BRAIN DRAIN AT AFRICAN HIGHER EDUCATION INSTITUTIONS: THE CASE OF MAKERERE UNIVERSITY

by

JAYNEFRANCES WALUSIMBI NABAWANUKA

(Under the Direction of Erik C. Ness)

ABSTRACT

This study aims to deepen the understanding of the factors that influence Makerere University faculty who go for studies abroad to return or not to return to Makerere. Understanding all these factors is a key step in finding measures of not only minimizing brain drain caused by faculty not returning from overseas training programs, but also increasing brain circulation and brain gain from the African professoriate in the Diasporas. There are no doubts that higher education is vital to economic growth and development. Because of faculty's core function to the academic enterprise, universities must maintain high quality-faculty not only to ensure competitiveness in this era of proliferation of institutions of higher education, but also to advance national economic growth and development. Like other universities in the developing world, Makerere University has a shortage of doctorates hence the need to produce more doctorates. However, due to several factors, for example the absence of appropriate facilities or qualified faculty, the University sends many of its faculty who require advanced education overseas, mostly to the United States and Europe.

The study reveals that only 13% of all Makerere faculty who completed training in the period studied did not return to the University or left the University soon after returning from

training abroad. However, some academic units experienced larger numbers of faculty not returning to the University than others. For example, 17 (28%) out of 59 Veterinary Medicine faculty who trained did not return to the University. Moreover, 48% of the 27 Veterinary Medicine faculty who trained outside Africa did not return to the University after training. Worse still, all 10 Veterinary Medicine faculty who trained in North America did not return to Makerere. The major reasons advanced for not returning were lack of career growth and development prospects and poor working conditions. Split-site programs that allow a student to attend some of the courses and/or carryout research in Uganda had very high percentages of return compared with programs that were fully based abroad. This study recommends more planned investment in the higher education enterprise, particularly for laboratories and research. The study also recommends an overhaul in the governance of the University. Additionally, establishment of split-site PhD programs University-wide is also recommended. Finally, higher education institutions are urged to find creative ways of exploiting the human capacity in the Diasporas.

INDEX WORDS: Brain drain, Faculty work, Migration of health and STEM professionals, Brain drain at African higher education institutions, Immigration of students, Faculty career development, Causes of brain drain, Impact of brain drain

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DEDICATION

This dissertation is dedicated to J. Douglas Toma. Thank you for believing in me.

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CHAPTER 1

INTRODUCTION

Introduction to the Problem

Economic and social development the world over is driven by the advancement of knowledge. Higher education institutions are key players in the production and advancement of knowledge. As such, higher education institutions are fundamental not only to the development of human capital, but also, the production of knowledge and thus the construction of a knowledge economy and society, which ultimately results in economic and social development (Prewitt, 2004). In order for higher education institutions to produce knowledge, they require well-trained faculty at advanced levels of education, i.e., at the PhD level. But the Ugandan higher education system still largely depends on the Western World for PhD training, which means that many faculty go abroad for further training, then do not return. As a result, the ability for Ugandan higher education to play its fundamental roles has been impeded by “brain drain”, in which a sizeable number of faculty leave left the academy for better opportunities abroad or the private sector. Faculty who find better opportunities abroad or in the private sector both motivate and encourage others to follow suit. Yet those who leave are hard to replace because of the limited number of PhD holders in the country. Ignoring and or failing to identify the extent and impact of the brain drain prevent the Ugandan higher education system from structuring strategies to stop the outflow of faculty.

Purpose and Research Questions

The purpose of this study is to understand what factors influence Makerere University academic employees (faculty) who go for studies abroad to return or not to return to Makerere. Although one can easily determine from institutional documents the numbers of those that return or do not return, one cannot understand the reasons behind their decisions without a broader inquiry. Understanding the decisions, choices, and actions is best investigated or explained through the qualitative research approach of this study. The study assists in identifying not only the factors that influence faculty not to return to Makerere, but also the factors that influence those who return to return, and those that return and soon leave thus contributing to improved practice. Understanding these factors is a key step in finding measures of minimizing brain drain caused by faculty not returning from overseas training.

The study specifically investigates the following questions:

1. What factors influence Makerere faculty (academic employees) to stay abroad after completing their advanced studies?
2. What factors influence Makerere faculty who return home after completing their programs of study abroad to return? Among those who return home, what factors influence the decisions to resign their jobs and leave the University to join the private sector[1] or to return abroad soon after their return?
3. What strategies and policies could Makerere and similar institutions adopt to stem the brain drain?

[11] Although the faculty who leave the University to join the private sector in Uganda are not part of the brain drain from a national perspective, they are nevertheless a loss to the University which, would no longer directly benefit from this category of faculty. For this reason, faculty who left the University for the private sector or for other higher education institutions in Uganda were considered as part of the brain drain at Makerere University.

Examination of these questions is grounded in studies related to faculty work, migration, and brain drain. In the context of higher education institutions, while studies on faculty work explain: the relationship between faculty and their institutions, what they do, why they do what they do, how they do it, and where they do it, studies on migration explain why faculty chose to move from place to place, and studies on brain drain explain both the reasons for faculty moving from place to place and the effects and impact of such movement on the institutions losing faculty. The study uses a case study approach to allow for an in-depth examination of the issues. Institutional documents, published and unpublished materials were examined. Various participants from the University administration as well as faculty and former faculty who recently underwent training abroad were interviewed.

Makerere University: The Case Study

Historical Background

Makerere University, Uganda was established in 1922 as a small technical college which grew into an inter-territorial institution educating students from Kenya, Uganda, Tanzania, and Zanzibar. Uganda was a British Colony from 1894 to 1962 when it attained independence. In 1949 Makerere College became a University College affiliated with the University of London enabling its students to study for and receive awards from the University of London (MacPherson, 2009). Until 1954 Makerere College, as the University College of East Africa, remained the only higher education institution in East Africa (Court, 1999). The College admitted students with Cambridge School Certificate for preliminary studies that would qualify them for further studies leading to the award from diplomas and degrees of the University of London.

Dependence on the West

Makerere College graduates who sought advanced degrees went to institutions in the U.K., mainly to the University of London, Cambridge, and Oxford for further training. This established a dependence on the U.K. to provide advanced training for Ugandans. In 1963, Makerere College stopped awarding diplomas and degrees from the University of London and merged with the Royal College in Kenya and Dar es Salaam College in Tanzania to form the University of East Africa (Musisi, 2003). In 1970, the East African Community split and as a result, the University of East Africa split into three independent universities for Kenya, Uganda, and Tanzania. The University of East Africa and later the three universities in East Africa continued to depend on the United Kingdom and later other western countries for advanced training. Additionally, well into the late 1970s, Makerere University senior faculty was predominantly expatriates from mainly the U.K. and Australia. Moreover the Ugandans who with time took over from the expatriates had either had all their training or at least their advanced training overseas.

The Exodus of Professionals

The 1970s and the early 1980s were years of political strife, war, and economic downturn for Uganda. The education sector was greatly depleted during this time as many professionals fled the country. Makerere was greatly hurt by this exodus—both local and expatriate faculty fled for fear of their lives. By 1986, only 1 out of 50 academic staff had a terminal degree. In 1992, when the University started admitting tuition-paying students (private students), staff development was a key item on the agenda—a percentage of the revenue from private students is set aside for facilitating staff to attain advanced degrees. As a result, since 1992, an increase in the number of faculty going abroad for advanced training is evident.

Entry Points into the University Academic Service and Staff Development

There are six entry points into the academic service of the University namely: 1) Teaching Assistant, first degree holder; 2) Assistant Lecturer, Master's Degree holder; 3) Lecturer, PhD/terminal degree holder; 4) Senior lecturer, PhD/terminal degree holder; 5) Associate Professor, PhD/terminal degree holder; and 6) Professor, PhD/terminal degree holder. However, most entrants are at the levels of either Teaching Assistant or Assistant Lecturer. Within four years of being appointed as an Assistant Lecturer one is required to enroll into a PhD program. While some enroll into programs within the University, for one reason or another, others enroll into programs abroad. Employees from the position of Assistant Lecturer and above are either given a study leave to pursue their training or required to resign from their positions. All employees on study leave continue receiving their salaries. Additionally, the University may pay for the tuition and upkeep of some, and only upkeep for others. For others yet, the University secures funding from its development partners to fund the training programs. With the exception of those that resign from their positions to go for training abroad, in one way or another, the University contributes towards the training.

Growth of the Ugandan Higher Education Sector

Makerere University was the only university in Uganda until 1988 when the Islamic University in Uganda (IUIU) was established in the eastern part of the country by the Organization of Islamic Conference.[2] Makerere University remained the only public university until 1989 when Mbarara University of Science and Technology (Mbarara University) was established in western Uganda. Mbarara University, as is evident in its name, specialized in

[2] Makerere University is the second oldest higher education institution, the oldest HEI being Katigondo National Major Seminary in Masaka District which was established in 1911 to train catholic priests.

science-based disciplines. Mbarara University was the second institution in Uganda, after Makerere University, to have a medical school. Three more public universities have been established to date: Gulu University (northern Uganda) and Kyambogo University (central Uganda) in 2002 and Busitema University (eastern Uganda) in 2007. In 1998, Makerere University Business School was established as a constituent college of Makerere University. The School was later to become independent of Makerere University but continued to be affiliated with the University by all degree programs at the School being Makerere University programs. In 2006, following an amendment of the UOTIA, the Uganda Management Institute (UMI), which was founded by the Ugandan government in 1969, was elevated to a degree-granting institution. The elevation of UMI to a degree awarding institution brought the number of degree-awarding public universities and institutions to seven.

Moreover, following the enactment of the Universities and other Tertiary Institution's Act in 2001, a substantial number of private universities have been chartered. By May 2011, the total number of private universities in Uganda had grown to 29. This means that Makerere University has to compete with other public and private institutions for faculty from the limited pool of appropriately trained professionals.

Need for the Study

Higher education institutions are home to many professionals, most notably to faculty, who are dedicated to academe. In many ways, faculty members are the embodiment of higher education institutions—they are not only the brains and hearts of higher education institutions, but also the blood that runs its core missions of teaching, research, scholarship, and service. Some authors have argued that they form the core of the academic enterprise (Haaland, Wylie, & DiBiasio, 2006). Haaland et al. (2006) argue that faculty are the source of energy and stability in

university programs and represent a long-time commitment and institutional investment. Indeed the importance of faculty in the academic enterprise cannot be denied. Because of faculty's core function to the academic enterprise, universities must maintain high quality faculty to ensure competitiveness in this era of proliferation of institutions of higher education.

The quality of faculty may be measured through employing various variables such as: their level of education; the institutions they attended; their research capabilities often measured through their ability to attract research funding and the number and quality of publications; the quality of their teaching; and the extent to which they are involved with the community both within the institution and outside. Advanced education and training is the major means of improving the quality of faculty. Like other universities in the developing world, Makerere University has a shortage of doctorates, hence the need to produce more doctorates. However, due to several factors, for example, the absence of programs or appropriate facilities or qualified faculty, the University sends many of its faculty who need advanced education overseas, mostly to the United States and Europe.

Unfortunately, many of the faculty who go overseas do not return, and many that return soon leave to go back abroad or to join the private sector resulting in Makerere being "drained of its brains". The term "brain drain" was coined by the British Royal Society in the 1950s and 1960s to describe the outflow of scientists and technologists to the United States and Canada (Cervantes & Guellec, 2002). The term may be defined broadly as the migration of trained and talented individuals from one institution, or from one country or part of a country, to another in search of better working conditions, higher quality of life and/or a less hostile environment (SIRDC, 2008). Many scholars agree that young scholars who manage to get advanced degrees in Africa are "increasingly fleeing the poverty and decrepitude of academic life for business,

government, and jobs overseas" (Lindow, 2009). In the words of Professor Njabulo Ndebele, former Vice Chancellor of the University of Cape Town and President of the Association of African Universities, "if we don't do something about this in the next 10 years, our capacity to produce new knowledge will suffer tremendously" (Lindow, 2009).

Higher education is not only fundamental in the development of human capital, but also the production of new knowledge. However, the ability for Uganda's higher education to fulfill this role has been continuously hampered by the incessant brain drain in which large numbers of professionals have migrated out of the country for "greener pastures". A growing number of Africans are entering the stream of international migration from the continent (Gordon, 1998). According to the United Nations Economic Commission for Africa (ECA) emigration of African professionals to the West is one of the greatest obstacles to development. A study by the International Organization for Migration (IOM) and ECA noted that Africa lost 60,000 professionals between 1985 and 1990 and was continuing to lose its skilled personnel at an increasing rate (Aredo & Zelalem, 1998). According to a recent United Nations Educational, Scientific, and Cultural Organization (UNESCO) report, there are currently over 300,000 highly qualified Africans in the Diaspora, 30,000 of whom have PhDs (UNESCO, 2007). Meanwhile a 2005 World Bank study on census and population stated that 36% of Uganda's college-educated citizens were living abroad (Schiff & Ozden, 2005).

Gordon (1998) cites six reasons for the increased emigration from Africa to the United States and Europe: (1) globalization; (2) world economies; (3) economic and political development failures in Africa; (4) immigration and refugee policies in Europe and the United States; (5) Anglophone background of the sending countries; and (6) historical ties of sending countries to the United States. She describes the massive movement of professionals as an

"exodus" (Gordon, 1998, p.1). Similarly, the 2005 World Bank study on census and population identified both pushing and pulling factors to blame for increased emigration. The report states that in countries of origin, the main reasons for emigration of qualified personnel are limited employment possibilities, poor working conditions, and weak career paths. Meanwhile a 2007 United Nations Conference on Trade and Development report also points at slow economic growth, rapid population growth, political instability and conflict, the low pay and the widening gap between earnings in poor countries and rich countries for the same careers as major push factors for emigration (Manning, 2007). On the other hand, the report points out that, due to an ageing population, the information technology revolution, which calls for more computer and ICT engineers, and shortages in certain jobs, which people in rich countries shun, such as nurses, teachers, technicians, electricians and plumbers, there is an increasing demand for skilled manpower in industrialized countries.

Moreover, higher education institutions in Uganda have inadequate resources and facilities to provide sufficient educational opportunities for all citizens who need and desire it. As a result, many Ugandans have had to seek advanced education opportunities in overseas destinations like the United States, Europe, South Africa, and India. Many of those that go overseas do not return, which is a waste of the resources that could have been channeled to other functions. According to UNESCO (2007), for every 100 African professionals sent overseas for training between 1982 and 1997, 35 failed to return. It follows that the pool of adequately trained personnel, from which universities can recruit faculty, is limited. Consequently, staffing higher education institutions with qualified faculty is extremely intricate.

In addition, funding cuts in academic infrastructures, science and technology subjects or teaching/learning materials and equipment drive a growing number of graduates and researchers

out of academia to take up lucrative posts in the private sector (UNESCO, 2007). This trend accelerates as university salaries fall behind those of senior managers in private companies. The inability to attract or keep qualified academic staff is having a profoundly negative impact on higher education systems in the developing world (UNESCO, 2007). In some countries, not enough researchers and PhD holders can be tempted to stay within academia just to fill teaching posts, never mind carrying out key scientific research. For example at Makerere, the majority of professor and associate professor slots remain unfilled because of lack of qualified personnel.

Moreover, higher education is an important determinant of not only individual earnings, but also economic growth and development. Thus higher education is vital to developing nations, such as Uganda, in the quest for increased development. Makerere University, with a student body of approximately 35,000 is the largest individual feeder of the Uganda workforce. Failure for Makerere to maintain a quality faculty will necessarily reflect in the country's human capital and its capacity to sustain development.

Significance of the Study

The study highlights the extent of brain drain as well as the fields that are most affected at Makerere University. Additionally, the study assists in identifying: the factors that influence faculty not to return to Makerere, the factors that influence those who return to return, and the factors that influence those who return to stay or to leave soon after their return. Moreover, the study isolates the factors that are within the realm of the higher education institutions to control and those that are not and point to possible remedies to alleviate brain drain. Understanding all these factors is a key step in finding measures of not only minimizing brain drain caused by faculty not returning from overseas training programs, but also increasing brain circulation and brain gain from the African professoriate in the Diasporas. A healthy and vibrant higher

education means a strong and vibrant workforce, which will ultimately translate into economic growth and development.

CHAPTER 2

LITERATURE REVIEW

Though there are many studies discussing brain drain, only a few of those studies discuss the impact of skilled migration on sending countries in sub-Saharan Africa. Moreover, only a few of those studies specifically study the depletion of higher education faculty due to brain drain. Worse still, none of the empirical studies on brain drain at higher education institutions was based in Uganda. As a result, this study reviews literature mainly from other parts of Africa and the rest of the world. However, this does not create any serious problems as conditions in Uganda's higher education are comparable to the rest of sub-Saharan Africa. The absence of related empirical studies on Uganda made it difficult to gauge the scope of the problem of brain drain. Nonetheless, it made the study even more needed. This chapter provides a review of literature. The literature review that follows is divided into three parts: 1) Higher education and the professoriate 2) What is brain drain, its causes and impact? 3) The conceptual framework.

Higher Education and the Professoriate

Higher education is recognized both as an engine for economic growth and as a gatekeeper to individual positions of high remuneration and status. It therefore follows that higher education is an essential component of the lifelong educational system. Moreover, a 2002 study of the relationship between education and economic growth in emerging economies found that investments in secondary and higher education—and not just primary education—are more beneficial than may have been realized (Post, Clipper, Enkhbaatar, Manning, Riley, & Zaman, 2004). The same study found that when more people get a secondary and higher education, national economies tend to grow faster. Hence there is evidence that human capital is a key

determinant of economic growth and is associated with a wide range of noneconomic benefits such as better health and wellbeing (TFHES, 2000).

Faculty is, once again, the foundation of the higher education enterprise. The quality of the products of higher education is highly dependent on the availability of quality faculty. Institutions with quality faculty are more likely to develop and produce skilled human capital needed for national development. In a study of academic staff turnover in Nigerian universities, Nwadiana (2002, p.1) argues that since institutions serve as storehouses for nurturing the manpower needs of the nation, "the number of academic staff, quality, and effectiveness make the difference in university education and production functions". In order for higher education in Uganda to enhance the capacity to Uganda's development needs, academic quality must be ensured. One of the ways for ensuring academic quality is by maintaining a competent and stable faculty. However, brain drain has made it difficult for African higher education institutions to maintain a high quality faculty.

While national academic systems differ, all stem from common roots in Europe. The model of professional authority that characterized the medieval university of Paris, the power of dons at Oxford and Cambridge and the centrality of the chairs in the 19th century German universities all contributed to the ideal of the academic profession worldwide. The 19th century reforms in the German higher education system that made academics civil servants and as such, expected to contribute to the development of Germany as a modern industrial nation made research a key responsibility of faculty (Altbach, 2005).

Teaching and research constitute the core work of faculty with most academics devoting some of their time to these activities. Historically universities modeled after the German university placed a greater emphasis on basic research, those modeled after the English

university (including the former British Empire) placed more emphasis on teaching and those modeled after the U.S. land-grant model (which was modeled after both the German and British universities) stressed applied research (Cummings, 2009). Ugandan universities are modeled after the English university. However, some fields, for instance the health and biological sciences, mimic American universities. This could be explained by the fact the most of the dons in these disciplines have some level of American training.

In recent years, new forces have influenced the differential faculty emphases leading some to assert a convergence in academic practice (Cummings, 2009). The forces are diverse. Cutbacks in public funding for higher education has forced institutions to seek alternative means of funding, for example, commercialized research and contracted training. Additionally, Cumming (2009) also argues that the adolescent population has declined, creating pressure to improve teaching in order to attract students. Other arguments are that the new recruits to the academy are likely to have had their advanced training at institutions that emphasized research and as a result, feel obligated to do research, thus resulting in increased competition for research funding. These developments put together have shaped the professoriate as one involved in teaching, research, scholarship, and service. How much time one professor spends on either activity depends on both personal and institutional attributes. At research intensive institutions, faculty tend to allocate more time to research, while at teaching intensive institutions such as community colleges (other tertiary institutions), faculty allocate most of their time to teaching.

Moreover, every aspect of academe is being driven by “a host of interrelated development: dazzling technological advances; globalization; rapidly increasing numbers of tertiary students worldwide; unprecedented expansion of proprietary higher education; and innumerable entrepreneurial, market-driven initiatives from within and without the campus. All

these changes are unfolding at an unprecedented pace. *The American Faculty* (Schuster and Finkelstein, 2006) refers to this as a metamorphosis and argues that central to this metamorphosis is the academic profession, ever changing in composition and in role, as the faculty seeks to ride the crest of change while also clinging to traditional responsibilities. The future for the academy and its faculty is ever becoming harder to predict.

Higher education is in a period of unprecedented challenges. Financial cutbacks, enrollment uncertainties, economic recession, pressures for accountability, and confusion about academic goals are among the challenges facing colleges and universities. A combination of economic recession, the restructuring of the economies, and a popular revolt against paying for public services, including education, have contributed to the pervasive fiscal problems that colleges and universities face. This will mean that the academic profession, as well as higher education in general, must adjust to new circumstances. .

The professoriate has been profoundly influenced by the social, political and economic context of higher education. While academia has relatively strong internal autonomy and, with some exceptions, a considerable degree of academic freedom, societal trends and public policy have played a major role in shaping institutions of higher education as well as national and state policies concerning academia. There are many examples. The U.S. Land Grant Acts in the 1860s stimulated the expansion of public higher education and an emphasis on both service and research, while the G.I. Bill following World War II stimulated the greatest and most sustained period of growth in the history of U.S. higher education. Additionally, court decisions the world over regarding the role of government in higher education, race relations, affirmative action, and the scope of unions on campus, and other issues have had an impact on higher education policy. For example, with Makerere University, for a long time in Ugandan history, being the only

university, public or private, its employees were originally civil servants, and as such, bound by the civil service code. During that period, the Ugandan government centrally controlled the movement of faculty. For example travel abroad and travel funds had to be approved and provided by the government. The faculty was not only restricted as to what seminars or conferences they attended, but also what subjects or topics their presentations covered. As a result, faculty academic freedom was constrained. With time, however, Makerere's operations became independent of the central government. Although the University was accountable to the parliament through the Ministry of Education, it was free to decide on issues relating to its day-to-day management, who was admitted, what was taught, how and by whom—academic freedom grew and even soared. Uganda, just like the rest of the world, experiences tensions between the autonomy and 'internal life' of the academic profession, on one hand, and the many external forces for accountability that have shaped the direction of higher education, on the other.

The history of higher education stresses tradition, continuity, and gradual change. Higher education has evolved through successive stages as society's needs have changed. Previous elements survive, even flourish, but the topography has become more complex, more accommodating of variation. Schuster and Finkelstein (2006) describe and analyze over 30 decades of faculty development and conclude that rapid, discontinuous changes in government policies, economic and social structures, and communications technologies are changing the face of the traditional academic career. They stress that academic work in the twenty-first century is fundamentally performed by contingent faculty. The tenured or tenure-track faculty is a minority within the professoriate. This is evident at Makerere. While almost 90% of faculty were either tenured or tenure track in 1992, by 2005 these categories of faculty only accounted for 56%, the rest were contingent faculty (Mamdani, 2007).

The professoriate, the world over, is large and differentiated. Altbach (2005) reported that there were over 1 million full-time and part-time faculty in America's 3,500 institutions of post-secondary education. The United States of America (U.S.) boasts of the most comprehensive higher education system in the world. It is home to a diverse body of higher education institutions including research universities, comprehensive universities, community colleges, technical colleges, liberal arts colleges, and private for-profit institutions. Education systems around the world reflect much of the diversity in the U.S. Uganda is home to a diverse body of higher education institutions including universities, other tertiary institutions, such as technical colleges, vocational institutions, teacher training colleges, and private for-profit institutions. The environment in which faculty are stationed, whether a research university or a comprehensive university, a community college or a liberal arts college, greatly influences and, to a great extent, determines the careers that faculty choose and as a result dictates where they elect to work.

In sum, the faculty has undergone a host of changes and is still evolving—from the odd jobs by fresh graduates as a way station on the path to some other career, to careers; and from white males to gender, race, age, and nativity diversity. When the number and intensity of external social/economic/political pressures impinging on the higher education system reach a critical mass, the system is forced to re-equilibrate itself to accommodate the pressures, not only responding quantitatively, but also adapting qualitatively (Schuster & Finkelstein, 2006). The breakaway from traditional structures of the professoriate generated new opportunities—it laid the foundation for configuring the academy in ways that incorporate a multitude of perspectives and values.

Brain Drain

What is brain drain? Where, Why and How much?

The phenomenon of international migration of scholars is perhaps one as old as universities themselves (Teferra, 2000). The movement of teachers and researchers from one national setting to another—ranging from permanent relocation to short-term visits or exchanges programs—is perceived to be a constructive dynamic (Teferra, 2000). However when one nation becomes a substantial net exporter of intellectual talent, a "brain drain" condition is said to occur. The presence of brain drain suggests that the sender country is at risk of depleting its natural supply of intellectual power (Schuster, 1994; Teferra, 2000). The use of the word 'Brain' pertains to any skill, competency or attribute that is a potential asset. Meanwhile the use of the word "Drain" implies that this rate of exit is at a greater level than "normal" or than what might be desired (Giannoccolo, 2006). Linking the two words implies the departure of the most talented at an appreciable rate (Giannoccolo, 2006). Giannoccolo (2006), in his comprehensive review of literature on brain drain, looked at definitions of the term over time and noted that, initially, the authors remarked the social, ethical and political aspects more than the economical ones as evidenced in the following 1981 Modern Dictionary of Economics definition of brain drain:

> Brain drain: The migration of educated and skilled labour from poorer to richer countries. Education skill, which represents investment in human capital, is usually cheaper to acquire in poorer, labour abundant countries, since its provision is usually a labour intensive activity. Those with the skills or education then move to more developed countries where the return to their human capital is higher. Such migration is often encouraged by laws and institutional factors, as most countries look more favourably on immigration by those with skills than those without[3].

[3] The Dictionary of Modern Economics, edited by D. W. Pearce (1981) The Macmillan press, London.

However, over time, the language around brain drain has been altering. To highlight the changes he points to the fact that in the OECD Report of 1987 there are two brain drain definitions: Brain Exchange and Brain Waste:

> Brain exchange implies a two-way flow of expertise between a sending country and a receiving country. Yet, where the net flow is heavily biased in one direction, the terms "brain gain" or "brain drain" is used. A further term, “brain waste”, describes the waste of skills that occurs when highly skilled workers migrate into forms of employment not requiring the application of the skills and experience applied in the former job.

The author goes on to point out that in the late 1990s, authors started introducing a new brain drain’s specification, that is, brain circulation:

> This refers to the cycle of moving abroad to study, then taking a job abroad, and later returning home to take advantage of a good opportunity. The authors believe this form of migration will increase in the future, especially if economic disparities between countries continue to diminish. Such circular migration has been observed amongst Malaysians who had studied in Australia, for example.

He concludes that in the 1960s and 1970s debates concluded that brain drain was conditioned by political and economic imbalances in the world system as evidenced in the work of Bhagwati & Dellafar 1973; Bhagwati, 1976a, 1976b, 1979; Portes 1976; Hamada, 1977; Lidgard & Gilson 2001. He points out that these studies analyzed mainly least developed countries (LDCs) and emerging countries. According to the studies, the main motivation to migrate was the fact that the labor markets were incomplete and not able to employ highly skilled workers, and the effects of these migrations were bad for the development of the sending countries (Giannoccolo, 2006). He further states that scholars of the time suggested that the solution to the effects of the migration was to introduce brain drain taxes to compensate the negative externalities of brain drain.

On the other hand, he argues that in the late 1990s and the early 2000s, the main motivation to migrate was linked to individual aspects (income, social, private) and the effects on of these migrations was not certain, they can be bad (brain drain) or good (brain gain). The solution offered was to create individual incentives for workers to come back, an international coordination and, when it is possible, to create the conditions to have a brain gain other than brain drain (Giannoccolo, 2006).

The motivation of scholars to immigrate or decide to stay abroad after they complete their training abroad is a product of a blend of economic, political, social, cultural and personal factors (Teferra, 2000). The role played by each factor varies from country to country, discipline to discipline, individual to individual, and is not static but rather continuously changing. Some scholars argue that emigration results from a combination of push factors (in source countries) and pull factors (in recipient countries) (Kana, 2008). In his work entitled “From Brain Drain to Brain Circulation”, which analyzes the migration of skilled health professionals, Kana (2008) states that the reasons for scientific researchers failing to return to their home countries after training abroad include: lack of research funding; poor research facilities; limited career structures; poor intellectual stimulation; threats of violence; lack of good education for children in home country; and lack of the evidence-based decision-making culture, leading to lack of recognition of potential contribution of researchers to national health development. He thus argues that the key push factors driving out health workers include: weak health systems; insecurity including violence at the workplace; poor living conditions; low remunerations; lack of professional development opportunities (e.g. continuing education or training); lack of clear career development paths; and risk of HIV infection due to lack of appropriate protective gear when handling specimens, blood and blood products; nepotism in recruitment and promotion;

political unrest/civil wars; widespread poverty; poor governance; and case overload (leading to burnt-out syndrome in health workers). On the other side some of the factors that pull professionals to developed countries may include: availability of information, easy access to communication and technology, making it easy to find jobs or complete visa applications and process; aggressive targeted recruitment to fill vacancies in richer countries, availability of employment opportunities, better remunerations and working conditions, secure and conducive living conditions and opportunities for intellectual growth. The same reasons hold true for other professions.

Kana (2008) noted that in the past, the migration of skilled health professionals from LDCs to highly developed countries (HDCs) was essentially a passive process in which movement was driven mainly by the political, economic, social, and professional circumstances of the individual migrant. However, in recent years, he argues that, the demand for health workers in many countries in the Organization for Economic Cooperation and Development has been greatly increased by changes in population dynamics. In response, some of these countries are relying increasingly on imported labor, with potentially damaging consequences for the healthcare systems in many developing countries, especially Africa (Kana, 2008).

Literature on mobility of labor identifies various advantages and disadvantages of brain drain (Schuster, 1994; Smallwood, Anthony & Maliyamkono, 1996; Teferra, 1997). The major negative impact of brain mobility is erosion of the sending country's human resource capital and potential to create knowledge to inform scientific technological advancement, which impedes development. Additionally, the sending countries lose out on the investments in educating their nationals who emigrate. On the other hand, some of the pros for migration of professionals are: remittances to the home country, better personal development opportunities to migrants,

reduction in unemployment or underemployment. At higher education institutions, the migration of the professoriate creates knowledge gaps within the academy, which affects the quality of its graduates, which in turn affects the capabilities of national human resources capital.

Uganda is among the African countries most hit by "brain drain" (Olita, 2007). According to a 2007 report by United Nations Conference on Trade and Development (UNCTAD), in 2000, one in five Ugandans who finished tertiary education (21.6%), left for greener pastures (Olita, 2007). Research shows that there are greater concerns in the science-based fields as opposed to the social sciences and humanities. For example, the UNCTAD 2007 report revealed that "in 2002, there were 175 Ugandan doctors living and practicing medicine in the United States, compared to 722 in the whole of Uganda" (p.3). Dr. Sam Zaramba, the director general of Uganda health services, remarked that "there is a substantial brain drain particularly of doctors and nurses" (Wendo, 2008). He stated that half the doctors from his graduation class are specialists abroad. At Makerere, the Medical School and the Faculty of Veterinary Medicine are some of the worst hit faculties by brain drain. A struggling medical faculty has meant that the University is not able to produce the number and quality of doctors that the country requires. Conditions at Makerere are mirrored at Mbarara University of Science and Technology, Uganda's only other medical school besides Makerere's medical school.

Conceptual Framework

The previous section highlighted that there are broadly two streams of research that inform the study: higher education and the professoriate, embedded in the literature on faculty work and careers, and brain drain, which is entrenched in literature on international migration of labor. It follows that the study employs multiple frameworks to explain brain drain at African higher education institutions. According to the literature discussed above, why one migrates is

based on push and pull factors. Theories of faculty work and careers explain higher education and the professoriate, that is, what faculty does where they do it and why they do it. These theories also explain what influences their decision to do what they do, how they do it, and where they do it. Of particular interest is the framework forwarded by Blackburn & Lawrence (1995), which emphasizes properties of the individual and their work environment. This study employs "properties of the individual and their work environment" as one of the frameworks to explain faculty movement.

On the other hand, brain drain literature is embedded in a bigger body of literature on international migration. It has been argued that the theoretical rationales for the different international migration types are quite complex as the factors which influence migration often also largely influence each other (Jennissen, 2004). This study draws from several theories of international migration including: Neo-classical economic theory, relative deprivation theory, world migration systems theory, and migration networks theory. According to the neo-classic economic theory, the main cause of migration is individuals' efforts to maximize their income by moving from low-wage to high-wage economies (Castles, 2000). Another alternative explanation is the world migration systems theory, which explains that migratory movement generally arises from the existence of prior links between sending and receiving countries based on colonialism, political influence, trade, investment or cultural ties (Castles, 2000). Relative deprivation theory is another theory that is employed to explain brain drain where the relative income of a household or an individual is an important determinant of international migration. The theory explains people from societies with much economic inequality are more prone to migrate. The final international migration theory that is employed to explain brain drain is the migration networks theory. This theory suggests that connections such as family ties and other networks

increase the likelihood of migration as they lower the costs and risks of migration (Massey, et al 1993). The following section looks at the framework on faculty work and careers and the selected theories of international migration in more detail.

Properties of the Individual and their Work Environment

Blackburn and Lawrence (1995) take the theoretical perspective that characteristics of individuals and their employing institution combine and lead to variations in faculty motivation, behavior, and productivity. The two authors argue that empirical studies of faculty work tend to focus either on the individual or the environment that leads to the variations in their behavior and productivity. To the contrary, their framework focuses on both the individual and the environment characteristics. Their framework consists of both a structural dimension or what affects faculty behavior and process dimension or how these factors influence behavior. Individual constructs—socio-demographic characteristics, career, self-knowledge and social knowledge—have been identified as antecedents of faculty behavior (Blackburn & Lawrence, 1995).

Blackburn and Lawrence (1995) identify three socio-demographic characteristics that are widely studied—chronological age, race/ethnicity, and gender. They point out that these variables influence behavior indirectly by limiting or enhancing access to resources or opportunities. The literature suggests that men and women, and older and younger people, and different ethnic groups receive different responses to their behavior. The feedback affects the individuals' perceptions of themselves and their environments and, ultimately, their role performance.

The Blackburn and Lawrence framework also describes properties of the environment that influence individual behavior of faculty. They define properties of the environment as the objective characteristics of the work setting that exist, separate and apart from individual faculty perceptions. Also included under this construct are situations that arise in individuals' personal lives that can affect performance. They include environmental conditions, environment response, and social contingencies.

The environment conditions represent the structural and normative features of the university or college. One set of factors is the fiscal well-being of an institution, its geographic location, the composition of its faculty, and the system of faculty governance. These factors can affect the faculty's access to resources that are needed in order to carry out their research. The second set—the composition of the student body, quality of library, laboratory, and other instructional resources—can influence faculty teaching. The third set consists of normative features such as understanding the mission of the college or university shared by the faculty. Meanwhile social contingency factors include events that happen in faculty members' personal lives and affect their work. For example, the birth of a child or the poor health of a spouse or parent or the fact that children may need extra time for taking part in their school activities. Some of these social contingencies may be controlled by the faculty member, for example, being a soccer mum, while others, such as poor health of a spouse are beyond the control of the individual. All these situations may affect the performance of faculty.

Finally environmental response includes different types of feedback that the faculty members receive about their role performance. It may be a salary raise or the award of tenure. Faculty receive various evaluations from students in their classes, peers who review publication work, colleagues and administrators who consider curricular revision, instructional materials,

research assistants, and the like. These responses operationalize the normative climate of the institution. The shared understanding of the institution's mission and what is central to a particular academic unit in part shape decisions about tenure or committing institutional resources.

The framework also forwards a processes dimension, which examines various different theoretical perspectives on motivation (tendencies to initiate and sustain a given activity). They group motivation theories in two categories, noncognitive and cognitive. Noncognitive theories assume that internal needs, personality dispositions, and external incentives and rewards will cause an individual to behave in predictable ways. Noncognitive theories include personality and career development theories, reinforcement theories and dispositional theories. Reinforcement theories hold that different stimuli in the environment cause individuals to respond in certain ways. Personality and career development theories propose that at different development stages, individuals are compelled by particular needs or psychological states to act in characteristic ways. Each stage has a set of different and distinctive pressures that lead individuals to behave in particular ways. For example an assistant lecturer starting out in their career is at a stage when they want to make their mark. This is the time for them to establish a line of research and produce publications. That individual is at a stage when they would like to apportion more time to research, for they know if they are to make the tenure ranks, they must research and publish.

On the other hand the scholars that forward cognitive theories of motivation for explaining faculty behavior argue that motivation is a function of an individual estimation of whether they will succeed at something. If one believes they are unlikely to attain something, they will not put in the effort to try and achieve, but on the other hand if they believe they have a chance to succeed then they will go all the way. People are motivated to work when they believe

that their performance will lead to a desired outcome, for example promotion or tenure or even mere appreciation by colleagues and/or the employer. Another facet of cognitive theories is self-efficacy. When individuals believe in their abilities or if they are fortified by earlier victories of a similar nature they are likely to have self-confidence in their abilities. This motivates them further to work harder.

The hot question is how does this framework explain brain drain? The framework forwards both individual and environmental aspects that mold a professional in their chosen work environment. Individual aspects include expertise, self-confidence, knowledge of one's capabilities of what they are expected to do under the different circumstances, and environmental aspects include rewards, collegiality, and resources available to an individual. If the environment is working against a faculty member, they tend to get de-motivated and to look elsewhere for better opportunities. For example if the expected rewards (salaries and benefits) on one's return to Makerere are not good, one will be tempted to stay abroad or to move to the private sector where they expect better rewards. Another example is facilities and resources for research and career advancement. An individual faculty member faced with the decision of whether to return or not will put into consideration the level of facilities and resources Makerere will be able to provide as compared to their alternative employer. The fact that the framework explains both the individual and environmental attributes helps in explaining some of the reasons that motivate faculty to leave Makerere or not want to return.

Theories of International Migration

The patterns and movement of people are so complicated and versatile that no single analysis is sufficient. As a result many theoretical models have been developed to explain migration. The various models incorporate varying assumptions and perspectives. This study

employs several of the international migration theoretical models (neo-classical economic theory, relative deprivation theory, world migration systems theory, and migration networks theory). Taken together the models offer an all-embracing explanation of the movement of faculty to and from Makerere University.

Neo-classical Economic Theory: The neo-classic economic theory views migrants as individual, rational actors who decide to move on the basis of a cost-benefit calculation (Todaro, 1969). Migration is considered a deliberate and conscious effort to increase real income and improve welfare (Sirojudin, 2009). Todaro (1969) concluded that assuming the presence of free choice and full access to information, and taking into consideration the likelihood of getting employment, people are expected to go where they would earn the highest wage. In agreement with Todaro (1969), Sirojudin (2009) in his review of economic theories of emigration, suggests that the choice process often includes the "deliberation of the following factors: (a) the difference in cost of living between the original and the host (destination) countries, (b) the differences in labor wages, (c) political and economic changes, (d) differences in demographic structure, (e) technological processes, and (f) the development of international trade" (pg. 706). According to this theory, wage differences between regions are the main reason for labor migration (Jennissen, 2004). The theory further explains that such wage differences are due to geographic differences in labor demand and labor supply although other factors like labor productivity, or the degree of organization of workers might play an important role as well (Jennissen, 2004). Critics of the neo-classical economic theory point out that it does not take account of the role of the family (Brown, 2002; Elrick & Ciobanu, 2009; Haas, 2010; Sirojudin, 2009).

The Relative Deprivation Theory: Another theory that is employed to explain brain drain is the relative deprivation theory, which states that the relative income position of a household or

an individual is an important determinant of international migration (Taferra, 2000). Therefore, the incentive to emigrate will be higher in societies which experience much economic inequality (Jennissen, 2004). Although the faculty under consideration left the country to go for advanced studies assured of a job on their return, faculty salaries at the University are quite low compared to the salaries in the Western World, which would be an incentive for faculty to try and get employment abroad. Additionally Makerere faculty remuneration packages substantially lag behind those for professionals within Uganda's private sector. The glaring disparities or economic inequalities between academics and other professionals in turn motivate the deprived professional (the faculty) to emigrate or move to the private sector.

World System theory: World systems theory is another theoretical model that is employed to explain brain drain resulting from migration of faculty. According to the world system theory, a migration system is constituted by two or more countries which exchange migrants with each other. World system refers to the international division of labor, which divides the world into core countries, semi-periphery countries, and periphery countries (Wallerstein, 1974). While core countries focus on higher skill and have capital intensive production, the rest of the world or periphery countries focus on lower skill, have labor intensive production and extraction of raw materials, which constantly reinforces the dominance of the core countries (Wallerstein, 2003). The theory has been employed to explain linkages between countries that may not share borders. The theory is based on the contention that capitalism is a historical social system (Wallerstein, 2003). Wallerstein (2003) defines historical capitalism as the system in which endless accumulation of capital has been the economic objective that has prevailed in fundamental economic activity. The zest for capital accumulation drove developed countries to amass colonies to fuel their capitalistic gains. Colonization not only led to culture exchange but also to

interdependence between the colonizer (in search of cheap labor) and the colonized (in search of finished goods). In the higher education arena, the world system theory may be seen as an explanation for superior education institutions in the colonizing states and the rest of the developed world compared to the former colonies and developing countries. As a result, former colonies continue to depend on their former colonizers and the developed world for advanced education. During the process of acquiring advanced education, scholars (especially those in the scientific and technological areas) are wooed with money and facilities that are only a dream in their home countries to stay and work in their host countries. The cumulative result of this is brain drain.

Migration Networks theory: Migrant network theory focuses on both the cause and perpetuation of migration (Sirojudin, 2009). Sirojudin (2009) argues that networks represent complex interpersonal ties that bind together current migrant laborers, former migrant laborers, and non-immigrant labors in both their countries of origin and their countries of destination. He goes on to state that a network is shaped by many factors, and that some of the strongest ties include kinship, friendships, and shared community of origin (Sirojudin, 2009). Massey *et al.* (2005) argues that networks also make migration "self-perpetuating." The networks tend to enlarge over time, reducing the costs and risks of migration for ever greater numbers of migrants (International Migration Review, 2010). Researchers have also argued that many migrants have ties to institutions and organizations that help them to migrate, get jobs, or adjust to society in the destination countries (Poros, 2011). Such institutions might include universities, Diaspora organizations, government and nongovernmental organizations, private employment agencies, corporations, religious organizations, and so on (Poros, 2011).

Most potential immigrants seek to minimize their risks when they move and consider places where they know other individuals or organizations can help them to make the trip and settle most easily (Poros, 2011). Social networks provide the kinds of connections needed to make migration possible. Therefore, migrant networks have been argued to not only aid potential migrants by helping them to find jobs, but also by offering them accommodations while they search for jobs as well as giving them tips on how they should market or present themselves to potential employers (Fawcett, 1989). This explains why former Makerere faculty employed in the U.S. are found in clusters—those that came before helped the others to come and settle in. Migration networks also determine whether, and to what extent, immigrants integrate into their host countries while also maintaining a connection to their home countries — a process known as "transnationalism" (Poros, 2011).

The preceding chapters have discussed the background of the study, given an overview of the case study, reviewed literature on faculty and brain drain, and highlighted the theoretical models that are employed to study brain drain at Makerere University. The next chapter considers the research design and methods of the study.

CHAPTER 3

RESEARCH DESIGN

Rationale

Qualitative research has been defined as any kind of research that produces findings not reached by means of statistical procedures or quantitative methods. Instead it is the kind of research that produces findings from real world settings where phenomenons of interest unfold naturally (Patton 2002). Thus, unlike quantitative researchers who seek causal determination, prediction, and generalization of findings, qualitative researchers seek instead illumination, understanding, and extrapolation to similar situations (Hoepfl, 1997). Toma (2006) argues that qualitative research is holistic, empirical, interpretative and empathetic. It is *holistic* in its concern with process and context rather than simply outcomes or focusing on differences and comparison, as in quantitative work. It is *empirical* because it occurs in natural surroundings, centering on work in the field. It is *interpretative*, focusing on gaining meaning and understanding and building theories and concepts. Toma (2006) also argues that qualitative research does this through intuition by the researcher who works at becoming an insider and thus penetrating the data sources. Qualitative research is also empathic in that it concentrates on the frames of references and values of those involved through a planned design that evolves in course of the inquiry.

Additionally, Yin (2009) suggested that case studies are the preferred method when: "how" or "why" questions are being posed; the researcher has little control over events; and the focus of the research is on a "contemporary phenomenon within a real-life context" (p.2). This

study seeks to identify the reasons for or the factors that influence faculty to make the decisions which they make when it comes to returning to their jobs at Makerere or staying abroad after advanced training. Because of the nature of the questions (what, why) investigated qualitative methods, particularly a single case study was the most appropriate means of investigating the questions at hand.

Case Selection

A single case study, Makerere University, was employed to investigate the research questions. Although brain drain affects all sectors of the economy and is both a national and continental issue, as the numbers of Africans migrating to the western world grows, the need to strengthen higher education becomes more critical. Therefore higher education as a sector was chosen for the study because higher education institutions are imperative in the battle to provide sufficient education opportunities to the citizens.

Makerere University is the primary context of the study. Its selection as the case was based on typical and convenience sampling techniques (Patton, 2002). According to Yin (2009), a typical case is a single case that can represent other institutions and the lessons learned from this case are assumed to be informative about the experiences of the average institution. Makerere University is not only the oldest university in Uganda and the East African region, but also, at approximately 35,000 has the highest student enrolment in the region. Moreover, Makerere University staff development enterprise is relatively bigger than the rest of the universities in the country. In addition, the University faces similar challenges as other public universities within the region. Finally, choosing Makerere University was convenient to the researcher because she is a former employee of the University thus understands the policies and processes at the University, which will facilitate data access and improve analysis.

Data Collection

Data collection was in two phases. The first phase was collection of trend data on faculty brain drain at the University covering all departments while the second phase was archival documents and in-depth interviews with selected administrators, faculty and former faculty from two science-based faculties.

Trends by discipline and destination

All faculty of Makerere University who went abroad to pursue advanced studies during the period starting January 1992 and ending August 2004 formed the broader pool. 1992 was selected as the base year because that was when Makerere University started investing substantially into staff development. As a result, the number of faculty going abroad for advanced degrees started growing. There were two major reasons for this. First, the private student program (introduced in 1991) provided resources that the University could tap for staff development. Second, by the early 1990s donors had started "coming back" to Uganda so scholarships became more readily available thus increasing the numbers of faculty going abroad for training. Meanwhile, 2004 was chosen to be the upper limit because the University usually allows for a maximum of six years within which to complete a doctoral degree so candidates who left in 2004 should have returned by the end of 2010. This eliminated the faculty members that were still pursuing their programs of study abroad.

I initially approached the Directorate of Human Resources for a list of all employees who left during the period of the study. The list was provided in July of 2010. In order to triangulate the data, the administrators of faculties, colleges, institutes, and centers were approached for a list of faculty who left the country for further studies during the period in question from their

respective units. The lists from the administrators indicated whether the faculty returned and if they returned, whether they remained at the University, and their last known contact information. The lists from the administrators were also obtained in July of 2010. The advantage with the information from the faculty/department level was that faculty usually communicate more with their academic units than with the human resources office so for those faculty who did not return this was a valuable source of the last known contact information.

Additionally, the University keeps a personnel file for each employee from the time they are appointed into the University service. To further ensure accuracy of the numbers and to get preliminary information on the possible subjects of the study, personnel files of all faculty who were employed by the University during that period were perused. The use of three collaborative sources of data, that is, the Directorate of Human Resources, the departments, and the personnel file records division served as a means of triangulation of data to further build trustworthiness of the study. The collaborative sources gave me more confidence that all the intended participants were included.

After obtaining and reconciling the two lists, I thoroughly looked at each individual's file to determine things like: what level of employment they were, which departments they were from, which institutions they went to, the programs of study they pursued, the sources of funding for the studies, whether they were bonded (required under a contract—the bond—to return and serve the University for a specified period failing which predefined measures would be instituted against the defaulter), whether they returned, and whether if they returned, if they continued to serve the University for at least three years. The personnel files could have made a good source for finding out whether they had families, but that information was likely to be inaccurate

because from my experience at the University I learnt that employees do not always update their files with such information.

From the above information I was able to determine which departments sent out the most students, which programs of study were more popular than the others, which destinations received the most students, whether they returned, and which destinations had most students returning or not returning and whether those that returned remained at the University. The trend data shows the trends across all units at the University, which gives an overview of the University wide trends of brain drain enabling the comparison of departments. Nonetheless, I sought out to focus on the science-based disciplines because brain drain literature suggested that these were the most affected. As a result, the candidates for detailed interviews came from science-based faculties.

For broader analysis of the data, the sending department/fields were sorted into 8 categories: (i) Health Sciences (College of Health Sciences and Child Health and Development Centre); (ii) Veterinary Medicine (the Faculty of Veterinary Medicine); (iii) Agriculture and Biological Sciences (the Faculty of Agriculture, the Faculty of Forestry and Nature Conservation, the Institute of Environment and Natural Resources, and the Faculty of Science excluding mathematics and physics); (iv) Engineering, Technology & Physical Sciences (the Faculty of Engineering and Technology, the Faculty of Computing and Information Science, the Institute of Statistics and Applied Economics, and mathematics and physics from the Faculty of Science); (v) Law, Business, and Economics (the Faculty of Economics and Management, the Faculty of Law and The Human Rights and Peace Centre [HURIPEC]); (vi) Social Sciences (Faculty of Social Sciences, Makerere University Social Research Institute, Institute of Adult and Continuing Education, the East African School of Library and Information Science, and the

Institute of Psychology); (vii) Humanities (the Faculty of Arts and the East African School of Industrial and Fine Art); and (viii) Education (the School of Education). While categories (i) through (iv) are health and Science Technology Engineering and Mathematics (STEM) fields, categories (hereafter interchangeably referred to as STEM fields or STEM faculties or health and STEM faculties), (v) through (viii) are non-STEM fields (hereafter interchangeably referred to as non-STEM fields or non-STEM faculties). This reduced the number of units from 18 to 8 making it more manageable to analyze. This categorization helps highlight the trends that emerge from the brain drain literature, which indicate that there is more brain drain in the health and STEM fields as compared to the non-STEM fields.

The destinations were categorized into 6 categories: (i) North America, (ii) United Kingdom & Australia, (iii) the rest of Europe, (iv) Asia, the far East and South America, (v) Africa excluding Uganda, and (vi) Uganda. The purpose of including Uganda in the categories is to allow the research to exam the number of faculty going to destinations outside Uganda compared to that staying within Uganda.

After making the categories I formulated a matrix that analyzed the faculty who went abroad from 1992 to 2004 by discipline and destination in accordance with the above categories. From the matrix, I was able to identify the highest and lowest return rates by faculties and by destination.

Archival documents and in depth Interviews

The second phase of data collection was from archival materials and semi-structured interviews with respondents. Archival materials on policies on training were obtained from the directorate of human resources and the University Secretary's office. Some faculty who had undergone training abroad between 1992 and 2004 were interviewed. The interviews followed a

semi-structured format in order to explore consistent themes between participants and also to allow follow-up for topics important to each participant (Rubin and Rubin, 1995). The semi structured interview protocol is included in Appendix A. Respondents were selected in the manner detailed in the section titled “interview respondents.” The interviews took place in spring 2011. On average each interview lasted approximately 50 minutes. With the exception of one interview (the participant refused audio recording), an audio recording of all interviews was made. Some interviews (16) were physically face-to-face either in Uganda (12) or at the respondents’ U.S. institutions (4). The remaining interviews took place either via video conferencing over the internet (10) or by telephone (5).

Interview respondents

After entering the trend data in the matrix, the following steps were followed to identify the candidates that were interviewed:

a) I picked the two destinations, outside Africa, that had the highest number of faculty not returning from training programs abroad and dropped the faculty who did not go to either of these destinations from the interview pool.

b) From the remaining pool, faculty from two health and STEM faculties, one with the lowest rate of return and the second with the highest rate of return, were selected. All the remaining faculty was dropped from the pool. The faculty who returned but resigned their positions within three years of returning were classified as non-returns. Comparing two faculties within the same area, i.e., science-based, allowed for an exploration of unique features in the two faculties. The exploration of the unique features was useful learning points for the faculties which had the highest non returns.

c) From this reduced pool 25 faculty (12 from College of Health Science and 13 from the Faculty of Veterinary Medicine) were selected to be interviewed trying as much as possible to balance the numbers of the participants between disciplines, destinations, returnees, absconders[4], and resigners. This made it possible to explore the factors that influenced faculty to return or not to return or to return and soon leave despite their disciplines and the destinations that they went.

d) Five senior administrators (Principals/Deans/Directors/Heads of Departments) from the two faculties were interviewed. Additionally, a senior administrator from University human resources directorate was interviewed.

In sum, when choosing who to interview, I pulled from faculty who both trained in the two most popular destinations outside the African continent and were from the health and STEM units which had the highest number of faculty returning or the health and STEM based faculties which the highest number of faculty failing to return or returning and soon leaving the University service. Disciplines of study are a key measure because there are fields that have long established a trend of African professionals' migrating to the west, for example, medical fields. Additionally, I strived to ensure that the number of women interviewed were representative of the number of women who trained or returned or did not return. A total of 4 female faculty was interviewed. There was no female administrator interviewed because none held the administrative positions which were targeted in the respective units. The interviews took place in the spring of 2011. Table 1 describes the distribution of interview participants.

[4] I understand that the terms "abscond" and "absconder" carry negative connotations. That is not what is intended, rather, I used the terms because those are the terms that Makerere University uses to describe that category of faculty.

Table 1: Distribution of interview respondents

	North America	The rest of Europe	Administrators	Total
Health Sciences	5	7	3	15
Vet. Medicine	7	6	2	15
Human Resources Department	0	0	1	1
Total	12	13	6	31

Data Analysis

In the first phase, to better understand migration patterns and return rates by faculty and by discipline and by destination, the data were entered in an excel sheet where formulae were entered to calculate totals, percentages, differences and averages. This made it possible to compare trends at Makerere University with the trends identified in the brain drain literature which suggest that faculty from science-based disciplines were less likely to return. In order to systematically analyze interview and archival data an analytical framework was developed employing both deductive and inductive strategies. From the theoretical frameworks which were earmarked to explain faculty work and careers and brain drain, the following broad themes were identified: destination, nature of programs, work environment, economic consideration, career growth, social ties and networks, political environment, patriotism and allegiance, education system, and foreign immigration policies and targeted recruitment. The broad themes identified were the basis of the coding system that was utilized to analyze the interview data. Additionally, the pattern matching technique was used to identify emergent themes from the data. The emergent themes were employed as further codes to analyze the data.

Role of the Researcher and Access to data

A qualitative researcher serves as the primary data collection instrument. As such it was imperative for me to identify, from the onset, any biases, assumptions, values and generally all

the baggage that I was bringing with me to the study (Creswell, 2009). I was employed by the University as head of the legal office, a senior level management position. The position involved interaction with senior level administrators and academicians alike. The rapport I had with officers in the institutions gave me some leverage in accessing information that the University would be reluctant to give to a stranger. Moreover, my experiences as an employee not only gave me greater historical knowledge, but also a better understanding of the institution and its various policies. However, the nature of my work required me to follow up faculty who had violated their study leaves by not returning from their study programs abroad. In this regard I was responsible for recovering from them dues to the University that accrued as a result of their breach of contract by failing to return to the institution. Some of the faculty, especially those that had not returned were reluctant to talk to the researcher about the very thing that the researcher was previously prosecuting culprits like them for. However, on learning that the researcher was no longer employed by the University most of the faculty opened up. The fact that the researcher is no longer an employee might also, on the other hand, have caused the faculty still at the University to have mixed feelings about the researcher, which might have influenced their answers in the interviews.

This study was conceived during the course of my PhD program through interactions with former Makerere faculty currently based in the United States. After getting acquainted with 10, half of whom came from one faculty at Makerere—Veterinary Medicine, the words “brain drain” hit me. I could not help to informally ask them about their stories. What I heard convinced me that the issue needed to be studied. I am a graduate of Makerere University. Additionally, the University footed the bill for my master’s degree program. I love the institution. So I have my biases. For instance, I believe that it is unfair for faculty to abandon the University after milking

it of its resources. On the other hand, I also believe that the University should take some of the blame. For example, I believe that the University is not doing enough to motivate its employees—salaries are still low, research funds are hard to come by, excellence in research or teaching is not well rewarded and the list goes on. Although I had no other intention but to approach the study objectively, I knew that nonetheless the information I gathered and interpreted could be biased by my experiences at Makerere (Creswell, 2009). So I triangulated the data and tested my assumptions and interpretations with neutral people such as my advisor and committee members.

Reliability and Validity

There is general agreement that all research studies must be open to critique and evaluation. Failure to assess the worth of a study – the soundness of its method, the accuracy of its findings, and the integrity of assumptions made or conclusions reached – could have dire consequences. Ambiguous or meaningless findings may result in wasted time and effort, while findings which are simply wrong could result in the adoption of dangerous or harmful practices. It follows that research designs must contain strategies for ensuring reliability and validity or, in other words, trustworthiness of the study, findings, and interpretations (Glesne, 2006).

Reliability has been described as 'the consistency or constancy of a measuring instrument', or 'the degree of consistency or dependability with which an instrument measures the attribute it is designed to measure' (Long & Johnson, 2000). Meanwhile Brink (1991) proposes three tests of reliability for qualitative work (stability, consistency, and equivalence), each to be used as is appropriate for specific studies. *Stability* is established when asking an informant identical questions at different times produces consistent answers. *Consistency* refers to the integrity of issues within a single interview or questionnaire, so that a respondent's

answers on a given topic remain concordant. *Equivalence* is tested by the use of alternative forms of a question with the same meaning during a single interview, or by concurrent observation by two researchers.

Joppe (2000) provides the following explanation of what validity is in qualitative research: validity determines whether the research truly measures that which it was intended to measure or how truthful the research results are. Meanwhile Kirk and Miller (1986) suggest that in the case of qualitative observations, the issue of validity is not a matter of methodological hair-splitting about the fifth decimal point, but a question of whether the researcher sees what he or she thinks he or she sees. Therefore, in agreement with Toma (2006), I am of the view that validity is useful in qualitative research in that it suggests that the researcher is observing, identifying, or measuring what he or she purports. Researchers generally determine validity by asking a series of questions, and will often look for the answers in the research of others.

Long & Johnson (2000) argue that validity is normally established through consideration of three main aspects: content validity, criterion- related validity and construct validity. The first of these depends largely on sampling and careful construction of the instrument and refers to the degree to which the entirety of the phenomenon under investigation is addressed. A sub-set of this is the weak concept of face validity, which assures only that the instrument and findings appear to be thorough and accurate to reputedly knowledgeable reviewers. Criterion-related validity is concerned with comparison of the instrument and findings with an established standard to determine the correlation between measured performance and actual performance. Finally, construct validity is associated with consideration of the proximity of the instrument to the construct in question.

Both reliability and validity are very important constructs in research. In agreement with Long and Johnson (2000), I endeavored to have follow-up interviews with each participant. At the follow-up interviews some of the questions that had previously been asked were reworded and asked again to ensure stability. Additionally, to ensure consistency within an interview, when respondent's answers seemed inconsistent, follow up questions were asked to substantiate. Moreover, to test for equivalence in answers questions paraphrased to see whether similar answers were given. Additionally, I sought some interviews with faculty or former faculty who I knew to hold differing opinions.

Verification

Verification is the process of checking, confirming, making sure, and being certain. In qualitative research, verification refers to the mechanisms used during the process of research to incrementally contribute to ensuring reliability and validity and, thus, the rigor of a study (Morse, Barrett, Mayan, Olson, & Spiers, 2002). These mechanisms are woven into every step of the inquiry to construct a solid product (Creswell, 1997; Kvale, 1989) by identifying and correcting errors before they are built into the developing model and before they subvert the analysis. The authors further argue that if the principles of qualitative inquiry are followed, the analysis is self-correcting. Verification strategies help the researcher identify when to continue stop or modify the research process in order to achieve reliability and validity and ensure rigor. Creswell (2009) describes 8 verification procedures: prolonged engagement and persistent observation, triangulation, peer review and debriefing, negative case analysis, clarification of researcher bias, member checking, rich description, and external audit. Aware that attending to all these means of increasing trustworthiness is not necessary in any one study, some of the verification procedures were attended to in the manner described hereafter. To check divergence

from initial expectations, I kept notes from the beginning to see how the data would have pushed study from initial assumptions. The study also ensured convergence with other sources of data by employing various kinds of triangulation and comparisons with the literature. Additionally, the study employs extensive quotations from field notes and transcripts of interviews. Moreover the study also looks at archival data and recordings to further increase trustworthiness.

Limitations

This study will be limited mainly in two aspects, both methodological. First, case studies are of limited generalizability. There is no way of knowing, empirically, to what extent Makerere University is similar to or different from other such institutions in sub-Saharan Africa. Moreover, since the sample is small and distinctive and the data predominantly non-numerical, there is no way to establish the probability that data is representative of the larger population. The study would better explain the status of affairs if the entire population was considered. However, this would be extremely expensive and time consuming, a project which would be difficult, if not impossible, to accomplish in a bounded period that the PhD program offers.

The second limitation relates to objectivity. Researcher expertise, knowledge and intuition are an integral part of the case study research method. As a researcher I have the discretion to choose what questions to ask, when to ask them and how to ask them. It is also up to me to choose what to observe and what to record. In essence I have the responsibility of drawing out the points of interest from the data on which to base and construct the stories the faculty has to tell. Personal judgment is employed to determine what data or issues to include or exclude or which data to treat as being significant. All of these choices affect the quality of the study. As I discussed earlier in this chapter, my connection to Makerere University may bias my

analysis of the data. However, to guard against this, I strive to be rigorous by having constant checks and balances, and by triangulating the data.

CHAPTER FOUR

FINDINGS

Introduction

This chapter includes three sections. The first section summarizes and reviews the staff development and training policies at Makerere University that existed in 1992 and those that were introduced during the period studied. The section also gives an overview of the University governance structure, the student and staffing levels, and the modes of funding staff development. The second section summarizes the general trends of staff training and development at the University during the period studied. The section also gives comparisons between: academic units and destinations of trainees. The third section provides a narrative of opinions and reasons given by faculty for choosing to return or not to return or to resign their positions soon after they returned from training abroad. The section also gives perspectives of administrators on brain drain at Makerere University. This final section relies heavily on interview data collaborating it, where possible, with the data provided in the first and second sections. Although, as outlined in chapter three, the period studied was 1992 to 2004, the findings of the study are drawn from 1992 to 2009. Considering that the University usually gives its faculty up to 6years of study leave to complete a doctoral degree, employing 2009 as the upper cap for drawing findings would allow for those that started training in 2004 to have completed their programs and returned (or not) by 2010

Overview of Makerere University Staff Development Context

At the beginning of the study in 2009, Makerere University had 18 academic units namely: Faculty of Agriculture, Faculty of Arts, East African School Library and Information Science (EASLIS), Faculty of Forestry and Nature Conservation, Faculty of Law, College of Health Science, Faculty of Science, Faculty of Social Sciences, Faculty of Engineering and Technology, Institute of Statistics and Applied Economics (ISAE), Institute of Adult and Continuing Education (IACE), Faculty of Computing and Informatics Technology, Faculty of Economics and Management (FEMA), Makerere University Institute of Environment and Natural Resources (MUIENR), Margaret Trowel School of Industrial and Fine Art (MTSIFA), and the Faculty of Veterinary Medicine. However, by 2011 during the course of writing the findings from the study, the University reorganized itself into 12 academic units, including 8 colleges, 2 schools, and 2 centers. Since the study was conducted before the University reorganized itself, the old academic divisions are employed in reporting and analysis of findings.

In December 2009, the University had a total of 34,672 students: 32,811 undergraduate and 1861 graduates. Table 2 gives a breakdown of the student enrollment as of December 2009. With 5,730 students the School of Education had the highest number of students. The other academic units with high numbers of students included: I.A.C.E. (4,539), Faculty of Arts (4,019), faculty of Social sciences (3,180) and the Faculty of Economics and Management (2,907).

Table 2: Makerere University students and faculty as of December 2009

ACADEMIC UNIT	UNDERGRADUATE STUDENTS	GRADUATE	# STUDENTS	# FACULTY	FACULTY/STUDENT RATIO
AGRIC	1,045	43	1,088	103	1/10
ARTS	3,815	204	4,019	156	1/26
COMPUTING	1,781	140	1921	57	1/ 34
EASLIS	562	36	598	21	1/28
EDUCATION	5,572	158	5,730	78	1/73
FEMA	2,577	330	2,907	55	1/52
FORESTRY	209	7	216	43	1/5
HEALTH SCIENCES	1056	262	1318	241	1/6
I.A.C.E	4,535	4	4,539	29	1/157**
I.S.A.E	2,008	74	2,082	40	1/52
LAW	1,225	53	1,278	34	1/34
MTSIFA	465	6	471	39	1/12
MUIENR	188	40	228	10	1/23
PSYCHOLOGY	1,075	18	1,093	22	1/22
SCIENCE	1,212	129	1,341	142	1/9
SOCIAL SCIENCES	2,910	270	3,180	71	1/45
TECHNOLOGY	1,981	48	2,029	120	1/17
VET MEDICINE	595	39	634	103	1/6
TOTAL	32,811	1861	34,672	1363	1/25

Source: Compiled from data from the 2009 Makerere University Annual Report.

**At least 90% of the students from this unit were long distance and only came to the University to interface with the lecturers and other students for no more than two weeks in a given semester.

By December 2009, the University had a total number of 1363 faculty: 387 female and 976 male yielding an overall faculty to student ratio of 1 to 26. Of the 1363 faculty, 27% had PhDs, and 48% and 25% had a master's degree and bachelor's degree, respectively, as their highest qualification. Table 3 shows a breakdown of faculty by academic unit and highest degree attained. Some of the health and STEM faculties, namely, agriculture, forestry, health sciences, had decent faculty/student ratios ranging from 1/5 to 1/9. However, STEM faculties, such as, Computing (1/34), I.S.A.E (1/52), Technology (1/17), had poor faculty/staff ratios. Moreover,

even where the faculty/student ratios were good, the number was boosted by faculty at the assistant lecturer and teaching assistant levels who did not hold PhDs. The College of Health Sciences (shaded grey), one of the focus academic units of the study, had only 24% of its faculty with PhD degrees by 2009. This was below the University average of 27%. Its counterpart, the Faculty of Veterinary Medicine (also shaded grey), had 30% of faculty with PhD degrees at that time.

Table 3: Qualification profile of academic staff as of December 2009

HIGHEST QUALIFICATION								
	PhD		Masters		Bachelors		TOTAL	
ACADEMIC UNIT	Female	Male	Female	Male	Female	Male	FEMALE	MALE
AGRICULTURE	14	35	13	32	2	7	29	74
ARTS	11	38	21	54	10	20	42	112
COMPUTING	2	7	11	19	7	11	20	37
EDUCATION	8	20	14	19	2	15	24	54
EASLIS	0	6	3	3	3	6	6	15
FEMA	4	4	13	28	0	6	17	38
FORESTRY	1	11	5	14	3	9	9	34
HEALTH SCIENCES	6	34	48	87	26	40	80	161
I.A.C.E	1	3	7	8	3	7	11	18
I.S.A.E	1	9	4	15	5	6	10	30
LAW	1	3	11	18	2	0	14	21
FINE ART	2	6	9	18	1	3	12	27
ENVIRONMENT	0	7	0	2	1	0	1	9
PSYCHOLOGY	3	3	5	6	2	3	10	12
SCIENCE	12	44	12	40	12	22	36	106
SOCIAL SCIENCE	9	21	9	23	1	8	19	52
TECHNOLOGY	1	22	9	43	12	33	22	98
VET MEDICINE	5	19	10	25	10	34	25	78
TOTAL	81	292	204	454	102	230	387	976

Source: The Directorate of Human Resources

Moreover, the situation was even worse in some of the departments. For example, veterinary public health, perhaps the department most affected by brain drain in the faculty of Veterinary Medicine, had only 20% of its faculty with PhDs by March 2011. Table 4 shows the established faculty positions alongside the filled faculty positions at the department of veterinary public health as of March 2011. In March 2011, the department of veterinary public health had 10 positions out of 15 established positions filled. Although 60% of the established positions, that is, from the position of lecturer upwards, are required to have PhDs, only 20% of faculty at the department had PhDs. All the five spots that were not filled required PhD holders. Moreover, the assistant lecturer rank, which required only a master's degree, had an extra two faculty above the established four faculty for that rank. In essence, at the current level of established positions, the department of veterinary medicine lacked 7 PhDs out of a possible 9 PhDs.

Table 4: Established position compared with filled positions in the department of veterinary public health.

Rank (Qualification requirement)	Established positions	Filled positions	Unfilled positions
Professor (PhD)	1	0	1
Associate Professor (PhD)	2	2	0
Senior Lecturer(PhD)	2	0	2
Lecturer(PhD)	4	0	4
Assistant Lecturer(Masters)	4	6	-2
Teaching Assistant(1st Degree)	2	2	0
TOTAL	15	10	5

Source: Interview data

Remuneration and Benefits

Although faculty remuneration at the University improved between 1992 and 2009, it continues to be low compared with professionals with commensurate qualifications in the private sector. While a lecturer was paid less than USD$150 a month in 1992, by 2001 the pay had

increased to approximately USD$232 per month. Further increments were registered in 2004 to bring the salary to approximately USD$295 per month for a lecturer. By 2009 the salary of a lecturer at the University had increased to a record USD$1147 per month.[5] However, salaries for faculty at Makerere University are still the lowest within the region, which has necessitated continuous agitation by faculty for salary increments.

Training Policies

In 1999 the University revised its promotion criterion by adapting what is famously referred to as the Mujaju Report. According to the Mujaju Report, one had to have a PhD degree to be appointed or promoted to the rank of lecturer and above. Additionally, the Report called for an M.A. for all appointed as assistant lecturers and an upper second class honors degree for anyone appointed as a teaching assistant. The Report generalized criteria relevant for appointment to both academic departments and professional departments making research the primary criterion for appointment to the position of lecturer and above University wide. Administrators from the clinically oriented departments such as medicine and veterinary medicine showed dissatisfaction with the Mujaju requirements. Prior to the Mujaju report, an individual could be appointed or promoted to the position of lecturer with only a master's degree. Following the coming into force of the Mujaju report many faculty looked high and low for opportunities to obtain their doctoral degrees. Moreover, the Report required not only for the doctoral training to be in the fields that the faculty taught, but also that the training be completed within four to five years of commencement of training and that a 3.0 or better grade be maintained at all times. Before promotion to the position of lecturer, an individual was also required to have published a minimum of four articles in a refereed journal in their field of

[5] Official Bank of Uganda rates as June of a particular year were employed to convert the salaries from Uganda Shillings to USD$

specialization. Although the University required the faculty to have PhDs before they were promoted or appointed to the position of lecturer, it did not provide adequate avenues and resources for the faculty to go for further training.

In 2006, the University revised the Mujaju policy and passed another promotions criterion for faculty. The new promotions criterion provided for both normal track and fast track promotions. Under the normal promotions track, in addition to serving a minimum of three years at a level, the faculty due for promotion must have three new recognized publications since their last promotion. Under the fast track, although the faculty need only have two years of teaching experience, they must have published six new recognized publications since their last promotion. Although the University instituted the various requirements for publication, hardly any funds are provided for research. This makes it difficult for the faculty to research and, as a result, to publish their findings.

Avenues for Further Training and Funding Staff Development

Faculty who wanted to enroll in PhD programs could do so at Makerere University or other universities within Africa or outside Africa. It was not feasible for faculty to enroll in PhD programs in other universities within Uganda because they did not have the capacity to supervise doctoral programs. Additionally some departments in Makerere University itself did not have enough capacity to supervise doctoral work. As a result, a sizeable number of faculty, especially from the science-based units ended up seeking training opportunities outside Uganda. For those who ended up training within Makerere University, tuition fees were waived, they continued with their teaching schedules, and in some instances, funds were allocated to them to carry out their doctoral research. Collaborating institutions with Makerere University in various parts of

the world are destinations to many of its faculty. The collaborations range from joint programs to faculty or student exchanges and joint research activities.

There are several avenues for staff development at Makerere University. In the early 1990s when the University established the private sponsorship scheme and started getting extra funding from the tuition paying students, the University Council agreed to set aside a percentage of the earnings from the private scheme to go toward staff development. The Council also agreed to set aside a percentage of the private income for research. From these funds the University funded training abroad of some of its faculty and was able to provide some funds for doctoral research. While some of the faculty went on full rides to one or the other collaborating institutions with Makerere University, some had to look around for fellowships to fund their training and some even had to turn to private means to fund their training. The constant factor here was that faculty wanted to earn their PhDs in whatever way possible in order for them to be promoted or appointed to the positions of lecturer and above. The scramble to go out for training was so hard and widespread in the mid-1990s that it was not uncommon to find two-thirds of faculty in a given department to be away on study leave. This meant that the remaining faculty did both their work and the work of their colleagues who were away for training. The teaching loads became heavier, leaving very little room for research and service.

General Trends of Staff Development at the University

To provide an overview of the staff development trends at the University, I first collected data for all faculty who had registered for and completed advanced degree programs (both master's and PhD) between 1992 and 2009. I then disaggregated these data to report faculty training activities in all academic units at the University making it possible to make comparisons between units and disciplines. This highlighted the units that were facing brain drain as a result

of faculty not returning from training abroad or resigning their positions soon after they returned from training. The following section summarizes the findings from that data.

How Many Faculty Underwent Training and how were they Distributed by Discipline and Destination?

An examination of the faculty training data at Makerere University indicated that a total of 508 faculty enrolled into and completed advanced level programs both within and outside Uganda between 1992 and 2009. Of these, 471 pursued terminal degrees, i.e. PhD or equivalent. Table 5 below gives a breakdown of the distribution of the faculty who underwent and completed PhD/ equivalent training between 1992 and 2009.

Table 5: Faculty who completed advanced degree training between 1992 and 2009

Categories	North America	U.K. & Australia	The rest of Europe	Asia, Far East & South America	Totals for outside Africa	Africa excluding Uganda	Uganda	Total	%
Health Science	8	7	15	0	30	6	17	53	11%
Veterinary Medicine	10	8	7	2	27	9	23	59	13%
Agriculture & Biological Sciences	9	7	23	0	39	15	37	91	19%
Engineering, Technology & physical sciences	11	19	26	0	56	8	33	97	21%
Education	2	4	5	0	11	2	7	20	4%
Humanities	8	10	9	1	28	13	16	57	12%
Law, business & economics	7	3	4	0	14	9	3	26	6%
Social Sciences	3	6	11	1	21	23	24	68	14%
Total	58	64	100	4	226	85	160	471	100%
%	12%	14%	21%	1%	48%	18%	34%	100%	

Source: Data from the Directorate of Human Resources

Table 5 shows that 160 (34%) of the faculty who underwent and completed PhD/equivalent programs studied in Uganda as compared to 226 (48%) that went to destinations outside the African continent. Europe (excluding the U.K.) was home to 21% of the faculty who trained while the U.K. and Australia took 14% and North America 12%. Only 4 (1%) of the faculty went to Asia, the Far East, or South America. The category of Engineering, Technology and the Physical Sciences at 21% of all faculty who trained, had the greatest number of faculty undergoing advanced degree training. This category was closely followed by Agriculture and the Biological Sciences, which claimed 19%. Social Sciences and Humanities topped the arts based categories with 14% and 12% respectively of the faculty who underwent and completed PhD/equivalent programs in the study period.

Table 6 gives a breakdown of the numbers of faculty who underwent and completed training during the period studied by destination, and whether they returned or absconded. The table also provides a comparison between non-STEM and STEM and health faculty. Overall, more health and STEM faculty (300 or 64%) underwent and completed PhD/equivalent programs during the period of study. Of the 300 health and STEM faculty, 152 (51%) went to destinations outside Africa, 110 (36%) studied in Uganda, and 38 (13%) studied at other African destinations. Table 6 shows that the rest of Europe hosted 71 (24%) of the 300 health and STEM faculty, while the U.K. and Australia received 41 (14%) faculty and North America 38(12%).

Table 6: Comparison between STEM faculties and Non-STEM faculties

Category		North America	U.K. & Australia	Rest of Europe	Asia, Far East & South America	Africa excluding Uganda	Uganda	Total	% of faculty who trained
No. of faculty who Trained	STEM	38	41	71	2	38	110	300	64
	Non-STEM	20	23	29	2	47	50	171	36
% of faculty who trained	STEM	13	14	24	1	12	36		
	Non-STEM	12	13	17	1	28	29		
No. of faculty who returned	STEM	20	36	63	2	34	102	257	86
	Non-STEM	15	18	25	2	43	48	151	88
% of faculty who returned of those who trained in region	STEM	53	87	89	0	90	93		
	Non-STEM	75	77	86	0	91	96		
No. of faculty who absconded	STEM	18	5	8	0	4	8	43	14
	Non-STEM	5	5	4	0	4	2	20	12
% of faculty who absconded of those who trained in region	STEM	47	13	11	0	10	7		
	Non-STEM	25	23	14	0	9	4		

Trained Returned Absconded

What were the Rates of Returners and Absconders/Resignees?

Both Tables 6 and 7 show figures for absconders/resignees. However, while Table 6 gives the breakdown of absconders/resignees by region and overall category of disciplines (health and STEM or non-STEM), Table 7 presents the data for absconders/resignees by individual category of discipline. Table 6 shows that 257 (86%) of the 300 STEM faculty who trained returned to their positions at Makerere University. Table 6 also shows that151 (88%) of

the 171 non-STEM who trained returned to Makerere. Thus 43 (14%) of the 300 STEM faculty who trained did not return to the University after they trained or resigned soon after returning as compared to 20 (12%) of the 171 non-STEM faculty who trained who did not return. Summing the number of STEM and non-STEM faculty who did not return reveals that a total of 63 faculty did not return to the University. As a result, 43 (68%) of the 63 faculty who did not return were from STEM faculties.

A further look at the number of faculty who returned compared to those that did not return by destination reveals some interesting results. Table 6 shows that 23 (40%) of the 58 faculty who trained in North America did not return or resigned soon after returning. The figure is even higher for STEM faculty where 18 (47%) of the 38 who trained in North America absconded. Unlike North America, the percentage of STEM faculty who went to the U.K. and Australia who did not return or resigned soon after returning was only 13%. Within close proximity with U.K. and Australia, the Rest of Europe, had only 11% of the STEM faculty who trained there absconding or resigning. On the other hand U.K. and Australia at 23% of non-STEM faculty who trained there not returning, was very close to the North America, which had 25% of non-STEM faculty who trained there not returning.

Table 7 shows that the total number of faculty who absconded was 63. Moreover, from Table 6, the sum of faculty who trained outside Africa who did not return to Makerere University or resigned their positions soon after returning is 45. Remembering that Table 5 shows that the total number of faculty who trained was 471 of which 226 trained outside Africa. These figure read together show that, although only 13% (63) of the 471 faculty who trained did not return or resigned their positions at Makerere, 20% (45) of the 226 faculty who trained outside Africa did

not return from their training abroad or resigned their positions soon after returning from training.

Table 7: Absconders and resignees by discipline and destination of the faculty who underwent completed advanced degree training between 1992 and 2009

	North America	U.K. & Australia	The rest of Europe	Asia, Far East & South America	Africa excluding Uganda	Ug.	Total	% of absconders
Health Science	2	0	1	0	1	1	5	8%
Veterinary Medicine	10	2	1	0	3	1	17	27%
Agriculture & Biological Sciences	1	2	1	0	0	3	7	11%
Engineering, Technology & Physical Sciences	5	1	5	0	0	3	14	22%
Education	2	0	0	0	0	1	3	5%
Humanities	2	1	2	0	0	0	5	8%
Law, Business & Economics	2	2	1	0	3	0	8	13%
Social Sciences	1	0	1	0	1	1	4	6%
Total	23	10	12	0	8	10	63	100%
As a % of faculty who absconded	37%	16%	19%	0%	12%	16 %	100 %	

Health and STEM categories

Put in another way, 45 (71%) of the 63 faculty who did not return to Makerere or resigned their positions soon after returning, trained outside Africa. North America, at 37%, had the highest percentage of faculty not returning to Makerere after training. The rest of Europe came in second to North America with 19%. The U.K. and Australia, and Uganda each had 16% not returning, while the rest of Africa had 12% of the faculty who did not return. Finally, 100% of the faculty who trained in Asia, the Far East and South America returned to Makerere after they completed their training there. The Engineering, Technology and the Physical Sciences category accounting for 22% of the faculty who did not return ranked second among health and STEM categories (Table 7). The categories of Agriculture and Biological Sciences and Health Sciences at 11% and 8% respectively had the lowest numbers of faculty not returning among the health and STEM

categories. According to Table 7, of the 5 health sciences faculty who did not return to their jobs at Makerere, 3 trained outside Africa. Generally the non-STEM categories had fewer faculty not returning compared to the health and STEM categories.

Table 8: Faculty who trained outside Africa and did not return to Makerere by discipline

	Total l faculty who trained outside Africa	Total of faculty who absconded/resigned of those who trained outside Africa	% of faculty who absconded/resigned of the total that trained outside Africa
Health Science	30	3	10%
Veterinary Medicine	27	13	48%
Agriculture & Biological Sciences	39	4	10%
Engineering, Technology & Physical Sciences	56	11	20%
Law, Business & Economics	14	5	36%
Social Sciences	21	2	10%
Humanities	28	5	18%
Education	11	2	18%
Total	226	45	20%

 Health and STEM faculties

Table 8 shows that while 48% of the 27 Veterinary Medicine faculty who trained outside Africa did not return to Makerere University after they completed training, only 10% of the 30 Health Sciences faculty did not return. Additionally, as exhibited in Table 7, 13 (63%) of the 17 Veterinary Medicine faculty who did not return trained outside Africa. Moreover, 100% of the 10 Veterinary Medicine faculty who trained in North America did not return to Makerere. Additionally, 20% of the 56 Engineering, Technology and Physical Sciences faculty who trained outside Africa did not return to Makerere. Finally, among, the health and STEM categories, 10% of the 39 Agriculture and Biological Sciences faculty who trained outside Africa did not return to Makerere. Among the non-STEM categories, 36% of the Law and Business and Economics faculty who trained outside Africa did not return. It is important to note that the 5 faculty who

did not return to their positions at Makerere in the humanities category all trained outside the African continent.

Putting into consideration that 43 (68%) of the 63 faculty who did not return to their jobs at Makerere University following their advanced degree training was from health and STEM categories, health and STEM faculties were selected for the in-depth interviews. The Faculty of Veterinary Medicine was selected because it had the highest percentage of faculty not returning among the health and STEM categories.[6] On the other hand the College of Health Sciences was selected for in-depth interviews because it had the least number of faculty not returning. The two extremes were selected to allow for comparison and contrast of two science-based categories.

Findings from the Interviews

Having outlined the policies and the general trends of staff training and development at the University during the period studied, this section includes a narrative of the findings from the personal interviews. The narrative is outlined by themes from the coding system of the interview data. Before proceeding with the narrative by theme, the section offers an overview of the interview participants, summarizes where they trained, by region, and reports the reasons they forwarded for their choices of destination and institution.

A total of 31 participants were interviewed. They included: 1 senior level administrator from the Human Resources Directorate, five faculty/departmental senior administrators, and 25 faculty (13 from the faculty of Veterinary Medicine and 12 from the College of Health Science). Twelve of the faculty interviewed went to destinations in North America while the remaining

[6] While Engineering, Technology and Physical Sciences comprised, the Faculty of Engineering and Technology, the Faculty of Computing and Information Science, the Institute of Statistics and Applied Economics, and Mathematics and Physics from the Faculty of Science, the Faculty of Veterinary Medicine stood on its own. Therefore 29% absconders from Veterinary Medicine are much higher in actual terms than 24% from the Engineering, Technology and Physical sciences category which combines four academic units.

thirteen went to destinations in Europe excluding the United Kingdom. Eleven of the faculty who were interviewed were still employed by the University while fourteen either did not return from their PhD training or resigned their positions at Makerere University soon after returning from their training. Four of the participants were women. All the participants were married and had children (three of the participants were not married at the time they commenced their programs of study). The participants' ages ranged from 32 and 57 years and their ranks from lecture to professor, for faculty, and head of department to principal, for administrators. All the participants with the exception of two were tenured.

Makerere University faculty pursuing advanced degree training during the study period went to a total of 24 countries around the world. This study focused on the faculty who trained outside the African continent. Although the main focus of the study was to find out why they returned or not return, finding out why they chose to train outside Uganda would in a way inform their later decisions. It was under this context that the respondents were asked why they chose to train outside Uganda. The answers to this question were varied. While some respondents chose to study abroad to get "exposure", others believed that their busy schedules at Makerere would not allow them to pursue a PhD program in-house. Others yet avowed that their departments at Makerere University "did not have the capacity to adequately supervise PhD work." Some still acknowledged that the research facilities and other resources, such as library and subscriptions to journals were wanting, thus the need to study abroad. There were some yet that believed that degrees earned from U.K., U.S.A., and some of European institutions were superior to those from Uganda and the rest of the African continent.

The respondents were also asked why they chose the particular destination. When asked why they chose the institutions and countries that they went for training, the faculty advanced

mainly three reasons for their decisions. First, the faculty interviewed indicated that finances played a major role in their decision of where to go. For example, one faculty from the College of Health Sciences that went to North America stated that: “finances dictated my choice. I went there because they offered me a tuition waiver, would fund my research and give me a stipend while I was in the program.” While another one from the same college that went to the same region stated that:

> I cast my net very wide. I applied to several institutions in the U.S., the U.K., and other parts of Europe. Although I was admitted to several places, I did not get funding. I went to the first institution that offered me funding for the program because I wanted to study at the time.

Meanwhile another faculty from the College of Health Sciences that trained in the U.S.A also affirmed that, “I had connections at the institutions so I got a scholarship there. So I went there because that is where the opportunity was. I could have gone anywhere else if that is where I got the opportunity. I felt I wanted to study at the time.” When one respondent from the faculty of Veterinary Medicine that trained in the U.S.A was asked why they chose to study in the U.S.A, the respondent revealed that they had no choice as far as the country where they trained was concerned. The participant stated that:

> Actually the choice whether U.S.A. or any other region was already chosen for us. The funding under the program was from the World Bank project to develop extension and training at the ministry of agriculture including the Faculties of Veterinary Medicine and Agriculture. All the people that went under the program had to pursue their training in the U.S.A.

Another respondent from the same faculty who went to Europe for their doctoral training had a similar story to tell. The respondent stated that, “I did not have money to pay for myself, but the Germany government through the German Academic Exchange Services (DAAD) gave me funding to enroll at a Germany institution.”

The second most frequent reason that was advanced for the choice of country of destination and institution attended related to the programs themselves. When asked about choice of country and institution, one veterinarian that went to Europe stated that, “at the time scholarships were few so it was a good opportunity and secondly it was something that identified with my field of interest, which I think was like hitting two birds with one stone.” Meanwhile when asked the same question, another veterinarian responded that, “the opportunities were there and the program aligned to my interests.” Additionally, one faculty from the College of Health Sciences that went to the U.S.A. chose to go there and to attend that particular institution because, “the program specialty was world renowned and I wanted to work with professor [name] who was very well-known for his work in my field of interest.”

The structure of programs was another reason that was cited as playing a major role in the choice of institution. For example, one respondent that attended a sandwich program between Makerere University and an institution in Europe had the following to say:

> The program offered the necessary arrangements that would make it possible for me to be with my family for some time in the course of the program. I took some courses in [country] and some courses in Uganda. I did my research in Uganda and analyzed the data in [country]. For me it was important not to stay away for too long at a time and the program made that possible.

In agreement, another respondent stated that, “the program would enable me to keep coming back home, which would allow me to be with my family. That was a major attraction for me.” Some faculty who went to English speaking countries to pursue their doctoral programs reported to have done so because they “did not want to have to learn a new language.”

The rest of this section is organized under the broad themes identified from the conceptual framework namely: nature of programs, work environment, career growth, economic

consideration, the Ugandan context, social ties and networks, and immigration policies and targeted recruitment.

Nature of Program Attended

The nature of the programs attended was one of the themes that were employed in analyzing the interview data. To ascertain the different kinds of programs and the role played by the nature of program attended in the decision to return or not to return, the respondents were asked several questions. First, they were asked to describe the nature of the programs they attended—whether joint, sandwich, home country research component or not. A joint program is offered jointly by two or more institutions and leads to a joint award of the institutions involved. The joint programs at Makerere are structured in such a way that the student is registered and takes coursework at all the institutions involved, and has a committee made of faculty from all the institutions involved. Students under the joint programs at the University were required to remain active at the University during the time that they were taking courses at Makerere or doing research in Uganda. On the other hand, a sandwich program is one where the student is registered at one institution but takes coursework at all the institutions involved in the sandwich. A sandwich program, unlike the sandwich snack, does not have to be between only two institutions; there maybe more than two institutions in a sandwich program. An example of a sandwich program is where student "X" from Uganda is admitted to a program at the University of Cape Town in South Africa which requires the student to take courses at the University of Cape Town in South Africa, University of Oslo in Norway, and Makerere University in Uganda; and to carry out research (for dissertation) in one of the three countries. In this example "X" would receive an award of the University of Cape Town. Most of the sandwich programs that were operational at the University required the student to do the research component in the

country of citizenship of the particular student. Joint and sandwich programs may also be described as split-site programs by virtue of the fact that the student is required to undertake their work at different sites.

The faculty was also asked whether they were able to go back to Makerere or Uganda during the course of their programs, if so what percentage of time they spent abroad, and if they remained active in running programs at Makerere during the time that they were pursuing their advanced degree training. Moreover, the respondents were also asked whether revisiting or not revisiting Makerere or Uganda during the course of their programs abroad influenced their decision to return or not to return to the University.

The Makerere University faculty who trained during the period studied included both those that attended joint or sandwich programs and those that did not attended such programs. Of the 30 health sciences faculty who went outside the African continent for their advanced degree training, 17 attended either joint (11) or sandwich (6) programs. Of the remaining 13 faculty, 6 attended programs that were funded by foreign governments that required the participant to return to Uganda following completion of the program. On the other hand, of the 27 veterinary medicine faculty who went outside Africa for their programs of study, only 3 attended joint or sandwich programs or carried out their dissertation research work in Uganda and only three were required by the hosting countries to return to Uganda following completion of their programs. The faculty from the College of Health Sciences who attended either joint or sandwich programs or carried out their doctoral dissertation research in Uganda returned to the University and are still employed by the University. The three veterinary medicine faculty who attended joint/sandwich programs also returned to the University, however, one of them left for a post-doctoral program soon after returning to the University and did not return from that program.

Overall the respondents' answers to the questions under nature of programs category were similar depending on the program attended. There were different kinds of joint and sandwich programs. Joint programs required registration at both Makerere University and the collaborating institution with students receiving joint awards of the two institutions. There were also joint programs that called for an advisor from both Makerere University and the collaborating institution. While some programs required students to take courses from both institutions, other programs required the student to do only the research component in Uganda. One faculty from the faculty of Veterinary Medicine who went to a sandwich program describes the program they attended as:

> The program was not a joint registration. I was registered in Europe but had supervisors both at Makerere and in Europe. The main part was that I would do the research in Uganda and would then go and write in [country]. I did my data analysis and write up from there. So the sandwich was such that I would do the work in the two places.

The program structure and requirements for the Veterinary Medicine faculty quoted above differed substantially from the ones of one College of Health Sciences faculty who attended a joint program who, when asked about the nature of the program they attended stated:

> I was registered both here [Makerere] and there [country in Europe]. I had two major professors, the principal investigators, one from here and the other from there. My committee had faculty from here and there. I did most of the preliminary courses here and the advanced courses there. I collected my data here and analyzed it there. During the time I was here I was taught and advised students. At the end of the day I received a joint award of both institutions.

Although the level activeness deferred from program to program, faculty who attended joint and sandwich programs remained active at Makerere University whilst they pursued their advanced degree program abroad. While some faculty reported to have conducted courses during the times they were in Uganda and to have continued with student supervision throughout the course of the program, others only supervised students, and others still only attended departmental board

meetings and used University facilities while they were at Makerere. For example, one faculty from the College of Health Sciences that attended a joint program in Europe revealed that:

> The arrangement was such that I was supposed to contribute some percentage of time to Makerere University. I still run a course during the time I was in Uganda. I would also do my assessments and used to supervise students, and read their proposals even when I was not in Uganda. So it was like I never left in the first place.

The arrangement described above under a joint program in Europe was quite similar to the experience of a veterinarian who attended a sandwich program in Europe who stated:

> I had time there and then I had to go back to Makerere for my fieldwork and then I had to go back to [country]. So whenever I was back in Makerere I was fully immersed into the activities in the department. I was back into teaching, I was back into supervising students and of course doing my field work. At times I would still be consulted on in subjects of interest within the department.

When asked whether the nature of program could have contributed or motivated them to return and stay at Makerere University, one veterinary medicine faculty who attended a sandwich program between Makerere University and a university in Europe, stated that:

> Yes it did. The nature of program kept me grounded at Makerere, making me more attached to the institution and as such making it harder for me to stay in Germany. Additionally my funding from DAAD was conditioned on the fact that I would return and serve Uganda after I complete the program.

Additionally, when a senior administrator in the College of Health Sciences was asked whether the joint and sandwich nature of the programs that the majority of the faculty from that college attended contributed to the high levels of returns at the college stated that:

> Yes in part it does because since during the training one remains a recognized individual as belonging to Makerere University and during the course of the training the student keeps the link with Makerere University through supervision and through placement. So the student does not, for example, just go to [name of institution] all the time and stay there but also stays at Makerere for part of the time.

The administrator emphasized that under joint and sandwich programs, the problems of dislocation from one's home environment are eliminated. For example, because the faculty is

required to do work at both institutions, they remain attached to the research infrastructure at their home institution which they would be using after completing their programs.

On the other side one veterinarian that went to North America and attended a program that was neither joint/sandwich nor required them to go to Uganda for the research component, in agreement with other respondents in similar circumstance, had this to say when asked if the nature if the program could have influenced their decision not to return to Makerere University:

> Our program was not structured in one way or the other. One could go back and do research in Uganda, it depended on your committee and the availability of funding. So it was optional, you could do your research here or abroad. Now that you ask, when I look back I realize that during the time I was out here for my PhD program I was in a way cut off from Makerere University. Except for communication with friends, I was not involved at all in the departmental work or decisions when I was away so when decision time came, it was easy for me to decide not to go back. In a way I had grown attached to my new environment here in the U.S.. Long before I completed the program I longed for an opportunity to stay and when the opportunity presented itself I could not have been happier.

Work Environment

The work environment was clearly a key influence in the decision whether to return to the University or not. All the respondents recognized and highlighted the substantial role played by the work environment in informing their choice of where to work. The work environment covers many aspects of one's employment including, governance structures and policies, interactions with supervisors and colleagues, funding for training, facilities, research funding, and rewards, such as promotions and remuneration. The participants' responses on the work environment are narrated below under the following headers: job satisfaction, governance and structure, facilities and research resources/funding, and funding for training. The narrative is subdivided in the themes mentioned above.

Job satisfaction: Job satisfaction, the contentment or discontent arising out of employee's feelings toward work, is a major component of faculty work and careers. Faculty who are satisfied with their work at the institutions that they do it are less likely to leave those institutions. In this case, faculty who had job satisfaction at Makerere University prior to going to study abroad would be more likely to return to the University after they completed training. Job satisfaction implies doing a job one enjoys, doing it well, and being suitably rewarded for one's efforts (Encyclopedia of Business and Finance, 2011). It is indeed a "key ingredient that leads to recognition, income, promotion, and the achievement of other goals that lead to a general feeling of fulfillment" (pg. 1). Therefore job satisfaction can be influenced by a variety of factors, for example, the degree of fulfillment of the work, and the work environment, which includes the rewards, the physical environment in which one works, and one's interaction with their supervisors and colleagues.

When asked to comment of the levels of job satisfaction at the faculty of Veterinary Medicine, one senior administrator had the following to say:

> From my experience here I think that the University must address the reasons that satisfy people. Why are people satisfied in life? Or what makes people satisfied. They will tell you. So besides salary or emoluments, there are other reasons that make people happy. They have to feel worthy. They must feel useful in the society. They have to feel like partners. If you do not have facilities for research or facilities to teach so that they are satisfied with the quality of teaching, then, my dear, you will have on your hands faculty who are dissatisfied. We need to do more to improve levels of job satisfaction.

All the respondents pointed to overall job satisfaction as a key influence in the decision whether to return to Makerere University or not after training abroad. To convey a picture of the respondents' thoughts on overall job satisfaction, this section expresses their responses under the following themes: general feeling of fulfillment, economic considerations (rewards), and work environment.

Most of the respondents reported to have had a general feeling fulfillment during their employment with Makerere University. They were generally satisfied with their job at the University in as far as what they were doing was concerned. For example, one respondent stated that, “I liked what I was doing, the subjects I was teaching and the department I was in.” Another respondent said that, “there are two dimensions to satisfaction, there is doing what we love to do, that is one thing, I was satisfied with that.” Meanwhile another respondent revealed that they loved teaching and were satisfied by the fact that their job made it possible. However, one of the respondents from the College of Health Sciences that went to the U.S.A. for training and did not return to the University stated that, “my levels of job satisfaction were relatively poor.”

Governance structure and policies: Many of the respondents pointed out that the overall governance structure and staff development policies increased the likelihood of faculty leaving the University to go and work at institutions that have more favorable environments. As simply put by one of the senior administrators at the College of Health Sciences, “the government and the University have not done enough to discourage brain drain.” The faculty interviewed believed that there were no deliberate policies to retain faculty. For example, one senior administrator was of the view that:

> The government and the University never do enough. One, there is no deliberate policy by government to retain staff. The government spends a lot of money on training, especially for us medical people, but there is no deliberate effort by the government to retain professionals within the country. For example, many of my friends have left the country and are working abroad. Second, the University where we are working also does not invest in retaining us. If you look at the HR departments, there is no deliberate effort to retain employees.
>
> In my opinion I think that the issue of governance could have an impact on brain drain. Some policies are good while others are bad. Policies like the one that says that if you are a new appointment you do not get an opportunity to go for further studies until you have served for at least two years before is a bad policy. Moreover in the late 1990s the University passed the Mujaju policy on training, which in essence provides that one cannot be appointed to the position of lecture

> unless they have a PhD. This would be a good policy if the University provided the avenues for PhD training. The University should make the grounds fertile for people to have PhDs by providing better incentives for PhD holders.

But a senior administrator in the faculty of Veterinary Medicine was of the view that the Makerere's blanket policy requiring a PhD before one can become lecturer is a bad policy for the faculty of Veterinary Medicine. The senior administrator stated:

> In the past few years the University has maintained the policy of demanding that people should have a PhD before they become lecturers against the national policy by the National Council of Higher Education, which allows a lecturer to be at a level of a Master's degree. The consequences are that all my people who train for their Masters of sciences degrees and are here already, Makerere does not offer them a job of lecturer. They remain teaching assistants or assistant lecturers until they finish the PhD for the same pay. Now when other Universities are around and they are hunting for competent people, the vets are very vulnerable. This is a science-based discipline. The vets are particularly vulnerable because they are crosscutting in nature.
>
> With this trend that many universities are coming up in Uganda and the only place where they can get quality people is Makerere, Vet is the first place to fall into the hands of the hyenas. So I am losing many staff in that direction. If Makerere had instituted a policy where they recognize that where you have a masters you can become a lecturer, I would not be suffering as much. But it is very difficult for somebody to wait until he gets a PhD to become a lecturer for the same pay.
> Clinical science—the art and practice of medicine—can be done well with a master's degree. But when you force someone into a PhD, into research, they are usually going into those restricted areas, which usually are abstract and that is where they have the greatest demand globally because nobody wants to study abstract and difficult things. So when they leave for their PhDs, they do not return.

The senior administrator also focused on a new University policy that requires teaching assistants to resign their positions before they embark on PhD training. The said administrator pointed out that with many faculty who go abroad for PhDs not returning to the University, the Faculty of Veterinary Medicine was highly dependent on teaching assistants and assistant lecturers and if these too were required to resign their jobs before they embarked on training, the situation was likely to get worse since they would not be required to enter a contractual bond. There would be nothing for them to hold on to.

The administrators from the Faculty of Veterinary Medicine were of the view that there was a disconnection between the central management and the academic units. As one administrator put it, "the central management was too busy with other things, such as, salaries, to pay particular attention to the various needs of the academic units." Moreover, the academic units were "the experts of running those units and knew best what was best for the individual units." Additionally, senior administrators from the Faculty of Veterinary Medicine that were interviewed favored the view that there was need for further decentralization of the operations of the University. For example, they were of the view that the units themselves were best suited to deal with personnel matters and not the Human Resources Directorate at the central management level. They hoped that when the faculty became a college, more power would be divested to the college as opposed to the central management.[7] But there were still related complaints in the College of Health Sciences which has been operating as a college for over five years—the central appointments board still handles all issues relating to appointments and promotions. The administrators posit that the colleges or faculties themselves have the best expertise to decide on personnel matters in their units.

Administrators and faculty alike had qualms with the promotion criterion and processes at the University. They complained that the prevailing promotion criterion does not put emphasis on teaching and service as it ought to. One senior administrator had the following to say on the promotion criteria:

> The promotion criterion is very much skewed. It does not put into consideration teaching, it does not take into consideration much of the service provided by an applied unit like the faculty of veterinary medicine. Here I have people who have brought fame to Makerere through provision of service to the community. You do not find that in departments like History but when you have a cross cutting policy

[7] At the time of conducting the interviews the Faculty of Veterinary Medicine was in the process of merging with some other faculties to form a college.

> which is insensitive to the unique issues here, you paralyze the system. We have already suffered from this Mujaju policy. We have presented twice to the senate and the people have not listened to us.
>
> As a result we have lost our clinicians—they have either left the University or gone for PhDs. These are very good clinicians and hold masters' degrees but the new policy requires them to get PhDs before they can be appointed lecturers. Two times I have gone to the Senate and told them that as a result of the policy, vet had lost the clinical people who had masters, who were very good, they abandoned their clinical work and went to do PhDs or left the University altogether. Because they abandoned the clinical work, the faculty lost the clientele of farmers. The hospitals where our students train are the farms. So when the clinicians are away and you lose the farms, you have no training facilities for your students. And I told them that, but they did not understand that. Apparently they were just bent on fighting the idea.

Some of the respondents acknowledged that Makerere University had some enabling policies that would pull faculty who went abroad for training back to Makerere. One of the senior administrators had this to say on some of the enabling policies:

> We do have enabling policies such as; when you leave to study you remain on the payroll which is an incentive to keep people. When you go to study, if you are in University housing, your family retains the house. Those are some of the incentives to keep people. I think there are policies in place to try to entice people to come back to Makerere after their studies.

Additionally, faculty members on training are required to give annual reports on the progress of their training and are encouraged to keep in touch with their departments. However, while there are reprimands against faculty whose PhD programs are funded by the University—funds for a subsequent year are not disbursed until a progress report of the preceding year dully endorsed by the faculty's major professor is furnished to, and approved by their head of department at Makerere—there are no reprimands against faculty whose programs are not fully funded by the University. As a result, faculty whose programs are not funded by the University tend not to give annual progress reports of their training.

Facilities and research resources/funding: Facilities and research resources are some of the other aspects of the work environment that were major factors in the decision by Makerere faculty whether to return or not to return or leave soon after returning to the University after they completed training abroad**.** It was evident from the responses that the University lacked adequate facilities and research funding and materials. One of the respondents from the faculty of Veterinary Medicine that did not return after PhD training summarized it this way:

> We did not have enough laboratories; even the ones that were available were not well equipped. The facilities were generally not good. For example, there was no generator at the faculty yet the University often faced electricity power cuts. This would often ruin experiments. We did not get most of the teaching materials that were required, which often meant cutting back on the number of practical sessions. The University did not allocate funding for research. The little research was really through student dissertation projects or the rare grant. The situation was pathetic, but we understood that the University did not have money and we improvised. It was hard for anyone to choose to go back to such conditions after earning a degree from a reputable research institution.

Other respondents were of the view that the essence of a doctoral degree was to get the opportunity to pursue research and other scholarly activities beyond the point that is possible at the master's degree level. These respondents believed that earning a PhD was a mockery if the University did not provide faculty with resources to do research when they returned to the University armed with PhDs. One of the faculty who returned to the University after training abroad but soon left to take up an appointment overseas stated:

> When I came back, I was so eager to implement what I had learnt and I really thought that that was one of the reasons I went out there in the first place. So I came back very eager, I came back ready to put in practice some of the things I had learnt but it was not easy because there were no resources. There is need to invest in labs and research materials. I believe people leave mainly because of the poor remuneration, inadequate facilities and lack of research resources.

Another respondent that returned to the University after training abroad but soon left and took up an appointment abroad commented:

> During my PhD training, I had a chance of working in a first class laboratory. When I went back to Makerere, I could not even get simple software for my computer. I could not continue with my research because the equipment was lacking. It dawned on me that if I remained at Makerere, I was never going to be able to apply what I had spent four years of my life perfecting. I had returned believing that the University needed me and that I had to play my role to improve the University, but I could not stay. I had to move on to where I would be able to carry out research. I, unfortunately, had to leave; it was the right thing for me to do at the time.

Veterinary Medicine and health sciences being science-based disciplines; the importance of laboratories may never be over emphasized. For example, one Veterinary Medicine faculty was of the view that most their colleagues had left because "they were frustrated." The faculty member averred:

> They [colleagues] were frustrated because they required good laboratories and good networks beyond Makerere, which would supply them with materials and equipment, which things are not in Makerere. So eventually the people get frustrated and elect to go to places that will provide them with the equipment and materials that they require. But for me my research is not laboratory oriented so I am not really affected by the lack of labs. So at the end of the day, it is not what goes to the bank per se that keeps people around. It is other opportunities either to do work through consultancy or to have a grant where you can have allowances or funding for travel or funding for whatever you require. So sometimes there are not enough resources to make people's dreams come true so they leave to go and pursue their dreams.

Additionally, Makerere University physical structures had not grown enough to accommodate the increased numbers of students, which made both students and faculty uncomfortable about their learning and teaching environment. Moreover, the bigger student numbers meant that faculty found themselves teaching on day, evening, and weekend programs. When the faculty was not teaching they were "marking assignments" As a result, the faculty had no room left for research and community service. Moreover, on these very heavy teaching schedules at the University, faculty added teaching responsibilities at neighboring institutions, consultancies and private practice in clinics around the city in order to supplement the income from the University. One of the respondents from the College of Health sciences commented:

> I was always moving from one place to the other. I had to teach both the day and evening programs, supervise medical interns at the hospital, mark assignments, advise and supervise students, do my consultancy work, see my own patients at my clinic, and take care of the family. We all had to do this if we were to have enough income to sustain our families. It was very tiring and left very little room for creative thinking.

"If the University paid us well," one respondent said, "we would not have to juggle so many things at a time in order to make ends meet. We would give the University work a 100% commitment. We would not have to serve so many masters. We would definitely do a better job." As put by one of the faculty who did not return, Makerere "was simply not a good environment to work. To keep some semblance of sanity, I had to leave and find a better opportunity and better environment to work in. That was the best decision I ever made."

The presence of research opportunities at the College of Health Sciences was a major reason for faculty returning to the College after they trained abroad. The respondents from the College indicated that health sciences has had, "a growing stream research funding from development partners, which has made it attractive for research oriented faculty to return to the College. Health Sciences faculty have won grant after grant after grant. Moreover, the management at the College has highlighted the importance of teamwork. As a result, each faculty member is involved in one grant or the other. It is not surprising that the College of Health Science accounts for over 40% of the research output at the University. Starting with breaking HIV/AIDS research in the early 1990s, the College of Health Sciences has had the good fortune of attracting various cadres of funders. A senior administrator at the College of Health Science stated:

> We at the College have been involved in research constantly. Even during the time that many other academic units in the University were not doing any research, we were doing research. We do not leave research work to a few individuals; we like to get everyone involved. For example, when we got the Gates grant, we involved as many faculty as possible. At the end of the day,

> multiple people were publishing multiple publications out of funding from just that one grant. Also funding from the Pfizer Corporation benefitted many. Because of our breakthrough research in the areas of HIV/AIDS and malaria we were an attractive unit to partner with so we have had some very long life collaborations with outside institutions, such as, Case Western Reserve University, Johns Hopkins, Walter Reed, McMaster, Tufts, Uppsala, Bergen, the Karolinska Institute and so many other institutions. We have been able to win joint grants with these partners, which keeps our people happy. This is hardly the case in other parts of the University.

Without prejudice to the foregoing, the health facilities and resources at Mulago, the teaching hospital for the College of Health Sciences, were cited as other factors that made Makerere University an unattractive environment to work in. As a result, poor health care facilities emerged as one of the factors that influenced Makerere University faculty in deciding whether to stay abroad or to return to the University after they completed their training. Some respondents, from the College of Health Sciences were of the view that Ugandan health system had constraints that made them think twice about continuing to work with the University. One of the respondents that did not return to the College of Health Science following their training abroad stated that:

> Working at the medical school meant that we worked with patients on the wards. The conditions of the hospital were alarming; the structures were dilapidated, hygiene was poor, there were no materials including basic materials like masks, gloves or hand sanitizer. A lot of the time the hospital did not have running water and electricity. I had friends that had contracted fatal diseases in their quest to assist patients when barely protecting themselves. The working environment was scary and the national government was doing nothing to improve the conditions.

Funding for training: The participants were asked to comment on whether Makerere University' contributed towards funding the programs they pursued. They were particularly asked if Makerere University was involved in any way in securing funding for them or if it paid expenses for the programs. All the participants who were interviewed reported that the University gave them paid study leave to go and pursue their programs. Additionally, the University fully-funded the programs for two out of the 21 faculty interviewed. Three more

faculty received research grants from the University to fund doctoral dissertation research. Moreover, four of the remaining faculty who was interviewed went on scholarships that were secured by the University from its development partners such as NORAD, Sida SAREC, and DAAD. An additional six faculty were funded by grants secured by the University in collaboration with other institutions. The remaining six faculty secured funding for the programs out of their own personal efforts mainly through graduate assistantships at the institutions attended.

In exchange for the University's contribution toward their training, the faculty signed a contractual bond that required them to return to the University following completion of their programs and serve continuously for at least three years for those that went on three year programs, and at least four years for those that went on four year programs. The penalty for breaching the contract is for the faculty breaching it to pay to the University all the monies that the directly or indirectly spent on the faculty, and all the salaries drawn by them while they pursued the programs of study. As indicated in the previous section, a total of 45 faculty breached the contract by either not returning or resigning before serving the required years under the contractual bond.

Career Growth

Career growth stood out as a major factor that influenced the respondents' decisions to return or not to return to the University. Out of the 21 faculty respondents, 13 suggested that career growth was the single most important factor that influenced the decision to return or not to return. As one respondent put it, "the first thing, I think, is the desire to grow and develop yourself in terms of career and of course as you grow you appreciate; as you grow career wise you improve your credentials then you also have the opportunity to help the others grow." When

asked to name and rank the major two influences for their decision to leave the University, one respondent said that, “the first one is the opportunity to grow and develop my career as fast as possible within limits and to be in an environment where you can only be limited by your effort.” Another respondent stated that:

> Growth in career goes beyond the pay. For sure the remuneration is going to be better if you, for example, go outside, but there are some things that are tangible but you still cannot quantify them like what am I going to be in the next five years? What are my credentials going to be like? Can I compete in the international market if I stick here or if I went out? These are some of the things that you look at. I think in all fairness I do not think there is anything that Makerere could do in a year or two or three or five that could really hold a number of people down who are looking at things broadly from a career growth perspective. So for me the reason I left was the opportunity to grow professionally because whatever training I got here I would not be able to utilize there because Makerere would not give me even the software program because each software costs $3000 it would be hard to get the program. More so, the programs that we run hinge around that. So it was difficult to know that I would go back and I would not use the talent. I would have it on paper, fold it away and as we all know in these research science programs, professions, you need to practice it. One or two years down the line, if you do not practice it you end up getting burnt out and frustrated.

The faculty strongly felt that professional support was important. According to one of the respondents from the Faculty of Veterinary Medicine that studied in North America, returned to Makerere and left soon after retuning:

> It all boils down to professional support. When people finish graduate studies they come with drive, with a vision to succeed. But if you see colleagues that finished two or three years before you going slow, are literary frustrated and they seem to have lost out in the drive, then that is a serious problem. When we complete our studies we go back with that hunger to really takeoff. Unfortunately you go back and get grounded, that has a very big demoralizing effect because fitting back in that sort of life becomes very difficult. One or two years down the road you run out of steam and frustration comes in, you seek for an exit before it is too late in your career.

On the flip side, some respondents felt Makerere University was the best place for them to grow their careers professionally. According to one of the respondent who returned to the College of Health Science after their PhD program in Europe:

> As I told you I had started building my career in Makerere. I joined and within a short time I got a promotion. I was happy with and enjoyed the work I was doing and I should say I think I made a very good decision. So I think in a way I knew that if I wanted to build a career the place to do it was in Makerere and not in Europe. If I were to remain in Europe, I would work very hard but I would never win a Nobel Prize anyway. So the idea is that the real prospects of building a career was back in Makerere and actually and not in Europe. I would probably earn a lot of money abroad but there is something more to being satisfied in the work that you are doing other than money. My feeling was that I would grow more in Makerere. Of course I agree that the money, the funds, the salary that we get is not what you can go singing about but I am just saying that, probably I would never go beyond a researcher there and would be limited in my skills to mentor others. I have been able to build the department very well and I am sure that the our department is one of the most powerful in the College of Health Sciences

Meanwhile some of the respondents from the faculty of Veterinary Medicine and from the College of Health Science that are still employed by the University felt that Makerere was a better fit for their career plans. For example, one of the respondents said that, "one, in Makerere, once I earned my PhD, my status had risen and two, I found that, if I wanted to apply what I had gotten out of my PhD in Uganda, the best place to apply it was Makerere. Other respondents chose career over better pay packages as is witnessed in the following statement:

> When I came back to Uganda I tried to see whether I could get a better package outside the University and I soon discovered that they would probably be able to pay me money in the pocket but I would not really exploit my intellect to the maximum. The best place to explore and use my intellect was at Makerere. And I had seen people with PhDs who had taken jobs that even single degree holders could handle. This would be committing an intellectual suicide. I did not want to do that. I had suffered so much psychologically and had to practice what I had learnt out of my PhD. Makerere provided an arena for that so I stayed there.

Economic Considerations

Economic considerations clearly influenced the faculty members' decisions to return or not to return to the University after they completed their training abroad. Most respondents highlighted economic considerations as a major factor in their decision to return or not to return to Makerere University following completion of training abroad. The major economic

considerations that were stressed in the responses were the levels of remuneration at the University and Uganda's economy at large. One of the participants that trained in North America that did not return to Makerere avowed that:

> Uganda's economy is one of the worst in whole world. The level of inflation was at its highest. The unemployment rate was sky rocketing. The Uganda shilling did not mean very much. Faced with an opportunity to work in an economically more viable environment here in the U.S.A., the choice for me was very clear. I could work here, earn in dollars and be able to put up developments back in Uganda. With time when I have made many investments that give me a sense of economic security, I will go back to Uganda and will probably get a chance to serve Makerere University again

A senior administrator from the College of Health Sciences said that, "people leave the University for a variety of reasons. Some people leave to seek better remuneration. The pay here is not so attractive." Another administrator in agreement stated that, "most people complain about the payment. We are not paid well. When you look at places like the U.K., people there are paid thousands of pounds while we here at Makerere are paid 'peanuts'." Additionally, one veterinarian faculty who studied in North America and remained there after completion of the program affirmed that:

> The salary was not adequate at the time. It was very hard to get by. By the time your salary came you were lining up at that bank, lining up for the salary and by the time you got it, half of it was already spent and you were paying back debts. So it was really very hard to get by. Looking at the way I was leading my life, not sure of survival, living hand to mouth, I did not want to live like that anymore.

In agreement, another veterinarian that did not return to Makerere stated that:

> The remuneration greatly influenced my decision. The remuneration at the University is comparatively low. If you look at people all over. For example, those who work in authorities in Uganda, those who work in parastatals, those who work in NGOs, some of them earn three or four times more than professors at Makerere yet these are people who have only first degrees,. So it is a demoralizing thing and also a demotivating factor because we all work to make our lives better and improve the welfare of families. When we are not appreciated we tend to slow down and tend to give back what you think is worth what you are paid, or you move on. So the remuneration was a disincentive.

Additionally, another veterinarian stated that, “remuneration was a problem. The remuneration was not commensurate with the level of our expectations and in this regard I was dissatisfied. In my opinion the main cause of brain drain at Makerere University is really low pay.” Bringing yet another angle to remuneration, one faculty from the College of Health Sciences that trained in North America and returned to Makerere had the following to say:

> The remuneration at Makerere leaves a lot to be desired. The job definitely needs some supplementation of income. At the completion of my program abroad I had an extra job waiting for me in Uganda and as such my income could be supplemented and after a short while I started to write some grants and I guess having grants is what really made me stay up to today.
>
> But if I had not got that extra job and research opportunities to supplement my income from the University, my decision would have most likely been different. I probably would have taken up one of the several job offers that I got. If I was not able to take care of my family, I would have left.

Additionally, one faculty from veterinary medicine that studied in Europe and returned to Makerere on completion of their studies said that, “in my department we worked a lot with the farmers outside the University and this supplemented our salaries from the University. Without that extra income it would have been very difficult for me stay at the University.” To explain their decision to stay on in North America after completing their PhD program, one veterinarian declared that:

> The remuneration at Makerere was really not that great. As a result, one would feel compelled to remain in North America. The pasture there was obviously much greener. The pay package they offered was attractive and you would also have many resources at your disposal to advance your research interests, which was definitely not the case at Makerere.

Another faculty member that did not return to Makerere simply put it, “if the salaries at Makerere were to double, laboratory facilities to improve, and there was guarantee of funds for my research work, I would run back to Makerere very gladly.”

Lack of a consistent and favorable retirement plan for faculty was another factor that influenced some of the faculty not to return. Even among those that returned, many expressed a feeling of mistrust of the retirement policy at the University. Faculty were quick to point out that in the mid-1990s, the University dissolved the existing retirement plan and established a new one with the same provider. Members of the dissolved scheme received both their personal savings and the University's contributions that had accumulated to that date. One of the members had the following to say about the retirement plans:

> During our energetic years we work hard but this cannot go on forever. So retirement schemes are meant to provide us with an income long after our youth and vigor is gone. The University does not have a favorable and consistent retirement scheme for its faculty. In the 1990s the scheme I had been on since I joined the University was dissolved and my proceeds were paid out to me. The University started a new scheme with the same provider. This meant that I used up my savings from before and started at zero. One wonders why the University did not carry our savings forward into the new scheme. We need these savings for when we retire and not when we are still able. So in 2005, during the time that I was concluding my PhD studies word came that the University was reviewing the retirement scheme again. I heard that because National Insurance Corporation, the provider, had been privatized the University was going to pull out the retirement funds. This made me think that at this rate I might not have a retirement check. I could not go back to an institution that was not only taking my present seriously but was also playing with my future. That is when I started looking around for opportunities to stay here. I do not regret my decision because as we speak faculty are still agitated about retirement schemes.

The faculty and administrators also indicated that Makerere University's policy on retirement age was not favorable to academe in general. The mandatory retirement age for faculty below the rank of associate professor is 60 years while that for associate professors and professors is 65 years. The respondents were appalled by the fact that Makerere University did not "have provisions to retain faculty beyond retirement age." One senior administrator stated:

> One of the demotivating factors in the University, in my view, is that say if someone reaches the time of retirement, if retirement is 60 years or 65 years; Makerere University does not have a provision to retain that person at certain percentage time and allow that person to keep bringing money and writing grants.

> To me that is the biggest problem that this University has and that is why it has not moved as much as it should have moved. As you know in other countries, if a professor of 75 years retired 5 years ago, he still maintains an office he still teaches a few hours and spends most of the time writing grants. By that age he has a lot of influence, knows everybody, is influential, is able to write, is able to attract students, is able build teams and then these people will all learn from him and all that production will be under that university leading to the growth of the university. Makerere University does not have that arrangement as far as I know.

Moreover, the University no longer grants unpaid leave. This used to be an avenue for faculty who wanted to be away for short periods of time and return. Respondents indicated that the current policy require the faculty who wish to be away temporally to resign their jobs before they leave and reapply if they want to return to the University. The respondents argued that most modern universities would allow such a leave of absence and require that the faculty commits to the university a percentage of their time during the time that they were away. In the past, a faculty member who was temporarily away from the University would be utilized in one way or another as examiners or reviewers among other things, which enabled continued contact with the University. Respondents from the College of Health Sciences gave examples of faculty who had been offered short contracts at institutions like the World Health Organization and the World Bank that were required to resign from the University before they took up the appointments. Such faculty, they argued, would have nothing tying them to return to Makerere University after their short-term contracts. As a result many such faculty was lost to Makerere University.

The Ugandan Context

There were factor that related to Uganda as a country that influenced Makerere faculty to return or not to return after they completed their training abroad. These factors include: the Uganda political environment and economy, health care system, education system, and patriotism and allegiance.

Political environment and economy: From the early1990s the Uganda government, in trying to keep up with the World Bank directions that suggested that higher education had less returns on investment as compared to primary education and that governments, if they wished to continue benefitting from the Bank, should take primary education as a priority, started reducing funding allocated to higher education in favor of primary education and later secondary education. Since then, funding allocation to the University by the government continued to decline. No resources were allocated to research and hardly any to laboratory equipment and structural maintenance. As result, faculty worked not only in a dilapidated environment, but also lacked the relevant equipment and materials. One faculty who did not return to the University stated:

> Laboratories were not well equipped and reagents were missing. Some of the structures were leaking and window had broken glass. The lavatories were clogged; I used to drive back to my house to use a toilet. Lucky for me I was living at the campus. The physical environment was not conducive more especially so for female employs. Whenever we complained about the state of affairs, we were reminded that the government had not provided funding for general maintenance of structures and the University management was also quick to say that the money from the private students was not enough to do some of these restructure development kind of jobs.

Moreover, chronic political instability and erratic economic management of the 1970s and 1980s led to persistent economic decline, which left Uganda among the world's poorest and least developed countries. Although since assuming power in early 1986 the National Resistance Movement government, under the leadership of President Yoweri Kagutta Musevini, has taken important steps towards economic rehabilitation and adopted policies that have promoted economic development, Uganda still remain among the world's poorest and least developed nations. More than 50% of Uganda's population lives under the international poverty line of $1.25 a day. There is rampant unemployment and underemployment. It came by no surprise that

the political environment and economy emerged as some of the factors that influenced faculty decisions.

Political insurgency emerged as one of the factors that influenced some faculty not to return to the University following their training abroad. Factors in the Uganda political arena affect all its citizens including those working with Makerere University. Although the University does not control the political environment in Uganda, the political environment affects its operations and is therefore a part and parcel of the work environment, which may affect faculty decisions. When asked why they elected not to return to Makerere, one of the respondents that did not return to the University had the following to say:

> There are a number of things which contribute to people making decisions to go back or to stay and one of them is actually political instability. I hail from Northern Uganda as I told you. Right from the time I joined Makerere there are so many political things that affect people there whether they like it or not. The war in the North did affect me somehow and as long as this government is still the way it is I will be reluctant to go back to Uganda. But if things change I am willing to go back and make my contribution. But because of the trend of things that is now I think I will be reluctant to go back immediately.

Additionally, some respondents complained that there was wide spread corruption in Uganda. Moreover, tribalism was intermittent in all sectors of the government and private sector. As a result, resources and opportunities were limited to a few privileged people, respondents complained. This led to stratification in earnings between the privileged and the underprivileged, which in turn yielded discontent and disgruntlement among the underprivileged, a factor that influenced some faculty to choose not to return to Makerere University.

That state of affairs did not only remain outside the University; it was present at the University. Some respondents reported that there was favoritism in the running of the academic units with most opportunities being exposed to a favored few usually tribes' men of whoever is

in charge at the unit at a particular time. For example, one of the respondents that did not return to Makerere University after training stated that:

> I was very lucky to learn of the opportunity that landed me a slot to go and train. At that time "X" was the dean at the faculty. He happened to go for a conference together with his deputy and "Y" was asked to fill during their absence. On the first day in the Dean's office, "Y" called me to the office and told me he had stumbled upon a call for fellowships in my area of interest but that the deadline for applications was within 48 hours. The fellowship required that the application be supported by the faculty. "Y" worked tirelessly with me to put together an application before the deadline. If it was not for "Y" taking office when he did, I would never have got the opportunity to come and train. That kind of environment discouraged me. I did not want to go back and work in an environment where favoritism was the order of the day. I preferred to work in environment where merit rules the day, because then fair competition is encouraged.

Administrators and faculty alike complained that the University lacked institutional autonomy. Although the Universities and Other Tertiary Institutions Act of 2001 was meant to bring a high level of institutional autonomy to public higher education institutions, 10 years after its enactment, there were complaints that the Uganda parliament and government intermeddled in the way the institutional organs run the institutions. Persistent intermeddling created an atmosphere of uncertainty and, as a result, frustrated institutional management. Some faculty stated that they did not wish to continue being a part of that uncertainty.

Additionally, female respondents reported that there were gender inequalities at the University that made them uncomfortable. One female respondent that did not return to the University indicated that she worked in a predominantly male environment that did not take women seriously. She stated that, "I often suggested ideas that were brushed off without serious consideration only when the same ideas were presented by male counterparts at a later stage, they were lauded. I did not want to continue working in such an environment. I wanted to work in an environment that treasured my input regardless of my gender."

Health care system: The Uganda health care system is underfunded and as a result ineffective. Life expectancy at birth is only 50 and 51 years for men and women respectively. There is a high child mortality rate with infant mortality rate at 75death per 1,000 (UNICEF, 2009). Public hospitals not only luck equipment and drugs, but are also in a poor state of repair. It has become the norm for the privileged to fly out their families to Kenya or India or South Africa for medical attention. More and more people, who can afford it, fly out of the country for things as simple as child birth or removal of cataracts because hospitals in Uganda are not well equipped. One respondent cited the example of a close relative whose child had died in Mulago hospital because the hospital had run out of oxygen. It was understandable that some respondents emphasized that they wanted to have better health care for themselves and their families. For example, one respondent from the faculty of Veterinary Medicine who did not return to the University said that they wanted to raise their family in an environment where they would be able to get good medical attention when they required it. Meanwhile another faculty who did not return to the University after their doctoral training abroad stated that:

> There are several reasons why I did not return. One of them is that I had a medical condition that needed treatment. When I came here I met a doctor who used to volunteer addressing those issues without payment and had evaluated me and prescribed two procedures a year apart. So that medical condition was one of the reasons because I knew I would not be able to get the services back in Uganda.

Education system: The education system was another factor that influenced faculty member's decision to settle abroad following their training. Some respondents indicated that the Uganda education standards had deteriorated and left a lot to be desired. For instance, one respondent stated:

> During our times in school, standards were high and enviable, but with the introduction of UPE and USE, things declined. The quality of a Makerere graduate is not what it used to be. The University has dropped so many things to

> fit the big numbers. For instance, the faculty of Veterinary medicine has the same physical structures as it had twenty years ago yet the numbers of students have more than quadrupled. The rich are taking their children to South Africa or India or the U.S or Europe. Here I was in the U.S. I could never have forgiven myself if I did not work out a plan that would benefit my children. So I decided to acquire citizenship here. I wanted my children to be educated in the best system in the world. I wanted better for them. I believe that the best gift I could give them is an excellent education. To me this was really important and it weighed a lot when I was faced with the decision.

Patriotism and allegiance: Unlike the above characteristics of Ugandan context that kept faculty from returning, loyalty to Makerere as an institution and to Uganda as their home country was the underlying reason for some faculty members' decisions not to stay abroad after completing their training. While some faculty were of the view that if Uganda was to develop, it was up to Ugandans to step up and play a role in the development process, others felt that Makerere had invested so much in them, which put them in debt and not repaying that debt was "simply wrong." To this faculty, coming back was a must, coming back was a "duty", coming back was a "responsibility", and coming back was "the right thing to do". One of the respondents vehemently stated:

> My personal attitude towards life is that it is me to develop. All those things I see, people have worked hard for them and this generation seems to be enjoying because others before it worked for it. So I think that every generation has a responsibility to do something. That is my thinking. I did not think that going out and just earning a good salary would make me a better human being than staying here and developing my country. The other thing is that I also think that the systems there (abroad) have money, but the people do not have it.

While another respondent emphasized service beyond self and argued:

> A big part of my motivation has been going abroad and coming back to Uganda to develop the whole research culture within the medical school context and that is something I thought I had to play a role in. I believed that the biggest public health problems were here in Uganda, so I felt I was more needed here. My feeling always was that going and staying in the U.S. is fine but there you are essentially serving a whole different population given the type of work in public health. In public health there is this idea that you are working for the community. I wanted to serve my community, my home, and my institution. At the end of the

> day there is the view I subscribe to that if Uganda is going to improve, and I might be wrong, it is going to be up to us to improve it, to change it.

Another faculty yet made it clear that they knew that Makerere University was where they were supposed to be because they studied there, were recruited by it and belonged at Makerere. They had a very strong sense of belonging because "that is where I was supposed to be, that was my job." In agreement, another faculty stated that, "I identified with Makerere; I felt that I belonged there, it was my identity, it was my home. I had my friends and my family there. So there was that very strong pull to take me back." Respondents that returned to work at Makerere generally felt that they had a role to play there. One of the respondents that returned to the College of Health Sciences had the following to say:

> I believed that the conditions of being in Uganda were more advantageous. I will explain this: whereas the salaries in Uganda are low, I always felt that my contribution was more appreciated there. I felt I had a role to play. I felt this very strongly and I was as such bound to work in Uganda. I felt that I could study out there but was more needed back home because there are so many gaps here. So I always thought I was needed back home. So for me my staying here and the fact I did not even try to look out for a job was that I would make a greater contribution here.

There was a clear sense of pride in Makerere University as an institution both among the faculty who returned and those that did not return as is evident in the following responses:

> I came back to Uganda because it is home and so I was coming back home. Uganda is the country of my birth, it is the country that I owe a lot to and I am happy with, you know that is the reason I came back to Uganda. Why Makerere? Because that is the institution where I did my first and second degrees and diploma and I always felt proud of it. I feel very proud about it because I think that it has a big name, I feel that it is doing a good job, I feel that it stands out. It is an institution that I feel proud to be associated with. Of course it has gone through hard times, but I feel proud to be associated with Makerere because I love teaching.

> Do not mistake the fact that I did not return to Makerere for not loving the institution. I love Makerere and I try to do everything within my power to continue building even though I am no longer there. Circumstances forced me not to return but I still love my institution and hope that someday I will be able to go back there.

Social Ties and Networks and Migrant Social Networks

Social ties and networks and migrant social networks were other major factors that influenced the decision by Makerere faculty to return or not to return to Makerere University following completion of their training abroad. While a social network is made up of individuals and organizations which are tied together by different sorts of relationships, such as, kinship, friendship, economic exchange, influence, and common interests, migrant networks have been defined as interpersonal ties linking kin, friends, and community members in their places of origin and destination (Poros, 2011).

Family ties: Family ties played a major role in most faculty decisions to return to Makerere after their training abroad. For example, one of the respondents that returned to the University stated that, "I did not consider staying there or getting a job while there because my family was this way (in Uganda)." Some respondents made it clear that family was the single most important factor in the decision to return to or not to return to Makerere and that family allowing, they would have welcomed opportunities to remain abroad. For instance, one respondent that returned to Makerere put it simply that, "to me family was the entire equation", while another respondent stated that:

> Let me be very open with you. For me the family was first and foremost. The fact that I would choose to come back to Makerere depended on the fact that I would not be able to carry my family away. I had to come back home, first of all because I was married, I was quite young, my spouse had a good job which they was not willing to leave… Family was the most important factor for me… If there had been an opportunity for me with my spouse getting an equally good job where I was, by all means I would have tried to stay there... But the arrangement to have my family there was not feasible.

Some respondents highlighted the importance of the extended family. Commonly in Uganda, the extended family is social security. For example, the elderly are looked after by their immediate

and extended family, the Uganda government does not play a role in their welfare. Additionally in the event of the death of a bread winner for a family, the rest of the family, immediate or extended takes over the responsibility. As a result, when people are still youthful and earning a living, they have a responsibility to their extended families. One of the respondents had the following to say about extended families:

> Plus some of us are from backgrounds where the salary you are getting is not only for you but for the whole clan; everyone is looking at you for their upkeep. If I was to be in position to help my family, I had to get a job that would enable me to do that.

Family ties not only motivated some faculty to return to the University, it also motivated others not to return. Some respondents started families while they were abroad, which necessitated their stay abroad. One such respondent avowed that, "I got married to a non-Ugandan while abroad and the most logical thing for me to do was to stay abroad with my newly acquired family and raise our children." That respondent went on to add that, "the game plan would have been entirely different had I not gotten married, it would have been much more certain for me to go back to Makerere after all my job was waiting for me." Another respondent did not return to the University stated that:

> Well, besides career growth, the other consideration was the family. I looked at generally the country, Uganda, and I was asking myself what is there for my children. The future did not look as bright as it did at the time when we were growing up. So I felt like maybe if I stayed abroad I would give my children an opportunity to make it in life because as you know now things in Uganda are getting tighter and tighter. So many people were going through the university system and there were no jobs, there was that uncertainty. I did not want to take chances with my children. When I went through the system, there was an opening for me but for my children I was not very sure they would have the same chances I had. So I said, well, the U.S.A. has better opportunities for them than Uganda.

Social networks: Social networks are another factor that influenced people's decision to return or not to return to Makerere after completing their studies abroad. One of the respondents

who returned to the College of Health Sciences after their training abroad had the following to say about social networks:

> I had invested a lot of my time at Makerere. I had a network of friends, colleagues and associates on whom I could depend. There were professors at the medical school and consultants at the hospital with whom I had worked and published articles. I wanted to continue working with them, for them to continue guiding my career. I would feel lost without them. Let me tell you something. In my department we are a closely knit family—we look out for each, we support each other. I very much wanted to continue being a part of that family. So, the network that I already had here was a big part in my return. It was after all through my network that I had got the opportunity to train in the first place. How could I turn around and abandon them? I had to come back.

Another respondent that returned, in agreement with the foregoing respondent felt that the investment they had in Makerere and their colleagues there was too valuable for them to leave and have to start over again. That respondent stated:

> I do not know whether it was because I went for my PhD when I was in my forties, but I could not imagine uprooting myself from the network of friends, colleagues, collaborators, clients that I had going. Going away for the PhD itself was such a big step for me. Even then I made sure I came back frequently and I vigorously kept in touch with my people lest they would forget me. I could not imagine starting afresh. I guess I was scared of having to start all over.

Migrant social networks: Migrant social networks were a major factor when it reached the time for faculty to decide whether to remain abroad or to return back to Makerere University. For example, one of the respondents that did not return stated that:

> I had a lot family and friends here. It was a close friend that made it possible for me to come here and train. When I first got here, I lived with my friend, later I moved in with a relative. My friends and family helped me when it came to getting a job and acquiring citizenship. By the time I completed the program I had obtained citizenship and I had a job lined up for me. I have also been able to help out my cousin and some friends. To be honest, for me, from the start, it was unlikely that I would go back to Makerere. I guess for me Makerere was a way station to bigger things. From before I finished secondary school, I always dreamt of living the American dream and every step I too in my career was towards that.

Many respondents that did not return to the University knew someone at the institution where they trained that helped them establish themselves in the new environment. One of the

respondents from the faculty of Veterinary Medicine that did not return to the University confirmed this when they stated that:

> My mentor, my former head of department at Makerere was there and managed to get me a post doc opportunity as well as guided me when the time came to look for a faculty position. It was difficult for me to settle in because I had the guidance of colleagues that had gone through the same experience so I was armed with their experiences and they were very helpful and are still very helpful as I continue to establish my career here.

Meanwhile another respondent that did not return to Makerere University highlighted the importance of migrant social networks, which existed in the area that trained and finally settle. The respondent stated:

> There was a Ugandan community in the area that helped me to navigate the situation. Additionally, there were other foreigners that had a wealth of experience that gave me a soft landing. It is unlikely that I would have chosen to stay here if I did not have this support system. The fear of the unknown always makes people select what is familiar. Seeing others like me that had succeeded in the environment in a way gave me wings, it boosted my morale; it made me believe that if they had done it and succeeded, I too would be able to succeed.

Immigration Policies and Targeted Recruitment

In order to accumulate human capital, developed countries strategically design their immigration policies to attract skilled immigrants. Examples of such countries are the United States, the U.K., Japan, and Canada. A review of the faculty development data at the University revealed that of the 22 faculty who did not return to the College of Health Sciences and the Faculty of Veterinary Medicine, 18 (82%) are currently residents of the United States. This figure includes faculty who did not train in North America. The respondents were asked to comment on whether the immigration policies of the countries they trained could have influenced their decision to stay or to return to Makerere University. Respondents that trained in Europe tended to think that the immigration policies there were so stringent and thus uninviting. One respondent stated that, “I looked around for opportunities to stay. Although the openings

were available, they were really open to citizens and becoming a citizen was extremely difficult." Additionally, respondents who went to European countries such as Germany, Sweden and Norway tended to be financed by the respective governments, which provided strict requirements that they returned and served Uganda. One respondent stated that, "the Germans were very strict about us coming back to Uganda, the DAAD program was aimed to build capacity in developing countries so they did not entertain scholars that wanted to stay in Germany."

The U.S Immigration Act of 1990 and the American Competitiveness and Work Force Improvement Act of 1998 both emphasize selection of highly skilled workers through quotas that favor candidates with specialized training. Thus the United States government has immigration policies that are particularly enabling to scientists that wish to stay in the United States. Graduates from U.S. higher education institutions have the option to extend their stay in the U.S. following completion of their programs to obtain practical training. Optional Practical Training (OPT) is work permission for F-1 students to gain up to 12 months of work experience in their fields of study. However, students in select fields of science, technology, engineering and mathematics (STEM) may apply to extend their OPT for another 17 months. Additionally, students on J-1 visas may be allowed up to 18 months of Academic Training (AT) to gain work experience in their field of study. PhD students who are offered a Post-Doctoral position may be authorized for 18 months of AT and can request a second 18 months period for a total of 36 months of post-doctoral training (ISSIS, 2011).

Although students on J-I visas are generally required to go back and serve their countries of origin for a continuous period of two years after they graduate before they reenter the United States, there are exceptions to this general rule, especially when such a student is in the medical or STEM fields. For example, under the Conrad Program, a waiver of the requirement to go back

and serve their native country for two years before reentering the U.S. may be issued for a foreign medical graduate who has an offer of full-time employment at a health care facility in a designated health care professional shortage area or at a health care facility which serves patients from such a designated area. Another ground for waiver is exceptional hardship. If a J-1 holder can demonstrate that their departure would cause exceptional hardship to their U.S. citizen or legal permanent resident dependents, a waiver may be granted. A waiver may also be granted for a J-1 holder by a U.S. Federal Government agency that has determined that such person is working on a project for or of its interest and the person's departure will be detrimental to its interest. Besides the obviously open U.S. policy to retain STEM field foreign nationals who train in the U.S, the information on such avenues is readily available. Some respondents that trained in North America revealed that the fellowships they were on required them to go back to Uganda and serve for at least two years. However, the two year period could be waived under special circumstances. For example, one of the respondents who trained in the U.S.A. and was required to go back and serve Uganda after completing the program revealed that the two year period was waived on medical grounds.

The respondents indicated that once one decided to stay, it was not hard to do so legitimately. The information on how to stay legally was not only readily available, but the student advisors and potential employers encouraged immigration. For example, one respondent stated that, “during the final stages of the program, the immigration counselor brought it to my attention that there were many opportunities available for graduates in my field and that she would help me with the immigration paper work if I chose to immigrate.” Another respondent said that “during the program I had two children, who were U.S. citizens by virtue of the fact that they were born here; my returning to Uganda would have been hard on them so I was granted

U.S. citizenship." Another respondent revealed that their field of expertise had few qualified U.S. citizens, so qualified people in that field were given citizenship easily.

The interviews also revealed that some American higher education institutions specifically targeted to recruit some of the respondents by offering them post doc positions immediately after they graduated and later faculty positions. Targeted recruitment went beyond faculty who graduated from the U.S higher education institutions. For example, some respondents that trained in Europe were on graduation offered post-doctoral positions by U.S. institutions which subsequently offered them tenure track faculty positions. Some of the specialties were so unique and in so much demand in the U.S. that recruiters deliberately looked outside the United State to get the right candidates. One of the respondents had the following to say:

> Here in the U.S. we have shortages of epidemiologists, graduate students are hired for faculty positions before they even complete. I really had trouble when I was trying to hire an epidemiologist for a post doc, I did a national search and I could not get one. I ended up asking for permission from the equal opportunities office to let me hire "X" (one of the respondents) because I had searched nationally and I could not find one and yet the money was from a grant that had to be expended and the work done. Before "X" completed the post doc, there was already an offer for "X" a faculty position. We really have shortages of epidemiologists and I knew that "X" was well trained.

This chapter has presented the findings of the study; the next chapter analyzes the findings employing the broad themes that were identified in chapter three, identifies the implications for policy and research, and points to areas for future research.

CHAPTER 5

CONCEPTUAL ANALYSIS

Having outlined the findings of the study, this section gives a conceptual analysis of the findings by utilizing the conceptual frameworks identified in chapter 2. Various factors influenced the decisions by Makerere University faculty who trained abroad between 1992 and 2009 to return or not to return to the University following completion of their study programs or to return and soon leave. Multiple frameworks are employed to analyze the findings: properties of the individual and their work environment (Blackburn & Lawrence, 1995); and theories on international migration, namely, neo-classical economic theory (Todaro, 1969; Weintraub, 2007); relative deprivation theory (Jennissen, 2004; Runciman, 1966); world migration systems theory (Wallerstine, 1974 & 2003); and migration networks theory (Massey *et al*, 2005). This section is arranged according to the above frameworks.

Properties of the Individual and their Work Environment

The properties of an individual and their work environment play a major role in determining where individuals choose to work. According to Blackburn & Lawrence (1995), characteristics of individuals and their employing institution combine and lead to variations in faculty motivation, behavior, and productivity. Blackburn and Lawrence (1995) identify individual constructs (socio-demographic characteristics, career, self-knowledge and social knowledge); properties of the environment (environment conditions and response, and social contingencies); and process dimensions as factors that influence faculty decision relating to where they chose to work. In this case, individual characteristics as well as the work

environment featured prominently in influencing the choices that Makerere faculty made when it came to deciding whether to return to the University or not after they completed training abroad.

Individual Constructs

Blackburn and Lawrence (1995) identify socio-demographic characteristics (including chronological age, race/ethnicity and gender), career, self and social knowledge as individual constructs that affect faculty behavior and choices. Individual constructs—chronological age, gender and career—that influenced Makerere faculty when making the decision to return or not to return to the University are discussed below.

Chronological age: The study revealed that chronological age played a role in what choice faculty made when it came to deciding to return or not to return to the University. The faculty who went to train while they were still young (under 30 years) were more likely not to return to the University because they had not invested a lot into Makerere and had not yet established networks that would attract them back to the institution. This was contrary to the faculty who went to train at an older age (above 35 years) who because they had established themselves at Makerere felt that returning to the University would consolidate their career while not returning would mean starting over.

Gender: Gender was another socio-demographic characteristic that affected faculty decisions. Uganda being a patrilineal society, married women tended to choose to stay where their husbands were established. For example, while one woman who left for training when they were relatively newly married and had an infant child indicated that they returned to Makerere because they had to return to their family plus, “my husband had a good job here (Uganda).” On the other hand, a comparable man had no qualms with having to uproot their bride and settling abroad. Furthermore, a woman that got married to a non-Ugandan and had children while abroad

said they had not returned to the University because they had to stay abroad and raise their family. But a man who married a non-Ugandan and had children while training abroad chose to come back to Uganda and raise their family. While maintaining the family was important to both men and women, women tended to come across as being forced to bend to the needs of their husbands, which was not necessarily the case with men.

Career: Career was another individual construct that Blackburn and Lawrence (1995) identified that may lead to variation in faculty behavior. The career path chosen by an individual determines where they decide to work. For example, a person who wants to build a career in teaching will choose to work at an institution that will make that possible and as comfortable and enjoyable as possible. Because all professionals take their careers very seriously, it was by no surprise that career growth was the most frequently cited reason for both returning and not returning to Makerere after faculty completed their studies abroad. While some argued that Makerere University offered them the best chances for career growth—working close to longtime colleagues and networks that they had built, thus the decision to return there, others argued that Makerere lacked the resources that were crucial for their career development, thus the decision not to return. Either way, career growth was a major influence in the faculty decisions. Moreover, for the faculty who had had to fend for themselves as far as obtaining further training opportunities was concerned, the University had already exhibited a lack of commitment to their career development. Fearing that this lack of commitment was the norm, this category of faculty felt not returning or leaving soon after they returned was their best choice. Most of the respondents valued career growth more than remuneration and were of the view that had Makerere presented the best chances for career growth for its faculty, many would be happy to continue serving the University.

Properties of the Environment

Properties of the environment, objective characteristics of the work setting that exist separate and apart from the individual faculty perceptions, are other factors that Blackburn and Lawrence (1995) identified as coming into play to determine faculty choices. The two authors point to environment conditions, environment response and social contingencies as properties of the environment that combine to influence faculty behavior. The study revealed that one aspect of the environment or the other compelled faculty not to return and some that returned to go away in search of a more conducive work environment. Drawing from Blackburn and Lawrence (1995) the following subsections discuss aspects of the work environment at Makerere that influenced faculty in making the decisions they made in as far as returning, not returning or returning and leaving the University after they trained abroad was concerned.

Environment conditions: Environment conditions, which represent the structural and normative features of the institution, directly influence faculty decisions to return to or not to return to the University after training abroad or to return and soon leave. Environment conditions include things like the fiscal wellbeing of the institution, its location, compositions of faculty, governance, facilities (such as library, laboratories and instructional resources), and university mission. These conditions not only affect faculty access to resources but also how they do their work. As a result, environment conditions were some of the major influences that were named by faculty for taking the decisions they took.

Makerere University did not exhibit fiscal wellbeing, which in turn affected the way resources were allocated and what resources and rewards were available to its employees. Physical infrastructure, research facilities and funding were properties of the work environment that directly influenced faculty behavior. The University evidently lacked physical infrastructure

to adequately handle the burgeoning student numbers: computers were scarce, libraries were small and did not have subscriptions to most journals and databases, classrooms were small and not well furnished, laboratories were scarce and lacked equipment and other materials, and the internet, where available, was very slow. Paradoxically, the University allocated little to no funds for equipment and research. Put together, these aspects of the work environment made work at Makerere extremely cumbersome. The faculty who went out to train went to world-class institutions with state of the art facilities and equipment. When they looked back and compared the resources available at those institutions with those at Makerere, Makerere was no match. The faculty could no longer imagine themselves working in an environment with such inadequate facilities and research funding. They had gone out in the world and tasted other dishes and mummy's (Makerere University) cooking was no longer the best cooking. So, when they had to choose to go back to Makerere or to have the opportunity of working in an environment that provided superb facilities and resources, they chose the superior environment, not because they hated Makerere, but because Makerere could not provide what they needed at that stage in their careers.

Closely related to physical infrastructure and research facilities are the issues of the health system and facilities and veterinary facilities. It was evident that the facilities provided in Mulago hospital, a national public hospital and the teaching hospital for Makerere University, left a lot to be desired. Clinicians were worried about contracting diseases because of lack of protective equipment. Dr. Margaret Mungerera, a former president of the Uganda Medical Association in a 2008 interview with the New Vision newspaper blamed the departure of health practitioners on poor working conditions in both government and non-government health services (Wendo, 2008). She cited low pay, chronic shortage of medical equipment and supplies,

underfunding of the health sector and limited opportunities for further training. Moreover, there is a high demand for health workers in developed countries, where the remuneration is much better than in Uganda (New Vision, 2008). Health sciences professionals that are lucky to go abroad for further training get the chance to taste both worlds and, given the opportunity, are often tempted to go and work in the environments abroad, which have better facilities and equipment.

Although only three out of 30 College of Health Sciences faculty who went abroad did not return after they completed their training, the administration indicated that there was a high attrition rate at the College with many faculty leaving for various destination including, South Africa, Rwanda, Swaziland and Botswana. This created shortage that impacted the quality of graduates from the University. The facilities in the faculty of Veterinary Medicine were also hazardous to vet practitioners. Faculty risked getting animal communicable diseases if they continued operating without the protective gear that was required. The faculty from the faculty of Veterinary Medicine too, like their colleagues at the College of Health Sciences wanted to work in a safe environment. Makerere University could not provide the kind of safe environment they preferred to work in. The desire to work in a safe environment influenced their decisions of the faculty who did not return not to return.

Organizational structure and management were some of the other environment conditions that were highlighted by respondents. Many respondents were disgruntled with the organization and management of the University and were fed up of being a part of an institution that was so poorly organized and managed. Some respondents felt that there was a disconnection between the central administration and the academic units. Such respondents championed the view that certain aspects of running the academic units such as, setting minimum qualifications of

personnel, appointments and promotions of faculty, curriculum, teaching loads, and so on, were matters that would best be handled by the academic units themselves instead of the central administration. Disregarding such cries, the University continued to operate in a top down manner that often saw the establishment of policies across the board that were disadvantageous to some academic units especially those that were professionally or clinically oriented.

Lack of evidence-based decision making culture has been sighted as one of the major push factors (Kana, 2008; Adetayo, 2010). Luck of evidence-based decision making culture leads to a lack of recognition of potential, which in turn leads to unsuitable rewards. Some faculty felt that there was a general lack of equity and transparency in the way administrators executed their duties. Individual merit was often disregarded in allocating resources. Instead, things like, gender, tribe, and schools attended, dictated who got what advantage over whom. As a result, faculty who believed that they would not thrive in such an environment as they were not the right gender, did not come from the preferred tribe, or did not attend the favored schools, were inclined to stay abroad and look for opportunities where they hoped individual merit would soar above everything else.

Additionally, respondents expressed the view that there was intermeddling by the Uganda government and politicians in the way the University was run, which contributed to inefficiencies. Refusal by the government and the parliament of Makerere University having a free hand in setting tuition and fees structures was cited as the major reason why the University was poorly funded. It was argued that the fees paid by private students were not enough to run the programs forcing the University to cut back on things like laboratory work and tutorials. Respondents thought that faculty at Makerere were not well remunerated partly because the private students did not pay at unit cost. Respondents also revealed that the political governments

impeded their academic freedom, which made them reluctant to return to Makerere University and instead to look for environments that treasured academic freedom.

Working in a mutually respectful and friendly environment may sometimes be better than all the money in the world. This statement held true in the case of some Makerere University faculty. Despite the fiscal hardship that Makerere faced, many respondents felt at home there and chose to return after they earned their doctoral degrees abroad. For these respondents, Makerere was home and family, they enjoyed working there; they could face any challenges knowing that they were not alone—they had their colleagues by their sides. Additionally, there was a sense of nostalgia among some respondents that circumstances had forced not to return; some of them missed working side by side with their Makerere colleagues. This sense of belonging was the driving force behind the collaborations that had been established between Makerere University and many of the institutions abroad at which former Makerere faculty worked. Consequently, some faculty who did not return to Makerere after training felt an obligation to join the forces to improve Makerere, at least for the sake of the colleagues they had left behind. Many hoped that they would be able to return there someday.

Environment response: Environment response, which includes the different types of feedback to faculty, for example, award of tenure, promotions, salary raises, is another category of influences that Blackburn and Lawrence (1995) identified as factors that influence faculty behavior and thus decision of where they choose to work or not.

Policies on training and promotions influenced Makerere University faculty decisions. Literature on brain drain suggests that the key push factors driving professionals include lack of professional development opportunities and lack of career development paths. University policies on training and promotions made faculty reluctant to return to the University. Although

the University requires faculty to have doctoral degrees before they are considered for promotion or appointment to the position of lecturer or higher, very little has been done by way of funding PhD training and research. Instead, the University heavily relies on donor funds to this regard, which are never a given. Faculty who maneuvered their way into obtaining funding for their doctoral training felt little to no allegiance to the University when faced with the decision to return or not to return to the University. There was evidence in the testimonies of both the faculty who the University funded or obtained funding to undergo PhD training and those faculty who the University did not play a role in funding or soliciting funding for PhD training that there would have been less faculty not returning to the University had the University played a greater role in funding doctoral training and research. While faculty who the University funded or solicited funding for felt a great responsibility to return to the University after they graduated, the faculty who got funding out of their personal maneuvers felt no such responsibility and were, as a result, more likely not to return to the University after they completed their training abroad.

Moreover, foreign PhD funding agencies and institutions varied in what they required of their grantees. While some demanded that the grantees return to their institutions following completion of their training abroad, and put mechanisms to ensure that they returned to their home countries, other put no such restrictions, which meant that if the grantees found ways of staying behind after they trained, nothing prohibited them from do so.

Additionally, besides two years of teaching experience, and service, for a lecturer to be promoted to the position of senior lecturer under the fast track route, they must have published at least six new recognized publications in their area of specialization since their appointment or promotion to the position of lecturer. On the other hand, promotion of a lecturer to a senior lecturer position under the ordinary track requires: three years of teaching, three new recognized

publications in the area of specialization since promotion to the rank of lecturer and supervision of at least one graduate student. (See Appendix B for a table indicating the appointment and promotion requirements.) But the University hardly provides funding for research, which makes it hard for faculty to do original research and publish. As a result, faculty often stagnate at the lecturer level. Faculty who witnessed those before them go for training and returning only to be stuck at the lecturer level feared that there would be no upward movement for them too. This made them think twice about returning to the University after their doctoral training.

Social contingencies: As previously discussed, social contingencies factors include events that happen in the faculty members' personal lives and affect their work or the choices they make as far as work is concerned (Blackburn & Lawrence, 1995). In this study, respondents revealed that there were many aspects in their personal lives, for example, getting married, having a baby, and contracting a disease that influenced their decision whether to return to Makerere University or not. For instance, some respondents chose to stay abroad because they has got married or had starts families there. Others still had members of their families contracting disease that they felt would be best attended to if they remained abroad.

Theories of International Migration

In addition to the properties of the individual and their work environment, the study employs several international migration theoretical models (neo-classical economic theory, relative deprivation theory, world migration systems theory, and migration networks theory) to explain the factors that influence faculty decisions to return or not to return to Makerere University after training abroad.

Neo-Classical Economic Theory

Neo-classical economic theory considers people as: having rational preferences among outcomes that can be identified and associated with value; seeking to maximize utility; and acting independently on the basis of full and relevant knowledge (Weintraub, 2007). Therefore, according to the neo-classical economic theory, the main cause of migration is individual's efforts to maximize their income by moving from low wage to high wage economies (Castles, 2000). There was overwhelming evidence that the pay at Makerere University was miserable. Faculty felt unappreciated because the rewards that they received for the work done were not commensurate to the work done and to their levels of education. As a result, faculty looked elsewhere in the hope of getting better rewards.

In April 2010 the Minister of Health revealed that 13 senior surgeons left Uganda for Rwanda in 2009 due to poor pay (Dambisya, 2010). Additionally, in the same year South Africa employed 250 Ugandan doctors, Swaziland 10 and unknown number of Ugandan doctors was scattered all over the southern African region in countries like Lesotho, Zimbabwe, Zambia and Botswana (Dambisya, 2010). This was in addition to the numerous Ugandan doctors in America and Europe. In 2010, in Rwanda, a consultant surgeon (usually with a master's degree as the highest qualification) was paid between Ug.Shs5million and Ug.Sh9million (USD$1,786 to USD$3,214), which is admirable compared to USD$884 that Makerere University pays a terminal degree holder in the same field.

Respondents cited financial or economic reasons as major influences to their decisions to stay abroad or to return. The faculty who felt that while based at Makerere they would be able to attract research grants as well as consultancies to supplement their income was eager to go back to the University in spite of its other shortfalls. However, faculty who foresaw no means of

income supplementation while they were at Makerere, when given other options, chose not to return to Makerere. The faculty, as rational thinkers, weighed their options and Makerere lost out to the west, and in some instances to other African countries, where incomes were greater. To this category of faculty, not returning to the University simply made economic sense.

Social security was another dimension of financial/economic considerations that faculty weighed when making the decision to return or not to return Makerere University after they trained abroad. Makerere University as a corporate body independent of the Uganda government is required to provide retirement benefits for its employs independent of the central Uganda government. Social security acts as a safety net for workers when they can no longer work and receive an income. Unfortunately, Makerere University does not have a tangible social security plan for its employs. By law the University as an employer is meant to contribute 10% of an employee's gross salary toward a retirement scheme, the employee is required to contribute 5%. However, due to the fact that the salaries are very low, 15% does not add up to much. Moreover, the University has had a turbulent history as far as managing the faculty retirement fund is concerned. Respondents wanted a secure future. They felt that the University could not provide a secure future thus the decisions to migrate to systems where they saw hope for a secure future.

Relative Deprivation Theory

Relative deprivation theory suggests that the relative income position of an individual or a family is an important determinant of international migration (Taferra, 2000). Scholars have noted that there four preconditions for relative deprivation: person X does not have Y, person X knows other persons that have Y, person X wants Y, and that person X believes that obtaining Y is realistic (Merton, 1938; Runciman, 1966). The respondents indicated that the wages at Makerere University were relatively less than those of less qualified professionals in the

Uganda's private sector as well fell below those of faculty in the neighboring countries. These wage differences motivated some faculty who went abroad for training to remain abroad where they could get favorably better wages.

Additionally, the study revealed that unfavorable political environment in Uganda was the cause of some faculty not returning to Makerere when they completed their training abroad. Uganda has had its share of turbulence—from the 1981/1985 civil war, to the insurgencies in Northern Uganda thanks to Joseph Kony's Lord Resistance army. These insurgencies have not only left people internally displaced from their homes but also propelled others to migrate from Uganda for fear of being persecuted. Moreover, some respondents are of the view that most African governments are dictatorial and corrupt. One of the respondents was of the view that, "the issue of brain-drain boils down to dictatorial governance on the continent." Respondents shared the view that they would love to work in an environment free of fear, political oppression, tribalism and rampant corruption. There was fear that career development opportunities were only open to those that originated from the tribe of whoever was the ruler at the time. Moreover, the respondents also revealed that the corrupt nature of the Uganda government created economic differences. Some individuals were, for example, accorded more opportunities when it came to getting tenders or consultancies from the central government leaving those that were excluded from such opportunities thirsty for opportunities to improve their status. As a result of the inequalities in wages and opportunities, faculty felt they would be better off if they did not return to such an environment. On the other hand, faculty who were prone to getting opportunities were more eager to return to Makerere after they completed their training.

World System Theory

Makerere University faculty decisions to return or not to return to the University after they completed training abroad may be explained employing the world system theory lens. World system theorists argue that there is an international division of labor where core countries, the more developed countries, predominantly use higher skilled labor, while the less developed countries focus on less skill (Wallerstein, 2003). This creates dominance by the more developed countries. The developed world and the underdeveloped world depend on each other; the developed world to provide highly skilled labor and the developing world to provide unskilled labor. Professionals in the developed world find it both inviting and fulfilling, because they are highly skilled, to move migrate to the developed world. To further exemplify how world system theory explains brain drain at Makerere University, I discuss the nature of programs that Makerere faculty attended and the recruitment strategies by developed countries.

Nature of the program attended: The developed world uses higher education as one of the ways of perpetuating the state of affairs, where the developing world will always be dependent on the developed world. Because developed countries' education systems are portrayed as being superior, scholars from the developing world are attracted to pursue training at institutions in the developed world. Many training programs in the developed world are a way of attracting talent from all over the world with the hope that some of the graduated would be assimilated into their systems. It came by no surprise that the nature of the program attended was a major contributing factor to whether they returned or not. Split-site programs, where trainees either underwent joint programs or where they did programs that most of the training was done in Uganda with short attachments at a collaborating institution in the North, exhibited higher numbers of returns, in fact, all faculty who underwent joint programs or whose programs allowed

for part of the training or the research component to be in Uganda returned. These types of programs enabled the faculty to teach and supervise students while they underwent training themselves. The connection with the University was ongoing. To this faculty there was really never a choice of whether to return on not; they had really never left in the first place. On the contrary, trainees that underwent programs fully based at an institution in the North and were not even able to do research in Uganda, were disengaged at the University and often grew attached to the institutions that they trained at. When given opportunities to stay at their new institutions or in the countries where they trained, the decision was not very hard. The period that they had spent training had driven a distance between them and Makerere University. This category of respondents found it easier to decide not to go back to Makerere University. In some instances, the doctoral research was not relevant to the Uganda situation and the faculty felt better off staying in the countries where their areas of research would be more relevant.

Recruitment strategies by developed countries: Developed countries position themselves strategically to recruit professionals from other parts of the world to fill the labor gaps in their systems. This strategy has been widely used in the health and biomedical sectors. Health care systems around the world are in crisis; they are faced with shortages of health care professionals, which are created by increasing demand and without a matching increase in supply (Clark, Stewart & Clark, 2010). The recruitment of healthcare workers from less developed countries has emerged as one of the main responses of developed countries to the shortage of healthcare professionals. As a result, strategies by developed countries to recruit health workers and other biomedical professionals from the developing world have been a major factor in perpetuating migration of professional from the developing world and thus leading to brain drain in the developing world. There is need to note here that veterinary medicine is a crosscutting discipline.

It crosscuts to human health sciences especially in areas of public health, anatomy, pathology, and biomedical research and practice. Veterinarians are increasingly working in human health sciences environments. A particular example that comes to mind is the area of diseases that are crosscutting between animals and humans, for example, brucellosis and salmonella infections. Moreover, anaimals are often the testing grounds for drugs being developed for humans. Therefore, veterinarians should, and rightly so, be included in the discussion of health care professionals.

The study revealed that most of the College of Health Sciences and Faculty of Veterinary faculty who did not return to Makerere University after training abroad had been deliberately recruited to service the budgeoning health services systems of one country or the other in the developed world. As reported in the previous chapter 47% of the health and STEM faculty who trained in the Unites States did not return to the University. Worse still a 100% of the Veterinary medicine faculty who trained in the U.S. did not return to Makerere. Moreover, 3 of the 4 College of Health Sciences and Veterinary Medicine faculty who trained in other destinations outside Africa and did not return to Makerere are currently working in the United States—the remaining one is working in Uganda. This goes to show that the U.S. is strategically recruiting professional from the developing world to fill the gaps in its system.

This brings me to the issue of the differences between the regions that were hosting Makerere University faculty. Although going into the study I expected that the U.K. and Australia, because of the colonial background to Uganda, would have the highest percentage of faculty not returning, I was suprised that it was North America.[8] But again, perhaps this should not have been surprising considering that North America is bigger than the U.K. and Australia

[8] Since only one person trained in Canada, North America is primarily influenced by those studying in the United States.

put together. Respondents revealed that the U.S. was very attractive not only beacuase it was an English speaking country but also because there was a lot of diversity. Respondents also indicated that there were affirmative action programs in favor of blacks that they hoped to take or were already taking advantage of in the U.S. But one would think that the U.K. being English speaking and former Ugandan coloniser would have retained more faculty than the U.S. This was not the case. Respondents were of the view that the immigration policies in the U.K. were much more intricate compared to those in the U.S. Conversely, the rest of Europe had the language disadvantage. Plus, the respondents stated, these countries being so much more predominatly white, they would feel less at home than what would be the case in the U.S., which has more black people. Asia and the far East did not have many Makerere faculty going there to train because thier education systems were less revered than those of the U.S., Canada, the U.K., Australia and most of Europe.

Migration Networks theory

Although monetary and career growth incentives are major influences that shape potential migrant's decisions, the role of social ties and networks is significant in decisions whether to stay abroad or not. Migration decisions are often made by the family or household as a unit rather than simply an individual. Hence, an individual's decision to migrate is not based on maximizing one's own advantage but rather on maximizing the collective benefit of the family as well as minimizing the family's collective risk. The family as a collective unit would, for instance, be in position to minimize the risk by diversifying of household resources. For example, a family member could baby sit or contribute towards rent or carpool, thus minimizing costs. The benefits of the advantages that could be had by doing the move as a family or moving to a country or location where one has family makes the decision to move much more easier.

Conversely, if it is not to the advantage of the family to do the move, it is unlikely that the decision to move would be taken. In this case, faculty stressed the significance of family in their decision to return or not to return to the University after they trained. While some returned because their spouse could not get employment abroad or could not make the move, others returned because they did not want to uproot their family from an environment where they had established themselves. On the other hand, some faculty did not return because it was in the best interest of their families to move abroad or because they started a family while they were abroad and wanted to stay there to sustain their family. Whatever their differing reasons were, the family was a big influence on the decisions taken.

Social networks are not limited to kinship alone. They also include ties with friends, and shared communities. There was evidence that some respondents returned to Makerere University because of the networks and friendship they had established at Makerere University, in particular, and Uganda generally. These networks in some instances make access to resources easier, in other instances they make bearing difficulties or tragedies easier because one has friends to depend on. The same holds true if those friendships and networks are abroad as will be discussed in the following subsection on social migration networks.

Social migration networks provide information and support to both potential and new migrants. The support and information helps migrants cope with their new environment. Migrants are attracted by the fact that other migrants from the same ethnic group have already settled in the receiving society, thus allowing for occurrence of networks of recruitment (Massey *et al.,* 1998). In this case, respondents confirmed that the fact that they knew of someone who had migrated to a particular area and succeeded influenced their decision to migrant. In some particular instances, former colleagues were active in recruiting others to go and join them in the

new locations that they had settled. Migration networks tend to enlarge overtime, which further reduces the cost of migration to a greater number of migrants. A good number Makerere University Veterinary Medicine faculty have tended to settle in the U.S. where they testify that they have been able to get assistance from their former colleagues thus making the move less daunting.

CHAPTER 6

CONCLUSION

This final chapter provides a brief review of the study and summarizes the major factors that influenced Makerere University faculty decisions whether to return or not to return to the University after they completed training abroad. The chapter also suggests implications for research and policy.

Review of the Study

The purpose of this study has been to deepen the understanding of what factors influence Makerere University faculty who go for studies abroad to return or not to return to the University or return but soon thereafter leave to go back abroad or to join the private sector. The study argues that the numbers of faculty not returning from their training abroad is substantial, considering the number of PhD holders at the University, to warrant it to be referred to as brain drain. Multiple frameworks—properties of the individual and their work environment (Blackburn & Lawrence, 1995), neoclassical economic theory, relative deprivation theory, world systems theory, and migration network theory—were employed to explain brain drain at Makerere University.

The major factor that contributed to the conception of this study is the role of higher education institutions to economic growth and national development. Higher education is not only central to the economic and political development of a nation, but also vital to competitiveness in an increasingly globalized knowledge society. It plays a critical capacity building and professional training role in support of national development goals. For Africa to

meet the challenges of poverty reduction and achieve sustainable human development, it needs to have a greater output of professionals. This makes higher education institutions critical to national development. But higher education institutions are finding themselves amidst a sea of constraints including shrinking funding, increased student numbers and brain drain of its professoriate. This makes it difficult for higher education institutions to meet their responsibilities to their nations. Since the professoriate are fundamental players at higher education institutions, I thought it necessary to discover out the factors that influence Makerere University faculty to return or not return to their positions at Makerere after completing their training abroad, which in turn will inform policy to devise strategies for attracting and retaining faculty at Ugandan higher education institutions. Additionally, although there were glaring gaps left by the immigration of faculty at Makerere—sky-rocketing faculty/student ratios, heavy teaching loads, low research output, few PhD holders in place—there was no single study on the issue of brain drain at Ugandan higher education institutions.

The study relied on archival materials and documents and interview data collected from Makerere University's 6 administrators and 25 former and current faculty to identify the factors that influence faculty to return or not return to the University after they trained abroad. Multiple frameworks were employed to explain brain drain at Makerere University. While chapter four reported the findings from the archival material and documents and the personal interviews, chapter five analyzed the findings, and this final chapter reports the key findings from the analysis and offers implications for policy and research.

Summary of Findings

The examination of what factors influence Makerere University faculty who train abroad to return or not return or to return and soon leave Makerere University yielded several findings. The narrative following summarizes the key findings of the study.

1. The work environment was the major push factor that kept faculty from returning to the University. The organization and management of the University was wanting. Some of the policies governing faculty and the running of the academic units were entered blindly and dictated upon the academic units without due regard to what was most favorable to a particular unit. The management was not transparent and often favored some individuals and some units. The facilities were inadequate and research funding was minimal, which minimized career growth as this entailed research and publication. The faculty was not well remunerated. Additionally, the University did not have a well-planned and well-organized retirement benefits scheme, so the future was bleak. These factors of the environment tended to push faculty away, they propelled them to look for greener pastures abroad and thus make the decision not to return to the University after completing training abroad.
2. The political environment in Uganda was turbulent. Some areas of the country were at war, which forced some faculty who hailed from those areas to flee the country in fear of persecution. Moreover, nepotism was widely practiced. Great opportunities were only open to a favored few, which motivated the faculty who did not belong to the favored groups not to return to the University.
3. Whether the University participated in securing funding for the training was a factor that influenced faculty to return. The faculty who were fully funded by the University

returned to University. The faculty who received funding for the training out of their own efforts felt no obligation to return to the University. Although the University entered a bond with all the faculty who were granted study leave requiring them to come back and serve the University for a time no less than the time they were away for training or until the bond was lifted, the mechanisms for prosecuting defaulters were so weak that most faculty were not deterred from defaulting the contract.

4. Social ties and families were both push and pull factors. Some faculty returned because they did not want to uproot their families, while other faculty was pulled to settle abroad because they had family and friends in those destinations. The University was a collegial environment to work, which attracted some faculty to come back and work with their colleagues.
5. The nature of the programs attended played a major role in whether faculty returned or not. The faculty who attended joint programs between Makerere University and collaborating institutions abroad returned to the University after the completed training. Additionally, faculty who attended split-site programs requiring them to spend time both at Makerere and institutions in the North returned to the University. In addition, faculty who did their research in Uganda, while based at Makerere University also tended to return. The three categories of faculty above remained active at Makerere during the time that they trained, which meant that they really maintained a connection with the institution. However, the faculty who did all their course work and research abroad and did not revisit the University during their program were more likely not to return to the University after they completed their training. This category of faculty was detached from the University.

6. Bilateral agreements between the Uganda government and governments of other countries, especially in Europe, and between Makerere and other institutions that required the candidates to return to Makerere or to Uganda and serve a prescribed length of time, tended to create an atmosphere for faculty to return to Makerere. However, this was only possible if the countries in issue actively required the faculty to return.
7. Migration networks influenced faculty to make the decision to migrate to their host countries or to other countries in the West or North. The networks reduced the risk of migration by providing information and other resources.
8. Better working environments in terms of good remuneration, better planned social security, superior facilities, and access to research funding in the developed countries was the major pulling factor of Makerere University faculty to remain abroad or to return to Makerere and soon leave to go back abroad. Better pay meant better welfare for self and family. A renowned social security system meant peace of mind, and good facilities and resources for research assured faculty of career growth and development.
9. Immigration policies of the host countries either inspired faculty to return to Makerere, if the policies were hostile and intricate, or not to return to the University if the policies were welcoming of immigrants. It was found that the U.S. and Canada had enabling immigration policies for scientist, particularly scholars in the health sciences, veterinary medicine and biomedical fields, which encouraged faculty to stay in the U.S. or Canada. Additionally, there was evidence of targeted recruitment in STEM fields by countries like the U.S. This gave opportunity to Makerere faculty who were recruited in that manner to remain abroad.

As narrated above, the findings relate to both push and pull factors. Table 9 and Table 10 give a summary of the major findings of the study. While Table 9 summarizes the factors which influence faculty not to return to Makerere University or to leave soon after returning from training abroad, Table 10 summarizes the factors which influence faculty to return to the University after training abroad. The tables sort the findings reported in chapter four by the pull and push factors for returning and for not returning. As explained in chapter two, push factors are dynamics in the source countries/institutions that drive (push) workers away. On the other hand, pull factors are things in the recipient countries/institutions that attract (pull) workers to those destinations/institutions. The key words here being: push, pull, source, and recipient.

Table 9: Factors influencing faculty not to return to the University or to leave soon after returning from training abroad

Push factors	Pull factors
Uganda context: Political insurgency violence; corruption; lack of democracy; wide spread poverty & poor conditions of living; gender inequalities; poorly funded health care system; deteriorating education system *Work environment conditions:* Poor facilities, backward technology & poor access to information; lack of research materials & funding; teaching overload; lack of institutional autonomy, poor policies & governance *Work environment response:* Low wages & benefits; limited career growth and development structures & opportunities; rigid requirements for promotion; lack of academic freedom *Social contingencies:* Burdens of extended families; poor welfare for family	*Developed world context:* Political stability; democracy; fiscal health; good conditions of living; gender equality; good health care system; good education systems; targeted recruitment; easily navigable immigration systems; presence of migration networks; population diversity *Work environment conditions:* World class facilities, technology & access to information; good levels of research funding & materials; balance between teaching research & service; institutional autonomy; good policies & governance *Work environment response:* High wages & benefits; good career growth and development structures & opportunities; established tenure requirements; presence of academic freedom *Social contingencies:* Family ties and social networks; better family welfare

When considering the factors that influence faculty not to return to Makerere University or to leave soon after returning, Uganda/Makerere University is the source country/institution, while the countries/institutions to which faculty move to are the recipients. For example,

according to Table 9, political insurgency, wide-spread poverty, poor pay and poor facilities were some of the factors that pushed faculty away from Uganda/Makerere (the sources). On the flip side political stability, wealthy economies, good pay and world-class facilities were some of the factors that pulled faculty to migrate to these destinations.

Conversely, when considering factors which influence faculty to return to Makerere University, Uganda/Makerere is the recipient and the countries where the faculty trained or were temporarily stationed are the sources. For example, according to Table 10, discrimination, stringent immigration policies, and language barriers in the host countries were some of the factors that pushed faculty away from those countries or stopped them from settling in those destinations thus motivating them to return to Uganda/Makerere. On the other hand family ties, networks, and collegiality were some of the factors that pulled them to return back to Uganda.

Table 10: Factors influencing faculty to return to the University after training abroad

Push factors	Pull factors
Developed world context: Discrimination; stringent immigration policies; language barriers; harsh weather; cultural differences; limited migration networks; lack of diversity in population; high cost of living *Work environment conditions:* work overload; cutthroat competition, underemployment(e.g. doctors working as nurses or Physician Assistants (PAs or veterinary doctors working as veterinary assistants) *Work environment response:* stringent requirements for tenure; discriminatory allocation of career growth opportunities; *Social contingencies:* Lack family & social ties	*Developed world context*: Good weather; no language barrier; culture; favoritism (for the favored ones); low cost of living; patriotism & allegiance *Work environment conditions:* Collegiality; established networks; limited competition *Work environment response:* Promotions; chance to stand out because of fewer numbers of PhD; *Social contingencies:* Family ties and networks

There is need to reiterate that Makerere faculty who leave the University to join the private sector, although not part of the national brain drain, are still part of the brain drain at Makerere University. Thus in the case of a faculty member who leaves the University to join the

private sector or other institutions in Uganda, Makerere University would be the source while that other institution or the private sector would be the recipient. For instance, some faculty cited stringent promotion requirements at Makerere University as a factor that drove them to leave the University for the private sector or for other institutions in Uganda. In the foregoing example, stringent promotion requirements are a push factor while relaxed or non-stringent promotion requirements in the private sector or other institutions are a pull factor.

Taken together, Table 9 and Table 10 show that the work environment resonated as the major factor influencing faculty decisions to return or not to return to the University after they trained abroad or to leave the University soon after they returned from training abroad. For example, the poor work environment in terms of poor facilities and poor remuneration at Makerere pushed faculty away from Makerere and motivated them to settle abroad. At the same time, the work environment in terms of collegiality and limited competition for resources pulled back some faculty to Makerere. Equally the work environment in terms of good pay and good facilities in the developed world pulled Makerere faculty to settle abroad.

Research Implications

The implications for research for this case study on the factors that influence faculty who go abroad to train to return or not return or return and soon leave the University after they complete their training abroad are topical.

This dissertation concentrated on the College of Health Sciences and Faculty of Veterinary Medicine. This dissertation revealed that a substantial number of faculty from the Engineering, Technology, and Physical Sciences category were not returning to the University after they completed their training abroad. A study concentrating on all STEM fields would be a welcome addition to empirical research because the study would not only be able to discover out

the factors that influence faculty from STEM fields to return or not to return to the University but also be able to compare between the different STEM fields and determine what they can learn from each other when dealing with brain drain. Such a study would be important because for African nations to stay competitive in this knowledge-based economy and for them to technologically catch up with more developed nations, there is need to strengthen capacity in STEM fields. Considering that the study would be covering a reasonable number of faculty, a survey instrument could be employed. However, to get further information, a few number of faculty could be selected from the survey respondents for in-depth interviews.

This study was designed to discover what factors influenced their decision to return or not to return. The work environment, particularly in as far as rewards (remuneration and promotions), facilities and research funding, and organization and management of the University are concerned, was a major influence on the decision to return or not return or to leave after returning. It was also revealed that the work environment abroad was a major pull factor. Other studies could be designed with the purpose of reaching the faculty who did not return and finding out what Makerere could do to attract them back or to discuss ways in which the University can benefit from their expertise even if they did not return to Makerere. Such a study would ask questions like, if the institutions were to provide better working environment would the faculty be attracted back home or stop them from leaving? The study could employ qualitative methods—using in-depth interview. The study would specifically ask respondents to suggest what policies the University could adopt to attract them back. Additionally the study should solicit ways that the faculty would be willing to contribute to the University even if they did not return to Uganda—would they be willing to come for sabbaticals, be external examiners, visiting professors, etc. The results of such a study would inform University policy with a view of

influencing the University to formulate policies that promote retention and collaboration with human capital in the Diasporas.

Finally, a study of split-site programs prevailing at Makerere is another opportunity for future research. Split-site programs and joint programs had a 100% return rate. Considering the high return rate, the University should be implementing more such programs. Therefore, it would be interesting to study these models of faculty training with a view of finding ways of incorporating them in all departments at the University. The proposed study would begin out by identifying the different split-site programs that the faculty attended and analyzing how they were established, organized and funded. This information can be found at the academic department levels as well as the human resources directorate. The faculty who attended those programs would then be interviewed to discover what influenced them to return and whether the fact that they attended a split-site program contributed to their decision to stay at the University. There would also be need to study the different country contexts where the various faculty trained to see whether there were factors unique to those destinations, for example, immigration policies, that might have dissuaded faculty from remaining in those countries.

Policy Recommendations

The study yields four major policy recommendations. First, restructuring of higher education funding is recommended. Second, the study recommends policy and governance reforms. Third, tapping knowledge from the faculty and professionals abroad is seen as a necessity. Finally, development of split-site PhD programs is crucial. The policy recommendations are elaborated below.

As mentioned earlier, the quality of human capital is essential in economic development. Quality human resources are more important than even natural resources. This has been proven

to be true by countries such as Japan, which have limited natural resources, but have managed to become super powers because of the quality of their human capital, while countries like the Democratic Republic of Congo, endowed with a wealth of natural resources, are still underdeveloped. Quality human resources require a good education preferably at the higher level. Therefore higher education is critical for ensuring skilled human capital in all sectors of the economy. Brain drain at higher education institutions threatens their capacity and as such is an impediment to economic development.

This study confirmed that Ugandan higher education institutions, like many of their counter-parts around sub-Saharan Africa, lack the resources that they require to play their role in development. The budgetary allocation to Makerere University has continued to dwindle over the years. The central government hardly allocates any resources for infrastructural development and research to the University. But the University cannot create knowledge without essential requirements such as laboratories and materials. It is therefore imperative that the government increases budgetary allocations to higher education institutions. This will not only ensure the provision of basic infrastructure, but also revamp research capacity. Additionally, there is dire need to ameliorate the conditions of service at the University by increasing remuneration, providing better facilities and resources required to carry out their responsibilities as well as providing for their years after retirement. The suggested improvements will increase retention, attract “new blood” to the academy and hopefully attract some of the faculty who left the University to return.

Resources that will satisfy all sectors of the economy are hard to come by. This is especially difficult for developing countries such as Uganda. Universities are urged to find innovative ways of supplementing governmental funding. Makerere University introduced

private programs both to increase university access and also to supplement government funding. This was a commendable job. But that was not enough. Now is the time for the University to vigorously fundraise from the private sector, alumni, friends, and well-wishers to supplement governmental funding. One common source of funds for higher education institutions (at least in the U.S.), is alumni giving. Makerere has not done well in following up its alumni and soliciting for their support. The University Planning and Development Office should design campaigns to raise funds from alumni and friends to create an endowment fund where the proceeds could be used to support research and laboratories. Companies, especially those doing a lot of business with the University, for example the big banks, could be approached to sponsor chairs at various departments within the University. This too would be a means of supplementing government funding.

The study revealed that most research funds are from foreign sources. It also revealed that some academic units, for example the College of Health Sciences, were more successful in getting foreign grants than other units. As a means of raising the income from grants, the University should build faculty capacity in grant writing. Additionally all faculty should be encouraged or required to write grants continuously. Moreover, the current trend in higher education funding is through institutional and public/private partnerships. The University is urged to establish collaborative relationships with universities around the world and write joint grants to foster joint objectives.

The second policy recommendation revolves around policy and governance reform and overhaul. Policy and governance reforms in Ugandan higher education will not only be able to forge ways of increasing the resources available to higher education institutions, particularly public universities, but also ensure maximum optimization of the available resources by avoiding

waste and utilizing the resources strategically. A beginning point in this regard would be for the central government to accord institutional autonomy to the public universities. One of the policy reforms suggested is for the central government to give institutions a free hand in setting the fees and tuition for paying students. On various occasions when the University attempted to revise (upwards) the fees to privately sponsored students-students without a government scholarship-the government intervened and halted the University plans. Yet there is overwhelming evidence that the private students at Makerere are paying the list fees and tuition within the region. The fees and tuition paid by private students, as confirmed by one of the respondents, "simply cannot run the programs appropriately."

There have been arguments that the government has a responsibility to its citizens to keep public institutions affordable to the lay people. Although I agree that the government has a responsibility to provide means for educating its nationals, I believe that this should neither be at the expense of faculty who are paid very poorly nor should it be at the expense of quality since the funds are inadequate to cover essential components of training-for example experiments and tutorials. If the government wishes for more citizens to benefit from a free or affordable public university education, it should either offer more scholarships or give loans to private students who need assistance. There has been talk of establishing student loans similar to the ones established in neighboring Kenya, Tanzania, and Rwanda but this has not materialized. Currently over 85% of government scholarships are based on academic merit. This has meant that the recipients of the scholarships predominantly come from rich families who can afford to take their children to the expensive secondary schools within a 100 mile radius of Kampala, and who excel at the national examinations. Ironically, while the same students were able to pay almost twice what a university student pays to the secondary schools, the government argues that they cannot

afford to pay tuition to attend university. There is need to revolutionize the criteria for awarding government scholarships.

In addition to revising the criteria for awarding scholarships, there is also need for a general overhaul of institutional governance. There is need for the University to refrain from top down decisions but, rather for it to encourage academic units to lead the planning process. This would eliminate blanket policies such as the policy that requires clinicians at the Faculty of Veterinary Medicine to have a PhD before they can be appointed to or promoted to the position of lecturer, whereas it is not necessary for a clinician to have a PhD to be a good clinician. The Faculty of Veterinary Medicine has lost a number of faculty as a result of this requirement. In essence more powers should be devolved to the colleges.

The third recommendation is tapping of knowledge from the faculty and professionals abroad or in the private sector would be one way to alleviate the effects of brain drain. Many of the faculty who did not return to the University was holding faculty positions in North America or in Europe. They were willing to work collaboratively with Makerere University to build for the future. In fact, some of them were already in collaborative programs of one kind or the other with different academic units in the University. The University should find ways of tapping their knowledge. Some suggestions of doing this would be: joint research, joint programs, external examiners, visiting professors, and study abroad programs.

To successfully tap knowledge from professionals abroad, there is need for investment in information communication technology (ICT). Currently internet connectivity at the University is limited and unstable. The connections are very slow. Better ICT will make it possible for academic units to connect, in real time, with their collaborators abroad. Students at Makerere would be able to tune into web-based classes or discussion forums and other online resources.

Investment in ICT is very expensive and the University will need assistance. The Ugandan government has a responsibility to supply the initial capital needed to increase bandwidth at public universities. The internet will provide enhanced distance learning by enabling online courses.

The final policy recommendation relates to split-site programs. Split-site training programs had a 100% return rate. The University should endeavor to establish joint programs or programs in which its faculty would be required to spend a reasonable portion of their training at Makerere University or in Uganda. This would not only answer to issues of faculty shortage, as the faculty on training would still be able to teach and supervise students while in Uganda, but also keep the faculty connected to the University throughout their training, which would make it easier for them to remain there when they complete training.

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APPENDICES

APPENDIX A

Interview Protocol

1. Briefly tell me about yourself prior to going to study abroad
    - What rank were you employed at
    - What subjects did you teach, at what level
    - Were the subjects you taught different from what you would have preferred to teach
    - Were you married, did you have any children
    - Did you rent or own your home or were you housed by the University
2. Did you have job satisfaction
    - Interactions with colleagues
    - Mentoring opportunities
    - Remuneration
    - Facilities
3. Why did you choose to go to [insert institution and country]
    - Scholarship and academic opportunity
    - Courses of study
    - Financial reasons
    - Employment prospects
    - Personal reasons
4. Did you consider other countries and programs other than the program you enrolled in? If so which ones and why?
5. What were the principal and secondary subjects you studied
    - Were these consistent with what you originally set out to study, i.e. before you went out to study did you know what special fields you wanted to study and whether that was the field that you ended up studying
    - Was you field of study relevant to the subjects you taught at Makerere
6. When you first went abroad to study, approximately how long did you intend to stay,
    - what was the length of your program
    - Did you complete the program on schedule
    - If you did not complete the program on schedule, what were the reasons for the delay

7. While abroad were you abreast with current issues in Uganda and at Makerere
    - How often did you read newspapers from Uganda
    - Did you keep in touch with the developments in your special field of study in Uganda
    - Did you stay in contact with family and friends, did you receive letters or emails? How often?
8. During the period of your studies abroad, did you revisit Uganda? How often? How long? During those visits were you in touch with your colleagues at Makerere?
    - If you revisited Uganda, what was the influence of the(se) visit(s) on your future career plans?
    - Did it tend to increase or decrease the likelihood that you would return to Makerere
    - Why do you think were the reasons for this?
9. With whom did you live while you studied abroad
    - Did you have family or friends in [insert host country] before you went to study there
    - While there did you have a circle of friends in [insert host country]
    - How would you rate your experiences in making friends in [insert host country]
    - How often did you interact with people from Uganda and other foreigners outside of school or working hours
10. Students in foreign countries frequently encounter problems. What problems, if any did you encounter?
    - Fluency in the language of instruction
    - Education of your children in the host country
    - Ability to adapt to the educational program
    - Discrimination against your nationality
    - Spousal adjustment
    - Delay in marriage
    - Separation from family in Uganda
    - Separation from friends in Uganda
    - Ability to get along financially in host country
    - Repayment of debts
    - Loneliness while in host country
    - Homesickness
    - Unpleasant treatment by faculty members and professional colleagues
    - Food and cooking
    - Jealousy or hostility of the people in specialty at Makerere toward people
11. Please tell me about the immigration procedures of the country where you trained.
    - Was information readily available

- Did you know of any recruitment programs of persons of your qualifications

12. Why did you come back to Makerere
    - What motivated you to come back to Makerere
    - Did you get any job offers abroad?
    - Did you consider staying abroad?
    - Were the immigration procedures in any way a hindrance to your staying abroad
13. Why didn't you return to Makerere
    - What motivated you to not to return
    - Was it better paying jobs abroad
    - Political stability
    - Economic stability
    - Social services for self and family
    - Relevance of training relevant to my job at Makerere
14. Could you comment on whether the immigration procedures in the country you went to study influenced your decision to stay or not to stay abroad
15. Why did you leave Makerere after you returned
    - Application of knowledge
    - Remuneration
    - Political Stability
    - Economic Stability
    - Social services
16. What policies if present at Makerere could have influenced you to make a different decision?
17. If you were asked to name the major two influences on your decision, which would they be and how would you rank them?
18. Do you have any other comments, questions that will enrich the study?

APPENDIX B

Promotions and appointment to academic positions

Promotion and appointment to various academic positions shall be as indicated in the Tables below. A member of staff could be appointed on one track and yet promoted on another track or even promoted on one track and had a further promotion on a different track.

Table 1.1 NEW ENTRANTS *(FAST TRACK*)

Post	**Minimum Academic Qualifications**	**Years of Teaching**	**Publications**	**Supervision of Graduate Students**	**Contribution to community**
Senior Lecturer	PhD or Master's degree in Clinical Sciences	Evidence of pedagogical skills	Eight (8) recognized publications in the area of specialization	Not required	Required
Associate Professor	PhD or Master's degree in Clinical Sciences	Evidence of pedagogical skills	Eleven(11) recognized publications in the area of specialization	Not required	Required
Professor	PhD or Master's degree in Clinical Sciences	Evidence of pedagogical skills	Twenty one (21) recognized publications in the area of specialization	Not required	Required

Table 1.2 FAST TRACK PROMOTIONS

Post	**Minimum Academic Qualifications**	**Years of Teaching**	**Publications**	**Supervision of Graduate Students**	**Contribution to Community**
Teaching Assistant	Bachelor's Degree with First Class or Second –Upper Division Degree	Not required	Not required	Not required	Not required
Assistant Lecturer	Bachelor's Degree with a First Class or Second class Upper Second and a Master's Degree	Not required	Not required	Not required	Not required
Lecturer	PhD or Master's Degree in Clinical Sciences	Not required	Not required	Not required	Not required

Senior Lecturer	PhD or Master's Degree in Clinical Sciences	Two Years of Teaching Experience	Six new recognized publications in the area of specialization since promotion to the rank of Lecturer	Not Required	Required
Associate Professor	PhD or Master's Degree in Clinical Sciences	Four Years of Teaching Experience	Six new recognized publications in the area of specialization since last promotion to the rank of Senior Lecturer	Supervision of at least 2 Graduate Students to completion	Required
Professor	PhD or Master's Degree in Clinical Sciences	Five Years of Teaching experience	Ten new recognized publications since last promotion to the rank of Associate Professor.	Supervision of at least 3 Graduate Students to completion	Required

Table1.3 ORDINARY TRACK PROMOTION

Post	**Minimum Academic Qualifications**	**Years of Teaching**	**Publications**	**Supervision of Graduate Students**	**Contribution to Community**
Teaching Assistant	Bachelor's Degree with a First Class or Second Class Upper Division	Not required	Not required	Not required	Not required
Assistant Lecturer	Bachelor's Degree with a First Class, Upper or Master's Degree	Not required	Not required	Not required	Not required
Lecturer	PhD or Master's Degree in Clinical Sciences	Not required	Not required	Not required	Required

Senior Lecturer	PhD or Master's Degree in Clinical Sciences	Three Years of Teaching Experience	Three new recognized publications in the area of specialization since promotion to the rank of Lecturer	Supervision of at least one Graduate Student	Required
Associate Professor	PhD or Master's Degree in Clinical Sciences	Eight Years of Teaching experience	Three new recognized publications in the area of specialization since promotion to the rank of Senior Lecturer	Supervision of at least three Graduate Students to completion	Required
Professor	PhD or Master's Degree in Clinical Sciences	Ten Years of Teaching experience	Five new recognized publications since promotion to the rank of Associate Professor	Supervision of at least five Graduate Students to completion	Required

6.1.5 Research Staff

The University uses the following criteria to promote and appoint research staff

Table 1.4: MINIMUM QUALIFICATION AND EXPERIENCE FOR MISR STAFF

(Applicable to other Research Centers/Institutes in the University)

Post	Terms of Service	Minimum Qualification and Requirements	Area of Specialization
Director (M3)	Contract 5 Years Renewable once	**PhD** 1. A minimum of ten (10) years of proven research 2. A minimum of twelve (12) publications (of which eight (8) are in refereed Journals or Books and two (2) are books 3. Evidence of successful grant proposals 4. Ability to shoulder administrative duties 5. Recognized service to the community. 6. Membership to Professional Organizations	Candidate may fall in any discipline within the wider university or fall within MISR's current areas of research. 1. Governance and Civil Society 2. Health 3. Education 4. Environment and Natural Resources 5. Micro and Macro Economics 6. Resettlement, Migration and Urbanization 7. Agriculture and Rural Development
Research	Permanent	**PhD**	Candidate must fall within any of

Post	Terms of Service	Minimum Qualification and Requirements	Area of Specialization
Professor (M3)		1. A minimum of ten (10) years of proven research 2. A minimum of twelve (12) **new** publications in refereed Journals and/or four books. 3. Evidence of successful research grants proposals. 4. Recognized service to the community. 5. Membership to Professional Organizations.	the current areas of specialization: 1. Governance and Civil Society 2. Health 3. Education 4. Environment and Natural Resources 5. Micro and Macro Economics 6. Resettlement, Migration and Urbanization 7. Agriculture and Rural Development
Research Associate Professor (M4)	Permanent	**PhD** 1. A minimum of ten (10) years of proven research 2. A minimum of eight (8) **new** publications in refereed Journals and/or two books. 3. Evidence of successful research proposals 4. A significant contribution to the intellectual life in their area of specialization. 5. Recognized service to the community. 6. Membership to Professional Organizations.	Candidate must fall within any of the current areas of specialization: 1. Governance and civil society 2. Health 3. Education 4. Environment and Natural Resources 5. Micro and Macro Economics 6. Resettlement, Migration and Urbanization 7. Agriculture and Rural Development
Senior Research Fellows (M5)	5-Year Renewable Contract	**PhD** 1. A minimum of five (5) years of proven research. 2. A minimum of six (6) new publications in refereed Journals 3. Not less than ten (10) Research reports 4. Contribution to the intellectual life in area of specialization	Candidate must fall within the current area of specialization 1. Governance and civil society 2. Health 3. Education 4. Environment and Natural Resources 5. Micro and Macro Economics 6. Resettlement, Migration and Urbanization 7. Agriculture and Rural Development

Post	Terms of Service	Minimum Qualification and Requirements	Area of Specialization
Research Fellow (M6)	5-Year Renewable Contract	**PhD** 1. A minimum of three (3) years of proven research. 2. A minimum of three (3) refereed publications 3. At least two (2) research reports	Candidate must fall within the current area of specialization 1. Governance and civil society 2. Health 3. Education 4. Environment and Natural Resources 5. Micro and Macro Economics 6. Resettlement, Migration and Urbanization 7. Agriculture and Rural Development
Graduate Fellow (M7)	5-Year Renewable Contract	Masters Degree (Coursework and Dissertation), Bachelors Second Class-Upper Division or its equivalent	Candidate must fall within any area of specialization in Humanities and/or Social Sciences
Research Secretary (M4)	Permanent	**PhD** 1. A minimum of ten (10) years of proven research. 2. A minimum of six (6) publications in refereed Journal 3. Proven work experience of public relations activities. 4. Evidence of previous administrative work experience and skills.	Candidate must fall within the current area of specialization 1. Governance and civil society 2. Health 3. Education 4. Environment and Natural Resources 5. Micro and Macro Economics 6. Resettlement, Migration and Urbanization 7. Agriculture and rural Development