Financing Access Without Mortgaging the Future: An Evidence-Gated Risk-Sharing Model for South African Higher Education

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1. Introduction & Policy Context

South Africa's higher education sector faces a fundamental public economics challenge: expanding equitable tertiary access and improving qualification completion while maintaining macro-fiscal sustainability under severe budget constraints (Mbhalati, 2024). The post-2017 policy framework established fully subsidised, need-based direct grants for undergraduates from households earning up to R350,000 per annum (Presidency of the Republic of South Africa, 2017; NSFAS, 2023). However, this dispensation leaves "missing-middle" households earning between R350,000 and R600,000 reliant on capped, partially funded loan schemes (Manamela, 2026b). Meanwhile, state allocations face nominal contractions - evidenced by the Parliamentary Budget Office's recorded decline in direct National Student Financial Aid Scheme (NSFAS) allocations from R58.2 billion in 2025/26 to R54.3 billion in 2026/27 (PBO, 2026) - against an aggregate national unemployment rate of 33.6% in Q2 2026 (Stats SA, 2026).

South Africa should preserve need-based direct grants for students least able to bear repayment risk and consider income-contingent loans (ICLs) for missing-middle students only through an evidence-gated pilot where transparent, cohort-based estimates demonstrate that expected net fiscal costs and repayment risks are defensible. The system must be evaluated on equitable access, debt aversion, and qualification completion as well as loan recovery, with reliable tax-linked administration enabling delivery rather than being assumed as a self-funding mechanism.

2. South Africa's Fiscal Realities

South Africa's student-financing debate occurs against a backdrop of tight macro-fiscal consolidation. The 2026 Medium-Term Budget Policy Statement (MTBPS) reaffirmed fiscal discipline, targeting debt-to-GDP stabilisation at 78.4% in 2025/26 and expanding primary budget surpluses to manage rising debt-service burdens (Godongwana, 2026). Consequently, real per capita non-interest public expenditure is projected to contract over the medium term (PBO, 2026).

Higher education spending reflects these fiscal pressures directly. Consolidated government higher education spending declines nominally from R157.5 billion in 2025/26 to R155.8 billion in 2026/27, while direct NSFAS allocations drop by R3.9 billion to R54.3 billion despite over one million prospective applications (PBO, 2026; Manamela, 2026b). As Figure 1 shows, the NSFAS decline exceeds that in consolidated higher education and training spending, reinforcing the need to assess options within a constrained fiscal envelope. Furthermore, physical university places (235,000) lag behind 2025

bachelor-degree passes (345,875), showing that aid expansion alone cannot expand intake capacity (PBO, 2026).

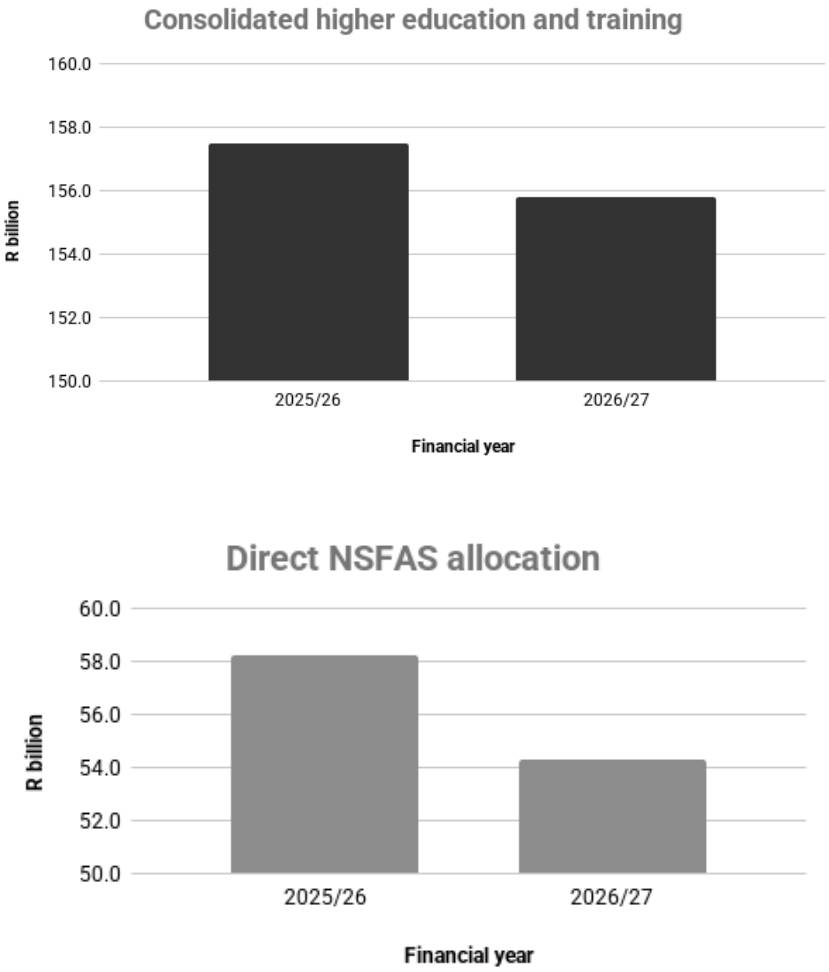


Figure 1. Reported nominal changes in consolidated higher education and training spending and NSFAS allocations, 2025/26–2026/27. Source: Parliamentary Budget Office (2026), as cited in the essay. Budget figures are not actual expenditure. (a) Consolidated higher education and training spending. (b) Direct NSFAS budget allocations.

Although aggregate unemployment of 33.6% (Stats SA, 2026) signals general economic slack, loan recovery depends specifically on the post-graduation employment probabilities and life-cycle earnings distributions of funded cohorts. Persistent audit challenges and data-reconciliation backlogs at NSFAS (Manamela, 2026a) show that administrative fragility imperils delivery, reinforcing the need for robust design before expansion.

3. Economics of Student Financing & Fiscal Valuation

The economic rationale for state intervention in higher education financing rests on capital market failures (Barr, 2004; Lochner and Monge-Naranjo, 2012). In an unconstrained market, individuals invest in human capital until marginal returns equal the borrowing interest rate (Lochner and Monge-Naranjo,

2012). However, human capital cannot be pledged as physical collateral, creating asymmetric information and severe credit rationing (Friedman and Kuznets, 1945; Barr et al., 2019). These borrowing constraints bind most acutely on low-income households, where liquidity constraints and disutility from debt aversion depress higher education participation below socially optimal levels (Carneiro and Heckman, 2002; Field, 2009).

Resolving these failures efficiently requires differentiated risk allocation. Need-based direct grants eliminate short-term liquidity constraints for low-income students (households earning up to R350,000 per annum) without imposing debt aversion or repayment risk (Field, 2009; Mbhalati, 2024). Conversely, income-contingent loans (ICLs) provide lifecycle consumption smoothing and downside risk protection for missing-middle households (R350,000–R600,000) by indexing repayment obligations directly to actual post-graduation earnings (Barr et al., 2019).

Evaluating the fiscal sustainability of an ICL scheme requires moving beyond loan face values to calculate the expected Net Fiscal Cost (NFC), discounting both disbursements and repayments over the valuation horizon:

$$NFC = \sum_{t=1}^{T} \frac{D_t + A_t - E[R_t]}{(1+r)^t} \qquad (1)$$

where D_t denotes state loan disbursements in year t, A_t represents administrative and collection costs $E[R_t]$ symbolizes expected cohort repayments, r is the social discount rate (reflecting the sovereign borrowing rate plus a risk premium), and T is the maximum repayment horizon (Barr et al., 2019). Expected recoveries ($E[R_t]$) depend endogenously on graduate employment probabilities, real earnings trajectories, statutory repayment thresholds (e.g., Australia's A$69,528 baseline for 2026–27), interest indexation rules, and write-off provisions (Barr et al., 2019; Australian Department of Education, 2025).

When graduate earnings remain below statutory thresholds or non-completion rates are high, $E[R_t]$ declines significantly, causing the loan scheme fiscally to converge toward a direct grant (Barr et al., 2019; NSFAS, 2023). Crucially, deferred repayments during low-earning years do not constitute permanent write-offs; their economic value depends on whether real interest indexation matches or falls below the social discount rate r. Consequently, ICLs are not an automatic fiscal cure; their net public cost relative to direct grants remains an empirical hypothesis requiring transparent, cohort-specific actuarial valuation before deployment.

4. International Evidence & Administrative Prerequisites

International experience demonstrates both the operational potential and structural prerequisites of income-contingent loan (ICL) architectures. Australia's Higher Education Loan Program (HELP) illustrates the administrative efficiency of collecting repayments automatically through employer Pay-As-You-Earn (PAYE) withholding, reconciled annually via the Australian Taxation Office (ATO) against a statutory threshold of A$69,528 for 2026–27 (Australian Department of Education, 2025; Barr et al., 2019). However, Australia's 2025 Accord legislation – executing a one-off A$16 billion debt

reduction – underscores that ICL models remain politically vulnerable and are not fiscally self-sustaining (Australian Department of Education, 2025).

Similarly, Solis (2017) uses a regression-discontinuity design to show that test-score credit access doubled immediate college enrolment and virtually eliminated family-income participation gaps in Chile. Yet Chile's state-guaranteed commercial lending (CAE) generated severe default liabilities, warning against private bank intermediation (Solis, 2017).

For South Africa, adapting these international mechanisms requires building on domestic policy precedents while addressing crucial implementation prerequisites. Unlike the Heher Commission (2017), which advocated universal bank-originated loans backed by government guarantees, South Africa's missing-middle model must retain direct state origination to avoid private interest margins and contingent state liabilities (Presidency of the Republic of South Africa, 2017). Furthermore, policy design must distinguish between two distinct administrative functions: automated income verification for eligibility targeting at entry and payroll-linked repayment collection post-graduation (Manamela, 2026a).

While assigning debt collection to the South African Revenue Service (SARS) has long been proposed (NSFAS, 2023), tax-linked collection cannot create fiscal resources independently. Its efficacy depends on three institutional prerequisites: formal labour-market absorption, automated real-time data integration across HEMIS, NSFAS, and SARS, and explicit POPIA-compliant legal frameworks for payroll deductions and non-payroll income tracking (Barr et al., 2019; Manamela, 2026a).

5. Evaluating Pathways: Grants, Loans, & Systemic Throughput

Evaluating student-financing models requires distinguishing between physical access (enrolment), persistence, and qualification completion (van Broekhuizen et al., 2016; Mbhalati, 2024). Linked administrative data from the Southern Africa Labour and Development Research Unit (SALDRU) document that while NSFAS expansion successfully widened university access for students from under-resourced Quintile 1 – 3 schools, expanded enrolment occurred alongside substantial variations in progression and completion across fields and institutions (Branson and Whitelaw, 2025; Whitelaw and Branson, 2026). For instance, Whitelaw and Branson (2026) report that only 4% of the 2016 National Senior Certificate (NSC) matric cohort completed a public university Science, Engineering, and Technology (SET) qualification six years post-matric, showing bottlenecks that originate before tertiary enrolment.

Accurately evaluating financial aid requires isolating baseline secondary schooling disadvantages from post-secondary funding effects. At a descriptive level, funded students frequently display lower average module pass rates than unfunded peers because financial aid recipient cohorts disproportionately enter from under-resourced secondary schools with severe academic articulation gaps (Naidoo and McKay, 2018; Wildschut, Megbowon and Miselo, 2020). However, multivariate tracking studies controlling for pre-tertiary academic achievement, demographic background, and field of study indicate a weakly positive association between financial aid receipt and academic persistence, although institution-level outcomes vary significantly across universities (Wildschut, Megbowon and Miselo, 2020). Longitudinal cohort analyses also confirm that aid buffers financially vulnerable students against dropout (De Villiers, Van Wyk and Van der Berg, 2013; van Broekhuizen et al., 2016).

Consequently, policy frameworks must evaluate academic development interventions - such as Extended Curriculum Programmes (ECPs) and institutional tutoring - on their empirical cost-effectiveness rather

than treating them as automatic fiscal cost savers (Branson and Whitelaw, 2026; Mbhalati, 2024). SALDRU evidence shows that ECP participation supports initial retention but does not automatically raise graduation rates across all qualification streams (Branson and Whitelaw, 2026). Sustainable financing must therefore pair financial support with targeted academic development, avoiding punitive financial exclusions that disproportionately harm academically underprepared, low-income undergraduates (van Broekhuizen et al., 2016; Mbhalati, 2024).

6. Comparative Assessment of Policy Options

To determine whether a conditional grant–loan hybrid is fiscally and socially defensible, it must be evaluated against a simple alternative: targeted direct grants for low-income households alongside continued, incrementally refined missing-middle funding arrangements (Mbhalati, 2024; PBO, 2026). Comparing them across six public finance criteria highlights key trade-offs:

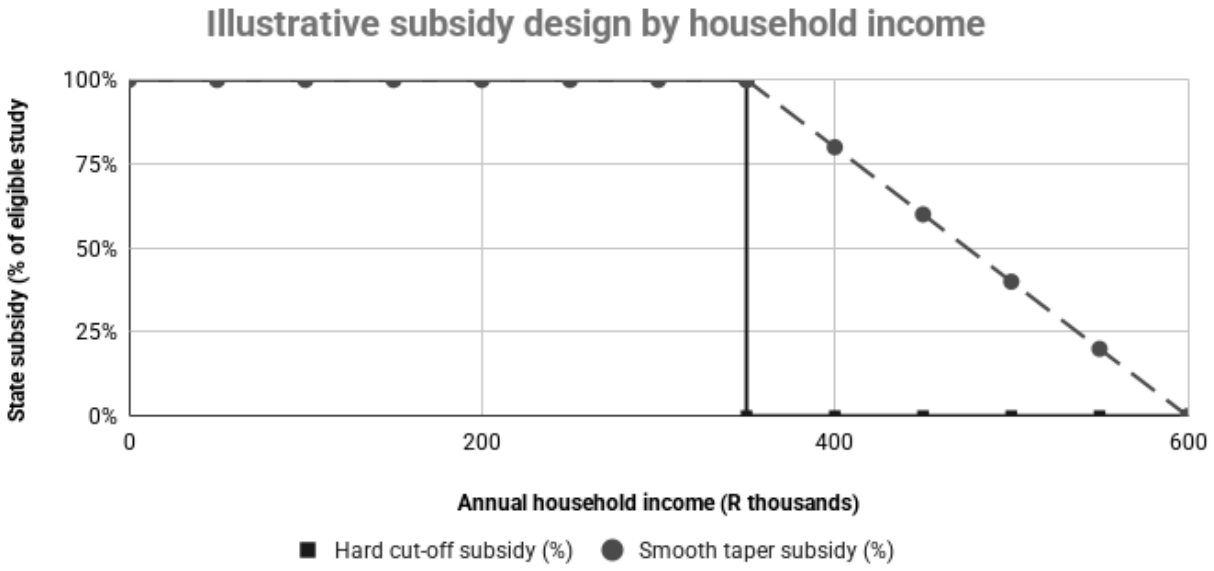
Criterion	Conditional Grant–Loan Hybrid	Targeted Direct Grant / Graduate Levy
1. Equity	Protects Quintile 1–3 via grants; missing-middle loans align repayment with private returns.	Broad tax redistribution across high earners; eliminates debt burden for middle earners.
2. Access	Removes liquidity barriers; mild borrowing aversion may persist for missing middle.	Eliminates debt disutility entirely; yields maximum participation among risk averse applicants.
3. Throughput	Requires evidence-based institutional academic support and ECP integration.	Requires identical academic support mechanisms; funding alone does not guarantee completion.
4. Fiscal Cost	Net cost depends on NPV recoveries ($NFC = \sum \frac{D_t + A_t - E[R_t]}{(1+r)^t}$); risk of fiscal drag if earnings lag.	Unrecoverable 100% public outlay; requires immediate, continuous tax reprioritisation.
5. Admin	Requires dual SARS capability: entry income verification and PAYE loan collection.	Bypasses individual loan tracking; requires defining a complex legal tax base and managing evasion.
6. Risk Allocation	Distributes risk between state (downside protection) and graduates (repayment above threshold).	State and general taxpayers absorb 100% of economic and labour-market absorption risks.

7. Policy Recommendations

Rather than committing to an unconstrained national loan expansion, National Treasury and the Department of Higher Education and Training (DHET) should implement an evidence-gated missing-middle financing pilot governed by five principles:

1. **Preserve Need-Based Floor:** Maintain fully subsidised direct grants for Quintile 1–3 students from households earning up to R350,000 per annum, protecting vulnerable undergraduates from debt disutility and repayment risk (Presidency of the Republic of South Africa, 2017; NSFAS, 2023).
2. **Independent Actuarial Valuation:** Mandate pre-implementation cohort modeling using linked HEMIS-SARS administrative data to project graduate earnings distributions, threshold cross-rates, and true Net Present Value subsidy costs (van Broekhuizen et al., 2016; Barr et al., 2019).
3. **Bounded Missing-Middle Pilot (R350,000–R600,000):** Introduce a smooth grant-to-loan taper across the missing-middle band, reducing the grant from 100% at R350,000 to 0% at R600,000 while raising the loan share proportionally, to eliminate cliff effects (Manamela, 2026b).

Figure 2. Stylised comparison of a hard income cut-off and a smooth taper in the state's subsidy contribution. The curves are hypothetical and do not represent the existing funding rules. Source: Author's illustration.



4. **Secure Tax-Linked Administration:** Systematise SARS automated income verification at entry and employer PAYE withholding post-graduation under POPIA-compliant data protocols, establishing statutory collection mechanisms for non-payroll and informally employed earners (NSFAS, 2023; Manamela, 2026a).
5. **Pre-Specified Empirical Decision Rules:** Evaluate the pilot against five pre-determined benchmarks – equitable access, loan take-up, repayment compliance, qualification completion,

and net public cost – expanding, modifying, or terminating the scheme based on demonstrated results.

8. Conclusion

Resolving South Africa's student-financing trilemma requires moving beyond false binaries between universal fee-free education and unconstrained loan expansion. A differentiated grant–loan hybrid does not offer an immediate fiscal cure; its success is bounded by structural informal employment and the empirical distribution of graduate earnings. Nevertheless, an evidence-gated pilot provides a rigorous framework for evaluating how higher education access, completion, and repayment risks can be shared equitably between the state and graduates within South Africa's macro-fiscal realities.

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