

Global competitiveness in research: Does a doctorate abroad matter for
faculty in Sub Saharan Africa?

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Rationale

- Competition for World class
- Two approaches: Incentives vs Study Abroad
- SS Africa depends much on study abroad
- Are they globally competitive following return?

Purpose

- To assess progress on global engagement in research of foreign doctorates years after they return to country of origin.
- Engagements in research will include:
 - Publications
 - Projects
 - Collaboration
 - Conferences
 - Funding
 - Affiliations

Context

- Competition in Research not new (Cold war space programs)
- Universities and HE faculty as new entrants
- Unbalanced global stage
 - Top 500 Universities
 - Best 15 funded countries in each region compared (Table 1)
- Unbalanced local context - Uganda
 - faculty
 - funding
 - Infrastructure

Literature on factors affecting research engagements

- Demographics (age, gender, marital status, citizenship, etc.)
- Research Context shapes outcomes:
 - reward system vs productivity
 - academic discipline vs productivity
 - country size vs collaboration
 - links with industry vs publication and collaboration
 - funding vs publications
 - cosmopolitanism vs conferences
 - Industry vs collaboration
 - publication vs collaborations.
- Little about study abroad and global competitiveness in research.

Methodology

- Using modified Global Engagement Model (Figure 1)
 - Study abroad outcomes are dependent on demographics, context and or correlation among outcomes.
 - Outcomes for Research: International Publications, Projects, Collaboration, Conferences, Affiliations and Funding.
 - Context: Education, academic discipline, and demographics (age, gender)
- 170 CVs from the Uganda NCHE covering 2009-2014 (Table 2).
- Retrospective/causal comparative design (foreign and domestic doctorates).
- Longitudinal Curriculum Vitae Analysis (LCVA) method (Each Count for outcome was coded under year of occurrence).
- GEE method (baseline and split category analysis).

Results

- Annually, 3.82 times access to international funding for foreign doctorates. Surprisingly, no significant differences under; publications, conferences, collaboration, affiliations and projects (Table 4).
- Significant differences were found under:
 - Funding for PhD (4.36 times) and postdoc favors domestic under projects and conferences (Table 5)
 - Funding for Soft disciplines (2.92 times) and affiliations in the Hard disciplines (Table 6)
 - Funding for male faculty than for female faculty (Table 7)
 - Other research dimensions had no significant differences even with split data analysis

Discussion

- Funding dimension suggests preference to work at a global level that could be linked to the study abroad influence.
- No significant differences in Affiliation suggests reduced interest overtime as a result of no immediate links with consultancy.
- Weak in international publications. Greater consultancy could affect publications. Sponsor interests first.
- No significant differences in collaboration. Could also be attributed to consultancy. Collaboration is highly correlated with publication.
- Conferences often attract basic research than consultancies. Affiliation is a highly significant factor. Postdocs with domestic PhD even perform better.
- No significant difference in projects though domestic PhD appear to perform better. Possible linkage to projects while at PhD and continuity with supervisors.

Implications

- Support for PhD and postdoc abroad
- Improving faculty welfare
- Setting minimum on engagements.
- Funding Research Centers
- Alumni contact and mentorship

Limitations and further study

- CVs are often designed for purposes other than research.
- Challenging when dates are missing.