

Open Access and our Brothers and Sisters to the South: A Comparative Look at Usage and Impact of African, Latin American and Caribbean Open Access Publications

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ABSTRACT: The Open Access (OA) movement is endeavoring to break down access barriers to scholarly publications, address the unsustainability of traditional publishing economic models, and equalize the flow of information between industrialized nations in the global North and less industrialized nations in the global South. This paper presents results from two studies designed to examine the achievement of this third goal. The first study compared usage during a thirty day period and content production of OA journals between scholars in Africa and Latin America and the Caribbean (LAC). The study also investigated the extent to which African OA journals were covered in indexing and abstracting sources compared to non-OA African journals. The second study examined the level at which articles in African OA journals on agriculture, the environment, and health are being indexed in the Institute for Scientific Information (ISI) Science and Social Science Citation Index and whether the articles are being cited more frequently by researchers in the global North versus those in the global South. Results from the first study suggest that while the OA movement has facilitated the delivery of scholarship into the hands of African scholars, it has not yet made significant inroads in providing for response from African scholars to the rest of the global scholarly community as is more evident from LAC scholars. Despite this, the data from the second study suggests that OA content from African scholars is having an impact on South-South and South-North information flows, an improvement over strictly traditional North-South trajectories.

Introduction

The Open Access (OA) Movement endeavors to break down access barriers to scholarly publications in all disciplines by eliminating readership costs (Suber, 2007). Unfortunately, there have been relatively few studies examining how the OA movement is impacting African or Latin American and Caribbean (LAC) scholars. Similarly, there has been little investigation of the extent to which the OA movement is impacting traditional North-South information flows.

To address this need, I developed the following two studies. The first study compared African and LAC use of the OA journals in the *Directory of Open Access Journals (DOAJ)* as well as levels of production of OA content from the two regions. Because inclusion of OA journals in abstracting and indexing (A&I) services is crucial if OA is to fulfill its promise (Yontz and Fisher, 2007) I also measured the extent to which African OA journals are being included in A&I services and in the free scholarly search service *Google Scholar*.

The second study examined the extent to which scholarship from African OA publications in the disciplines of agricultural, environmental and health research is being included in the *Institute for Scientific Information (ISI) Science and Social Science Citation Index*, the level of citedness achieved, and the impact the scholarship is having on South-South and South-North information flows.

Methodology

STUDY ONE:

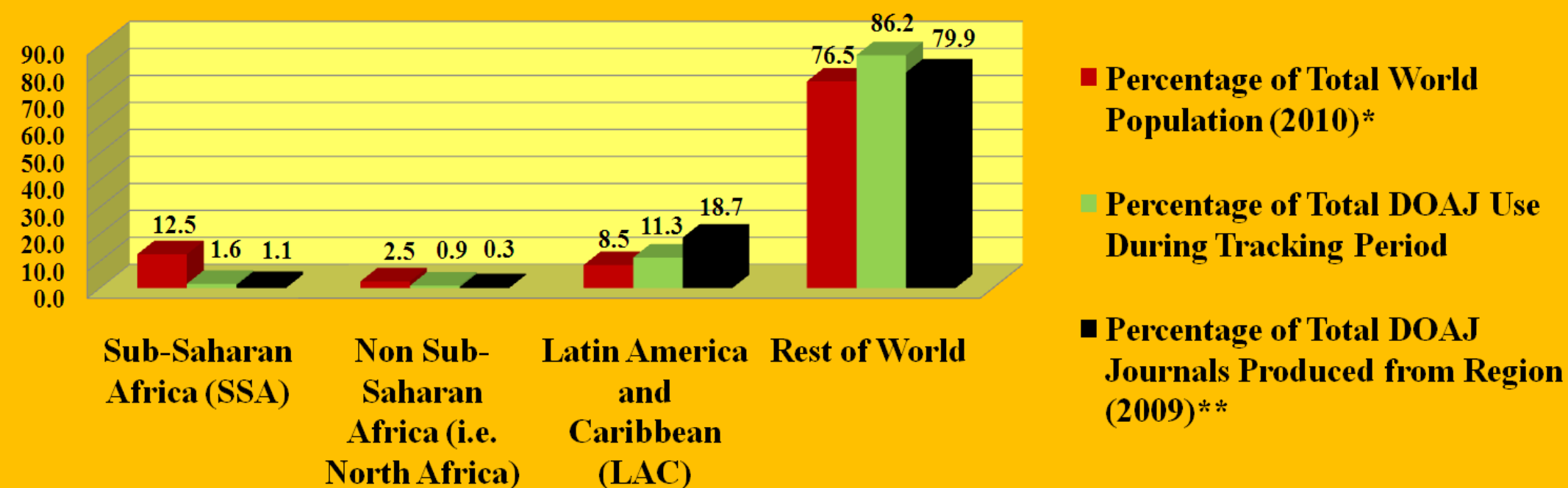
Utilizing the geo-localization tool on the *DOAJ* website, I recorded visitors to the site for forty non-consecutive days between 12/01/09-02/28/10. I also used the *DOAJ* journal lists to compare African and LAC production of OA content. To measure the A&I coverage of OA African journals, I used journals lists from *DOAJ*, *Bioline International*, *Sabinet Open Access Journals*, and *OpenJournals Publishing (OJP)*. I used *Ulrichsweb Global Serials Directory* to compare the abstracting and indexing of these journals with those of *African Journals Online (AJOL)* - a mixed-model publishing platform). I also tested each title for coverage in *Google Scholar*.

STUDY TWO:

Using the *DOAJ*, *Sabinet*, *OJP* and *Bioline*, I identified 227 African OA journals. Of these 227 journals, 100 were in the fields of agricultural, health or environmental research. All 227 titles were searched in the *ISI indexes* to compare levels of inclusion. Of the 100 titles, 15 were indexed in the *ISI* indexes. These 15 were searched in the indexes to determine the percentage of articles published from 2010 or earlier that had been cited. Of these 15 journals, a 5 title sample was selected. For these 5 titles, data was gathered examining the extent to which all articles published in 2008 (164 total) were cited in an OA publication or cited by a global South researcher. The publisher's location for each citing article was also recorded to examine South-South and South-North information flows.

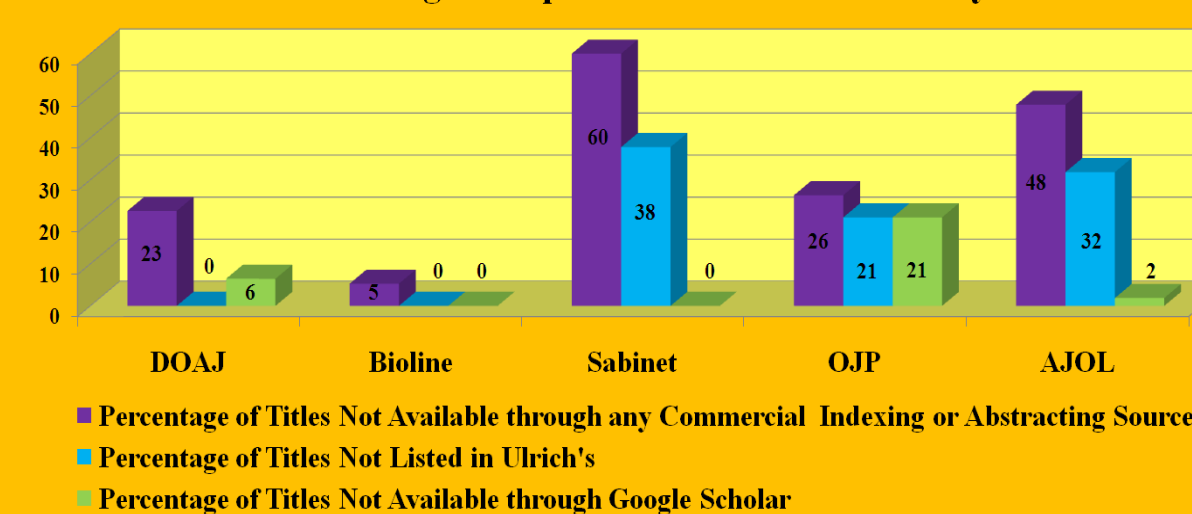
Study One: Results

Comparison of Population, DOAJ Use, and Production of DOAJ Journals between Sub-Saharan African, North African and Latin American and Caribbean Countries

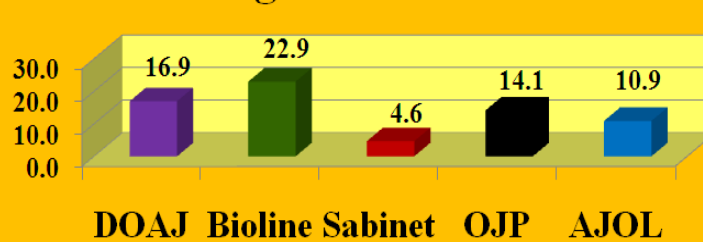


Sources: *United Nations Population Division (2008). **DOAJ (2010)

Percentage Comparison of A&I Accessibility

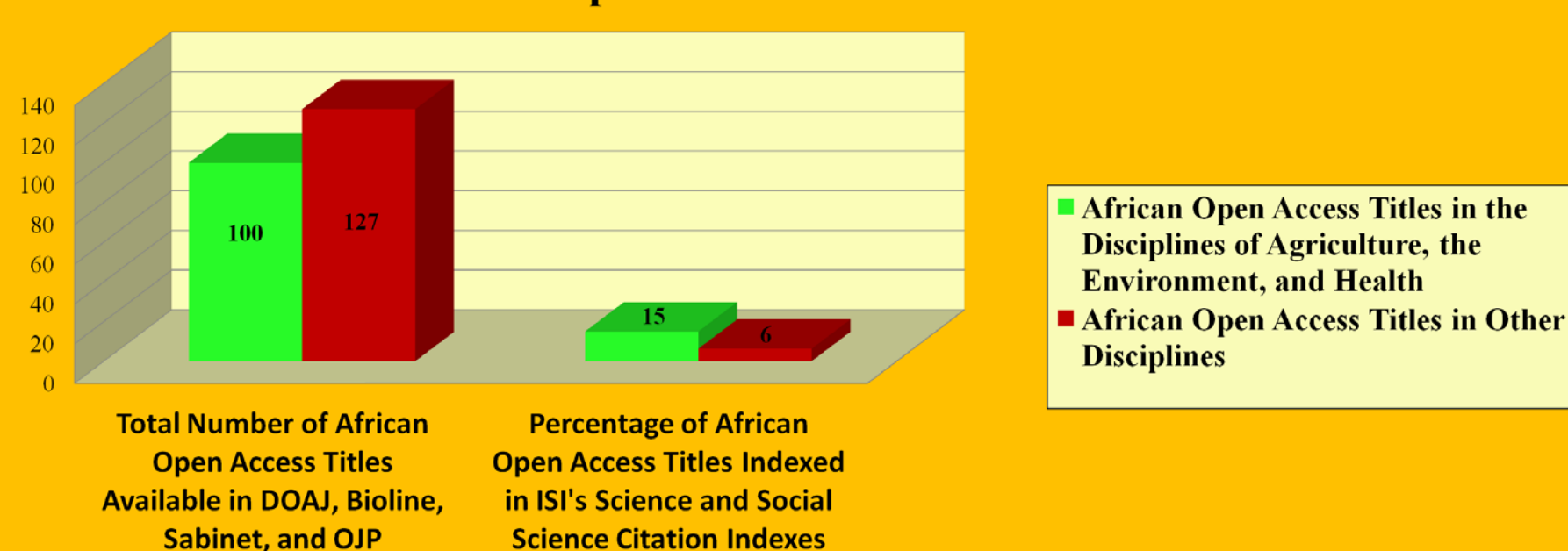


Average Number of Indexing and Abstracting Sources Per Journal

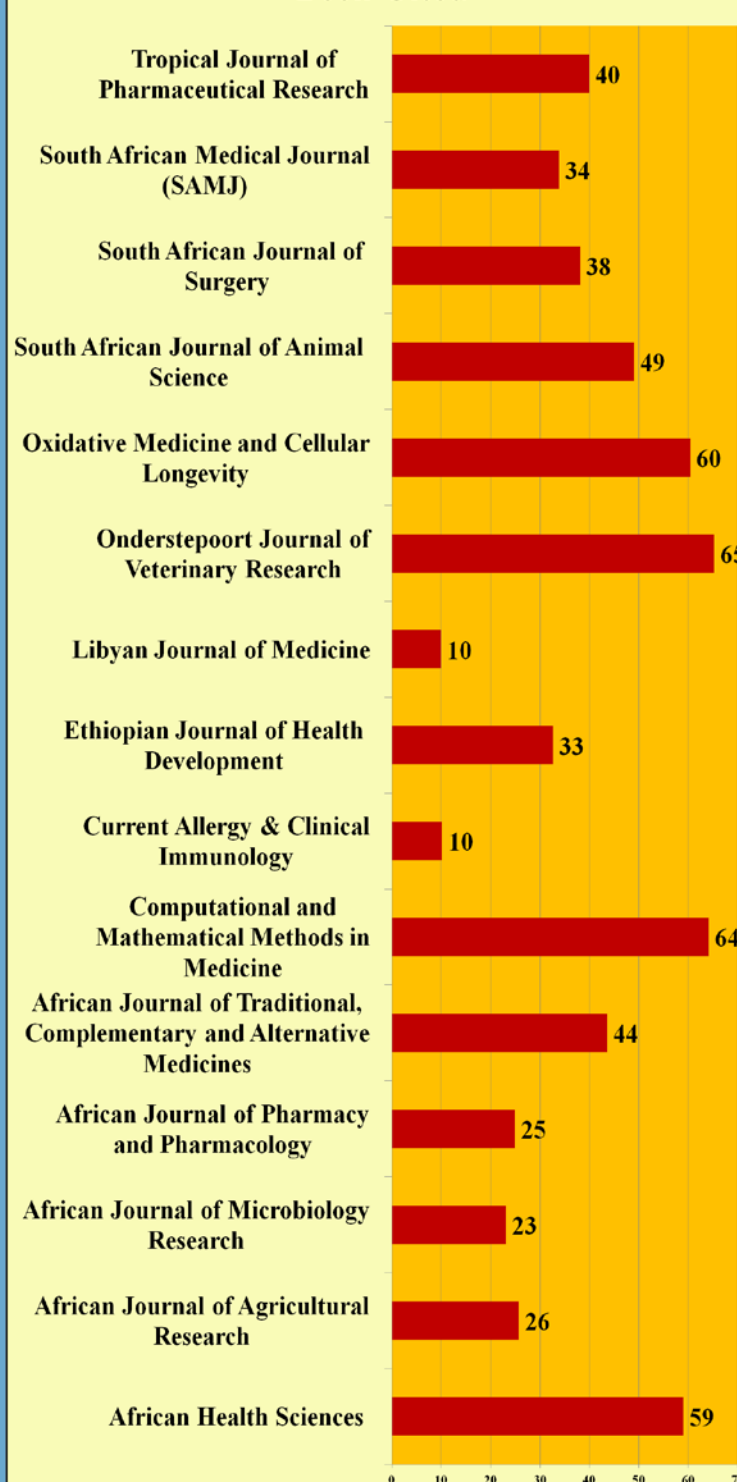


Study Two: Results

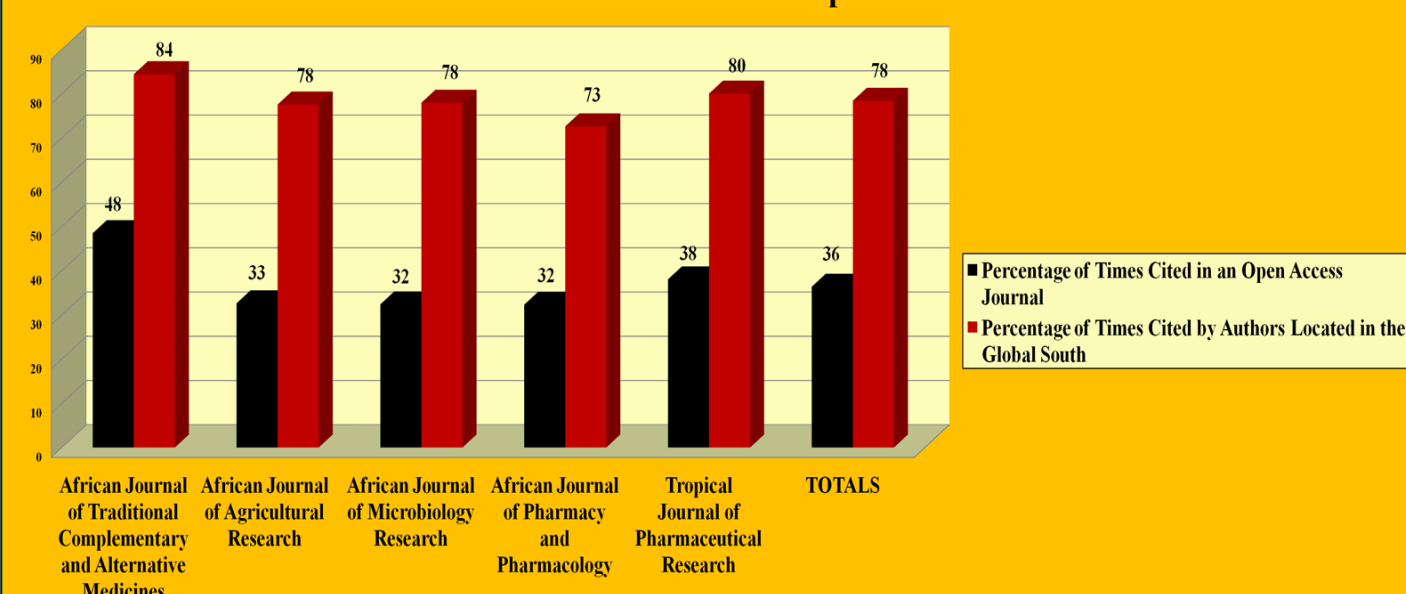
Inclusion of Open Access African Titles in ISI



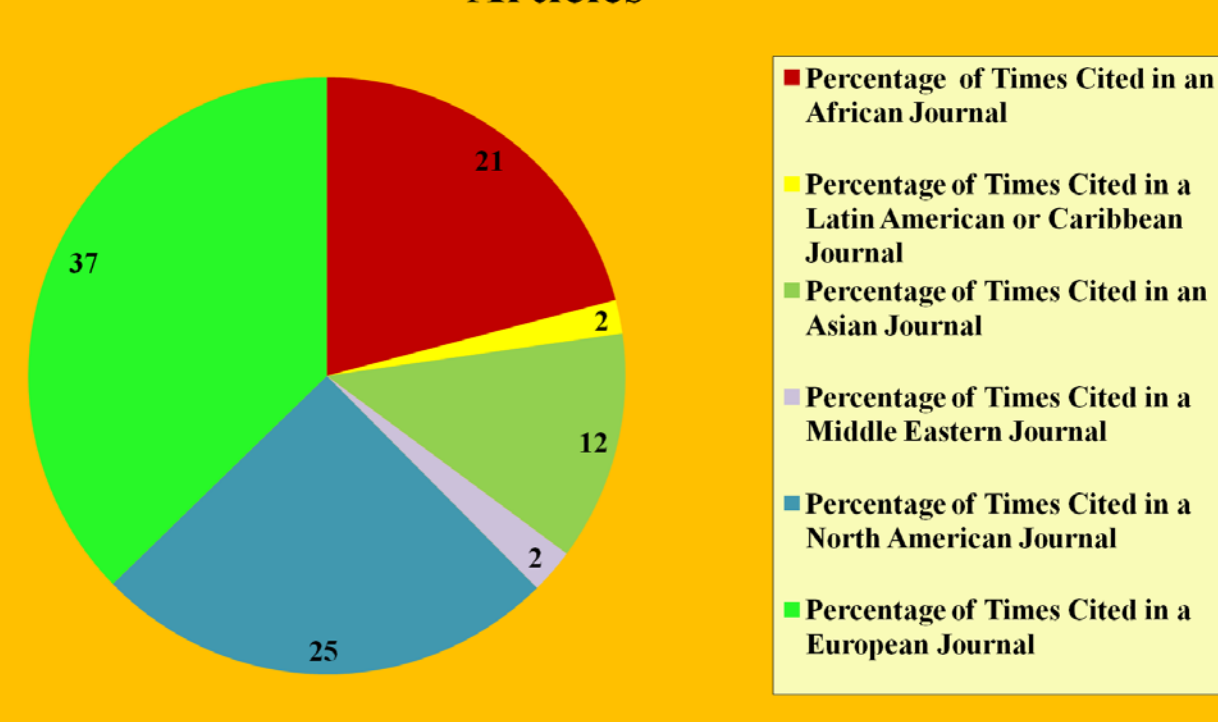
Percentage of All Articles Indexed in ISI from 2010 or Earlier That Have Been Cited



Impact on Other Open Access Publications and Researchers in Global South: Five Journal Sample



Five Journal Sample: Location of Publication for Journals Citing African Open Access Articles



Summary and Conclusions

STUDY ONE:

1. Africa is almost twice the population of the LAC region, yet its use of the *DOAJ* is significantly lower. While African countries contributed a smaller percentage of OA content to the *DOAJ* than their use, LAC countries production of OA content was almost twice their use. These results suggest that African researchers are being active consumers of the OA model, but more passive contributors than their LAC counterparts.

2. The A&I results show that African OA publications are more accessible than non-OA African publications, which may contribute to improving information flow reversal.

STUDY TWO:

1. While the percentage of titles from African OA journals included in the *ISI* Indexes is low overall, the titles dealing with the environment, health or agriculture were more than double (15%) that of other disciplines (6%).

2. Of the articles published in 2010 or earlier in the fifteen OA journals which met the subject criteria (4388 articles total), 36% had been cited. While these journals are currently having some impact, the majority are not. While the majority of citing journals for the OA African articles are from non-OA publishers (64%) located in the global North (Europe 37%, North America 25%), a significant number of researchers citing the OA articles are located in the global South (78%), suggesting that the OA African titles are having an impact on South-South information flows in terms of individual researchers, and South-North information flows in terms of publishers and content disseminators in the areas of environmental, health, and agricultural research.

Suggestions for Further Research

Due to time constraints in the second study, the OA African journals were only checked in the *ISI* Indexes. Further data from other indexes would give a more complete picture of the level of citedness and the impact on information flows. Additionally, the data gathered from the five journal sample (percentage of: times cited in an OA journal, times cited by an author located in the global South, location of publisher) should be extended to the full 15 journal set. Similar data for the OA LAC journals in the subject areas of agricultural, environmental and health research should be collected for comparative purposes.