

Symposium on the Comparative Analysis of National Research Systems

A Discussion on Jacques Gaillard's Comments on the Regional Report on
Sub-Saharan Africa

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17 Country Profiles

- Botswana, Burkina Faso, Cameroon, Cote d'Ivoire, Ethiopia, Ghana, Kenya, Lesotho, Malawi, Mali, Namibia, Rwanda, Senegal, Tanzania, Uganda, Zambia and Zimbabwe
- Benin, the Gambia and Nigeria not compiled

The Core of the Compilation derived from two major research initiatives

- African Science & Technology Profiles funded by the South African Department of Science & Technology covering 22 countries completed in August 2007 by Research Teams from CREST and High Impact Innovation co-ordinated by Johann Mouton (14 of these profiles were used for meta review)
- Science in Africa at the dawn of the 21st Century completed in 2001, co-ordinated by Roland Waast and Jacques Gaillard covered 14 countries (3 were used for the meta review)

Outline of the Main Regional Report on SSA Compiled by Johann Mouton

Five key Sections:

- Introduction
- Summary of Indicators and Descriptors
- Summary of Findings from Country profiles
- Concluding Assessment

Outline of Comments by Jacques Gaillard

1. Meta review in Africa and Africa in the rest of the world (research outputs): Recent trends?
2. Science is as much (more?) concentrated in Africa as in the rest of the world: consequences?
3. Science policy in the context of scarce R&D indicators
4. De-institutionalisation, de-professionalisation and generation gap?
5. Brain drain and the limit of S&T Diaspora
6. International collaboration/cooperation and the limits of national science
7. Going beyond macro quantitative indicators: the need for further studies

1. Trends in Africa (scientific publications)

- The use of ISI Thompson Citation Index
Science citation Index, Social Science Citation Index and the Arts and Humanities Citation
- Publications of Journals of National journal databases –CREST SA Knowledgebase
- Regional databases –African Journals Online Project

2. Science is as much concentrated
in Africa as in the rest of the world
consequences?

How can the GDP Correlates help?

1. Group 1
2. Group 2
3. Group 3
4. Group 4
5. Group 5

Table 1: Africa's Ten Largest Economies, 2003

Country	GDP at current US\$ (billions)	Population (millions)	GDP Growth Rate	Country Weight in to total African GDP
South Africa	160.8	45.03	2.2	24.9
Egypt	78.7	71.93	2.8	12.2
Algeria	65.7	31.80	5.9	10.2
Nigeria	48.0	124.01	5.5	7.4
Morocco	44.7	30.57	4.2	6.9
Tunisia	24.9	9.83	5.5	3.9
Libya	21.4	5.55	5.6	3.3

Brain Drain and Diaspora

Levels of Analysis:

- External
- Internal
- Regional (mobility)

Factors:

- Political instability and poor governance - recent events in Kenya (Cote d'Ivoire, DRC, Somalia, Sudan etc)

S&T Human Resources and Brain Drain

Local & Regional Postgraduate Training and Research

- Masters
- Doctor

Impact of De-industrialisation

- De-institutionalisation
- De-professionalisation
- The generation ?

S&T Diaspora

- Those who visit their countries of origin
- Those who visit the Region
- Those who never visit

International Co-operation

- Strengths
- Weaknesses

STI Indicators Issues

- National Agencies responsible for generating data
- STI Policy Studies Centres on the Continent (PRIME Africa initiative in 2005/06)
- NEPAD African Science, Technology and Indicators Initiative (ASTII)

The End

THANK YOU FOR YOUR ATTENTION