MAKERERE INSTITUTE OF SOCIAL RESEARCH

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MISR WORKING PAPER NO. 31 • JULY 2017

The Impact of Governance on Research in Ugandan Universities

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1.0 The role of governance in enhancing university functions

A survey of Ugandan universities in 2014-6 revealed that few of them do significant research. Not many of their staff engage in innovative studies, produce impressive publications, or register acclaimed patents. From 2001 to 2007, the productive capacity of a Makerere academic staff was 0.2 compared to 0.5 for South Africa (Cloete et al, 2015). The average lifetime publication of a typical Ugandan PhD holder was found to be ten pieces and patent registration to be 0.6 (Ssembatya, 2012). Ugandan universities do not allocate more than 5% of annual institutional budgets to research. Neither does the state adequately fund research in universities. Most of the knowledge and academic materials staff use in universities are imported in the form of foreign published books or journals, the web or conferences abroad. Students therefore do not develop local theoretical concepts for resolving personal or community problems. Very few Ugandan academics are recorded in international academic listings such ISI or HiCi.

Still less do these universities train outstanding postgraduate students for the formation of an intellectual core needed for the country to realise its development plans such as envisaged in Vision 2040. These universities are not fulfilling their multiple functions of *research*, innovation, training and *public service*. Governance of these institutions is the major cause of this problem because there is a relationship between governance and research abilities of universities.

The governance of a university determines its ability to do research, produce knowledge, train the next generation of researchers and academics or perform public service tasks. There is a challenge of undemocratic model of governance Ugandan universities inherited from the dictatorial era of Milton Obote and Idi Amin, especially in the key areas of finance and institutional autonomy and the lack of effective participation of the

academic staff in the management of academic processes. First, the model does not encourage full open debate on how universities should be governed. Consequently, no shared refined view of the role of universities in society has emerged. Second, most stakeholders, including the controllers of the state, administrators, university managers, academic staff, parents and the general public see the major function of universities as training for the labour market. The research and knowledge production functions of universities are not emphasised as major purposes for the existence of universities. Third, any improvement in funding, infrastructure development or education facilities focuses only at improving access and teaching not research or knowledge production. The massification of higher education in terms of institutions (from one university in 1987 to 40 in 2014) and students (from around 5000 in 1990 to over 250,000 in 2015) focused only on increasing access of students to higher education without concurrent transformation of universities into knowledge-producing institutions. Although increasing access in a country whose gross enrolment ratio is as low as 6.8%, neglecting research means that professors will continue using imported or copied knowledge to teach without coming up with their own. Fourth, the model ties the financial control of public universities to the state to a level where the latter determines areas and amounts of university expenditure. Lastly, stakeholders do not discuss and arrive at a common view concerning the roles of universities in addressing local and global forces impacting on their society.

For universities to fulfil their core functions in society, particularly knowledge production, a shared democratic model of governance, embracing significant participation, but not full control by academics and other stakeholders including the state, the public, administrators and students, has been identified as necessary (Altbach & Salmi, 2016). In such a model, the owners of the university and other stakeholders devolve the responsibility of managing the academic, financial and public policy responsibilities to the university provided the latter is accountable to the former and the public. The owners conditionally delegate education policy to the faculty who establishes an administration which is, collegiate rather than top-down, where the university community of administrators, faculty and students share authority in specified areas, although the managers often have a final say in policy matters (Rosovsky, 2014). To develop such a management model for universities, the key stakeholders must have a

shared view of the role of universities in society.

1.2 The current governance model at Ugandan universities

The current governance model consists of stakeholders with varying levels of authority with the state represented by the government at the apex of a pyramidal governance structure. Next to the government is the National Council for Higher Education (NCHE) whose role is to regulate higher education by accrediting institutions and programmes. At the micro level of institutions are the university councils whose responsibility should be to make final policy decisions for universities but whose current practice seems to be implementing government policy under the 2001 Universities and Other Tertiary Institutions Act, 2001 (UOTIA). Below the councils are senates, colleges, faculties, academic departments, staff and student unions. The senate is supposed to be the final judicial body on academic matters. However, the Act does not specifically give senates powers to allocate finances to areas such as research, libraries or laboratories. The council and administrators exercise that power. In good international practice, a faculty board or division, constituting heads of academic departments should be an office where matters pertaining to academic disciplines or programmes are jointly administered. Below the faculty heads are departments whose role is to perfect a given discipline through research, teaching, publications, patent registrations, organisation of academic debates, conferences and general advocacy for the discipline. The academic department should be the cell of university activities. It is where academic programmes are designed, teaching and research agenda planned, and postgraduate students identified.

However, in the last five years, another body called a college that seems to have more academic and administrative authority than the traditional bodies of faculties and departments, has been superimposed over the faculty board and department. Consequently, the policy has blurred their responsibilities without adding visible value to the management of academic processes. Besides, most Ugandan universities have another unit, called the directory of research and postgraduate affairs, which administers all issues pertaining to research and postgraduate training. This unit seems to be doing what academic departments in areas of research and postgraduate training should do.

Lastly, there are powerful staff and student unions whose bite is

felt when they organise strikes. Student and staff organisations have a strong sense of entitlement and a feeling that the state (or other owners of universities) should provide them with what they demand (Mesele and Habtam, 2015; Byaruhanga, 2006; Munene, 2003; Nkinyagi 1991; Kasozi, 2015). For example, there has been a student or academic staff strike each year since 1990 at Makerere University. All the resultant commotion could be avoided if genuine participatory governance structures were in place (Nakayiwa, 2015). None of these strikes sought to improve the quality of education by funding research or education facilities. Most of the strikes aimed at improving the welfare of the participants.

1.3 The impact of government overrule on universities

As noted earlier, at the top of the governance pyramid is the government. This is definitely true of all public universities as all of them have been founded and owned by the state (under Section 22 of the Act). Under section 6A of the Act, the minister can direct all universities on matters of a policy and the latter must comply. The NCHE has powers to close down a private university for what it feels are good reasons. However, this paper will focus mainly on public universities and a few faith-based non-profit accredited institutions.

Public universities do not have sufficient autonomy to control their funds to freely finance key areas of their functions. Private universities suffer from owners who do not often separate the roles of ownership from those of management. Lack of institutional autonomy and academic freedom for staff has adversely affected the ability of Ugandan universities to perform their research function. Institutional autonomy of a university refers to the overall corporate ability of the university to act by its own choices in pursuit of its vision and mission without reference or interference by external or internal authorities or individuals. Academic freedom, on the other hand, is the individual freedom of university workers to teach, do research, speak and publish without interference, penalty or intimidation from internal or external authorities. It is not only the government and owners of private universities who violate the academic freedom of staff and students. Incidences of managers of various units of institutions who notoriously barred staff from expressing their opinions on "sensitive" topics or to undertake research on "untouchable" issues have been recorded. Without institutional autonomy, a university's

ability to get and spend money is restricted or over-regulated. It is true Ugandan universities are freer than they were before the 2001 Act was enacted. Although the government adopted neoliberal policies in the 1980s and state funding of a public university decreased from 100% in the 1980s to an average of 40%(for Makerere) in 2012 of institutional budgets, the state retained all the financial control that the university had before the neoliberal era. Thus, a number of areas of the 2001 Act still throttle the minimum financial freedom universities need to perform their functions. In turn, this affects their ability to generate knowledge or to disseminate it. Although the current government would like to feel good that the 2001 Act gave universities more freedom, the Act needs more amendments to enable universities to preform their multiple functions.

Government models of managing society influence the way other state institutions in the country are managed. In Uganda, and presumably in most underdeveloped countries, the pervasive arm of the state is felt in the governance of every institution, particularly those which are financed by the public. The governance of universities, therefore, has been conditioned by the way the state manages society. Government interest in universities has focused on controlling rather making these institutions play their full multiple roles in society. In many African countries, governments have seen universities as "government institutions" and either managed these institutions directly from ministries or planted into them complaint administrators who have no interest in instituting shared methods of management. From 1960 to 1990, almost all African universities were nationalised and ruled as "government institutions" where faculty, administrators and students could not democratically have a meaningful share in the governance of their institutions. The heads of state were the heads of universities and appointed most of the key officers of these universities. Promotions and general upward mobility in university ranks were based not on academic merit but on loyalty to government. In Uganda, the 1970 Makerere University Act gave the government, through the minister of education, massive powers over the university, including appointment of professors and top administrators. The head of state was the chancellor of the university. Under Obote rule (1962-1971/1980-1985), the government was autocratic and the central government, under the president, controlled most of the affairs of the state, including the university. Section 12(2) of the 1970 Makerere University Act stated that "the Minister

may, after consultation as he deems necessary, appoint any person to be a professor or director of an institute of the university or hold an office equivalent to such a post". Even the research function of the university was taken over by the state. Section 128 of the 1970 Visitation Committee that informed the enacting of the Makerere University Act of 1970 stated, "It is essential for government to direct research. Academicians are not always the best people to decide on research priorities for the country".

Even in the period when the Uganda state was very weak (1980-1990) and external bodies such as the World Bank, IMF and Tanzanian troops were needed to keep the state together, control of the university by armed groups ruling the area in and around the capital remained. Inside the university, elements of the shared model of governing the university had retained since the colonial period became dysfunctional as whoever managed the university needed government support to impose authority in the university.

Further, in developing countries, external financial institutions influence power relations at universities more than they do in financially strong nations. The role of the university as a research institution in Uganda and most of Africa was further weakened by the neoliberal policies implemented in that period. The World Bank emphasis was to make social services market-driven and UNESCO's focus was on "humanistic benefits" of education with little emphasis on research, knowledge production and the training of the next generation of researchers and academics (Harrison, 2004; Obamba, 2012; Teferra, 2010). Even the UNO millennium goals did not address the role of higher education in producing knowledge for development. They instead influenced government actions in the education sector to focus on the primacy of primary education and the near neglect of other education levels.

During the NRM period (1986 to date), the increasing centralisation of the state has impacted on the way higher education institutions are governed. The NRM regime started as an inclusive administration with some of its decision-making powers in areas that were not key to its security decentralised (Langseth and Mugaju, 1996). Over time, however, power was centralised and the state became increasingly visible in the operations of most social institutions, including higher education (Kasfir, 2007; Rubongoya, 2007:2; Tripp, 2010). As real and meaningful devolution of power did not occur, critical higher education decisions could not be

made without the approval of the chief executive, the relevant minister or parliament on such issues as fees levels at public universities, unit costs, staff and student welfare and a host of other areas of higher education policy and administration.

The NRM did not initiate reforms for fundamentally transforming the role of the university to make it an engine of knowledge production through research and innovation. The focus of the NRM government has been on increasing access by more students and making the universities pay for their education.

However, this is not to suggest that the NRM government did not improve on what was in place. It started the journey of democratising the management of higher education but stalled mid-way. A number of reforms, which increased the participation of academics and other stakeholders in decision-making in all sectors of society, including public universities, were initiated. Between 2000 and 2001 when the process of drafting the Act was going on, it seemed as if a shared model of governing universities was emerging. Sources of income beyond government subventions were allowed to come into public universities. The UOTIA recognised the institutional autonomy of universities in Section 3. Academic staff and students were permitted to participate in governance by electing and being elected into top administrative structures of university governance. The head of state ceased to always be the chancellor of a public university. So far, Makerere has had three chancellors who were not heads of state. Professional appointment boards were put in place in most universities and meticulous guidelines for filling various academic positions were developed. These reforms increased the number of stakeholders involved in decision-making and non-government funding of universities, particularly Makerere University.

However, there are sections of the Act and other government administrative behaviour that interfere with the autonomy of public universities, thus enabling the government to retain ultimate control of universities. First, the Amendment Act, Section 6A, referred to above gives government a freehand to intervene in university matters whenever it feels like it. With enlightened leadership, this section may be harmless but can be misused by unwise leaders. Second, Section 62(3) forbids public universities to spend any money not approved by parliament. Third, experience has shown that public universities cannot fix levels of fees. Al-

though under section 41c, a university council has powers to "fix scales of fees and boarding charges", Makerere council's attempts to increase fees in 2004/5 and subsequent years were halted by government. Fourth, Section 59(5) of the Act does not give public universities the right to invest any of their funds without approval of the minister. Fifth, the government treasury can ask public universities to remit to the government monies collected at source using Section 44(4) of the Public Finance and Accountability Regulations. Sixth, like the civil service, public universities must use *the single-spine* structure when paying staff. This is very strange, as universities recruit academic staff globally, and often employ many foreign workers who cannot be fitted into a country specific structure such as Uganda's. Forcing academics to adhere to civil service structures not only excludes good non-Ugandan staff but increases the temptation for marketable Ugandans to seek jobs elsewhere – and many have done so. Lastly, under the Pension Act, academics in public universities must retire at 60 years of age. As a result, universities lose the very seasoned academics they need to supervise and mentor the next generation of researchers and professionals.

1.4 The role of the National Council for Higher Education (NCHE)

The (NCHE) is the next player in the macro management of university institutions in the country. There is no record that there was consensus amongst higher education stakeholders over the roles of a central body to oversee the delivery of quality higher education amongst stakeholders. Indeed, there was resistance to its demands by some concerned parties. This lack of a shared view of the role of a regulatory agency delayed and weakened efforts by the NCHE to survey the whole higher education sub-sector in order to find solutions to problems of delivering quality higher education. A number of higher education stakeholders grudgingly accepted the establishment of the (NCHE). Some professors and administrators in established universities felt their peer review system was sufficient to check on the way they managed academic processes. A number of them noted that the operations of regulatory agencies would intrude in the institutional autonomies of universities and academic freedoms of staff. For example, Makerere University only accepted the accrediting of its programmes by the NCHE after the minister of education had directed

it to do so. In 2011, the NCHE had an administrative problem with the accrediting process of Uganda Martyrs University's Masters Architecture programmes. A number of smaller universities also objected to the accrediting powers of the NCHE.

However, some administrators in some universities welcomed the NCHE's role as a final quality controller, which would counter the monopoly of academic staff in doing so. A number of university managers and government officials saw the NCHE as a welcome mid-way body that would reduce the micro-management of higher education institutions by government officials and ensure the delivery of quality of higher education.

The NCHE was created not only to reduce the micro-management of the state in the day-to-day affairs of universities, but also to initiate, design and advise government on policy and other matters relating to institutions of higher education. The establishment of councils of higher education was probably also implemented as part of the neoliberal agenda of "unbundling" the state to reduce its operations in favour of the market by managing the expansion of higher education supply (Bailey 2014, 2015; Chirwa; 2013, Materu; 2007, Moja *et al.*, 1966). With the massification of higher education institutions, programmes and students, a body is needed to guide and regulate the expansion, especially the for-profit institution whose major aim in the delivery of higher education is monetary.

Many nations in Africa have created regulatory agencies to ensure the delivery of quality higher education, to manage the development of higher education delivery and to formulate higher education ideas and policies **(**Knight, 2005; Saint, 2010; Sehoole, 2012; Tierney, 2012; Kremmer, 2010, Naidoo, 2005, Eaton, 2007, Bailey, 2014, 2015). The first quality and accreditation agency in Africa was created for Francophone sub-Saharan Africa in 1968, followed by those for Kenya, 1991, Nigeria, 1991, Cameroon, 1991, Ghana, 1993, Tanzania, 1995, Tunisia, 1995, Mauritius, 1997, Liberia, 2000, South Africa, 2001, Uganda 2002, Ethiopia, 2003, Mozambique, 2003, Sudan, 2003, Egypt, 2004, Namibia, 2004 and Zimbabwe, 2004.

1.5 Contending forces in university councils

The way university councils are constituted within the governance structures of public universities makes it difficult for councillors to develop shared views on higher education and roles of a university in society.

This inertia hinders the development of a research culture at universities. In the period 2004 to 2012, the NCHE recorded many disagreements and conflicts within each university council. The interests of the majority groups – staff and students – often superseded those of other university groups and, on a number of occasions, the interests of the university institution itself. The current composition of public university councils is in Section 38 (1) of the Act. This section sets the arena for contention amongst university stakeholders who manage universities. If the council is the employer of staff, they (staff) should not have a majority vote, as is now the case. Appointed officials who do not wield majority votes have financial and administrative authority. The 2012 expulsion by council of the vice chancellor of Kyambogo University before all the necessary reports were presented to it is an example of the in-built areas of conflict within university councils. The report which council commissioned did not incriminate the vice chancellor on many issues and a court of law awarded him a lot money in damages. Government is also represented and has the wielding hand of approving all funds the council may use. Due to the in-built apparent conflict within councils, it is very hard for these bodies to engage with other stakeholders and resolve academic and institutional problems in a democratic way. For example, none of the university councils has come up with a nationwide strategy for discussion on improving Uganda's higher education, their specific institution or to define the type of university the country needs for development. Second, the current councils of public universities are too big to meaningfully focus on policy management issues. Lastly, as pointed out above, the government, through the ministry of education, finance or parliament, can reverse decisions of university councils.

1.6 The roles of various top officers

In a democratic model of governance, the roles of the various managers *vis-à-vis* other officers and council are clearly spelt out. Such clarity of roles and responsibilities gives managers the confidence to perform their responsibilities without seeking external or internal authority. In Uganda, however, there are legal problems that have rendered the management of public universities difficult. These legal problems have given some individuals the chance to seek external support to achieve their personal aims. The law is not very clear on the powers, particularly the financial powers,

of the vice chancellor, the deputy vice chancellor, finance and administration, the university secretary and the bursar. Second, the academic powers of the deputy vice chancellor and academic registrar are blurred.

According to the Act, the vice chancellorship (vice chancellor[1], deputy vice chancellor, finance and administration and deputy vice chancellor academic affairs) are not the accounting or chief academic officers, respectively. Instead, junior officers such as the university secretary[2] and the academic registrar[3] "say the last word" on financial and academic matters, respectively. If the latter two are not academics who have experienced teaching, research, publication and other vital areas of higher education, the university's academic system may suffer. There is, therefore, an urgent need to redefine in clear terms the finance and academic roles of the various university managers, thus ensuring accountability.

Currently, it is democratically difficult to develop a "shared" administrative view in a public university as a number of officers have power to by-pass the would-be line managers and report directly to councils, senates and sometimes, government officials.

1.7 Selection of top officials

The politics and intrigue in-built in the legal process of selecting a vice chancellor are such that a shared and democratic form of governance cannot easily emerge within Ugandan public universities. Under sections 31 - 37 of the Act, peers elect the vice chancellor and other top academic officials of public universities. However, external forces, especially the state, are interested on who becomes vice chancellor of major universities. These forces covertly influence these selections. This method has tended to politicise what should otherwise be an academic exercise.

However, much as this method of selecting top university leaders tends to be a problem at present, the situation before the enactment of the UOTA, was worse. Before the Act, the choice of the vice chancellor was dependent on political as opposed to academic considerations. In extraordinary behaviour, for instance, if the head of state is not *sophisticated*, one

1 Section 31(1) (a) of the Act provides that the vice chancellor is responsible for academic, administrative and financial affairs of the university.

2 Under section 33(3) (b) of the Act, the university secretary is the accounting officer of the university and responsible to the vice chancellor as provided for in section 34(2).

3 Under section 34(2) of the Act, the academic registrar is responsible to the vice chancellor with his/her functions provided for under section 33(3).

could end up in a situation such as when Amin dismissed a vice chancellor[4] in the presence of his staff and appointed another[5] from the audience or where a non-academic[6] was appointed to administer academics. The current system, however, still has room for improvement.

1.8 The senate

There are areas of university governance embedded in the Act that prevent the development of a consensus in the management of university senates. According to the law, the senate is the final authority on academic matters. However, it does not have a final say on finances. This means that to have resources allocated to academic items such as research and other educational materials, members of the senate have to look to councils and administrators for such allocations. There was a case of a university that refused to give library money collected as library contributions from students and instead, referred to this money as *development* funds in official records. The aggrieved library official approached the NCHE but the latter could not follow up the issue, for it was stated that the university had the institutional autonomy to design its budget as permitted by Section 3 of the Act.

1.9 Relations of colleges, faculties and academic departments

One of the hurdles facing research in Ugandan universities is the inability of academic departments to play their full role as the primary source of knowledge creation and teaching. In the current governance model, teaching and research policy as well as the training and hiring of staff are not sufficiently devolved to academic departments to let the latter fully tap the potential of individual academic staff. The creation of colleges blurred the roles of the faculties and departments, not only at Makerere, but also in all universities where a colleges layer was introduced in the governance of universities. The relations of the three organs – department, faculty and college – are so blurred that in many institutions it is hard to ascertain who has power on teaching and research policy or the control of resources to finance these activities.

Although principals of colleges, deans and heads of departments are elected in most universities, the process has not produced democrat-

4 Professor Lutwama.
5 Professor Ssenteza Kajubi.
6 Frank Kalimuzo.

ic governance as was expected. Instead, it has created factions with the winning factions struggling to control whatever resources there might be in those academic divisions. The appointment system encourages cronyism and corruption. If reformed, though, the current method is still better than the pre-1970 system.

2.0 Developing a national higher education policy with emphasis on research, knowledge production and training

Government as the head of the governance structures of universities sets examples of what is done in these institutions. To date, however, it has not come up with a comprehensive national higher education policy on research, knowledge production and the training of researchers needed for its development plans. The state does not have a "clearly articulated strategy" of the role of higher education in development (Cloete, 2015; see also University World News, 13 March 2011, Issue 73). In a study, Cloete et.al., 2015, which covered universities in eight countries, only Mauritius and Kenya "exhibited the strongest awareness of the concept of the knowledge economy and the role of higher education in development" in the East African region. Surprisingly, most government officials felt that the university is not doing enough in contributing to economic development. At the same time, government has continued to give meagre funds to higher education, and the little it gives is allocated to the teaching rather than the research function of universities.

2.1 Defining the roles of universities

As noted above, the state has not come up with comprehensive policies to define the roles of higher education, in general, and universities, in particular, in development except the production of educated human resources. Nor have senates, councils or staff and students' unions organised policy dialogues on the roles of higher education for governments to adopt. In undemocratic hierarchically defined governance, few participants develop initiatives to design long-term policy documents for discussion. As a result, there is no "pact" over higher education's role in society, particularly in economic development (Cloete, 2011, 2015 a). Neither the state nor the various stakeholders in Uganda are fully aware of the many functions of universities – except perhaps the teaching role. This is not to say that they do not like the utility of other functions such as the value of

knowledge or that they deliberately block the implementations of those functions. They are simply not well informed of the many functions of universities.

Universities have a number of functions, including production of knowledge, storing and disseminating this knowledge, creating the next generation of scholars, selecting dominant elites and training a relevant labour force (Kerr, 1963, Wordaski, 1990, Anderson, 2010, Cloete *et al.*, 215). Past practices by African institutions of emphasising only the teaching function started in the colonial period and retain their influence on current behaviour. Although the *Asquith Report* suggested that the colleges were not only to be "agencies for instruction but also centres of research", colonial priorities were for broadly educated Africans for working in the civil service. Institutions that were subsequently founded on these recommendations, including Makerere, Ibadan, Legon, Fourah Bay and Gordon College, Khartoum, emphasised teaching rather than research (Temele, 2016, Sicherman, 2005).

From 1960 to the 1980s, the African university's role was "developmental", concentrating on the production of manpower for the civil service (Yesufu, 1973, Bloom, 2006, UNESCO, 2009). It was mainly in Ghana that Kwame Nkrumah tried to design a university that would emphasise both teaching and knowledge production for development (Fredua-Kwarteng, 2015). Nyerere's philosophy of education for self-reliance guided education efforts in Tanzania and gave the University of Dar es Salaam directions for research. After independence, the emphasis on the production of human resources to replace departing colonial officers was a pressing need for the initial post-colonial governments. In the later 1960s, the coming of some American professors to Makerere from the various research institutions in the USA injected some emphasis on research especially in the faculties of medicine, agriculture and social sciences. But the Humboltian model of a university built on a combination of research and teaching within the context of institutional and academic autonomy supported by state funds, never emerged (Henningsen, 2013, Wordarski, 1990, Nybom, 2003, Sicherman, 2005, Anderson 2010).

The view that a university is primarily, if not only, a producer of skilled human resources was further strengthened by the neoliberal policies introduced in the 1980s to remove the state and replace it with the market in directing human affairs. These views explain the popularity of

"market-driven" courses, which many of these universities started offering and the absence of research as a major requirement for good faculty performance in a number of Ugandan universities. Staff in many of Uganda's universities are employed, and evaluated, for teaching. Research is a distant obligation. The state does not emphasise the role of researchers. For example, Uganda Vision 2040 does not specifically identify research needed in the "transformation of Ugandan society from a peasant to a modern and prosperous country within thirty years". The current rush to build new universities is based on government interest in increasing access of students to higher education than to a combination of teaching and research.

2.3 The research function of universities

Much as a traditional campus-based university is a complex multipurpose institution with many functions, research and knowledge production should take precedence over other roles (Cloete *et al.* ed., 2015, Bernasconi, 2015, Holt 1988, Wardoski, 1990). This is especially so in this knowledge-driven age. Although Uganda has many universities and many are proud to award certificates, diplomas, degrees and other terminal awards, few of these institutions qualify to be called universities because they do not conduct research. But every state needs "a national research system which is composed of universities, the private sector, public and private centres" to produce relevant knowledge to resolve social problems and participate in the larger global economy (Cloete *et al.*, 2015; Nordling, 2013).

However, teaching, the process of transferring knowledge to students by a second party, is inherently tied to research, the search for, and production of knowledge. Questions raised in the act of knowledge transfer (i.e teaching) lead to answers and students become key to the research enterprise and therefore can be a part of the "community of learners" called a university. But teaching can only be part of a research enterprise if the teacher sets out to use teaching for the dual purpose of instructing and knowledge production. However, most of the teachers in our universities are "lecturers" giving notes to students who are not expected to pose major research questions. Great universities of the world exhibit Humboldt's ideas of a university as being based on a union of research and teaching in which both participants learn and create knowledge (Wodarski, 1990;

Henningsen, 2013). Moreover, good research increases teaching excellence (Holt, 1988).

The role of the university in the research enterprise is, therefore, to: (a) produce knowledge through research, debate and other forms of investigation, (b) transfer this knowledge to society to resolve social concerns of good governance, health, food production, industrial development, the protection of the environment and a host of other social needs, and (c) train the next generation of academics and researchers. The university, therefore, should be based on unbiased knowledge and analysis, combining research and teaching, and allowing students to freely participate in the learning process, within the context of national priorities.

To perform their knowledge production function, universities need the following conditions. First, they must have social backing for their major functions, including research (Cloete, 2015). To get this backing, society must be well informed on the roles of a university and the importance of research to the university and the state served by the institution. Second, they must be well funded. In developing countries, government must be the leader in supporting the university. This is because there are few private entrepreneurs and a philanthropy culture to support universities, as is the case in some developed countries (Kigotho, 2015). Lastly, in collaboration with other stakeholders, the government must constantly define the role of the university in society.

According to the survey of universities I carried out in the period 2014-2015, very few universities fulfilled the conditions necessary for conducting successful research in a university setting (see also Anderson, 2010). First, many of these institutions did not have shared management systems of governance, which includes members of the academic staff, key stakeholders and management. Second, virtually all the universities, and ultimately the state, did not balance qualitative and quantitative development of their institutions in order to avoid mismatches of enrolments and facilities. A recent study shows that some countries, namely, Iran, China, Tunisia, Thailand, Brazil, Malaysia, Turkey and Singapore have managed to balance their annual growth rates of tertiary enrolments with annual growths of the publication of science papers at an average of 10% and 15%, respectively (Marginson, 2016). This balance is key to performance of staff, students and the creation of a research culture. Third, universities failed to secure sound institutional autonomy for themselves and academic free-

dom for their staff. Most of Uganda's higher education institutions are not free and, therefore, cannot fully develop the internal strength they need to pursue their missions, including conducting research and training of the next generation of academics. Academic freedom is not only violated by the state but also by private owners of institutions, managers, and staff themselves when dealing with students and other workers. Many managers have never heard of the Kampala Declaration on Intellectual Freedom and Social Responsibility, 1990, the Dar es Salaam Declaration and the CODESRIA studies on these issues. Fourth, many universities have not developed meticulous organisational guidelines to manage the knowledge production enterprise. Many universities have no research policies, agenda or strategic plans to manage the search for knowledge. The latter includes "institutional research policies, research agendas, guidelines, etc." (Sanyal, and Varghese, 2006, Mohamedbhai, 2012). Lastly, as noted above and will discuss below, research is not well funded.

2.4 The funding behaviour of government

Both the state and institutions do not sufficiently fund research. Government funding behaviour of higher education has influenced social views towards the role of a university in society. First of all, Government focus on funding education has been, for a long time, on primary education. Since the start of implementing IMF/World Bank "conditionalities" in the period 1998/9 to 2007/8, public universities have been receiving only about 0.3%, the tertiary 3.7% allocations. Other sectors faired a little better for Primary averaged 2.40%, Secondary 0 .58% and BTVET 0.21% as a percentage of GDP.

Uganda fully accepted the implementation of neoliberal policies because it had financially collapsed as a state. By mid-1985, the country had many armed factions controlling the various parts of its territory and there was no effective central government. One of the areas that suffered most was funding of higher education. For a long time, Government has been funding public universities using *student enrolments as a basis for fixing amounts allocated to universities*. A rough figure was calculated as a unit subvention and then released. But the unit subvention was neither pegged on a scientifically worked out real unit cost nor factored to include inflation or the cost of running a given programme. Yet, due to political concerns, the state permitted universities to admit as many students as would sat-

isfy social pressure for accessing higher education. The result has been an ever-increasing mismatch between facilities and enrolments, leading to the inability of universities to fulfil all their functions.

The neoliberal era saw investment in research and development in Uganda drop. In 2003, Uganda invested only 0.74% of GDP in research and development but the figure decreased to 0.5% in subsequent years. Funding per university student declined from $2553 in 1970 to $1113 in 1980 and to a mere $639 in1985 (Carrol, 2005). In the same period, the expenditure on education averaged 3.52% as a percentage of GDP. This was lower than the average in the two sister-countries of Kenya and Tanzania in (roughly) the same period. Kenya, spent 0.9% on public universities and about 4.2% on the whole education sub-sector as a percentage of GDP (Wandiga, 2007). Tanzania spent slightly more on public universities as a percentage of GDP than Kenya (about 1.0%) in the same period. This trend of under-funding higher education was projected to continue for ten years up to 2014/5. In comparison, developed nations invested 3-4% of GDP in research and development in the period 2008-2012. The USA spends 2 .7% and European nations about 1.0% on higher education as a percentage of GDP.

Many African nations were forced to invest less as a percentage of GDP in research and development (Sanyal, B.C. and Varghese, N.V., 2006). Public expenditure per student in Africa fell from $6800 in 1980 to $$1200 in 2002 and averaged $981 in 33 African countries in the following year (World Bank, 2008). Although there was a general decline of funding to higher education throughout the world due to neoliberal policies, Africa suffered the most (Balán, 2015, Hazelkorn, 2015).

As universities focused on teaching, Government withdrew funding for research and postgraduate training. From that the 1990s onwards, any postgraduate training was tied to civil service manpower requirements or to utilise donated scholarships by foreign sources (Mamdani, 2007). Due to external appeal to fund research, the Ministry of Education released about five hundred million shillings each year from 2009 to 2011 through the NCHE for distribution to public universities for financing staff development and research [(14th Minutes of NCHE Council, Minute 114/2010(e), 28 June 2010; Commissioner, Planning MoE&S to the Executive Director, NCHE, 22 September 2010 (EPD/86/248/01)]. The NCHE distributed to public universities whatever money was released but the project was

abruptly stopped due to objections of some officials who wanted the Ministry to distribute these funds.

University institutions allocated very little of their institutional funds to research. On average, funding of research was allocated from 1% to 2% of institutional budgets by universities in the 2011/12 academic year (NCHE *State of Higher Education*, 2013/4).

2.5 Views of society on the roles of a university

Government funding behaviour of public universities pervades and influences society's view of these institutions. In turn, society's view of a university has influenced the state's funding behaviour of these institutions because citizens do not insist that research in universities be funded by the state, the institutions themselves or other stakeholders. As a result, no strong social pressure group has developed to advocate funding of research at universities. Although state vision and actions may not always reflect social views and aspirations in *sophisticated* societies, this may not be the case in countries where higher education access is below 10% of relevant age (GER), where the reading culture is poor and where public debates on major social issues is rare.

For almost one hundred years, the state, using study commissions or "experts", has set education views, agenda and structures. From early colonial contact in the 1890s, the state permitted missionaries to deliver literacy education dressed in Christian religious baggage to Ugandans. Chiefs were instructed to advocate this education. Twenty-five years after the so-called Uganda Agreement of 1900, the colonial state constituted the Phelps-Jones Commission to study and advise on education. Dr J. Jones and Dr J. K. Aggrey who presented their report in 1925 led the commission. That report identified the government as the main funder and driver of education policy although missionaries were left with the responsibility of delivering it. Twenty-six years later, the de La War Commission that was asked to study and report on education presented its report in 1937. Its report recommended a number of reforms, amongst others, the provision of general higher education to Africans by the state. In 1945, Justice Asquith presented his report to the colonial secretary, which called for the establishment of a number of university colleges in the empire to award degrees of the University of London. As noted earlier, Makerere was one of those colleges. In 1951, the Binns Study Group reviewed the education

system and set the stage for increasing access to the secondary and higher education levels. The Bernard de Bunsen recommendations of 1952 rendered the Binns report into an operational document. In 1963, Professor Castle presented his recommendations which lay the basis of our current education structure, which was not fundamentally altered by the [Kajubi] Education Policy Review Commission recommendations of 1989.

Gradually, people began to assume that it is the responsibility of the state to set education policy and to fund the major areas of education especially in its public institutions. Before the neoliberal era, the state paid 100% of the cost of higher education. In the management of higher education, therefore, whatever, Government does not focus on is not viewed seriously by the general public. Government-owned universities are more prestigious and sought after by students and parents than private ones.

As already noted, for the Uganda public and the state, the role of a university is to teach. This influences how universities organise their priorities in the implementation of their missions. This factor, the assumption that universities are mainly teaching institutions, has contributed to the dearth of research in Uganda's universities. This is not to imply that society does not like or value knowledge. Those who know have not taken the trouble to thoroughly educate society and the state about the multiple functions of a university let alone, the type of university the country needs. As a result, a shared view of the various roles of a university in society has not emerged.

None of the stakeholders ask universities to show research products at the end of semesters. Parents only hold universities accountable for the employability of their graduates. Indeed, "there is a growing expectation that university education is a guarantee of future employment and that if a university graduate is unemployed, the education provided was poor" (Rosovsky, 2015:15). As has been noted by scholars, tying the curriculum to the immediate needs of the market can be suicidal to graduates and society. As has happened in the recent past, "…the forces of globalization and new discoveries can shutter factories, bypass entire industries and throw graduates who are narrowly educated on the slag of human obsolescences" (Peterson, 2015).

When the World Bank began to take interest in funding higher education, especially after its 2000 report on higher education, it tended to focus on the training of skills needed by the market without stressing

the *development of the mind* as the major focus of higher education (World Bank, 2000, 2003, 2008; Mamdani, 1993). This emphasis on immediate marketable skills for the labour force reinforced views of universities as only teaching institutions. Neither have university community groups developed a shared view of the role of universities, which can be a basis for all parties to work together and refine a shared view.

Knowledge is replacing physical capital as the driver of development (World Bank, 2000). The decision-making methods where vice chancellors in public universities are reluctant to take major decisions for fear of upsetting the fountain of power (the government) have contributed to the lack of initiative at the micro level of higher education governance. In the end, relevant authorities have not attended to the research function of universities.

3. Increasing access without facilities

Quantitative rather than qualitative development

Government has permitted the massification of access without transforming the university into an engine of development by investing to promote its capacity for research and innovation (see also Temele, 2016). Emphasis on increasing access without matching it with facilities for quality education and knowledge production is one of the failures in managing the expansion of higher education. This failure is due to a governance model that is hierarchical and does not involve all stakeholders in major decision-making. Although we now have many institutions, the university in Uganda has not been transformed into a research and development institution. There has, therefore, been more quantitative than qualitative development in Uganda's university sector in terms of institutions, student enrolments (access) and programmes, than corresponding numbers and quality of staff, facilities in laboratories, libraries and services a university needs to fulfil its various functions (see also Teferra, 2015). The failure to balance the establishment of new institutions (i.e universities, study centres and campuses) and enrolment of students with needed facilities has affected staff performance and research capacity in Uganda's university sub-sector. Each main university campus is often supplemented by "learning centres", campuses or branches in various towns of East Africa (Munene, 2015). Student numbers have grown faster

than education facilities. Since 2000, student numbers in Uganda's higher education sector have been growing at a rate of 12-15% per year (Table 1). But academic staff numbers have been growing at about 7.5% a year in the same period.

Thus the state has failed to balance the "two major, apparently contradictory expectations of universities: providing increased access while at the same time producing and disseminating knowledge" (Altbach, 2015, Knobel, 2015, Hazelkorn, 2015). All these expansions of institutions for increased access are not the results of agreed positions amongst higher education stakeholders on the roles of universities for there are no such forums that link stakeholders together. Government has established university institutions to appease regional or strong political constituencies and not necessarily to enhance development. All these factors have undermined research capacities in Uganda's institutions of higher learning.

Table 1. Growth of enrolments in higher education institutions, 2000-2013

Year	2001/2	2002/3	2003/4	2004/5	2005/6	2006/7	2009/10	2011/12	2012/13	2013/4
Students	6500	80000	85836	108295	124313	137190	173369	198066	220201	247,473
%Growth	8.3	23.1	7.3	26.1	14.8	9.4	26.4	14.2	11.2	12.4

***GER= (220201/3643000)*100% = 6.1%. Figures for year 2007/8 are unavailable**

Source: National Council for Higher Education

Makerere University illustrates how research capacity has been affected by the failure to balance student numbers with facilities (see Mamdani, 2007). The ratio of academic production per staff at Makerere was only 0.2 a year, instead of 0.5, which is expected of staff at good universities, for example in South Africa (Musiige and Maassen, 2015). The arts and humanities faculties, which admit more students than they have facilities produce less knowledge than the science-based ones that do not admit large numbers of students. In 2012 for example, science- and technology-based faculties produced more than 90% of Makerere's research output (2164 compared to 58 for business, arts and humanities and education combined), as Table 2 below indicates.

Table 2. Research output by major disciplines at Makerere University

Fields of study	Year 2010	Year 2011	Year 2012
Business and Management	3	4	10
Science and Technology	2374	2293	2164
Humanities	22	13	21
Education	22	33	27

Source: Directorate of Quality Assurance, Makerere

But this is not to suggest that increasing access to higher education by more Ugandans is a bad idea. To manage a middle-income economy, Uganda's gross enrolment ratio should be raised to at least 40% of relevant age (GER) in relevant disciplines. The ratio is now a mere 6.8% (NCHE, 2013/4). It is estimated that a 1% increase of GER a year results in increases of GDP by 0.39% in the medium term (Mesele and Adanne, 2014). Indeed, there have been massive increases in tertiary enrolments in the world in the last few decades. World enrolments have doubled between 1995 and 2013, with China's enrolment growing 6.2 times in the same period. In 1995, world estimates were 60 to 79 million students (Hezlkorn, 2015, Altbach, 2015, Mini, 2015). By 2015, the numbers were estimated to be around 190 million students; and forecasts are that by 2030, 430 million students will be attending higher education institutions – with China enrolling about fifty million. In 1960, Africa South of the Sahara had less than one hundred universities. In the ten years from 2000 to 2010, higher enrolments doubled from 2.5 to 5.2 million students. Currently, there are over 1000 public and 2000 private universities (Teferra, 2015, Mesele and Habtam 2014; Sawahel, 2015). Increasing access to higher education must be accompanied by concurrent increases in facilities if quality of research and teaching is to be maintained. Unfortunately, in Uganda, this has not been the case.

Impact of massification on research

The combination of failure to fund research and massification of students and institutions reduced research capacities in institutions of higher learning. Research capacity is defined simply as the ability of an institution to search for, and produce knowledge. Indeed lack of research

capacity is not restricted to Uganda. Most of the universities in Africa lack research capacities (Sawyerr, 2004). Research capacity is dependent on financing, qualified academic staff, educational facilities, social support for the disinterested search for knowledge, social understanding of the roles of university institutions, a shared governance structure where researchers and managers are cooperative and shared views on research, a friendly legal framework that gives institutions the freedom to do research and a good post graduate training system. Makerere and other *Asquith institutions* in Africa focused on training for the civil service and later for the general market (Sicherman, 2005). Not only has Makerere continued to prioritise teaching over research in terms of its institutional budget allocations and time allocations to its activities, but also new universities have imitated this practice. They see their main function as teaching and research is a distant second or third function. An external manifestation of this assumption is the emphasis put on graduation ceremonies over launching of books and other research outputs. The state, which has retained the right of decision-making for major higher education policies, has not guided institutions to prioritise research through funding or awards of honour.

Impact of increased access on academic staff capacity

As noted above, massification has affected research in many ways. It has adversely affected the capacity of the academic staff to do research. Staff qualifications and numbers have not grown relative to increasing numbers of students, institutions and programmes. Table 3 reflects the staff situation in the period 2004/5 to 2012/13. With over thirty universities, Uganda had only 9464 academic staff of whom only 973 were PhD holders, handling over 200,000 students in 2012/2013. Accordingly, the student to PhD staff holder ratio was very high. According to a study conducted by Maria Nakachwa of the NCHE in 2012, many Makerere academic staff also taught or "moonlighted" in other universities. Overworked as teachers, many academic staff are often too tired to conduct research.

Table 3. Distribution of higher education academic staff by qualification in the period 2004/5- 2012/13 in Uganda

	PhD	Years %	M.A.	Years %	Bachelor's	Years %	PGD	Years %	Others		Total
2004/5	549	10%	2221	42%	1715	33%		0%	764	15%	5249
2005/6	558	11%	2167	41%	1694	325	153	3%	686	13%	5258
2006/7	746	12%	2651	41%	1949	30%	224	3%	895	14%	6465
2010/11	858	11%	2967	38%	2621	34%	209	3%	1214	16%	7785
2011/12	914	11%	3657	42%	2923	34%	269	3%	939	11%	8594
2012/13	973	10%	3455	37%	2585	27%	264	3%	2187	24%	9464

Source: NCHE publications, the State of Higher Education, 2006-2014

Impact of massification on facilities

Although the state and parents urge universities to admit more students, they do not provide sufficient facilities to cater for increased numbers. Most Ugandan universities lack educational facilities to deliver quality higher education including the conducting of research as 2013/4 NCHE report laments:

> *Infrastructure is not matched with enrolment growth leading to a persistent decline in space per student. Total lecture space for all institutions of learning in 2012/13 was 147,971m², which gives a ratio of 0.67 m² per student, far below the NCHE acceptable standards. The libraries space, on the other hand, was 37,134 m², which gives a ratio of 0.17 m² per student. In absolute terms, the case is, however, slightly better than in 2011/12 academic year where the lecture space was 99,732 m² and library space was 30,783 m² .*

The same report regrets that the average hard copy books to student ratio was only nine instead of the NCHE ideal of forty per student. The average computer to student ratio averaged one unit to twenty students instead of the required five students to one unit. Insufficient educational materials undermines the capacity of staff and students to conduct research.

Massification versus access for the poor

Although total numbers of student enrolments in universities have increased throughout the world (including Uganda), it is the wealthy who are the beneficiaries of this bonanza (Basset, 2015). Basset observes that in Francophone Africa, the children of the richest sector of society account for 80% of tertiary enrolment while those from the poorest 40% account

for only 2% of students. In Argentina, the enrolment rate of the wealthy is five times higher than that of the poor; and in Mexico, the rate is 18 times higher than that of the poorest. Further, the poor do not access the best institutions. The top 100 globally ranked universities, which are only 0.5% of the estimated 18000 credible higher education institutions, enrol only 0.4% of world higher education students (Hazelkorn, 2015). Few poor families can afford to send their children to these institutions unless they get scholarships. Studies by Goldthorpe, (1965), Mayanja (1998), Liang and Rwasheema, (2001), Bidemi Carrol, (2005) and Kasozi (2009) have concluded that in Uganda, higher education has not been readily accessible to the poor since the 1960s.

4.0 Current of research in Uganda's universities

4.1 Current status of research in Ugandan universities

In almost all Ugandan universities, research is seen as a distant extra curricula activity to be conducted when all teaching requirements are accomplished. The productive capacities of staff is very low and postgraduate training is not impressive. On average, research is not allocated more than 2% of budgets of each university institution. Most of the knowledge taught in our universities is not produced by Ugandan academic staff or in Uganda. It is imported in form of donated textbooks and yellow notes obtained from the web. In the pages that follow, we shall survey the research activities of a few accredited universities (public and private), to get an insight into the amount of research activities in those universities.

Makerere University

Strengths

Makerere has the largest number of PhD holders in the country (though, admittedly this study only knows those within higher education institutions). In 2012/13, about 69% of PhD academic staff holders were at, or associated with, Makerere University. That is out of 1585 of Makerere's academic staff, 640 or approximately 40% had terminal degrees. This percentage fell short by only 20% of the NCHE's ideal of 60% of staff with PhDs in a single university. Twenty-three administrative and twelve support staff had PhD degrees giving Makerere 675 PhD holders or 69% of *known national stock* of terminal degrees. Table 5 indicates the unit lo-

cations of these terminal degree holders. Although still below the NCHE ideal of 60%, this position is good enough to position Makerere as a leader in postgraduate training in Uganda.

Makerere has made a number of strides in recent years in research. Its contribution to knowledge production accounts for about 80% of Uganda's research output (Cloete *et al.*, 2015). Its research outputs in form of publications and doctoral degrees increased tremendously in the period 2005 to 2012.

Table 4: Research and publication outputs in African flagship universities

University	Year 2007	Year 2009	Year 2010
Botswana	106	128	108
Cape Town	1017	1309	1517
Dar es Salaam	60	92	90
Edua. Mondlane	23	40	46
Ghana	61	124	170
Makerere	233	230	382
Mauritius	36	29	63
Nairobi	105	173	198
Total	1641	2125	2574

Source: Cloete *et al.*: Knowledge production and contradictory funds in African Higher Education, 2015

In a recent publication by the Centre for Higher Education Transformation, (CHET, South Africa), *Knowledge Production and Contradictory Funds in African Higher Education,* Makerere University was ranked second to the University of Cape Town in research and publication outputs in the period 2007-2011 amongst Africa's "flagship" universities (Table 4) and first in cited fields of international cooperation in the period 2006-2012.

Table 5. Qualifications of academic, administrative and support staff at Makerere as of Jan 2014

Discipline	Qualification					
Academic Staff	PhD	Master's	Bachelor's	Total	(Part-Time)	Grand Total
Agricultural & Environmental Sciences	118	4	61	183	14	197
Business & Management Sciences	36	10	69	115	12	127
Computing & Information Sciences	25	2	62	89	1	90
Education & External Studies	54	4	55	113	3	116
Engineering Design Art & Technology	55	5	86	146	6	152
Health Sciences	70	11	203	284	19	303
Humanities & Social Sciences	137	11	120	268	4	272
Natural Sciences	89	4	59	152	9	161
Veterinary Medicine	37	4	54	95	2	97
School of Law	16	5	23	44	2	46
Jinja Campus	3	13	8	24	0	24
Admin &Support staff	35					
Total	675	73	800	1513	72	1585

Compiled by author from Makerere administrative offices

Secondly, foreign donors have generously funded Makerere's research activities. In 2013, 80% of its $85 million research funding came from foreign donors (Musiige and Maassen, 2015). For now, most people, including those in government, see the university only as a teaching institution. They do not fund research activities except some fly-in-the pan grants or allocations from the government such as the presidential initiatives in various science areas. Neither does the institution allocate substantial amounts of money from its central budget to research. It seems Makerere stakeholders expect the kindness of donors to continue forever.

Threats and problems

The institution derives 80% of its research funding from foreign donor sources. It is, however, unsustainable to depend on foreign donor funding to levels exceeding a point where, if the donations become un-

available, research activities become impossible to fund. Foreign donor funding is good while it lasts but has many uncontrollable variables. These include changing priorities of donors, enduring some form of "soft power", unpredictable diplomatic relations between receiver and donor nations which could influence allocations to state or non-state institutions, creating isolated centres of excellence within a university and weakening what Nico Cloete and others have called the "academic core" of the university and the often strict conditions of donor funding (see Gibbon, 2010, Cloete *et al.*, 2011; Nordling, 2012, and Fredua-Kwarteng, 2015).

Government funding of research function should be the most sustainable source of funding. Even a number of the rich Ivy League universities of the USA are publically driven though privately owned. They receive massive financial grants, research monies and awards from all levels of governments – local, state and federal (Vincent-Lancrin, 2008). Government should realise that donors can never sustain their generosity.

Secondly, Makerere suffers all the negative consequences of massification described above. With 675 or 40% academic staff with PhD, 57% of staff cannot supervise doctoral students or do serious research. They can only teach undergraduates.

Most of the programmes, especially the humanities, are overcrowded and, therefore, under-staffed. Only the colleges of health science, basic (or natural sciences) and veterinary medicine meet the NCHE benchmarks for staff-student ratios. The rest fall below the NCHE required benchmarks. These include agriculture (1:16 instead of 10), engineering (1:23 instead of 10), education (1:58 instead of 15), arts and humanities (1: 41 instead of 24), business (1:43 instead of 24), ict (1:48 instead of 24) and law (1: 33 instead 24).

Thirdly, research activities are concentrated in science-based faculties. These happen to be divisions that are less crowded by student numbers and possess least mismatches between enrolments and facilities. It is not a coincidence that faculties or colleges, which are less crowded, produce more research outputs than the crowded ones. There is, a correlation between research output and staff-student ratios. Various reasons account for less crowding in science-based faculties: (a) Uganda high schools graduate few science students (less than 25% of total between 1990 and 2010); (b) science academic staff have more opportunities for research projects outside the university than their counterparts in arts/humanities; and (c)

it is difficult to teach large numbers of students in laboratories than the latter can take. The School of Medicine, now College of Health Sciences, led the struggle for controlled admissions of students. This consensus did not develop in the arts/humanities faculties because extra teaching was the main source of top-up income to salaries of staff.

Fourthly, the role of the academic department as the cell of research and postgraduate studies especially in matters of financing is not well articulated. There are few research plans at the micro level of departments, agendas or systematic approach to conducting research. Where there are research strategic plans, implementation is poor. However, at the institutional level, the Directorate of Research and Graduate Studies at Makerere is doing its work well. However, the various units of the university that handle research policies and activities are not sufficiently organised to coordinate and remit data to the directorate as efficiently as they should. My research assistant for this study noted that research organisation at Makerere University at the unit levels of colleges, faculties and departments was not systematic. There is no reporting, recording or retrieval systems to track what staff are doing—or not doing.

Lastly, the roles of the colleges and that of the faculties over the universally accepted cell of university academic activities – the academic department – are not properly defined. The new structure is so hierarchical that open discussion of issues is difficult. The struggle by heads of departments, deans and principals to manage academic and financial affairs of their divisions is always present, though sometimes latent. This struggle negatively impacts on research.

Makerere Institute of Social Research (MISR)

Since its foundation in 1948, MISR has been a vanguard and centre of knowledge production at Makerere. The institute was founded to focus on the study of African cultures for informing African colonial policy. Over the years, MISR has attracted first class scholars and produced numerous publications. However, the demands of the absolute and autocratic Ugandan state from 1966 to 1986 made MISR's freedom and resources decline. The neoliberal policies of the state from the early 1980s further undermined the institute's ability to contribute original knowledge as it had done in the past. Possibly to survive, the institute's leaders turned to consultancy for funding their activities. Consultancy culture began to

undermine basic and critical research.

Research Agenda

Current MISR emphasis is to encourage original production of knowledge derived from basic research from original sources. Presently, there are four group and three individual research projects. The group projects are (i) Beyond Criminal Justice, (ii) Land Access, Conflict and Governance, (iii) Building and Reflecting on Interdisciplinary PhD Studies for Higher Education Transformation. Individual projects include (i) Human Sexualities, (ii) the Political Economy of oil and (iii) Popular Culture.

The MPhil/PhDs in Social Studies

The shortage of highly qualified researchers partly contributed to the institute's decision to offer doctoral programmes. Currently, MISR is trying to return to its past research culture by engaging in basic and critical research and producing academics who can think and create a nucleus of the next generation of researchers.

The five-year programme includes two years of intensive full-time course work, during which students are required to take a set of core inter-disciplinary courses, ranging from theory to history and historiography. Four broad thematic clusters define the programme's intellectual focus: Political Studies, Political Economy, Historical Studies, and Cultural Studies. Students specialize in one field, but take classes across all four. This allows students to be grounded theoretically, while also giving them a broad foundation in historically informed debates in the Humanities and Social Sciences.

Publications by MISR

In the period 2010 to 2015, MISR has turned out a number of impressive publications. The first category of publications are known as *Working Papers*, each of which is an essay dealing with a specific well researched topic. Some twenty-eight papers have been produced and are listed at the back of this *Working Paper*.

The second category of publications is the Book Series. The following books have been published by MISR:

a. Mahmood Mamdani, 2013, *Getting the Question Right: interdisciplinary exploitation at Makerere University*, MISR Book Series no. 1.

b. Mahmood Mamdani, 2013, *Define and Rule: native as political identity*. MISR Book Series no. 2

c. Adam Branch, 2013. *Disciplinary Human Rights: War and intervention in Northern Uganda*. MISR Book Series no. 3

d. Mahmood Mamdani, 2013. *Saviors and Survivors: Darfur, Politics and the War on Terror*, MISR Book Series no.4

e. Mahmood Mamdani (edited). *The Land Question: Socialism and the Market, 2015*

Thirdly, MISR publishes academic periodicals. In August 2016, MISR launched the first *MISR Review* aimed at disseminating academic work produced at MISR and to promote debate in the broader scholarly community.

5.0 Research in other accredited universities in Uganda

Institutions such as Mbarara University of Science and Technology, the Uganda Christian University, Uganda Martyrs University, Mountains of the Moon University, Bishop Stuart University, and Ndejje University are beginning to develop impressive research structures. Others such as Bishop Stuart University have publishing facilities. But almost all of them lack research capacity in terms of scholars, education facilities and funds for fully fulfilling their missions. Like Makerere, teaching takes most of their efforts. Section five will highlight some of the research activities in some of these institutions.

Mbarara University of Science and Technology (MUST)

Research organisation and management

Mbarara University of Science and Technology is well organised in its research efforts. It has an effective central office that is specifically responsible for research and coordinates effectively with the units that report directly to faculties or institutes. Departments and faculties are well represented in the governance of research at this university. The university has a Grants Management Manual, a Research Strategic Plan (CIRIMO), a Research Innovations Policy, Management and Uptake Policy. The Faculty of Medicine has a strategic plan for the Office of Research Administration. MUST's research policy is being reworked and should be approved soon.

Research outputs

The University has no publishing house but hopes to start academic journals. ITFC, a semi-autonomous postgraduate research institute, has researchers who have appeared in the ISI high ranked journals such Conservation Biology, Oryx, Forest Ecology and Management, Lancet and others.

Research collaboration

MUST collaborates with a number of institutions both in Uganda and overseas including: Massachusetts General Hospital (MGH), University of Calgary, University of California San Francisco (UCSF), Harvard University, John Hopkins University, University of British Colombia (UBC), MUST - Bogoye , Case Western Reserve University, Indiana University, University of Minnesota, Ghent University, Oxford University, Kwa Zulu Natal University, Moi University, Makerere University, Kampala, Gulu University, Busitema University, and Kampala International University (Western Campus).

Uganda Christian University, (UCU) Mukono

Research organisation

UCU is a private non-profit institution owned by the Church of Uganda (Anglican). The University's research activities are organised under the School of Research and Postgraduate Studies which makes research decisions. UCU has a fully- fledged research policy, student research manual, digital repository, open access policy as well as a university bulletin in which academics and students publish their findings. But only one of the staff's works has been listed in international publication listings. Every financial year, a call is issued either for papers, publications or for writing proposals for community outreach.

Financing research

UCU allocates just about 1% of its budget to research and publication. In 2014, the amount was approximately 450 million shillings and was expected to be 550 million the following year. The institution has received donations from agencies such as JCRC for research and development, and staff training in grants writing.

Publishing in local and international journals

Only one researcher has appeared in the World Council of Churches and Wiley-Blackwell Companions to Religion series. UCU has not made it yet to ISI (Institute for Scientific Information), HiCi researchers and other global listings.

Uganda Martyrs University (UMU), Nkozi

Research organisation

Uganda Martyrs University is owned by the Catholic Church of Uganda and is governed by the Uganda Episcopal Conference of Uganda. The Research Directorate coordinates all research activities of UMU. It does so by following standard procedure of the University's research policy and research strategic plan (2000-2010). Although the governance of research is hierarchical, intensive consultations are made before decisions are taken.

Funding of research

The percentage of the University budget for research is about 4%, which includes all that goes into running the Research Directorate. For the financial year 2015/16 UMU allocated 100,000,000 Uganda shillings for research. Although UMU does not get direct support for research from foreign governments, a number of institutions have helped to facilitate the University's research agenda.

Publications and research output

UMU has the following publications in which internal and external writers publish their work: Journal of Development Studies; Journal of Science and Sustainable Development; Mtafiti Mwafrika (African Researcher) a Monograph Series; and UMU book series.

However, it does not seem that any UMU staff has made it to the ISI (Institute for Scientific Information), HiCi researchers and other global listings.

Mountains of the Moon University (MMU)

Research organisation

MMU is a private university run by the communities in which it is located in western Uganda. The University has an elaborate policy providing for a Directorate of Research and Postgraduate Studies whose activi-

ties are governed by the University's strategic plan.

Funding research

On average, the University spends about 4% of the annual budget on research, which was 8,000,000 shillings in 2014. The followings units received research monies in 2014/15: School of Agricultural and Environmental Sciences; School of Education; School of informatics and computing; School of Health Sciences; School of Business and Management Studies; and Directorate of Postgraduate Studies and Research. MMU has received external assistance from the following institutions: Flemish Inter-University Council, Close the Gap International, University of Gent, Jackson State University Deutscher Entwicklungsdienst, German Development Service in Uganda, the Rwenzori Development Leadership Group, Kasese District Local Government (KDLG), SNV Uganda (Netherlands development organisation), Lake Katwe-Kabatooro Local Council, and Kabarole Research and Resource Centre.

Publications

A number of staff at the University have published in international journals. They include the Vice Chancellor, Professor Kasenene. However, the university does not have a publishing house but publishes a number of studies especially on horticulture.

Ndejje University

Organisation

The Church of Uganda dioceses of the central region of Uganda own Ndejje University. The University has a Research and Innovation Policy, which informs the way research, and knowledge production is organised. The Directorate of Research manages research at Ndejje. However, the unit is still in infancy and some research activities are not well documented.

Funding

Ndejje University currently allocates 100,000,000 shillings to research to cater for the staff research competition and its administration. This is about 1% of University budget. Individual staff research projects are funded at a modest amount of 5,000,000 shillings but multidisci-

plinary projects can go up to 8,000,000 shillings. The university also funds research capacity development workshops. Four to six such workshops are conducted per academic year at a cost of approximately 50,000,000 shillings. Since accessing the money is by competitive applications, on average, about 60,000,000 – 80,000,000 shillings are used each year.

Publications

Some members of staff have contributed to dissemination of their work through publishing. The University is planning to have a publishing outlet.

Postgraduate training

Some graduates are trained but the University is trying to properly organise itself in this direction.

Nkumba University

Nkumba University has a good research policy and allocates about 60,000,000 shillings a year for research, which is about 4% of annual institutional budget. Various university groups access this money on a competitive basis. With the exception of funds obtained through the Vicres Project, the university does not get research money from external sources. However, Nkumba University has been very systematic in organising a series of public lectures and debates for the benefit of stakeholders and the nearby communities. Debates are one of the ways of critically reviewing issues and evaluating ideas. From 2000 to 2015, the following people have given commencement lectures, followed by debates, have been given before graduation days: Ali A. Mazrui, Bishop Adrian Ddungu, David rubadiri, Yosia Kyazze, John Ssebuwufu, Rev. Michael Ssennyimba, Professor Nakanyike Musisi, Samuel Mukasa, HE Yoweri Museveni, Joseph Katto, Ahmed K. Sengendo, Swaibu Lwasa, Lady Sylivian Nagginda and Justice Ogoola.

Bishop Stuart University, Mbarara (BSU)

The Church of Uganda (Anglican) dioceses of the Mbarara region own Bishop Stuart University (BSU). BSU has put in place most of the governance infrastructure which support research in a new small university. It has a research policy, a central research committee, research committees at units, and a senior academic to manage the university research

agenda. Since 2011, the institution has progressively increased funding to research from 15,000,000 in that year to 250,000,000 in 2015. Although this figure falls short of 4% of institutional budget, it is a good start.

Further, BSU staff have published a number of works. The institution has floated a publishing house and a printing press. Clearly, this new and small institution has made a good start in fulfilling the multiple functions of a university.

6.0 Other research institutions in Uganda

Besides universities, there are other research centres (not a focus of this paper) that were originally created within relevant government departments to create knowledge for implementation. The Ministry of Agriculture has grouped these institutions under the National Agricultural Research Organisations (NARO). For this financial year, NARO was allocated 25.24 billion (about 0.00017% of GDP) and URI 14.34 billion (about 0.00010% of GDP). These institutions need, and often take, highly qualified researchers from university institutions. Except training personnel who work in these establishments, there seems to be no coordination of efforts between universities and these organisations.

7.0 Creation of the next generation of academics: Postgraduate training in Ugandan universities

7.1 Staff development and training

The training of the next generation of academics and researchers is a major function of a university. It is linked to research and knowledge production. A number of universities have postgraduate programmes and the NCHE recently published guidelines for offering postgraduate degrees. The governance of postgraduate programmes is based in directories of research and postgraduate studies although real teaching remains in academic departments. However, departments lack authority to set priorities on the purchase of necessary education facilities for conducting research and payment of supervisors.

For some time, public universities financed staff training and postgraduate programmes from their own funds. Due to budgetary constraints, however, allocations to research and postgraduate training were reduced. In 2011/12, a total of 465 staff members were training for PhDs

while 442 were studying for Masters degree. By the end of 2014, the figure had risen to 592 for PhD trainees.

7.2 The need for doctorate holders in the country

The country does not only need more qualified staff but also well trained researchers to perform the triple functions of knowledge production, its dissemination and proper application in society. The people who perform these triple functions are PhD holders. Researchers and innovators are linked and doctorate holders are needed to do both. PhD holders are key in executing tasks that need high level thinking. The major functions of PhD holders, therefore include, but are not limited to, the following:

a. The production of knowledge through research and innovation;

b. The dissemination of knowledge through teaching, publications, transforming knowledge into goods and services for society; and

c. The creation of the next generation of academics and researchers through teaching, supervising and providing example.

7.3 The dearth of doctorate holders in the country

The number of PhD holders in the country is so low that it is wishful thinking that the country can be transformed into a middle-income society by 2040. This research has established that there is an alarming shortage of PhD holders who constitute the core of research communities in societies. The survey indicates that currently, there are about 1,300 PhD holders in both higher education and outside of it. The most recent NCHE publication (2013/4) puts the number in higher education institutions at 1,096. In a population of 34 million people, the ratio is 1 PhD holder to 34,000 people.

These estimates are derived from two sources. First, the NCHE collects numerous data on higher education each year from universities and other tertiary institutions. The NCHE has been publishing data on academic staff since 2004. However, the NCHE data has the following problems:

a. Only PhD holders who are within the higher education system are included. Those working elsewhere in the country are not

included.

b. A number of PhD holders teach in more than one higher education institution (i.e, they 'moonlight'). There is, therefore, a possibility of multiple counting in some cases.

The second source of information on PhD holders in Uganda is the 2012 Uganda National Council for Science and Technology survey, *The Careers and Productivity of Doctorate Holders (CDC)*, conducted by Professor Vincent Ssembatya. However, its calculation of actual numbers and where they work is also not complete.

Uganda, with more than 150,000 students at universities, does not only have a low ratio of PhD staff to students, but also PhD training programmes are not well structured. Thus, in 2011/2, the PhD to staff ratio was about 1:150, for universities and about 1:208 for the whole higher education sub-sector (compared to the NCHE ideal ratio of 1:15). None of Uganda's universities had the NCHE ideal of 60% staff with PhDs although Makerere with about 40% was moving towards that ideal.

The average percentage of PhD holders in each of Uganda's university was found to be 11.7% (NCS&T) and 11% (NCHE) of total staff. To fill the gap and eliminate this deficit, the country needs to produce at least 1000 PhDs per year for the next ten to twelve years. Based on normal productive capacity of three PhD graduates per academic staff every five years (or 0.6 PhD per year), Uganda's current PhD production capacity is about 212 PhD graduates each year. The actual production in 2014/5 was only 100.

With student enrolments increasing by 12-15% each year, the system is registering a deficit of at least 1,000 PhD holders annually. To counter this negative development, the country should aim at: (a) filling the gap by massive training of postgraduate students within and outside Uganda and (b) developing capacity for research and training in a few capable universities to enable the country produce at least one doctorate per ten thousand people in the general population (i.e. 100 per one million). In comparison, South Africa produced 26 doctorates per one million people in 2007, Portugal 569, Korea 187 and Turkey 48 (*University World News*, 15th December 2013: *Understanding the demands of PhD production*).

The country needs more PhD holders if it is to transform its economy into a middle income one by 2040, because universities are the "fac-

tories" of high-level thinkers (Muhamadbhai, 2012). The current PhD to population ratio of 1:34,000 is too low to constitute a thinking core that the country needs to become innovative enough to achieve its *Vision 2040*. Research and other forms of knowledge production conducted by highly educated and skilled people is key to transformation into a knowledge economy. As Vision 2040 has not specifically itemised how many PhDs the economy will need to transform into a "modern and prosperous nation", a national dialogue on this issue is needed in order to develop a shared view on PhD needs and the type of university this country needs to achieve its vision.

7.4 Characteristics of Ugandan PhD holders

Ssembatya's (NCS&T) survey gives us a glimpse of the characteristic of Ugandan PhD holders. Using a sample of 534, the NCS&T survey established that that 99% of Uganda's PhD holders were employed. They are hot cakes on the market. They worked at higher education institutions (85%), statutory bodies, research institutions, the private sector and multinational organisations. This high rate of employment reflects a very high demand for PhD holders in this country.

However, the majority of the sample (76%) were male and only 24% female. The graduation age was high at 48 years, indicating either late start in embarking on doctoral studies by candidates, long completion rates or both. The study found Ugandan PhD holders were not intellectually productive. The average lifetime publication of a typical Ugandan PhD holder was ten pieces and they had very low patent registrations (0.6 patents per person). There is, therefore, a need to watch quality as we train these key individuals who train the country's young people at universities and construct its development plans.

The major fields of study were natural sciences (23%), agriculture (23%) and health sciences/medical (6%). Most Ugandan PhD holders did their studies in Uganda (53%), 13% in the UK, 8% in the USA and 6% in South Africa. However, there were a number of PhD holders who got their degrees from other countries, including the Netherlands, Norway, Germany, Canada, India, Sweden, Malaysia and others.

7.5 The training of postgraduate students in Uganda

Initially, the NCHE allowed only accredited universities to offer

postgraduate programmes. Further, the NCHE developed its *Benchmarks for Conducting Postgraduate Programmes* only in 2014 when many institutions had already embarked on offering these programmes. This study has established that many universities, including those with no capacities in terms of staff and facilities, are offering postgraduate programmes. It is not surprising that the knowledge production capacities of PhD holders in Uganda were found to be low by the UNCS&T study quoted above.

The training of postgraduate students needs thorough thought. Although the demand is high and urgent, the production of PhD graduates cannot be rushed. This demand is Africa-wide and several forums and papers have discussed this problem and given suggestions (Khodabocus, 2016, McGregor, 2013, Hayward and Ncayiyana, 2015 etc.). As Executive Director of the NCHE, the author had the difficult task in November 2012 of asking one Ugandan University to halt the award of some sixty doctoral degrees on grounds of questionable quality. Expert reviews of these awards later on vindicated these fears. Later on, I wrote the following opinion in the press:

> In addition, the traditional method of producing PhD candidates by requiring only a thesis is no longer acceptable as many candidates plagiarise their way through. The PhD by coursework, annual and comprehensive examinations is by far the best method in this global age. The latter method reduces plagiarism because the tutors interact with the candidate and know what the candidate can produce. In this light, I salute Mahmood Mamdani for the PhD programme that he is running at the Makerere Institute of Social Research. The students who will go through his programme will never regret their experience (Kasozi, in The New Vision of April 2, 2014).

The NCHE needs massive campaigns to popularise its preferred model of teaching doctoral studies in Uganda. Most institutions do not distinguish research from postgraduate training activities, the linkage of the two while others do not know which comes first: research or postgraduate training. Over 60% of these offices supervise and put whatever money is allocated to postgraduate training rather than research.

8.0 Potential PhD production capacities at selected universities in Uganda

This study has compared training activities at selected universities in Uganda to international practice. The following are the estimates of the PhD numbers that can be produced by universities within Uganda, given

the following parameters:

Staff capacity

a. Surveys of doctoral trainings indicate that one seasoned PhD holder academic staff, given good education facilities, can supervise three PhD students in five years (Cloete *et al.* 2015). That is 0.6 students a year.

b. A seasoned academic holds a PhD; has taught for at least six years; written five or more good articles and one or two books. Such a person is about 55 to 75 years of age and can make wise statements without looking them up in books or the web.

c. For most universities, only about 12% of PhD academic staff are able to supervise PhD candidates because:

   i. The young PhD holder who has taught for less than six years is busy trying to manage the starting of life in the academic world, gaining confidence and setting themselves up financially by, unfortunately for some in Uganda, *moonlighting* and consultancies.

   ii. About half of PhD academic staff are sucked into searching for money rather than knowledge, fighting for administrative positions at universities and the general society, getting involved in politics and seeking positions of social honour rather than knowledge. Once a potential academic reaches the age of 55 without substantially contributing to human knowledge, such individual cannot easily come back into the academic world. He/she cannot supervise good PhD graduates because his or her mastery of the subject discipline is shallow.

   iii. Due to inadequate financing, lack of good infrastructure to support research and postgraduate training, bad governance of units, many potential PhD supervisors amongst Ugandan academics are easily discouraged and give up supervising students as an impossible task.

   iv. The retiring age requirement of 60 to 65 at a number of universities in Uganda removes the most seasoned academics from the system. Their removal contributes to the

dearth of PhD holders who can supervise the next generation of academics in this country.

Uganda's current capacity in creating PhD holders based on academic staff capacity alone is about 212 a year with Makerere producing three-quarters of them as shown in Table 6 below.

Table 6: Current potential PhD production capacity in eleven selected universities

University	Current PhD staff holders	Possible production based on 0.6 PhD unit production of 25% of PhD holders a year of total staff	Potential number by each institution	Actual numbers produced in 2014/15
Makerere University	1000	250 x 0.6	150	68
Gulu University	16	4 x 0.6	3	2
MUST	56	14 x 0.6	8	3
Nkumba University	13	3 x 0.6	2	3
UMU	39	10 x 0.6	6	2
UCU	31	8 x 0.6	5	2
KIU	82	21 x 0.6	13	14
Ndejje	39	10 x 0.6	6	1
Bugema	40	10 x 0.6	6	Not graduated yet
IUIU, Mbale	42	10 x 0.6	6	2
Total	1403 (25%) =	350.75 x 0.6 =210.45	212	100

Source: Worked out by author from available data

The numbers of PhDs produced by institutions were less than their production potential. According to this survey, the eleven selected universities graduated 100 individuals with PhDs in 2014/15. However, the potential was 212. But this potential does not take into account education facilities such as staff offices, students' reading rooms (carrels), library, laboratory equipment, science materials, field placement funds and a host of others.

Education facilities

The estimates above did not take into account the role of education facilities. These are dependent on the nature on the discipline in question

but the following are crosscutting:

a. A supervisor of a PhD student must have an office to meet, mentor and help the PhD candidate in a closed and personal environment for discussing intellectually demanding ideas.

b. A carrel or office space in the library or classroom block is a necessity for the PhD candidate.

c. Access to ICT and a computer is a must for a PhD student.

Good candidate selection, that is, candidates who have performed well in their Bachelors and or Masters courses.

Sufficient financing both to the supervisors and students are key to the success of postgraduate programmes. Elsewhere, increases in funding have increased PhD production levels (Cloete *et al.*, 2015).

9. Conclusions and recommendations

Most Ugandan universities do not conduct research or add new information to known knowledge. They are teaching institutions or *glorified high schools* using imported knowledge to teach or write pamphlets. They are not fulfilling their multiple functions of research, advanced training and public service. The major cause of this lack of emphasis on research is the way institutions are governed. To increase research output from these universities, the governance of universities and the roles of universities in society must be re-thought. The existing governance model is hierarchical and does not have room for stakeholders to debate the roles of a university or the type of institution most suitable for the country. The current model does not free the initiatives of each individual stakeholder in the university to freely do their best.

There has not been a fundamental structural or ideological transformation of the Ugandan university since the colonial period. Although there has been massive expansion in number of institutions and enrolments of students, this expansion has focused on increasing access of students to higher education without transforming the university into a research engine for development. Few people have voiced this concern because most stakeholders see the major function of universities as trainers of the labour force. This does not imply that they hate knowledge or dislike the university's other roles. They may not know or are focusing on teaching because the employment of their children is a more immediate and

pressing need than research at universities.

The current governance model, with the state at the apex, is partly to blame for the qualitative stagnation of the university in Uganda. Although government financial contributions to the running of public universities declined from 100% in the 1980s to an average of 40% since the early 2000s, the current model of governance ties the financial control of public university institutions to the state to a level where the latter determines areas and levels of university policy and expenditure. To develop an inclusive governance, the key stakeholders must be clear of, and should have, a shared view of the role of universities in society.

Secondly, the academic department should be the nucleus of academic activities with power to determine on the use of research and training funds for their disciplines than is currently the case. The department offers not only an intellectual home to an academic but also a starting point for involvement in university activities. Strong academic departments are often the most protective of staff whose views may be considered different from those of the mainstream. Academic staff should, therefore, have more authority on how funds are used on all academic matters in each department than is currently the case in both public and private universities.

Thirdly, the PhD deficit of some 10,700 individuals should be addressed quickly but wisely. To maintain a health PhD staff to student ratio in the face of the current 12-15% annual increases in student enrolments, the country needs to turn out PhD holders that would both address the current PhD deficit and the growing mismatch between students and staff.

Fourthly, to avoid the danger of turning out half-baked PhD holders from multiple and insignificant high-school-like "university" institutions, the country should develop the only institution with some research and postgraduate training capacity, Makerere University, to train PhD holders. Makerere University should gradually focus on postgraduate training to produce academics for the many mushrooming higher education institutions, the public and private sectors. According to a number of studies, every developing country needs at least one first class research and postgraduate training university (Altbach, 2013). Makerere is in position to focus on research and postgraduate training and it is in the country's interest that it does so. Its undergraduate programmes should gradually be trimmed to accommodate more postgraduate students. Mbarara Uni-

versity of Science and Technology and, possibly, Uganda Christian University could follow the same road as Makerere, ten years later. But their capacity in terms of staff, infrastructure and global connections are still very far behind Makerere. While we have some idea of the number of PhD holders education institutions need, we are not clear of what the rest of society wants. The National Planning Authority should embark on a study to provide the country with that necessary data. All I know is that the country needs these qualified individuals to constitute a thinking core for all high level activities. Unless a solution to the PhD holder deficit is resolved, the whole of Uganda's higher education sub-sector will fall into disrepute and the country will not achieve its development goals.

Lastly, a national dialogue to discuss the nature of the university this country needs is overdue. It is important to discuss the nature of the university that will help the country produce the necessary knowledge and human resources who can contribute to the realisation of the country's visions (2020 and 2040) and address pressing social and physical problems. Such a dialogue should cover the whole country in order to develop a shared view of the role and nature of the university the country would like to have. The history of education in Uganda indicates that the country has paused, on average every 25 years, to re-examine its education system through commissions. None of the commissions ever focused on the developing a shared view of the university the country needs to resolve its pressing problems. Such a dialogue should not only define the type of university the country needs but all other factors that contribute to making a university perform its many roles.

The governance of university institutions needs more democratisation at all levels. The state should amend the various sections of the Act that control the ability of universities to freely make choices on governance and the use of their funds. The state should only put conditions on funds remitted from government sources but leave these institutions to manage other funds as they see fit. Sections 6A, 41(c) 59(5), and 62(3), of the University and Other Tertiary Institutions Act, as well as Section 44 (4) of the Public Finance and Accountability regulations, should be amended. To retain academic staff, public service regulations and laws governing personnel such as the Pension Act, should not apply to universities. Universities are not only national but also international institutions. Laws governing their behaviour should respond to their dual nature. However,

the institution must be accountable to the public and the auditor general should continue to audit its accounts—and if possible—the academic processes of the university. University councils should have more freedom on financial matters while senates should have some say on financial matters relating to academic financing. Areas of sections 31 to 34 of the law which disempower the vice chancellor and blur the responsibilities of top officials should also be amended.

The Humboltian model of a university, which combines research and teaching in the context of institution autonomy based on social responsibility and financially supported by the state, seems to be the most relevant for African countries. Whatever type of university is adopted, a link to the technical sector for providing the latter with high skilled knowledge must be allowed. Emphasis on basic research and democratic methods of managing academic processes are key to the success of any model.

Lastly, until an entrepreneurial class and philanthropic culture develops in a nation, the state is the only institution that can afford to finance such an expensive institution as a university dedicated to a combination of mainly postgraduate training and research. Already, a number of private universities in Uganda such as Kabale and Mountains of the Moon have appealed to the state to take them over while others constantly ask for financial assistance from the state.

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