DRAFT:
Paying for university -
Some economic considerations

V2b

March 2017

1. Mandate and approach

- TIPS asked to provide an input on "the broader social, economic and financial implications of providing fee-free higher education and training.”
- We were also asked to analyse whether the economy can absorb more graduates.

- Why TIPS
  - ➢ Set up to support development of economic policy, particularly industrial policy
  - ➢ Skills shortage and inequality are central economic challenges
  - ➢ Core areas of expertise include
    - Economic analysis to support policy development
    - Value-chain analysis
    - Inclusive and equitable growth and the economics of the social wage
    - Support for SEIAS

Methodology

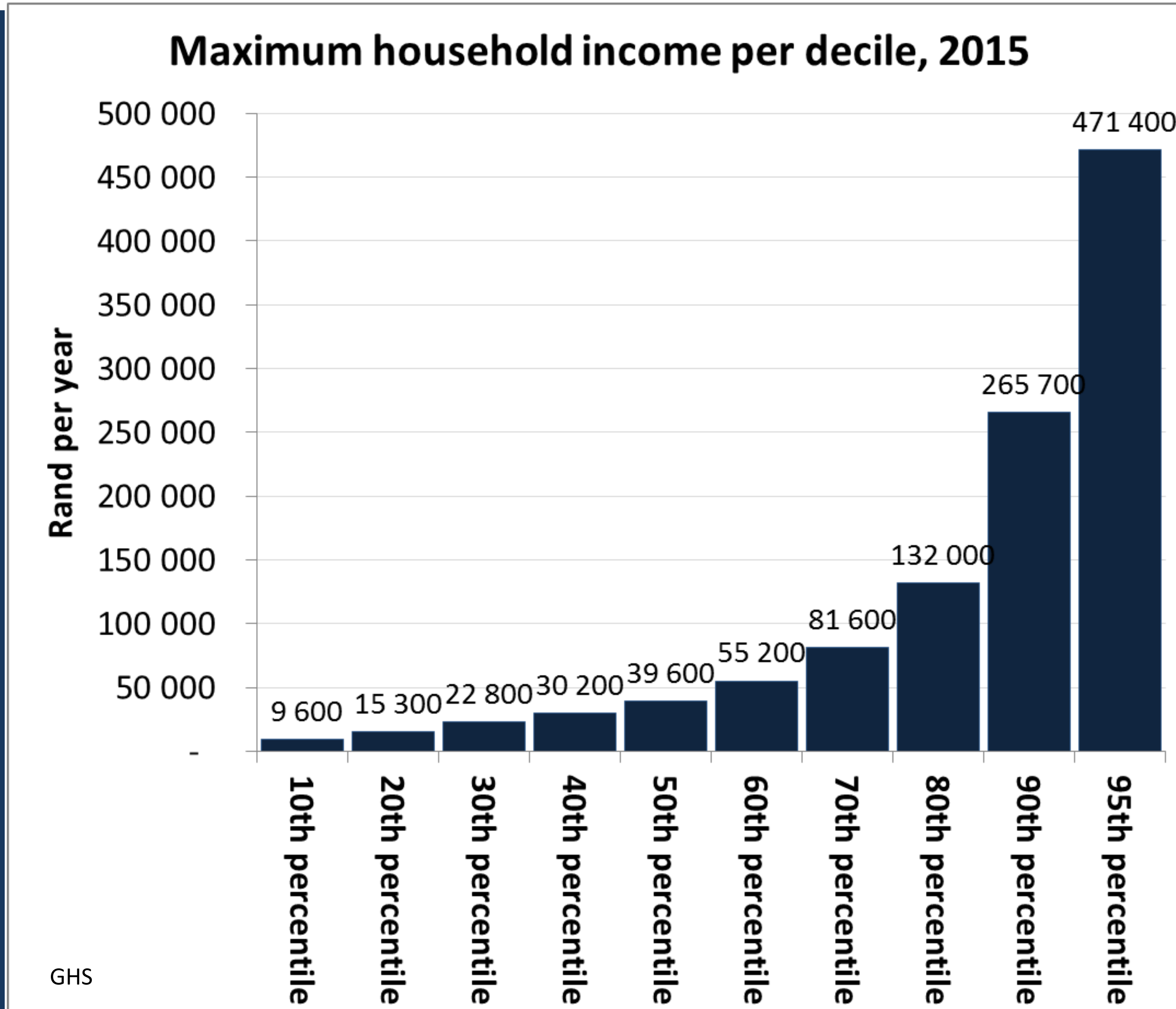
- University education promotes economic and social development primarily through its impact on income inequality, social mobility and the skills shortage
- This paper therefore:
  1. Analyses the link between the skills shortage and income inequality
  2. Evaluates how the education system currently affects inequality and social mobility
  3. Reviews the impact of the current fee system
- On this basis, we propose alternative ways to fund universities and evaluate them using the SEIAS methodology that focuses on the costs, benefits and risks to different social groups

2. Economic inequality and the skills shortage

- South Africa is amongst the most unequal countries in the world
- Economic implications (see Ostry et al. 2016 for the IMF, amongst others):
  - Policy contestation and social conflict depress investment
  - Lower productivity as poor households cannot ensure adequate education or health
  - Weaker domestic demand for locally produced goods and services
- Continued alignment with race and gender aggravates impact on social cohesion
- The skills shortage is a key factor sustaining inequality

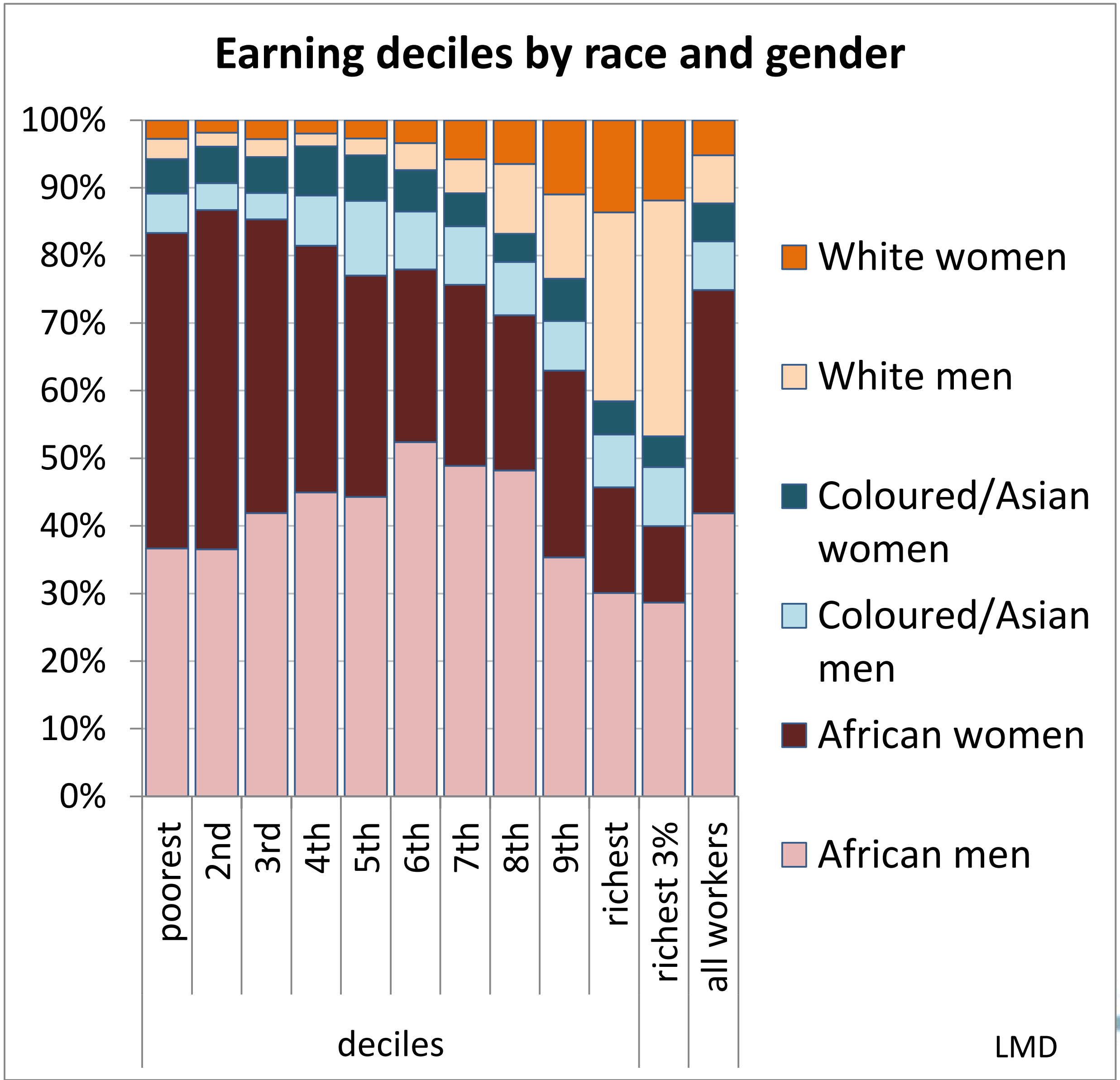
Household income distribution

- Richest 10% of households account for half of household income and over nine tenths of household assets
- Poorest 30% of households
  - Live on less than R2000 a month
  - Half depend primarily on social grants and remittances
- Richest 10% earn over R40 000 a month



Inequality, race and gender

- Inequality by race was reflected in employment, earnings and ownership
- Africans made up 75% of all employed people but just 40% of the richest 3%
- Employment ratios:
  - African men: 45%
  - African women: 33%
  - White women: 45%
  - White men: 65%
- Black people had far less inherited assets than whites with the same income
- 42% of formal business owners were white men; just 33% were Africans



The skills shortage and inequality

- Especially from the late 1970s, apartheid rules maintained white privilege in the workplace less through overt job reservation than through
  - Unequal access to tertiary education and certified training
  - Exclusionary professional associations
  - Encouraging in-migration and promoting white women as an alternative to opening the doors of learning

- The skills shortage was a pillar of inequality
  - It exaggerated the gap in pay between skilled and unskilled workers
  - It encouraged unequal and hierarchical work organisation
- It also effectively promoted mediocrity by
  - Limiting the pool of students
  - Reducing competition
  - Reducing diversity, which studies show promotes productivity, in management and the professions

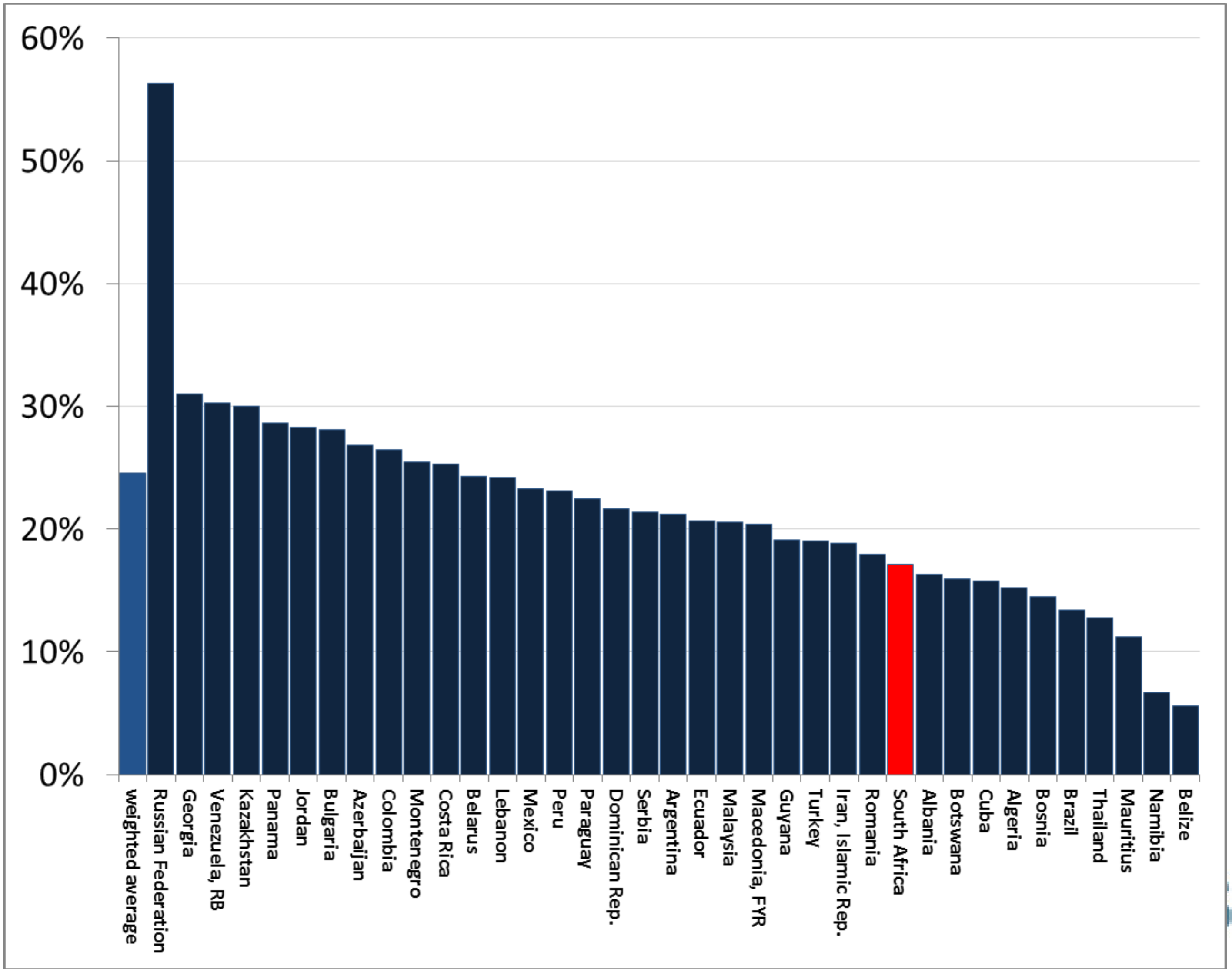
Assessing the skills shortage

- In a market economy, skills shortages appear mostly in unusually high returns to education, NOT as an inability to fill posts at any price
- Employers experience shortages primarily through high, sometimes not sustainable, cost to hire people for high level positions
- Extent of shortage depends on both demand (linked to both growth and work organisation) and supply

- Indicators
  - ➢ Low share of graduates in labour force
  - ➢ Unusually high returns to tertiary education reflected in large pay gap between graduates and others
  - ➢ Very low joblessness for graduates especially compared to less educated workers

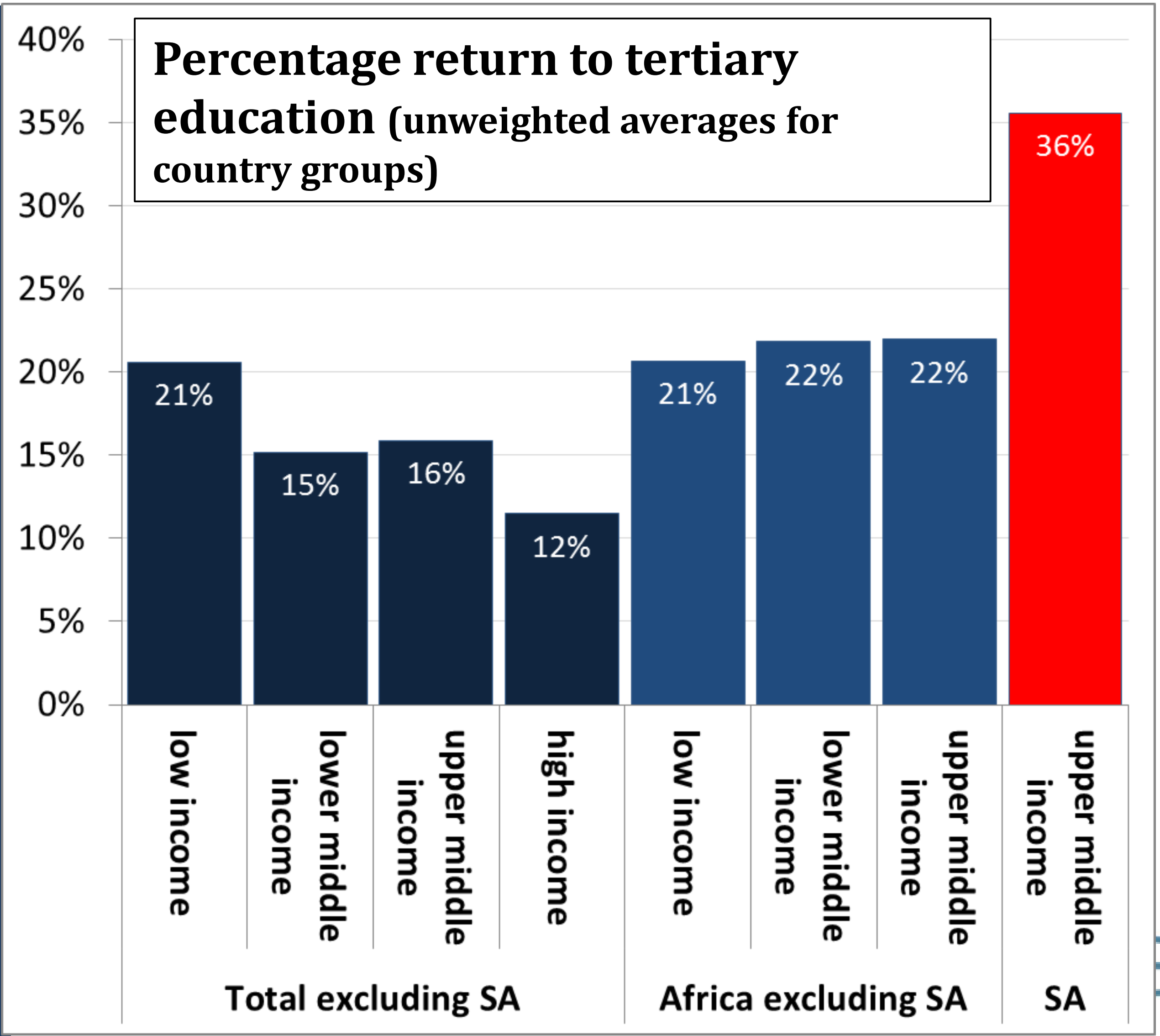
Share of graduates in the labour force

- World Bank data on share of tertiary graduates in labour force (employed plus workseekers) for 38 upper-middle-income economies
- Weighted average for group was 25%, and unweighted was 19%
- South Africa was at 17%
  - 44% lower than the weighted average
  - 11% lower than the unweighted average)
- South Africa ranked 27th out of 38 countries



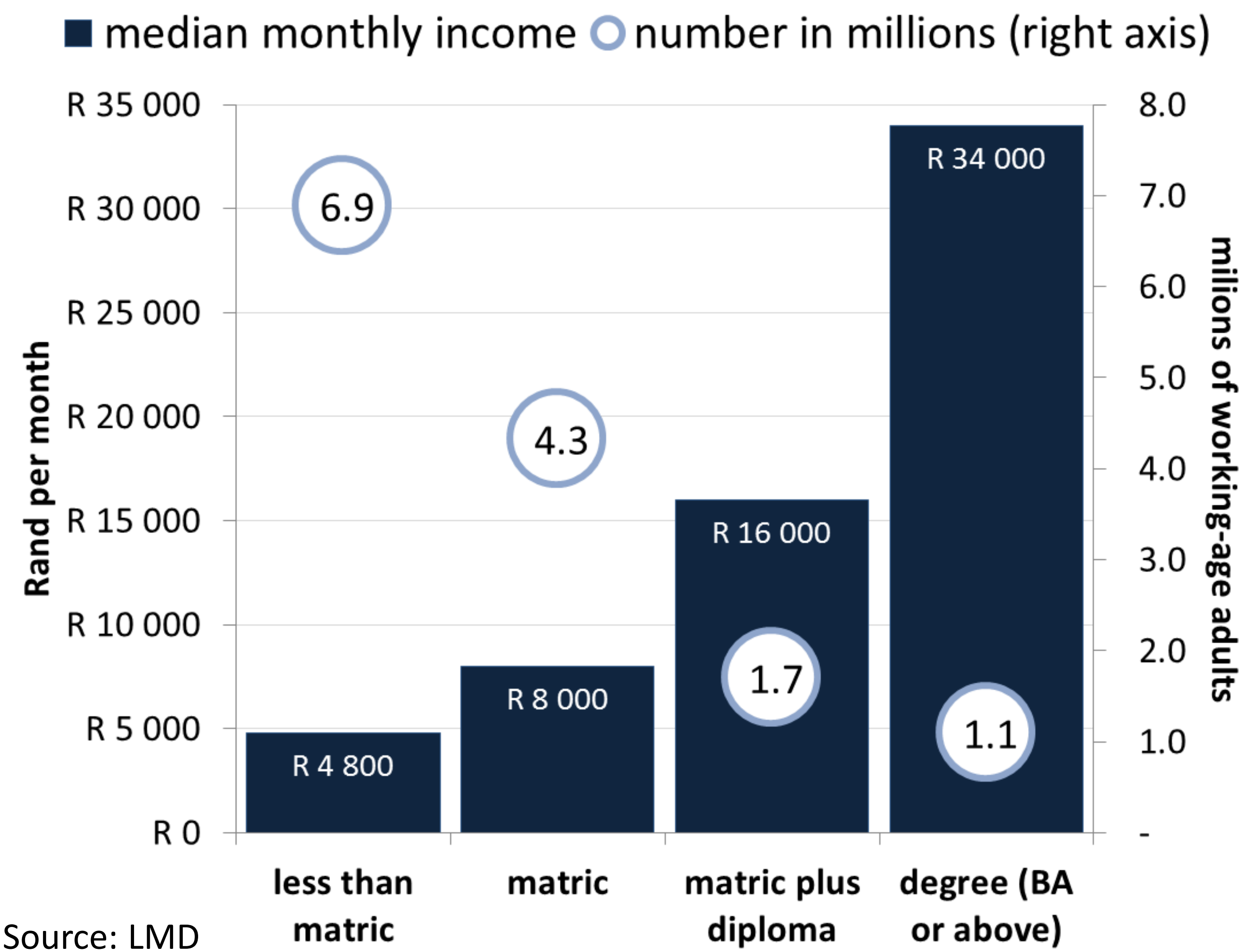
Returns to tertiary education

- World Bank research by Montenegro and Patrinas (2014) looked at returns to education, measured by pay differential (excludes profits)
- Survey data for various years from 2002 to 2012 for 108 countries
- South Africa had by far the highest returns to tertiary education of any country
- Returns in Africa were generally higher than elsewhere, but South Africa was higher than other African economies also



Education and pay in South Africa

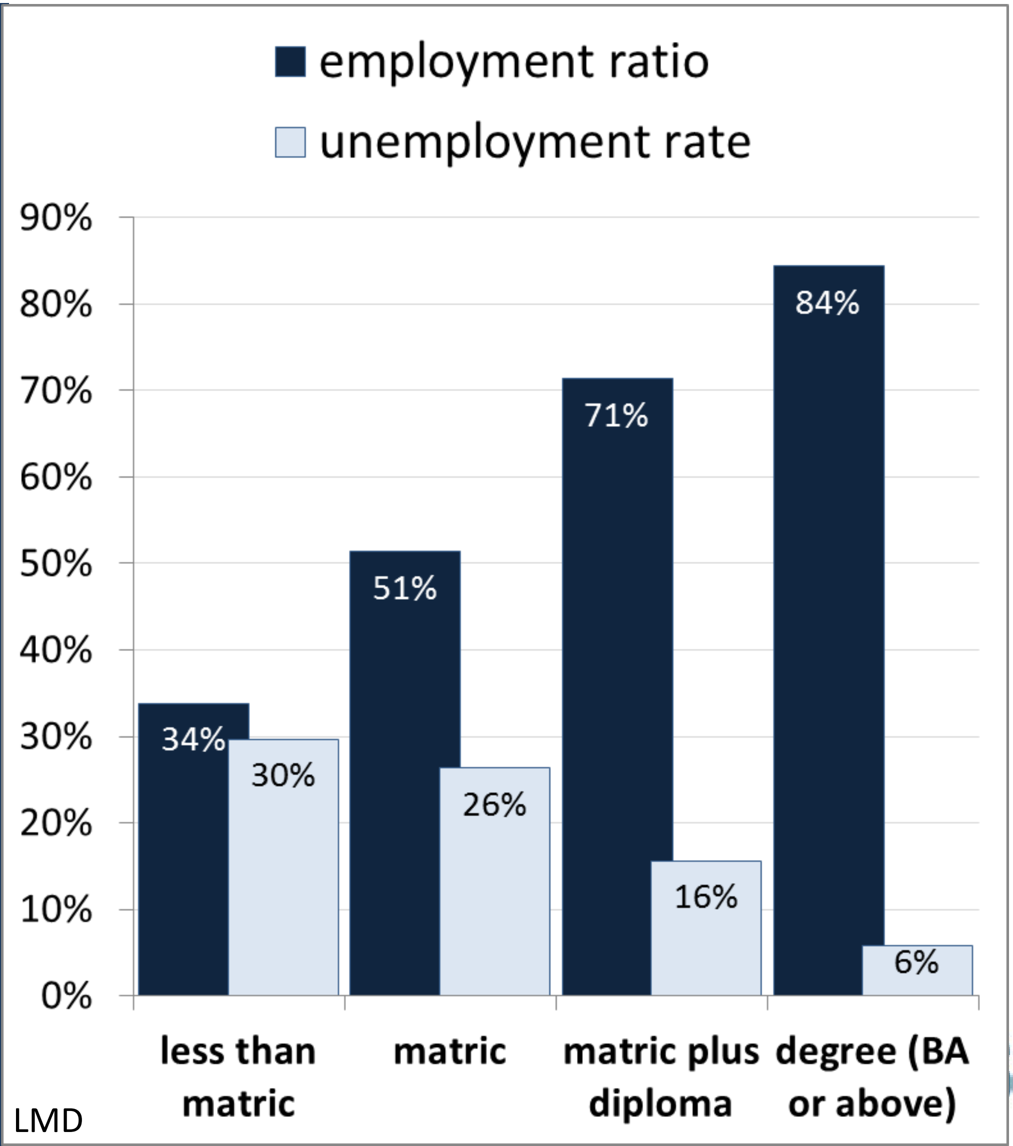
- In 2015, the median income for people with degrees was R34 000 a month
- That was equal to the 88th percentile in overall earnings distribution



Source: LMD

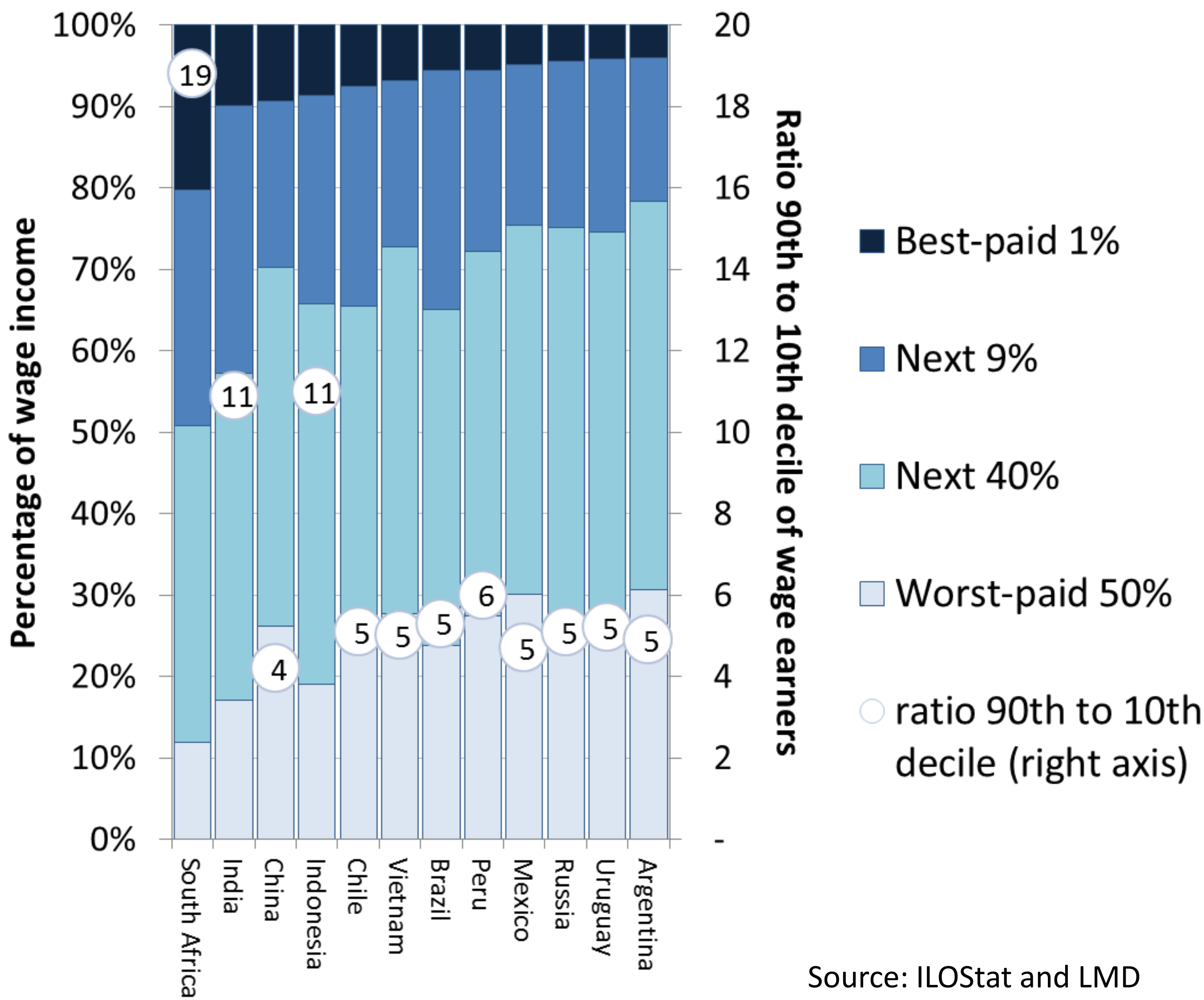
Joblessness and education

- Two measures of joblessness:
  - Share of working-age adults with employment (the employment ratio or absorption rate)
  - Share of workseekers in employed plus workseekers (the unemployment rate)
- By both measures, joblessness was very low for graduates even by international standards
  - Data on "tertiary" is misleading because includes matric plus any diploma of at least six months
- Contrast with extraordinarily high joblessness for matric and below
- International norm for employment ratio is 60%



Implications

- South Africa has amongst the most unequal wage scales in the world, as measured by the ILO
- Addressing the skills shortage should bring down pay at the top, moderating inequality
- Reducing the cost of skills would also effectively improve competitiveness across the economy



Source: ILOStat and LMD

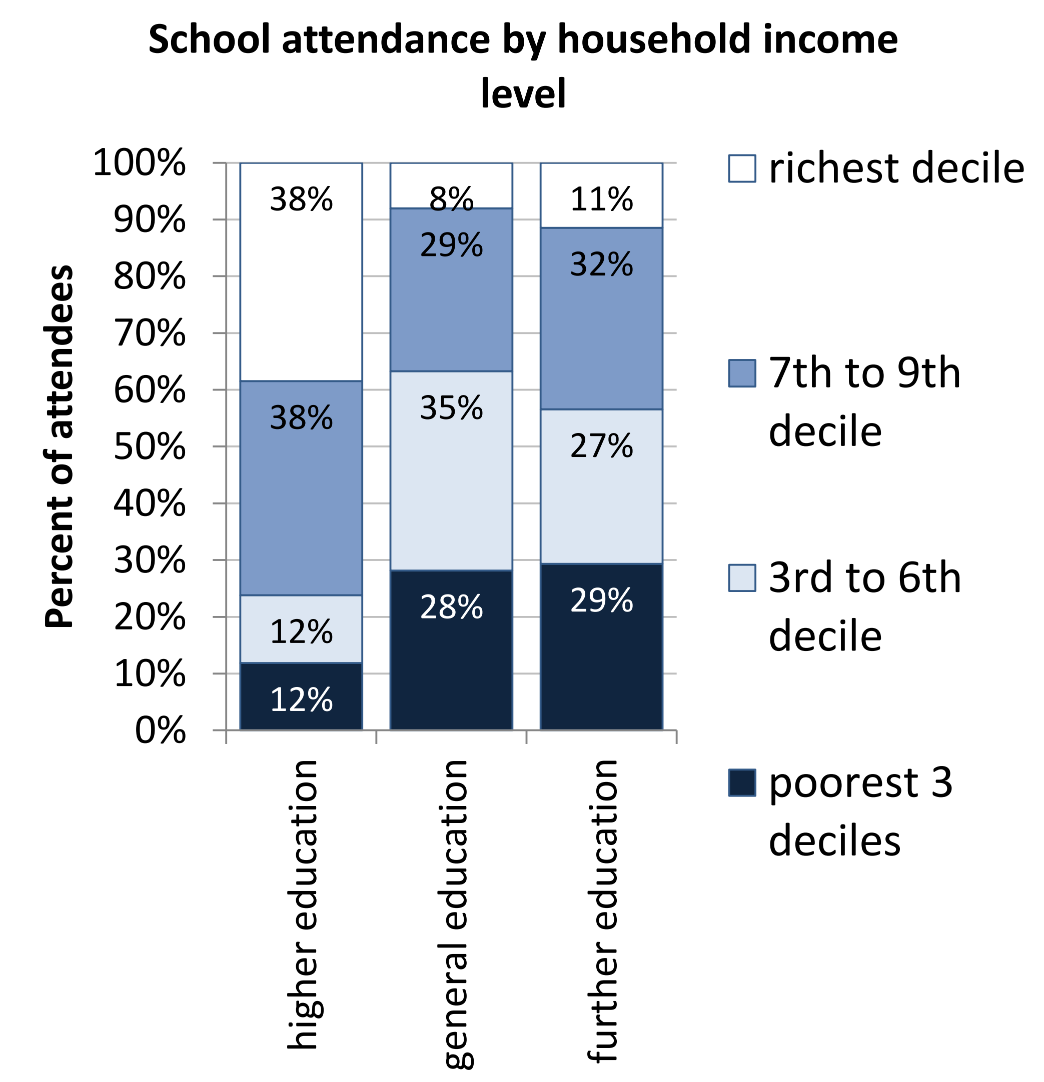
2. Education and social mobility

- Social mobility refers to the extent to which people can move between deciles
- Inequality is particularly problematic where social mobility is limited
  - Reduces systemic legitimacy
  - Undermines advancement based on merit
- In the long run, the solution to inequality is to generate more opportunities for the poorly educated and marginalised
- In the short run, improving social mobility helps – and education should be a critical vehicle
- In South Africa, despite progress since 1994, access to higher education is still shaped by family income and race

poorly

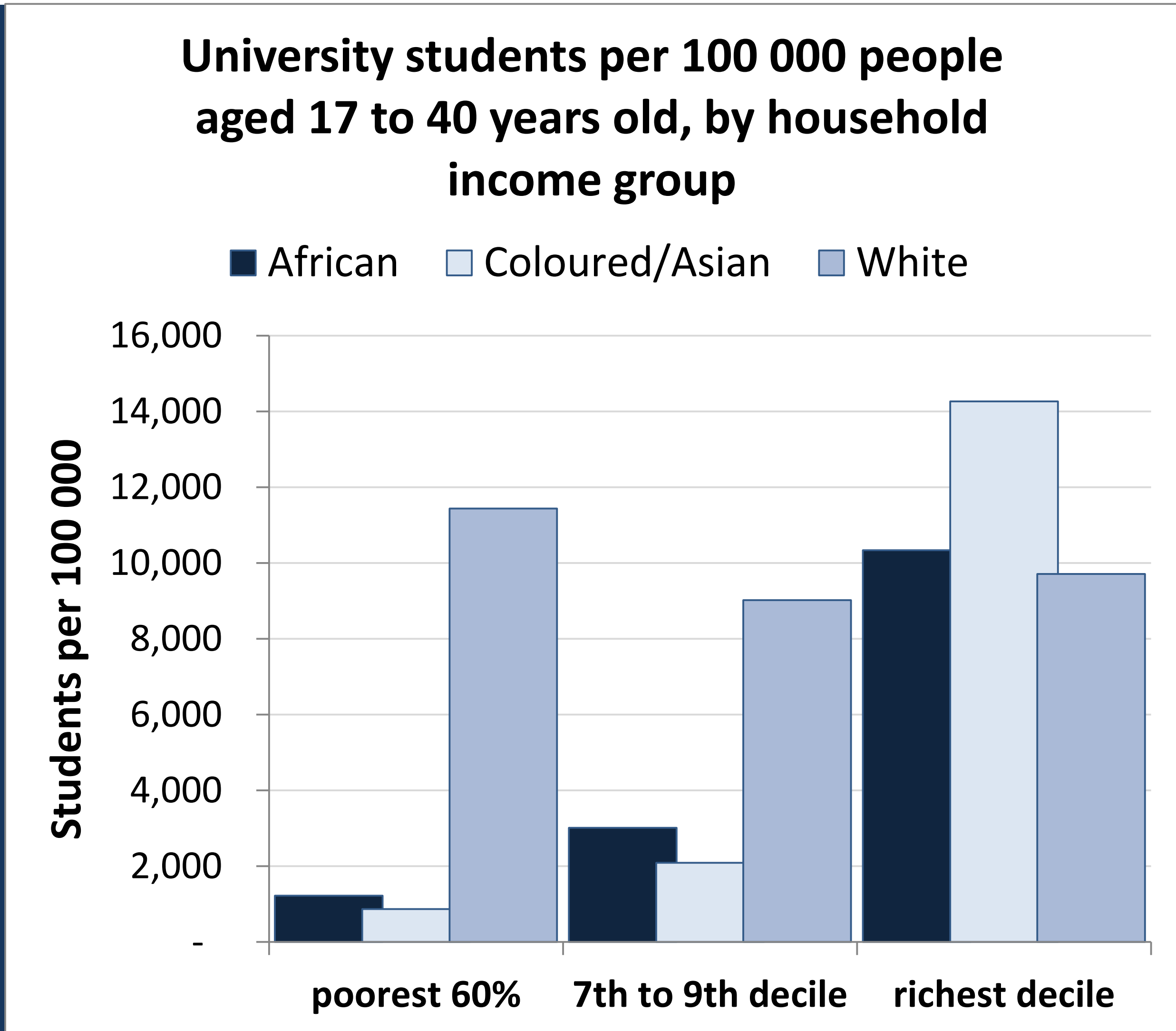
Universities and the reproduction of privilege

- People from high-income households are far more likely to go to university, which in turn improves their economic prospects
- For every thousand households in 2015,
  - in the poorest 60%, around 45 people attended a tertiary institution
  - In the richest decile, the figure was 170 – although these households had fewer children
- Members of the richest decile accounted for 38% of all university students, but just 9% of learners in general education and 11% in further education.



Race and university access

- Except for the richest decile, whites still had much more access to higher education than blacks
- Attendance at university per 100 000 people aged 17 to 40 was similar across the richest decile, irrespective of race



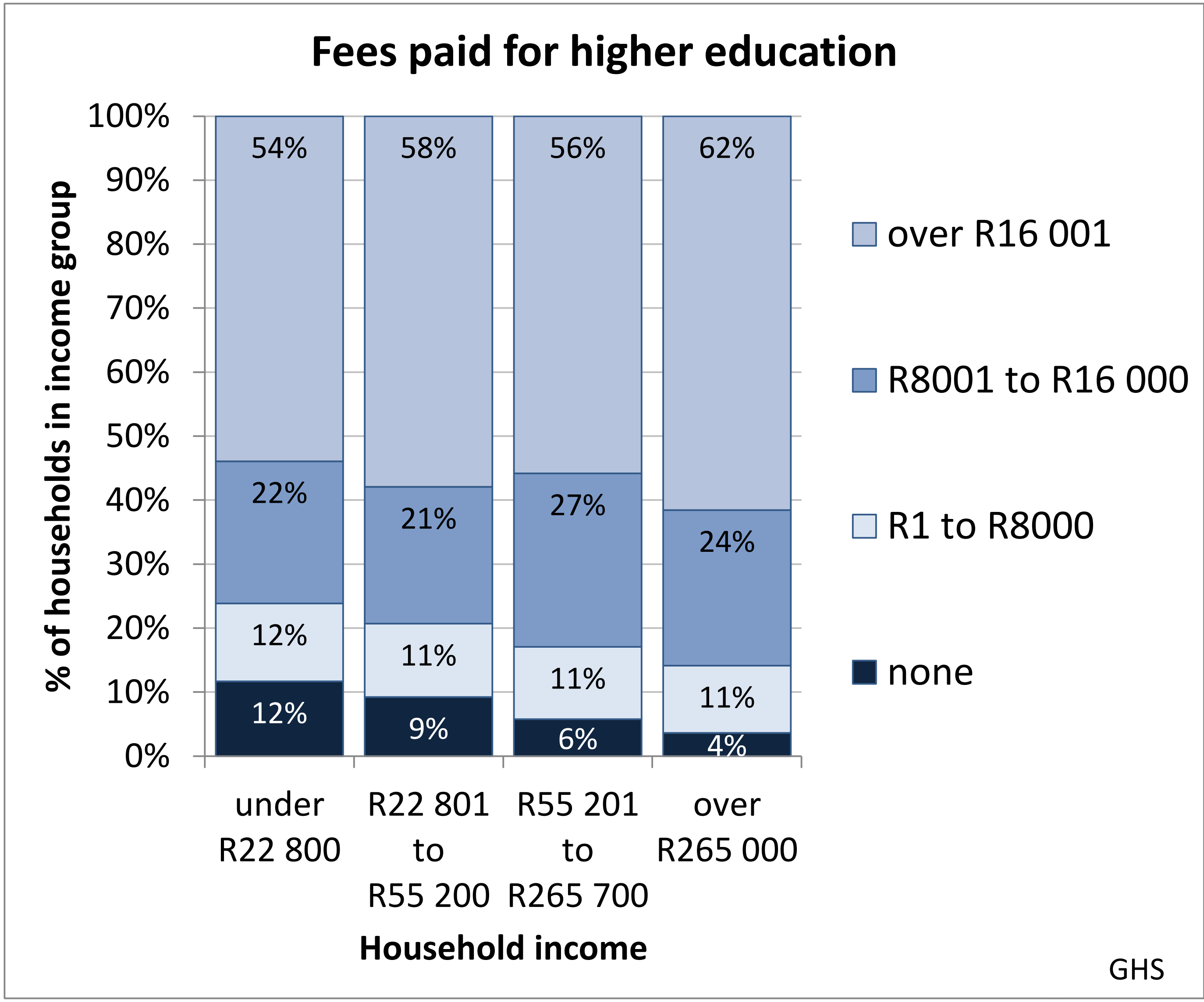
3. The fee system and unequal access to universities

- Unequal access to university results from:
  - Inequalities in general education based on income and location (and consequently race)
  - Same cost per student irrespective of household income
  - NSFAS leaves disproportionate burden on low-income households

- Aggravated by rapid increase in education fees in real terms from 1994
- Major causes:
  - Decline in subsidy per student from 1994 to 2002 as student numbers grew
  - Stabilisation in real terms after 2002 achieved almost exclusively by replacement of subsidy to universities with loans to students – an incentive to increase fees

Education costs

- At every income level, households had around the same sticker price for higher education
- Cost of R20 000 p.a. for 4 years equals
  - Almost 4 years pay for students in poorest 30%
  - Four months pay for students in the top decile
- In contrast, most poor children went to no-fee (but very poor quality) schools

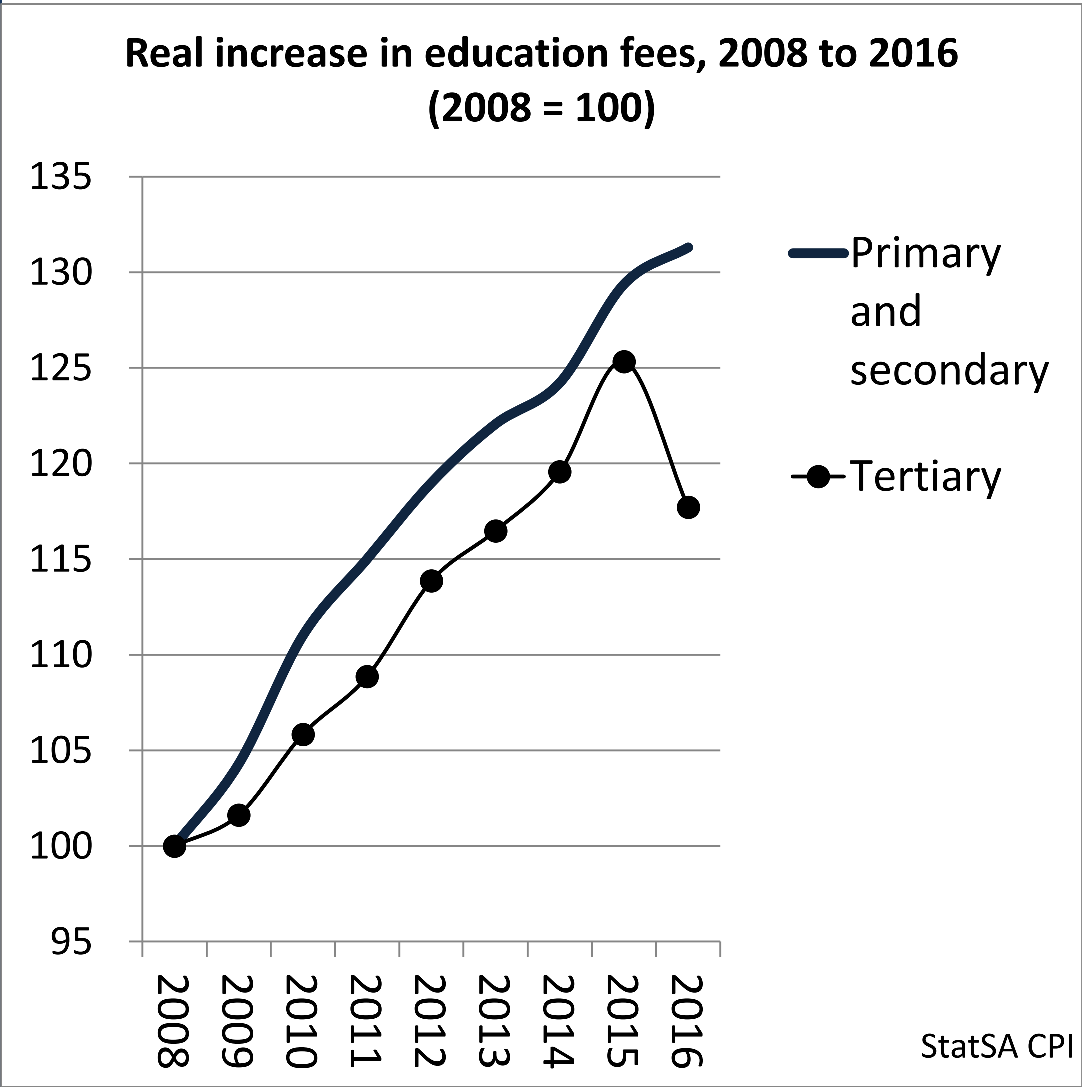


NSFAS and household costs

- NSFAS provides relief to some low-income students
- But they still see high fees and rising debt
- In practice,
  - Low-income students still face a much greater burden relative to their income than high-income students – which may in itself deter some from attending university
  - Every deviation from anticipated costs can cause desperation – for instance:
    - Cost of texts and materials (can reach several thousand rand a year in some courses)
    - Getting a bursary, which may disqualify a student from NSFAS
    - Problems with accommodation
    - Failing to graduate or repeating years

Education pricing

- In real terms, the cost of education as a whole almost doubled from 1994
- Tertiary education rose 25% above CPI from 2008 to 2015 – separate data not available before then
- Primary and secondary education fees increased more rapidly, but poor households generally did not pay them
- The freeze in 2015/6 saw a real decline in fees equal to inflation – around 6%



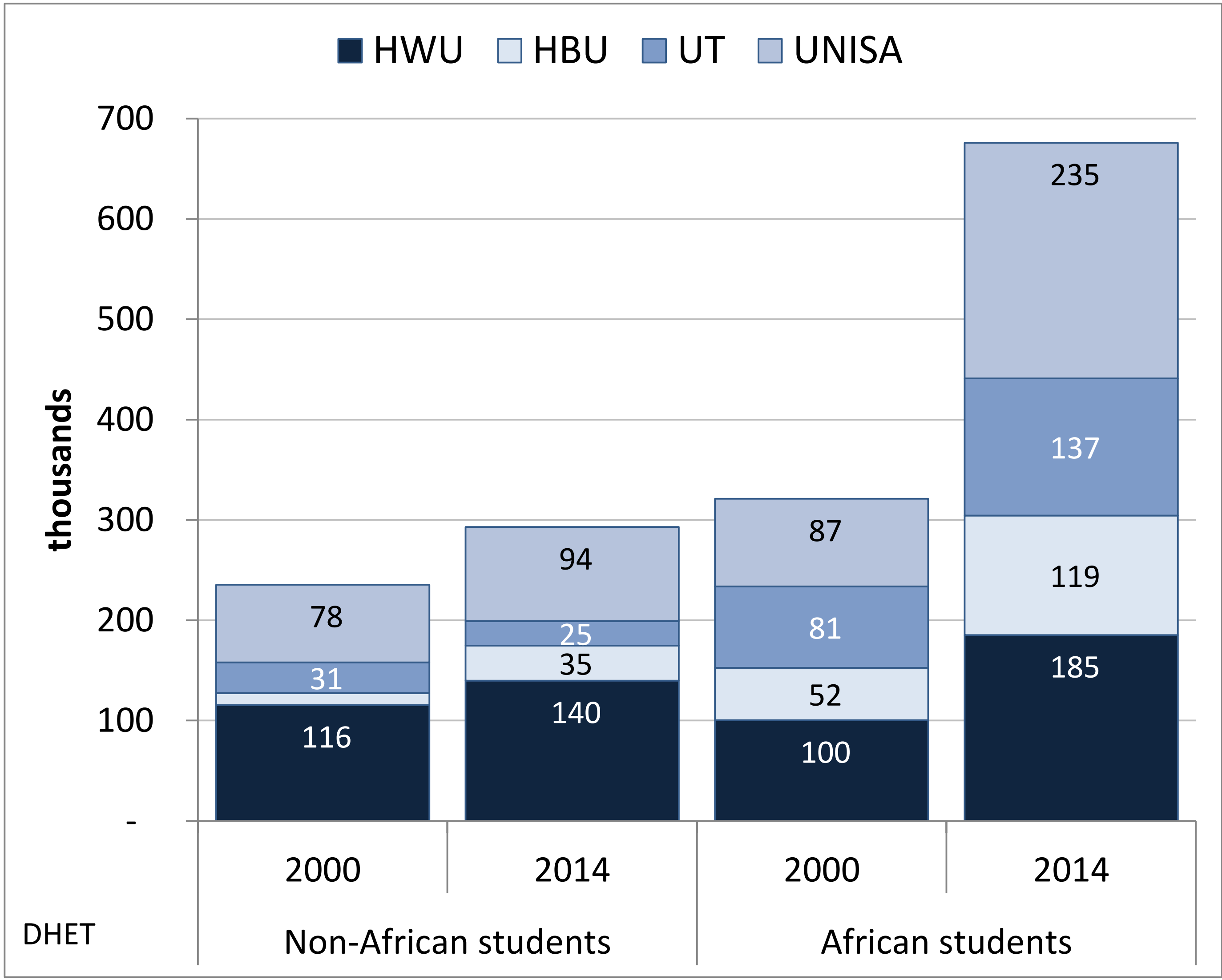
Factors driving higher fees

- Total student numbers, including UNISA, climbed from 370 000 in 1997 to almost a million in 2014
  - Growth was disproportionately in HBUs and UNISA
- In constant 2014 rand, funds per student dropped from around R40 000 in 1997 to R27 000 in 2005, then increased 8% to R29 000 in 2014
- But direct subsidies to universities continued to fall, dropping 31% from 2005 to 2014
- The increase in state funding was entirely due to expansion in NSFAS, which more than tripled in funds per learner from 2005 to 2014

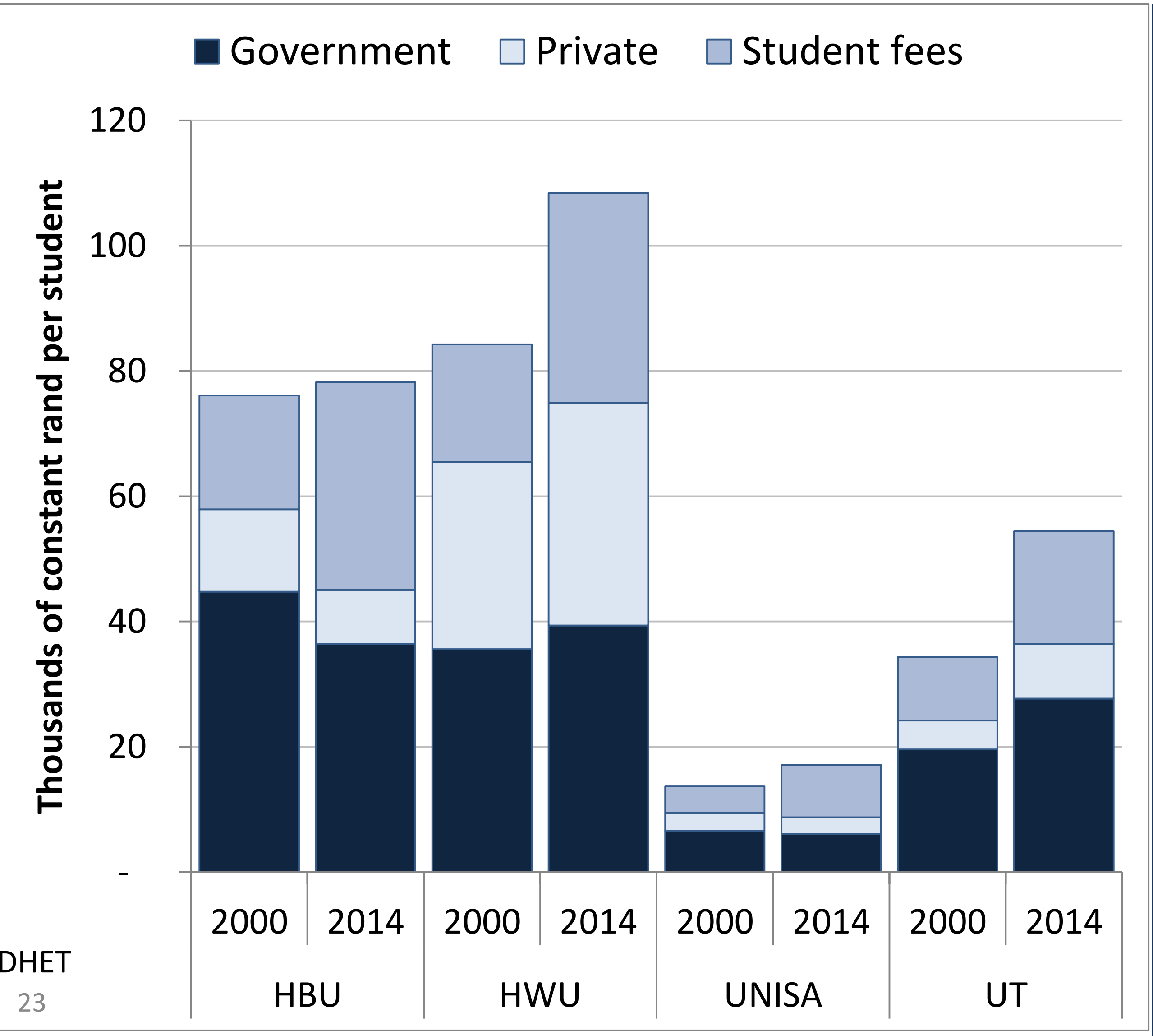
- The perverse incentive:
  - Universities see less cash from the state
  - Therefore raise their fees to cover costs
  - NSFAS therefore has to provide more cash per student
  - And poor students still face hardships

Inequality within the university system

- Bulk of growth in HBUs, Universities of Technology and UNISA
- But virtually all private funds go to HWUs, which also have better facilities



Income by source



DHET

- The fastest growing source of income from 2000 to 2014 for both HBUs and HWUs was fees
- But HWUs also started with higher private funding and saw an increase, while it fell for HBUs
- State funding to HBUs declined, apparently because of research funding and the relatively fast growth in student numbers

In sum…

- The current fees system continues to place a disproportionate burden on low-income students
- By international standards, measured in terms of months of income, fees for South African universities are low for the top decile but very high for the poorest 80%
- The increase in fees in part reflects the shift to loan funding from 2002
  - Provides an incentive to universities to increase fees as their direct subsidy goes down
  - That in turn raises the cost of NSFAS to the state

4. Policy options

- The policy options considered here aim:
  - To share the cost of university more fairly across households
  - To provide sustainable financing for universities
  - To ensure that universities have the freedom to fulfil their role in terms of critical thinking and research
- The SEIAS methodology assists in assessing policy options
  - Focus on costs, benefits and risks for different stakeholders
  - Not always able to quantify but can identify and describe

Options

- Compare current system with:
  - ➢ Increased funding to replace fees through a surcharge on income tax for graduates
  - ➢ Expanding NSFAS funds through zero-interest loan from the UIF surplus
  - ➢ Differentiating fees with a benchmark to equalise the burden relative to household income
  - ➢ Increased private funding for universities

- In each case, the technical assumptions are:
  - ➢ The total cost per student will remain constant in real terms
  - ➢ DHET said total fee income came to R21 billion in 2014
  - ➢ The number of students does not change radically, although it could continue to grow at the current pace of around 2% a year
- The assessment considers costs, benefits and risks to families in the poorest 80%; families in the richest 20%; universities; and the state

Context

- The cost is obviously not the only challenge to ensuring that higher education does more to promote equality and social mobility
- Additional steps would include:
  - Improving the quality of no-fee schools and making access to quality secondary schools more merit based
  - Making the learning environment more hospitable to students from poor backgrounds, especially by
    - Moving to a standard four-year degree in line with international norms
    - Improving communication with and accountability to students based on a review of governance and communication structures
  - Undertaking research into the full cost to students of attending university and ensuring that any options cover it
  - Reviewing salaries to enable universities to compete for more representative faculty
  - Reviewing curricula and research incentives to ensure they promote research and teaching that are relevant to South Africa – it is hard to justify higher spending on universities if they do not deliver in this regard

Option 1. The status quo

- Description:
  - State subsidy to universities stabilises at around R35 000 per student per year in 2016 rand
  - The budget forecasts a decline in NSFAS funding in real terms from R11 000 per student in 2016 to R9000 in 2018, although the number of students covered is expected to increase from 179 000 to 200 000 in the same period.

Benefits, costs and risks

- Benefits
  - ➢ Low-income students: Budget would provide NSFAS loans to around 20% of all students
  - ➢ High-income students: Continue to enjoy quality low-cost education by international standards
  - ➢ Universities: Do not see significant increase in dependence on the state
  - ➢ State: Not disruptive in terms of either systems or costs

- Costs:
  - ➢ Low-income students:
    - Targets would not reach around 40% of low-income students as defined here
    - Amounts would continue to be tight compared to actual costs
    - Still end up with high debt
  - ➢ High-income students: None
  - ➢ Universities: None
  - ➢ State: Continued increase in budgets for universities and NSFAS

- Risks:
  - ➢ Low-income students: Continued fee increases
  - ➢ High-income students: Protest action could disrupt studies
  - ➢ Universities: Protest action; greater dependence on private income could constrain academic freedom and social contribution; continued fiscal consolidation makes it difficult for state to provide promised funds
  - ➢ State: Protest action; continued fiscal consolidation makes it difficult to maintain expected spending

Option 2. Graduate tax

- Description:
  - Tax would subsidise fees for students from the poorest 90% of households, or around 60% of students
  - Fees are estimated as a proportionate share of the total, or R12 billion
  - Assume accommodation costs would still be met by NSFAS
  - Income-tax surcharge targeted at all graduates, no matter when or where they graduated
  - Assuming that the bulk of the cost would be met by the top 20% of taxpayers (who contribute around half of all personal income tax) a surcharge of around 1,8% would be required

Benefits, costs and risks

- Benefits
  - Low-income students: Would be relieved of fees and stress
  - High-income students: Less disruption at university and in society
  - Universities: Reduced disruption and low-income students are less stressed
  - State: Reduced protest and higher graduation rates; avoid cutting spending on other priorities

- Costs:
  - Low-income students: Still end up owing for accommodation; most would end up paying tax once employed
  - High-income students: They and their parents would end up paying tax, but only proportionate to income; more competition for university places
  - Universities: Greater state and public pressure to moderate costs and fees
  - State: Conflict with fiscal targets

- Risks:
  - Low-income students: Scheme falls apart if universities raise fees too high
  - High-income students: Universities continue to raise fees rapidly
  - Universities: Pressure to hold down fees leads to undesirable cuts
  - State: Effectively squeeze out other tax increases; continued rise in taxes undermines tax morality and may lead to skills flight and consequently reduced revenue

Option 3. UIF loan to NSFAS

- Description:
  - UIF lends NSFAS around R20 billion from its surplus
  - Low-interest loan to NSFAS is justified because:
    - Increased graduation rates and social mobility would promote job creation, in line with the UIF mandate
    - UIF surplus is currently well over R100 billion, and the interest alone equals around two thirds of its pay-outs so that it is snowballing
  - Effectively the loan would almost triple the NSFAS budget, enabling it to reach at least 300 000 more students with somewhat more generous loans
  - Because NSFAS is a loan fund, it could repay the UIF over time, although only at a low rate of interest

Benefits, costs and risks

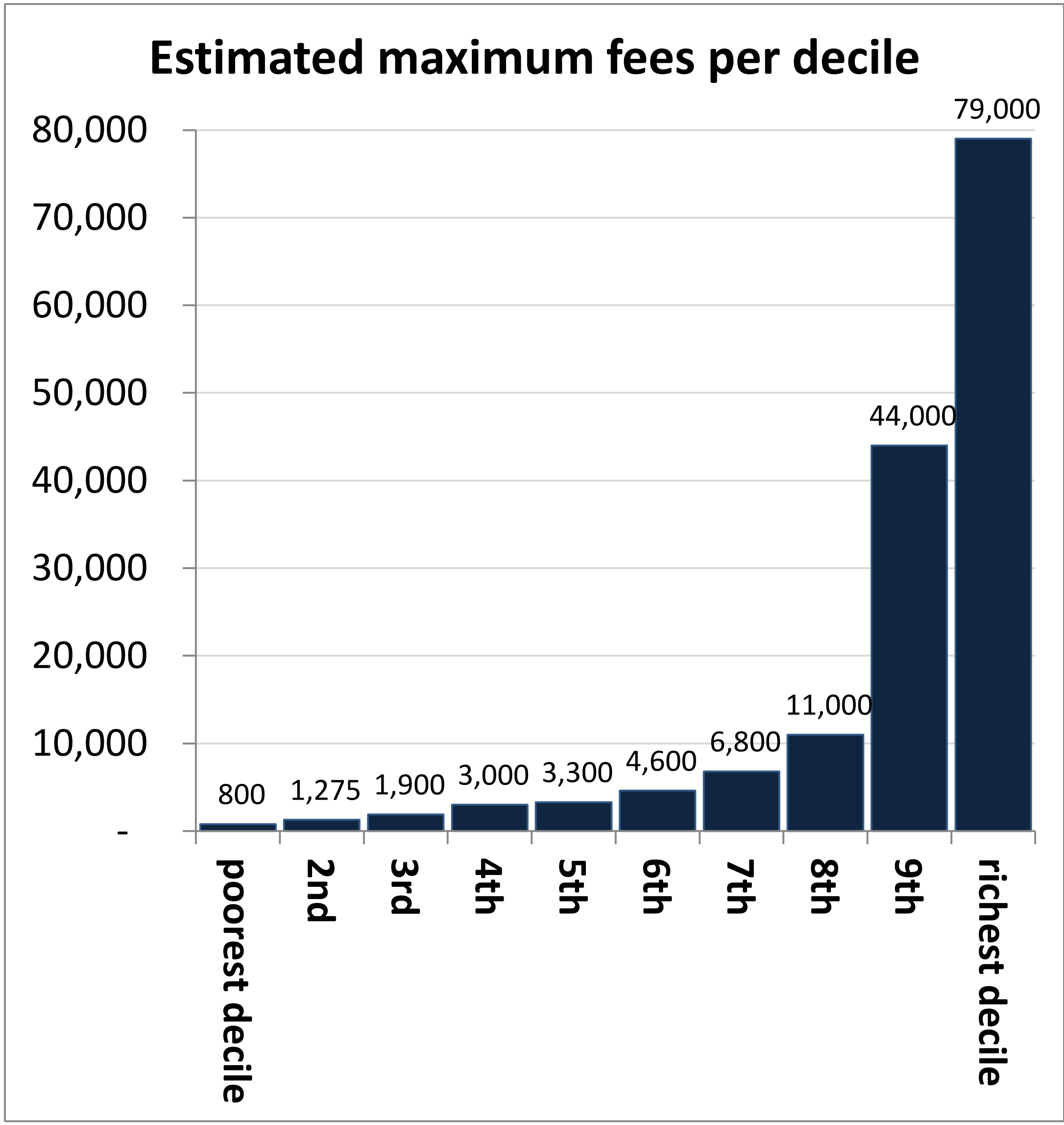
- Benefits
  - Low-income students: More access to NSFAS funds and less of a tight budget
  - High-income students: Less protest and greater social cohesion
  - Universities: Reduced disruption; space to raise fees as NSFAS will pay
  - State: Enhanced social cohesion and graduation rates

- Costs:
  - Low-income students: Still end up with substantial debt at graduation
  - High-income students: Universities still have incentive to raise fees as NSFAS will pay
  - Universities: None
  - State: Department of Labour and UIF Board would need convincing; opportunity costs of using UIF surplus for this particular aim

- Risks:
  - Low-income students: May not graduate or get a high income job, but still owe on debt
  - High-income students: More competition for university places
  - Universities: None
  - State: Students do not repay debts and UIF stakeholders are unhappy (although not financially much affected)

Option 4. Differentiated fees

- Description:
  - Fees are pegged at two months' household income per student per year for the richest 20% of households, and one month's household income per student per year for the remaining 80%
  - Cost per decile would range from R800 a year for the lowest decile to R79 000 for the richest
  - A rough estimate of revenue would be around R23 billion, based on estimates for current attendance in higher-education institutions in the General Household Survey
  - Cross-subsidies from rich households would effectively replace NSFAS



Benefits, costs and risks

- Benefits
  - Low-income students: Much lower cost
  - High-income students: Reduced protest and greater social cohesion
  - Universities: Reduced disruption; substantial increase in fee income especially at HWU, who get richer students
  - State: Enhanced social cohesion and graduation rates without budget burden

- Costs:
  - Low-income students: Still end up with some costs and therefore likely debt
  - High-income students: Much higher fees
  - Universities: Administrative costs of setting individual fee rates and collecting; HBU may see lower fee income unless some cross-subsidy system included
  - State: Protest from high-income group

- Risks:
  - Low-income students: Unable to cover even proposed low fees without some assistance
  - High-income students: More competition for university places
  - Universities: High-income students start seeing foreign options as competitive
  - State: Skills flight as high-income households shift tertiary students overseas

Option 5. Higher private funding

- Description:
  - Universities obtain higher corporate and individual funding through donations, bursaries and sale of services
  - State provides a tax incentive for donations to universities and could encourage large companies to fund bursaries in relevant fields, where they will benefit directly
  - Not clear how much funds could in fact be raised in this manner

TIPS

Benefits, costs and risks

- Benefits
  - Low-income students: More moderate increases in fees
  - High-income students: More moderate increases in fees
  - Universities: Higher income without greater dependence on the state; less protest
  - State: Less pressure for fiscal transfers

- Costs:
  - Low-income students: No reduction in fees
  - High-income students: No reduction in fees
  - Universities: Cost of fund raising and greater dependence on companies and rich individuals, which may constrain research and curricula; HBU do not get much private funding
  - State: Cost of tax subsidy

- Risks:
  - Low-income students: Impact depends on whether universities can raise substantial sums
  - High-income students: Same
  - Universities: Companies and rich individuals start setting agenda, reducing socially necessary activities
  - State: Universities unable to meet social needs as competing for private funds

Conclusion

- Some key questions are:
  - How to manage the trade off between redistribution and disruption of the rich and skilled?
  - How great is the risk and cost of continued protest if a bigger fix is not forthcoming?
  - How onerous is NSFAS for low-income students – evidence is essentially anecdotal
  - How to protect university autonomy from political and corporate interference while strengthening their contribution to society?

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