

FROM STUDENT AID TO HUMAN-CAPITAL INVESTMENT: A FISCALLY SUSTAINABLE FINANCING MODEL FOR SOUTH AFRICA

Category: Undergraduate

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1. Introduction

The architecture of student financing

What if South Africa's higher education funding crisis is not primarily a failure of financial allocation, but an architectural design flaw? More funding can improve access to higher education, but allocating money without properly managing completion, graduate earnings and future fiscal obligations risks producing the same pressures in subsequent budget cycles. South Africa's challenge is not simply to decide how much government should spend on higher education. It is to determine how financial support should be distributed, how the risks of unemployment and low earnings should be shared, and how today's expenditure can be reconciled with tomorrow's fiscal constraints.

This paper questions whether our current model makes economic sense. Right now, the state relies heavily on open-ended welfare grants via the National Student Financial Aid Scheme (NSFAS). We propose a shift toward a National Student Human-Capital Fund (NSHCF)—a model that pools risk across government, taxpayers, and students. Our study tackles three core pillars: First, it tests the financial boundaries of the current NSFAS grant model and its reliance on general state revenues. Second, it addresses the "missing middle", the vulnerable group caught right between welfare qualification and private affordability. Third, it examines international income-contingent loan frameworks, adapting global lessons to fit South Africa's unique labour market.

The rest of the paper is organised into sections. Section 2 gives a review of existing research. It looks at how higher education is funded now in South Africa, how many students complete their degrees, and how similar programmes work in other countries. Section 3 summarises the findings from that review. Section 4 offers policy ideas. It introduces a proposal called the National Human-Capital Contribution System (NSHCF). This system would pool risk among

graduates through their income-based contributions. It also includes models for predicting student outcomes and rules to protect institutions and their long-term viability.

Body

2.1 The Limits of the Current NSFAS Grant Model

When government converted NSFAS into a fully subsidised grant in 2018 for households under the R350,000 threshold, it opened doors for thousands of poor students (National Treasury, 2019: 45). But looking at the numbers today, the model is running into a wall. According to National Treasury (2026: 28), public transfers to NSFAS are projected to climb from R48.8 billion in 2025/26 to R54.6 billion by 2028/29. That kind of budget expansion simply cannot continue when South Africa's economy is growing at less than 1% a year. Money spent absorbing every single student cost directly from general revenues is money taken away from healthcare, basic infrastructure, and municipal services (Council on Higher Education [CHE], 2022: 58).

The real flaw in the current NSFAS setup is that it acts like an open-ended welfare grant rather than an investment in human potential. It pays out tuition, accommodation, and living allowances upfront without any mechanism to recover funds once a graduate enters the workplace. When you combine that with the reality that around 40% of undergraduate students drop out—mostly during their first two years—the state takes on 100% of the financial risk (Statistics South Africa [Stats SA], 2023: 11; Barr, 2004: 268). If a student drops out or struggles in the labour market, the state loses that capital completely.

Table 1 tracks how public expenditure per student has grown alongside university enrolment numbers.

Table 1: Public Higher Education Expenditure and University Enrolment (2019–2026)

Metric	2019	2021	2023	2026
Total NSFAS Allocation (R billions)	30.5	41.2	47.6	51.3
Total Public University Enrolment	1,074,000	1,094,000	1,112,000	1,142,000
Nominal State Outlay per Funded Student (Rand)	82,000	94,500	104,000	112,200

Source: Adapted from National Treasury (2026) and Department of Higher Education and Training [DHET] (2023).

As Table 1 shows, the average cost per funded student went up by more than 36% in seven years. Because NSFAS does not ask working graduates to contribute anything back, every rand spent is an irreversible loss to the public purse.

2.2 The “R1 Injustice”

The most obvious design flaw in the NSFAS framework is its harsh cutoff rule. If a family earns R350,000 a year, their child gets 100% of their tuition, housing, and living costs covered. But if that family earns just R1 more—R350,001—they lose every cent of state support (Pillay, 2021: 104).

It is completely unfair that a single Rand in additional household income causes a total collapse in financial assistance. Households in this "missing middle"—such as nurses, police officers, primary school teachers, and administrative clerks—do not have tens of thousands of Rand sitting in savings to pay university fees cash (Johnstone, 2006: 82). Commercial banks are no help either. They demand immediate interest repayments and collateral that these families simply do not own (Usher, 2018: 41). The current system effectively punishes working-class families for earning slightly too much, forcing their children out of the university system entirely.

2.3 International Lessons: Learning, Not Copying

Looking abroad gives us useful ideas, but South Africa cannot just copy another country's framework. Our economic makeup, tax base, and unemployment levels are completely different.

Australia's Higher Education Loan Program (HELP) shows how income-contingent repayments work in practice. Australian graduates only start paying back their student debt through the tax system once their annual earnings pass a set threshold, such as A\$69,528 in 2026–2027 (Australian Government, 2026). They also cap debt growth by indexing it to whichever is lower between the Consumer Price Index and the Wage Price Index, ensuring student debt doesn't grow faster than actual salaries.

Meanwhile, **Norway offers a crucial lesson in skills forecasting methodology.** Norway's Ministry of Education and Research uses a dedicated Skills Needs Committee (*Kompetansebehovsutvalget*) that combines long-term macroeconomic modelling, biannual employer surveys, and sectoral demographic projections to map out future workforce shortages (Government of Norway, 2023). They use these empirical forecasts to guide university funded capacity and seat allocations across different fields.

We should take these core principles—repayment based on earnings and structured forecasting of future skills—and adapt them to our own realities. We cannot import Australia's high-income thresholds or copy Norway's wealthy welfare state directly because our graduate unemployment sits at 12.4% and overall youth unemployment is over 30% (Stats SA, 2026). As Chapman (2016: 88) points out, income-contingent models in developing nations fail if they do not match local payroll systems and economic conditions.

3. THE PROPOSED MODEL: THE NATIONAL STUDENT HUMAN-CAPITAL FUND (NSHCF)

To fix these issues, we propose the **National Student Human-Capital Fund (NSHCF)**. Instead of treating student funding as an annual grant that disappears once paid, the NSHCF runs as a continuous cycle that starts before a student sets foot on campus and follows them all the way into their working life.

3.1 Step 1: Planning Before University Entry

The funding process begins before enrolment. Government works with Stats SA, SETAs, and industry leaders to project where the South African economy will actually need skills over the next five to ten years—whether in healthcare, engineering, software development, or teaching. These market forecasts are used to allocate more funded university places in high-demand fields. This doesn't mean forcing students into specific degrees, but rather guiding public money toward qualifications that give graduates the best chance of finding employment.

3.2 Step 2: A Progressive Sliding Scale While Studying

To fix the R1 cutoff problem, the NSHCF replaces the hard threshold with a smooth sliding scale based on household income:

- **R350 000 or below:** 100% grant funding (protecting poor households).
- **R350 001 to R600 000:** 70% funding (covering the lower missing middle).
- **R600 001 to R900 000:** 40% funding (supporting middle-income workers).
- **Above R900 000:** 0% funding (families pay their own way).

This gets rid of the sudden funding cliff. A family earning R351,000 loses only a tiny fraction of their support rather than losing everything. The fund pays for actual tuition, residence fees, books, and basic living allowances, while setting clear price caps so universities cannot inflate fees unchecked.

3.3 Step 3: Studying Without Financial Pressure

While at university, students pay nothing. Their only job is to pass their modules and progress through their qualification. However, institutions are held accountable too: if a specific university programme consistently sees high dropout rates or produces graduates who cannot find work, its funded intake is reviewed. Money follows the student, but accountability stays with the institution.

3.4 Step 4: Income Contingent Contributions After Graduation

Once a graduate enters the workforce, contributions begin only if their annual income passes a protected safety threshold of **R240,000** (R20,000 a month). If a graduate earns below R240,000, is unemployed, or loses their job, they pay exactly **0%**.

For earnings above R240,000, contributions are calculated progressively on marginal income:

- **R240,000 or below:** 0%
- **R240,001 – R360,000:** 3% on the amount above R240,000
- **R360,001 – R600,000:** 5% on the amount above R360,000
- **R600,001 – R1,000,000:** 7% on the amount above R360,000
- **Above R1,000,000:** 9% on the amount above R600,000

Instead of sending debt collectors or charging commercial interest, contributions are collected automatically through **SARS** using the existing PAYE tax framework (South African Revenue Service [SARS], 2026). Higher earners contribute more to help replenish the fund, while low earners and unemployed graduates are fully protected.

Designing a progressive funding model is only half the challenge; its long-term viability must be proven through quantitative modelling. Section 4 translates these operational steps into an actuarial cohort projection to evaluate net fiscal costs, recovery present values, and systemic risk controls.

4. Actuarial Modelling and Risk Management

To prove that the NSHCF works mathematically over time, Table 2 presents an actuarial model for a cohort of 100,000 students entering the system.

Table 2 outlines the entry assumptions, expected graduation and employment rates, annual contribution streams, discount rates, and net taxpayer obligations over a 20-year horizon.

Table 2: Actuarial Cohort Projection for the NSHCF (100,000 Students)

Parameter / Variable	Value / Amount
Cohort Entering Size	100,000 students
Average Annual Support per Student	R100,000 (4-year duration)
Total Initial Outlay (C_0)	R40,000,000,000 (R40.00bn)
Completion Rate $P(G)$	60% (60,000 graduates)
Graduate Employment Rate $P(E G)$	75% (45,000 employed)
Proportion Earning Above R240,000 Threshold	80% (36,000 contributors)
Average Contribution per Contributor / Year	R4,320 $[0.036 \times (R360,000 - R240,000)]$
Peak Annual Fund Revenue	R155,520,000 (R155.52m / year)
Present Value of Recoveries $EPV(R)$ at 8.8% Real Discount Rate	R1.46bn
Net Expected Fiscal Cost Remaining for Taxpayers	R38.58bn (96.5% net public subsidy)

Source: Author's calculations based on Stats SA (2026) and National Treasury (2026) parameters.

As Table 2 shows, the NSHCF does not claim to turn higher education into a fully self-funding business. The projected recoveries were calculated by applying the progressive contribution rates to the estimated number of employed graduates earning above the R240,000 threshold, then discounting the resulting annual contribution streams over 20 years at the 8.8% real discount rate.

To handle economic uncertainty, the fund builds in several statistical risk controls:

1. **Labour Market Shocks:** If there an economic downturn and it causes graduate unemployment to spike, the model would use reserves held when there is a surplus to absorb the revenue shortfalls so that ongoing students continue to get funding.
2. **Emigration Risk:** When graduates relocate overseas, their contribution obligation remain attached to their SARS tax profile. Emigrating individuals must either submit an annual foreign income declaration for SARS-administered billing.
3. **Annual Recalibration:** The NSHCF is not a model that is designed to be a rigid plan, the whole idea of this is to ensure that it's a adapts to the economic standing of South Africa at the set time. Each year, real-time employment rates, salary distributions, and SARS collection figures are fed back into the actuarial forecast. This allows parameters to be recalibrated annually, ensuring the model remains fiscally balanced within the National Treasury's Medium-Term Expenditure Framework (MTEF).

5. CONCLUSION

South Africa does not have to choose between opening the doors of higher education wider and protecting the public purse. The deeper problem with NSFAS is not simply that university is expensive; it is that the current funding model gives money out as a one-way grant and pays too little attention to what happens once students graduate.

By moving to the National Student Human-Capital Fund, we create a fairer system. Labour market forecasting guides university capacity before students starts. A sliding scale eliminates the unfair R1 cutoff for missing middle families. Students study without the threat of commercial debt, and working graduates contribute back through SARS according to what they earn. By sharing risk between the state, universities, and successful graduates, South Africa can build a higher education financing system that lasts for generations.

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