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Developments in Transnational Research Linkages: Evidence from U.S. Higher-education Activity

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ABSTRACT

In our knowledge-driven era, multiple and mutual benefits accrue from transnational research linkages. The article identifies important directions in transnational research collaborations involving U.S. universities revealed by key dimensions of 369 projects profiled on a U.S. higher-education association's database. Project initiators, principal research fields, regional and country distributions, and the sources and amounts of funding for different types of transnational research activity are selected for analysis. The balanced total portfolio of reported current research projects by region suggests that U.S. university principal investigators increasingly recognize the value of collaborative knowledge generation in the Global South as well as in other OECD countries. The data also show concentrations in the distribution of transnational research projects by principal field of activity that could exacerbate intra-regional asymmetries. The multi-institutional data draw attention to the often unnoticed, but vital, role that higher-education institutions play in supporting transnational research endeavors that address issues of current and future global concern. The conclusion considers wider implications for higher-education involvement in transnational knowledge generation and calls for increased symmetry in collaborative research ventures.

KEYWORDS: TRANSNATIONAL RESEARCH LINKAGES, DEVELOPED NATIONS, DEVELOPING NATIONS, CAPACITY BUILDING, SUSTAINABLE DEVELOPMENT

1 INTRODUCTION

In our knowledge-based and innovation-driven era, academics and administrative professionals possess lofty expectations for university-based research in all fields of inquiry (Crossley & Watson, 2003, p. 122). In pursuit of valuable lessons and breakthroughs, higher-education institutions throughout the world increasingly have embraced a new educational-policy tool: the transnational research linkage. Transnational research linkages range from transformational institutional partnerships that possess on-going research components (see Koehn, 2012c) to one-off cross-institutional projects and modest collaborative investigations among faculty members.

The potential mutual benefits of transnational research

linkages include positioning at the cutting edge of information flows, emerging and innovative ideas and shared possibilities, impending policy changes (Jones, 2007, p. 330), technological and social breakthroughs (e.g., Oleksiyenko & Sa, 2010, p. 368), and national, regional, and community economic development (Goddard & Vallance, 2011; Harman, 2006, p. 45; Robertson, 2009, pp. 113, 122-123; Tikly, 2011, p. 88; World Bank, 2002).ⁱ In addition, the maintenance of active transnational research agendas allows university scholars to transmit new insights and techniques to future generations of students who will fill critical teaching, research, and administrative positions (McMahon, 2009, p. 256).

Although the volume of transnational scholarly collaboration has increased in the United Kingdom, Australia, Canada, the United States, France, Germany, Japan, China, and India across most disciplines (Adams, Gurney & Marshall, 2007, p. 3), multi-institutional data regarding key features of transnational research linkages have not been available for analysis. For instance, Woodfield and colleagues (2009, p. 6) found that “due to a lack of comprehensive, systematic and regular data collection (...), much of the international partnership activity undertaken by Universities (...) goes unnoticed at sector and policy level”. By combing the on-line database of transnational higher-education research and development projects involving member institutions of the Association of Public and Land Grant Universities (APLU) and the American Association of Universities (AAU), this study contributes to bridging the knowledge and awareness gap. The principal purpose of the research undertaking is to identify important directions in transnational research collaborations involving U.S. universities.

A range of research initiatives, from archeology to art, appear in the APLU/AAU database. The most common type of transnational research project deals with health. Social-science, natural-science, environmental, engineering, and agricultural projects also are well-represented. These six most frequently encountered research fields provide the focus for analysis in this article.

The contribution proceeds as follows. The first section discusses the contemporary importance of transnational research linkages in the context of existing disparities among industrialized and wealthy (Northern) and low-income (Southern) countries. The next section describes the study methods. The third section presents insights based on analysis of the research findings. Of particular interest are project initiators and sectors, regional and country involvement, and the sources and amounts of funding for transnational research activity. The conclusion considers wider implications for higher-education involvement in transnational knowledge generation and calls for

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increased symmetry in collaborative North-South research ventures.

2 TRANSNATIONAL RESEARCH LINKAGES IN THE CONTEXT OF GLOBAL DISPARITIES

Today's universities operate in a global context of disparities in national wealth and economic opportunity and in institutional-resource endowments. These disparities are most pronounced when comparisons are drawn between the Global North (wealthy industrialized countries) and the Global South (low-income countries). Existing North-South disparities are perpetuated and exacerbated by challenges facing higher-education systems in low-income countries, including mass-education pressures, obsolete communication and technological infrastructure, limited national funding for research undertakings, and shortages of qualified research and development personnel. Insistence on structural-adjustment resulted in a dramatic reduction in the ability of many governments in low-income settings to support university research and sustainable-development activity from domestic revenues. Underdeveloped research capacity has resulted in the exclusion of much of the Global South from global knowledge circuits and emerging learning opportunities.

Economic and epistemic asymmetries between the North and the South remain enormous. Many higher-education institutions in the South, particularly in Africa, confront acute financial, capacity-building, and connectivity needs (Juma & Yee-Cheong, 2005, pp. 90-94; Teferra & Altbach, 2003, pp. 5, 10). These challenges are difficult to overcome and could intensify amidst expanding globalization, increasing market liberalization, lack of understanding of cultural and political dynamics, and the intense global competition that characterizes contemporary higher education. Thus, the research gap between North and South, large as it already is, could widen and deepen (Zezeza, 2005).

The increasing concentration of academic research and knowledge generation in the industrialized North underscores the importance of collaborative research opportunities and capacity-building initiatives that involve higher-education institutions in low-income places (Obamba & Mwema, 2009, pp. 351, 355, 362, 366). Potentially, research collaborations and partnerships promise to mitigate prevailing North-South economic asymmetries and resource imbalances. For instance, transnational research linkages provide opportunities for universities in low-income countries to develop the scientific and technological capacity to innovate and adapt knowledge to local contexts in instrumental fulfillment of their community-service mission (Pillay, 2011, p. 6). In a recent synthesis report on universities and economic development in Africa, for instance, Cloete and colleagues affirm that "high levels of education are essential for the design and production of new technologies, for a country's innovative capacity and for the development of civil society" (Cloete, Bailey & Maassen, 2011, p. ix; also Maassen & Cloete, 2009, pp. 254-255).

In addition, the quest for collaborative knowledge generation and application is inspired by growing understanding that, by itself, no amount of research in any one country, nor any single academic discipline or institution, can fully comprehend, let alone resolve, the multiple and increasingly complex global problems that confront humanity. Fruitful participation in today's interdependent world of scientific research requires active participation by faculty and students in collaborations that cross disciplinary, institutional, knowledge-system, and North-

South boundaries. As "emerging global model" universities (Mohrman, Ma & Baker, 2011, pp. 43-44) interpret their mission to embrace transsovereign challenges that spill over nation-state borders, such as mitigating and adapting to climate change and controlling zoonotic diseases (Woodfield, et al., 2009, p. 5; UNESCO, 2009, p. 2)ⁱⁱ, Northern and Southern faculty members in virtually all disciplines increasingly aspire to collaborate in strategic location-specific research.

Collaborative research promises mutual South-North gain given that local discoveries constitute key ingredients in sustainable community development and in addressing transnational challenges. Applied, policy-oriented, problem-solving, or development-focused research, including insights from contextually based Southern scholarship, plays a critical role in evidence-based policy making aimed at advancing globally shared goals such as reducing poverty and hunger, alleviating suffering, protecting life-support systems, and enhancing human capabilities, as well as responding quickly and effectively to new economic opportunities (Colclough, 2010, p. 824; Yusuf, Saint & Nabeshima, 2009, p. 57). South-North research collaborations also hold out promise for learning from traditional practices and ways of knowing (Vessuri, 2008, p. 128; also UNESCO, 2009, p. 6) The useful synergy often generated by multiple ways of knowing and by linking specific local contexts with transnational challenges argues for additional creative syntheses of science and technology with indigenous insights and practices (see Dei & Asgharzadeh, 2006, pp. 59-60, 67; Vessuri, 2007, pp. 168, 172).

Transnational research partnerships devoted to collective knowledge building approach local development challenges through an insight-generating comparative and transcultural lens (Crossley & Holmes, 2001, pp. 399, 396). The symmetrical North-South research linkage is built upon mutual trust and participation by all collaborating parties in project design, decision making, resource support, management, evaluation, and benefit taking. From project design through implementation, evaluation, and dissemination, developing trust and demonstrating competence in interacting with professional counterparts of diverse nationality and across specialization boundaries are pivotal for all research partners intent on addressing complex and interdependent horizon-rising challenges (Koehn & Rosenau, 2010).

3 STUDY METHODS

The complete APLU/AAU database accessed for this study consists of 768 project-based profiles at 77 U.S. institutions of higher education posted by April 2009. All of the reporting institutions in the national database are U.S. universities.ⁱⁱⁱ Although the APLU/AAU database of world-wide research and development project profiles cannot claim to be exhaustive or representative of the whole^{iv}, it provides what is arguably the most inclusive picture of the scope of transnational engagements involving major U.S. institutions of higher learning.

The author accessed the open-access online APLU/AAU database (now found at <http://www.aplu.org/page.aspx?pid=776>) and coded data from the project-director-reported profiles into an SPSS dataset that parallels the common reporting items and close-ended respondent choices found in the survey instrument. Among the project directors reporting a *primary* transnational activity, 369 selected "research"^v. These 369 self-identified primary research linkages provide the basis for analysis in this

article. To cite one example, the research-project database includes a linkage between the University of Rochester in New York and the University of Helsinki (Finland) Department of Medicine to study “lung aging in smokers”.

The time span covered by the projects reported in the database ranges from decades to one year. To be included in the database, however, APLU required that the project be active at the initial posting interval (November 2007-April 2009). Respondents indicated that universities had launched about one-third of the posted projects in 2007, 2008, or 2009; two-thirds had been operating for longer. The duration of the research projects in the database varies considerably; 41 per cent were relatively short-term (1-4 years) and 27 per cent were relatively long-term (10 years or longer), with the others (32%) at 5 to 9 years. Exactly 70 per cent of the projects were scheduled to terminate by the end of 2011 and 22 per cent were on-going indefinitely.

4 FINDINGS

The next sections present findings for key project dimensions where data can be collected from the 369 profiled transnational partnerships primarily devoted to research. The collaborative dimensions to be explored are: principal project initiator; principal overseas partner; principal research field; regional and country focus of activity; human-resource development; principal source of funding; and project’s total external funds. Such multi-institutional data across a nation-wide spectrum of prominent public and private universities have not been available and analyzed in the past.

4.1 Principal project initiator

Transnational research projects often involve co-initiators who have previously collaborated on projects or are connected by prior affiliations (McGrath, 2008, p. 44)^{vi}. This study of reported U.S.-university research projects confirms that, in most cases, the principal instigator for transnational linkages is the U.S.-based faculty member (also see Koehn, Deardorff & Bolognese, 2011, p. 339). In the APLU/AAU database, two-thirds (229) of the reporting project directors specified that a U.S.-university-based faculty member or members, including diasporic faculty, initiated or provided the creative impetus and contacts for their transnational research project. Many U.S. universities provide seed grants to faculty and/or graduate-education support that enhances access to transnational research relationships.

Other U.S. campus actors served as the principal drivers of 12 per cent of the reported projects. Donors or other U.S. sources accounted for an additional 10 per cent. Non-U.S. sources acted as the principal stimulus for only 37 of the research projects (also Koehn et al., 2011).

4.2 Principal Overseas Partner

Nearly half (150, 45%) of the 336 reporting cases cited a tertiary-level educational institution as the principal overseas partner. Another 108 profiles (32%) indicated that an overseas research institute constitutes the principal transnational partner. A smaller number of projects (35 or 10%) are principally partnered with a host national government.

4.3 Principal Research Field

The dataset encompasses a wide range and breadth of higher-education transnational research linkages. Health/medicine is the *principal* field addressed in 114 (31%) of 367 reported project profiles. Collaborative research projects in the social sciences are the next most common (66, 18%), followed by projects that principally involve natural sciences (43, 12%), environmental science (41, 11%), engineering (32, 9%), and agriculture (22, 6%). Although only 10 project directors selected education as the principal research field, 64 projects (17%) include an educational component.

Nada Wannan and colleagues (2010, p. 62) conclude their study of U.K.-Africa higher-education partnerships by asking if there are disciplinary areas in partnerships that are “overlooked?” Among the most neglected fields in transnational research partnerships involving U.S. universities in the APLU/AAU database are public administration, business/finance, and law.

In only one principal field (natural resources/forestry) were at least half of the collaborative research projects intended to last 10 years or longer. In most other cases (including engineering, education, health/medicine, and social sciences), at least a plurality of the reported transnational projects were of short-term (1 to 4 years) duration. A plurality of the natural-science (40%) and archeology (43%) projects spanned 5 to 9 years. Half or more of the research collaborations in only four fields (agricultural sciences, education, natural resources/forestry, and law) extended beyond 2010. In most other fields, about two-thirds of the projects in the database were scheduled to terminate by the end of 2010.

4.4 Regional Focus

The regional distribution of research projects profiled on the APLU/AAU database is set forth in Table 1. Research projects are relatively evenly distributed numerically across four of the six regions (Western Europe, Central/South America, Asia, and Sub-Saharan Africa). Perhaps due to relative scarcity of long-term professional contacts or difficulties securing access, reporting U.S. university project directors are far less involved with research collaborators in Central/Eastern Europe and the Middle East/North Africa.

Table 1. Regional Distribution of APLU/AAU-profiled Research Projects (N=354)

Region or Country in Region Mentioned	Research N	%
Western Europe	106	29.9
Asia	96	27.1
Central/South America	92	26.0
Sub-Saharan Africa	83	23.4
Central/Eastern Europe	34	9.6
Middle East/N. Africa	20	5.6

Note: totals exceed 100% since many projects involve partners in more than one region

Interesting intra-regional patterns emerge upon closer analysis. For instance, 71 (86%) of the 83 project linkages in Sub-Saharan Africa are located in English-speaking countries (mainly in Zambia, South Africa, Kenya, Ghana, and Ethiopia). Only nine of the reported U.S. research collaborations in Sub-Saharan Africa are found in Francophone countries, where French universities likely are active^{vii}. English increasingly is viewed as the main medium of academic discourse and this finding suggests that, at least in Sub-Saharan Africa, the ability

to work in the English language is a key variable driving the formation of transnational research partnerships that involve U.S. investigators.

Other revealing tendencies can be identified when the unit of analysis is “participating country”. For instance, more than half of the 96 projects in the Asia region involve partners in China and India and nearly four-fifths of the 20 research linkages in the Middle East and North Africa region involve Egypt and Israel. With the exception of Mexico, projects in Central/South America are widely dispersed by partners’ country.

While they pursue research collaborations in more than 100 countries, the reporting U.S. project directors clearly favor certain locales. Using an arbitrary 20 per cent (one-fifth) figure as the intra-regional threshold, only China, India, Zambia, Egypt, Israel, Mexico, and the United Kingdom meet or exceed the threshold. This “most favored nations” finding likely reflects the widespread use of English at research institutions in these countries and the presence of personal relationships based on prior post-graduate supervisions and/or past affiliations (also McGrath, 2008, p. 44).

The data presented in Table 2 are informative in terms of the concentration pattern of specific types of research projects in the four preferred regions. The most common type of transnational research project found across all regions operates in the field of health/medicine. U.S.-university linkages with African institutions are particularly likely to be engaged in health-related research^{viii}. Forty-one per cent of all projects involving in-Africa collaborators are in the health field and twenty-nine per cent of all health/medicine projects in the database engage researchers located in Africa. In comparison with the other regions, linkages in Asia are more likely to involve engineering research and less likely to involve natural-science projects. Projects in Central/South America are particularly likely to involve environmental-science research. Natural-science projects are most likely to involve Western European partners (38% of the total versus 25% in Central/South America, 23% in Africa, and only 15% in Asia).

Table 2. Principal Research Field: By Region (Ns=351-353)

Principal Field	Africa	Central/South America	Asia	Western Europe
Health/medicine	41%	32%	30%	30%
Social sciences	14%	20%	25%	16%
Natural sciences	12%	13%	7%	17%
Environmental sciences	9%	19%	12%	8%
Engineering	3%	3%	17%	7%
Agricultural sciences	9%	7%	5%	2%
Other	12%	6%	4%	20%

4.5 Human-resource development

Long-term research capacity is enhanced when projects include human-resource development. Further, new transnational research projects typically require that collaborators acquire additional competencies. In the APLU/AAU database, project directors indicated whether or not training Southern university staff during the past year constituted a project output (also see Chapman & Moore, 2010, p. 551). About one-fourth of the respondents (83 of 346) reported in the affirmative. The types of projects most likely to include a human-resource-development

component are health/medicine (24%), environmental-science (23%) and social-science (19%).

4.6 Principal Source of Funding

In today’s resource-constrained environment, universities are expected to mobilize external support for transnational research initiatives from government agencies, businesses, international and indigenous NGOs, foundations, and other sources. The data presented in Table 3 indicate that the National Science Foundation and the National Institutes of (Mental) Health combined are the principal source of funding for slightly more than one-fourth of the reported transnational research projects. Aside from U.S. government agencies, the highest proportion of all research projects (14%) are principally funded by the project directors’ home university (also see Koehn, 2012a). Taken collectively, another 12 per cent are primarily financed by overseas higher-education and research institutions and host national/subnational government agencies. The growing role of foundations in funding university-based transnational research projects (see Owen, Lister, & Stansfield, 2009, p. 232) also is reflected in these findings. The near absence of multinational corporate funding for transnational research undertaken by universities indicates that calls for expanded corporate sponsorship have not generated tangible contributions (also see Cloete et al., 2011, p. xvi; Johnson & Hirt, 2011, p. 494; Teferra, 2009).

Table 3. Principal Source of Funding for APLU/AAU-profiled Research Projects (N=355)

Principal Source of Funding	Research N	%
NSF, NIH, NIMH	91	25.6
USAID	24	6.8
Other US government agencies	76	21.4
This university	51	14.4
Overseas university/research institute	23	6.5
Host’s national/subnational government	20	5.6
Foundation	25	7.0
International organization	9	2.5
International NGO	4	1.1
Multinational corporation	1	0.3
Other	31	8.7

4.7 Total Amount of External Funding

The Table 4 data report the number and proportion of projects with external funding in categories that range from \$50,000 and less to over one million dollars. About one-third of the research projects operated on external funds of \$50,000 or less (including 11 projects supported entirely by internal university funding). At the high end (above \$.5 million) are nearly 30 per cent of the reporting APLU/AAU transnational linkages, including 6 projects in excess of \$10 million.

Table 4. Total External Funds from All Sources for APLU/AAU-profiled Projects (N=321)

Total External Funds	Research N	%
\$50,000 or less; none	100	31.2
\$51,000-\$100,000	33	10.3
\$101,000-\$200,000	39	12.1
\$201,000-\$500,000	60	18.7
\$501,000-\$1,000,000	34	10.6
>\$1,000,000	55	17.1

The Table 5 findings enable readers to distinguish among the six principal fields of transnational research linkage according to the total amount of external project funding. The data indicate that research projects in the agricultural sciences and in health/medicine are most likely to be funded at the high end (in excess of \$1 million). Natural-science and environmental-science projects are relatively evenly distributed across the six external-support ranges. Half of the social-science-research projects operated with less than \$100,000 in external funding. A majority (56%) of the research projects in the field of engineering secured \$50,000 or less in external funds; no project in this field received more than \$500,000.

5 DISCUSSION AND CONCLUSION

Analysis of the projects profiled in the broad-based, self-reporting APLU/AAU database illuminates several important research trends in U.S. university transnational partnerships.^{ix} First, the total portfolio of the reporting current research projects is relatively balanced among four geographic regions, with the Middle East/North Africa and Central/Eastern Europe lagging behind. This finding indicates that recently active U.S. university researchers have not restricted transnational project linkages to Western European collaborations. Furthermore, the high level of activity in Sub-Saharan Africa, Central and South America, and Asia suggests that the reporting project directors recognize the value of collaborative knowledge generation in Southern as well as Northern contexts.

The data also show that funding agencies and U.S. research initiators need to devote greater attention to developing transnational linkages in the relatively neglected regions of Central and Eastern Europe, the Middle East, and North Africa. Moreover, there are striking concentrations in the distribution of transnational research projects that could exacerbate prevailing regional asymmetries. For instance, more than 40 per cent of the active research projects in Africa focus on health or medicine while only 3 per cent principally involve engineering research. This finding likely reflects researcher interest in African health issues and their potential transnational spillover effects as well as the growing influence of African health-focused funding by philanthropic organizations such as the Bill and Melinda Gates

Foundation (see Marten & Witte, 2008, pp. 8-9, 12)^x. Efforts to increase the intra-regional breadth of transnational research undertakings will need to encourage breakthroughs in multiple rather than singular directions.

The multi-institutional data presented in this article provide evidence that principal investigators are drawing upon a diversity of funding sources for transnational research undertakings. Roughly equal proportions of the total pool of projects are supported by the major government scientific agencies (NSF, NIH and NIMH), by other U.S. government agencies, by the proposer’s home university coupled with overseas higher-education and research institutions and host national/subnational government agencies, and by other funding sources, mainly foundations. These findings draw attention to the often unnoticed, but vital, role that higher-education institutions play in initiating as well as supporting transnational research endeavors that address issues of current and future global concern.

University research linkages can be predominantly asymmetrical or symmetrical. In asymmetrical research partnerships, project-initiating (usually Northern) scholars determine scholarly and thematic priorities, methods of inquiry, and the theoretical and conceptual paradigms that are deployed. One of the important lessons learned from a decade of U.S.-Africa higher-education partnerships is that a collaborative initiation process, where the African university plays “a major role in identifying the problem to be addressed”, contributes to partnership success (Morfit & Gore, 2009, p. 18)^{xi}.

The first step toward symmetry in transnational research involves establishing open and genuinely supportive collegial relationships designed to facilitate joint problem identification and symmetrical planning and project-design. Early consultations among researchers provide the impetus for exploring the potential for viable partnership based on common values, visions, societal needs, and mutual gain. Participating in multiple and long-term relationships of the trust-building and information-gathering variety positions the Southern higher-education institution to play an active role in research-project initiation (also Pandor, 2009, p. 16; UNESCO, 2009, p. 5) and in national development.

To promote near-symmetrical linkages, research-project resources need to be devoted to capacity building within partner universities in the South. Most universities in the South can afford to devote few of their own scarce domestic resources to encouraging and sustaining research undertakings. Attention to institutional-capacity building and human-capability development among Southern university partners is crucial because much transnational research activity is, and is likely to continue to be, funded by Northern-based donors. Indeed, Obamba and Mwema (2009, p. 356) conclude that a “defining

Table 5. Principal Research Field: By Total External Funds in ‘000s (N=280)

Principal Field	\$50 or less; none		\$51-100		\$101-200		\$201-500		\$501-1,000		>\$1,000	
	#	%	#	%	#	%	#	%	#	%	#	%
Health/medicine	26	25.7	13	12.9	16	15.8	16	15.8	9	8.9	21	20.8
Social sciences	22	40.7	5	9.3	4	7.4	12	22.2	6	11.1	5	9.3
Natural sciences	8	20.0	5	12.5	5	12.5	10	25.0	6	15.0	6	15.0
Environmental sciences	9	23.1	1	2.6	6	15.4	6	15.4	10	25.6	7	17.9
Engineering	14	56.0	4	16.0	2	8.0	5	20.0	0	0.0	0	0.0
Agricultural sciences	6	28.6	2	9.5	2	9.5	3	14.3	1	4.8	7	33.3

criteria” of a successful transnational academic linkage is “building research capacity within collaborating institutions in the South”. In many Northern countries, therefore, capacity building is a stated focal donor policy objective for South-North university collaborations (Koehn, 2013).

Success in building Southern research capacity requires support for human-capability enhancement. The APLU/AAU database findings regarding human-capability development are not encouraging in this connection. Only one-fourth of the reporting U.S. project directors indicated that training Southern university staff occurred during the past year. These findings are consistent with the “deep decline” in support for training and education at Northern institutions of higher learning (King & McGrath, 2004, p. 46). In the United States, for instance, the number of USAID-funded graduate scholarships for study in the United States has declined from roughly 15,000 in 1979 to about 1,000 (McMurtrie, 2009, p. A25). Ensuring that in-country and overseas training, and research-mentoring opportunities, are central components of transnational collaborations should be a priority among U.S.-university-based project initiators and external funders.

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NOTES

- i For instance, investment in agricultural research has been highly productive for investors and African economies (Kellogg & Hervy, 2009, p. 8).
- ii Zoonotic diseases are caused by infections transmitted between animals and humans. Animal-to-human viral infections have increased dramatically in the past decade. Peter Daszak (2008), Executive Director of the Consortium for Conservation Medicine, reports that 61 per cent of emerging infectious diseases (EIDs) are caused by zoonoses; three-fourths of these involve transmissions from wildlife to human populations.
- iii However, this does not mean that their partners elsewhere in the North and in the South are passive players in research-proposal design and execution. Another recent study of funding awarded to U.S. universities in 2009 under the U.S.-Africa Higher-Education Initiative showed that the majority of successful applicants had implemented processes that involved joint responsibility by the African partner for identifying project and research objectives. In half of the remaining cases, the African university partner assumed lead responsibility for identifying research objectives (unpublished data from a survey of project directors conducted in 2010/2011 by Marisa Griffiths and the author).
- iv In addition to lacunae both among and within APLU and AAU member universities, project-profile postings are not always complete.
- v For analysis of the 295 profiles that principally involved development activity rather than research, see Koehn (2012b).
- vi In the author's study of Higher Education for Development's 2009 U.S.-Africa partnership awards, 82 per cent of the reporting project directors indicated that they were personally connected with their partner co-director prior to collaborating on the successful proposal; usually, they had known each other for seven years or longer. The inter-personal familiarity and trust built through years of working together certainly contribute to willingness and ability to undertake additional transnational research collaborations.
- vii The three remaining linkages are in bilingual Cameroon.
- viii On the importance of an inclusive and worldwide approach to academic initiatives in global health, see MacFarlane, Jacobs, and Kaaya (2008, p. 384).
- ix Through the conduct of additional nationally based studies of research partnerships (e.g., Canadian or Ethiopian transnational linkages), these findings can be extended and critically analyzed in comparative context.
- x In 2005, U.S. philanthropic foundations provided nearly \$2 billion in support of global health initiatives (Marten & Witte, 2008, pp. 8-9, 27).
- xi Data from the 2010/2011 study of HED's Africa-U.S. Higher Education Initiative partnership awards are suggestive of shifts in a symmetrical project-initiation direction (also Koehn, 2012c).