

The linkage of Knowledge producing higher education to economic development



**Abdu B. K. Kasozi,
Research Associate,
Makerere Institute of Social Research
Former Executive Director, NCHE**



Introduction

- **I am going to argue that:**

1. In this information age, knowledge has replaced “physical capital” as the basis of development.
2. Higher education, particularly research institutions, is the sites of knowledge production.
3. Because of the roles they play, universities are the centers of any country’s innovation system —which includes public and private research centers, commerce and industry.



Introduction

4. For universities to perform that role, there must be an understanding, a consensus and agreement amongst all stakeholders, the university, the citizens and the academia, that the role of universities is not only to teach like high schools do, but also, and more importantly, to produce knowledge through research, debate and other forms of discovering what was not known before.



Introduction

5.If that understanding is achieved, then:

- Proper laws for managing universities as both knowledge producing and teaching institutions must be enacted;
- Proper funding and accounting mechanisms put in place;
- And co-operatively ensure that our universities play the role that will create the knowledge we need for development.



Introduction

6. That Makerere is at cross-roads where it has achieved some degree of research capacity but is threatened by two factors:

- ❑ Lack of emphasis by the state on research for its funding is based on student influenced teaching
- ❑ Disappropriate emphasis on undergraduate admission and teaching, understandably for money.



Higher education provides societies with:

- Knowledge for managing and resolving all human activities;
- Passing this knowledge to the next generation and thus training a skilled labour force;
- Produce and spread social values,
- Universities are thus sites for knowledge creation thru research, debate



Higher education and economic development are linked

A series of studies, mainly by the World Bank, have established that there is a linkage:

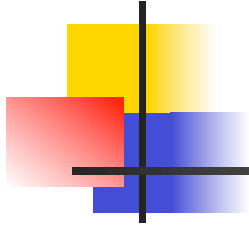
- In a UK (1995) when HE increased by 1%, annual GDP output grew 0.42-0.63%.
- Taiwan (2004) 1% rise in education stock led to a 0.35% rise in industrial output. A 1% increase in the number of graduates of engineering and sciences leads to 0.15% increase in agricultural output.



Higher education linked to economic development

- A 1993 study showed a correlation of enrollment rates in the key disciplines of science and technology with productivity.
- A 2006 study showed correlation between higher education and entrepreneurship
- A 2003 study showed that the rates of return on R & D were 78%
- From 2007, various HERANA studies by CHET have established that relationship in Africa

Higher education linked to economic development



Higher education increases:

- Private benefits:
 - Better prestige and increased opportunities for upward social mobility
 - Better employment opportunities, wages and income
- Public Benefits
 - Creation of skilled human capital
 - Increased taxes for government
 - An analytical society likely to enhance governance.



African HE has not played above roles

African HE lags behind both in terms of access and quality. The following Gross Enrollment Ratios tell part of the story:

- 6.0% Uganda
- 5.0% Sub-Saharan Africa
- 18.0% East Asia
- 10.0% South Asia
- 28.0% Latin America and the Caribbean
- 20.0% The Middle East and N. Africa
- 49.0% Europe and Central Asia
- 68.0% High Income Countries



Africa spends very little on Higher Education and R&D

- In 2008-12 developed nations spent 3-4% of GDP on R&D
- In same period, Uganda spent 0.74%
- 2000-2010 Uganda spent annually only 0.35% on public universities
- Africa produced 1.2-2.3% of global articles in 1996 to 2006(12500 to 5200)



African HE has not played above roles

- Sub-Saharan African current production level is about 23% below its production possibility frontier due to its lack of skilled workforce.
- Africa scores badly in the World Bank Knowledge Economy Index (KEI) which captures the integration of knowledge in the economy, innovation, education and ICT
- The KEI runs from 10 (highest) to 0 (lowest).



African HE has not played above roles

- High income countries score above 8.0
- Few African countries are above 5.0
- All the three East African countries score less than 3.0 meaning they are a long way in building knowledge based economies



World economy driven by knowledge

- The HERANA studies have established that:
 - World economy is driven by knowledge
 - Every African nation needs a “flagship” university to lead in knowledge production
 - Universities are the core of national innovation systems,
 - Their funding and mngmt of research is crucial to economic development



Causes of HE underdevelopment in Africa

World Bank policies partly to blame:

- 1985-1989 World Bank spent only 17% of its world wide education expenditure was spent on higher education
- 1995-9, the figure was reduced to 7%
- African countries were encouraged to spend less on HE giving the reason that rates of return on HE were lower than basic education and HE benefited private and not public interest.



Causes of HE underdevelopment in Africa

- Govt funding per student declined:
 - 1980 \$6800
 - 2002 \$1200
 - 2002 onwards in 33 African states \$981
 - Currently, where public universities also admit private students, universities spend less than \$500 per year on a student.



Causes of HE underdevelopment in Africa

- The WB took the position that funding be targeted to training only graduates needed by the market. Knowledge production sidelined
- Few Gvts in Africa see universities as research and knowledge producing sites
- Funding from the state is linked to only teaching as if universities are high schools.



Causes of HE underdevelopment in Africa

- Ministry of Education in Uganda has allocated an average of 9 - 11% for HE and over 60% for basic 1985-2005
- Research in universities is not given its own bold budget line: emphasis is on teaching
- Makerere, depending on 80% donar funding (\$80.00 in 2013) has done its best as the next slide shows (data by Ian Bunting)



Research Publications in “flagship” African universities, 2009-11

University	2007	2009	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



Causes of HE underdevelopment in Africa

- Management of university funds and academic processes have not been the best in our universities
- Makerere and other public universities must organise their research better at:
 - Departmental
 - Faculty; and
 - College levels and link to the Centre



Way Forward: Step 1. Change Univ/Gov. Relationship

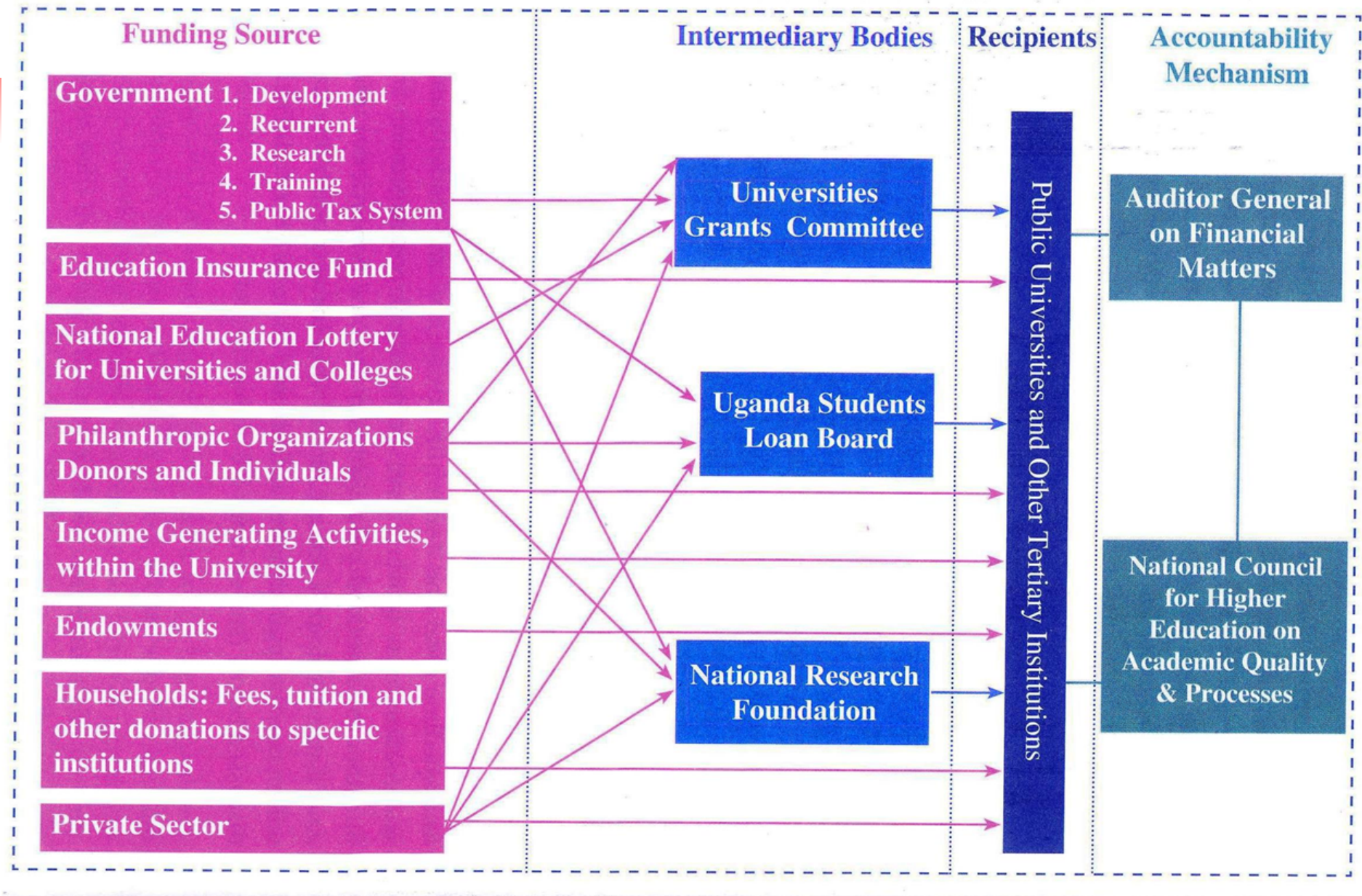
- Universities should renegotiate with the government for a new relationship, most preferably through the granting charter as Kenya & Tz did
- Amend Sections 59(5), 60(3), 62(1) of the Principal Act (the Universities and Other Tertiary Institutions Act; 2001) as well as Amendment Act 6A (2006).



Way Forward: Step 2. Change Univ/Gov. Relationship

- Change the public funding model as below in order to give universities:
 - More sources of income
 - Increased autonomy
 - Increased accountability as they can only get a subsequent grant after accounting
 - Assure parents of multiple sources of fees

Figure 14.1: A new diversified funding proposed model for Uganda public universities





The Way forward: Step 3. Increase social advocacy on role of HE

- VCs, Professors and staff increase advocacy to interest population in roles of universities
- Increase Collaboration between universities and all stakeholders (the state, commerce, industry and the general public) to make universities knowledge producers.
- Institutional autonomy should be balanced with accountability in financial and academic processes management



The Way forward: 3 Increase social advocacy on role of HE

- Demystify the university and bring it to participate in activities the majority of the population are involved in.
- Write your findings in languages the ordinary people can understand
- Tell every academic staff that he/she is both a teacher and a researcher



The Way forward: 3 Increase social advocacy on role of HE

Cherry picking of single items (like salaries) for negotiating with the state blurs the magnitude of problems public universities face—much as the subject method can bring a doze of relief. It is high time a holistic approach to the problems of higher education is taken by staff, students, Gov. & the population.