RHODES UNIVERSITY
Where leaders learn

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A funding contribution analysis of Research and instruction Staff at Public Universities in South Africa based on Institutional Type

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Background…

- In early 2000s, the South African higher education sector underwent a major sizing and shaping exercise in the form of the activities geared towards breaking the divisive legacies of apartheid as prescribed by the National Plan for Higher Education (NPHE) (Ministry of Education, 2001).
- The mergers saw the reduction of public higher education institutions from thirty-six to twenty-three.
- In 2013, the President announced the establishment of three additional Universities to the system, this brought total number of Universities in South Africa to twenty-six.

- The reforms in the sector led to categorization of Universities into three institutional types; traditional universities, universities of technology and comprehensive universities.
- Traditional universities are majorly regarded as research intensive and responsible for offering formative and professional qualifications (degrees).
- Universities of technology (UoTs) are responsible for offering vocationally focused programmes mostly at the levels of diploma, higher certificates and certificates
- Comprehensive universities offer a combination of traditional university-type and University of Technology-type programmes.

Relevance…

- In the era of ranking of Universities, little emphases is placed on monetized efficiencies at Universities in the ranking factors.
- As much as the core academic outputs in the forms of academic achievements of students and staff should remain the main focus of Universities, resource efficiencies measurements are also vital for accountability and gauge of return on public investment.
- This study is an attempt to fill the knowledge regarding comparative measurement of monetized efficiencies at Universities in South Africa looking specifically at income (Unencumbered income) generation of academics per capita.

Traditional Universities in South Africa

University of Cape Town
University of Fort Hare
University of the Free State
University of KwaZulu-Natal
University of Limpopo
North-West University
University of Pretoria
Rhodes University
University of Stellenbosch
University of the Western Cape
University of the Witwatersrand

Comprehensive Universities in South Africa

University of Johannesburg
Nelson Mandela Metropolitan University
University of South Africa
University of Venda
Walter Sisulu University
University of Zululand

Universities of Technology in South Africa

Cape Peninsula University of Technology
Central University of Technology
Durban University of Technology
Mangosuthu University of Technology
Tshwane University of Technology
Vaal University of Technology

What counts…

Ranking Factors	**QSWUR**	**THE**
Academic Reputation	Academic reputation score from surveys (40%)	
Employer reputation	Employer reputation score from survey (10%)	
Teaching & Learning	Student/Academic staff Ratio (20%)	Teaching – the learning environment (30%)
Research & Innovation	Citation, volume & influence (20%)	Research – volume, income and reputation, Industry Income, innovation (62.5 %)
Internationalization	International staff/student ratio (10%)	International Outlook – staff, students and research (7.5%)

Current outcomes…

UNIVERSITY	URAP	BGU	QSWUR	THE	CWUR	ARWU	DESCRIPTION
University of Cape Town	1st	1st	1st	1st	2nd	2nd	Traditional
Wits University	2nd	2nd	3rd	2nd	1st	1st	Traditional
Stellenbosch University	4th	4th	2nd	3rd	3rd	3rd	Traditional
University of KwaZulu Natal	3rd	3rd	7th	4th	4th	5th	Traditional
University of Pretoria	5th	5th	4th	5th	5th	–	Traditional
University of Johannesburg	6th	6th	5th	6th	6th	4th	Comprehensive
University of the Western Cape	8th	7th	9th	7th	–	–	Traditional
Rhodes University	9th	9th	6th	–	–	–	Traditional
North-West University	7th	8th	8th	–	–	–	Traditional
University of the Free State	10th	10th	–	–	–	–	Traditional
UNISA	11th	11th	–	8th	–	–	Comprehensive
Nelson Mandela University	12th	–	–	–	–	–	Comprehensive
Tshwane University of Technology	13th	–	–	–	–	–	UoT
University of Limpopo	14th	–	–	–	–	–	Traditional
Cape Peninsula University of Technology	15th	–	–	–	–	–	UoT
Durban University of Technology	16th	–	–	–	–	–	UoT
University of Fort Hare	–	–	–	–	–	–	Traditional
Central University of Technology	–	–	–	–	–	–	UoT
Mangosuthu University of Technology	–	–	–	–	–	–	UoT
Vaal University of Technology	–	–	–	–	–	–	UoT
University of Venda	–	–	–	–	–	–	Comprehensive
Walter Sisulu University	–	–	–	–	–	–	Comprehensive
University of Zululand	–	–	–	–	–	–	Comprehensive
Sefako Makgatho University	–	–	–	–	–	–	New
Sol Plaatje University	–	–	–	–	–	–	New
University of Mpumalanga	–	–	–	–	–	–	New

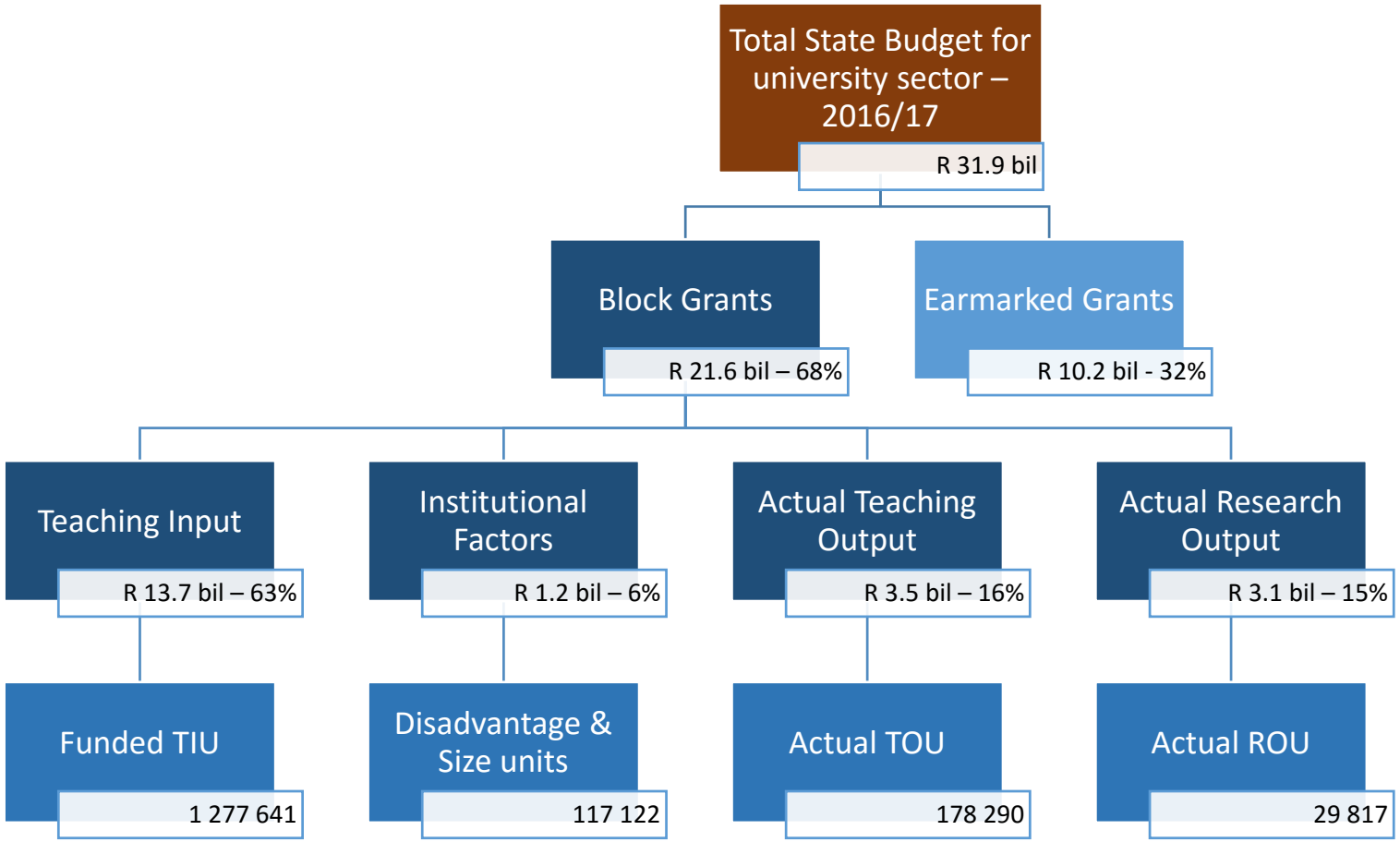
Methodological Criticisms

- Methodologically ranking systems are criticized on the following basis:
  - Monodimensionality: heavily weighted around research
  - Statistical robustness: rankings aggregate a number of indicators into a single measure, this may affect the statistical reliability and validity of certain measures in the ranking algorithms
  - **Dependence on university size and programme & qualification mix:** large and established universities are by nature of the indicators favoured. Universities with programmes in bio-medical, chemical sciences are particularly favoured
  - Low consideration of input-output relationships: Context, resources, efficiencies (Daraio *et al*., 2014).
  - Lack of consistent definitions of certain indicators
  - Institutional responses are diverse and sometimes not coordinated: There is no consensus acceptance of the rankings outcomes. Some institutions question the validity meaning of rankings.
  - In a piece in The Conversation, Sioux Mc Keanna, states: “Rankings are bad science because they are always only an approximation of quality, but they are presented in the media as, and are understood by the public to be, the real deal. These calculations present quality as if it is something that can be objectively and neutrally measured. But perhaps most worrying of all is that they treat quality as something that is generic and without context”.

Some NDP-2030 Targets

- Increase participation rates for university enrolment to more than 30% (currently about 24%, but differs substantially by population group)
- Increase enrolment from about 1m to 1.6m
- Increase graduation rate to more than 25% by 2030
- Produce more than 100 doctoral graduates per million per year by 2030

State Investment



Peer Data Reports

The HEMIS data is annually provided by the Department of Higher Education and Training (DHET), based on the following process. Second HEMIS submission data (Year N) will be available at the end of May (Year N+1) and final audited HEMIS submission data (Year N) will be available from August (Year N+1). The August data submission will also include any resubmitted data of previous years. It is important to note that the May submission is provisional and possibly incomplete data. The latest dataset (final student 2016 submission 3) was received on 16 November 2017. For help on using these reports, click HERE

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Student Headcount Reports	Viewers	
• by Institution and Calendar Year		
• by CESM Category and Calendar Year		
• by Entrance Category and Calendar Year		
• by Qualification Type and Calendar Year		

Student FTE Reports	Viewers	
• by Institution and Calendar Year		
• by CESM Category and Calendar Year		
• by Course Level and Calendar Year		
• FTE Enrolled Detail Report		

Ratio Reports	Viewers	
• Research Output Publication Units per Permanent Instr/Res Staff Headcount		
• Total Research Output Units per Permanent Instr/Res Staff Headcount		
• Total Graduates per Permanent Instr/Res Staff Headcount		
• Staff:Student FTE Ratio		
• Graduation Rate (DHET)		
• UG Degree Credit Success Rate		

Research Related Reports	Viewers	
• Research Publication Units by Institution and Calendar Year		
• Research Master Units by Institution and Calendar Year		
• Research Doctoral Units by Institution and Calendar Year		
• Total Research Output Units by Institution and Calendar Year		
• NRF Rated Researchers by Institution and Calendar Year		
• Permanent Instr/Res Staff Headcount with Doctoral as highest qualification		

University fees in 2017: how much it costs to study in South Africa

Staff Writer 12 July 2017

Poll

Who is your main mobile provider?

1st & 2nd Stream Income Factors

	Traditional Us	Comprehensive Us	UoTs
Teaching Input Unit Per IR Staff	50	60	64
Teaching Output Unit Per IR Staff(Grad)	8	14.5	11.5
Total Research Output Per IR Staff	2.1	1.2	0.5
Student FTE: IR Staff FTE Ratio (Fees Unit per IR)	20	38	27

Unit Prices/Income of Funding Factors

Funding Factor	Unit Price
Subsidy Per Teaching Input Unit	R11,000
Subsidy Per Teaching Output Unit(Grad)	R20,000
Subsidy Per Research Output Unit	R109,000
Average Fees Per Student FTE	R35,000

Average Contribution of IR Staff by University Category

	SA Trad Universities			SA Comprehensive Universities			SA UoTs		
	Units	Unit Price	Income	Units	Unit Price	Income	Units	Unit Price	Income
Teaching Output Unit Per IR Staff(Grad)	8	R20,000	R160,000	14.5	R20, 000	R290,000	11	R20,000	R220,000
Total Research Output Per IR Staff	2.1	R109,000	R228,900	1.2	R109, 000	R130,800	0.5	R109,000	R54,500
Teaching Input Unit Per IR Staff	50	R11,000	R550,000	60	R11, 000	R660,000	64	R11,000	R704,000
Student FTE: IR Staff FTE Ratio (Fees per IR)	20	R35,000	R700,000	38	R35, 000	R1,330,000	27	R35,000	R945,000
Total Income Per IR Staff (on Average)			R1,638,900			R2,410,800			R1,923,500
Average SLE CTC	1	R650,000		1	R650,000		1	R650,000	
Average SLE Contribution			R988,900			R1,760,800			R1,273,500

Some Possible take-home

- IR staff remain the fundamental unit of production of teaching, research & community engagement outputs:
  - On average, an IR staff at Traditional Universities brings in about R100,000 more in state funded research output earnings compared with counterparts at Comprehensive Universities and about R170 000 more compared to UoTs.
  - On average, an IR staff at Traditional Universities brings in about R870 000 less in state funded teaching/graduate outputs compared with counterparts at Traditional Universities and about R460 000 when compared with UoTs.
  - On average, an SLE at Traditional Universities contributes just under R1m towards salaries of administrative staff and other operating costs, while an SLE at Comprehensive Universities contribute about R1.7m and UoTs about R1.3m
  - At average CTC (R3m) of Vice Chancellors salaries, it takes the state funded contribution of 3 SLEs to pay salaries of VC at Traditional Universities, and 2 SLEs for Comprehensives and UoTs.