

The Evolution of Academic Discourse and Policy Making on Innovation; Can Africa Learn without Practice?

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Outline of the Presentation



- Introduction
 - Motivation for the subject of presentation
- Historical shifts of innovation models and implication for Africa
- Some concluding remarks

Introduction cont..



- To be fruitful – especially for Africa - the debate we are having today must be traced back to the post war period when models and policy making on innovation (or rather S&T) started to be crafted.
 - Models are interpretation of reality (and therefore knowledge on a given phenomenon).
 - And knowledge is normally incremental, additive and grows:
 - If this general trend is not followed, then questions have to be asked and knowledge gaps addressed.

Introduction cont..

- This could be the case for Africa which was not part of the empirical evidence that formed the shifting models, debates and policy making on innovation.
- To date 4 major shifts can be identified (informed by Roy Rothwell's 5 innovation models:
 - Technology push
 - Demand pull
 - NSI
 - Non market (?) innovation models

Historical shifts of innovation models and implication for Africa

1) *Technology push (beginning of the 50s):*

- innovation were thought to be triggered by basic research in science, leading to wide spread marketing of new products and use of new processes and by implication economic growth .
- seem to have been triggered by the World War II military science; especially the Manhattan project.
- The project demonstrated that scientific project could be large and hierarchically organized and achieve pre determined goals (Hallonsten ,2009).

Historical shifts of innovation models and implication for Africa cont..

- Led to Bush's (1945) master piece on *Science: the endless frontier*, which to a large extent influenced not only the American S&T policy, but rest of the world.
- R&D inputs became major measures of innovation, leading to increased budget to R&D.
- To date the model seems to have died –at least in terms of debate, but in policies it is still much alive; very unfortunately for the context that was not part of the evidence for debate, such as Africa.

Historical shifts of innovation models and implication for Africa cont..



- For Africa (innovation policies are still very much science policies; emphasizing the supply side of knowledge.
- Africa with its 1% of GDP: where is this figure coming from? Why not more or even less? What is the implication of not researching on and debating this?

2) *Demand pull* (beginning of the 60s)

- A result of limitations of technology push
- Emphasize the dynamics of market demand as a catalyst for technological change:

Historical shifts of innovation models and implication for Africa cont..

- Project **Hindsight** on the role of basic research on innovation – recognized need more important than science.
- **SAPHO** project on successful and unsuccessful innovation: successful innovation are those that managed to establish a worthwhile market, but also emphasized coupling - that innovation is best represented by coupling between tech push and demand pull.
- **SAPHO**- recently revisited and reconfirmed (Radosevic & Yoruk, 2012) – demand critical for innovation

Historical shifts of innovation models and implication for Africa cont..



- According to Porter (1990), it is not only the quantity, but also the quality of home demand that determines the international competitiveness of a nation.
- Despite the critical importance of the demand/need pull for innovation, debate on this has vanished (McMeekin et al. 2002; Diyamett, 2010 for a review)
- Along side is less emphasis on the demand side innovation policies.
- What is the implication of this to the current situation of Africa, where demand for knowledge for innovation is very weak?

Historical shifts of innovation models and implication for Africa cont..

- Where markets are not sophisticated enough to demand high quality goods and services?
- In the absence of demand side research and discourse that can inform demand side policies
Science: the endless frontier can easily turn into
Science: the endless budget (Godin, ND)
 - (A mockery from the director of the US Bureau of Budget, Harold Smith on Bush's master piece that was by then guiding the US S&T policy)

Historical shifts of innovation models and implication for Africa cont..

3) *NSI model* (beginning the 80s)

- Brought into the light context specificity of innovation – even more reason for the above arguments.
- But confirmed the demise of the demand pull model; **users central**, but only referred to as sources of learning.
- What is stressed is *learning* rather than incentives for innovation as a result of the demanding customers or meeting of the emerging needs.
- Consequently policy emphasis not on stimulating demand but interactive linkage.

Historical shifts of innovation models and implication for Africa cont..



3) *Non market innovation models* – in the making

- Must be remembered that innovation is traditionally understood – including in the previous models - in economic context.
- Current social and environmental challenges are moving away the debate from economic and market understanding of innovation , to social.
- Reason: arguments that market driven innovation excludes the less able section of the society from participating in the market economy; it is also not good for the environment

Historical shifts of innovation models and implication for Africa cont..

- But also because (and I think above all) capabilities for market innovation has already been built elsewhere: *“We want to differentiate social innovations from ordinary innovations **because the world is already amply equipped to produce and disseminate ordinary innovations.....**”* (Phil et al 2008, pp 39).
- But what would be the implication for Africa that is currently focusing on industrializations as its major source of growth? Also goal 9 of the SDGs

Governing the Building of the technological and innovation capabilities in Africa cont..

- Economic and market led innovations are still the major source of poverty alleviation through growth and employment generation, including of the poorest (goal 8 of the SDGs).
- Private sector still a major engine of growth
- According to Ahlstrom (2010) growth is considerably more important than foreign aid and welfare redistribution programs in improving people's well-being, particularly over the long run.

Concluding Remarks



- Model represents a unique response to a particular challenges that each country/region is facing at a given time – developed countries are amply equipped with market led innovations, while Africa is not.
- Countries should be encouraged to develop their own models, reflecting current challenges.
 - Any meaningful model of innovation and useful policy for Africa must revisit the earlier models in the context of Africa; but of course in the light of the current situation.

Concluding Remarks cont..

- There is however a challenge for Africa: Africa does not have adequate expertise on **innovation and development** – scholars and policy makers who can challenge the current models and raise policy relevant questions.
 - Basically the essence for the initiation of AfricaLICS as an organ for **innovation and development** capacity building in Africa.
 - African governments and regional bodies; and all well wishers of Africa should support this effort.

Thank you very much for your kind
attention

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