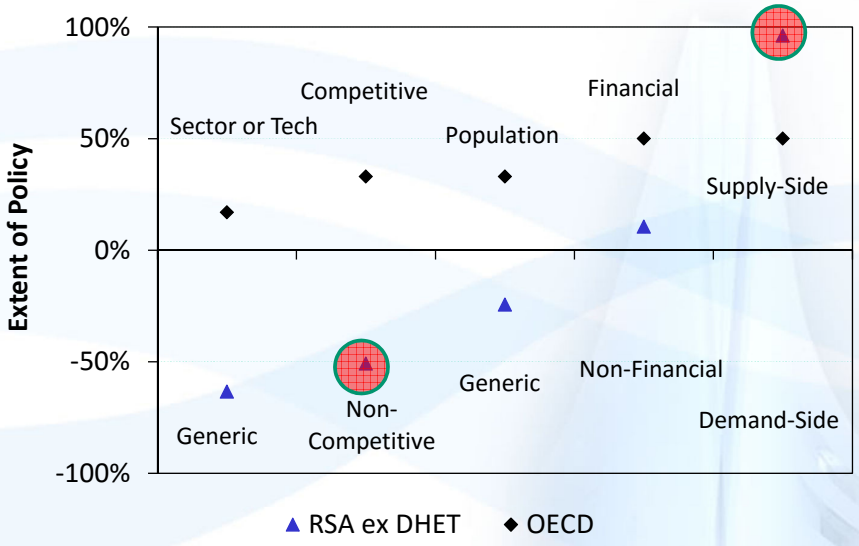
Principles III

viii. Firms that hold both DUI and ST4I modes of learning are better at innovation, although a big challenge is to stimulate firms to combine the DUI and ST4I modes of innovation.

ix. The **second** most important process is interaction within and between networks (referred to as connectivity), and especially between firms and universities, between firms themselves and between firms and knowledge centres.

x. In terms of formal competence building, it is important that this in not narrowly construed as the 'creation of a product fit for employment' based only on university education. Instead all forms of skills development including adult-based and lifelong learning should be embraced and recognised.

Policy Mix in South Africa



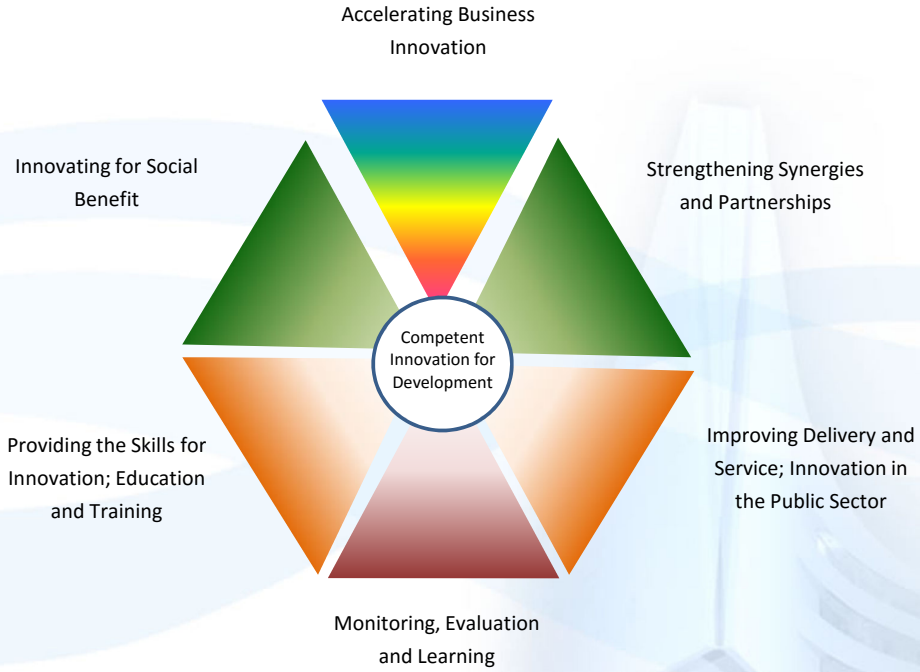
Need for Capacity Building

- In Government:
  - system-level understanding (especially relationship between the nonrecursive variables)
  - policy learning (M&E better informed)
  - policy mix and balancing
- In Private Firms
  - commitment to innovation
  - role of DUI and ST4I
  - importance of early adopters
  - factors supporting technology transfer

Capacity Building 2

- In Universities and Science Councils
  - human resource needs
  - linkages with private firms
  - DUI support
  - technology commercialisation

NACI High Level Framing



Theme Six: Monitoring, Evaluation and Learning

- Objective:
  - Provide evidence-based metrics and learning facilities for the innovation policy community in order to better inform and guide public policy
- Core Policy Actions included:
  - Ensure that a minimum proportion of public funded programmes to support firm-level innovation are evaluated and the results are used to adjust these instruments where necessary.
  - Establish and fund centres of learning within the higher education sector to ensure that the innovation policy community are able to continuous upgrade their expertise based on the latest research and insight from the studies.

Providing the Skills for Innovation through Education and Training

- Objective:
  - Equip all existing and potential innovators with the necessary skills that will enable them to work and participate effectively in an innovative society.
- Core Policy Actions included:
  - Bring innovation and critical thinking into all education curricula in order to foster a culture of innovative and critical thinking among the youth.
  - Train innovation ambassadors to work in all sectors of the economy as early adopters and drivers of change through innovation.