

FUNDING OF HIGHER EDUCATION AND TRAINING

Commission of Enquiry into the Funding
of Higher Education and Training

21-22 July 2016

STRUCTURE OF WORKSHOP PRESENTATION

- Public/private benefits and funding of HET
- International trends in public funding of HET
- National trends in public funding of HET
- Funding model for SA HET
- Role of Ministerial Funding Statement
- 1st Stream income: Analysis
- 2nd Stream income: Analysis
- 3rd stream income: Analysis
- NSFAS – successes and failures
- HET funding challenges
- Funding options

PUBLIC AND PRIVATE BENEFITS AND FUNDING OF HET (1)

- Public benefits of HET (Public goods role of HETIs)
 - Economic:
 - Increased tax revenues
 - Greater productivity
 - Workforce flexibility
 - Social:
 - Increased quality of civic life
 - Increased charity giving
 - Social cohesion
 - Adaptation to technology
- (CHET: Fees and Sustainable Development, 2016)

PUBLIC AND PRIVATE BENEFITS AND FUNDING OF HET (2)

- Private benefits of HET:
 - Higher salaries and benefits
 - Enhanced employment opportunities
 - Higher savings levels
 - Professional mobility
 - Social:
 - Improved life expectancy
 - Improved quality of life for family/children
 - Enhanced social status
 - Better consumer decision making
- (CHET: Fees and Sustainable Development, 2016)

PUBLIC AND PRIVATE BENEFITS AND FUNDING OF HET (3)

- Private benefit returns on HET

➤ RSA	40	Mauritius	21
➤ Mexico	20	Brazil	17
➤ USA, Turkey, Portugal			14
➤ Spain	11	Norway	10

- Gini coefficient and 'fee free' HET

- High Gini coefficients with 'free' HET privileges the already privileged

(CHET: Fees and Sustainable Development, 2016)

INTERNATIONAL TRENDS IN PUBLIC FUNDING OF HET (1)

- Worldwide pressure on public funding of HET
- Value for money doubts re HET expenditure
- Competing social interests especially in developing countries
- Insularity of HET iro national goals and objectives
- Low sense of public accountability of many HETIs
- Lack of government, business/industry and HET 'pacts' re national development
- Newer flexible models for E&T based on advanced learning technologies

INTERNATIONAL TRENDS IN PUBLIC FUNDING OF HET (2)

- Public funding measured to HET expenditure as % of GDP for 2012 (OECD, 2016)

➤ Cuba	4.5%	China	3.0%
➤ Finland	2.2%	Malaysia	1.8%
➤ Ghana	1.4%	USA	1.4%
➤ Senegal	1.4%	Australia	1.2%
➤ India	1.2%	Brazil	1.0%
➤ Chile	0.9%	RSA	0.7%

INTERNATIONAL TRENDS IN PUBLIC FUNDING OF HET (3)

- Consequences of decreased public funding of HET
 - Dependency on 'own' income – 3rd stream income
 - Increased dependency on variety of 'user charges'
 - Mismatch between increased enrolments and academic staff appointments – increased student: staff ratios
 - Deterioration of standards, decay of infrastructure
 - Rise in private HET for affluent

NATIONAL TRENDS IN FUNDING SA HET (1)

HET expenditure as % of GDP (DHET:
University State Budgets, 2016)

	08	09	10	11	12	13	14	15	16*	17*
%	.63	.66	.68	.71	.73	.72	.73	.74	.84	.82
Normal ised re 04	96	100	103	109	112	110	112	114	128	126

NATIONAL TRENDS IN FUNDING SA HET (2)

HET expenditure as % of total State budget (DHET: University State Budgets, 2016)

* Represents normalized figures re 2004

	08	09	10	11	12	13	14	15	16*	17*
%	2.36	2.24	2.37	2.47	2.51	2.49	2.48	2.43	2.81	2.77
*	88	83	88	92	94	93	92	91	105	103

NATIONAL TRENDS IN FUNDING SA HET (3)

Rand values in R' 000 HET budget for selected years (Source: DHET: University State Budgets, 2016)

	Total Budget
2008	15 119 788
2010	19 108 099
2012	24 280 762
2014	26 069 986
2016	36 858 629*

- Includes approx R1.3 billion for 2 new universities and R8,9 billion for NSFAS

NATIONAL TRENDS IN PUBLIC FUNDING OF HET (4)

- Context of decreased public funding of HET
 - Significant increase in student enrolments
 - Total enrolments grew by nearly 4% p a between 2007 and 2014
 - Now nearly 72% of students African compared to 65% in 2008
 - 58% are women compared to 56% in 2008
 - STEM graduates now make up 30% of all graduates

NATIONAL TRENDS IN PUBLIC FUNDING OF HET (5)

- Total academic staff: Increased by 2% pa 2007 - 2014
- Student : staff ratio: 20:1 in early 2000's to 27:1 now- effect?
- Severe competition for 3rd stream income
- Tuition fee increases – 12% in some cases
- Introduction of variety of user charges
- Pressure on standards, equipment, infrastructure

NATIONAL TRENDS IN PUBLIC FUNDING OF HET (6)

- Rise in private HET for affluent
- Salaries of academic staff – USAf survey of 2012
- Pressure on tuition fee increases for 2017- CPI approx 6.1%, HET inflation of 1.7% - result 7.8% ?
- ‘Insourcing’ costs – full insourcing approx additional R600 million across – at cost of R100 000 p a per student, equals 6 000 student places !
- Exchange rate fluctuations

FUNDING MODEL FOR HET (1)

- Developed in 2003/2004 and replaced previous SAPSE model in place since 1983
- Basic principle: Public subsidies in line with public priorities
- Ministerial Review Committee of funding model – status ?
- Government subsidies: 2 components – block grant and earmarked funding
- Block grant – Institutional Council discretion
- Earmarked grant – Ministerial discretion

FUNDING MODEL FOR HET (2): BLOCK GRANT

- Block grant made up of 4 components
 - Teaching inputs- enrolled students
 - Teaching outputs- graduating students
 - Research outputs- M, D and publications
 - Institutional factor grants- Transformation and economies of scale
- Input and output driven model: Inputs approx 70%, outputs approx 30%

FUNDING MODEL FOR HET (3): BLOCK GRANT: TEACHING INPUTS

- Teaching input matrix
 - Driver: FTE enrolled students
 - 4x4 matrix: Level of study and area of study
 - Contact and distance education: Distance 50% of contact except for M and D level where it is equal
 - Classification of study fields – CESM classification
 - Cost analysis across study fields in 1997

FUNDING MODEL FOR HET (4): BLOCK GRANT: TEACHING INPUTS

- Teaching input matrix: Cost factors per FTE student for contact E&T
- Rationale: varying costs per level and per field

Field /Level	1	2	3	4
1	1.0	2.0	3.0	4.0
2	1.5	3.0	4.5	6.0
3	2.5	5.0	7.5	10.0
4	3.5	7.0	10.5	14.0

FUNDING MODEL FOR HET (5): BLOCK GRANT: TEACHING INPUTS

- Teaching input matrix
 - Level 1: Undergraduate
 - Level 2: Intermediate Post Graduate- Honours and PG Diploma
 - Level 3: Master's
 - Level 4: Doctoral

FUNDING MODEL FOR HET (6): BLOCK GRANT: TEACHING INPUTS

- Teaching input matrix
- Field 1: Education, law, psychology, public administration
- Field 2: Business, economics and management studies, communication and journalism, computer and information science, languages
- Field 3: Architecture and built environment, engineering, family ecology and consumer science, mathematics and statistics
- Field 4: Agriculture and agricultural operations, visual and performing arts, health professions and related clinical sciences, life sciences, physical sciences

FUNDING MODEL FOR HET (7): BLOCK GRANT: TEACHING INPUTS

- Teaching input matrix
- Example: Funding value of 1 FTE contact education:
 - Level 1 (UG) in 'soft sciences' (eg education): 1
 - Level 1 (UG) in 'hard sciences' (eg life sciences): 3.5

 - Level 4 (D) in 'soft sciences (eg education): 4.0
 - Level 4 (D) in hard sciences (eg life sciences) : 14

FUNDING MODEL FOR HET (8): BLOCK GRANT: TEACHING OUTPUTS

- Teaching outputs: Graduated students by output weights
 - 1st Certificates and diplomas of 2 years and less: 0.5
 - 1st diplomas and bachelors degrees of 3 years: 1.0
 - Professional 1st bachelors degree(4 years or more): 1.5
 - Post graduate and post diploma diplomas: 0.5
 - Post graduate bachelors degrees: 1.0
 - Honours degrees/ higher diplomas etc: 0.5
 - Non-research masters degrees and diplomas: 0.5

FUNDING MODEL FOR HET (9): BLOCK GRANT: RESEARCH OUTPUTS

- Research outputs
- Research output categories and weights
 - Publication units: 1
 - Research masters graduates: 1
 - Doctoral graduates: 3

FUNDING MODEL FOR HET (10): BLOCK GRANT: INSTITUTIONAL FACTORS

- Disadvantaged students factor grant
- Disadvantaged student: African or coloured SA citizen
- Factor values
 - Disadvantaged students: Less than 40%:
Factor weight of '0'
 - Disadvantaged students: Between 40% and 80%:
Factor weight is increased linearly up to '0.1'
 - Disadvantaged students more than 80%:
Factor weight remains '0.1'

FUNDING MODEL FOR HET (11): BLOCK GRANT: INSTITUTIONAL SIZE FACTORS

- Institutional size factor: Economies of scale
- Institutional size less than 4000 student FTEs:
Factor value: '0.15'
- Institutional size: 4000 to 25 000 student FTEs:
Factor value: Decreased linearly to '0'
- Institutional size more than 25 000 FTEs
Factor value '0'

FUNDING MODEL FOR HET (12): BLOCK GRANT

- Institutional block grant allocation:
- Teaching input allocation
- +
- Teaching output allocation
- +
- Research output allocation
- +
- Institutional factors allocation

FUNDING MODEL FOR HET (13): BLOCK GRANT

- Examples of some block grant allocations for 2016
- CPUT

Block grant = R917 400 000

Teaching input = R622 753 000

Research output= R 36 109 000

Teaching output= R195 340 000

Institutional factors= R 63 198 000

FUNDING MODEL FOR HET (14): BLOCK GRANT

- Examples of some block grant allocations for 2016
- UP

Block grant = R1 726 424 000

Teaching input = R1 162 653 000

Research output= R 355 325 000

Teaching output= R 208 447 000

Institutional factors= Zero

FUNDING MODEL FOR HET (15): BLOCK GRANT

- Some differences between CPUT and UP for 2014
- Rationale: varying costs per level and per field

	Teaching inputs	Teaching outputs	Research outputs	Research output per academic staff member
CPUT	58 100	9 390	332	0.4
UP	110 700	10 202	3 269	2.4

FUNDING MODEL FOR HET (16): EARMARKED GRANT

- Underlying rationale and principles
- Prioritisation of earmarked funding categories
- Ratio of block grant to earmarked grant

	Block grant	Earmarked grant
2004	87%	13%
2009	76%	24%
2015	68%	32%

FUNDING MODEL FOR HET (17): EARMARKED FUNDS

- Examples of earmarked fund categories for 2016:
 - Teaching development grant: R649 506 000
 - Foundation provision grant: R319 956 000
 - Research development grant: R209 547 000
 - HDI development grant: R433 532 000
 - NSFAS grant: R8 893 811 000
 - Veterinary sciences grant: R149 250 000
 - Clinical training grant: R452 406 000
 - Infrastructure and Efficiency Grant: R2 422 013
 - Zero fee increase grant: R300 000 000
 - New universities grant: R1 275 165 000
 - National Institute of Human and Social Sciences: R25 081 000
 - African Institute for Mathematical Sciences: R5 265 000

FUNDING MODEL FOR HET (18)

Proportional distribution of government funding (1st stream) to total institutional income for entire sector for 2013

	1 st Stream
2000	49%
2013	40%

FUNDING MODEL FOR HET (19)

- Proportional distribution of government funding to total institutional funding for selected universities for

Unisa	SU	UCT	MUT	TUT	CUT
32%	33%	34%	52%	54%	59%

FUNDING MODEL FOR HET (20): MINISTERIAL FUNDING STATEMENT

- Role of annual Ministerial Funding Statement
- MTEF provision for HET for coming 3 years
- Information on:
 - Estimated funding units for Teaching input, Teaching output, Research output, and Institutional factors
 - Block grant calculations
 - Earmarked funding categories and the applicable 'rules'

TUITION FEE INCOME (2nd STREAM INCOME) (1)

- Tuition fees increased by an average of nearly 9% p a for all universities ie by 42% from 2010 to 2014
- Institutional variation over this period:
 - UCT increased by nearly 10% p a over this period
 - UFH increased by approx 5.5% p a
- Student debt to universities in 2015: R5 billion

TUITION FEE INCOME (2nd STREAM INCOME) (2)

- Proportional distribution of tuition fee to total institutional funding for all universities and for selected universities for 2013

All	CUT	DUT	RU	UCT	NMMU
33%	39%	42%	46%	29%	28%

TUITION FEE INCOME (2nd STREAM INCOME) (3)

Changes in proportion of 2nd stream income between 2000 and 2013

	2 nd Stream Income	
	NSFAS	Private
2000	24%	22%
2013	33%	20%

'OWN INCOME' (3rd STREAM INCOME) (1)

- What is 3rd stream income
- Proportion of 3rd stream income of total institutional income for all universities and for selected universities for 2013

All	SU	UCT	DUT	UFH	UWC	UZ
27%	45%	37%	11%	20%	45%	16%

OVERALL INCOME DISTRIBUTION FOR HET

Proportional distribution of funding stream incomes

	1 st Stream	2 nd Stream		3 rd Stream
		NSFAS	PVT	
2000	49%	24%		27%
		2%	22%	
2013	40%	33%		27%
		13%	20%	

NATIONAL STUDENT FINANCIAL AID SCHEME (NSFAS) (1)

- Origin of NSFAS
- Established in 1999 based on NCHE Report of 1996
- Ministerial Committee's Review of NSFAS (2010)
- Supports students at all public universities and public TVET Colleges
- Type: Income contingent loan scheme
- Students repay once they earn R30 000 p a or more
- Interest rate set at 80% of Repurchase Rate
- Up to 40% of study loan can be converted into bursaries through academic achievement

NATIONAL STUDENT FINANCIAL AID SCHEME (NSFAS) (2)

- Data for 2014/15

Disbursements	Amount	Number of students	Average amount per student
Universities	R7 billion	186 150	R37 604
TVET Colleges	R2 billion	228 642	R8 747
Total	R9 billion	414 802	

NATIONAL STUDENT FINANCIAL AID SCHEME (NSFAS) (3)

- Allocations to some universities in 2014/15

	UCT	Unisa	WSU	UL	VUT	NMMU
Amount	R182m	R347m	R450m	R425m	R228m	R268m
# students (%)	3 650 (14%)	24 118 (7%)	13 539 (56%)	12 548 (54%)	6 747 (34%)	6 008 (23%)
Average per student	R49 863	R14 388	R33 237	R33 869	R33 793	R44 607

NATIONAL STUDENT FINANCIAL AID SCHEME (NSFAS) (4)

- Disbursements in selected years

	2004	2006	2008	2010	2012	2014
Amount	R985m	R1.3 bn	R2.3 bn	R3.6bn	R7.7b	R9bn

- Student debt to NSFAS in 2015 amounted to R15 billion
- Loan recovery rate is lower than approx 30%

NATIONAL STUDENT FINANCIAL AID SCHEME (NSFAS) (5)

- NSFAS rules
- Use race as proxy for poverty with African applicants weighted 3, Coloureds 2 and Indians 1
- Problem re 'black' students at Historically Advantaged Universities
- Uses full cost of study at universities as guide for allocations
- Eligibility criteria: Academic potential and financial need
- Means test: Proposed threshold value for family income is R122 000

NATIONAL STUDENT FINANCIAL AID SCHEME (NSFAS) (5)

- Means test: Unevenly applied: UCT =R250 000, Rhodes=R180 000, most others=R122 000
- Problem of 'missing middle'
- Use race as proxy for poverty with African applicants weighted 3, Coloureds 2 and Indians 1
- Challenge: 'More money to fewer students' or 'less money to more students'
- Varying levels of service rendering by university Financial Aid Offices
- NSFAS pilot project: Engage directly with students – challenges

HET CHALLENGES (1)

- Limited alternatives to university study
- High dropout and low graduation rates
- Large numbers of very poor students and insufficiency of NSFAS funds
- Governance problems
- Financial health and controls of universities

HET CHALLENGES(2): ALTERNATIVES TO UNIVERSITY STUDY

- Limited alternatives to university study
 - 26 universities
 - Approximately 100 private HET institutions
 - 50 public TVET Colleges
 - Some private TVET colleges
 - 11 Colleges of Agriculture (DAFF)
 - Colleges of Nursing(DoH)
 - WP on Post School E&T
 - Low absorption rate of economy

HET CHALLENGES (3): DROPOUT AND GRADUATION RATES

- Low through puts, high dropouts (DHET 2000 to 2008 1st time entering student cohort analysis, 2016)
- Cumulative total % dropout and graduates for 3 year diplomas for 2008 intake

	Year 2	Year 3	Year 4	Year 5	Year 6
Dropouts	31.6%	38.5%	39.2%	42.1%	42.4%
Graduates		13.7%	25.4%	33.8%	39.3%

HET CHALLENGES (4): DRPOUT AND GRADUATION RATES

- Cumulative total % dropout and graduates for 3 year diplomas for 2008 intake (African students compared to White students)

* Switch to degree study on completion of 3 year diploma

	Year 2	Year 3	Year 4	Year 5	Year 6
Dropouts:					
A	32.1%	39.0%	41.1%	43.8%	30.0%
W	28.5%	34.6%	25.2 %*	30.6%	31.7%
Graduates:					
A		11.9%	23.4%	31.7 %	37.1%
W		25.0%	38.9%	48.2%	54.4%

HET CHALLENGES (5):DROPOUT AND GRADUATION RATES

- Low through puts, high dropouts (DHET 2000 to 2008 1st time entering student cohort analysis, 2016)
- Cumulative total % dropout and graduates for 3 year bachelor's degrees for 2008 intake

	Year 2	Year 3	Year 4	Year 5	Year 6
Dropouts	20.7%	25.8%	28.0%	29.8%	30.2%
Graduates		20.5%	36.1%	46.2%	51.9%

HET CHALLENGES (6): DROPOUT AND GRADUATION RATES

- Cumulative total % dropout and graduates for 3 year bachelor's degrees for 2008 intake (African students compared to White students)

	Year 2	Year 3	Year 4	Year 5	Year 6
Dropouts:					
A	23.7%	29.1%	31.8%	34.2%	35.0%
W	15.1%	19.6%	20.3 %	21.1%	22.2%
Graduates:					
A		13.4%	28.2%	39.2%	45.4%
W		33.9%	50.9%	59.8%	65.1 %

HET CHALLENGES (7):DROPOUT AND GRADUATION RATES

- General conclusions from DHET cohort study
 - Operate grossly inefficient HET system in terms of inputs yielding outputs
 - Diploma dropouts much higher than degree dropouts
 - Diploma graduations much lower than degree graduations
 - White students do marginally better than African students in 3 year diploma study

HET CHALLENGES (8): VERY POOR STUDENTS

- Large numbers of very poor students
- Poor loan recovery rate of NSFAS
- Race and financial empowerment still highly correlated
- Universities with more than 80% African students
 - CUT, DUT, UFH, UJ, UL, TUT, UniVen, VUT, WSU, UZ, UMP
- Universities with more than 60% African students
 - UKZN, NWU, NMMU, Unisa

HET CHALLENGES (9): GOVERNANCE FAILURES

- Between 2010 and 2012 5 assessor report and 4 institutions under administration: TUT, VUT, UZ, WSU and assessor report for CUT
- Main failings:
 - Poor Council leadership and performance;
 - Non-compliance with institutional rules and policies
 - Interference in admissions, appointments of staff and procurement;
 - Council –VC contestations
 - Poor Senior Management performance especially iro HR and Finance

HET CHALLENGES (9): FINANCIAL HEALTH OF UNIVERSITIES

- DHET Analysis of 2015 Reports by universities (2016)
- Universities with operating deficits in 2014 on council controlled funds: NWU, RU, UKZN, UNISA, CUT, MUT
- Universities with council controlled personnel costs above the DHET norm of 53%-63%: CPUT (67%), TUT (66%), RU (73%), UFS (64%), UCT (65%), WSU (71%), DUT (71%), MUT (65%), VUT (70%)
- Student debt before provision for doubtful debt: R5.451billion
- Student debt as % of tuition fee income: 28%

HET FUNDING OPTIONS (1)

- Increase government subsidies to 1% of GDP ;
- Retain tuition fees but not for the 'poor'
- Standardize principles and processes for determining tuition fees
- Sliding scale tuition fees ?
- Increase NSFAS funds and improve loan recovery rate
- Institute NSFAS loans for 'missing middle'

HET FUNDING OPTIONS (2)

- Graduate tax model – tax on ‘private benefits’ of HET (compare to Australia)
- Social Impact Bonds: Privately funded bonds to be repaid by government when desired social outcomes are achieved
- Decisive institutional differentiation models eg Germany
- Greater tax breaks for corporate donors to HET