Career Choices, Return Paths and Social Contributions

THE AFRICAN ALUMNI PROJECT
Report prepared for The MasterCard Foundation

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Acknowledgements

1. Executive Summary

This report comes out at a time of increased global demand for access to quality secondary and higher education that leads to meaningful employment. Demographic change in the 21st century signals a particularly challenging education and job creation environment in Sub-Saharan Africa. The MasterCard Foundation has stepped into this scenario with a commitment to make substantial investments to improve access to quality secondary and tertiary education in Africa, as well as school to employment transition support. As part of this investment, the Scholars Program has partnered with international universities, within and outside Africa, to provide comprehensive undergraduate and Master's-level scholarships to talented, economically disadvantaged African youth who demonstrate leadership potential and a commitment to "giving back" to their communities. Five of these universities, from the United States (UC Berkeley, Michigan State), Canada (McGill, University of Toronto) and Costa Rica (EARTH), plus Simon Fraser University in Canada[1], have partnered to conduct this pioneering study on the career and life trajectories of African alumni of their respective universities, with the hope to gain further understanding and insights that may improve outcomes for current and future African scholars. In particular, the study aimed to gather heretofore unavailable evidence of the social contributions of African alumni, and retrospective reflections on the value and challenges of their international education over the course of their lives and careers.

The multi-university team adopted a mixed methods approach to analyze four research questions:

1. **CAREER TRAJECTORY:** What are the post-graduation experiences of African alumni from international universities?
2. **RETURN PATHS:** What are the factors that have influenced the post-graduation decisions of African alumni to return, or not, to their region/country of origin?
3. **SOCIAL ENGAGEMENT:** Have African alumni prioritized social and civic engagement with their region/country of origin? If so, what types of engagement with what social change outcomes?
4. **VALUE OF AN INTERNATIONAL EDUCATION:** How has the international university experience influenced the career choices and social engagement contributions of African alumni?

Additionally, participating African alumni were asked to provide insights and advice to current and future African youth studying in international

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[1] Simon Fraser University is not a MasterCard Foundation Scholars Program partner but participated fully in the study.

universities, specifically: 1) how to maximize the value of their academic and social experience, and 2) how to prepare for a successful post-graduation transition to further studies or the workforce, especially for those aspiring to return to the African continent.

After an extensive data gathering and tracing effort by multiple units in six universities, the study invited 1,575 African alumni to participate in a comprehensive web-based survey that addressed the research questions. Of these, 294 (18.7 %) submitted completed surveys, a reasonable response rate to a web-based survey of international alumni, most of whom were out of touch with their *alma mater* institutions. To complement the survey with qualitative data and insights, team members conducted 100 in-depth interviews, the majority in-person. Researchers from UC Berkeley, Michigan State, EARTH University and Simon Fraser University made six trips to Africa to conduct interviews. All six partners interviewed alumni living in the diaspora of North America and Costa Rica. The multi-university team developed common codebooks to permit aggregation of data for the mixed methods analysis.

1.1 Key findings

"As a young person graduating from college, you are looking to build your career and you want to minimize risk and the unknown. Being in the US, you see a lot of opportunities to do well. There is sort of a pull from the US…but not from back home." (Ghanaian, residing in the US)

"There's a vast amount of opportunity [in Africa] to come back and exploit it. I think the continent is desperate for people with exposure and skills and networks. …If you do come back, there's this sort of open field of opportunities that you don't necessarily see while you're [abroad]. So it's worthwhile keeping your eye on opportunities back at home." (Ghanaian, residing in Ghana)

Below are some of the key findings from the survey and interview analyses for each research question.

Career and Life Trajectory

- **Childhood influence.** Career goals are strongly influenced by childhood experiences, family values and primary, secondary and tertiary education in Africa. International education tends to reinforce and broaden these goals, not redirect them, especially for graduate students.
- **Socio-economic mobility.** There is striking socio-economic and career mobility for alumni of international universities, compared to the majority

in countries of origin, both for those who returned to Africa (55%) and those that reside in the diaspora (45%). The data show generalized upward mobility in authority and leadership.

- **Linear and non-linear career paths.** Some alumni have pursued non-linear career paths traversing continents, sectors and fields; others have pursued linear, upward-moving paths where careers are built within a single institution — in a majority of cases, around their universities.
- **Contributions to higher education.** A large number of alumni work in universities and research institutions (44%), followed by private business and not-for-profit organizations, with only 7% reporting work with the public sector (outside of education). Alumni are working in six principal areas: agriculture and environment, economics and finance, education, health, public administration, and social development.
- **International networks — a lifeline.** Alumni who maintained strong connections with their mentors and international networks, across all sectors, were able to weather career and economic hardships more successfully. For those who returned to Africa, international collaborations often proved a "lifeline" during periods of greatest political instability and economic hardship. This finding emphasizes the crucial role of mentoring and network-building for developing resilience to volatility and change.
- **Career frustrations.** Skills learned and degrees earned from international universities contributed both to career frustrations and successes, largely depending upon the hierarchical structure of the workplace. Those who returned to Africa upon graduation reported that having an international degree could be a disadvantage in certain circumstances — for instance, when talents and skills are not recognized or utilized, or when a superior perceives the international graduate as a threat.
- **Gender-based career challenges.** Women alumni living in the diaspora and on the continent reported challenges related to gender discrimination in the workplace, as well as difficulties balancing family and their careers. A larger percentage of women graduates (57%), as compared to men (49%), have chosen to live and work in the diaspora, perhaps associated with greater opportunities for career mobility outside of Africa.

Return Paths

- **Post-graduation return paths**. The study identified four return paths for African alumni: "direct return" (45 percent, within 12 months of graduation), "delayed return" (5%, after 12 months up to several decades), "global" (7%, living and working both in the diaspora and Africa) and "diaspora" (43%, living and working outside of Africa). Survey data show declining return rates over time, from a high of 65% in the 1970s, leveling out at about 40% since 2010.

- **Ability to implement knowledge gained.** Between 50% and 70% of survey respondents chose these five factors as influential in their return decisions (in descending order): ability to implement knowledge gained, job prospects, ability to make a contribution to country of origin, ability to become a recognized professional, and place to raise a family. Safety/security, potential earning power, cultural norms, visa issues, and concerns about readjusting to life in Africa were other factors in decision-making, though of less importance.

- **Degrees and fields of study**. Alumni who pursued graduate degrees were more likely to return to their countries of origin (50%) as compared with undergraduates (30%), and certain fields of study, such as health, agricultural science and social sciences, had very high return rates as compared with business, law and engineering.

- **Region of origin differences.** Regression analysis showed that alumni from West Africa were less likely to return as compared with those from East and Southern Africa, underscoring the importance of political and economic context in return decisions. When and where political stability and economic opportunity have improved in West Africa, for instance, over the last two decades in Ghana and Nigeria, there has been an increase in direct and delayed return to these countries.

- **Delayed return.** The delayed return path percentage (5%) is likely to grow in the future as some alumni residing and working in the diaspora carve out spaces for an eventual return to Africa. Several alumni interviewed for this study delayed their return for more than three decades, pursuing careers and raising children in the diaspora, and eventually returning to their home countries for a strong "third act" as social entrepreneurs, businesspeople and academic and thought leaders.

- **Return decisions are complex and evolve over time.** Interviews provided insights into the "return or stay" dilemmas African alumni face upon graduation and the evolving considerations influencing their decisions over time. Main considerations influencing return decisions are:
  - **Expectations.** Alumni in Africa faced pressures to return home to fulfill a host of obligations including contributing financially, "giving back" to society through one's profession, and modeling success to the younger generation. Alumni in the diaspora described their success as tied to sending back remittances to support siblings and other children to pursue education.
  - **Career opportunities**. Those who pursued fields of study that were directly relevant to opportunities in their home contexts, such as in agricultural or health sciences, were able to return home, apply their learning and advance professionally upon completion of their studies. More recent alumni emphasized emerging markets and entrepreneurial opportunities as incentives to return home, both

for individual gain and to contribute to the social transformation and economic development of Africa.

- o **Financial considerations**.   Large salary differentials between professionals in Africa and abroad, particularly in the academic and public sectors, factored into decision-making to different degrees. Remaining abroad to pursue financial stability was viewed as a sensible strategy — particularly among alumni from families with limited means — to acquire the resources and relationships for an eventual successful return home.
- o **Economic and political context**. Political and economic conditions in home countries at the time of graduation were a key factor influencing both return decisions and experiences upon return. Many interviewees spoke about political repression or instability, and economic collapse, at different periods of time in their countries of origin (e.g. Uganda, Rwanda, Nigeria, Ghana, Togo, Burkina Faso, Zimbabwe, Mozambique, South Africa), conditions that deterred return for some, and delayed return for others.
- o **Staying connected.**   International networks and collaborations were crucial for alumni following any of the four paths to overcome challenges, thrive professionally and "stay connected".   Alumni from multiple fields who returned to Africa cited long-term rewarding international collaborations with their *alma mater* and other institutions.   For those in the diaspora, connections with home in many forms, including joint projects with colleagues in Africa, remain vital for sustaining their identity and sense of purpose.

- **A false dichotomy**. These findings suggest caution in framing the debate about "return" in moral terms, presenting a false dichotomy.   Instead, shared values characterize all groups of alumni while differing opportunities and personal circumstances contribute to their diverse pathways upon completion of their studies, and over a lifetime.

Leadership and Social Engagement

Leadership

- **Leadership in careers.** Eighty-six percent of the African alumni have held leadership positions in their respective careers. Forty percent of the alumni self-identify as "social entrepreneurs."
- **Leadership in social/civic organizations**. Outside of their professions, nearly 80% of alumni are active in social and civic organizations in some capacity (primarily within Africa, but also in diaspora communities), with just over half serving in leadership positions.
- **Transformative leadership.** A substantial number of African alumni have generated social change of a transformative nature, affecting mindsets of

institutions and governments, creating new organizations and ways of doing things, and improving the lives of large numbers of people. Alumni are "making change happen" in these fields: i. higher education, research and science, ii. private business and social enterprises, iii. creative arts, iv. government and public service, v. community engagement, and vi. Pan-African policy and leadership.

Social Engagement

- **Multiple arenas for "giving back."** A large majority of alumni are "giving back" to society in multiple arenas and to varying degrees, depending upon their passions, expertise and stage in life. The ten principal arenas of social engagement are: i. higher education, ii. authorship of influential books/articles, iii. community development and empowerment, iv. non-profit humanitarian organizations, v. volunteering in communities of origin, vi. bridging African and international institutions, vii. social/economic development through international agencies, viii. remittances and philanthropy, ix. advocacy, and x. promoting youth leadership and mentoring youth.
- **Careers related to African development**. Sixty percent of alumni are currently employed in local, national or international positions directly related to African social and economic development (74% whom are residing in country of origin, 26% of whom are residing in the diaspora). When asked about current or past job/employment, the responses rise to 83% in country of origin, and 50% in the diaspora. Over 20% of African alumni living outside of Africa currently have positions related to African development, such as professionals with the World Bank, United Nations, Center for Disease Control and Prevention, and USAID, among others, while another 25% who no longer work in the sector did have positions related to development in Africa in the past.
- **Diaspora engagement with Africa**. Alumni in the diaspora are able and willing to share financial resources toward social development on the African continent: 60% contribute remittances, 39% make productive investments, and 32& make charitable contributions. Alumni in the diaspora are also contributing their knowledge and skills through academic and other exchanges, although sufficient opportunities for meaningful and sustained engagement are still lacking.

Value of an International Education

- **Current relevance of international experience.** Key aspects of the international education experience continue to be relevant and employed regularly by alumni in their current positions, particularly university prestige and reputation, academic courses, research, intercultural competencies, mission and values and international networks.

Interestingly, the value of academic courses and research extends beyond alumni in academia to all sectors.

- **Advantage over peers who did not study abroad.** Most alumni believe they have fared "better" or "much better" than their peers who did not study abroad in three aspects: finding a first job, career advancement, and making a positive difference in country of origin, irrespective of their return path.

- **Social and professional networks.** As expected, a majority of alumni of international universities were able to create and strengthen international social and professional networks. More surprisingly, data show that 50% of African alumni also strengthened their professional networks in Africa during their international education, and the other 50% claim "neutral" impact. This finding merits further exploration to understand precisely how social and professional networks in Africa have been sustained or created by African alumni while studying abroad, so that these mechanisms can be replicated to assist more students.

- **Confidence as scholars and innovators.** Analysis of interviews revealed enduring values and benefits of an international education, such as exposure to new ideas, critical thinking and use of practical teaching methods. Often alumni referred to the critical thinking pedagogy and practical methods at US and Canadian universities, as well as EARTH University, as important for building their confidence as scholars and innovators, skills that were subsequently leveraged for career advancement and effecting social change.

- **Diversity and intercultural competency.** All alumni cited exposure to students from different nationalities, religions, ethnicities, and sexual orientations as pivotal for expanding their worldview and for breaking down previously held stereotypes. For those that returned to Africa, having greater intercultural competency was a huge advantage for managing and leading multi-ethnic organizations. Another influential element was exposure to democratic forms of government and civic participation in the US and Canada, as well as relatively less rigid class boundaries than what they were used to in Africa.

- **Bridging misconception barriers.** Alumni also referred to their positive contributions to correcting misconceptions and stereotypes about Africa and Africans by non-African students (domestic and international). For many alumni, these bridged barriers led to life-long friendships.

- **Challenges of an international education.** Some African alumni faced significant academic, social and financial challenges during their international education, although all participants in this study were able to overcome these challenges to obtain a degree. Alumni who had only partial scholarships reported anxiety about sustaining themselves, and their families, in some cases, and challenges navigating the work world as students. Social problems were mainly related to initial cultural

adjustments and finding fellow African or non-African friends. Graduate students generally experienced far fewer challenges than undergraduates, largely because they had the maturity to deal with social issues, such as racism and homesickness, and a more advanced capacity to focus and overcome academic challenges.

Advice to Current and Future Scholars

- **Strong encouragement to study abroad**. Nearly all surveyed alumni encourage African students to pursue study abroad (at graduate level, in relevant fields of study). This in itself is a striking commendation of the international university experience, crossing generations, geographies, return paths and career trajectories.
- **Higher quality and skills needed in Africa**. The top three reasons given to study abroad are: "higher academic quality" (62%), "skills/knowledge needed in Africa" (59%) and "access to global opportunities" (39%). The fourth reason, "job prospects in Africa are better," drops off to just 10%, suggesting that African alumni of the future, as with the past, will face challenges finding meaningful employment with favourable remuneration. For future research, we intend to analyze these responses by countries of origin, field of study and year of graduation to examine differences in perceived job prospects for alumni sub-groups.
- **First degree at home**. Most alumni, even those that studied as undergraduates abroad, advise African youth aspiring to careers within Africa to pursue their "first degree at home," and a subsequent graduate degree in an international university for exposure and specialization. This advice is associated with trends in improved quality and diversity of higher education institutions in Africa, particularly in the larger, middle-income countries.
- **Choose course of study relevant to Africa.** A common piece of advice is for African students who intend to return home to "choose course of study relevant to growth fields in Africa." Students are also advised to conduct research using data from their countries of origin as a key means to stay engaged and relevant.
- **Network and build relationships**. Alumni advise students to be proactive about building relationships with faculty and other potential mentors that will endure beyond graduation. The advice to "network, network, and network" on campus and in the wider community is pertinent for all African students no matter which return path they choose.
- **Crises may emerge so seek support**. Study abroad can be "overwhelming." When African students face fears about failure, isolation, or other matters, alumni advise seeking support right away from trusted adults and friends.
- **Transition to work in Africa.** For those seeking careers in the private sector, alumni advise not to overlook multiple resources on campuses, such as

career centres, to find companies and employers seeking talented individuals to work in Africa. Alumni also advise students to prepare for multiple careers over a lifetime by gaining exposure to different disciplines, experiences and social groups. Finally, students are advised to adapt their material expectations to the realities in Africa: "If you're moving back, learn to adapt. It's not easy; the comforts are different so find alternatives, apply wisdom and be ready for adventure. It's worth it." (Ugandan, delayed return to Uganda)

1.2 Policy and programming implications

"Given that you're providing someone with an opportunity, four years doing something which will be a launching pad for everything else they're going to do in their lives, I don't know how you quantify that. That's a job for social scientists. It will have a **transformative impact** *and if they take any part of that back to their lives in their home countries, it will have been worthwhile."* (South African)

The theory of change of The MasterCard Foundation Scholars Program is that Scholars who study abroad will return home to Africa and promote positive social change through their organizations and businesses, engendering transformative changes for society at large with sufficient time and support. The findings from this study show evidence to support this theory of change. At the same time, the research highlights the complex set of factors influencing post-graduation "return" decisions, resulting in paths with significant career and geographic mobility, shared commitments to contribute to African development in diverse capacities, and the possibility of "delayed return" into transformative roles decades after graduation. Findings indicate various ways to support post-graduation transitions that will be meaningful on both individual and social levels, as summarized below.

Programming implications for The MasterCard Foundation Scholars Program

1. **Mentors and advisors.** Nearly all surveyed alumni have stated their willingness to serve as mentors and advisors of Scholars, and at least 25% are in positions to offer substantive summer internships in their respective organizations across Africa and in diaspora-based international organizations. **African alumni of partner universities could be proactively connected with current and future Scholars through the Scholars Community Platform, among other options.**

2. **Proactive support for building international relationships.** Alumni who returned to Africa with strong international networks, laying the groundwork

for future collaborations, are more resilient to uncertain and difficult conditions, and have thrived when conditions improved. This finding suggests **the need for deliberate and proactive support for initiating and supporting lasting relationships between MasterCard Foundation Scholars and their international academic communities** (e.g. faculty, staff, students, advisors, professional associations) during their study abroad. Among the partner universities, Michigan State University[2] has already advanced a process for encouraging and coordinating research, education and development collaborations with African universities and government agencies involving their African students, serving as a model for others.

3. **Harness talent in the diaspora to serve Africa.** Alumni who remained in the diaspora, or delayed return maintain strong connections with Africa that include, but go beyond, remittances. The potential for "brain drain" evolving into "brain circulation" is considerable and under-tapped, with important lessons to be learned from other diaspora communities (e.g. China, India, Mexico, Singapore). The MasterCard Foundation should consider the whole career and life trajectory of MasterCard Foundation Scholars when visioning their contributions to social change on the continent, including those who remain in the diaspora or delay return. It may also consider **teaming up with organizations such as the Carnegie Foundation and the African Center for Economic Transformation (ACET) in Ghana to develop mechanisms for harnessing African talent in the diaspora, including MasterCard Foundation Scholars/Alumni, to serve targeted needs on the continent.**

4. **First degrees at home, second degrees abroad.** The findings confirm that alumni highly value their international education and continue to reap benefits in their careers. Alumni with graduate degrees in certain fields of study returned to their countries of origin in higher numbers and experienced fewer social and academic challenges as students. This would suggest that **The MasterCard Foundation Scholars Program should continue to support excellent Scholars to pursue graduate degrees abroad,** targeted toward fields of growing importance in the African context and where local universities still lack adequate expertise, as well as provide support for innovative joint or hybrid degree programs with African universities.

5. **Circle of advisors to improve higher education in Africa.** The stellar intellectual and social qualities of many alumni interviewed in this research,

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[2] From Appendix 3: "There has been significant interest in the outputs and outcomes of the African Alumni study across MSU. The database of African alumni that we created has already been useful for our faculty and students. The MSU MasterCard Foundation Scholars office has been able to use the data to get in touch with alumni and plans to utilize these alumni networks to connect students to internship and mentorship opportunities. Our MSU African Studies Center Director has also been able to use the database to build relationships with our alumni and has visited several alumni in her travels to Africa thus far in 2016. The alumni networks that will be reinvigorated through this work will have significant impact on MSU's future research, education, and outreach goals in Africa."

and their leadership roles in universities across Africa, **presents an opportunity for the Foundation and interested partners to enrich efforts to improve higher education in Africa by creating a circle of advisors from this study.** As graduates of international universities, they are well poised to identify, distill, adapt, and infuse certain key qualities and benefits from an international education into African institutions of higher learning. The potential gain is enormous, benefiting large numbers of African university students.

Recommendations for Partner Universities

1. **African alumni engagement.** The research has revealed an under-tapped potential to further the global credibility, branding and outreach of partner universities by systematically documenting and profiling the scientific and social impacts of their international alumni. For Sub-Saharan Africa, a strong case could be made that the deepest and most profound impacts of "global universities" on African development are through the sustained, often transformative, contributions of their African alumni, such as those profiled in this report. **In order to tap into this potential, Alumni Offices, Study Abroad Programs and other relevant units on campuses will benefit from assigning additional resources to re-engage with their African alumni.**

2. **Potential of African alumni to contribute to university missions.** Given the huge potential for African and other international alumni to contribute to the research, education and outreach missions of partner universities**, we recommend that Offices of Institutional Research, in particular, continue to conduct retrospective tracer studies of their alumni from Africa, and other understudied populations**, employing methods and lessons learned from this study. We see a great benefit from university partnership across groups of universities with similar globalization missions conducting joint studies, guided by expert faculty in their respective Schools of Education, International Relations and Development Studies Departments, and other relevant academic units.

1.3 Future research

This multi-university study yielded data and research findings with timely implications for international universities seeking to enhance their global reach, and scholarship programs motivated by theories of change based on notions of "go back and give back." Time limitations did not allow for full analysis of the wealth of data collected for this study, particularly the in-depth qualitative data. Most compelling is the data set of 100 coded interview transcripts that could be further analyzed to discern patterns of behaviour and outcomes related to key demographic, educational and employment variables such as

country of origin, gender, socioeconomic childhood status, field of study and current employment sector. The research team will seek opportunities to continue and deepen the analysis.

Other universities have expressed interest to likewise trace and understand the career and life trajectories of their African alumni, including universities within Africa with pan-African student populations (such as Makerere in Uganda, Ashesi in Ghana, University of Pretoria in South Africa). Having tested a mixed methods approach with considerable success, this project may now be extended to include more partners with wider implications. Already, one extension of this project is an associated book in production: "International Scholarships for Higher Education: Pathways to Social Change" (Palgrave MacMillan Press, publication date January 2017).

2. Setting the Stage

Globally, the demand for higher education is at an all-time high, and rates of growth in this sector are very strong.[3] A central feature of this demand is its international character: contemporary students are more likely than ever to cross borders seeking the credentials, technical skills, subject area expertise, and training in scientific and critical thinking available at the tertiary level. As a result, universities around the world have increasingly prioritized recruiting and supporting these international students. In spite of the well-documented individual and national benefits of tertiary education, opportunities for access remain grossly uneven around the world.

Nowhere is this inequity of access more clear than in Sub-Saharan Africa, which trails all other regions in absolute and relative tertiary enrolment rates.[4] Faced with underfunded and often underperforming universities on the continent, many top African students pursue their higher education abroad, and many do not return. Others have returned to play leadership roles in academia, government, business, international agencies and civil society. Nevertheless, the post-graduation evidence is largely anecdotal. This study makes a major contribution to the study of African alumni outcomes by systematically tracing and collecting data on past African graduates of selected international universities, and employing a mixed methods approach to better understand why these Africans pursued higher education abroad, how they reflect on their international university experience, what paths they have pursued after

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[3] UNESCO. 2014. "Higher Education." *Home>Education>Higher Education*. Retrieved February 4, 2014 (http://www.uis.unesco.org/Education/Pages/tertiary-education.aspx).

[4] Kritz, Mary M. 2012. "Globalization of Higher Education and International Student Mobility." Retrieved February 4, 2014 (http://www.un.org/esa/population/meetings/EGM_MigrationTrends /KritzPresentationFinal.pdf). [with the possible exception of Central Asia]

graduation, and how these alumni have contributed to social transformation on the African continent.

This multi-university study was conceived and shaped through discussions between MasterCard Foundation Scholars Program senior staff and the university researchers that ultimately signed on to the two-year project (2014-2015), led by the University of California, Berkeley. The Foundation is deeply committed to supporting access to secondary and tertiary education for talented, economically disadvantaged African youth through its Scholars Program, which began with a historic investment of $500 million in 2012, making subsequent investments each year to further this goal. Five of the six research partners in this study received substantial support from The MasterCard Foundation Scholars Program in 2012 and 2013 for comprehensive scholarships for youth, primarily from Sub-Saharan Africa, to attend their universities[5].

The MasterCard Foundation (of which The MasterCard Foundation Scholars Program is one Program) is relatively new [6] and has adopted a "learning" approach to guide its investments, adapting and adjusting its priorities as research and experience dictate. This study was funded to contribute understanding to one of the key assumptions of The MasterCard Foundation Scholars Program "theory of change," namely that, given appropriate selection processes and supports during their international education, MasterCard Foundation Scholars will return to their countries and communities of origin on the African continent as agents of positive social change[7]. A framework report and literature review prepared by Mathematica Policy Research for The MasterCard Foundation Scholars Program partners, commenting on The MasterCard Foundation Scholars Program theory of change, states, "The dearth of rigorous studies that examine the likelihood of students returning to and working in their communities of origin following completion of education in foreign countries is striking." [8] This claim led to discussions regarding the need for primary research to deepen our

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[5] University of California, Berkeley, Michigan State University, McGill University, University of Toronto, EARTH University (based in Costa Rica); Simon Fraser University in British Columbia, though not a MasterCard Foundation Scholars Program partner, is very interested in strengthening its global education program, particularly in Africa, and learn from trajectories of past SFU African alumni. The American University of Beirut (another MasterCard Foundation Scholars Program partner), participated in the first phase of the study but had to drop out due to lack of resources and time, given other priorities.

[6] Established in 2006 and based in Toronto (http://www.mastercardfdn.org/).

[7] The Scholars Program supports large numbers of African students to study on the African continent at secondary and tertiary levels, within and outside of their countries of origin. This study only covers international university partners outside of the continent. See http://www.mastercardfdn.org/ for a complete description of the Program.

[8] Mathematica Policy Research, MasterCard Foundation Scholars Program Theory of Change, April 2013.

understanding of the career and life trajectories of **past** African graduates of international universities. The research is intended to contribute knowledge to the field of higher education and social change, specifically to the sub-field of international student mobility and the 'brain drain' debate, and to derive policy implications to improve programming and outcomes of The MasterCard Foundation Scholars Program in the years ahead.

The brief literature review and annotated bibliography conducted for this study confirmed the limited number of studies on the post-graduation trajectories of international university graduates in general, and Africans in particular. It also confirmed the absence, to our knowledge, of any US or Canadian university-initiated tracer studies of their African alumni. Nonetheless, there is a rich literature on related and relevant themes: internationalization of higher education from both university and student perspectives; international student mobility, including evidence and debate on the social and economic impact of "returnees" versus "brain drain," with a few studies focused on African students; and evaluations, reviews and reports by and about international scholarship programs. The results of the review and annotated bibliography are presented in Appendix 7.

The Foundation has adopted a flexible approach to the Program's "go back, give back" expectation. For instance, while the expectation of return to Africa is important, there is flexibility regarding the timing of return, understanding the desire of many Scholars for further studies and work experience outside of Africa.   There is also understanding and acknowledgement of the significant contributions of diaspora communities to social and economic change in Africa, and the emergence of "global citizens" who increasingly live and work on two continents. This study, therefore, comes at a pivotal time to contribute hard evidence of the various ways that African alumni of international universities contribute to Africa at different phases of their career trajectories. From this learning, the study has the potential to make a major contribution to present and future programming of The MasterCard Foundation Scholars Program.

2.1 Research goal, questions, and guiding model

In December 2013, the study was launched with a workshop at UC Berkeley where university partners gathered to determine research goals, questions and methods, a framework for analysis, and a collaborative working group structure.   The outcome of the workshop was a detailed Research

Prospectus[9] that has guided the study throughout. A timeline for the project was also developed and a revised and final version is provided in Appendix 1.

The central goal of the study, "Career and Life Trajectories of African Alumni of International Universities," is to retrospectively examine the factors influencing career and life decisions of African alumni[10] of partner universities, and, more specifically, to understand how these path decisions have influenced their contributions to social and economic development on the African continent. Halfway through the study, in recognition of the growing interest in the research, potential opportunities for African alumni to reengage with one another and with current MasterCard Foundation Scholars Program Scholars, and to establish a web presence, the study evolved into the African Alumni Project with a designated website supported by the Graduate Division of UC Berkeley (http://africanalumni.berkeley.edu).

The four key research questions are:

1. **CAREER TRAJECTORY:** What are the post-graduation experiences of African alumni from international universities?

2. **RETURN PATHS:** What are the factors that have influenced the post-graduation decisions of African alumni to return, or not, to their region/country of origin?

3. **SOCIAL ENGAGEMENT:** Have African alumni prioritized social and civic engagement with their region/country of origin? If so, what types of engagement with what social change outcomes? What are the factors that have influenced alumni decisions to prioritize social and civic engagement?

4. **VALUE OF AN INTERNATIONAL EDUCATION:** How has the international university experience influenced African alumni career choices and social engagement contributions?

Additionally, we asked African alumni in both the survey and interview instruments to provide insights and advice to current and future African students. Specifically, we asked for advice to: 1) maximize the value of their academic and social experience, 2) prepare for a successful post-graduation

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[9] "PARIS" Study Research Prospectus, prepared by the delegates to the launch conference with principal contributions by doctoral candidate Ben Gebre-Medhin and lead researcher Robin Marsh, March 2014. "PARIS" refers to the original acronym of the study – "Past African Recipients of International Scholarships," which was later changed to "Career and Life Trajectories of African Alumni of International Universities," to be inclusive of African graduates who were not scholarship recipients.

[10] The surveyed and interviewed African alumni may have attended multiple institutions of higher learning both inside and outside of Africa. For this study, we are referring to "alumni" or "graduates" of the participating partner universities, unless otherwise specified.

transition to further studies or the workforce, and, in the case of MasterCard Foundation Scholars Program Scholars aspiring to return to Africa, 3) career opportunities and challenges they will face on the continent.

The research team developed the following simple 'three-phase model' to guide analysis of the four key research questions and associated sub-questions (see Appendix 2[11]).

Three Phases	Example Critical Junctures	African Context	Global Context
Student/Family Background	-Voluntary service in school and community -Sources of educational support		
University Experience	-Scholarship program -Choice of discipline -Connectedness with home -Extracurricular involvement		
Career Trajectory	-Family obligations -Multiple professional options over space/time		

The model presents a three-phase life trajectory of individual Africans who go abroad for higher education (for first or subsequent degrees). Data were collected on all phases from early childhood until the present. The interview protocol pays particular attention to critical junctures, or choice points, in the lives of participating alumni, and how they contribute to career and social engagement outcomes. The two vertical bars represent the influence of the socio-economic and political context, both in Africa and globally, in alumni decisions affecting their career and life paths.

2.2 Collaborative multi-university research

As mentioned earlier, this research project is a collaboration of six universities, all grantees of The MasterCard Foundation Scholars Program, with the exception of Simon Fraser University in British Columbia. Two are large public US universities — University of California, Berkeley and Michigan State

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[11] Appendix 2 provides a more thorough rendering of the key research questions and sub-questions in the context of the three-phase model.

University; three are public universities in Canada — McGill University, University of Toronto and Simon Fraser; and the sixth is EARTH University, an agricultural sciences four-year university based in Costa Rica that educates students from throughout Latin America and, since 2000, from Africa as well.

The project has been a collaborative effort throughout the research process, led by Dr. Robin Marsh and her research team at UC Berkeley[12], together with Principal Investigators Dr. Amy Jamison (MSU), Professor Andre Costopoulos with Dr. Lina di Genova (McGill), Suying Hugh (University of Toronto), Dr. Nancy Johnston with Shaheen Nanji (Simon Fraser), and Nico Evers (EARTH). In addition, the project has greatly benefited from the participation of several non-university partners, namely Dr. Meggan Madden (Middlebury/Monterrey Institute for International Studies), Dr. Aryn Baxter (Arizona State University), Dr. Bret Shaw (University of Wisconsin, sabbatical at EARTH), and Barry Burciul (The MasterCard Foundation Scholars Program).

A multi-university collaborative working group structure was established during the launch workshop in December 2013, with chairs and members volunteering according to their interests, expertise and time availability. Four working groups (Appendix 3) were formed to carry out major research tasks (except tracing, which was handled separately): Literature Review, Institutional Review Board (IRB)[13] and Governance, Survey Design and Analysis, and Qualitative/Narrative Inquiry. This multi-university collaborative process involved significant in-kind and monetary contributions by all partners, as well as institutional learning on multiple fronts, particularly in areas of alumni relations and data management. Appendix 4 provides details of partner contributions, institutional learning and management of alumni data as written by the lead researchers at each university.

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[12] The four UC Berkeley graduate students who contributed major inputs to the research effort at different times of the project are Ben Gebre-Medhin (sociology doctoral student), Sidee Dlamini (Master of Development Practice and MasterCard Foundation Scholar, Tessa Emmer (Master of Development Practice student), and Rami Arafah (social welfare doctoral student). Two undergraduates who contributed greatly to the transcribing and coding of interviews were David Sung and Shelley Zhang. In addition, McGill University students Geoffrey Plint and Beverlyne Nyamemba contributed to advancing the qualitative portion of the study.

[13] The four teams worked simultaneously to prepare the inputs for IRB review by the Office for the Protection of Human Subjects at UC Berkeley, Office of Regulatory Affairs for Human Research Protection Program at MSU and the Research Ethics Board for the three Canadian universities. EARTH signed an inter-institutional agreement with UC Berkeley to "rely" on CPHS rules. Appendix 6 contains the full IRB protocol for UC Berkeley plus partner approval letters.

3. Research Methods

The research team adopted a mixed methods approach to conducting a retrospective tracer study of Sub-Saharan African alumni of partner universities. The research process had three phases over two years: 1) tracing Sub-Saharan African alumni and collecting current contact information (n=1,575), 2) administering a comprehensive web-based survey (n=294); and 3) conducting in-depth semi-structured interviews with alumni in person (n=80) and via telephone/video conference (n=20).

3.1 Tracing African alumni

The tracing phase was conducted on individual campuses, although tracing techniques were shared among partners. This activity dominated the research for the entire first year, 2014, and carried into the first few months of 2015 for UC Berkeley and MSU. Collection and updating of alumni records varied from relatively centralized systems (e.g. in alumni relations offices — EARTH, McGill), to relatively decentralized systems (in diverse colleges, schools, and departments, as well as alumni offices — MSU, University of Toronto), to a hybrid of centralized and decentralized units on campus (graduate division, undergraduate registrar, in addition to separate alumni relations offices in the larger schools and departments – UC Berkeley). In Appendix 4, column 3 on Data Management, summarizes how alumni records are kept on the various campuses and the considerable efforts made to locate, consolidate and update records of African alumni. Column 1 indicates the considerable monetary and in-kind resources committed to this study.

Many university records of the older African alumni were found to be absent or incomplete, particularly for the 1960s — mid 1990s, before records were digitized. This is not true for EARTH University, which maintains complete records of its small number of African alumni going back to 1999, and less of a problem for Simon Fraser University where most African students enrolled during or after the 1980s. Primarily due to these types of data issues, McGill and University of Toronto decided to only track alumni starting from the mid-1980s and mid-1990s, respectively. Berkeley and MSU were interested in tracking African alumni going back as far as possible to learn their full historical trajectory, and were partially successful in locating and reaching these older alumni for participation in both surveys and interviews[14]. All Sub-Saharan African alumni were eligible for the study if they had received a degree, undergraduate or graduate, from one of the partner universities and their graduation date fell within the ranges reported in Table 1 below.

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[14] Tracing identified a total of 2,200 eligible African alumni from UC Berkeley and MSU, together, and their summary characteristics are presented in Graphics 1 and 1A.

Table 1: Alumni Data by Research Partner

Data	UCB	MSU	McGill	Univ. of Toronto	SFU	EARTH	TOTAL
Sub-Saharan African Alumni – with basic information[15]	812 (1960s-2013)	1,429 (1950s-2013)	700 (1985-2013)	297 (1995-2013)	212 (1987-2015)	31 (1999-2014)	3,481
Sent and received survey invitation[16]	408	610	323	190	29	15	1,575
Surveys completed (response rates)	118 29%	84 14%	40 12%	33 17%	11 38%	8 53%	294 18.7%
Interviews conducted	60	15[17]	6	3	9	7	100

Table 1 shows the data that were eventually tracked for each university partner and that served as the alumni database for the mixed methods research (3,481 records total). The table does not include "guestimates" of the total population of African alumni from each university because of the significant number of missing records for the four large universities, as referred to above. The type of investigative search that would have been required for these incomplete or missing records, department by department, and through alumni-to-alumni tracing, was beyond the scope of this project.

Once eligible and available university enrolment records of Sub-Saharan African graduates were collected into a single database at each university, research teams began the process of tracing or searching for current contact information (e.g. address, email, cell phone number). The most important and

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[15] Such as degree, year of graduation, field of study but not necessarily up-to-date contact information. This formed the database for our study.

[16] These numbers were confirmed through access to MailChimp campaigns for UCB and EARTH, and reported by the other campuses.

[17] There was not time to transcribe two of these interviews, so the total interviews coded and analyzed were 98.

effective tracing techniques were Google and the professional and social media platforms LinkedIn and Facebook. A typical search would find a LinkedIn profile for an alumnus that provided clues as to current employment; further searching would often lead to phone numbers or emails that could be further checked for validity. The upgraded LinkedIn service allowed for InMail communications to pursue contact with the alumnus, make a short introduction to the study and request an email address for further communication. As shown in Table 1, research partners succeeded in obtaining email and/or telephone information for 1,575 sub-Saharan African alumni, or 45% of the total number of eligible and available records.

All members of the research team participated at some point in the tracing phase, from the Principal Investigators to work-study students, as it was essential to make as much progress as possible given limited time and resources. UC Berkeley and MSU also invited interested MasterCard Foundation Scholars to participate in the tracing process, especially for alumni from their own or nearby countries. This was quite successful and provided the opportunity to present the study for the first time to MasterCard Foundation Scholars on these campuses. Many Scholars have continued to show interest in the findings of the study, including the possibility for someday getting to know their "predecessors" in person. Finally, as the tracing process proceeded, and with IRB approvals in place between July and October 2014, we pursued an "alumni to alumni" tracing process through email, Facebook and the African Alumni Project website (http://africanalumni.berkeley.edu), learning new information about fellow alumni from their co-graduates. Time ran out for fully exploiting this path, which could be returned to at a later date.

Subset of Alumni Data from UC Berkeley and Michigan State University

As mentioned above, UC Berkeley and MSU were interested in tracking as many of their African alumni as possible for a historical "arc" of Sub-Saharan Africans attending the two universities over time. In total, basic data were collected on gender, country/region of origin, degree, field of study, year of graduation and current residence for 2,200 alumni (784 for UCB, 1,416 for MSU), although not all variables have complete data. This is the case, for instance, for current residence, with about 50% missing data. A codebook was developed for data aggregation from the two universities. The only variable for which data were not aggregated was "field of study" because of the markedly different results for Berkeley and MSU; all other variables had similar results, providing a good rationale for aggregation (see Appendix 5 for a complete set of aggregated data and selected cross-tabulations).

1. AFRICAN ALUMNI @UC BERKELEY + @MSU

n = 2200

UNIVERSITY STUDY

DEGREE LEVELS

- 15%
- 48%
- 37%

KEY
- UNDERGRADUATE
- MASTERS
- PhD

TOP SIX FIELDS OF STUDY

@UC BERKELEY

Law
Business
Engineering
STM
Health Sciences
Social Sciences
Other

0% 10% 20% 30% 40% 50%

@MSU

Business
Arts & Humanities
STM
Agricultural Sciences
Social Sciences
Education
Other

0% 10% 20% 30% 40% 50%

GENDER

72%   28%

RETURN RATES BY DEGREE

60%

30%

0%

CURRENT RESIDENCE

Total Count: **1154**
Missing Data: **1033**

OUTSIDE OF AFRICA
53%

IN AFRICA
47%

CHANGES OVER TIME

GENDER BY DECADE OF GRADUATION

100%

50%

0%

1960-69 1970-79 1980-89 1990-99 2000-09 2010-14

—•— Male   —•— Female

RESIDENCE BY DECADE OF GRADUATION

80%

40%

0%

1960-69 1970-79 1980-89 1990-99 2000-09 2010-14

—•— In Africa

The main findings are summarized in Graphics 1 and 1A. As expected for these two large public research universities, most African alumni (85%) have pursued graduate degrees, 47% and 38% at the master's and PhD levels, respectively. Undoubtedly, funding is a major explanation due to the scarcity of international scholarships for undergraduate education in public universities in the United States. Survey and interview analyses indicate that the majority of undergraduates were self-funded whereas the majority of graduate students

received scholarships, fellowships and/or teaching and research assistantships to pay for tuition fees and living expenses. This pattern will be significantly altered with The MasterCard Foundation Program and the first group of undergraduates who graduated in 2015 (not covered in this study). A related explanation is the relative affordability of university education within Africa for very high-performing students who successfully compete for government scholarships. In terms of field of study, there is a wide range across the disciplines for both universities, with the most numerous in the field of agricultural sciences for MSU and engineering for UC Berkeley.

For the 1,154 alumni for whom there are residence data, 53% live in the diaspora and 47% reside in Africa. As one of the study's core research questions relates to post-graduation "return," we ran cross-tabulations for current residence and four factors that could be associated with return, namely gender, decade of graduation, degree level, for UCB and MSU aggregated (Appendix 5), and field of study, for UCB and MSU separately (Appendix 5A and 5B). All four factors had significant chi-square values indicating that these variables are related to return outcomes. The gender cross-tabulation shows a higher percentage of women residing in the diaspora (57.3%) as compared with men (49.4%), an interesting finding worth further investigation. A plausible explanation is that women graduates believed they would face fewer career mobility barriers in the US and Canada as compared to their countries of origin. Higher rates of return are associated with recipients of graduate degrees; about one third for undergraduates versus 50% for master's and PhD degrees. There is a trend toward lower return rates over time, although leveling out at about 40% by 2000 (from a high of 70% in the 1960s). The reasons for declining and then leveling rates of return over time are discussed later in the report when analyzing factors that influence return.

In relating field of study to current residence, the data show statistically significant chi-square values at the master's and PhD levels for both universities. A striking result is that 70% of the 274 agricultural science graduates from MSU currently reside in Africa. For Berkeley, 44% of the 102 engineering graduates (master's + PhD) reside in Africa; the figure rises to 56% for the 88 health science graduates. Law, business, and arts and humanities degrees show lower return rates. These "field of study" associations will be explored in more detail in the survey and qualitative findings section.

We also looked at whether the large majority of male alumni (72%) was consistent or changing over time. Graphic 1 shows a strong tendency for the gender ratio to converge over time. Given the emphasis on recruitment of women students for The MasterCard Foundation Scholars Program, we expect this tendency to continue, with women as numerous or surpassing men on most campuses. Finally, looking at Graphic 1A on country and region of origin, the data show a relatively equal distribution for East, West (dominated by Nigeria)

and Southern Africa (about 30% each); the top five countries are South Africa, Nigeria, Kenya, Ethiopia and Ghana.

1A. REGIONS/COUNTRIES OF ORIGIN

Top Ten Countries, UC Berkeley + MSU
Total: 73.4% (1696)

Total: 2221

| EASTERN* |
| 30.5% |
| (677) |

| WESTERN |
| 37.3% |
| (829) |

| SOUTHERN |
| 30.4% |
| (676) |

| CENTRAL |
| 1.8% |
| (39) |

*Includes Sudan/South Sudan

Sudan 2.25%
Ethiopia 7.56%
Ghana 6.21%
Kenya 11.8%
Nigeria 20.4%
Uganda 3.06%
Tanzania 3.24%
Zambia 2.3%
Zimbabwe 5%
South Africa 14.54%
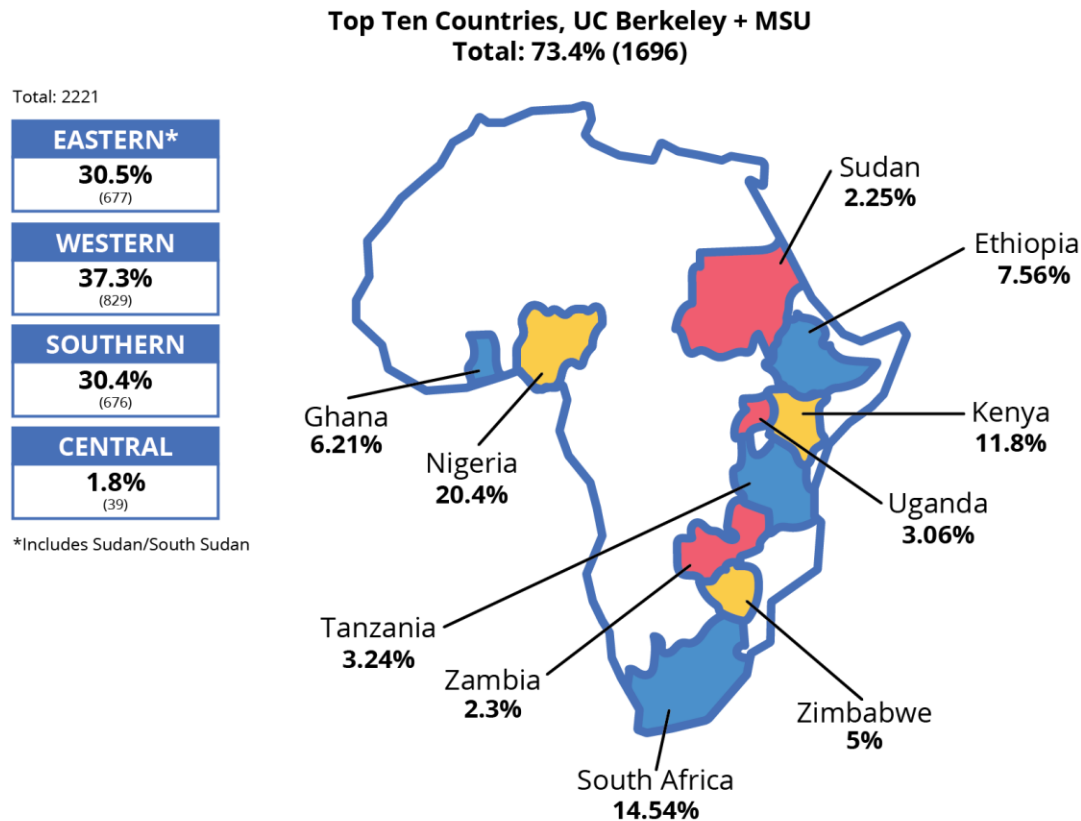
3.2 Survey design and data management

A comprehensive web-based survey instrument was designed with a three-part process: first, locating previous surveys from relevant studies with questions that had been framed and vetted; second, a collaborative working group process of editing previous questions and adding new ones using the three-phase model as a guide; and, third, pre-testing the survey. Pre-testing, by eight African alumni and two current MasterCard Foundation Scholars (graduate level) from UC Berkeley (4), MSU (3) and McGill (3), proved very important for improving the clarity of the questions and resolving technology-related problems of access and flow. Once the survey questionnaire was finalized and the codebook developed, it was used by all six partner universities. An informed consent form and brief explanation of the study are

incorporated in the first pages of the survey. In all, the survey contains 181 questions (see Appendix 8 for the survey PDF). Consistent with the benefit this study gained from consulting previous surveys, we anticipate that future retrospective tracer studies may wish to access a version of this survey for their own projects.

Research partners were presented with three options for managing alumni information and survey data, as shown schematically in the figure at right and explained fully in Appendix 9. Option 1 allowed maximum control by the partner university to administer the survey and choose how they wanted to store their own data. This option was selected by the three Canadian universities. McGill's team took on responsibility for working with Campus Labs, a survey vendor for which all Canadian partners had an active license, to develop a Canadian survey template.

Alumni Contact

	Partner	UC Berkeley
Partner	Option 1	N/A
UC Berkeley	Option 2	Option 3

Data Collection & Storage

Michigan State University preferred Option 2, choosing to manage their own alumni contact information but relying on UC Berkeley for survey data collection and storage. EARTH University preferred Option 3 since it required the least administrative support and was in continuity with their reliance on Berkeley for the IRB approval. In this case, UC Berkeley had access to EARTH alumni contact information and managed the survey from the initial invitations through to data collection and storage.

UC Berkeley employed the software package CASES (Computer-Assisted Survey Execution System[18]) to develop a unified codebook with the Canadian universities, administer the survey to Berkeley, MSU and EARTH alumni, and collect and store the survey responses on UC Berkeley's servers in

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[18] CASES is a software package for collecting survey data based on structured questionnaires. It was developed, distributed and supported by the Computer-assisted Survey Methods (CSM) Program at UC Berkeley. "For over 30 years, CASES has been one of the most frequently used systems in the United States and has been used in several countries around the world. CASES is backed by a dedicated team of specialists whose continuing activities are primarily supported by the Association for Computer-assisted Surveys (ACS), an international consortium of survey-related organizations." (http://cases.berkeley.edu/)

a secure container. After completion of the survey response period, UC Berkeley and McGill teams prepared an aggregated data file for analysis. As a final step, McGill transferred the de-identified survey responses to CASES for joint analysis by all six partners.

Survey Recruitment Materials

The research team designed an informative and attractive survey invitation, with individual login IDs, to send to all Sub-Saharan African alumni for whom preliminary contact information had been obtained (see Table 1). This was an important step as it would be the first time that most alumni would learn of the African Alumni Project and its request for their participation. UC Berkeley and EARTH used the newsletter program MailChimp to administer the survey invitation, whereas MSU and Campus Labs used their own internal communications platforms. Click to see the UC Berkeley invitation, and the EARTH survey invitation.

EARTH was the first to launch the invitation on October 31, 2014, in preparation for a mid-November trip to Kenya and Uganda when willing surveyed alumni would be interviewed in-person. Berkeley followed on November 17, and the rest of the partners sent their invitations out by mid-December. The Canadian partners followed a standardized survey protocol that allowed for a total of three automatic reminders, and then the survey was closed in January 2015. EARTH, UC Berkeley and MSU had more freedom to design a system to maximize response rate while staying within reasonable boundaries to avoid overload and diminishing returns. Berkeley sent out MailChimp reminders on November 21, December 1 and December 11 (all text and links, no images), and a thank-you note on December 12. In email feedback during December and January, a concern was raised about whether the study included both African alumni residing on the continent and in the diaspora. To address that concern and any mistaken representation in the initial invitation, the study released a special survey invitation only to alumni residing in the diaspora on February 18, 2015, followed by a final reminder to all alumni on February 21. MSU followed a similar pattern of reminders.

The survey response rates per partner and aggregated are reported above in Table 1, varying from 53% for EARTH to 12% for McGill, with UC Berkeley in between at 29%. In all, 294 completed surveys were submitted out of a total of 1,575 invitations (18.7%). Researchers were pleased with the overall response rate given the retrospective nature of the study (reaching out to alumni as far back as the 1960s), varied access to Internet servers and Internet quality, the length and depth of the survey, and given that communications with African alumni by partner universities have been few and sporadic, with our invitation being the first post-graduation communication for many.

Table 2 provides summary characteristics of the survey sample of 294 alumni by research partner. There is considerable variation among the partners with respect to all of the variables. The childhood community variable is a proxy for socio-economic status with rural[19] representing, in the majority of cases, lower economic status. EARTH alumni have the highest percentage of alumni with a rural background at 60%, to be expected given its agricultural emphasis, with SFU and McGill reporting the lowest percentages at 10% and 17%, respectively. Regarding the distribution of undergraduate and graduate degrees received among the sample alumni, EARTH, SFU and University of Toronto have 50% or more undergraduates, while MSU and UC Berkeley have less than 10% undergraduates, and McGill is in between at 38%. There is somewhat less variation for "current job in country of origin"[20], with a mean of 51%. In terms of gender, 68% of the survey sample are male, 32% female, with two Canadian universities reporting the highest number of females, University of Toronto (50%) and Simon Fraser (60%).

Survey bias in favor of alumni residing in the diaspora related to accuracy of contact information and strong Internet access (for completing a web-based survey), was balanced by the perception, for some, that the study was focused on the experiences of alumni who had returned to Africa and, therefore, was less interested in the participation of those who had not returned. We addressed this concern, as mentioned earlier, with special invitations directed only to diaspora-residing alumni; however, the perception may have persisted for some and discouraged their participation. In the end, the survey split of approximately 52% – 48%, in Africa and outside of Africa, shows a moderate bias in favour of responses from Africa as compared to the total alumni population where data are available (see 47% – 53% split for UCB and MSU as presented in Graphic 1). A greater proportion of PhD respondents completed the survey, many of whom have returned to Africa, presumably because of their interest and appreciation for the study and willingness to contribute to the research effort. In addition, a greater proportion of recent graduates completed the survey, with a mean graduation year of 2003. This again is related to more reliable contact information, aided by a stronger digital presence of the younger generation, and perhaps greater agility with web-based surveys. Nevertheless, survey responses cover a wide range of graduation dates spanning nearly half a century (1966-2014).

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[19] Survey respondents were given four choices for the community that they grew up in: rural, small town, city or national capital.

[20] "Country of origin" was asked in the survey with this explanation: "To refer to the African country where you hold/held citizenship. If you changed citizenship, please use your citizenship when you began your [CAMPUS] program. If you had dual citizenship, select the African country of citizenship where you spent the most time."

Table 2: Summary of Survey Data by Partner

Partner	Gender M, F (%)	Child-hood comm. (% rural)	Int'l univ. degree (%)	Grad. year (median)	Current age (mean)	Current job in country of origin (%)	Top country of origin [21]
UCB	M: 78 F: 22	26	UG: 9 MA: 47 PhD: 44	2000	51	50	South Africa
MSU	M: 64 F: 36	36	UG: 6 MA: 38 PhD: 56	2002	52	47	Kenya
EARTH	M: 75 F: 25	63	UG: 100 MA: 0 PhD: 0	2008	34	63	Uganda
SFU	M: 40 F: 60	10	UG: 82 MA: 18 PhD: 0	2008	29	46	Kenya
McGill	M: 68 F: 32	17	UG: 38 MA: 24 PhD: 38	2005	39	60	Kenya
U of T	M: 50 F: 50	24	UG: 50 MA: 35 PhD: 15	2003	45	48	South Africa
TOTAL	M: 68 F: 32	28	UG: 22 MA: 37 PhD: 41	2003	47	5022	

      The survey codebook and analysis plan were guided by the study's three-phase model and four key research questions. Survey questions were coded to form new variables and constructs for analysis and to ease eventual merging of CASES and Campus Labs data sets. A copy of the Survey Data Analysis Plan by research question is in Appendix 10. We employed the statistical package SPSS for the data analysis presented later in the report.

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[21] Survey sample includes alumni from 29 Sub-Saharan African nations.
[22] Another est. 5.5% work in Africa outside of COO = 55.5% total primary workplace in Africa, 44.5% in the diaspora. Further data on working and residing within Africa, and 'global citizens' are presented later in the report.

3.3 Interview questionnaire design and administration

The Qualitative/Narrative Inquiry working group consisted of several PhD experts in qualitative research and analysis, including several members with recent dissertations on topics related to higher education in Africa. This expertise was deployed to collaboratively design the interview questionnaire, prepare researchers for conducting field interviews, and for subsequent development of the interview codebook and analytical framework. As with the survey, the questionnaire was designed to follow the three-phase model, covering a childhood to present day trajectory with particular emphasis on the four research questions, and ending with an opportunity to provide advice to current African scholars. See Appendix 11 for a sample interview questionnaire. Following Office for the Protection of Human Subjects (OPHS) guidelines, we developed a generic informed consent form that was adapted by each partner (UC Berkeley form in Appendix 12), and signed and dated by all 100 alumni interviewees. Each partner university has retained the original forms.

Interviews were conducted in person and via Skype or phone between November 2014 and November 2015[23]. The number of interviews conducted are shown in Table 1 and will be further described in a subsequent section. UC Berkeley, lead partner, conducted 60 of the 100 interviews, 56 of them in-person. MSU conducted all of their 15 interviews in person and EARTH conducted five out of their seven interviews in-person. The three Canadian partners conducted the majority of their interviews via Skype and phone due to lack of resources to travel to Africa or outside of the local area.

In-person interviews were conducted on field trips to East Africa (Kenya, Uganda, Rwanda, Tanzania), West Africa (Ghana, Senegal, Ivory Coast, Togo), and southern Africa (South Africa). Interviews were also conducted with alumni residing in various diaspora communities of the United States and Canada, including the San Francisco Bay Area, Washington DC, New York City, Montreal, Toronto and Vancouver.

The selection process for interviewees, once a pool was created from those volunteering to be interviewed in the survey, was based on a few key criteria to ensure representation of the larger alumni population and diversity of experiences. Table 3 presents a summary of interviewee characteristics for all six partners for these key variables: gender, region of origin, childhood socio-economic status, highest degree (obtained at partner university), field of study, graduation decade, current residence, work sector, and scholarship

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[23] The interview protocol benefited from several iterations of pre-testing with international students at the Monterey Institute for International Studies, a locally based African alumnus of UC Berkeley, and early interviews with EARTH alumni in Uganda and Kenya.

recipient. Of particular note, 69% of the interviews were with African alumni currently residing on the continent, most in their country of origin, and 31% were conducted with Africans residing in diaspora communities in North America, Central America and Europe.

Table 3: Summary Characteristics of Interviewees

Variable	100 Interviews Conducted[24]
Gender	M – 62 F – 38
Region of origin	Eastern Africa – 52 Western Africa – 28 Southern Africa – 20
Socio-economic status during childhood[25]	Low – 39 Medium – 46 High – 15
Highest degree	UG – 24 MA – 43 PhD – 33
Field of study	STEM – 36 Health – 20 Social Sciences & Humanities – 28 Law, Business, Education, other – 16
Graduation decade	1965-74 – 8 1975-84 – 10 1985-94 – 20 1995-2004 – 16 2005-2014 – 46
Current residence	Country of Origin – 62 Other Africa – 7 Diaspora – 31
Work sector	Private – 23 Academia – 39 Public/int'l agency – 27 Non-profit – 11
Received scholarship	Yes – 76 No – 24

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[24] Seventy-five US alumni, 18 Canadian alumni, and seven EARTH alumni. Two of the MSU interviews were not transcribed in time for this report.

[25] Note that we do not have this information for Canadian interviews.

For computer-assisted qualitative analysis, three partners (UC Berkeley, MSU and EARTH) used the online mixed methods data analysis program, Dedoose (http://www.dedoose.com/), while the three Canadian partners elected to use a similar, licensed program, MAXQDA (http://www.maxqda.com/), as it aligned with Canadian privacy laws. A process was adopted to inductively create a common codebook from careful review and pre-coding of five transcribed interviews of Berkeley, MSU, EARTH, McGill and University of Toronto alumni of diverse backgrounds and experiences. There were further refinements to eliminate redundant codes and add missing ones, creating a common codebook in July 2015 containing 13 "parent" codes and 149 "child" codes (see Appendix 13 for complete codebook). A summary is presented in Table 4 below. Researchers, employing assistance from students, coded transcribed interviews between July and December 2015.

Table 4: Summary Codebook, Qualitative Analysis	
Parent Codes	Child Codes (#)
Great Quotes	0
Family Factors	18
Country/Region of Origin	11
Education in Africa	17
Int'l Education, General	18
Int'l Education, Academic Experiences	11
Int'l Education, Social Experiences	11
Connections to Home	8
Decision to Return Home	19
Post-Graduation (Int'l Education)	5
Professional Transitions	9
Social/Civic Engagement	10
Advice for Scholars	12
Total	149

In addition to the codebook, considerable effort was made to operationalize one of the key capabilities of Dedoose: the use of "descriptors" or key variables to categorize each interview, making it possible to filter interview excerpts by one or more of the descriptors to form sub-groups for analysis and comparison. Appendix 14 presents the agreed mode of analysis per research question, including key codes and descriptors, and use of illustrative profiles and quotes. This document can serve as a guide for future research as well, since the six-week timeframe for analysis (mid-December

through January 2016) was insufficient to complete the plan[26]. Priority was given to identifying key themes from the coded excerpts, filtering by current residence to gain insights from African alumni living on the continent and in the diaspora.

4. Main Findings

This section presents the main findings of the survey and qualitative analysis for the four research questions. The survey sample size is 294, although not all respondents answered every question. Appendix 15 presents the full survey output. For basic demographic data on the survey sample, per partner, refer back to Table 2, and for basic interview characteristics, see Table 3.

For each research question, the survey findings are presented first, expanded with the qualitative analysis of in-depth interviews that follows. Together, these methods have produced findings that are far more convincing and insightful than either method alone. 'Banners' and 'profiles' of individual alumni who participated in the study provide illustrations of key findings.

4.1 Career and life trajectory

What are the post-graduation experiences of African alumni from international universities?

CAREER TRAJECTORY: MUSTAFA SULEIMANJI

"I felt like development work was not really fulfilling...I didn't feel like I was contributing the way I wanted to. So I joined the private sector [working for a Norwegian company] on alternative energy. I did that for a bit then bounced around looking for the perfect job. I worked in Zambia and Nairobi. Then I decided "you know.... as a Tanzanian I might as well move back and start from zero." [I] founded an internet start-up called X-Commodity which is a platform designed for farmers and co-operatives to trade their products online through an auction system."

Mustafa Suleimanji is the Country Manager for EduMe Tanzania, a mobile and online learning platform for professional development. Prior to joining EduMe, Mustafa worked for the United Nations in Somalia. Mustafa is the founder of XCommodity, an online resource focused on connecting suppliers of commodities in Africa to buyers around the world. Mustafa's interests lie in international development, start-ups, entrepreneurship, and the formalization of informal markets. Mustafa holds a degree in Economics from Simon Fraser University (2006).

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[26]An important outcome of the workshop was recognition of the great 'wealth of information' in the study interviews, and the limited time to fully analyze the material for this final report. It was agreed that more opportunities should be found to further analyze the interviews from different perspectives for joint publications, drawing in all interested members of the African Alumni Project research team.

CAREER TRAJECTORY: OSEN POGOSON

"In the long term for me, my main aspiration is to change the face of the hospitality industry on the continent of Africa. I can't just focus on one aspect of the industry. I need to be as well-rounded as possible. So having worked in operations …I'm now taking a step back and looking at things from a much bigger picture. "

Osen Pogoson was born in Lagos, Nigeria and immigrated with her family to Canada after graduating from secondary school. She began her career in the hospitality industry while in her third year studying Economics at Simon Fraser University (BA 2007). She subsequently earned both an MA in Hospitality and an MBA from Cornell University. Osen founded Clos World Consulting, a hospitality consulting firm operating in Europe and Africa. Osen, who lives in the USA, travels widely and is passionate about developing the hospitality industry throughout Africa.

4.1.1 Survey analysis

The charts in Graphic 2, divided by the three life phases, summarize the main findings from the survey analysis for the research question on career and life trajectory. The results are quite striking and show marked social mobility. The alumni, 69% male and 31% female, come from a total of 29 Sub-Saharan African nations[27] with childhood communities fairly evenly split between rural/small town (53%) and city/national capital (47%). The average age is 47, with a very wide distribution from early 20s to mid 70s, corresponding to childhoods lived in the colonial era, early independence and through the greater part of the second half of the 20th century.

The survey asks respondents to identify their economic status during childhood by whether or not their families had enough money to cover basic needs, such as food and school fees. About one third of alumni came from poor families that struggled to make ends meet ("without enough money"), 57% came from middle-level families ("with enough money"), and 12% came from affluent families with "more than enough money."   In another measure of economic status, respondents were asked to compare their childhood standard of living to those of the majority in their country of origin, and in a subsequent question were asked to make the same comparison for their current standard of living. Fully 96% of the surveyed alumni consider themselves better or much better off than the majority in their countries of origin, as compared to 66% during childhood, and the one third who were worse off than or the same as the majority during childhood shrunk to only 4%.

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[27] Top ten countries of origin, in order, are: South Africa and Kenya (tied at 18% each), Ghana, Nigeria, Uganda, Zimbabwe, Ethiopia, Senegal, Botswana and Tanzania.

2. CAREER AND LIFE TRAJECTORY

CHILDHOOD

GENDER

Total Count: 294

♂ ♀
69% 31%

TYPE OF COMMUNITY

- 28%
- 25%
- 30%
- 17%

KEY
- RURAL
- SMALL TOWN
- CITY
- NATIONAL CAPITAL

ECONOMIC STATUS

- 31%
- 12%
- 57%

KEY
- WE DID NOT HAVE ENOUGH MONEY
- WE HAD ENOUGH MONEY
- WE HAD MORE THAN ENOUGH MONEY

INTL HIGHER EDUCATION

FIELD OF STUDY

Total Count: 263

Field	Number	Percentage
Social Sciences	59	22
Engineering	37	14
Agricultural Sciences	34	13
Health Sciences	31	12
STM	26	10
Business	22	8
Education	17	7
Arts & Humanities	14	5
Law	11	4
Other	12	5

Key: Number, Percentage

HIGHEST DEGREE

UNDERGRADUATE	MASTERS	DOCTORATE
22%	37%	41%

CAREER

SECTOR

Sector	%
Education/Research	44
Private Business	29
Not-for-Profit/NGO	10
Public	7
Other	10

0% 25% 50%

AREA OF EXPERTISE

- 22%
- 20%
- 17%
- 16%
- 12%
- 12%

KEY
- AGRI & ENV
- ECON & FINANCE
- EDUCATION
- HEALTH
- PUBLIC ADMIN
- SOCIAL DEVELOPM'T

LEADERSHIP ROLES

Role	%
Strategy Development	79
Motivating Others	76
Determining Policies	66
Publishing Research	62
Establishing Values/Ethics	61
Raising Funds	46
Facilitating Consensus	45
Coalition-building	34
Lobbying	21
Drafting Laws	13
Other	13

0% 50% 100%

SOCIAL AND CAREER MOBILITY

CHILDHOOD VS CURRENT ECONOMIC STATUS COMPARED TO MAJORITY IN COO

	Childhood	Current
Worse	11	1
Same	23	3
Better	37	36
Much Better	29	60

Key: Childhood, Current
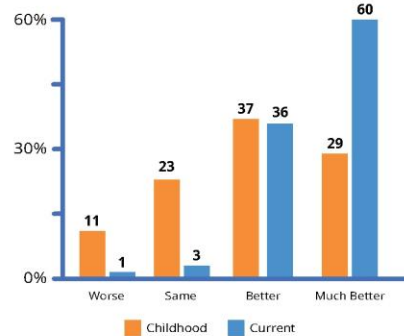
FIRST CAREER JOB VS CURRENT JOB

	First Career Job	Current Job
Assistant	6	3
Professional	28	19
Manager	8	10
Director	4	14
Executive / Founder	2	10
Academic / Researcher	48	33
Other	5	11

Key: First Career Job, Current Job
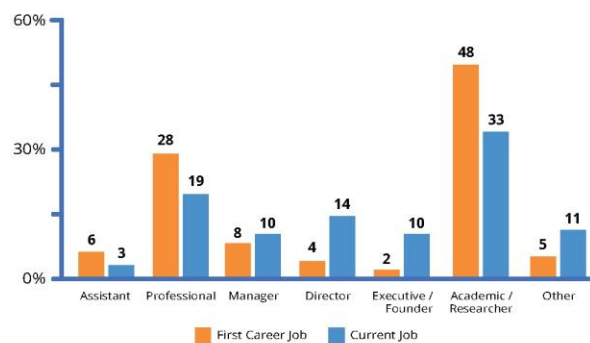
A large majority of the sample alumni, 78%, studied at the graduate level abroad. Many of those who studied at the undergraduate or master's levels went on to pursue higher degrees (est. 44% — Q122, Appendix 15), constituting in all a highly educated survey sample. Fields of study show a diverse range of disciplines, with the largest percentage in social sciences, mainly economics, as well as degrees in political science, sociology, geography, demography and anthropology. The next largest group includes the professional fields of engineering, agricultural sciences and health sciences, followed by STM (basic sciences, technology/ computer science and mathematics). Business, education and law degrees were earned by 19% of alumni, 5% earned arts and humanities degrees, and "other" includes such fields as journalism, communications and design. This diversity of fields allowed alumni to contribute to scientific advancement and social change, either at home or from the diaspora, from a wide range of perspectives and expertise.

Of the survey alumni, about 55% currently work in Africa — 50% in COO and 5% in another African country — while 45% work in the diaspora. More details on the return paths are discussed in the next section. Interestingly, over 80% of the respondents report having worked in Africa at some point prior to or after their study abroad (Q22, Appendix 15), reflecting both the mature age at which many began study abroad (i.e. with prior work experience), as well as the geographic mobility of post-graduation careers in and outside of Africa. An additional question on mobility within and between fields (Q20, Appendix 15) shows that nearly half (48%) have stayed within one field over their career, another 31% have shifted within the same general field, and 21% have changed fields once or more often. The largest number of alumni work in academia or research institutions, as would be expected with the high number of PhDs, followed by private business and not-for-profit organizations. Only 7% report working in the public sector, although 12% report working in "public administration," primarily through teaching and advising. The diversity of fields of study carries over into a wide and quite even distribution of the six main areas of expertise: agriculture and environment, economics and finance, education (e.g. pedagogy, teaching), health, public administration and social development.

The survey asked respondents to list their *first* career job title after graduating from their international university, and to list their *current* job title. We see upward mobility into positions of greater authority and leadership, with 14% in management, director or executive/founder positions starting out, increasing to 34% at the time of the survey. Primarily there appears to be a shift of professionals, academics and researchers to titles reflecting higher positions within the same organizations, such as from assistant professor to department chair, or engineer to engineering manager.

This study is particularly interested in the leadership roles that alumni have played in their careers and lives, a question we return to in our discussion of social and civic engagement. A large majority of the alumni responded affirmatively when asked whether they have ever had a leadership position (86%, Q18, Appendix 15). These respondents were then asked to "check" which roles or positions they have held over their careers and the results are reported in the bar chart entitled "Leadership Roles." In all, these roles demonstrate the ways in which individuals can influence significant changes in the organizations they work for, the people and communities they serve, and societies at large. For instance, developing strategy, determining policies, and establishing values/ethics — roles played by more than 60% of alumni — are fundamental contributions to social change. A smaller but significant number are leading political change through coalition-building, lobbying and drafting laws.

4.1.2 Interview analysis

This question, in particular, is best understood through an examination of the individual career and life trajectories captured in the in-depth interviews. See Appendix 14 for a review of the qualitative mode of analysis and a list of the eight codes used to analyze this question. Findings are organized by the three life phases: 1) childhood and education in Africa, 2) international education experience, and 3) post-graduation careers. Four profiles were carefully selected from the interviewees to represent the diversity of career trajectories of African alumni who participated in this study. These profiles, together with the banners on the trajectories of Simon Fraser University alumni, Mustafa Suleimanji [28] of Tanzania and Osen Pogoson of Nigeria (above), illustrate and bring to life many of the more general survey findings.

The career trajectories of the interviewees highlight two types of career paths: 1) a non-linear, traversing path that crosses continents, sectors and fields, and 2) a linear, upward-moving singular path, where careers are built, in a majority of cases, around their universities. Many recent graduates engage in a period of carving out their career, moving from one job to another and relocating in consequence. From the interviews conducted (substantiated by the survey results), there is considerable geographic mobility across continents and countries, mobility across sectors and within and between fields, and upward mobility in authority and leadership.

The underlying career goals of most of the participants, regardless of the trajectory of their career path, were significantly related to making a contribution to society, often specifically to their countries and communities of origin. This underlying goal could explain why many of the participants crossed

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[28] All banners and profiles were pre-approved by the respective alumni.

sectors and continents seeking the best opportunities to "make a contribution" as part of their career trajectory. All of the interviewed alumni remain connected with Africa in some capacity, and the vast majority of those interviewed retain strong ties to their home country. For some participants, it took several years before their eventual return to living and working in Africa ("delayed return").

Of those interviewed and surveyed for this study, a significant number of alumni sought an advanced degree because they wanted to be in academia. A large percentage of those pursuing PhD degrees at an international university had faculty positions in their country of origin to which they would return. Because many of the participants were (are) academics, conducting research was a common theme in relation to career goals and choices. Very often, academics based in African universities have drawn on their research collaborations established during their international education for engagement in research projects and access to funding and publications. From the Canadian perspective, recent graduates from Canadian universities can be seen to make use of Canadian post-graduation immigration opportunities, which open the possibility of staying longer in Canada for internships, professional experience and longer-term employment.

Childhood and early education: shaping career goals

Looking within the pool of undergraduate and graduate interviews, there is a diversity of childhood experiences. However, family structure, mentors, the value parents placed on education, and parental education attainment are common themes and drivers of the experience of the African alumni attending international universities. A majority of our interviewees come from large families with multiple siblings. For many, religion, mostly Christianity (but also Islam in a few cases), played an important role in the early years. We observe childhoods with strong connections to extended families, village traditions and the land as formative characteristics. From a generational perspective, the availability and choice of schooling system, whether local or boarding, government or private, affected career goals and social mobility. Also, many interviewees cited various periods of economic and/or political instability in their home country as affecting identity formation and later educational and career choices.

Whether or not alumni as children had relatives living abroad, including one or both parents, strongly influenced educational choices and opportunities. For instance, the presence of a relative abroad served as an 'introduction' to the UK, France, United States or Canada as a possible destination for study. A finding unique to the Canadian African alumni indicated that it was the presence of a local relative who aided with paperwork and application

processes that motivated study in Canada. African alumni who went to the United States reported support from the US Embassy through the Education USA office, or through a government-sponsored scholarship. Both Canada and the United States were also perceived to be locations of political, social and economic stability.

In most cases, experiences in childhood and education in Africa influenced career goals, whereas international education experiences confirmed, but did not change, pre-established career goals and choices. This finding is partially explained by the fact that two thirds of the interviewees completed their undergraduate degree in their country of origin, where their fields of study and professional goals were formed. Graduate degrees opened up opportunities for professional mobility and shifting between sectors, as well as attainment of influential leadership positions. Even for alumni who pursued their undergraduate degrees in the US, Canada or Europe, the high school systems of their home countries had already 'tracked' them, for the most part, into fields of study, if not specific careers.

Dr. Thelma Awori, a Liberian who has crossed continents and sectors throughout her career, is an example of how childhood experiences informed her values and career goals, and influenced her decision to pursue international education in the United States. She is also an example of "delayed return" to her adopted country, Uganda.

Profile of Dr. Thelma Awori

"Mother Africa, African independence, you know all this kind of stuff is my background. So, for me, going to the UN was not going to the UN, I was going to a place where I could restore Africa."

Thelma Awori has had a bi-continental career, having lived both in Africa and in the US for extended periods of time. She completed all three of her higher education degrees in the US, at three different universities, and during three different periods of time. Thelma's career interests have been at the intersection of adult education, international development, and women's rights.

In Liberia, her family played a strong role in shaping her career interests and values to support African development. Her mother and father were both college-educated and spent time in the US for their post-secondary education. When Thelma was a child, she saw her parents actively involved in the education of the village adults. When she was in third grade, her family moved to Monrovia, the state capital, so that her father could head the National Literacy Program. Her mother also worked for the Ministry of Education and was a women's rights activist. Thelma's aunt, a herbalist focused on maternal medicine, also influenced her career aspirations.

After one semester at a local college, Thelma left Liberia to attend Mount Holyoke College on the ASPAU (African Scholarship Program in American

Universities) scholarship, a program started by John F. Kennedy. She studied chemistry at Mount Holyoke until she married a Ugandan, who was studying at Harvard. She then transferred to Radcliffe and studied anthropology, graduating with her BA in 1965. She and her husband returned to Uganda, where they started a family of five children.

"*I came back to Uganda in '65 and started to integrate and make contributions, children are born here, children are becoming acculturated in this society. Those guys who stayed there (in the US), now the children are lost.*"

Thelma's first job was teaching sociology at Makerere University in the Center for Continuing Education with close connections to other Adult Education centres in top East African universities, and eventually she decided to pursue a Master of Education at Berkeley through an AFGRAD scholarship. As her five children were still young, her graduate supervisor at Berkeley organized her coursework and thesis writing in order to minimize the time Thelma would be away from her family.

After completing her Master's degree in 1973, she returned to Kenya, where her family had become refugees from violence in Uganda, and worked at the University of Nairobi teaching humanistic psychology. While there, she was asked to conduct an evaluation for the UN Economic Commission for Africa. She took on other contracts, and as her work became known at the UN, she was offered a job with UNIFEM. At this point, her career shifted from working in the adult and higher education sector to working on African development more generally.

Thelma's goal for working in the UN was to "restore Africa and change their mindset.
And really, their mindset changed. Africa is not poor, not by the furthest imagination. Africa is one of the richest continents in this world. It's just the people have a poverty mentality, and once they can get out of that poverty mentality, the sky is the limit."

Within the UN, Thelma was Deputy Director of the Policy Bureau, and then she became head of the Africa Bureau for UNDP. Her career at the UN culminated with her appointment as Assistant Secretary General. Once Thelma retired from the UN, she decided to complete a PhD in Adult Education at Teachers College, Columbia University. She currently works as the founder of the Sirleaf Market Women's Fund in Liberia and the director of the Institute for Social Transformation in Uganda, which promotes leadership training for transformation.

Like many of the participants in the study, Thelma's goal to pursue a career in non-formal education was strongly shaped by the values she developed as a child in her family home. Her three international education experiences reinforced this goal and enabled her to shape her career trajectory in a way that supported African development with increasing levels of influence.

Reinforcing career goals: international education and mentorship

Alumni interviewed for this study emphasized that the technical and social skills obtained during study abroad reinforced and confirmed their pre-established career goals. Exposure to diverse inter-cultural student bodies was an "eye-opening" learning experience that prepared many alumni for their subsequent careers with multi-ethnic organizations. Mentoring, or networks that provided mentoring, were often established during the international experience and supported the graduates into their careers. For example, Philip Hendricks, a civil engineer from South Africa, has succeeded in his career partly from the mentoring, networks and international exposure he gained from his masters-level education at UC Berkeley. He is an example of "direct return" to his country of origin.

Profile of Philip Hendricks
"*For me it's always been about creation, what do I leave behind as a legacy, what do I contribute.*"

Born in South Africa, Philip Hendricks moved with his family to what was then Rhodesia, now Zimbabwe, just before starting primary school. His father was a teacher and his mother worked outside the home. They were able to provide a good education for him, and he was well supported by his family. Philip returned to South Africa immediately after high school and started working. Shortly thereafter he attended the University of Cape Town to pursue a degree in civil engineering. He was a student at UCT in the late 1970s during South Africa's apartheid era when there were few non-white students, especially in engineering. As a student of mixed racial background, Philip had to tread carefully, perform well, and avoid any political activity.

He chose a career in civil engineering because he wanted to make a contribution to society and create something of value. Upon completing his degree and a post-graduate diploma, Philip went to work for a large engineering consulting company in Cape Town. After three years, he transitioned to lecturing at an engineering institute, Cape Peninsula University of Technology (CAPUT), for 10 years. At that time, CAPUT was a very politically advanced institute that took in black students, and was a "great opportunity" for Philip. He was able to focus on applied work and did some consulting while he was there.

While at CAPUT, Philip received a British Council scholarship to the University of Dundee, but he rejected it, opting instead to pursue a master's degree at UC Berkeley with USAID support. He took leave for two years from his lecturing position to study civil and environmental engineering, focused on concrete and transportation engineering. While at Berkeley, he worked with Professor Carl Monismith, who ended up being very influential in Philip's subsequent career.

"I remember the very first time I went there and I saw students engaging with the professor and for me that was just unbelievable. So that sort of environment was great. The second thing for me was at Berkeley, and especially at the Richmond Field Station, you know I came from a very protective South African

environment which wasn't very open to the rest of the world, but suddenly at Richmond you had people from Ukraine, Libya, France, Iraq, Sri Lanka, you name it."

Philip finished his degree in 1992, just as South Africa was emerging from apartheid, and returned directly to Cape Town to his faculty position at CAPUT. A year later, he got a call from the Council for Scientific and Industrial Research (CSIR) in Pretoria, South Africa. Professor Monismith encouraged him to take a position with South Africa's premium government research institute. They worked together on a technology transfer and exchange partnership between CSIR, the University of California, and the California Department of Transportation - the Partnered Pavement Research Project (PPRP), which is still running today. The exchange component has trained more than 15 South Africans in engineering, and all have returned to South Africa.

Eventually, Philip became the Director of the Transport Group at CSIR. He stayed at CSIR until 2007, but left when the institute moved away from applied research to more basic science. He went back into the private sector, working for a company called AfriCon. Later, AfriCon merged to become Aurecon. It is a large consulting company that designs major infrastructure projects throughout Africa and the developing world. He is now the Director of Aurecon's delivery centers and manages nearly 3,000 people.

Philip is an active promoter of the Conference on Asphalt Pavements for Southern Africa and chaired CAPSA 2015 in South Africa. In all of the organizations where he has worked, Philip has risen to a leadership position and maintained his ethic of contributing to society's development.

Philip's profile illustrates how important one mentor can be. In this case, Professor Monismith not only contributed to his knowledge and skills development in civil engineering, but also provided opportunities for Philip to achieve his career goal to create "something of value" to Africa through infrastructure development, and to sustaining life-long research and development exchanges with his *alma mater* through the Partnered Pavement Research Project.

Meeting career goals: post-graduation opportunities

Upon graduation, career choices were often influenced by employment and/or financial opportunities, as the alumni profiles illustrate. The desire to return to one's country of origin also plays a major factor in career decisions. The profile of Dr. Isaac Minde, a Tanzanian who attended Michigan State University, illustrates how his international education reinforced his goals and commitment to contribute to agricultural development in Africa, and how his pan-African career eventually led back to his country of origin.

Profile of Dr. Isaac Minde

"*Interestingly, when I was in the department [at MSU], I was dreaming about home, Tanzania, and my department. But my colleagues…they were saying, CIMMYT, IITA, the World Bank…and then I was asking myself, what are those things? I came here and I'm going back home, right? For me, it was home.*"

Agriculture has been a part of Isaac Minde's life since his childhood on his family's farm in northern Tanzania. He was born in the Kilimanjaro region and spent his early life on a smallholder farm. After completing primary school near his home, he went away to a secondary boarding school — about 1,200 km south of Kilimanjaro, part of a strategy of Julius Nyerere to mix the youth around the country for national unity building. He then returned to Moshi for his final two high school years.

Isaac chose to pursue studies in agriculture because it was something very familiar to him. "*It's because that is where I grew up. I knew how to grow and tender coffee, bananas, vegetables and fruit trees.*" Also, agriculture was one of the top degrees at that time, together with medicine, veterinary science and engineering. After finishing high school, he applied and was accepted in Agriculture at University of Dar es Salaam's campus in Morogoro (now Sokoine University of Agriculture).

Upon graduation from university, Isaac was asked to stay on and join the faculty there; however, he chose a different path and went to work in the government's agricultural extension services. He was assigned to be the district Agricultural Officer of Manyoni district in Singida region of central Tanzania, one of the poorest in the country. This meant that he was in a region and climate very different from the one in which he grew up and had to learn on the job about new crops and agricultural practices that he had only studied briefly at university. Isaac stayed in this region for two and a half years, but increasingly became frustrated that, since this area of Tanzania had a harsh climate, much of his time was spent administering food aid. Isaac was offered a World Bank scholarship to return to the university, and he jumped at the chance.

He finished his master's at Morogoro and decided to stay on as a faculty member. In 1980, one of his major professors, Richard Foote, connected him to a Ford Foundation fellowship program that sent him to Michigan State University for a PhD in agricultural economics. Ever with a mind towards home, Isaac intentionally selected a dissertation topic that would take him back to Tanzania for research. When he graduated from MSU in 1985 he returned to his faculty post in Morogoro.

After eight years as a faculty member and four as department head, Isaac decided to leave the university. He went to work with the International Institute of Tropical Agriculture (IITA) in Nigeria and Rwanda. Later he would go on to work for IITA and a USAID project in Malawi. He then took a position as a regional coordinator for the Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA) and lived in Uganda for nine years before being called away by International Crops Research Institute for Semi-Arid Tropics (ICRISAT) in Zimbabwe. In his successful international career, Isaac has faced many challenges, including the Rwandan genocide in

1994 and the 2008 economic crash in Zimbabwe, always maintaining a strong connection to his family and colleagues in Tanzania.

At the beginning of 2011 he joined MSU and was posted at the University of Pretoria as Team Leader of an Africa-wide agricultural development project involving four universities. Before long, he got the chance to return to Tanzania. Isaac is currently the Deputy Director of the iAGRI program based at Sokoine University of Agriculture, which focuses on long-term degree training, collaborative research, and institutional transformation to build sustainable food systems. Throughout his career, whether living in the US or other African countries, Isaac's orientation toward Tanzania and home has remained constant.

Post-graduation transitions

Skills learned and degrees earned from international universities were regularly cited as contributing both to career frustrations and successes, largely a function of the hierarchical structure of the workplace. Those who returned to Africa upon graduation reported that having an international degree could be a disadvantage in certain circumstances: "*With [*an *international education] degree you rise quickly to a management position, [where] you will waste your talent…*" On the other hand, "*In many business enterprises, people are not very keen on hiring beginners who have top degrees.*" Another challenge is when the international graduate is perceived as a threat: "*If those who [are] supposed to be your boss are under you in terms of degree, [there is…] a feeling they may not be respected. Maybe they have in mind that you're going to behave like the expert, or….that if you're good, you may replace them later. Things like that; it does not help.*"

Alumni who pursued international degrees in business, engineering and computer science were more likely to stay in the host country to take full advantage of their practical learning and networks. One such participant who spent the first half of his career in the diaspora, and later returned to his country of origin, explained the difference in education systems off and on the continent:

> "*So my cousin who grew up with me, he made a comment…he said those of you who went to get education in the US do something differently than the ones who learn here. You guys try to grapple with something that I just accept. And for me that was a hard moment. Okay so something about the way I've been educated, and the training I had, I attributed most of it to my undergrad education but also some of it, frankly, to my professional experience at [multinational corporation in the US], where you encounter a problem and you fix it.*"

Interviewees with finance and entrepreneurship motivating their career plans often found that these motivations were best served by staying in the diaspora, although the recent entrepreneurial dynamism in Africa is beginning to shift this perception. Nii Sai Sai, a 2011 graduate of Berkeley's Haas School of Business, is one of these participants. His profile illustrates how African alumni living in the diaspora have settled into productive and rewarding careers, while still having an eye on returning home.

Profile of Nii Sai Sai
"*All along, I have been interested in the social impact of things.*"

Nii Sai lives in the United States with his wife, who is also from Ghana, and their three young children. Nii Sai is a social entrepreneur, with a strong sense of civic responsibility within his community in the East Bay of San Francisco, and with his wife's family farm in Ghana. He works for Aspire Public Schools in Oakland.

Nii Sai was born and raised in Accra. His parents and grandparents were college educated. Both parents spent time studying in Europe. Many of his aunts and uncles live outside of Ghana. While in high school, Nii Sai worked with the Education USA office (formerly USIS) in the American Embassy in Accra to find an undergraduate program in the US. Education USA offered support for him to take the SAT test and provided advising on the best college fit.

He earned his undergraduate degree in engineering sciences at Dartmouth in 1997. When Nii Sai graduated from Dartmouth, there were not many career opportunities in Ghana. Many of his friends from Dartmouth were also staying in the US to start their careers. During his studies he had an internship, which led to his first job after college as an information technology consultant with PwC and later IBM Global Services. Eventually Nii Sai was transferred to the San Francisco Bay area to work more closely with clients. Along the way he became a permanent resident of the US and married his wife, who had moved to the US in 1999 for her undergraduate and graduate degrees. Once he had permanent residency status, he began to consider going to graduate school.

Throughout the first ten years of his career, Nii Sai remained "interested in social impact." In 2008, he enrolled in UC Berkeley's MBA program; he was one of 2 students from Sub-Saharan Africa. His focus at Berkeley was on social entrepreneurship. During the MBA program, Nii Sai did a summer internship with his current employer, Aspire Public Schools. It was not easy to transition from the business sector into the social sector, "*especially when recruiting time hits, and people start talking about their offers.*" However, UC Berkeley's Haas School was "instrumental" in helping him make this transition, providing him with a network of others interested in social impact and bringing in organizations that were working on social entrepreneurship to conduct seminars.

Nii Sai's current role is in data visualization at Aspire Public Schools, "equipping people in the K-12 education sector to use data effectively to drive decisions in

and out of the classroom." He and his wife are managing a farm in Ghana from a distance, employing eight local staff. They hope that their investments will eventually help to support their move back home so that their children can receive part of their education in Ghana. In thinking about a "delayed return" to his home country, Nii Sai says, "*I always go to my peers in Ghana. Ultimately, those are the people who are going to be in leadership and are going to recruit you or show you the road back.*"

Nii Sai's profile illustrates that his two international education experiences have equipped him with the ability to cultivate a career pivoting between the private and non-profit sectors and having increasing social impact. His career decisions have been influenced by the political and economic context in his country of origin, Ghana, and his immediate needs to support a growing family in the US and his extended family back home. "*For Ghana, there is a significant amount of money flowing from outside, which sustains the economy. There are a lot of families that count on that for their livelihood.*"

Those who chose to stay in the diaspora did so because of family considerations, lack of career options at home, financial concerns, and, in some cases, opportunities to contribute to social change in Africa from within the diaspora, particularly when staffed in international organizations such as the UN and World Bank.

Career trajectories: the gender role

Gender and family played an important role in career trajectories both in Africa and the diaspora, particularly for women. Some of the women alumni interviewed were "ground-breaking" into male-dominated fields or organizations, as Thelma Awori's profile illustrates. Women living both in the diaspora and on the continent reported that they faced challenges related to gender discrimination in the workplace and difficulties balancing family and their careers. Challenges women mentioned include tensions with organizational leadership, under- and unemployment, and not being able to use knowledge gained from their international education. For African alumni of UC Berkeley and MSU (described earlier), a larger percentage of women graduates (57%), as compared to men (49%), have chosen to live and work in the diaspora. Osen Pogoson (see banner, 4.1) is an example of a young woman who studied in Canada, lives in the US, and works throughout Africa as a successful businesswoman.

4.2 Return paths

What are the factors that have influenced African alumni, post-graduation decisions to return, or *not, to their region/country of origin?*

RETURN PATHS: GEORGE NYOMBAIRE

"I grew up in a very difficult way and I knew that as a refugee in a foreign country, it was hard for me to get access to scholarships. Now I have my brothers and sisters who died during the war to bring me back. I got a scholarship to go to the US. I said "if I got to the US and stay there for good, I am betraying my country." I have that patriotism thing. That's the only reason I came back. I submitted my Ph.D. dissertation to the Graduate School in May and by 3 June 2012, I was here in Rwanda."

George Nyombaire was born and started his education in a Ugandan refugee camp as a Rwandan in exile. He excelled at school from the beginning, despite challenging economic circumstances at home and lack of resources at his local school. After finishing high school at a Ugandan boarding school, he applied to study Agriculture at National University of Rwanda. He obtained a Bachelor's Degree in Agriculture, and received a USAID scholarship to pursue a Master in Food Science at Michigan State University. After earning his PhD, with a scholarship from Michigan State, now George is making a significant contribution to Rwanda as the Head of Research and Development Coordination Department at National Industrial Research and Development Agency.

4.2.1 Survey analysis

As discussed throughout this report, a key area of inquiry of this study has been the identification of factors influencing the post-graduation "return" decisions of African alumni of international universities. Major findings concerning this question are shown in Graphic 3 and supplementary tables and charts in Appendix 15. We have seen that alumni careers are often non-linear and characterized by significant mobility over time, crossing continents and employment sectors and presenting opportunities for greater authority and leadership.

Within this pattern of mobility, the survey data reveal four basic post-graduation "return paths" (schematic map below). "Direct return" (45%) refers to those survey respondents who returned to their country of origin within 12 months after graduation. "Delayed return" (5%) refers to those who returned after 12 months, with delays extending in some cases to twenty or thirty years after whole careers were worked in the diaspora or elsewhere in Africa, or both. The percentage in this category is likely to grow as some alumni in the diaspora eventually repatriate to Africa. "Global" (7%) is a somewhat ambiguous category that is also likely to grow in the future with increasing transnational labour mobility. These alumni fall into two groups: those working outside of the country of origin but within Africa, sometimes in multiple countries (e.g. functionaries of international development organizations), and those that maintain residences in both the diaspora and Africa and travel widely between two or three continents for work and family reasons (e.g. founders of businesses or non-profit organizations). The fourth path refers to those alumni

who work and live in the diaspora (43%), primarily in North America[29]. Some belonging to this group returned to Africa for periods of their career, came back to the diaspora, and may or may not return to Africa at a later phase of life.

There were several ways that we analyzed factors influencing return decisions. One was simply to ask alumni to reflect on the potential decision factors listed in Graphic 3 and rate their relative importance in their personal decisions. We also asked alumni to look at these same factors (minus three) and assess whether these conditions were "more favourable," "same" or "less favourable" in their country of origin or country of study at the time of graduation. The responses to these questions are summarized in the chart below. With both sets of information, we are able to better understand the reasoning behind choice factors. The in-depth interviews discussed later shed further light on the nuances of choices complicated by competing obligations and goals.

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[29] The list of top six countries for current residence in Graphic 3 shows a higher percentage residing in Africa (40% diaspora, 60% Africa) as compared with "return path" numbers (43% diaspora, 7% global, 50% Africa), which is explained by missing data and some inconsistencies in survey answers, as well as inclusion of retirees and "dual residences."

3. RETURN PATHS

RETURN PATHS TO COUNTRY OF ORIGIN (COO)

DIRECT RETURN	45%
DELAYED RETURN	5%
GLOBAL	7%
DIASPORA	43%

n = 272 | missing = 22
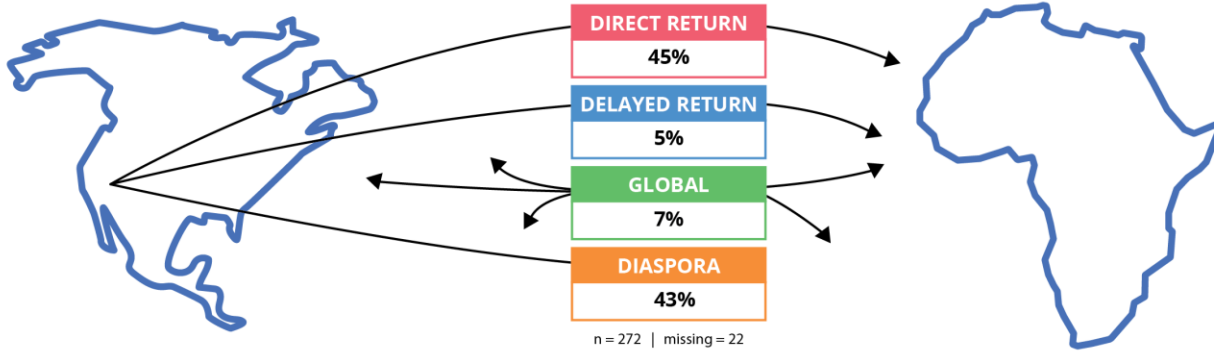
CURRENT RESIDENCE - TOP SIX COUNTRIES

USA	SOUTH AFRICA
24%	13%
CANADA	**KENYA**
10%	9%
UGANDA	**GHANA**
6%	5%
OTHER AFRICAN	**OTHER NON-AFRICAN**
30%	6%

n = 269 | missing = 25

KEY
- VERY IMPORTANT
- SOMEWHAT IMPORTANT
- NOT AT ALL / NOT VERY IMPORTANT

KEY
- RETURN
- NO RETURN
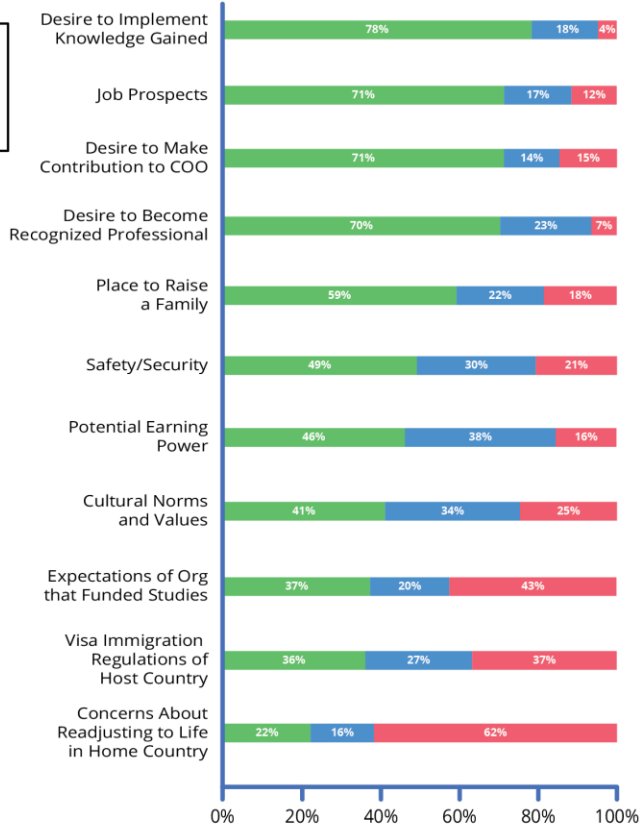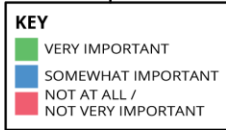
RETURN TO COO BY REGION OF ORIGIN

Region	Return	No Return
East	49%	51%
West	33%	67%
Southern	58%	42%
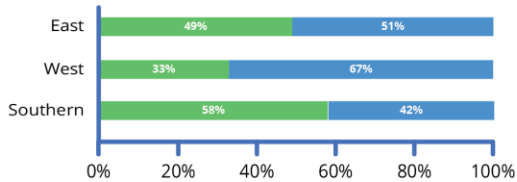
RETURN TO COO BY DECADE OF GRADUATION

1970s	1980s	1990s	2000s	2010s
65%	61%	56%	44%	41%

FACTORS INFLUENCING RETURN

Factor	Very Important	Somewhat Important	Not at all / Not very important
Desire to Implement Knowledge Gained	78%	18%	4%
Job Prospects	71%	17%	12%
Desire to Make Contribution to COO	71%	14%	15%
Desire to Become Recognized Professional	70%	23%	7%
Place to Raise a Family	59%	22%	18%
Safety/Security	49%	30%	21%
Potential Earning Power	46%	38%	16%
Cultural Norms and Values	41%	34%	25%
Expectations of Org that Funded Studies	37%	20%	43%
Visa Immigration Regulations of Host Country	36%	27%	37%
Concerns About Readjusting to Life in Home Country	22%	16%	62%

Country of Origin vs. Country of Study Comparisons at Time of Graduation

The above chart shows alumni perspectives on whether conditions were more favourable in country of origin or country of study, or the same, at the time of graduation. Of the top four factors influencing return in Graphic 3, two were rated "less favourable" in country of origin (ability to implement knowledge gained, job prospects) and two were rated "more favourable" (ability to make a contribution to COO, ability to become a recognized professional). The fifth most important factor, place to raise a family, was assessed ''more favourable'' in COO, at 44%, as compared to "more favourable" in country of study, at 38%. The next three factors in importance have "favourability" assessments as expected: greater safety/security and potential earning power in country of study, and preferred cultural norms and values in COO. The last three factors influencing return — expectations of organizations that funded study, visa immigration regulations of host country, and concerns about readjusting to life in home country, were not assessed for favourability. The latter was the only factor seen as not at all or not very important by a majority of respondents. The findings confirm the complexity of factors considered by alumni when facing their post-graduation transitions, with outcomes that ultimately led to the four "return paths" described above.

Cross-tabulations and regression model

Survey data were further analyzed by running chi-square tests on association between "return" (defined as "returned to COO within twelve months") and the set of independent variables shown in the table below. Independent variables associated with "return" at a significance level of 0.05 are marked with one asterisk. Those found to be significant in the

multivariate regression model are marked with two asterisks. Cross-tabulation tables and charts are found in Appendix 16.

Table 5: Chi-square Results for "Returned to Country of Origin within 12 Months of Graduation"

	Chi-sq.	df	p
PHASE 1 – Childhood/Education in Africa			
Era of graduation*	7.0	1	0.008
Region of origin**	9.3	3	0.026
Father's education*	13.6	2	0.001
Mother's education*	15.2	2	<0.001
Marital status*	5.7	1	0.017
Gender			
Rural/urban background			
Childhood economic status			
PHASE 2 – International Education			
Degree level*	12.9	2	0.002
Field of study*	33.5	8	<0.001
Work outside Africa during studies**	27.5	1	<0.001
Scholarship type*	40.8	2	<0.001
Return obligation**	59.9	1	<0.001
Presence of spouse during studies			
Presence of children during studies			
Connectedness to Africa during studies			
Work in Africa during studies			
PHASE 3 – Post-graduation Career			
Family expectation of return*	33.9	1	<0.001
Job prospects in COO*	13.0	1	<0.001
Ability to implement knowledge gained in COO*	11.1	1	0.001
Ability to make a contribution to COO*	7.3	1	0.007
Safety/security in COO*	6.9	1	0.009
Cultural factors in COO*	11.2	1	0.001
Standard of living in COO*	8.4	1	0.004
Potential earning power in COO			

We found that "return" rates are positively associated with lower levels of education for father, and especially mother (see chart below). However, childhood economic status and rural/urban backgrounds are unrelated to return, suggesting a weak, if any, association between economic background and post-graduation return to country of origin. Return rates tend to decline over time, leveling out at about 40% after 2010 (Graphic 3)[30]. Marriage or a long-term relationship prior to study abroad is associated with a higher rate of return, as expected; however, gender was found to be independent of return for the survey sample. Alumni who pursued graduate school degrees, as

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[30] Similar to findings reported for a larger sample of MSU and UC Berkeley African alumni (Graphic 1).

compared with undergraduate degrees, are also more likely to return to country of origin, as are students pursuing certain fields of study such as health sciences, agricultural sciences, education and engineering.
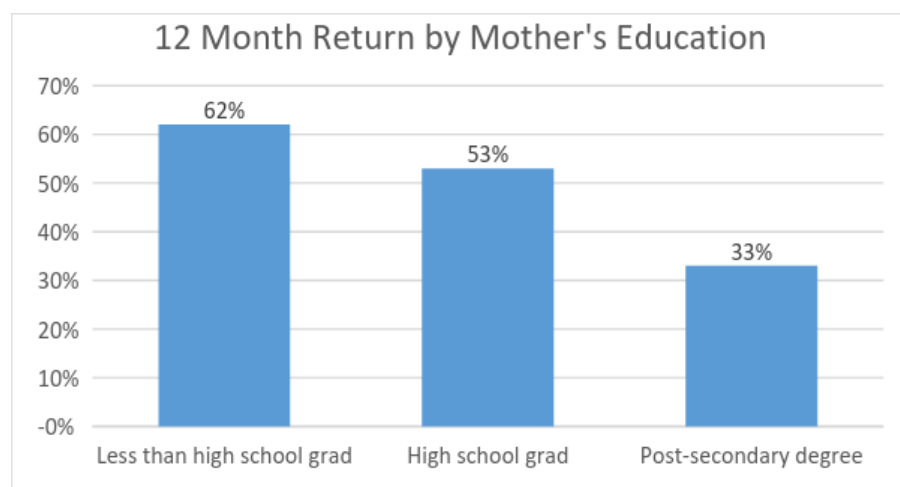
Type of scholarship was also found to be associated with return to COO as shown in the table below. Scholarships provided by private foundations, companies and individual sponsors are associated with a higher return rate, as compared with government or university scholarships, while self-funded alumni show the lowest return rate, as one might expect.

Table 6: Funding type by Returned to COO within 12 months				
Funding type		Returned to COO within 12 months		Total
		No	Yes	
Own Resources	Count	77	29	106
	Percent	73	27	
Government/University Scholarship	Count	37	62	99
	Percent	37	63	
Private Foundation/Company/Individual Sponsor	Count	8	30	38
	Percent	21	79	
Total	Count	122	121	243*
	Percent	50	50	

* missing data = 51

The table below presents the final results of the regression model (see Appendix 17 for worksheets on regression analysis). With an R-square of 0.552, we can say that the model explains about 55 percent of the variation between alumni that returned to their COO within 12 months (dependent variable) and

those that did not. Return rates were found to be significantly lower for alumni from West Africa (as compared with East and Southern Africa), affirming the importance of political and economic context in countries of origin in return decisions. Interestingly, job experience working **outside** of Africa during international study is also significantly associated with decisions not to return, suggesting that student work experience could open doors, and interest, to continue working in the diaspora post-graduation. Work **in** Africa during study, however, was found to be independent of return decisions (chi-square not significant). Finally, recipients of scholarships with "return obligations" had a statistically significant higher likelihood of return as compared with those that did not.

Table 7: Research Question 2 Regression Model

		B	S.E.	Sig.	Exp(B)	95% C.I. for Exp(B) Lower	Upper	R-sq.: 0.552
West origin	African	-1.53	0.513	0.003	0.22	0.08	0.59	
Work Africa studies	outside during	-1.37	0.475	0.004	0.25	0.10	0.64	
Return obligation		2.70	0.492	<0.001	14.87	5.67	38.96	

4.2.2 Interview analysis[31]

African alumni from the diaspora as well as those living on the African continent spoke of their mobility decisions in light of factors that fall into five broad categories: expectations, career opportunities, family considerations, contextual (political/economic) considerations, and international collaborations/networks. Within each of these interrelated categories are factors that facilitated direct and delayed return, drew alumni into the diaspora, and contributed to decisions to pursue a transnational life of movement back and forth between home in Africa and life overseas.

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[31] Appendix 14 provides a list of the 34 codes used to analyze the research question on return. Limited time did not permit the planned use of "descriptors" to compare sub-groups of alumni, for instance, by socio-economic group, gender or country of origin, and this remains a task for subsequent publications. We gave priority to dividing interviewees by current residence to understand the different perspectives and stories of African alumni with different return paths.

Expectations

> *"Families expect them to stay and get a career there to get more money. You have pressure from your family, your friends to stay."* (Uganda)
>
> *"If people do not come back, development won't be achieved in their home countries because I think these are the leaders of tomorrow. They really need to come back and lift up their own countries. It is not an easy job because some people get carried away with life in the US. They sort of lose the sense of who they are and they try to become somebody else."* (Tanzania)

Alumni spoke of diverse and sometimes competing expectations that accompanied their period of study abroad. Both the expectations of family members and those of employers and scholarship programs were described as having a significant influence—and contributing to heated African student debates—regarding the decision to remain abroad or return home upon program completion. Patriotism has also played a significant role in return decisions for some alumni, as explained by Rwandan MSU alumnus, George Nyombaire (above banner), who returned twice to his country, once as a former refugee, and again with a PhD in agricultural sciences.

Quotes in Graphic 3A (Scholarship and Employer Expectations) and Graphic 3B (Pressure to Give Back) emphasize the influence of scholarship program obligations or expectations of return as having motivated return decisions. In some cases, the intense pressure to "give back" contributed to professional challenges and encouraged alumni to pursue career choices that did not align with their personal interests (see Graphic 3B, Pressure to Give Back). As discussed in the survey analysis, there is a significant and positive correlation between scholarship program obligation and decision to return to country of origin within 12 months of graduation.

In contrast, the push to remain abroad was particularly strong among those who received family support to pursue opportunities outside of their home countries, as indicated by the quotes in Graphic 3B (Pressure to Stay). Interviewees explained the pressure on those who go abroad to maximize the opportunity by earning money and supporting those they left behind (Graphic 3C, Financial Rewards). Alumni in the diaspora described their success as tied to sending back remittances to support siblings and other children to pursue education. For other alumni, the greater influence was expectations of family and community members in Africa to return home to fulfill a host of obligations including contributing financially, giving back to society through one's profession, and modeling success to the younger generation.

The high level of professional success and financial stability expected of international alumni proved exhausting for some. As one South African alum explained, *"The expectation is that if you go to a fancy American university and*

come home, you should have [things] together. ...I was completely overextended last year because I am also under the pressure to make my PhD and the time spent away from South Africa meaningful." Similarly, a Kenyan alum expressed concern that pressures to succeed can make it difficult to pursue one's personal career dreams (3B, Pressure to Give Back).

3B. RETURNING HOME – HARDSHIIPS

Alumni living in Country of Origin/other Africa

PRESSURE TO STAY

" *The pull to stay abroad is very strong. Maybe 80% of the students who go there, given the chance, would not want to come back. That is my own assessment. Their families expect them to stay and get a career there to et more money. You have pressure from your family, your friends to stay. (Uganda)* "

" *There were Tanzanians who were studying - particularly in engineering, and quite a number of them didn't come back. When you go to America, if you want to come back, it has to be a very conscious decision. You don't do it in one day. You think of everything and even then you might change your mind. But I eventually said no, I'm going to Tanzania.* "

WASTED TALENT

" *I think it is the biggest tragedy for those who get excellent training and exposure who come back and do not use what they were trained for and at times it fades away. (Kenya)* "

POLITICS

" *The economy was bad during the Moi era, so we were trying to get everybody out. When they went out, some of them would not come back. (Kenya)* "

" *Well I came back after 2 years and found of course that there had been heavy militarization. I was put into a team that was designing a small bomb and started talking about circular probability, kill ratio, and realized this isn't so clean anymore. That is when I put a transfer out of it and it wasn't well received. (South Africa)* "

PRESSURE TO GIVE BACK

" *Whether or not you got a scholarship, you have been invested in to come back to this country to do something. That is the mindset that is put on you when you come back. "We have invested in you to come and make a difference here." That can be very challenging if you are not doing what you really want to do. (Kenya)* "

LACK OF MOBILITY AND RESOURCES

" *After a year, I go to the head of the department and ask him "I need a promotion." He looks at me, laughs, and goes to the shelf and pulls out a university calendar with the names of every academic staff listed in the order of seniority. My name was at the bottom because I was the latest, so he tells me "you look at where your name is. However much you work hard is useless." (Kenya)* "

" *There were expected hardships, differences in facilities, this is a time when Internet was quite well established in America and it was very easy. But here, I think we were using one telephone line in an area of 50 miles. It was tough being from the university. (Tanzania)* "

FINANCES

" *As a young man seeing your colleagues, wow, a car, paying for mortgage, this is really attractive. And when you go home, it will take me another three or four years until I can buy a car, even longer until I can think about getting my own house. (Kenya)* "

3A. RETURNING HOME — MOTIVATIONS

Alumni living in Country of Origin/other Africa

FAMILY AND CULTURE

" I wanted to return home because of the parents. They were poor. I wanted to come back to take care of my parents. (Kenya) "

" At the time, I had a set of twins who were six-months, so I had everything to come back to Kenya for. "

" They didn't put any restrictions; I think within me, after I was done, I was not very interested to live in a culture that wasn't mine. I felt more comfortable being here than in another country. (Uganda) "

CAREER OPPORTUNITIES

" My boss had already approached me with this job offer for the search trial. They needed someone with a medical background and training in epidemiology. I came back to a job. (Kenya) "

" We're trying to become the Amazon of Africa. That's our ambition. (South Africa) "

" And I realized that there was this massive emerging market in Ghana, with massive growth potential. "

" I left the US in '97. The position was open for the Director General at the National Agriculture Research Institute of Gambia. So it was quite an interesting offer. They actually got some money from the World Bank to establish this Institute...a lot of resources...PhDs in agriculture were wanted. "

SCHOLARSHIP AND EMPLOYER EXPECTATIONS

" So for us, it was very clear from the beginning that we were going back because I had discussions with people in Zimbabwe and they said this is the expectation from the program (Fogarty Fellowship) that you go back when you are done. "

" Actually, I went to do graduate work sponsored by the Rockefeller Foundation and the university Staff Development Program, so the funds required that I come back to Makerere University to teach. (Uganda) "

" With McKinsey it was one for one. You would have to come back for two years at the end of the degree. (South Africa) "

GREATER SOCIETAL IMPACT

" When I was in Mozambique doing my internship, I found out the farmers needed me. The farmers kept encouraging me, "don't go and stay there and get married to a white man, come back and work here". "

" When people come from a poor environment and they see them moving and make it, the demonstration effect on the community is just tremendous. I come from very humble background and I still live very humbly, in spite of the fact that I have had a stellar education. (Uganda) "

" I feel like we have more challenges here. I feel that it is more rewarding to be part of a team sorting out the African problems on this side where your impact is likely to be bigger. (Kenya) "

The tension between the individual benefits of pursuing a career outside of Africa (often emphasized by family members) and the potential societal benefits of return (emphasized by some scholarship programs, employers, African governments) is complicated by limited opportunities to reach full potential and maximize societal benefit through a career in Africa due to a variety of considerations. Indeed, the "return" decision is typically fraught with competing personal, family and societal pros and cons, dilemmas that continue throughout life for many of the alumni, whether they returned or not.

3C. NOT RETURNING HOME – DECISION FACTORS

Alumni living in the Diaspora

FINANCIAL REWARDS

" *The people who stay in developed countries have that pressure of earning money. They are the ones trying to escape the fear of being in this lacking environment, now that they have the ability, they want to use the opportunity to work, earn money and at least support as many people as they can on the other side. (Uganda)* "

POLITICAL INSTABILITY IN COO

" *I really wanted to go back, but I gave myself ten years. I said I'm going to come here, planning that during those ten years the government would be gone in Togo.* "

" *I disagreed with the president of my country on a critical constitutional issue. As a result I became someone who could not be employed in their own country. (Uganda)* "

FUTURE RETURN

" *At this point as soon as my son graduates high school I should be able to move anywhere...Especially now since I'm so good at English I would have more options. Kenya, Ethiopia, I think I have a lot to offer. (Togo)* "

" *Now is the chance to do more...Before I might have said I don't want to go down that path because it might send me back to working in Nigeria, but now I welcome any open door in front of me. At the end of the day, I want my family to be happy and wherever that's going to take me I'm going to go.* "

" *Let me put it this way. It's never occurred to me that I will not return. I'm still South African. I kept my proud South African identity, I kept my passport. I could return. I could always return. People say when did you leave? And I go - I never left. I wandered away, I may return.* "

" *We spent a lot of time talking about it, connecting with people. My wife actually spent a couple of months trying to work in Ghana to see if we can transition back home, but it did not work out. We are still open to that idea, and I want to see how I can make that happen. (Ghana)* "

CAREER OPPORTUNITIES

" *I think as a young person graduating from college, you are looking to build your career and you want to minimize risk and the unknown. Being in the US, you see a lot of opportunities to do well. There is sort of a pull from the US...but not from back home. (Ghana)* "

" *I was expecting to go back to Senegal. And I never lost contact with my old history department...But as I was completing my PhD, I was applying for jobs, and I got, I think, 10 interviews, most tenure track and visiting professors, from Georgetown to St. Louis, New Jersey, Colorado State, and so on.* "

STAYING CONNECTED

" *In Africa, you have these very talented students but they don't have any support...and I think also the universities here are looking for good students from Africa. So we want to build a platform that connects those people. The project's called, 'Enabling African Universities'. (Senegal)* "

" *In the last few years, particularly as my son has grown older, and I've been able to travel more, my connections with Africa as a whole, particularly West Africa are deepening. (Nigeria)* "

GLOBAL CITIZEN

" *I own a house in Uganda. That is my home, my family, my culture. My work is all over the world, but primarily in New York. I support about 19 kids in my family, including my cousins, nephews. I love Berkeley, and I want to buy a house there...I know what I want. I will be a global citizen, all over the place, doing what I love.* "

" *I really would like to establish dual citizenship before I come back permanently. Maybe in Europe or Mexico. It's relatively easy to immigrate to Mexico. It only takes five years to become a citizen. And the cost of living, I think I can handle it even if I'm doing freelancing. (Senegal)* "

Career Opportunities

> *"As a young person graduating from college, you are looking to build your career and you want to minimize risk and the unknown. Being in the US, you see a lot of opportunities to do well. There is sort of a pull from the US…but not from back home."* (Ghana, in US)

> *"There's a vast amount of opportunity [in Africa] to come back and exploit it. I think the continent is desperate for people with exposure and skills and networks. …If you do come back, there's this sort of open field of opportunities that you don't necessarily see while you're [abroad]. So it's worthwhile keeping your eye on opportunities back at home."* (Ghana)

Factors related to career opportunities also informed the career trajectories of alumni regardless of the return path pursued. What differs across these groups is the extent to which individuals perceived that the opportunities available to them, in a given field at a given period of time, would enable or inhibit the full development of their potential and their ability to contribute to society. Political dynamics also influenced the availability of and access to career opportunities (further elaborated below).

Many of those who chose to return to Africa upon graduation were motivated by confidence that their impact would be greater if they addressed challenges at home in African contexts, as evidenced by the quotes in Graphic 3A (Greater Societal Impact). Those who pursued fields of study that were directly relevant to opportunities in their home contexts, such as in agricultural or health sciences, as well as those who maintained and expanded professional networks established during their time abroad in all fields, were able to return home, apply their learning and advance professionally upon completion of their studies. These alumni described opportunities to leverage the knowledge gained abroad to make significant contributions back home. More recent alumni have emphasized emerging markets and entrepreneurial opportunities as incentives to return home, both for individual gain and to contribute to the social transformation and economic development of Africa. Examples include alumni who have started investment and real estate businesses in West Africa to capitalize on the pent-up demand for affordable housing; East Africans working to develop markets for renewable energy, particularly solar; South Africans starting up large online retail markets, creating hundreds of jobs; and artists and architects responding to increased demand for innovative spaces in metropolitan centres throughout Africa.

Others, however, described resource and mobility limitations that hindered their career objectives upon return (see Graphic 3B, Lack of Mobility and Resources). From deeply rooted cultural practices that inhibit merit-based promotion to run-down research facilities, alumni who chose to return faced a variety of hardships. Moreover, interviewees described the wasteful tragedy of

developing skills abroad that are not used and eventually fade away upon return. The qualitative interviews suggest that opportunities and obstacles to return vary somewhat across fields. As presented in the previous section on survey findings, return rates were found to be positively associated with certain fields such as health sciences, education and agricultural sciences, while negatively associated with others, such as business, law, arts and humanities (see Appendix 15).

Whereas alumni living in Africa emphasized the greater societal impact they could achieve on the continent, alumni living in the diaspora described the greater level of security and number of career opportunities offered in the US. Alumni who worked during their course of study, gaining experience and confidence as well as material rewards, were more inclined to enter the diaspora workforce after graduation. This was confirmed in the survey regression findings, where work outside of Africa during the period of study abroad was found to be significantly predictive of the decision to remain abroad upon program completion. Some described the powerful pull of job offers received prior to or after graduation that enticed them to remain abroad. In many cases, alumni in the diaspora expressed a desire and intention to return in the future, particularly as political and economic conditions have improved. In the meantime, they pursue pathways to stay connected.

It is important to note that while financial compensation was among the factors taken into consideration by African alumni, it was not the sole driver of return decisions. The opportunity to maximize impact and contributions to communities in Africa was also paramount for—and viewed differently by—both groups. While the desire to make greater societal impact was strong among those who returned to Africa, the diaspora also included many who chose to pursue international careers in order to have a wider and more influential impact in Africa. Ranging from careers with international organizations, such as the United Nations and World Bank, to journalism and academia, alumni in the diaspora demonstrate that a career outside Africa has the potential to contribute to national development in Africa while also expanding geographic reach and influence. The desire to impact society was a motivating factor among those who chose to return as well as many who chose to remain abroad.

Family and Cultural Considerations

"I wanted to return home because of the parents. They were poor. I wanted to come back to take care of my parents." (Kenya)

"At this point my son is in high school. As soon as he graduates high school I should be able to move anywhere. Especially now that I'm so

good at English I would have more options. Kenya, Ethiopia; I think I have a lot to offer." (Togo in US)

Intertwined with the consideration of expectations and career opportunities is the significant yet diverse role families play in the migration decisions of African alumni. In some cases, family obligations push African alumni to remain abroad while in others they are among the factors pulling them back home. For alumni in the diaspora, educational opportunities for family members were often a factor that drew them to remain abroad, particularly once children were enrolled in US or Canadian school systems. Alumni in the diaspora also described the importance of leveraging opportunities abroad to support as many family members as they could in Africa (Graphic 3C, Financial Rewards). Similarly, the obligation to support family was a primary motivation among alumni who chose to return to their country of origin. The pull home was especially strong for those with aging parents and young children in Africa.

Related to the desire to be near family is the desire to return to a familiar, comfortable culture emphasized by interviewees who returned to Africa. Even those who remained abroad described a deep sense of cultural identity that motivated them to remain connected and explore opportunities to travel back and forth and eventually return to the continent. Alumni who pursued diverse career trajectories echoed a common refrain: "*Home is home.*"

Political and economic context matters

"I really wanted to go back, but I gave myself ten years. I said I'm going to come here, planning that during those ten years the government would be gone in Togo." (Togo)

"[From 2000 to 2010], Ghana in particular has been doing very great. People are saying, 'Hey, you should come home.' I have friends who went home and have done very well. When I was coming out of college, it was just a different era." (Ghana in US)

In addition to home country economic and cultural contexts, many interviewees spoke to the significant role of political repression or instability in their countries of origin at different periods of time (e.g. Uganda, Rwanda, Nigeria, Ghana, Togo, Burkina Faso, Zimbabwe, Mozambique, South Africa) as a key factor influencing both their return decisions and experiences upon return. Despite the fact that the public sector remains a huge employer in Africa, few alumni chose to return to public sector jobs (with the exception of academia/ research) and attributed this largely to issues of corruption and inefficiency.

As indicated by the quotes in Graphic 3C (Political Instability in COO), alumni in the diaspora described a desire to strategically delay return until after a government transition. In some cases, alumni self-identified as *persona non grata* in their home countries due to their positions on contentious political issues, or having fled as refugees in their youth. Remaining abroad, in contrast, allowed alumni to critique and support African democracy from a place of freedom, safety, and influence. For example, an alumnus from Burkina Faso who chose to pursue a career in international journalism in order to elevate African voices and stories explained, *"I'm trying to figure out the best way to do it. It will be films based on issues in Africa. Documentary films. …I was looking for whose voice has not yet been heard, has not gotten heard. That's much more important to me."*

In other cases, historically pivotal political contexts were emphasized as a factor contributing to the decision to return, particularly for the post-independence decade (1960s– mid 1970s), and the 1990s for South Africa. Alumni who returned during these periods expressed a strong commitment and enthusiasm to participate in transitions to independence and liberation, and to form part of the building of African institutions and democracies. In contrast, the decades that followed (1980s–1990s) brought an era of military dictatorship, civil strife and economic decline that encouraged the internationally educated to remain abroad and join the diaspora, particularly alumni from West Africa. As presented above, the regression model shows a significant negative correlation between coming from West Africa and returning to one's country of origin post-graduation.

Alumni who pursued careers in African contexts as well as those who remained in the diaspora emphasized the huge contrast in salaries and other financial benefits that influenced their decisions and experiences following graduation. Financial hardship was widely referenced among alumni who returned home. As indicated by the quote in Graphic 3B (Finances), the relatively easy access to credit and highly valued commodities (e.g. electronics, automobiles, houses) was a strong pull to remain abroad. In addition to its appeal on an individual level, remaining abroad to pursue financial stability was also viewed as a viable strategy—particularly among those from marginalized backgrounds and families with limited means—to acquire the resources and relationships needed to invest in and implement projects in their home communities. As one alum explained:

"From my perspective, we have students who come through on scholarships who come from very poor backgrounds; they've come from a rural village. I know that quite a few of them dream of going back and starting a school or doing something more than sending money back to family. Once they get to some financial stability they will be able to do

that. And they will have the resources and network that can help them execute."

This notion that influencing change requires social networks in addition to financial resources was another recurrent theme that is further elaborated in the following section.

International collaborations and networks: a lifeline

"[Research collaboration with a former faculty member] kept the family alive. So yeah, that's how I survived. Through research." (Uganda)

"When we wrote [a small proposal], it caught the eyes of superiors. ...so they said this can be a very big project. They put us in contact with their professors from their university. When we got there, for one week, our job was to rewrite this proposal and present it to SIDA. At the end of the week a senior official came from Stockholm to Gothenburg to receive the project. We knew we had gotten it. And that's how the Languages of Tanzania *project[32] was born." (Tanzania)*

International networks cultivated and maintained during the period of study abroad have helped alumni to overcome challenges and thrive professionally both in Africa and the diaspora. Among those who returned to Africa, networks abroad were often described as key supports—even a "lifeline"–during periods of hardship. For example, during the second Obote regime in Uganda, one alumnus survived a period of extreme economic hardship through the research work offered by a former faculty member. Were it not for that support, he would have left his country with his family. In South Africa, one alumna attributes her international research connections as the means she used to establish a strong academic reputation in a post-Apartheid society marred by remaining racial and gender discrimination.

There are numerous examples of long-term research, training and development collaborations that supported alumni prior to and post-graduation. The box below on the Fogarty Fellows AIDS Program (AITRP) is an outstanding example of a 26-year collaboration with UC Berkeley and UCSF that trained African researchers (and others) to lead the fight against the AIDS pandemic and save millions of lives. The Fogarty final report indicates a "direct return" rate of 95%, with some Fellows subsequently pursuing opportunities outside their countries of origin. The programmatic factors that may explain this extraordinary success are: 1) one-year intensive master's degrees in

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[32] For more information on the Languages of Tanzania project, see the linked article by Karsten Legere, Dept. of Oriental and African Languages, University of Gothenburg, Sweden. http://www.sprak.gu.se/digitalAssets/1324/1324043_the-languages-of-tanzania-project.pdf

epidemiology[33]; 2) recruiting mature scholars already employed in the health sector; 3) improved career opportunities through international networks and external funding; 4) developing a "peer" culture of return over time; and, perhaps most importantly, 5) training in skills desperately needed and applicable back home.

"Fogarty Fellows"
 A Lasting Collaboration on HIV/AIDs Training, Research and Prevention[34]

At the height of the HIV-AIDS pandemic in Sub-Saharan Africa and around the world, the School of Public Health at the University of California, Berkeley (UCB) and the Schools of Medicine, Dentistry, Pharmacy, and Nursing at the University of California, San Francisco (UCSF) partnered with Ministries of Health and foreign universities in Africa, Latin America and Asia to provide training in HIV/AIDS-related research, including research on tuberculosis (TB), and other sexually transmitted infections. The training program was funded by the Fogarty International Center (FIC) of the National Institutes of Health (NIH) and ran for 26 years from 1988 to 2014. Under a new mode of operation, the program continues with in-country capacity-building programs in Uganda and Zimbabwe led by former Fogarty Fellows, including Professor Moses Kamya, Dean of the Medical School, Makerere University.   The African countries benefiting from the training program included Côte d'Ivoire, Uganda, Kenya, Zimbabwe, and to a limited degree, Democratic Republic of Congo and Sudan.

Throughout the 26 years of the AIDS International Training and Research Program (AITRP), the focus of the training has been on increasing the capacity of foreign partner countries and their academic institutions to conduct high-quality, locally relevant AIDS research, and strengthening the capacity of Ministries of Health and other organizations to evaluate the impact of their HIV/AIDS prevention and treatment program. Training modalities supported including master's and doctoral degree training in the US at UC Berkeley and, as appropriate at collaborating foreign universities, including "sandwich" programs in which trainees spent time and took courses at US academic institutions, and received mentorship and academic advising from US faculty, but received their degrees from foreign universities. In all, 75 Fogarty Fellows received master's degrees and 13 received doctoral degrees, including seven individuals who received both (from UC Berkeley).

Post-Graduation Activities of Trainees
More than 95% of AITRP-supported trainees who came to the US for training returned to their home countries upon completion of their training. Some subsequently assumed positions elsewhere, including a sizeable number with the Center for Disease Control and Prevention (CDC), either in the US or their

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[33] Several women Fogarty Fellows expressed the shorter time commitment as fundamental to their ability to participate, leaving children behind in Africa.

[34] Adapted from a final report prepared by Fogarty program staff at UC Berkeley and shared for inclusion in this report.

country/region of origin, or with WHO, UNAIDS and UNICEF, while a small number joined academic institutions in the US, Canada, Australia, and the United Kingdom.

The African Alumni Project interviewed 13 Fogarty Fellows from Uganda, Kenya, Côte d'Ivoire and Zimbabwe, including: lead researchers and directors of CDC/PEPFAR[35] programs in their respective countries; professors and deans in their academic institutions where they have developed independent collaborative research and training projects, senior research staff at Ministries of Health, directors of non-profit preventative health organizations, and UN functionaries at the forefront of designing and implementing the next generation of Sustainable Development Goals.

Alumni from multiple fields cited long-term rewarding international collaborations with their *alma mater* and other institutions, including engineering (see profile of Philip Hendricks above), community forestry and biodiversity in East Africa, community health in Ethiopia (McGill – University of Addis Ababa), and the *Languages of Tanzania* project launched and directed by a Professor of Linguistics at the University of Dar es Salaam. The Tanzanian UC Berkeley alumnus said his collaboration with Swedish universities and SIDA "saved [his] university career," and also saved dozens of indigenous languages in Tanzania from virtual extinction. These collaborations created employment, generated income, strengthened institutions and individual careers, and contributed to knowledge and policy outcomes that benefited all partners.

For many who have lived and worked in the diaspora for varying lengths of time, this period abroad is viewed as essential for building skills and establishing networks and savings for an eventual return home. "*Going back from [university] to Nigeria, I was not having enough to start my own business, so it should be difficult because there are no paying jobs in Nigeria,*" explained an EARTH alumnus who opted to work and build up savings prior to return. There are many examples of alumni who delayed return to pursue strategies of securing resources and establishing relationships and networks abroad to prepare for a successful return. For example, the founder of Africa's first liberal arts college (Ashesi University, Ghana) worked abroad for over ten years, and then pursued an MBA at Berkeley, before he felt adequately equipped for the transition. An MSU graduate from Uganda has reduced any anxiety about making a decision to return home by maintaining her professional connections abroad where she can travel anytime: "*But for me now, knowing I can apply for a visa to any country and get it anytime and I go and come back, that alone [takes away] the desire that I should go anywhere and get stuck. And also I feel that I can contribute here and be more visible.*"

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[35] President's Emergency Plan for AIDS Relief, initiated by the US government in 2003.

For those in the diaspora, connections with home remain crucial for sustaining identity and sense of purpose. Some leverage their connections in Africa to pursue academic exchanges and institution-strengthening such as the *Enabling African Universities* project (see Graphic 3C, Staying Connected). Others spoke of maintaining a strong sense of African identity and holding on to the possibility of return. As one South African living in the diaspora expressed, *"It's never occurred to me that I will not return. I'm still South African. I kept my proud South African identity; I kept my passport. I could return. I could always return. ...I never left. I wandered away, I may return."*

4.3 Social and civic engagement

Have African alumni prioritized social and civic engagement with their region/country of origin? If so, what types of engagement with what social change outcomes? What are the factors that have influenced alumni decisions to prioritize social and civic engagement?

SOCIAL ENGAGEMENT: CHRIS ATEGEKA

"It started when I was an undergraduate, and I built a bunch of wheelchairs out of scrap metal. This stems from my personal experience growing up and getting a bicycle, and it changed my life. The other aspect that inspired me was my grandmother. She was deaf mute. She did not let her disability define who she is. I want to elevate and help the disabled people who feel weak. Over 90% of disabled people are unemployed because of immobility."

Chris is an award-winning social entrepreneur, an engineer, and an inventor at heart. He holds one patent for the early detection and monitoring of infectious and chronic diseases using nano-technology. Chris is the founder of Rides for Lives (http://www.ridesforlives.org/#why), an on-demand healthcare delivery NGO serving the rural poor of Uganda. Materials and labor are sourced locally for all of the vehicles, from bicycle ambulances to mobile hospital buses. In 2015, Chris received the Muhammad Ali Humanitarian Award for "Dedication". He holds a BS and MS in Mechanical Engineering from UC Berkeley. Chris is a global citizen, living and working in the Bay Area and Uganda.

4.3.1 Survey analysis

Graphic 4 divides the survey findings on social and civic engagement by roles played in non-work related activities and work-related social change and development contributions. Survey respondents were asked to select the roles they play, any and all, in a table listing 17 types of social and civic organizations by theme, such as education, African diaspora, and community development (see Appendix 8 for the complete list). The results are shown in the bar chart and word cloud displaying organization types, with word size corresponding to frequency. Nearly 80% of alumni reported social engagement in and outside of Africa, as leaders (51%), members (44%), volunteers (42%) and financial contributors (19%). The high percentage of alumni who play a leadership role indicates a broad willingness to give considerable time and resources to social and civic activities, as well as a capacity for organizational leadership that is

recognized by constituent communities. These results will be further fleshed out in the interview analysis.

An important aspect of this research question is to discern the degree to which African alumni are contributing to social change, generally, and the social and economic development of Africa, in particular. This is a cross-cutting theme throughout the analysis as it also relates to 'career and life trajectory', 'return paths', and 'value of an international education'. In Graphic 4, we approach the theme with five basic questions: Are you a social entrepreneur? Have you held a leadership position? Have you influenced positive social change? Is your current (or most recent) job related to African development? and, Have you ever had work related to African development? African development is defined in the survey as a job/work "related to social or economic development of Sub-Saharan Africa." These questions were asked in the "work" section of the survey and refer to intersections between work/career and social change. The last two questions provide insight on whether or not alumni have chosen careers that are inherently connected to social change and development in Africa, and, therefore, provide professional opportunities to impact social change in their region/countries of origin.
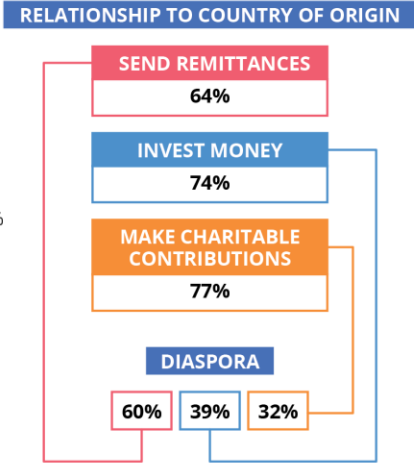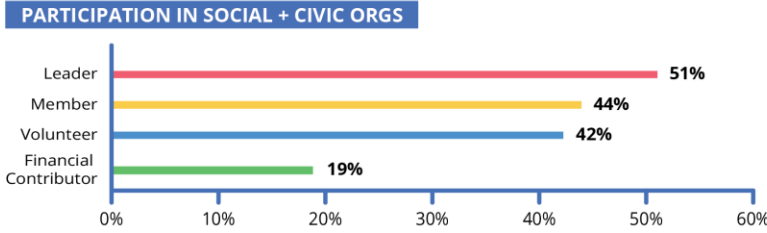
Sixty percent of alumni are currently employed in positions related to African development, which breaks down to 74% for those residing in their country of origin and 26% for those in the diaspora (including the 5% residing in Africa, outside COO). The numbers increase to 83% and 50% when asked about current and past jobs ("ever had"), respectively. The diaspora finding shows that about one quarter of survey respondents currently have jobs directly related to social and economic development on the African continent in diverse fields, areas of expertise and sectors (see Appendix 18 for cross-tabulations). Forty percent of the respondents self-identify as social entrepreneurs, typically understood as creators of non-profit organizations or for-profit social enterprises. A large majority of alumni (86%) have held leadership positions in their careers (see Graphic 2 for a breakdown of leadership roles). When asked, "Have you influenced positive social change?", responses present a bell curve distribution from "not at all" to "a very high degree," results likely to be related to age and stage of career. Thirty-eight percent believe they have impacted social change to a "high" or "very high" degree.

Alumni were also asked about their current relationship to their country of origin to gauge levels and types of engagement, using three categories of engagement: send remittances, invest money, and make charitable contributions. Aggregate results, and for the diaspora sub-group, are shown in Graphic 4 (top right). Remittances sent home from abroad or within the home country to pay school fees of siblings, nieces and nephews or support family

members, especially parents, in other ways, are an enormously important way in which African alumni contribute to their communities (overall 64%, diaspora 60%). Other ways alumni are engaged with their country of origin is through business or personal investments (74%) and contributions to non-profit charities (77%), in various forms, such as the "roles" described in Graphic 4. It is striking that almost 40% of African alumni living in the diaspora are making investments in their country of origin, paving the way for an eventual "return" in some cases. Almost one third of African alumni living in the diaspora are making charitable contributions to non-profit organizations located in their countries of origin.

4. SOCIAL AND CIVIC ENGAGEMENT

ROLES

PARTICIPATION IN SOCIAL + CIVIC ORGS

- Leader — 51%
- Member — 44%
- Volunteer — 42%
- Financial Contributor — 19%

(0% to 60% scale)

RELATIONSHIP TO COUNTRY OF ORIGIN

SEND REMITTANCES 64%

INVEST MONEY 74%

MAKE CHARITABLE CONTRIBUTIONS 77%

DIASPORA 60% | 39% | 32%

ORGANIZATION TYPES

Gender and Sexuality
Workforce Development
Literacy
Arts & Culture
Education
Immigration Rights
Health Care
Religion
Social Justice
Human Rights
Public and Civic
Community Development
Media
African Diaspora
Conflict Management/Peace Building
Environmental Resources
International Cooperation

SOCIAL CHANGE AND DEVELOPMENT

1 ARE YOU A SOCIAL ENTREPRENEUR?
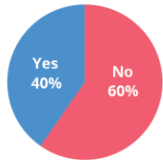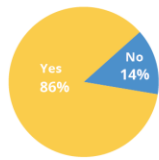
Yes 40% / No 60%

2 HAVE YOU HAD A A LEADERSHIP POSITION?

Yes 86% / No 14%

3 HAVE YOU INFLUENCED POSITIVE SOCIAL CHANGE?

- 4%
- 22%
- 36%
- 27%
- 11%

(0% to 40% scale)

KEY
- NOT AT ALL
- TO A LIMITED DEGREE
- TO A MEDIUM DEGREE
- TO A HIGH DEGREE
- TO A VERY HIGH DEGREE

4A IS YOUR CURRENT (OR MOST RECENT) JOB RELATED TO AFRICAN DEVELOPMENT?

Yes 60% / No 40%

BY CURRENT RESIDENCE
- COO: 74% | 26%
- Diaspora: 26% | 74%

(0% to 100% scale)
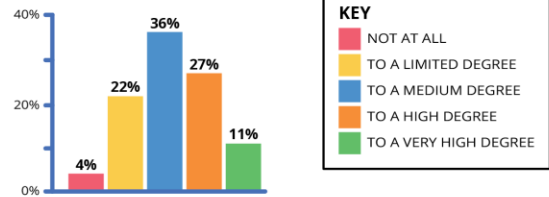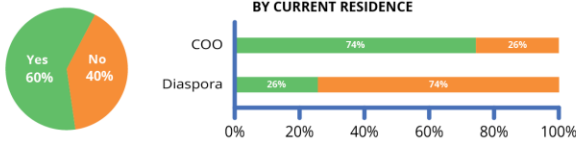
4B HAVE YOU EVER HAD A JOB RELATED TO AFRICAN DEVELOPMENT?

Yes 69% / No 31%

BY CURRENT RESIDENCE
- COO: 83% | 17%
- Diaspora: 50% | 50%

(0% to 100% scale)
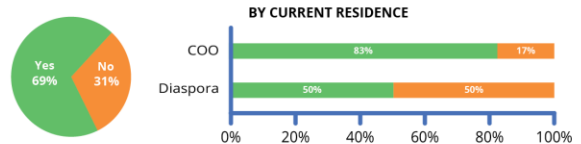
In order to better understand factors that have influenced alumni decisions to prioritize social and civic engagement, particularly with Africa, the study conducted bivariate analysis on "ever had a job related to African development" with the independent variables, grouped by life phases, listed in the table below. The results are less revealing than with a similar analysis for RQ2 (return), and did not result in a valid regression model. This is explained in part by less clarity and less variation in the dependent variable as well as the "Likert scale" framing of several of the independent variables.

Table 8: Chi-square Results for "Ever Had a Job Related to African Development"

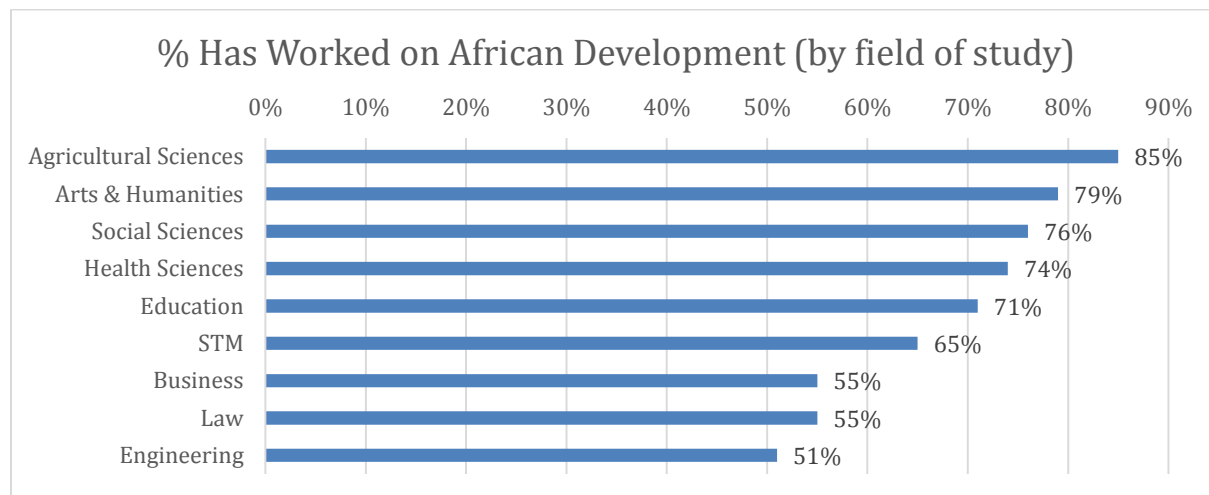|	Chi-sq. / *t*-Test	df	P
PHASE 1 – Childhood/Education in Africa			
Era of graduation			
Gender			
Region of origin			
Rural/urban background			
Childhood economic status			
PHASE 2 – International Education			
Field of study*	15.7	8	0.047
Participation in Africa-related activities during studies*	-2.24		0.026
Impact of experience on networks in country of study*	2.20		0.029
Impact of experience on networks in Africa*	-2.48		0.014
Degree level			
Work in Africa during studies			
Return obligation			
PHASE 3 – Post-graduation Career			
Area of expertise*	17.9	7	0.013
Residence in COO*	33.1	1	<0.001
Field of first job			
Current sector			
History of leadership position(s)			
History of field change(s)			

This analysis shows that demographic and childhood factors such as age, gender, region of origin, and childhood socio-economic status are independent of subsequent professional engagement with social and economic development in Africa. The four variables found to be associated with "ever had a job related to development in African development" for Phase 2 are: field of study (see chart below and Appendix 18 for all cross-tabulations), participation in Africa-related activities on campus (positive correlation), impact of international education on networks in Africa (higher positive impact

has positive correlation), and impact of international education on networks in country of study (lower or neutral impact has positive correlation). The importance of social and professional networks established during the course of study is explored later in the analysis of research question four, "the value of an international education."

% Has Worked on African Development (by field of study)

Field of Study	Percentage
Agricultural Sciences	85%
Arts & Humanities	79%
Social Sciences	76%
Health Sciences	74%
Education	71%
STM	65%
Business	55%
Law	55%
Engineering	51%

4.3.2 Interview analysis

Appendix 13 provides a list of the 28 codes used to analyze research question three on social and civic engagement. As noted earlier, limited time did not permit a comprehensive use of the descriptor variables for analysis by sub-groups. Priority was given to understanding differences in social and civic engagement by current residence, comparing African alumni in the diaspora with those living in Africa. An important finding is the large number of African alumni interviewed for this study who are leaders of transformative change in and outside of their countries of origin. A table on "transformative leadership" categorizes these contributions and highlights concrete examples, including the banner on the founder and president of Ashesi University, Patrick Awuah. The analysis also includes profiles of three alumni (Daniel Kwaro, Kenya — direct return, Ekua Bannerman-Richter, Ghana — delayed return, and Sarah Ladipo Manyika, Nigeria — diaspora) with very different histories of social and civic engagement. Together they illustrate the wide range of contributions and impacts revealed by the interview data. The section banner on social entrepreneur Chris Ategeka shows an example of social and civic engagement from a "global citizen."

Early influences on social engagement

"My parents have always told me to help the needy, take care of the poor, the sick and help people who have no food, when poor people come and borrow something small, I should be ready to help." (Kenya)

"She is the person who raised me. My grandmother is deaf-mute, so she doesn't hear nor talk. But her resilience, her power and strength as a woman trying to raise a child that is not hers, just a grandchild, and you know for me as a person I looked up to her as like...a pillar, because she was the protector." (Uganda)

"And my parents always taught us you are not the centre of the world. Know who you are and be proud of yourself, know your values, know your religion, we are Muslim, pray, respect elders, take care of your younger siblings and respect your older siblings, and try to know others who are not like you." (The Gambia)

Many of the interviewees spoke at length about members of their families as influential figures and strong role models of social and civic engagement. Irrespective of social class, these families instilled both the value of education and the value of helping members of the community in most need. Often grandparents, especially grandmothers, passed down traditional knowledge, customs and values, and fortified life-long connections with the rural villages to which alumni returned later in life as role models themselves. Nearly all alumni spoke of parents and extended family that viewed education as a vehicle for social and economic mobility. For the poor (39%, Table 3), this implied large sacrifices to ensure that school fees were paid, or to forego labor when children went to school on bursaries/scholarships. Partly as a result of these sacrifices, and strong family values, alumni followed in their footsteps to support younger siblings, education and the community at large in some cases.

"For me, from a family point of view, I continued to support my family. I sent my sisters to school. I wanted them to be educated, especially my sisters. My brothers could their own ways. In Mozambique, it is typical that sixteen, seventeen year-olds get pregnant. It is hard for girls. I always wanted my sisters to go to school."

Student activism was also a major early influence on subsequent participation in social and civic engagement. Alumni have participated in political activism from the independence struggles in East and West Africa, to the anti-apartheid movement of the 1970s and 1980s in South Africa, and participated in student strikes and anti-government protests throughout the continent, having to flee their country as refugees in some cases. One example is the current Prime Minister of Uganda (Master's in Child and Maternal Health, UC Berkeley), Rugunda Ruhukana, who was a student of medicine and political activist at Makerere University in the early 1970s and fled the terror regime of Idi Amin to Zambia, where he finished medical school. After years in exile, he

returned to Uganda to take up high-level government positions as the Minister of Health, Minister of Interior and Prime Minister. Another example is an interviewee living in the diaspora who was a student activist, fled a dictatorial regime in Togo, and went on to study peace and conflict studies and law at UC Berkeley where he was a leader in the African Student Association and co-founder of the organization Students for the Promotion of Research and Action in Africa (SPORAA).

Alumni who were socially or politically engaged in their youth in Africa often continued that activism in their international universities, participating in Africa-related associations and causes, and, to a much more limited degree, local student causes or protests. As will be discussed in the section on research question four, "value of an international education," many African alumni highly value the exposure gained from attending universities with diverse student bodies and strong histories of social and political activism. "*What I got from [name of int'l university] was an opportunity to see and view the world differently, to be less insular and to believe that I have a lot to contribute to this world.*" A particularly poignant account of the profound impact of this type of exposure comes from a South African engineer:

> "*The overall experience (apart from academic) had a significant impact on the outlook and approach to life of all our family (wife and both sons, who came with us, and daughter, who was born there). I gained the confidence to embrace cultural diversity, which was not common in South Africa then, and founded a new company that was markedly diverse for its time. More importantly, all who worked in that company were enriched and empowered by the experience. Both my son and daughter went on to marry outside the prevalent social and racial 'norms' so the '[name] university experience' continued into the next generation!*"

Other alumni cite their international student and community volunteering activities as important for understanding the ways that economic and racial injustice are manifest and combatted in the US and Canada; in some cases, these experiences were influential in their own career choices and social and civic engagement.

> "*I was able to sort of study imbalances of power and see how it is, and why it is, that the world is a certain way. And how it is that some people continue to be marginalized and the mainstream representation of those peoples. I suppose my community volunteer work gave me a good foundation for what I always wanted to do which was either child or women's rights activism.*"

Arenas of social and civic engagement

> *"So somehow, it's very rare that there's a total cut-off. It's very rare. If it happens, it must be something political, or some family catastrophe that that person might be going through. I mean it's human. You want to give back to where you're from. You want to share your successes with those guys who helped you from the very beginning."* (The Gambia)

The interviews reveal that within their professional or personal capacities, African alumni are widely involved in economic development, education, and social change on the African continent, mostly in their countries of origin, although a sizeable number have pan-African influence. Among them there is personal social mobility, but not huge wealth accumulation. Alumni who have been "lifted up" by family, sponsors, scholarships, and society at large (through government), are "giving back" with financial and time commitments, and scientific, creative, entrepreneurial, leadership and management contributions. Below are ten key arenas of social and civic engagement identified through the interview analysis, with examples and illustrative quotes from alumni residing in Africa and the diaspora.

1. **Higher education**: e.g. established new specializations, schools, departments, universities, including fields of public health, community health, law and society, biodiversity conservation.

> *"I came here for a special reason. We have a team of very senior professors retired from different universities across the globe. With our vice chancellor, I said, 'I know we can change absolutely this place.' We have done it."* (Uganda, Kabale University)

> *"When I came here, there wasn't a biostatistics unit or anything. I set up the biostatistics unit in the medical school of Stellenbosch. Work-wise, it is really great because there are a lot of exciting things to do."* (Zimbabwe in South Africa)

2. **Authors of books/articles**: e.g. wrote academic and popular books on African economic and political development; essays and articles on Pan-Africanism; novels and short stories on African and African diaspora themes; dissertations on Africa-related topics (see profile of Sarah Manyika).

> *"My essays were all published. So the first essay is called* Africa's Education Enigma: The Nigerian Story*. So that's really about me and my 15-year-old question, why my parents were poor in Nigeria at that time even though books were saying, if you are in a country with human capital you should have returns."* (Nigeria, in diaspora)

3. **Community development and empowerment**: e.g. improved access to HIV/AIDS information and basic services (see profile of Daniel Kwaro); engaged communities in MDG/SDG goal and target-setting.

"I still contribute to work with various groups of women, and talk about my other passions of preventing sexually transmitted infections, reproductive issues, HIV transmission for that matter, church groups, women's organizations, and I also work with disadvantaged groups wherever I find them. Orphanages and orphan groups, visiting these kinds of groups to advise and provide clinical care advice when asked." (Uganda)

4. **Non-profit organizations**: e.g. social entrepreneurs/founders of non-profit organizations based in Africa or with African "nodes," funded globally and locally (see banner on Chris Ategeka).

"*Over 90% of disabled people are unemployed because of immobility. We built tricycles for people with disabilities, and that went well. Then I realized that when they get to the hill, they need someone to push them. I thought 'How about I create a little engine on the wheelchair?' It became very expensive but it worked. That evolved to another product, to ambulances, to bicycle ambulances. We then realized that people had problems seeing doctors. They took hours or days before actually seeing a doctor. How about if I designed a hospital and brought it to the people? That is where the mobile idea came from. I designed over 20 products, but the health side is pulling more of my strings.*" (Diaspora and Uganda, founder of *Rides for Lives*).

5. **Volunteering in communities of origin**: e.g. role models/motivational speakers; church-based activities to support the poor; sanitation and water provision; building and support of schools, orphanages, community centres, job training, youth employment.

"*I also visit schools. I give motivational talks, especially right in the rural areas in the village where I come from. When I go to the village, it's part of my giving back. I'm trying to drum up interest in education. So I select a school and just visit and talk to them. Find out challenges, find out why they don't study, complete school, can't go far. I try to encourage them.*" (Uganda)

"I'm working now in an association to provide support to my home village. The village of my family. So we build some development projects whether it's helping access water, or access schools, or classes, and we provide some equipment for the health centres. And the last thing we are trying to do is provide opportunities for young people to have jobs." (Côte d'Ivoire)

6. **Bridging African and international institutions**: e.g. promoted African–US/Canadian university student and faculty exchange programs; joint research collaborations with US/Canadian universities and governments, Africa-based "nodes" of international programs and organizations.

"Actually it turned out to be the most popular study abroad program for UC Berkeley. It was called Peace, Conflict, Environmental and Culture (PCEC). I was one of the faculty members and coordinator." (Kenya)

"*And I put everything in the same database so people can see who's doing what. I will also try to get universities connected, exchange of students, and you build a platform where people can go to connect and get information. But to be the bridge between the universities in Senegal* [and US universities]. *We started a related project... We called it 'Enabling African Universities.'*" (Senegal, in diaspora)

"*They were looking for someone to start that program in common property in forestry. Most of the work was by us. We wrote the protocols from here. We were the first center (East Africa), and from here, we started forming other centres. It was called IFRI.*" [Int'l Forestry Resources & Institutions, founded by Elinor Orstrom, Nobel Prize Laureate].

7. **Social/economic development through international agencies:** e.g. held Africa-related assignments within the United Nations, Economic Commission for Africa, World Bank, CDC and others (often global careers in and outside the diaspora and country of origin).

"*I was in the African region working on what they called the Human Development Project. So this was a combination of human health, nutrition, population issues, educational issues, and I mostly worked on Ethiopia.*" (Uganda, World Bank)

8. **Remittances/philanthropy:** e.g. remittances and financial support of own family members;
family foundations; fundraise for charity and non-profit organizations in and outside of Africa (see profile of Ekua Bannerman-Richter, Ghana).

"*At least in my family and maybe in some Mozambican families, you are not successful on your own. You cannot be successful and just sit there and be happy. You wouldn't even be happy. It would haunt you. You know that there are people there who need you. Sometimes, I feel that my money is not enough. Family is an ethical responsibility. Even now, I still wire money back. I try to encourage them to start a business and I can fund them. I don't need anything. It is for them.*" (Mozambique, in diaspora)

"*We are running two projects but the school shoes is the one that I initiated. I remember as a high school student you know, myself not having shoes or wearing those old shoes was an, an embarrassment and sometimes you could be sent home if your shoes were too old or looking funny. So I suggested to these women [in the US] I could start online you know, a project for that. And that has gone well. It has remained very, very active and I'm so happy about that. It makes me feel better like you know at least I'm doing something for people back home.* (Kenya, in diaspora)

9. **Advocacy:** e.g. changed laws, policies and governance structures; gender justice; human and civil rights (African-Americans, disability, children, slum dwellers, farmers, workers); advocacy for creative voices to be heard.

> "*I remember one of our biggest advocacy issues was the delta. They wanted to start farming that would destroy the delta ecosystem. We said 'no!'*" (Kenya)

> "*So to the extent that I am supporting her project, and projects like that, it's because I am also very concerned about local issues from race relations to homelessness in San Francisco.*" (Nigeria, in diaspora)

> "*And so the idea is to have these smaller community-based homes so that the disabled people are not shut away, they are in the community as long as possible. But there's a lack of support for it. ...And we then started a process of engaging the government, including a series of meetings with the president of Western Cape... And from that we've actually come to form partnerships and mobilized 40 million grand.*" (South Africa)

> "*Women in Liberia organized market women, talked to them, convinced them, that we have one chance to make a difference for ourselves, and to make a difference for Africa. If this woman can get in [Ellen Johnson-Sirleaf], we as a country will be the first to have an African female president. And you would be the ones to make that difference. If you don't do it, we can lose, and all sit down here, and leave the men to always control us. They got the point.*" (Liberia)

> "*So I did four years as communications director and four years directing the Center for Prevention of Genocide. Really trying to figure out how can we create a mass movement for genocide prevention. Which is a fantastic area. Again, it's like building a movement from scratch.*" (South African, in diaspora)

10. **Promoting youth leadership and mentoring youth:** e.g. encouraged youth participation in agriculture, engineering and other fields; youth job training, internships, career development; mentoring of youth interested in studying in the US/Canada; training mentors.

> "*I have had some youth conferences on encouraging the youth to participate in agriculture, so most of the time I am there as the speaker, and also for International Women's Day, I always represent the women youth in agriculture.*" (Uganda)

> "*I have also been a volunteer for my own high school to get students, some of the best and the brightest, to college education in the United States.*" (Ghana)

> "*UCSF people have this training initiative to train mentors to mentor people, so they chose me as the mentor for Sub-Saharan Africa. They want to train more to be able to mentor people doing HIV research in terms of writing, publications, and things like that.*" (Zimbabwe)

Three Profiles of Social and Civic Engagement from Kenya, Ghana and Nigeria

Profile of Daniel Kwaro

Daniel was raised mainly by his mother, a high school teacher, in Western Kenya. In 1990, Daniel's father lost his civil service job due to "retrenchment" and never recovered from the loss. This influenced Daniel to choose the most stable career possible — medicine, despite his early fascination and ability with design and engineering. Daniel's grandfather sold their cattle and his mother worked at petty trading, as a side-hustle, to pay for his fees to attend Kenya's prestigious Alliance High School.

At medical school at the University of Nairobi, Daniel became a student leader of social action strikes for better educational conditions. *"I introduced a new form of strike, because mostly at that time, in Kenya, the strikes in the universities were quite violent. We would wear our lab coats, and walk through the highways in Nairobi, and block the traffic, but no violence."* Most of their demands were met. Toward the end of medical school during clinical work with patients, Daniel began to see both the power and limitations of medicine to "cure" patients suffering from poverty-related diseases.

At the height of the HIV-AIDS crisis in Kenya, Daniel was hired to head up a new program for the Family AIDS Care and Education Services (FACES) near Lake Victoria in an area with high HIV prevalence and limited HIV services. Still a major stigma, it was a huge challenge to design a system that would reach far and wide to identify sufferers and get them the care they needed. *"So I really learned a* lot of medical anthropology. *...I designed a mentorship system because we* were *shifting tasks from doctors to community health workers and needed to ensure that they were competent. We had a hub and spoke model, where you have one hub that has everything and supports a few clinics around it."*

After returning from UC Berkeley with a Masters in Epidemiology, Daniel became a Principal Research Officer at the Kenyan Medical Research Institute (KEMRI) campus in Kisumu. He was also the branch chief of HIV Implementation Science and Services (HISS) that was funded through the United States President's Emergency Plan for AIDS Relief (PEPFAR) and the Center for Disease Control and Prevention (CDC). Daniel managed over 500 people who tirelessly worked to implement innovative models for delivering preventive and treatment services to HIV patients, within a resource-constrained setting. He supported the creation of the Gender Violence Recovery Centre to manage the escalating cases of HIV-related domestic violence in densely populated slums of Kisumu.

In spite of these successes, KEMRI suffered drastic reductions in financing over a five-year period. This was partly due to a change in donor priorities. As a result, his team suffered massive layoffs. To help staff deal with the intense feelings and pressures of their jobs, Daniel and his senior staff organized weekly

staff meetings to build empathy. The staff were able to focus on the bigger goal of changing people's lives. Negotiations were made with other organizations to employ those who lost their jobs. Outgoing staff were also counseled and provided with career guidance. They received certificates of service in recognition of their dedication to serving others. As a result, over 70% of those who lost their jobs were recruited in other organizations within three months of the layoff. Many others went into business and founded innovative start-ups that required minimal capital.

Years of managing layoffs of health workers had a profound effect on Daniel's perspective on how to deliver healthcare in a setting such as Kenya, where the majority of citizens are materially poor, the burden of infectious diseases is high, the government's funding for healthcare is very low, and donor funding is unpredictable. Daniel is currently experimenting with the idea of adapting successful social enterprise models from other industries to the area of healthcare. He believes that promoting a culture of local innovation in healthcare can spur a model of healthcare delivery that is self-sustaining.

Beyond medicine and public health, Daniel is developing a commercial tropical fruit farm in the outskirts of Kisumu, engaging surrounding communities of subsistence farmers with mango production and access to export markets. He's hoping it will develop into a successful social enterprise. He believes that improvement in the earnings of households is the most critical structural change required to improve health in the community.

Daniel spends a good amount of time training and mentoring youth. In the workplace, he trains in the use of "design thinking" and the application of information technology in improving access to high-quality health services. He mentors local and international students who come to KEMRI-CDC as part of various internship programs. Having struggled through the process himself, Daniel helps Kenyans wanting to study abroad to navigate the complex application process. He also supported his five siblings to get an education and today they are all professionals.

Profile of Ekua Bannerman-Richter

Born in former Gold Coast now Ghana, Ekua moved at age 10 to Sacramento, California, where her father subsequently taught at Sacramento State University. At 13, she participated in her first fundraiser, dubbed *Walk for Development*, a 31-km walk to raise funds for community improvement. She successfully completed the walk when many failed to finish, and she found this, along with the funds she was able to raise, "*tremendously empowering.*" It started her life-long dedication to raising funds for community and other charitable causes through endurance walking and running events.

In the mid-70s, Ekua was lured into the US Air Force by the prospects of securing financial support for her college education. She was among the first women trained as aircraft ground equipment mechanics and, upon her assignment to a Fighter Interceptor Squadron in upstate New York, found

herself facing considerable resistance from her fellow airmen, who apparently deemed her an interloper on their male preserve.

She stayed the course and credits her time in the military with the confidence she feels to tackle most new experiences. Married, divorced and mother of a daughter, Ekua returned to California after obtaining a bachelor's degree (in Germany), and entered UC Berkeley to study law, supported by a university scholarship and the benefits she enjoyed under the GI Bill as a Vietnam Era veteran.

Two years into her studies, Ekua decided to augment her law degree with an MBA when she realized that many corporate clients felt frustrated by legal counsel who didn't seem to grasp the business exigencies that drove many corporate decisions. She funded her continuing graduate studies with the pay from her work as a graduate student instructor at Haas.

At Haas, Ekua sought to highlight the apparent suppression of gay and lesbian student voices by publishing an article on the "silent LGBT community" in the *Cal Business Weekly,* of which she was the editor-in-chief at the time. Ekua continued participating in fundraising fitness events and was recognized with a special award from her peers for most money raised in the Berkeley-Stanford competition to support the Special Olympics.

After earning her JD and MBA, Ekua worked for a couple of years for Orrick, Herrington & Sutcliffe, one of the largest public finance law firms in the US at the time. She found her work as an associate in the public finance tax group to be intellectually stimulating and financially rewarding. Working to finance such public benefit facilities as hospitals, universities, affordable housing and research institutions was also emotionally satisfying.

In 1995, while writing postcards from the banks of the Russian River in Alaska, where she had flown with friends to run a marathon, Ekua had an epiphany about the cause of her increasing restlessness in suburban Sacramento. The sounds of the flowing river recalled memories of her childhood in Cape Coast, along the shores of the Gulf of Guinea, and she had long been aware of the need to strengthen her children's bonds, not to mention her own, with her native country and continent.

A divorced single parent, she moved with her two young daughters back to Ghana in 1997 and re-established her law practice there. One of her top clients is Ashesi University, founded by fellow Cal MBA alumnus, Patrick Awuah.

Recalls Ekua, "*In the first three months or so here [Ghana], I went to more funerals than I had in the entire 30 years abroad.*" The low life expectancy of Ghanaians was brought forcefully home to her when she lost the young insurance agent who took care of her account. This was soon followed by the death of her receptionist's fiancé. Though both men had been in their mid-20s, their demise was accepted with more resignation than Ekua would have imagined. Her years at Berkeley had strengthened her commitment to her physical fitness as well as to the social contract of give and take—reciprocating societal support by engaging in public interest causes.

With the assistance of her family and friends, she started The Longevity Project, a nonprofit whose mission is to increase the life expectancy and quality of life of Ghanaians. Drawing on her long experience with raising funds through

endurance events in the US, Ekua organized the Accra International Marathon (AIM).

AIM improved on many fronts over the years and is set to mark its 10th anniversary with this year's edition on October 30, 2016. The enduring theme of the multi-distance leisure sporting event is *AIMing to keep Africa Alive!* Last year, it attracted participants from over forty countries and channeled thousands of dollars to support charities still struggling to ease the devastation wrought by Ebola in Guinea, Liberia and Sierra Leone.

Profile of Sarah Ladipo Manyika

Sarah is a novelist, essayist, actor, literary critic, professor of comparative literature, and advocate for young African writers. Her latest essay, *Coming of Age in the Time of the Hoodie*, is an exploration of race issues in the US through the lens of mothering a teenage son of mixed race.

Sarah, born to a Nigerian father and English mother, was raised in Jos, Nigeria until she was 15, lived a few years in Nairobi, Kenya, and moved to the UK as a young adult. Her father was an Anglican minister and church values were an important early influence. After studying African history and French at the University of Birmingham, she met her future husband, from Zimbabwe, and traveled with him to the San Francisco Bay Area. Faced with visa and employment challenges, Sarah seized on an opportunity to pursue graduate studies at UC Berkeley in the School of Education, and received her PhD in 2000.

"Until Berkeley I had been so consumed with Africa, and what Africa means to me, and what the world needs to be thinking about vis-à-vis Africa. And I paid less attention to African Americans. I think Berkeley was the place at which I began to really look at that more closely, and, you know, say: we are all in this together, we are all black. I need to pay attention to civil rights issues of inequalities, not just thousands of miles away where I come from, but here, where I live."

In 2003, Sarah wrote and published the acclaimed essay, "Oyinbo," which is a personal journey through her discovery of race and racism since leaving Africa in 1994. She continues this exploration in her debut novel, *In Dependence*, subsequent essays, and through her civil rights activism in the SF Bay Area.

Sarah views literature, through the compelling narration of stories about contemporary and often taboo social issues, as an important vehicle for transformation. She serves as a judge for the prestigious Etisalat Pan-African Prize for Literature, recognizing talented debut novelists, and is a board member of non-profit associations such as Hedgebrook: Women Authoring Change and the Museum for the African Diaspora in San Francisco.

"The amount of time and energy I've invested in the Etisalat prize has been because I think this is so important to society. I look at what Boko Haram is doing in the North, and I can't — I'm not in a position to actually go physically and do anything, and I'm not sure what that thing would be. But I am in a

position to try and write and raise up peoples' voices. So I am very, very active behind the scenes."

Sarah's own Africa-focused essays, most recently on Ebola and the Same Sex Marriage Prohibition Act in Nigeria, approach these issues from the vantage point of an African living in the diaspora, creating a "safe space" for critical dialogue. Last year she expanded her social engagement through theatre by teaching with Anna Deavere Smith.

Both the survey and interview analyses have highlighted the many ways that African alumni of international universities are socially and civically engaged in their professional and personal lives. Some alumni are "giving back" by sharing their financial success through remittances, charitable contributions, fundraising for non-profits, and investing in family or social enterprises. A surprisingly large number, over half, play leadership roles in social and civic organizations (outside of work), many related to education and community development. Alumni in the diaspora remain socially engaged with Africa and their countries of origin to varying degrees, with few participating in this study that have "disengaged" altogether.   Professionally, a great majority (83%) of alumni residing in Africa have held positions directly related to social and economic development in Africa; as compared to 50% for alumni residing in the diaspora, of whom 26% currently have jobs related to African development.

Choices related to how alumni are socially and civically engaged are strongly influenced by their early childhood experiences and mentors, histories of social and political activism, higher education fields of study, international exposure, and their diverse return paths. The ten key areas of engagement demonstrate the diversity of contributions. Some alumni expressed less social engagement than they would like and hope to achieve in the future. Reasons are largely related to the efforts put into launching careers and raising families, as compared to volunteer activities. Alumni pursuing careers in science, business and law, particularly in the diaspora, are often concentrated on developing successful careers outside of Africa, but remain connected with family and speak of the potential for delayed return.

4.3.3 Transformative leaders: making social change happen

TRANSFORMATIVE LEADERSHIP: PATRICK AWUAH

"So I settled on higher education because I realized that most problems in Ghana that I identify with all stemmed from leadership. All these people in charge were among the 5% of the population who got to do a post-secondary education. And it sort of dawned on me that we could change the way that 5% are educated. They will be the people in charge in 20 or 30 years. So I said, 'okay let's bring in the liberal arts, let's bring in the critical reasoning."

Patrick Awuah is a software engineer, social entrepreneur and pioneer in higher education in Africa. As founder and President of Ashesi University in Ghana, Patrick was influenced by his educational experiences at Swarthmore College and UC Berkeley (MBA), his successful management career at Microsoft, and his growing personal and professional network of committed individuals. Together they brought to fruition his dream of creating a liberal arts, leadership focused university for talented and ambitious African youth, at least 25% on full scholarships. In October, 2015, Ashesi opened it's state-of-the-art Engineering Wing, and Patrick sees no problem in achieving 50-50 gender equity. For his innovative and transformative contribution to higher education in Africa, Patrick was awarded the MacArthur "genius" award.

While a large majority of alumni demonstrate some social and civic engagement, not all alumni are generating transformative change nor would self-identify as transformative leaders[36]. Yet, the evidence of transformative change through the leadership of these alumni shines through. The examples are clear and compelling. The following table, "Transformative Leaders — Making Social Change Happen," groups examples of transformative change into six categories: 1) higher education, research & science, 2) private business & social enterprises, 3) creative arts, 4) government & public service, 5) community engagement, and, 6) pan-African policy & leadership.

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[36] Participants were not asked this question directly, however, answers to whether they self-identify as social entrepreneurs is one indication (40%), and having 'high impact' on social change is another.

Table 9: Transformative Leaders – Making Social Change Happen

Sector	Leadership	Transformation
Higher education, research & science	University dept. chairs, deans, vice-chancellors, presidents	Saved dozens of neglected languages from extinction with *Language Atlas of Tanzania*; raised provincial university to first-class quality with "returnee" faculty; founded liberal arts university in Ghana and was awarded MacArthur "genius prize" for contribution to higher education in Africa.
"*We only had Master's in Public Health, now we have masters with various specialty areas, and the new PhD program. I started four or five other public health departments in other universities in Ethiopia, some with PhDs.*"		
Private business & social enterprises	Founders, CEOs and senior managers of industries. Innovators of new technologies, leaders of corporate responsibility programs	Real estate financing to extend housing to hundreds of low and middle-class families; solar energy penetration to small rural villages throughout Kenya; breaking tea factory monopsony to increase prices for thousands of farmers; creating upwardly mobile jobs for thousands; co-founded African Center for Corporate Governance.
"*My biggest achievement was bringing Western Union to Ghana and then 14 countries in Africa. It helped create thousands of jobs in Africa. Western Union was needed in Africa to help channel remittances easily to end-users. I also developed my own Ag Development Bank.*"		
Creative arts	Prize-winning and path-setting authors, architects, designers, musicians, and supporters of creative arts in Africa	Unleashed new literary talent as judge for Etisalat Pan-African Prize for Literature; designed museum to honour Nelson Mandela; developed "Art of Creative Thinking" to open the minds of hundreds of vocational training students in Kenya.
"*One thing that I found from the Art of Creative Thinking is that the little playful different ways of exchanging and writing — after a while they started opening up. Let me put it this way — a lightness of dealing with deep things. There is a bonding and understanding, and a crossing or cultures.*"		
Government & public service	Ministers of national governments, directors and chairpersons of national government agencies, key advisors to heads of state	Negotiated peace with the Lord's Resistance Army in 2009; changed public sector hiring through creating "meritocracy"; advised Moi on multi-party democratic transition; organized Liberian market women to elect first female president of Africa.
"*I had two or three meetings with Joseph Kony who has committed untold crimes against humanity, but whom Uganda was ready to bring home and ensure that he goes through accountability mechanisms that would make sure that justice is established. …So, this did us a lot of good, and since then there have not been any bullets fired by rebel groups in northern Uganda.*"		

Community engagement	Leaders of community-based, non-profit and philanthropic organizations serving disadvantaged communities.	Launched Slum and Shack Dwellers Int'l serving more than three million "slum" families globally; led campaign for residential, independent living for mentally disabled in South Africa; developed community-based HIV prevention program saving thousands of lives; started demonstration farm and rural school serving 460 students; strengthened indigenous institutions to provide community-based health insurance serving rural Ethiopia.
"Now, we have an operating system that is more sophisticated, to address problems of land tenure, infrastructure development, housing, advocacy and exclusion, livelihoods. The programs are all accessible through an operating system, which is savings, and women-driven savings. That is what gives SDI (Slum/Shack Dwellers Int'l) a much more organizationally sustainable dimension." South Africa		
Pan-African policy & leadership	African policy leaders in the United Nations and World Bank, Founders of Pan-African leadership institutions and think tanks	Developed social policy on education for Africa; facilitated the ICT revolution for Africa; led integration of social safety nets into WFP emergency relief for Africa; founder of policy think-tank to advise governments on 21st century "economic transformation of Africa."
"No, I was a pan-Africanist. The work I did at the bank was to help Uganda, Kenya, and Zambia. The reforms that I had influence on were put in place. Ghana gave me an opportunity, but I paid back to Africa." Ghana *"The demand was so great, that we decided to put a centre in South Africa, and one in East Africa. The Institute for Social Transformation promotes training for transformation. Creating critical consciousness, mindset change of Africans, new leadership."* Liberia		

4.4 Value of an international education

How has the international university experience influenced African alumni career choices and social engagement contributions?

VALUE OF INTERNATIONAL EDUCATION: SYLVIA NATUKUNDA

"On the social aspect, with my exposure at EARTH I can now go in any culture and survive, to me that was number one. About the practical bit of my education...I think when I went to university, I had a different perception about working and going to the field, but by the time I came back, I realized that it's not only about sitting in the office. For example, in the entrepreneurship courses, we had to run and start a business and I learned that if I set my mind to do something I could actually do it."

Sylvia is passionate about networking and finding practical solutions for today's farmers. She has over 10 years of experience working as an agribusiness consultant for organizations including FAO and the AgriProFocus Uganda network. As CEO of Farm Reap Ltd, Sylvia is putting into practice her goal of generating good jobs for local people. Sylvia is the national representative for the Young Professionals for Agricultural Development (YPARD). She holds a B.S. from EARTH University (2003) and an M.A. in Agribusiness Management from Makerere University (2010).

This research question was not included in the research prospectus but became an important area of inquiry in the course of developing the survey and interview instruments. The study has presented a unique opportunity, particularly for participating universities, to learn about the post-graduation "value" of an international education from participating African alumni. The analysis did not follow the three-phase model as with the other research questions. The relevant survey sub-questions are: Why did you choose to study at an international university? What experiences and components of your international education are most relevant to your work now? How did your international education impact your professional and personal networks inside and outside of Africa? Would you encourage African students today to pursue higher education abroad? The interview data also provide insights on the influences of an international education on post-graduation social and civic engagement.
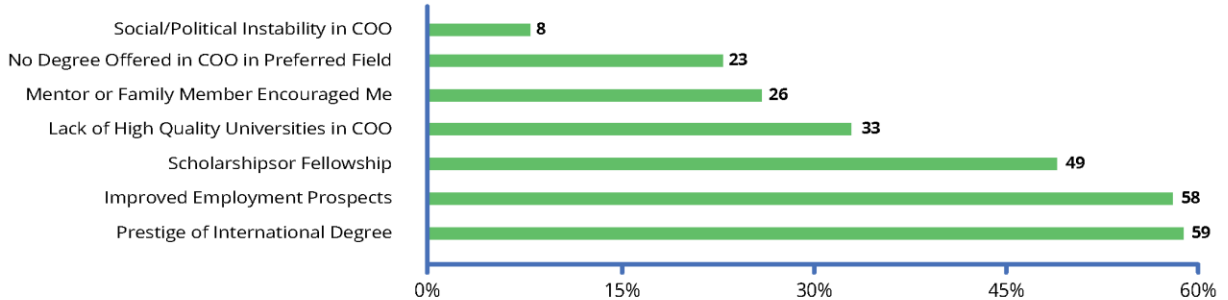
4.4.1 Survey analysis

The survey results are presented in Graphic 5 and the two tables that follow. Survey respondents were asked to rank the top three reasons why they chose to pursue an international university education. The data show a combination of pull and push factors that explain the opportunity and motivation to pursue higher education abroad. Prestige and employment prospects associated with an international education, in combination with a scholarship opportunity and the encouragement of mentors or family members, are decisive. Sometimes these pull factors are reinforced by frustration with lower university quality at home, or the inexistence of undergraduate majors or graduate degrees in the preferred field of study. As many African-based universities increase the range and quality of fields of study, these push factors will become less relevant, especially at the undergraduate level. Finally, eight percent of alumni pursued study abroad as a result of social and political instability in their country of origin, some as refugees.

A remarkably high percentage of respondents believe that their international education has impacted their career to a large extent (78%), while only five percent believe there has been very little or no impact. To gain a better understanding of this impact and its persistence, we asked which components of their international education are used most in their current career positions. University prestige and reputation, as well as academic courses, come out on top as "very often" used by 50% of respondents. For the 44% of the survey sample who work in the education/research sector (see Graphic 2), this is an expected outcome. However, the "very often" and "often" use of academic courses and research pertains to 75% and 61% of respondents, respectively, demonstrating their usefulness across sectors. One third of respondents also marked as "very useful" three components of an international

education related to exposure, values and networking: "intercultural competencies," "mission and values" and "international networks". Experiences gained with service learning continue to be useful sometimes, or more often, for 60% of respondents, with internships, at the bottom, continuing to be useful sometimes or more to 50% of respondents, and not at all useful to the other 50%. These lower numbers may be explained by the absence of these experiences for many alumni, particularly those attending international universities before these opportunities became widespread.

5. VALUE OF AN INTERNATIONAL EDUCATION

WHY DID YOU STUDY AT AN INT'L UNIVERSITY?

Social/Political Instability in COO	8
No Degree Offered in COO in Preferred Field	23
Mentor or Family Member Encouraged Me	26
Lack of High Quality Universities in COO	33
Scholarshipsor Fellowship	49
Improved Employment Prospects	58
Prestige of International Degree	59

(axis: 0% – 15% – 30% – 45% – 60%)

TO WHAT EXTENT HAS YOUR INT'l EDUCATION IMPACTED YOUR CAREER?

Pie chart: 5%, 17%, 78%

KEY
- LARGE EXTENT
- SOME EXTENT
- NOT AT ALL OR VERY LITTLE

KEY
- VERY OFTEN
- OFTEN
- SOMETIMES
- NEVER/RARELY
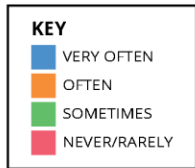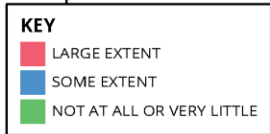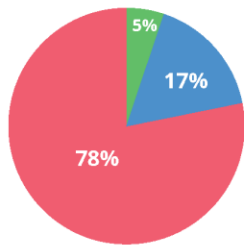
HOW OFTEN DO YOU USE THESE INT'L EDUCATION COMPONENTS IN YOUR CURRENT WORK?

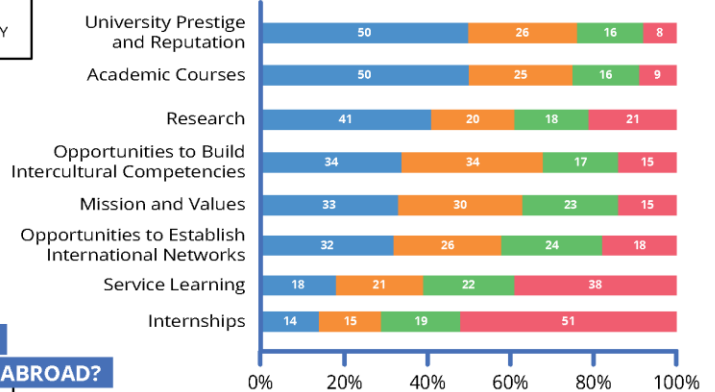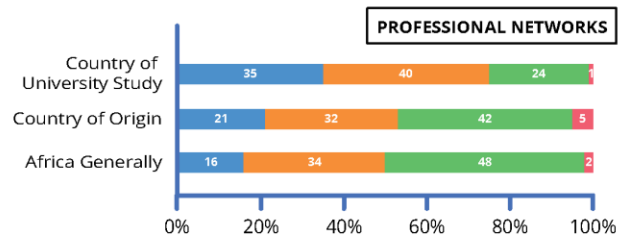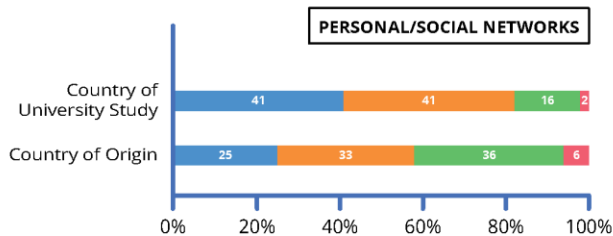|	Very Often	Often	Sometimes	Never/Rarely
University Prestige and Reputation	50	26	16	8
Academic Courses	50	25	16	9
Research	41	20	18	21
Opportunities to Build Intercultural Competencies	34	34	17	15
Mission and Values	33	30	23	15
Opportunities to Establish International Networks	32	26	24	18
Service Learning	18	21	22	38
Internships	14	15	19	51

(axis: 0% – 20% – 40% – 60% – 80% – 100%)

ON A SCALE OF 1 TO 5, HOW DID YOUR POST-GRADUATION EXPERIENCES COMPARE WITH PEERS WHO DID NOT STUDY ABROAD?

	N	MEAN	ST DEV
FINDING A FIRST JOB	216	4.40	0.88
CAREER ADVANCEMENT AND PROMOTION	227	4.32	0.92
MAKING A POSITIVE DIFFERENCE IN COO	215	4.08	1.19

1 = MUCH WORSE OFF
2 = SOMEWHAT WORSE OFF
3 = NO DIFFERENCE
4 = SOMEWHAT BETTER OFF
5 = MUCH BETTER OFF

KEY
- VERY POSITIVE
- SOMEWHAT POSITIVE
- NEUTRAL
- VERY/SOMEWHAT NEGATIVE
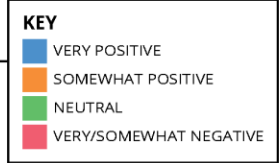
HOW HAS AN INT'L EDUCATION IMPACTED YOUR SOCIAL AND PROFESSIONAL NETWORKS?

PERSONAL/SOCIAL NETWORKS

	Very Positive	Somewhat Positive	Neutral	Negative
Country of University Study	41	41	16	2
Country of Origin	25	33	36	6

(axis: 0% – 20% – 40% – 60% – 80% – 100%)

PROFESSIONAL NETWORKS

	Very Positive	Somewhat Positive	Neutral	Negative
Country of University Study	35	40	24	1
Country of Origin	21	32	42	5
Africa Generally	16	34	48	2

(axis: 0% – 20% – 40% – 60% – 80% – 100%)

The study was also interested in learning how surveyed alumni compare their own post-graduation experiences with peers who did not study abroad.

These are subjective opinions, not verified with surveying of the peer group. For three categories — finding a first job, career advancement, and making a positive difference in country of origin — alumni were asked to rate on a scale of "much worse off" to "much better off" how they compare themselves to their peers who did not study abroad. Looking at the mean values, all three fall between "somewhat better off" and "much better off" (4.4, 4.32 and 4.08, respectively). These results confirm the previous findings, both that an international education is associated with improved employment prospects (irrespective of location), and that key components of an international university experience continue to be useful in their current work. Whether because of prestige and reputation, the academic skills gained, intercultural competencies or international networks, or a combination, the majority of surveyed alumni are confident that the international university experience has served them well.

The final set of charts in Graphic 5 report results on the impact of the international education experience on social and professional networks in the country of university study, country of origin, and Africa generally (professional networks only). We have seen the critical role of international professional networks in previous research questions, particularly in expanding career opportunities for alumni. We have also seen how professional and personal networks are called upon to marshal resources to invest in businesses and non-profit organizations on the continent, and how university networks, in particular, enable enduring and productive global research collaborations. Personal networks are a prominent way that alumni learn of job opportunities, and, for some, pave the way to an eventual return to Africa after extended periods in the diaspora.

So, how are networks impacted by study abroad? The survey results are as expected with respect to "country of university study," with "very positive" or "somewhat positive" impacts on both personal and professional networks for large majorities (82% and 75%, respectively). The next finding is a positive surprise and, to some degree, addresses concerns that international study might negatively impact networks in countries of origin and Africa generally. About half of alumni believe their international university experiences have had a "very positive" or "somewhat positive" impact on their professional networks in Africa, the other half largely saying the impact has been "neutral." Further analysis would be interesting in order to delve into the ways that international university experiences have created or strengthened networks in Africa. We know from the interviews that a number of alumni have benefited from networks associated with particular scholarships or fellowships with a strong presence in Africa. Also, for many, strong bonds of friendship formed with fellow African students during the course of study have endured years and decades after graduation.

4.4.2 Interview analysis

Limited time did not permit a complete qualitative analysis of research question four as planned in the Qualitative Mode of Analysis (Appendix 14). Of the 21 codes identified as relevant for this question, five were selected for review: academic quality, degree applicability/relevance, international collaborations/networking, benefits of an international education, and disadvantages (or challenges) of an international education. In addition, relevant excerpts were pulled from codes reviewed for the previous research questions.

Five major themes emerge from the interview analysis on the perceived value of an international education, illustrated by the sample quotes in Graphic 5A and below each theme. While all interviewed alumni expressed positive memories and benefits from their international education, the interviews also reveal serious challenges faced for some, both academically and socially. Illustrative quotes of these challenges are provided at the bottom of Graphic 5A. Both the perceived benefits and challenges of an international university experience form the basis for the advice they offer to current and future African students, discussed in the next section.

5A. VALUE OF AN INTERNATIONAL EDUCATION

CRITICAL THINKING

" There's much more direct interaction (in the US). It's the teacher and the learner. You have more access to data. And what amazed me was that it was easier for me to get data on Senegal than in Senegal. (Senegal) "

" To tell you frankly, I didn't come here to study social work. At the university at Makerere, we've been using textbooks in economics written by scholars from this campus and all I wanted to do was to rub shoulders with these people. I came here to learn how to think. And I have achieved what I came here for. (Uganda) "

" I don't know if it's the same with other Western countries but I know for sure here, in Canada, [professors] give you room to express yourself. (Nigeria) "

" The universities, at least here, they give you access and tools to see these things. You need the tools to see a much bigger picture than the little town that you come from. (Kenya) "

PRACTICAL LEARNING

" My approach on the impact of agriculture was not the same before I went to EARTH university, also my perception about how agriculture can be diverse in sustainable ways, it is something like, you are a blind guy, then you get new tips, you integrate many concepts in your mind that can help in contributing to the development of your country. (Uganda) "

" It changed everything. I think it's the best (journalism school) I have seen. I like the way they put emphasis on the practical side. How to grab a camera, how to deal with lighting. Even learn to build a website, my own website - I built it. (Burkina Faso) "

PRESTIGE/BRANDING

" Like it or not, it's a brand. Plus the language. If you have English, it's a plus, MSU is also a brand in agriculture. US in itself is a brand in education. So, one way or another, it was a happy occasion for me to have that chance. (Rwanda) "

" People think when you go to USA, you get the best quality of education. That's the belief. Because you know in US they have facilities, they have libraries, they have trained professors, they know there is no cheating, you cannot bribe a professor. Even here at the workplace, I can tell you if you are trained in the US and did your stuff, seriously,...you do very well and people can see you're doing a really good job. (Ghana) "

EXPOSURE/DIVERSITY

" It was the first time I lived with people of other nationalities and races. Berkeley taught me to appreciate the oneness of people and that perceived differences are an illusion. (South Africa) "

" The world is a global village. There is no piece of this globe that can be viewed in isolation, and you need to know what the rest of the world is do a good job here. As much as we want students, once you get your Master's, I say "now try the other universities overseas, so you can get that international exposure. (Uganda) "

" I looked at it not just as a place to learn new skills but I wanted to immerse myself completely into the culture of Americans,I wanted to be culturally competent, I really wanted to understand what America's all about. (Kenya) "

CHALLENGES

" When I graduated, I was the only black person, whether African American or African, who graduated from the mechanical engineering department. I was the only one in the whole year. When you go to class, you feel different, and if you miss class, the professor knows that you are not there. (Ghana) "

" So, most of my younger sisters and brothers rely on me to help them. When I informed them I am leaving for one year, I won't be getting paid and all this, it was not only me, it was the whole home environment. I was disturbing that environment, so I had to try to make sure it was not brutal. (Ivory Coast) "

" There are times when I would give up because it is a very tough place. I felt that there was no place for us from other countries to get support. I felt that most of the students there were from the Asian communities. They did not want to work with us. They thought that we were not intelligent enough. (Kenya) "

" It was a huge shock. Quickly, I realized, I made the dumbest decision in my life. When I would read I had no problem, but when people would speak I had a hard time understanding. They (MSU faculty) helped me manage that shock, and learn to write like in the American system. I knew I could not fail. Because I had never failed in my life. (Senegal) "

1. **Prestige and reputation**
   - A factor in deciding where to study, and
   - A factor influencing the ease of the post-graduation transition into employment and future career opportunities (in Africa and the diaspora).

The following quotes and those in 5A under "Prestige/Branding" of alumni from Ghana, Nigeria, Uganda, Rwanda and Kenya reflect the generalized belief that a degree from a US or Canadian university is prestigious throughout Africa (primarily Anglophone countries, but also Rwanda, Cameroon, Senegal, Togo and Côte d'Ivoire in our sample). The quote in 5A from Ghana expresses the view that a US degree comes with a reputation for quality and integrity as compared to some local universities where these qualities are lacking. Concurring with the survey results, the interviewees believe an international degree was very beneficial in their post-graduation transition to employment and subsequent career advancement. While some of the partner universities are recognized world leaders in particular fields, which may carry weight in hiring and promotion, alumni from all of the six universities expressed prestige as an important value of their international education.

> "*A US degree definitely does help. Berkeley, Stanford, MIT are the brands that are recognized in computer science in Africa.*" (Ghana)

> "*[Employers] all know the name and when they see that on the resume, it automatically leads again to credibility, so it's much easier in terms of getting a job.*" (Nigeria)

> "*I take a step back, but at the end of the day, you have a piece of paper and the knowledge you acquired. When you have that piece of paper, people want to hire you. It puts you above everyone else when you come from abroad.*" (Uganda)

2. **Critical thinking**
   - Inter-disciplinary methods and content
   - Horizontal faculty-student interaction
   - Self-confidence as a scholar

All of the interviewees cited overall, high-quality academic experiences. Many remarked on their initial nervousness and later excitement with the relatively "horizontal" pedagogy, where students could engage professors in discussions and express dissenting viewpoints. Often the alumni, even decades after graduation, recalled particularly meaningful professors and courses. Alumni who took advantage of electives and interdisciplinary courses to expand their knowledge and perspectives expressed how important they were for developing the confidence to handle diverse challenges in the workplace. The quotes in Graphic 5A under "Critical Thinking" and those below illustrate how the international university experience expanded their capacity to think critically, express themselves, and gain a "much bigger picture" of the world than they had when they arrived.

"American universities are the best, and I've been around. I know, because they encourage you to do the critical thinking." (Kenya)

"You ask me, did I find my Berkeley education useful? Of course I did because I acquired the analytical tools to carry out further political analysis. I can apply this to Tanzanian politics as much as I can apply it to understand American politics." (Tanzania)

"The multidisciplinary skills that the degree provided me [at EARTH] were necessary to make me a versatile professional who can easily face multifaceted employment challenges." (Uganda)

"I was able to learn a different approach to teaching. In this workshop they teach student learning approaches, how to engage with students in classes, not the traditional monologue whereby a teacher comes to class to tell the student everything, doesn't interact with the student, writes on the board. I was used to this to some degree before I came to Canada and that experience was very, very important for me." (Nigeria)

"All my courses were relevant to my country, to my thinking, to my orientation. That's why I came to Berkeley, period. So when you have a mix of classes and researchers, interact. And learn from this experience to help you develop." (The Gambia)

"He gave me a computer and supported me, and would be very rigorous in evaluating my work. And he would discuss it with me, and make my opinion count, and we would discuss as colleagues. For a young student, that was great for my confidence. And I defended [at MSU], and then wrote an article for a peer-reviewed journal, and all of these things made me feel like I could become a good scholar." (Senegal)

3. **Practical learning**
   - Applied and field-based methods
   - Problem-solving
   - State-of-the-art facilities/labs
   - Group work, team-building skills

The quotes in 5A under "Practical Learning" and below show the high value alumni put on the practical approaches and methods used in their coursework across fields, but especially in engineering, business, and the agricultural and health sciences. Particularly for those that obtained their first degrees in Africa, the more applied teaching methods and emphasis on problem-solving was appreciated and useful in their subsequent careers across sectors. Alumni of EARTH university emphasized how the practical side of their education — the agricultural field work and internships, the entrepreneurship courses, the leadership training — prepared them very well for a range of good jobs and entrepreneurial opportunities back home.

"So she taught a course on problem solving and I can't even begin to stress how important that class was to me." (Ghana)

"I would say that I grew a lot in Costa Rica, my leadership experience I cannot give a measure, I was exposed, due to my trajectory, how I came, all the problems I had before, it gave me a lot of boldness, leadership, courage on how to start things on my own." (Nigeria)

"EARTH university has played a big role, since the knowledge I gained from there is something I am now applying, such as dealing with people; we had a module in fourth year to work with second-year students to be their leader. Now I am working and managing people." (Kenya)

"I have, from early on, this interest in solar, but the whole question of energy access, looking at it from a theoretical perspective, and then how it's connected to our development and climate change, and how to improve business models that can design and deploy these solar solutions to local areas. All these got inspired and reinforced." (Kenya)

4. **Exposure and diversity**
- Global perspectives and ideas
- Intercultural competency and tolerance

Undoubtedly, one of the most important values of an international university education is the exposure it provides, not only to new ideas and knowledge but also to the new culture of the country of study and the diverse university student body. This is a theme mentioned by all of the interviewed alumni across the six partner universities. For many of the alumni, their international university experience exposed them for the first time to people from every continent on the globe, and, as friendships developed, to a diversity of perspectives on issues that sometimes made them question their own held views. A fascinating illustrative story of the impact of exposure to new people and ideas is told in the box below, "Building tolerance: the story of South African students at UC Berkeley."

Exposure led to the breaking down of stereotypes on both sides, as African alumni were exposed to new cultures and US, Canadian, and other foreign students were exposed to African students in and outside of class. The value of exposure cut both ways, building intercultural competency and tolerance on the part of the African alumni and their fellow non-African students. However, deeply held attitudes and behaviours change slowly. Some alumni remembered painful experiences with prejudice and intolerance, and experiencing for the first time being "black" in a majority non-black environment (Graphic 5A, Challenges, first and third quotes).

Building tolerance: the story of South African students at UC Berkeley

An interesting special case of building tolerance has occurred at UC Berkeley, with a long tradition of educating South African students going back to the early 1970s. This study includes interviews with white South Africans (Afrikaans, English, others), who studied at UC Berkeley during the Apartheid regime, as well as "coloured" and black South Africans, who were first able to study abroad starting in 1991 during the transition period to a free South Africa. In the 1970s and 1980s, a majority of the white South African students did their master's degrees in engineering and computer science specializations, sponsored by the Council for Scientific and Industrial Research (CSIR) or specific employers. As one of the top engineering and computer science universities in the United States, UC Berkeley was a preferred destination. These relatively privileged students, coming from the segregated and protected environment of South Africa to UC Berkeley during a period of fervent political activism (including the student anti-Apartheid movement), were certainly exposed to a whole new world. *"Berkeley equipped me to work with men from all different countries, Englishmen, Chinese, South Africans, and all races. It was really fantastic. Being a Berkeley graduate made all the difference."*

The white South Africans interviewed for this study held strongly contrasting views on Apartheid, forming a continuum from those who were essentially supporters or apologists for the regime, others who were highly critical but non-activists, and still others who were activists against Apartheid within South Africa and left the country under pressure, if not in official exile. The Berkeley graduates have done well in post-Apartheid South Africa, both in leveraging their degrees and technical skills, and in navigating their increasingly diverse and open society. Among the activist white students who attended UC Berkeley, most returned and several have become important social change leaders within South Africa, such as David Harrison, who won the Walter and Elise Haas International Award in 2005 for his work as CEO of LoveLife, a youth leadership HIV-AIDS prevention organization promoting healthy sexuality.

The coloured and black South Africans who came to UC Berkeley in the 1990s were "pioneers," forming part of the cadre of professionals to return to their country with new opportunities in the public, private and academic sectors. One of them, Philip Hendricks (profiled in the Career and Life Trajectory sector), is a manager of one of the largest engineering design companies in all of Africa. The first black South African to attend UC Berkeley, supported by a USAID scholarship, overcame a childhood of poverty and limited opportunity to obtain her PhD in Public Health, and has gone on to have a fulfilling, internationally recognized career at the University of the Western Cape. Unlike her South African predecessors, she went through a different type of culture shock when she came to Berkeley: *"The challenge is the different*

> *system of education. For example, I never touched a computer or printer before. ...Remember, we were doing statistics. If you are looking at the history of South Africa, we were not allowed to do mathematics."*

The quotes in Graphic 5A under "Exposure/Diversity" and below from alumni from South Africa, Uganda, Kenya, Cameroon, Burkina Faso and Rwanda, further expand on the value of exposure to new ideas and cultures. The last quote adds another dimension, the value of exposure to a more "democratic" society with less rigid class boundaries.

> *"There is a lot to learn from people from diverse backgrounds, because we don't have all the x-factors here. You have these 55 countries with different backgrounds, so that exposure is quite enriching. It's not only the technical knowledge, but you learn how people think, how people do things, how people work hard, and succeed. You get exposure beyond inside the classroom."* (Uganda)

> *"I had an opportunity to come and discover myself and develop a sense of identity and confidence and take views which were global views from my stay there [at the International House]."[37]* (Cameroon)

> *"Africans are very conservative. Had I not been to Berkeley maybe I wouldn't be thinking this way. Because I had to be in a place where my mind got to be challenged every day, and finally you learn so much about the world you are in, not everything falls right, and Berkeley really helped transform me. And maybe that's one of the reasons that I wanted to go to Cal, to be more liberal."* (Burkina Faso)

> "*In fact the first time I went to US I saw the chairperson of the department chatting with a cleaner (at MSU). They're talking about football which took place a previous weekend. They were laughing. And in Rwanda, it's really hard to see a boss talk to a lower-class, janitor. And I said okay you have to value human beings...and you have to love your job. If you're janitor, if you're a cleaner, clean without supervision. Make sure everything you do, do it well. That's how you're going to better the country."* (Rwanda)

5. International collaboration and networking

The importance of leveraging an international education to form personal and professional networks inside and outside of Africa was shown in the survey data above (Graphic 5), and earlier in the discussion on factors influencing post-graduation return decisions ("International Collaborations and Networks: A Lifeline," p. 49). International collaborations have also been pivotal in the lives and careers of the social change agents and transformative leaders profiled in the section on social and civic engagement.

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[37] This alumnus now sponsors an annual scholarship for an African student to reside in the I-House.

One relatively simple but highly impactful collaboration cited by several alumni has been the building up of local university libraries with donations of books from their respective international universities. Another example is when there are programs that sponsor multiple rounds of scholars from a particular country or institution (as with the Fogarty AITRP Program or USAID sponsorship of agricultural scientists, quote below), leading to a "critical mass" of graduates who support one another's career and contribute to institution-strengthening in the home country. The quotes below from alumni from Nigeria, Kenya, South Africa, Uganda, The Gambia and Mozambique illustrate these and other examples of the benefits of creating and maintaining international personal and professional networks.

"*After a long time with disconnection, we were able to connect through [Professor, MSU] again. When he was retiring we talked and we communicated by mail. He actually sent me over 80 titles of his book which I have passed on to the library for teaching reproduction health and endocrinology. He actually met the coastal shipment although we later refunded him.*" (Nigeria)

"*He went to Berkeley and came back. I went to Berkeley and came back. Again, we are working together. It is more of a relationship where we both know our strengths and weaknesses and we can work well as a team. The support is there. You consider him more as a friend and colleague than a boss. That boss thing really doesn't apply.*" (Kenya)

"*Listen, it was very beneficial for my career, no doubt about that. Played a huge part in coming to Pretoria through the contacts through the university so it still plays a huge part of my life.*" (South Africa)

"*For example, this network [from graduate school], has helped me in my new position as a professor and...international research projects.*" (Uganda)

"*I met the County Director [where I work now] in Costa Rica while I was in my first year. He gave me the opportunity to do my internship and later gave me a job. My network now is wide compared to before I came to EARTH University.*" (Mozambique)

Challenges

As mentioned in several places in this report, an international university experience also comes with challenges and hardships, particularly for students with financial obligations back home and/or to pay university fees or living expenses. Alumni who studied with full, comprehensive scholarships (est. 40% of interviewees) had more time to concentrate on their studies and research projects; they pursued work for experience more than necessity. Others with partial scholarships (covering some years but not all, or provided through

university student teaching and research assistantships) reported anxiety at having to make ends meet, a problem faced by university students generally but exaggerated for foreign students who have fewer resources and less family support. In general, alumni who studied in graduate programs faced fewer adjustment challenges than the undergraduates, largely because they had the maturity to deal with social issues, such as racism and homesickness, and a more advanced capacity to focus and overcome academic challenges.

The quotes at the bottom of Graphic 5 from alumni from Ghana, Côte d'Ivoire, Kenya, and Senegal illustrate the types of specific challenges African alumni have faced in their international university experiences. All of our interviewees were eventually able to overcome whatever challenges they faced sufficiently to obtain the degrees they pursued. In another study, it would be interesting to speak with the considerable number[38] who did not succeed and dropped out for various reasons.

Summary

We have seen that alumni following all four return paths have maintained strong connections with countries of origin, including those remaining in the diaspora, some of whom delayed return for decades but eventually did return to Africa, making important contributions with their accumulated wisdom, resources and networks. Members of the diaspora are primarily "giving back" through financial contributions in the form of remittances, investments and charitable contributions, but also as high-level professionals in international agencies serving Africa, such as the United Nations and World Bank, and as professors, authors and artists deeply engaged with African institutions and communities.

The study shows that alumni who returned to Africa are "giving back" across a wide diversity of fields and sectors, putting their international knowledge to work in most cases. Some are leading truly transformative changes in government policy, corporate governance, university structures, health and education reforms, among other areas, changes that could not have been accomplished from the outside. Many of these transformative leaders who returned to Africa attribute their international education and continuing international collaborations and networks with providing them the confidence, skills and resources to endure challenging periods at home, and, eventually, succeed and thrive.

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[38] For instance, non-official data from individual schools/departments indicate that some African alumni left before completing their doctoral dissertation ("ABD").

5. Advice to Current and Future African Scholars

As part of this study, we were interested to learn what advice past African scholars in international universities would give to current and future African students undertaking similar journeys. What could current African scholars learn from their predecessors? This is of particular interest to The MasterCard Foundation Scholars Program because of the hundreds of African MasterCard Foundation Scholars studying in undergraduate and graduate programs in all of the partner universities of this study[39] (except SFU), as well as others in North America and Africa that could benefit from this advice. The survey contained a few questions on advice and the results are shown in Graphic 6.

Nearly all (98%) surveyed alumni would encourage African students (today) to pursue study abroad. This in itself is a striking commendation of the international university experience, crossing generations, geographies, return paths, and career trajectories. This general recommendation, and the specific types of advice described below, follows closely from the discussion on research question four, the value of an international education.

Alumni were asked to rank the top two reasons why they would encourage current African students to pursue study abroad. The four most frequently marked responses are shown in Graphic 6. These responses largely mirror their own motivations when embarking on an international education as reported earlier. "Higher academic quality" is the top ranked response (62%) followed by "skills/knowledge needed in Africa" (59%). "Access to global opportunities" comes third as a motivation to study abroad (39%). The fourth reason, "job prospects in Africa are better," drops off to just 10%, suggesting that African alumni of the future, as with the past, will need to consider multiple motivations for returning home, not just job prospects and remuneration. For future research we could return to the qualitative data and map these responses by countries of origin, gender, current residence, field of study and year of graduation to examine differences in perceived job prospects for alumni sub-groups.
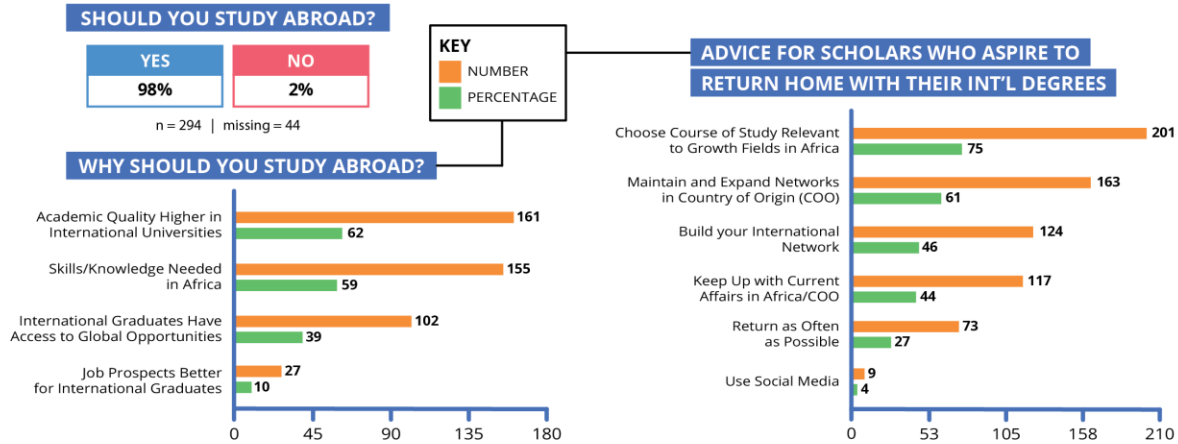
A second survey question with six response options asked for specific advice for African scholars aspiring to return home with their international degrees, where "home" refers to countries of origin or elsewhere on the African continent. The responses reported in Graphic 6 are consistent with earlier discussions on the value of an international education, emphasizing relevant coursework, maintaining/expanding networks in country of origin, and building

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[39] See The MasterCard Foundation Scholars Program website for more details on the university partners and numbers of scholarships over the next ten to twenty years (http://mastercardfdnscholars.org/).

international networks. Keeping up with current affairs in Africa was also advised by 44% of alumni, and about one quarter advised returning to Africa as often as possible during the course of study. Using social media was not seen as particularly important for ensuring a successful post-graduation transition home, even among the younger alumni, showing that personal connections are paramount. Advice to "choose course of study relevant to growth fields in Africa" (Graphic 6, "Stay Engaged," second quote), was the single most common piece of advice for scholars who aspire to pursue careers within Africa. The first quote under "Stay Engaged" in Graphic 6, expands on this theme to advise students to conduct research using data from their countries of origin as a key way to stay engaged and relevant.

6. ADVICE TO CURRENT & FUTURE AFRICAN SCHOLARS

"*Learn and observe as much as possible, then go back and make a difference.*"

SHOULD YOU STUDY ABROAD?

YES	NO
98%	2%

n = 294 | missing = 44

KEY
NUMBER
PERCENTAGE

ADVICE FOR SCHOLARS WHO ASPIRE TO RETURN HOME WITH THEIR INT'L DEGREES

Choose Course of Study Relevant to Growth Fields in Africa — 201 / 75
Maintain and Expand Networks in Country of Origin (COO) — 163 / 61
Build your International Network — 124 / 46
Keep Up with Current Affairs in Africa/COO — 117 / 44
Return as Often as Possible — 73 / 27
Use Social Media — 9 / 4

(x-axis: 0, 53, 105, 158, 210)

WHY SHOULD YOU STUDY ABROAD?

Academic Quality Higher in International Universities — 161 / 62
Skills/Knowledge Needed in Africa — 155 / 59
International Graduates Have Access to Global Opportunities — 102 / 39
Job Prospects Better for International Graduates — 27 / 10

(x-axis: 0, 45, 90, 135, 180)

AT UNIVERSITY

BE YOURSELF
" You don't have to pretend to be somebody you're not. You're different, there's no doubt. But you don't have to feel the need to copy someone else to fit in. "

FOCUS AND SEEK SUPPORT
" There is so much to digest, so much information. You need to be focused. You need to ground yourself. If you are finding that you are having some fears, please work on them. Not personally, but discuss with people, parents, uncles, teachers, mentors... whichever. "

NETWORK AND BUILD RELATIONSHIPS
" Build the relationships (w/faculty) that you will need not far in the future.....also have that research and community service experience. As soon as you get in, try and tackle these three things in parallel. Another thing is to network, network, network. "

STAY ENGAGED
" Use data sources from your country of origin, remain relevant to the needs of your country, and stay engaged in activities in your country. "
" Select courses that are relevant to development in Africa. "

FOR YOUR CAREER

USE CAREER CENTER
" I would recommend that everyone reach out to the career services on their campus. You can find jobs on the continent .... there are a lot of companies who do business all over. They want to hire people who have the knowledge on the ground (as Africans) and at the same time the Western training.... "

PREPARE FOR MULTIPLE CAREERS
" Get involved as much as you can. We know that most people are going to change career two or three times in their life - what you don't know is what those careers are going to be. If you just stay in your own discipline, specifically a scientific discipline, there's the danger of being too narrow. "

GET YOUR HANDS DIRTY FIRST
" A Berkeley degree can make you rise quickly to a management position. But I'd like to discourage you from that. You will waste your talent. Get your hands dirty first. "

LEARN TO ADAPT
" If you're moving back, learn to adapt. It's not easy; the comforts are different so find alternatives, apply wisdom and be ready for an adventure. It's worth it. "

The interview questionnaire also contained a section on advice for current and future African students, oriented specifically toward The MasterCard Foundation Scholars Program Scholars and grouped into two basic questions: 1) What would you advise the MasterCard Foundation Scholars to do to maximize the benefit of an education abroad? 2) For students interested in

bringing back their knowledge and skills to benefit their country of origin, what advice would you give them to prepare for a transition to meaningful work and life on the continent? Alumni approached this challenge quite seriously, reflecting back on their own experiences and considering the changes that have occurred since their graduation to provide advice as relevant as possible to the lives and challenges of African youth today.

The patterns of advice given can be grouped into "at the university" and "for your career," with quotes from alumni corresponding to specific themes (Graphic 6). Advice under "Be Yourself" and "Focus and Seek Support" addresses challenges African students may face in adjusting to the social isolation and academic demands of international universities, particularly for undergraduates. Many US and Canadian universities, large and small, are deficient at providing adequate student services and academic advising, even more so for international students. This, plus the hesitancy of some African students to seek professional help, explain the advice to go to "parents, uncles, teachers, mentors…whichever," when students face fears. This is a deep issue with no easy answers, particularly because family members of African students are not around in most cases, but the advice is clear that crises may emerge and cannot be ignored.

The advice to "Network and Build Relationships" is a common refrain from alumni. This quote advises Scholars to be proactive early on about building relationships with faculty, including seizing on opportunities to do student research projects or research assistantships with faculty. The advice to "network, network, network" is pertinent for all Scholars, whether they intend to pursue advanced degrees, return home directly after graduation, or seek work in the diaspora. Part of networking includes doing "community service," which puts Scholars in contact with communities and resources beyond their university campuses and builds goodwill for potential ongoing relationships.

Advice for Scholars related to their careers is oriented toward Scholars returning to Africa with their international degrees. How to make a successful post-graduation transition? For those seeking careers in the private sector, the advice is not to overlook multiple resources on campus, such as career centres, to find employers seeking talent to work in Africa. For all Scholars, "prepare for multiple careers," by maximizing exposure to different disciplines and experiences and not focusing too narrowly on one major, particularly a scientific, discipline. This advice is consonant with the careers of many African alumni interviewed for this study, who have used the prestige of their degrees, and their "critical thinking" skills and networks, to pursue better opportunities with increasing authority within and across sectors, sometimes across continents. The advice to "get their hands dirty" and not assume management positions too early might avoid possible resentment by colleagues and afford

Scholars the experience they need to build their careers. Finally, Scholars are advised to adapt their material expectations to the realities in Africa: "If you're moving back, learn to adapt. It's not easy; the comforts are different so find alternatives, apply wisdom and be ready for adventure. It's worth it." (Ugandan, delayed return to Uganda).

Finally, a piece of advice that came up several times (see alumni quotes below), pertinent for The MasterCard Foundation Scholars Program and other scholarship programs, as well as prospective scholars, is a conviction that the best course of action for African youth intending to eventually pursue careers in Africa is: "first degree at home" and a subsequent graduate degree in an international university for exposure and specialization. As the quality of higher education in Africa improves, particularly in the larger middle-income countries (returning in some cases to a former era of excellent quality), alumni believe that qualified Africans should be able to get a good "first degree" education at home in most fields. Additional reasons given are: 1) to increase their knowledge of and commitment to their own countries, 2) initiate personal and professional networks that will work well for them in the future, and 3) reach a level of maturity to make the most out of a future international education experience. Together these reasons partially explain why graduate students of the past have had higher return rates to Africa. Moreover, the demographic and financial facts simply favour this course of action as demand for an international education far outweighs supply, implying the need for a shift in focus on improving the quality of African universities to serve a fast-growing youth population with higher education aspirations.

> *"I think it's good to have the first degree at home. That international exposure is quite important at the graduate level, and even getting connections."* (Uganda)

> *"My advice would be that it would be better to fund Masters and PhDs because first, that's where there is bigger need. It is now possible to get a first degree in the local universities and then if someone goes to do a master's or PhD abroad, that exposes this person to better facilities, but also secondly, I think if they go for master's or PhD, they are older, they are more focused. These kids they are still too young, I think there's a point to be made that at a later age, you are providing and thinking about giving back."* (Tanzania)

> *"For the first degree, really, if you're going to get it abroad then you're less likely to make these solid networks that might help when you get back to your home country."* (South Africa)

> *"And I think students who have had their undergrad here and graduate overseas are more likely to return, than students who do their undergraduate overseas as well."* (Ghana)

6. Policy and Programming Implications

The findings of this retrospective tracer study of African alumni of international universities have several important policy and programming implications for scholarship programs, The MasterCard Foundation Scholarship Program in particular, as well as for universities that host and educate African students.

6.1 Implications for The MasterCard Foundation Scholars Program

The MasterCard Foundation Scholars Program has evolved its thinking about how to support and implement its Theory of Change framework. The Program is adopting a more flexible approach of supporting diverse post-graduation "transitions" of Scholars, primarily, but not exclusively, into the workforce in Africa. The findings from this study concur with the need for this evolved thinking. The implications and suggestions outlined below follow from this general conclusion.

"*See how they can continue some relationships with people they have met. Some kind of professional networking. So when they return, they can join proposals, they can get some mental guidance. I'm not saying there's nothing locally but it's good to reach out and know people internationally as well. ...I think for me, those [networks] have been quite useful in terms of continuing my work here. Right now I have many people to work with, and we all evaluate each other.*" (Uganda)

1. Our research indicates that alumni inclinations toward social engagement or "giving back" were formed early in life, strongly influenced by family values and education experiences in primary and secondary school (tertiary for some). This suggests that The MasterCard Foundation Scholars Program should continue to include and prioritize evidence of these values in their **application and selection processes.** Once at the international university, experiences with service learning, volunteering, and student activism, including African student associations, will strengthen and broaden these "give-back" tendencies.

2. There are various types of post-graduation "transitions" that we can anticipate for MasterCard Foundation Scholars based on our research: i. direct return to Africa, ii. remain in the diaspora to attend graduate school or move from MA to PhD, iii. remain in the diaspora to access work opportunities, with the possibility of delayed return, iv. direct return to Africa to work, with eventual seeking of a higher degree. The challenge of the Foundation is to provide **a flexible menu of supports to meet the needs of**

these distinct paths, with twin goals of promoting individual success and continued strong connectedness and engagement with Africa.

3. An unexpected outcome of this study with important implications for The MasterCard Foundation Scholars Program is the wealth of talent and good will among African alumni of partner universities, in Africa and the diaspora, that could be tapped to support current and future Scholars. Nearly all surveyed alumni have stated their willingness to serve as **mentors and advisors of Scholars** (about 250), and at least 25% are in positions to offer substantive summer internships in their respective organizations. Interestingly, alumni see mentoring Scholars as a way for them to "give back" to their *alma mater* universities, as well to help African youth to make successful post-graduation transitions. On an ad hoc basis, this has already been successfully tried with three UC Berkeley Scholars who interned with African alumni in Kenya, Uganda and South Africa in the summer of 2015.

4. The Arizona State University-managed Scholars Community has been working with a research team to engage alumni to assist with the design of the **Scholars Community Platform**, and have held successful meetings with seven alumni to date, three in the diaspora and four in Africa. When the Scholars Community rolls out in 2016 to serve all tertiary Scholars, there will be a great need to bring on qualified and willing mentors and to step up internship opportunities. The African alumni of partner universities, MasterCard Foundation Scholars' "predecessors," would be an excellent pool to draw from with adequate planning and nurturing of the goodwill developed thus far.

5. Another programming implication for The MasterCard Foundation Scholars Program, already implemented at ASU, is to create **"vignettes" of African alumni from this study (or others as identified) to include in university partner "Capstone" and "Leadership" courses designed for MasterCard Foundation Scholars**. In the course of this research, we have seen that MasterCard Foundation Scholars are very interested to know about the career and life trajectories of their predecessors, particularly those from their countries or fields of study who attended the same institutions as them, although, as in the case with ASU, this should not be a limiting factor. There is much potential to expand this opportunity.

6. Given the growing importance of personal and professional networking for career success in and outside of Africa, affirmed by this study, **the building of a dynamic and flexible Scholars Community is a clear priority.** Many alumni have maintained close contact with friends made during study abroad; some have formed "communities of practice" that they tap into for professional and personal advice, particularly when planning transitions

back to Africa. Others have lost contact with fellow alumni and express regrets about this. The Scholars Program may wish to seek advice from alumni for designing a range of support mechanisms that will accompany Scholars during their post-graduation transition paths, including, but not limited to, the **Scholars Community Platform**.

7. Alumni who returned to Africa with strong international networks, laying the groundwork for future collaborations, have fared better under difficult conditions and thrived when conditions improved. The international networks and collaborations have been pivotal in facilitating the successes of transformative leaders. This finding suggests **the need for deliberate and proactive support for initiating and supporting lasting relationships between MasterCard Foundation Scholars and their international academic communities** (e.g. faculty, staff, students, advisors, professional associations) during their study abroad. Scholars need strong guidance on cultivating and maintaining these relationships and networks. The Foundation can work with its university partners to encourage this activity, which is already happening in ad hoc ways but leaving behind Scholars who are less able to do this on their own. Among the partner universities, **Michigan State University**[40] has already advanced a process for encouraging and coordinating research, education and development collaborations with African universities and government agencies involving their African students.

8. Alumni who remained in the diaspora or delayed return have, on the whole, maintained strong connections with Africa that include, but go beyond, remittances. Our study shows that a sizeable number of African alumni of international universities in the diaspora are seeking ways to meaningfully match and share their talents with identified needs on the continent. The potential for "brain drain" evolving into "brain circulation" is considerable and, thus far, under-utilized. The Carnegie Foundation has recognized this opportunity and responded with the *African Diaspora Fellowship Program*, connecting African academics in the diaspora with African universities in a

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[40] From Appendix 3: "There has been significant interest in the outputs and outcomes of the African Alumni study across MSU. The database of African alumni that we created has already been useful for our faculty and students. The MSU MasterCard Foundation Scholars office has been able to use the data to get in touch with alumni and plans to utilize these alumni networks to connect students to internship and mentorship opportunities. Our MSU African Studies Center Director has also been able to use the database to build relationships with our alumni and has visited several alumni in her travels in 2016. The alumni networks that will be reinvigorated through this work will have significant impact on MSU's future research, education, and outreach goals in Africa. The results of the study will not only feed into program design for MSU's MasterCard Foundation Scholars' Program, but will also inform other academic programs at MSU. The need to make African students' degrees relevant to the African context, to allow African students opportunities to do relevant research, and to maintain alumni and faculty networks to not only enhance current students' education, but also to support alumni both on the continent and in the diaspora are key lessons that will influence future MSU activities."

demand-driven model. Our study shows that African alumni outside of academia, for instance in engineering, journalism, energy, and finance, would contribute their expertise and time (covering just local costs) should opportunities to contribute be made available. **The MasterCard Foundation should consider the whole career and life trajectory of MasterCard Foundation Scholars when visioning their contributions to social change on the continent, including those who remain in the diaspora or delay return.** It may also consider teaming up with the Carnegie Foundation and other organizations, such as the African Center for Economic Transformation (ACET, based in Accra, and directed by Dr. K.Y. Amoako, UC Berkeley alumnus), to develop mechanisms for harnessing African talent in the diaspora, including MasterCard Foundation Scholars/Alumni, to serve targeted needs on the continent.

9. Nearly all of the participating alumni for this study, crossing generations, return paths and career trajectories, would encourage current and future African students to pursue study abroad, a striking finding. However, many alumni, including those who received undergraduate degrees in the US and Canada (not EARTH), tended to recommend that Africans **pursue their first degree at home and their second or higher degrees in an international university**. This seems to be the trend in The MasterCard Foundation Scholars Program thinking and investment, supported by this research finding. "Home" might logically expand to include excellent universities on the continent outside of countries of origin, especially for youth coming from countries where tertiary education is lacking or of poor quality, or the financial options are out of reach.

10. Alumni also reflected on the tremendous gains for them from an international education experience, particularly the exposure to diverse ideas and people, and access to excellent courses and facilities for specialization in particular fields not commonly offered in African universities. This would suggest that **The MasterCard Foundation Scholars Program continue to support excellent Scholars to pursue graduate degrees abroad, either master's or PhD**, targeted toward fields of great importance in the African context, and lacking adequate expertise at home. Our research has shown that these Scholars return to Africa in greater numbers and many of them have achieved significant "multiplier effects," strengthening and transforming institutions and generating change throughout society, many times "paying back" the initial investment in their education.

11. The research question on the value of an international education revealed a cogent set of benefits that African alumni identified from their international education. Several of these benefits continue to be useful in their current

work, and for a lifetime. Given the statements above on "first degree home, second degree abroad," another implication of the research, adding to many similar voices of the past, is to employ African alumni of international universities to identify, distill, adapt, and infuse certain **key qualities and benefits from an international education (US, Canada, EARTH) into African institutions of higher level.** The potential gain is enormous, benefiting large numbers of African university students.

12. This is already happening for a few small, high-quality universities in Africa, most notably Ashesi University in Ghana. This is a case where the founder and president, Patrick Awuah, infused liberal arts and critical thinking qualities from his undergraduate institution, Swarthmore, into the basic premise of an Ashesi education, together with a problem-solving orientation gained while working at Microsoft in Seattle. He leveraged his business and finance skills learned at UC Berkeley, and a strong international network, to build and support Ashesi from its early days to the inauguration of a state-of-the-art Engineering Department last October. Patrick has integrated international exposure into Ashesi by offering opportunities for students to travel, study and intern abroad for several weeks or months at a time as part of their degree programs. Other African alumni from this study, PhDs from varied fields, have endeavored to infuse the critical thinking, practical methods, and exposure elements of an international education into their institutions of higher learning, with considerable influence. One suggestion for The MasterCard Foundation Scholars Program would be to **enlist the support and advice of a handful of these academic leaders in planning their next investments in supporting African youth** to have access to quality education and job training. It would likely be very rewarding and fruitful.

6.2 Recommendations for partner universities

The African Alumni Project also yielded important policy and programming implications for partner universities. Principal Investigators of each partner university outlined key inputs and institutional learning from the project in the table provided in Appendix 4. Below are four broad implications that will be discussed with appropriate university administrators and faculty as a product of this study.

1. The research has revealed an under-tapped potential to further the global credibility, branding and outreach of partner universities by systematically documenting and including the impacts of their international alumni. For Sub-Saharan Africa, **a strong case could be made that the deepest and most profound impacts of "global universities" on African development are through the sustained, often transformative, contributions of their African alumni.** This study can be leveraged to assess impact from all African alumni

living on the continent and in the diaspora, not just the "stars," and to foster continuing academic collaborations with their university *alma mater*.

2. Related to the point above, this research has identified a golden opportunity for Alumni Relations offices, Study Abroad programs, and other relevant units on campuses **to broaden their framework of potential alumni contributions to their *alma mater* institutions, particularly African alumni**. There is a tendency for Alumni Relations to focus on fundraising as their principal goal, which leads to fewer resources put toward tracing and engaging alumni from Africa or other parts of the developing world. While it is true that alumni from Africa may not have "deep pockets" or might prioritize other philanthropic causes, the research identified a widespread interest to "give back" to their *alma mater* universities in other ways, including: i. advising and mentoring current African students, ii. offering experiential learning and internship opportunities for current students (Africans and non-Africans), iii. giving scientific and motivational speeches before students and faculty, iv. engaging in collaborative research and training with students and faculty, v. inviting faculty to their own institutions for sabbaticals, speeches and other types of exchanges, and, vi. facilitating job opportunities for students seeking to work in Africa (Africans and non-Africans), among other ways.

3. The above policy recommendations would necessitate investment of more resources toward the tracing and continued engagement of African alumni, a process that could be facilitated and streamlined by the primary research conducted for this study. In general, the study discovered that tracing of international alumni is under-resourced among all partner universities, and the African Alumni Project was pioneering in conducting a systematic, retrospective tracer study of African alumni. **Given the potential benefits for university communities and credibility as "global" institutions, we recommend that Offices of Institutional Research, in particular, continue to conduct retrospective tracer studies of their alumni from Africa, and other understudied populations**, employing methods and lessons learned from this study.

4. Finally, findings from this research indicate areas where partner universities could improve the ways in which they serve international students, and African students in particular. Whereas the evidence shows strong, favourable "marks" for many components of their international education, universities were not adequately prepared to assist African students (now alumni) who faced serious adjustment issues such as racial prejudice, social and academic isolation, and anxiety about finances, particularly among undergraduates. **Since the intention of many international universities, not just those partnering for this study, is to attract African students in greater**

numbers, there are important lessons to be learned from this study in order to better serve these students and help them to thrive educationally and transition into successful careers.

6.3 Dissemination: presentations and publications

1. Webinars for The MasterCard Foundation partner universities and working groups (e.g. Transitions, Transformative Leadership, Scholars Community) on research findings and implications;
2. Presentations of research findings and implications at The MasterCard Foundation Program partner convenings, as appropriate;
3. Distribute reports (long and short versions) to research partners and participants;
4. Distribute reports (long and short versions) within international partner networks of interested professionals and practitioners;
5. Distribute report findings as appropriate to MasterCard Foundation Scholars;
6. Report research results on project website (www.africanalumni.berkeley.edu) and social media (Facebook);
7. Presentations in international conferences (CIES 2015, CIES 2016, African Studies Association 2016 (under review), others;
8. Potential publications: a. **"Transitions,"** featuring common goals and challenges of African Alumni of different generations; b. **"Voices of African Alumni,"** a book featuring African alumni from partner universities traversing the four return paths, contributing to Africa in diverse ways over a lifetime.
9. Other means of dissemination to emerge from discussions with The MasterCard Foundations Scholars Program staff;
10. Peer-reviewed articles co-authored by partner researchers and The MasterCard Foundations Scholars Program staff (in discussion);
11. Book under contract with Palgrave MacMillian, "International Scholarships for Higher Education: Pathways to Social Change," for submission in January 2017 (Dassin, Marsh and Mawer, co-editors, The MasterCard Foundations Scholars Program one of five case studies).

6.4 Future research

As discussed earlier in the report, a full year of this study was spent tracing African alumni of partner universities, with a significant accomplishment being a usable database for further expansion, engagement, and research. Furthermore, the in-depth interviews have been methodically coded for analysis (100 interviews, 98 coded), only part of which was possible during the time allotted for this study. All university

partners agree that further research is necessary, and will seek opportunities to continue to collaborate on joint publications and presentations. We see three priority areas for further research; however, others are likely to emerge as we begin discussions with The MasterCard Foundation Scholars Program and dissemination of findings.

1. The study did an exhaustive categorization of all interviews by ten key variables or "descriptors:" country and region of origin, current residence (COO, other Africa, diaspora), gender, socioeconomic status during childhood, international university, field of study, year of graduation, work sector, scholarship (none, full, partial), and type of scholarship. These descriptors will allow further analysis of the four research questions by sub-groups to gain a deeper understanding of variations in the career and life trajectories of African alumni, resulting in one or more peer-reviewed publications.

For instance, for research question two, we would like to explore how socioeconomic background and gender have influenced decisions regarding return paths. More generally, how does our study contribute to wider discussions about "brain drain" versus "deterritorialization" and transnational migration of talent in a globalized economy? For research question three, there is interest to further investigate how social and civic engagement by alumni has changed over time and varies among sub-groups. We are also interested to see how our data can be used to test "critical mass" theory, by examining clusters of impact in particular countries and fields or from particular universities (for example, the impact of Fogarty Fellows in Uganda on prevention of HIV-AIDS and other infectious diseases).

2. More research is necessary to fully analyze the qualitative data from research question four on the value of an international education, and relate the findings to wider discussions about the changing dynamics of higher education in Africa. What can this study contribute to current debates on the legacy and future of international scholarship programs? Have these scholarship programs, over the decades, substantively improved access to quality higher education for African youth, and with what impacts for host and sending countries? As mentioned earlier, insights from this study will be included in the forthcoming book, "International Scholarships for Higher Education: Pathways to Social Change" (Palgrave MacMillan, January 2017).

3. Mentioned above under "Dissemination (6.3)," the research partners would like to use the data and relevant findings from this study to prepare a publication for the benefit of MasterCard Foundation Scholars and Alumni, carrying to fruition an important goal of the research project from the

beginning, to "*learn about the paths my predecessors have walked.*"[41] We envision this publication would feature profiles of African alumni from the six partner universities, illustrating diverse career and life trajectories, with a common theme of connectedness and commitment to African transformation. The publication would also convey the main survey results, alumni advice for current and future scholars, and be linked with the Scholars Community platform.

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[41] From a quote by MasterCard Foundation Scholar Sidee Dlamini, who worked for two years as a research assistant with the African Alumni Project (graduated UC Berkeley in May 2015 with an MA in Development Practice). Her full quote is: *"History is a good predictor of the future. As an international scholar I cannot begin to explain the importance of learning about the paths my predecessors have walked. Learning about their successes and failures will put a lot of us at an advantage."*

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