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To cite this article: Johanna T. Crane, Irene Andia Biraro, Tamer M. Fouad, Yap Boum II & David R. Bangsberg (2017): The 'indirect costs' of underfunding foreign partners in global health research: A case study, *Global Public Health*, DOI: [10.1080/17441692.2017.1372504](https://doi.org/10.1080/17441692.2017.1372504)

To link to this article: <http://dx.doi.org/10.1080/17441692.2017.1372504>



Published online: 16 Sep 2017.



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The 'indirect costs' of underfunding foreign partners in global health research: A case study

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ABSTRACT

This study of a global health research partnership assesses how U.S. fiscal administrative policies impact capacity building at foreign partner institutions. We conducted a case study of a research collaboration between Mbarara University of Science and Technology (MUST) in Mbarara, Uganda, and originally the University of California San Francisco (UCSF), but now Massachusetts General Hospital (MGH). Our case study is based on three of the authors' experiences directing and working with this partnership from its inception in 2003 through 2015. The collaboration established an independent Ugandan non-profit to act as a local fiscal agent and grants administrator and to assure compliance with the Ugandan labour and tax law. This structure, combined with low indirect cost reimbursements from U.S. federal grants, failed to strengthen institutional capacity at MUST. In response to problems with this model, the collaboration established a contracts and grants office at MUST. This office has built administrative capacity at MUST but has also generated new risks and expenses for MGH. We argue that U.S. fiscal administrative practices may drain rather than build capacity at African universities by underfunding the administrative costs of global health research, circumventing host country institutions, and externalising legal and financial risks associated with international work.

Abbreviations: MGH: Massachusetts General Hospital; MUST: Mbarara University of Science and Technology; NIH: National Institutes of Health; UCSF: University of California San Francisco; URI: Uganda Research Institute

ARTICLE HISTORY

Received 27 June 2017
Accepted 23 August 2017

KEYWORDS

Global health; capacity building; partnership; collaboration; inequality

Introduction

Over the past 15 years, interest in global health research has surged within North American research universities. As a field, 'global health' defines itself in part through a commitment to equitable partnership between high- and low-income countries (Koplan et al., 2009). Central to the objectives of global health is the notion of capacity building, whereby research partnerships and the funding that comes with them are not only used to 'co-produce' scientific knowledge but also used to build research and public health implementation capacity at under-resourced host institutions (<https://cugh.org/programs/capacity-building-initiative>; <https://report.nih.gov/NIHfactsheets/ViewFactSheet.aspx?csid=74&key=B#B>). Although an ethic of partnership and the goal of capacity building can both be found in earlier forms of transnational health practice, 'global health' has framed

these commitments as elements that distinguish the field from preceding paternalistic eras of tropical medicine and international health (Geissler & Tousignant, 2016; Packard, 2016).

Although many U.S. institutions have established centres dedicated to global health scholarship and partnerships with universities, hospitals, and medical schools in low-income countries (Matheson, Walson, Pfeiffer, & Holmes, 2014; Merson & Page, 2009), evidence suggests that these collaborations face considerable obstacles in achieving the goals of equitable partnership and lasting capacity building (Crane, 2010, 2013; Geissler, 2013; Macfarlane, Jacobs, & Kaaya, 2008; Okwaro & Geissler, 2015). The literature on capacity building in African medicine typically focuses on clinical, research, and laboratory workers and their skills (Wendland, 2016, p. 416). In this essay, we instead emphasise the importance of building institutional capacity in the arena of fiscal administration and use a case study of one U.S.–Uganda university global health research partnership to demonstrate the importance of fiscal administration to equitable partnership. We begin by describing two ways in which U.S. fiscal administrative practices may constrain, rather than build, local research capacity: U.S. funding agencies' chronic underfunding of research overhead ('indirect') costs at foreign institutions and the reliance of U.S. universities upon administrative 'enabling systems' that avoid direct partnership and externalise fiscal and legal risk. We then illustrate how these practices played out 'on the ground' using our case study of a U.S.–Ugandan HIV research project. We conclude by arguing that resource-rich institutions must acknowledge and take responsibility for their roles in undermining administrative capacity at underfunded partner institutions.

Underfunding of foreign institutions

When funding scientific and medical research, U.S. federal granting agencies such as the National Institutes of Health (NIH) recognise both 'direct' and 'indirect' research costs. 'Direct' costs are those attributed to a specific research project, such as researcher salaries or study-specific equipment and supplies. 'Indirect' costs (often referred to as 'overhead' or 'facilities and administration' costs) are those borne by the institution and may include the provision of research space, electricity, human resources, accounting, and office supplies (<https://oalm.od.nih.gov/IndirectCostsFAQ#difference>). Indirect costs are reimbursed as a percentage of direct costs, and in the U.S. – where universities negotiate this rate directly with funding agencies – institutions are commonly reimbursed at rates of 50% or more (Brainard, 2005).

However, under the U.S. Department of Health and Human Services rules, indirect cost reimbursements for foreign institutions receiving NIH grant money are capped at a maximum of 8%.¹ This rate was raised from zero in the 1990s, when fears of 'emerging diseases' made the climate for international health funding more favourable than it had been during the preceding Reagan years. Leaders at the National Institutes for Allergy and Infectious Diseases (NIAID) succeeded in lobbying for an increase to 8%, the same amount offered to recipients of NIH training grants, but found that any amount greater than this was politically untenable (Crane, 2013, p. 167).

In global health research, where foreign grant recipients are often resource-poor institutions in low-income countries, this low reimbursement rate underfunds the human resources and physical infrastructure needed to successfully administer and conduct research. As our case study will illustrate, this positions host institutions for failure and further exacerbates inequalities between well-funded and underfunded partners. In addition, this failure may then serve to justify U.S. universities' preference for parallel administrative 'enabling systems' that externalise risk, maintain U.S. control over accounting, and bypass direct partnership with host institutions, described below.

Global health 'enabling systems' and institutional capacity building

U.S. universities with large global health programmes have developed administrative 'enabling systems' intended to streamline global health research. Designed by offices of 'Global Operations Support' (University of Washington) and 'Global Support Services' (Harvard), these systems guide

faculty through the legal and administrative steps involved in setting up an international research site. They also aim to manage the legal and fiscal risks associated with international work (<http://www.cugh.org/programs/enabling-systems>). While enabling systems cover a wide range of services, this essay focuses on fiscal administration and human resources.

Hiring and managing research staff in a foreign country often requires that the U.S. university establish a legal presence in the host nation. Because it is not always possible for a U.S. university to register as a legal entity abroad, legal presence is often established by founding what administrators term a 'shell' non-profit organisation to act as a fiscal agent on the university's behalf. Among other things, legal registration allows research projects to open local bank accounts, thus avoiding the once common problem of U.S. researchers operating projects through personal bank accounts.

In the absence of a grants management office at the host institution, the U.S.–Uganda research collaboration in our case study established a Ugandan non-profit to act as a local fiscal agent, grants administrator, and to assure compliance with the Ugandan labour and tax law. While a separate non-profit may be understandably appealing to a U.S. partner in the interests of speed and risk reduction, we argue that it is antithetical to the goal of capacity building. Our case study, chronicled below, demonstrates how this practice coupled with low indirect cost reimbursements failed to strengthen institutional capacity at the Ugandan host university.

Case study

One of the authors (Bangsberg) was until 2016 the U.S. director of an ongoing research partnership between Mbarara University of Science and Technology (MUST) in Mbarara, Uganda, and originally the University of California San Francisco (UCSF), but now Massachusetts General Hospital (MGH). Two of the other authors have been involved in this partnership as a research collaborator (Andia) and an anthropological observer (Crane). Our case study is based on these three authors' first-hand experiences working with this partnership from its inception in 2003 up to 2015.

The partnership began in 2003 when the U.S. team initiated a study of access and adherence to antiretroviral medication at the HIV clinic affiliated with the MUST medical school. During the pilot phase, the Mbarara-based project manager was able to fund the study's then-small operating expenses (including staff salaries) using a petty cash account at a local bank. However, lack of adequate banking infrastructure in Mbarara at the time meant this method required weekly trips to the capital city four hours away, and was thus not sustainable. As the study grew and acquired more staff, the collaboration shifted to paying employees as independent contractors of UCSF. This too proved unsustainable, as the timing of invoice payments issued from a large university accounting system were unpredictable and frequently delayed. Wiring transfers to Uganda incurred significant fees, and direct contracting to multiple employees made UCSF as well as the Ugandan employees legally vulnerable under the Ugandan tax law. As a result, the collaboration shifted to a commonly used model for the fiscal administration of global health research projects: the establishment of a 'shell' non-profit to act as the study's fiscal agent in Uganda. From the UCSF perspective, setting up a small non-profit was considered a much more time-efficient mechanism to meet U.S. government accounting requirements than waiting for MUST to develop a *de novo* grants management office. From the MUST perspective, the need for a grants office was not evident. Like many African universities, its primary focus was on teaching and not research, and the research that did occur was typically conducted by students and self-funded, and thus did not require a grants administration office. MUST was also a very young university, only 25 years old, and did not have the funding or the administrative support to establish a grants office at that time.

A non-profit called the Uganda Research Institute (URI) was founded on behalf of the research collaboration and with legal assistance from both Ugandan and UCSF lawyers. However, due to conflict-of-interest regulations, no one directly employed by UCSF (such as the principal investigator (PI) or the project manager) was permitted to be a legal partner or member. As such, the UCSF team asked the Chief of Medicine at MUST (Andia) – also their principal collaborator – to head

the organisation. URI was tasked with managing the study's finances and human resources in Uganda, services that were paid for by indirect cost reimbursements from the parent NIH grant.

Per the NIH policy described above, URI was limited to an indirect cost reimbursement rate of 8%. By comparison, UCSF's reimbursement rate for on-campus research was 50.5% that year; rates at private U.S. universities are typically even higher (<http://regents.universityofcalifornia.edu/regmeet/nov10/f2.pdf>). However, transnational research projects must negotiate multiple national and institutional bureaucracies and regulatory regimes, and thus entail administrative costs not typically required by domestic research collaborations. For example, fluctuating currency exchange rates posed significant challenges for URI. Because URI was funded by a U.S. grant, the organisation's budget was drafted in dollars. However, many of its expenses – including payroll – had to be paid in Ugandan shillings, the value of which shifted on a daily basis. URI paid employees according to the current exchange rate but was required to pay payroll taxes to the Uganda Revenue Authority on the 15th of the following month, by which time exchange rates had changed. The result was that URI was responsible for paying and taxing employees at two different exchange rates.

Despite such challenges, the 8% indirect cost reimbursement provided by the study's NIH grant was initially sufficient to cover URI's operating expenses. However, the organisation began to struggle as the number of studies within the collaboration grew. By 2009, the collaboration employed close to 60 local staff and oversaw not only the flagship adherence study but many other smaller HIV-related projects including studies concerning alcohol use, food insecurity, prevention education, lipoatrophy, transportation, mortality, dermatology, and paediatric adherence. URI was responsible for hiring staff, overseeing payroll, withholding taxes, and providing accounting and facilities management for all of these studies, all at the fixed 8% indirect rate. Because the grants funding most of these studies were quite small (some studies, in fact, had no funding at all), the indirect cost reimbursements yielded little additional resources. The organisation began running at a deficit. In 2009, URI carried out an extensive financial audit in preparation for the five-year renewal of the organisation. The report highlighted some major audit queries, especially the use of cash flow and breaches of the Ugandan labour laws.

These problems stemmed from the collaboration's growth and structure. As the collaboration expanded, each new study joined URI with a different budget for similar cadres of staff. This, in combination with the exchange rate variability, meant that URI records showed several different salaries for each employee. Furthermore, many employees had been inherited from the collaboration's earlier days (when they were paid as independent contractors by UCSF), and there were no records (such as interview reports, job descriptions, or contracts) documenting that they were legally employed by URI and in accordance with the Ugandan labour regulations. Thus, in order to streamline its operations and prepare for renewal, URI's director and board of governors initiated a restructuring process. In order to ensure proper job documentation, URI asked all the staff to reapply for their positions. The organisation's corporate governance structures were also established, and mid-level managers were hired to oversee employees. The research staff were asked to follow new communication channels in which they would communicate with their PIs through their new line managers, and not directly as they had previously done. New financial regulations were also implemented in which all employees would be both paid and taxed at a single exchange rate, which was determined by averaging exchange rates for the previous year (2008). Unfortunately, the new averaged rate was lower than the current rate, meaning that staff would be getting less money. This was not favourable for the staff who then wanted to revert to the previous management systems. The staff requested audience with the U.S. PI (Bangsberg), who then made an emergency visit to Uganda to hold a resolution meeting.

The URI management upheld their position on the new reforms, and this gave the U.S. PI a chance to approach the MUST administration about the more permanent solution of establishing an internal contracts and grants office. The subsequent founding of the MUST grants office in December 2009 was a collaborative effort involving significant technical assistance from the U.S. team, the successful application of an International Extramural Associates Research Development Awards (IEARDA) NIH grant to build institutional capacity, and considerable research and

advocacy within MUST by the collaboration's project manager and Associate Professor Nozmo Mukiibi F. B., who would become the new office's director and authorised signatory official. The office became the first central contracts and grants office at a Ugandan public university and as such represents a significant advance to build local fiscal capacity. The collaboration, which has since shifted its U.S. home institution from UCSF to MGH, now works directly and exclusively through the MUST grants office. URI went ahead with their renewal independently and continues to engage in public health work in Uganda.

Administrative capacity building

While the MUST grants office did increase local capacity, it also presented several challenges. As a grants office within a public university, it was subject to the Ugandan government procurement policies – which often delayed purchases of equipment by months and at times years – and the demands of international funding agencies. Much of the office's new accounting staff were relatively inexperienced recent university graduates who had learned accounting manually and had to be trained in using accounting software.

In addition, the new office had little experience with U.S. government accounting practices, and this led to compliance problems early on. At its inception, the grants office pooled the money from different grants into a single bank account. This was intended both to prevent corruption and to save money, as the office had to pay for each bank account it opened. However, a 2012 audit report from Uganda's Office of the Auditor General found that this approach left the grants office unable to accurately assess the balance of funds for individual projects, making it out of compliance with U.S. regulations regarding federal funding. The MUST grants office shared the results of this audit with the MGH team and requested help in meeting U.S. federal guidelines. The MGH team, in turn, requested help from their Office of Research Management, which oversees research activities at MGH and other hospitals under the Partners HealthCare umbrella. With help from the Office of Research Management (including a week-long Ugandan site visit by the office's Vice President), MUST and MGH devised a multipronged solution that included establishing installing QuickBooks accounting software and training staff in its use, creating an individual QuickBooks account for each grant, and linking each grant to a separate bank account.

These changes required significant investments in travel and training by visiting MGH staff, which notably could not be charged to the parent NIH grants. Following these interventions, the MUST grants office passed an independent audit conducted according to U.S. government 'Yellow Book' standards by Price Waterhouse Coopers at a cost of US\$20,000. The cost of this audit, coupled with the significant investments in staff training, far exceeded the MUST grants' office budget, which is funded entirely through indirect cost reimbursements. In other words, *the grants could not pay for the capacity building costs associated with their own administration.*

Like URI before, the MUST grants office is limited to 8% indirect cost reimbursements on NIH grants, which constitute the bulk of its funding. MUST policy encourages an indirect cost reimbursement rate of 15%, which is sometimes met by private foundations or non-U.S. government funders. But the university hesitates to demand more out of fear of discouraging collaborators. In addition (and somewhat ironically, given our argument), some outside partners use the jobs, infrastructure, and capacity building brought by their projects to argue against higher indirect cost reimbursements. In our case study, the bulk of the costs of staff training and the independent audit were absorbed by MGH. However, none of these expenses could be charged to the parent grants, and MGH was forced to find other means of paying for them.

The indirect costs of partnership

Our case study shows the impact of reduced reimbursement of indirect costs for foreign grant recipients on capacity building. Foreign institutions in low-income countries such as Uganda are

co-producing significant knowledge in the global health sciences; yet, this under-reimbursement is insufficient to build and sustain research and grants management capacity at the requisite international standards. Thus ‘partnerships’ with American institutions may be forced into unequal and extractive relationships at a structural level, regardless of the good intentions of those involved.

Moreover, our case study reflects some important themes in the management of academic global health partnerships. Established just prior to the recent rise of ‘global operations’ and ‘global support’ offices at U.S. universities, URI’s difficulties demonstrate both the need for a more coordinated approach to transnational fiscal administration and the pitfalls of non-investment in administrative capacity building. In this respect, the promotion of global health ‘enabling systems’ by the Consortium of Universities for Global Health is a double-edged sword. Some of the challenges experienced by URI – such as the coordination of multiple currencies and compliance with local labour law – are issues that enabling systems are designed to handle smoothly. More established and better funded university-affiliated non-profits, such as UWorld (University of Washington) and Harvard Global (Harvard University), are able to leverage legal and administrative expertise and resources in ways that undoubtedly ease the administrative burden that transnational partnerships entail. Nonetheless, at the same time, the case of URI demonstrates that the use of such ‘shell’ non-profits – an increasingly common ‘enabling systems’ approach – can allow U.S. universities to circumvent local bureaucracy while externalising the legal and financial risk associated with international work. For example, it was the Ugandan director of URI, not the American PI or his U.S. institution, who risked liability for URI’s non-compliance with the Ugandan financial and labour laws. By avoiding direct partnership with host institutions and deflecting risk from U.S. universities, such administrative enabling systems may undermine the ethic of partnership and the goal of local capacity building.

Genuine capacity building and real partnership involve considerable costs and risks. In our case study, the establishment of a successful grants office at MUST required large, unbudgeted expenditures by the collaboration, and these expenditures were largely borne by the U.S. partner. In addition, in partnering directly with MUST rather than using a stand-in non-profit like URI, the U.S. partner opened itself up to significant financial and reputational risk regarding sub-recipient monitoring. Had the MUST grants office been found in violation of U.S. federal accounting practices, MGH could have been charged with misappropriation of funds and been forced to repay all of the grants in question to the federal government. MGH was willing to accept this risk because the institution’s leadership was fully committed to building local human scientific and research capacity and recognised that in order for this to be sustainable, a parallel investment in grants management capacity was required. MGH mitigated the risk by having an on-site programme director, monthly visits by the Director of Global Health (Bangsberg), quarterly visits by the MGH global health finance manager, two visits by the MGH comptroller over five years, and an independent audit.

We recognise that there are legitimate reasons why both foreign and local researchers may wish to avoid working directly with African public institutions, many of which have entrenched bureaucracies and have suffered from decades of underfunding due to both international structural adjustment policies and poor national management (Geissler, 2015; Iliffe, 2002; Mamdani, 2011; Mwesigire, 2016; Pfeiffer & Chapman, 2010). Addressing these problems effectively will require investment and risk-taking not only by international partners like MGH but also by African governments (Boum, n.d.). Even questionable governments are capable of making productive investments in health care, as Mika’s account of recent developments in Ugandan oncology shows (2016).

Building research capacity in low-income countries, and especially in Africa, is a widely accepted goal among global health stakeholders, including the NIH (Chu, Jayaraman, Kyamanywa, & Ntakiyiruta, 2014; <https://cugh.org/programs/capacity-building-initiative>; <https://report.nih.gov/NIHfactsheets/ViewFactSheet.aspx?csid=74&key=B#B>). Yet, at the same time, funders and institutions in high-income countries systematically underfund partner institutions and advocate the establishment of parallel fiscal and administrative systems that may drain local research capacity. As Chu et al. have argued recently, global health partnerships may be made more equitable and less extractive by building African research capacity (2014). We agree that this must include training in

research and publication skills, improved technological infrastructure, greater local control over research agendas, and increased African authorship of scientific papers. In addition, we submit that it must include genuine fiscal and administrative capacity building with partner African institutions. Global health partnerships cannot continue to systematically underfund and undermine the very institutions and research capacities they purport to build.

These issues need to be addressed if global health is to succeed in driving equitable partnership between U.S. and African institutions.

Note

1. Other federal agencies, such as the CDC and USAID, have a negotiated indirect cost rate with foreign institutions.

Acknowledgements

The authors thank Prof. Nozmo Mukiibi, Nneka Emenyonu, and Peggy Bartek for their assistance in clarifying important details of the case study.

Disclosure statement

No potential conflict of interest was reported by the authors.

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