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I. Global Rankings of Universities: How Relevant to African Universities? and

II. African Quality Rating Mechanism (AQRM)

Goolam Mohamedbhai

I. Global Rankings of Universities

Outline of Presentation

- 1. Introduction
- 2. Academic Ranking of World Universities (ARWU)
- 3. Times Higher Education (THE) World University Rankings
- 4. QS World University Rankings
- 5. Webometrics Ranking of World Universities
- 6. Observations on Global Rankings

1. Introduction

- Since global ranking first appeared in 2003, the concept has rapidly spread globally
- There are now several global rankings
- So far, every year, only very few African universities in South Africa and Egypt – appear in the well-known rankings
- There is pressure on many African universities to be globally ranked – it has almost become a measure of Quality
- But are the <u>criteria</u> for the rankings well understood? Are they relevant to or appropriate for African higher education? Do they measure Quality?

2. Academic Ranking of World Universities (ARWU) (1/6)

- Undertaken by Centre for World Class Universities of the Institute of Higher Education of Shanghai Jiao
 Tong University, China (hence often known as Shanghai Jiao Tong Ranking)
- Started in 2003 as the first global ranking of universities
- Originally was meant to establish global standing of Chinese top universities v/s US ones but soon attracted world attention
- Annually ranks about 1,200 world's universities but publishes only the first 500
- Since 2009, ARWU published by Shanghai Ranking Consultancy, a fully independent organisation not answerable to any university or government agency

2. Academic Ranking of World Universities (ARWU) (2/6)

*	4 Criteria & 6 Indicators	Weight
A	Alumni awarded Nobel Prizes & Fields Medals	10%
В	Current academic staff awarded Nobel Prizes & Fields Medals	20%
В	Highly cited researchers in 21 broad categories	20%
C	Papers published in Nature & Science (now Hum & Soc Sciencluded)	20%
C	Papers indexed in Science Citation Index & Social Science Citation Index	20%
D	Per capita academic performance (scores of A, B, C divided by number of FTE academic staff)	10%
	TOTAL	100%

^{*} Criteria: A = Quality of Education (10%) B = Quality of Staff (40%) C = Research Output (40%) D = Academic Performance (10%)

2. Academic Ranking of World Universities (ARWU) (3/6)

2014 Ranking of Universities by Region

Region	Top 20	Top 100	Top 300	Top 500
Americas	16	56	123	177
Europe	4	35	122	205
Asia/Oceania	_	9	53	113
Africa	-	-	2	5
TOTAL	20	100	300	500

2. Academic Ranking of World Universities (ARWU) (4/6) 2014 Rankings

20 Top-ranked Universities:

- 16 from **USA:** Harvard, Stanford, MIT, UC Berkley, Princeton, Caltech, Columbia, Chicago, Yale, UCLA, Cornell, UC San Diego, Washington, Pennsylvania, John Hopkins, UC San Francisco
- 3 from **UK:** Cambridge (5), Oxford (9). UCL (20)
- 1 from Switzerland: Federal Institute of Tech. Zurich (19)

2. Academic Ranking of World Universities (ARWU) (5/6)

2014 Rankings – Top 100 Universities

90 from Americas & Europe

Other 10 Universities:

- 4 from Australia
- 3 from Japan
- 2 from Israel
- 1 from Russia

(No university from a developing country)

2. Academic Ranking of World Universities (ARWU) (6/6) 2014 Rankings

- Ranked universities in developing countries (12/500):
 - University of Sao Paulo, Brazil (101-150)
 - University of Cape Town, South Africa (201-300)
 - University of Witwatersrand, South Africa (201-300)
 - Fed University of Minas Gerals, Brazil (301-400)
 - Fed University of Rio de Janeiro, Brazil (301-400)
 - Indian Institute of Science, Bangalore, India (301-400)
 - UNESP, Brazil (301-400)
 - State University of Campinas, Brazil (301-400)
 - Fed University of Rio Grande do Sul, Brazil (401-500)
 - Stellenbosch University, South Africa (401-500)
 - Cairo University, Egypt (401-500)
 - University of KwaZulu Natal, South Africa (401-500)

3. THE World University Rankings (1/8)

- In 2004 Times Higher Education (THE) partnered with Quacquerelli Symonds (QS) to publish a new set of world university rankings.
- In 2009, THE & QS ended their partnership, each one deciding to publish its own ranking
- In 2010, THE with new data supplied by Thomson Reuters (a business data provider headquartered in New York) published its rankings using a different methodology
- THE uses 13 performance indicators grouped in 5 areas, most of the data being provided by the institutions
- Ranks world's 400 top universities annually

3. THE World University Rankings (2/8)

	5 Criteria & 13 Indicators	Weight
1.	<u>Teaching</u> : academic reputation survey* (15%); staff/student ratios (4.5%); PhD/Bachelor's degrees awarded (2.25%); PhDs awarded/faculty (6%); institutional income/faculty (2.25%)	30%
2.	<u>Research</u> : academic reputation survey* (18%); research income/ faculty (6%); research papers published in journals indexed by Thomson Reuters/faculty (6%) [unis producing < 200 papers/ year are excluded]	30%
3.	<u>Citations</u> : in publications over past 5 years in journals indexed by Thomson Reuters' Web of Science database	30%
4.	International Outlook: international students (2.5%); international faculty (2.5%); journal publications having at least one international co-author (2.5%)	
5.	<u>Industry Income/Innovation</u> : research funding from industry	2.5%
	* 10,000 academic responses TOTAL	100%

3. THE World University Rankings (3/8)

2014-15 Rankings 20 Top-ranked Universities:

- 15 from USA: Caltech, Harvard, Stanford, MIT, Princeton, UC Berkley, Yale, Chicago, UCLA, Columbia, John Hopkins, Pennsylvania, Michigan, Duke, Cornell
- 3 from **UK**: Oxford (3), Cambridge (5), Imperial College (9)
- 1 from **Switzerland**: Federal Institute of Tech. Zurich (19)
- 1 from **Canada**: University of Toronto (20)

3. THE World University Rankings (4/8)

2014-15 Rankings – Top 100 Universities

85 from Americas & Europe

• Remaining 15 Universities:

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5 from Australia (45-83) 3 from Korea (51, 52, 66)
2 from Singapore (25, 61) 2 from China (48, 49)
1 from Hong Kong (43) 1 from Japan (59)
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1 from Turkey (85)

(No university from a developing country)

3. THE World University Rankings (5/8)

2014/2015 Rankings

Ranked universities in **developing countries** (12/400)

- University of Cape Town, South Africa (124)
- University of Sao Paolo, Brazil (201-225)
- University of Witwatersrand, South Africa (251-275)
- University of New Mexico, (251-275)
- Indian Institute of Science, India (276-300)
- Panjab University, India (276-300)
- Stellenbosch University, South Africa (276-300)
- University of Marrakesh Cadi Ayyad, Morocco (301-350)
- State University of Campinas, Brazil (301-350)
- IIT Bombay, India (301-350)
- IIT Roorkee, India (351-400)
- King Mongkut's University of Technology, Thailand (351-400)

3. THE World University Rankings (6/8)

THE World Reputation Rankings 2014-15

- Rankings based solely on Academic Reputation Survey
- Subjective views obtained from about 10,000 "experienced, published scholars" from 142 countries on research and teaching within their fields
- Research/Teaching weightage used 2:1
- Hardly any difference in rankings of the first 20 universities under World University Rankings
- Of 100 universities ranked under Reputation Rankings, only 2 from developing countries:
 - University of Sao Paulo, Brazil (51-60)
 - National Autonomous University of Mexico (71-80)

3. THE World University Rankings (7/8)

THE New Ranking of African Universities

- THE announced an experimental ranking of 30 African universities at 'Africa Universities Summit' (Uni of Johannesburg, 30-31 July 2015)
- Ranking based ONLY on citations of research papers using Elsevier's Scopus database
- A university must have published a minimum of 500 research papers over 5-year period 2009-13 & at least 50/year for inclusion in list
- THE proposes to develop a full Africa University Ranking to include other indicators, e.g. teaching, economic contribution, civic engagement

No	Uni/Country	Pubs	No	Uni/Country	Pubs
1	Cape Town, S Africa	5540	16	Adis Ababa, Ethiopia	894
2	Witwatersrand, S Africa	4387	17	Rhodes. S Africa	1297
3	Makerere, Uganda	1113	18	Free State, S Africa	1513
4	Stellenbosch, S Africa	4357	19	North-West, S Africa	1708
5	KwaZulu Natal, S Africa	4235	20	Tunis, Tunisia	870
6	Port Harcourt, Nigeria	574	21	E N d'Ingenieurs, Tunisia	822
7	Western Cape, S Africa	1155	22	Mohamad V, Morocco	1504
8	Nairobi, Kenya	672	23	American Cairo, Egypt	701
9	Johannesburg, S Africa	2193	24	N Mandela MU, S Africa	886
10	Marrakesh C A, Morocco	911	25	South Valley, Egypt	637
11	Pretoria, S Africa	4544	26	Alexandria, Egypt	2550
12	Ghana	805	27	Assiut, Egypt	1589
13	UNISA, S Africa	982	28	Sfax, Tunisia	2355
14	Suez Canal, Egypt	999	29	Yaoude 1, Cameroon	876
15	Hassan II, Morocco	960	30	Minia, Egypt	695

4. QS World University Rankings (1/5)

- Quacquerelli Symonds (QS) is a global career & education company specialising in education and study abroad. It has offices around the world, including Johannesburg
- From 2004 to 2009 THE and QS jointly published the same rankings. Criteria used were research, employability, teaching & internationalisation
- From 2004-2009, the African universities ranked among the first 600 were usually UCT, Wits, Pretoria & KwaZulu Natal
- In 2010, after separating from THE, QS continued with essentially the same criteria for its annual rankings, but with some changes in the weight of the criteria
- It ranks about 700 of the world's top universities

4. QS World University Rankings (2/5)

	QS Indicators	Weight
1.	Academic reputation: global online survey of academics	40%
2.	Employer reputation: global online survey of employers	10%
3.	Faculty/student ratio	20%
4.	Citations per faculty	20%
5.	International faculty ratio	5%
6.	International students ratio	5%
	TOTAL	100%

4. QS World University Rankings (3/5)

2014/15 Rankings 20 Top-ranked Universities:

- 11 from **USA:** MIT, Harvard, Stanford, Caltech, Princeton, Yale, Chicago, Pennsylvania, Columbia, John Hopkins, Cornell
- 6 from **UK:** Cambridge (2), Imperial College (3), Oxford (5), University College London (6), kings College (16), Edinburgh (17)
- 2 from **Switzerland:** ETH Zurich (12), Ecole Polytechnique Lausanne (18)
- 1 from **Canada**: Toronto (20)

4. QS World University Rankings (4/5)

Top-Ranked 400 Universities by Region (2014-15)

Region	Universities	First Rank	Last Rank
Europe	183	2	399
North America	99	1	399
Asia	8o	22	399
Oceania	24	25	360
South America	10	132	347
Africa	4	141	390

4. QS World University Rankings (5/5)

2014-15 Rankings of African Universities (15/700)

- 141 University of Cape Town, South Africa
- 318 University of Witwatersrand, South Africa
- 360 American University of Cairo, Egypt
- 390 Stellenbosch University, South Africa
- 471-480 University of Pretoria, South Africa
- 501-550 University of KwaZulu Natal, South Africa
- 551-600 Cairo University, Egypt
- 601-650 Rhodes University, South Africa
- 601-650 University of Johannesburg, South Africa
- 701+ Al Azhar University, Egypt
- 701+ Ain Shams University, Egypt
- 701+ Alexandria University, Egypt
- 701+ Makerere University, Uganda
- 701+ University of Ghana
- 701+ University of Nairobi, Kenya

5. Webometrics Ranking of World Universities (1/4)

- Undertaken by Cybermetrics Lab of the Superior Council for Scientific Investigations (CSIC), a research body under the Ministry of Education, Spain
- Started in 2004, using publicly available web data on universities
- Ranks **all** HEIs that appear on the web (nearly 25,000 in January 2015)
- Six-monthly rankings published (January & July data)
- Rankings given by World and separately by regions (North America, Latin America, Europe, Asia, Africa, Arab World)
- In the January 2015 rankings, 900 HEIs in Africa are ranked

5. Webometrics Ranking of World Universities (2/4)

Criteria & Indicators (January 2015)

	Criteria	Indicators	Period	Weight
1.	Impact	No. of external inlinks the university webdomain receives from third parties	January 2015	50%
2	Presence	No. of web pages hosted in university's webdomain (inc. subdomains & directories)	January 2015	16.67%
3	Openness	No. of rich files (pdf, doc, docx, ppt) published in dedicated websites	2008-2012	16.67%
4	Excellence	No. of papers in the 10% most cited papers	2008-2012	16.67%
			TOTAL	100%

5. Webometrics Ranking of World Universities (3/4)

January 2015 Rankings – 20 Top-Ranked Universities

- 17 in USA (Harvard, MIT, Stanford, UC Berkeley, Cornell, Michigan, Minnesota, Washington, Pennsylvania, Columbia, Wisconsin, Texas Austin, UCLA, Yale, Pennsylvania State, Purdue, Illinois Urbana Champaign)
- Other 3 universities:
 - University of Cambridge, UK (15)
 - University of Oxford, UK (16)
 - University of Toronto, Canada (20)

5. Webometrics Ranking of World Universities (4/4) Best Ranked Universities in Africa (January 2015)

Africa	World	Universtiy	Country
1	328	University of Cape Town	South Africa
2	462	Stellenbosch University	South Africa
3	474	Cairo University	Egypt
4	494	University of Pretoria	South Africa
5	563	University of Witwatersrand	South Africa
6	830	University of KwaZulu Natal	South Africa
7	865	University of Nairobi	Kenya
8	1022	University of Western Cape	South Africa
9	1050	American University in Cairo	Egypt
10	1074	UNISA	South Africa
11	1167	Mansoura University	Egypt
12	1178	University of Johannesburg	South Africa
13	1213	University of Makerere	Uganda
14	1341	Rhodes University	South Africa

6. Observations on Global Rankings (1/3)

- Of the 4 rankings, Webometrics is hardly ever quoted in the developed world, but often quoted in the developing world, especially Africa; its relevance is questionable
- Of the other 3 rankings, THE & ARWU are considered the most influential
- However, these two rankings are appropriate for well-resourced, research-intensive, so-called 'world class' universities in the developed world they are widely used & quoted by these universities for marketing purposes
- The ranked universities represent no more than 2-3% of the world's higher education institutions; the 100 best ranked represent barely 0.5%

6. Observations on Global Rankings (2/3)

- Global rankings use mostly Research indicators, with hardly any indicators for Teaching & Learning (T&L) (except staff/student ratio) and none for Community Service (CS).
- Yet, both T&L and CS are vital for developing HE in Africa
- Criteria & indicators for global rankings are not appropriate for most African universities
- Many African governments are urging their universities to be globally ranked, without realising the inappropriateness of the criteria used – this could lead to waste of scarce resources

6. Observations on Global Rankings (3/3)

- Currently, main concern for African universities should be that they be Quality Assured, not globally ranked
- But ranking per se should not be rejected, provided relevant and appropriate criteria applicable to all institutions are used
- Two main constraints are:
 - Lack of reliable institutional data
 - Identifying measurable indicators for T&L and CS and have accessible data. *Can these be developed?*

II. African Quality Rating Mechanism (AQRM)

Outline of Presentation

- Background & Pilot Phase
- 2. Revised Questionnaire
- 3. Part 1: Institutional Data
- 4. Part 2: Self Rating at Institutional Level
- 5. Part 3: Self Rating at Programme Level
- 6. Observations on AQRM

1. Background & Pilot Phase

- QA forms part of AUC's HE Harmonization Strategy. Also emphasized in Joint Africa-EU Strategy
- AQRM developed by AUC for contributing towards improving quality of HE in Africa, also to assist AUC in selecting institutions for Nyerere scholarships & PAU networks
- Pilot phase launched by AUC in 2010 using of a self-rating Questionnaire (in English only) to be completed by institutions willing to be rated – no external reviewing
- 32 institutions (10 from Southern Africa: 6 South Africa, 2 Zimbabwe, 1 Mozambique & 1 Swaziland) responded by returning Questionnaires, not all fully completed

2. Revised Questionnaire

- Using pilot phase response, Questionnaire revised & launched (in English & French) in January 2014 for next phase of AQRM
- Objective now is to assist HEIs in their internal QA process & complement other QA initiatives in HE; to be used as a tool for benchmarking, not ranking
- Revised Questionnaire is a 44-page instrument in 3 distinct Parts: 1) Institutional Data Collection 2) Self Rating at Institutional Level 3) Self Rating at Programme Level
- Several HEIs have submitted completed Questionnaires number not known, participation voluntary
- For selected universities, AUC has undertaken validation of Questionnaire by external reviewers through site visit

3. Part 1: Institutional Data

40 Questions under 8 Clusters:

1. Institutional Profile

2. Student Profile

3. Facilities

4. Faculty/Staff Profile

5. Governance & Management

6. Teaching & Learning

7. Research & Community Engagement 8. Linkage with Industry

- Some Questions seek quantitative data (e.g. student and staff numbers), others are multiple-choice type (e.g. how is VC appointed), others ask rating (e.g. of lab facilities, student hostels, sports facilities, journals, Internet access) using 5 grades from Excellent to Poor.
- Institution finally asked to list its 3 best Departments or Subject Areas using 11 specified criteria

4. Part 2: Self Rating at Institutional Level (1/2)

6 Clusters:

1. Governance & Management

2. Infrastructure

3. Finance

- 4. Teaching & Learning
- 5. Research/Publications/Innovations
- 6. Community Engagement
- 6-10 Standards under each Cluster
- Each Standard to be assessed by assigning a value of o-4:
 Poor=o Insufficient=1 Satisfactory=2 Good = 3 Excellent = 4
- Aggregate of assessment values of all Standards under a Cluster gives an assessment for that Cluster
- Under each Cluster, strengths, areas for improvement & recommendations to be specified

4. Part 2: Self Rating at Institutional Level (2/2)

- Aggregate of assessment values of all 6 Clusters gives overall rating score at Institutional Level
- Overall Quality Rating at Institutional Level determined from:

Rating Score	Quality Rating	
1.0	Poor	
1.0-1.99	Insufficient	
2.0-2.79	Satisfactory	
2.8-3.5	Good	
>3.5	Excellent	

5. Part 3: Self Rating at Programme Level

- Rating of <u>one</u> programme from suggested five subjects: Civil Engg, Chemistry, Crop Science, Medicine or Business Management
- But institution can choose a different subject
 5 Clusters for Programme Level Rating
- 1. Programme Planning & Management2. CurriculumDevelopment
- 3. Teaching & Learning 4. Assessment 5. Programme Results
- 6-8 Standards under each Cluster
- Procedure for assessing overall Quality Rating for Programme Level exactly same as for Institutional Level

6. Observations on AQRM (1/2)

- AQRM is a more appropriate tool for assessing African HEIs than Global Ranking as it covers a wider range of relevant criteria
- It also helps the institution to collect data
- However, too many criteria/indicators specified could be reduced to a few more pertinent & meaningful ones
- Grouping of several indicators within a Cluster may not lead to a proper assessment of the institution in some areas, e.g. 'Research, Publication & Innovation' Cluster

6. Observations on AQRM (2/2)

- All responses sought under Self Rating are qualitative and subjective; no guidance given as to what should be considered as Poor or Excellent
- AQRM could be useful within an institution for improving Quality, but should be used with caution as a measure of institutional Quality by external stakeholders
- Unless completed Questionnaire has been independently & externally validated, AUC should not release the Quality Self Rating assessment by the institutions

THANK YOU