R&D Indicators and Firms' Innovativeness in Africa: Going Beyond Aggregate Data

An Idea for Research

Bitrina Diyamett

Presentation outline

- Introduction
- Justification and objectives
- Methodology (selection of countries)
- Outputs and potential impacts

Background

- Although R&D Indicators are collected independent of innovation indicators, they are still considered a measure of how innovative a country is.
- EC, Research Directorate General (2001), says a share of R&D expenditure in GDP expresses a country's relative efforts to create new knowledge, to disseminate and to exploit the existing knowledge bases to drive economic growth in a knowledge-based economy.

Background Cont..

- NEPAD's project on Africa's Innovation Outlook (AIO) is all about R&D indicators.
- So what is the problem? After all Knowledge is generated for use.
- The problem is how R&D historically came to be connected with innovation in developed countries; and Africa blindly copying what it sees today.
- To a large extent the essence of R&D in developed countries is the firm itself - by establishing R&D departments and R&D to be used, initially in incremental innovation, and later radical innovations. Japan for instance (Mani 1999)

Background Cont..

- It is only when R&D were well established in firms, they started reaching out to R&D outside firms (independent labs and universities); and to a large extent demand driven.
- So in essence, capabilities and demand for R&D must starts within the firm itself.
- More over (according to literature, e.g. Cohen and Levinthal;1990 and Rosenberg 1994), for a firm to be able to recognize the value of external R&D, it must itself be investing in some sort of knowledge generation.
- Hypothetically therefore, linkage between public R&D organizations and industrial firms in Africa can only happen if firms themselves are investing in some sort of knowledge generation/ management, such R&D, design, testing, and quality control.
- This research idea is about testing this hypothesis.

Objectives

- To analyze the extent to which African manufacturing is innovative, in terms of adoptive, incremental and more radical type of innovations (new to the market/country, new to the world)
- To determine the proportion of firms that have R&D, design and quality control departments, and how these are related to innovativeness of firms.
- To find out the relationship between a firms having the above departments and linkage with public R&D organizations
- To identify factors (internal and external) that facilitate firms to have R&D, design and quality control departments.

Countries to be involved

- Tanzania
- Ghana
- South Africa
- Tunisia

These countries have been selected for their differing in innovation capabilities and investments in R&D. They also represent different regions.

Outputs and expected impacts

Outputs

- While money is being put in public R&D; its potential demand from the firms is also known; and perhaps can be influenced.

Expected Impacts

- Changes on the way science and innovation policies are designed and implemented in Africa
- Contribute to the review and adaptation of both R&D and Innovation indicators that are currently being implemented by NEPAD.

Thank you for your attention

And

For critically thinking about this Research idea.