

Financing South Africa's tertiary education: combining Development Impact Bonds and an Educational Solidarity Fund

Undergraduate category

Word count: 1978

1. Introduction:

In May of 2026, the minister of Higher Education and Training outlined an investment amounting to R 149,2 billion towards funding tertiary education in the country during the 2026/2027 funding period. This amount includes a R100,1 billion investment towards public institutions through various grants, including funding towards the National Student Financial Aid Scheme (NSFAS) to fund qualifying students amounting to R48,8 billion through allowances, bursaries and student loans. Despite these substantial investments, the financial sustainability of this financing model still remains a point of concern. Due to the increased demand in tertiary education, and alongside it the increase in funding tertiary education, the NSFAS is estimated to suffer a shortfall of approximately R15 billion. This, accompanied by the fact that the budgeted cost of tertiary education amounting to R468 billion over the 3 year medium term funding cycle, further brings up concerns regarding the sustainability of the current funding infrastructure.

Alternative mechanisms of funding tertiary education, namely Development Impact Bonds, an Education Solidarity Fund alongside a higher income surcharge with a maximum contribution cap will be explored over this essay. The application of these mechanisms simultaneously will be discussed, whilst also determining the effectiveness of this plan in addressing the financial shortfalls of the current system. In the grand scheme, this essay will discuss how these complementary financial models can be used simultaneously to provide a sustainable source of funding to meet the demands of South Africa's tertiary education demands in the short, medium and long term.

2. Body:

The first instrument within the blended financing model are Development Impact Bonds (DIBs). A DIB is defined as a results-based financing contract and performance-based investment instrument used to fund development programmes in low and middle income countries, such as initiatives to increase access to tertiary education, in other words, private entities such as NGO's will provide funding upfront for initiatives, and upon the initiative achieving the desired outcomes, will receive a repayment of the invested funds with an additional premium. This model will utilise a DIB to meet the short and medium term needs of tertiary education funding. As stated above, South Africa's immediate tertiary education financing shortfall amounts to approximately R 63,8 billion, which is inclusive of the R15 billion shortfall, and in the medium term will amount to R468 billion. In the analysis of this instrument within the suggested three instrument financing model, a case study suggesting the effectiveness of DIBs in education will be analysed.

In the early stages of 2018, the British Asian Trust, the UBS Optimus Foundation, the Micheal & Susan Dell Foundation alongside Dalberg and other stakeholders had determined that the education system in India had lacked in its ability to provide a satisfactory quality of education to the members of the lower middle and poorer economic class, which was discovered in the Annual Study of Education Report 2018 that half of 5th grade students could read at a 2nd grade reading level, only 27.8 % of them could perform basic division, and this division between expected literacy and the underperforming levels were only worsened by the pandemic, in which Indian schools were on average shut down for 73 weeks—meaning that when students from poorer communities restarted school alongside their peers from wealthier backgrounds, due to their financial circumstances they could not access learning material throughout that time period, leaving them a year behind in education from their wealthier peers. This discovery led to the cooperative efforts of creating the Quality Education India Development Impact Bond. The goal of the DIB were to find and fund various high performing service providers to improve the grade appropriate learning outcomes and provide academic assistance to approximately 200 000 school children. In terms of achieving the original set out goal, the DIB was successful, as participants reported better reading proficiency as well as the learning growth attributable to the programme being between 229% and 350% of the set target, as well as meeting and exceeding all enrolment goals. Outcome payments for the DIB amounted to \$7.8

million compared to the budgeted \$9.2 million as shown in Table 1,

	Planned ⁹		Actual ¹⁰	
Outcomes achieved	Learning ¹¹	Enrolment ¹²	Learning	Enrolment
	Y1: 5-10	Y1: 103.1k	Y1: 280%	Y1: 100%
	Y2: 5-12.5	Y2: 106.2k	Y2: 325%	Y2: 100%
	Y3/4: 12.5-33	Y3/4: 70.8k	Y3/4: 229%	Y3/4: 150%
Outcome payments made	\$9.2m ¹³		\$7.8m ¹⁴	
Investment committed	\$3m		\$3.3m ¹⁵	
Investment return	IRR 8% p.a.		8%	

Table 1: Outcomes of the QEI DIB

being 15,217% lower than the budgeted amount. The QEI DIB also experienced shortfalls, which led to the programme not being reintroduced upon the end of the programme in 2022, namely the high infrastructure setup costs, the administration costs involved with interacting and finding the various service providers, having relevant methods of measuring quality and success of the programme as well as not clearly communicating roles to all participants in the beginning of the programme.

With the context of the case study, the method of applying the DIB in regards to the context of financing tertiary education will be analysed. The DIB will be implemented in 5 year funding cycles. Within the short term, the donated funds from investors will supplement the current funding mechanisms for tertiary education. The private funders of the DIB's contribution figure will be sourced from the Inyathelo's 10th Annual survey of philanthropy, which states that R1.81 billion in philanthropic donations were made in 2022, and amounts to R2,2 billion when involving SETA income. It is also stated that 47% of the total amount was dedicated to funding tertiary education, amounting to a range of R850 700 million – R1,034 billion, which when accounting for the cumulative inflation of 18.71% according to statssa, is worth between R1 009 865 970 – R1 227 461 400. Utilising the average cost of tuition including allowances as the NSFAS contribution limits for accommodation, meal allowances and learning materials amounting to R74 838 per student per year, this would fund up to an additional 16 402 students annually excluding additional funding. The investors will receive a return on their investment which will be determined pre-implementation as well as limited to 3% on the cumulative investment

over the 5 year cycle, which will be done to safeguard against excessive returns being paid out to investors and making the system unnecessarily costly. Within the scope of the DIB, within the financial model, in order for investors to receive payment, at minimum 75% of registered applicants must not just register but complete their registered qualification and 65% of the applicants within the programme must also be formally employed post graduation, as this will be essential to the successful application of the other two instruments within the model. Potential shortfalls of the DIB would be that as much as investors will receive a payout upon successful application, the risk may be too large to justify the outcome for them, as well as in isolation, it does not cover the financing costs and become sustainable. This is where the next tool within the funding model comes into play, namely the Educational Solidarity Fund.

The Educational Solidarity Fund (ESF) can be defined as a pooled fund of contributions from previous graduates used to fund the tertiary education of currently attending students, essentially having the previous beneficiaries of subsidised and free education pay it forward for the next group of students. The case study that will be analysed and will be compared to is the *Fondo de Solidaridad* of Uruguay, as this fund has an equivalent notion as to the proposed ESF within this essay. On the 25th of July 1994, the Uruguayan government established the Fondo de Solidaridad, a state organisation with the purpose of removing the financial barrier to education that socioeconomically disadvantaged households suffer from. The proposed solution was to obtain income from graduates in the form of contributions to fund scholarships and living expenses for currently enrolled students. Graduates would only begin making contributions to the fund after five years of employment. The contributions were set using an inflation-indexed economic indicator set by the government called *Base de Prestaciones y Contribuciones* (BPC) also defined as a benefits and contribution base. As of 2026, 1 BPC is equivalent to 6 864 Uruguayan pesos (R2 839,63 at the time of recording) per month. This figure was also dependant on the length of time it took to obtain the qualification, to ensure that the investments of longer qualifications were recuperated. For qualifications that take four years or less to complete, contributions were set at 0.5 BPC for the first 5-9 years of employment post graduation, and increased to 1 BPC after year 9. For qualifications that take longer than four years to complete, contributions were set at 1 BPC for the first 5-9 years post

graduation, and increased to 2 BPC after year 9. the *Fondo de Solidaridad* has collected over R 551,5 million since June during the mid- 2026 accountability address. In 2022 it was recorded that the gross enrolment ratio amongst both sexes was 76,4% post secondary education, and the initial government funding per student as a percentage of GDP per capita was 20,02%, compared to the respective 27,2% as well as the 62% of South Africa within the same year.

Within the context of the three instrument financial model, the solidarity fund will be utilised as the first of two mechanisms of creating recurring funding at the tertiary level. The graduate sample that will be analysed will be the 16 402 students annually who will be funded by the aforementioned DIB. Contributions will only be collected from employees who have reported earnings exceeding R270 thousand per annum. Contributions will be progressive, and will have the following brackets: 7,5% for earnings between R270 001-R450 thousand per annum, 9 % for earnings between R450 001 – R750 000 per annum, and 10% for earnings exceeding R750 thousand per annum respectively. The collection of contributions will begin at either two years post graduation, or once the participant has been formally employed for 18 months. The number of graduates who are employed according to the minimum standards set within the terms of the DIB are 75% for number of graduates, and 65% for number of graduates enrolled into formal employment, which would equate to 12 302 graduates annually, and of those a minimum of 7996 employed graduates, but a central figure of a 75% employment rate amongst graduates will be set at 75%, equating to approximately 9 226 employed graduates. According to Glassdoor, approximately 55-70% of graduates suffice the earning threshold, but a central figure of 65% will be used, meaning that the number of contributors within the first group will be 5 997, and will continuously grow after each yearly cohort batch as shown in table 2.

Graduate cohort pipeline								
Central case; each annual intake is tracked separately. Timing assumptions are explicit and editable on Assumptions.								
Intake year	New students	Graduation rate	Graduates	Employment rate	Employed within 2y	Above-threshold share	Potential contributors	Contribution start year
2027	16 402	75%	12 302	75%	9 226	65%	5 997	2033
2028	16 402	75%	12 302	75%	9 226	65%	11 994	2034
2029	16 402	75%	12 302	75%	9 226	65%	17 991	2035
2030	16 402	75%	12 302	75%	9 226	65%	23 988	2036
2031	16 402	75%	12 302	75%	9 226	65%	29 985	2037
2032	16 402	75%	12 302	75%	9 226	65%	35 982	2038
2033	16 402	75%	12 302	75%	9 226	65%	41 979	2039
2034	16 402	75%	12 302	75%	9 226	65%	47 976	2040
2035	16 402	75%	12 302	75%	9 226	65%	53 973	2041
2036	16 402	75%	12 302	75%	9 226	65%	59 970	2042

Table 2: Pipeline of graduate cohorts

According to Glassdoor, new graduates earn between R144 thousand to R282 thousand annually, with an average increase between 5% and 5,3% annually, in which case across table 4 an average of R282 thousand annually will be utilised, with a 5% annual increase, which will be applied across a ten year period with collections beginning in 2032, with graduates completing a 4 year degree and being employed for two years. The results are shown in table 3, showing that a conservative estimate under the assumption that all graduates will be within the minimum contribution bracket with a 90% collection efficiency rate is R 539 797 918,55.

Graduate solidarity fund						
Gross contribution uses marginal rates. Net collections apply collection efficiency and administration cost.						
Year	Eligible contributors	Average income (input)	Contribution per person	Gross collections	Net collections	Notes
2027	0	R 282 000,00	R 0,00	R 0,00	R 0,00	R 0,00 Cumulative eligible cohorts; annual collection assumed.
2028	0	R 296 100,00	R 0,00	R 0,00	R 0,00	R 0,00 Cumulative eligible cohorts; annual collection assumed.
2029	0	R 310 905,00	R 817,88	R 0,00	R 0,00	R 0,00 Cumulative eligible cohorts; annual collection assumed.
2030	0	R 326 450,25	R 1 983,77	R 0,00	R 0,00	R 0,00 Cumulative eligible cohorts; annual collection assumed.
2031	0	R 342 772,76	R 3 207,96	R 0,00	R 0,00	R 0,00 Cumulative eligible cohorts; annual collection assumed.
2032	0	R 359 911,40	R 4 493,36	R 0,00	R 0,00	R 0,00 Cumulative eligible cohorts; annual collection assumed.
2033	5 997	R 377 906,97	R 5 843,02	R 35 040 498,17	R 30 590 354,90	R 30 590 354,90 Cumulative eligible cohorts; annual collection assumed.
2034	17 991	R 396 802,32	R 7 260,17	R 130 617 380,95	R 114 028 973,57	R 114 028 973,57 Cumulative eligible cohorts; annual collection assumed.
2035	35 982	R 416 642,44	R 8 748,18	R 314 776 451,50	R 274 799 842,16	R 274 799 842,16 Cumulative eligible cohorts; annual collection assumed.
2036	59 970	R 437 474,56	R 10 310,59	R 618 325 221,71	R 539 797 918,55	R 539 797 918,55 Cumulative eligible cohorts; annual collection assumed.

Average income assumption	R 282 000,00
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Table 3: Graduate Solidarity Fund collections

The Solidarity Fund will produce a recurring funding source, which will improve the sustainability of the funding source, but does not entirely account for the entire tertiary education funding obligation. The third and final contributor to the financing system is the Higher Income Surcharge.

The Higher Income surcharge is an additional contribution which will be collected from individuals earning an annual income above R1m. This will be used to primarily repay investors from the DIB as well as additionally contribute to the tertiary education funding efforts. The surcharge will be charged utilising the following earnings brackets: 6% on income between R1 million – R1,5 million; 8% on income

between R1 500 001 – R2 million;and 10% on income exceeding R10 000 001.

Taxable bracket	Registered individuals		Taxable income		Income tax payable before		Income tax relief after proposals		Income tax payable after	
R thousand	Number	%	R billion	%	R billion	%	R billion	%	R billion	%
R0 - R91 ¹	7 700 135	—	272.9	—						
R91 - R150	1 973 185	26.5	227.5	8.2	15.8	2.6	-1.2	8.7	14.6	2.5
R150 - R250	1 717 760	23.1	338.6	12.2	28.4	4.7	-1.6	12.0	26.8	4.6
R250 - R350	1 231 672	16.5	363.6	13.1	50.2	8.3	-1.9	14.2	48.3	8.2
R350 - R500	1 158 117	15.6	478.2	17.3	86.4	14.4	-2.8	20.5	83.6	14.2
R500 - R750	756 629	10.2	456.7	16.5	107.4	17.9	-2.8	20.5	104.6	17.8
R750 - R1 000	274 963	3.7	237.7	8.6	67.6	11.2	-1.3	9.7	66.3	11.3
R1 000 - R1 500	199 837	2.7	238.1	8.6	76.3	12.7	-1.0	7.3	75.3	12.8
R1 500 +	133 230	1.8	425.0	15.4	169.4	28.2	-1.0	7.1	168.4	28.7
Total	7 445 393	100.0	2 765.3	100.0	601.4	100.0	-13.5	100.0	587.9	100.0
Grand total	15 145 528		3 038.2		601.4		-13.5		587.9	

1. Registered individuals with taxable income below the income-tax threshold
Source: National Treasury

Table 4: SARS reported earning estimates for 2022/2023 tax period

According to table 4, approximately 199 837 earned R1 million- R1,5 million, and 133 230 earned more than R1,5 million. In addition to that, according to the mentioned report there were approximately 23 575 individuals earning more than R 2 million. This alone will generate R6 842 405 000, and at a 90% collection efficiency rate will be R 5 973 419 565 annually. The funds collected will do majority of the financing of obligations that the DIB and Education Solidarity Fund fail to cover.

In conclusion, the three mechanisms used to address South Africa's tertiary education funding shortage are a Development Impact Bond, an Education Solidarity Fund as well as a Higher Income Surcharge. As shown within the consolidated forecast, this will not just cover DIB obligations but also invest further funds into the tertiary education system.

Net recurring education funding subtracts maximum DIB repayments from net solidarity and surcharge collections. New DIB capital is shown separately.								
Year	New DIB capital	DIB repayments due	Net solidarity	Net surcharge	Net recurring education funding	University Ed allocation	% of University Ed	DHET allocation
2027	R 1 227 492 876,00	R 268 028 680,84	R 0,00	R 5 973 419 565,00	R 5 705 390 884,16	R 100 100 000 000,00	5,70%	R 149 200 000 000,00
2028	R 1 227 492 876,00	R 536 057 361,67	R 0,00	R 5 973 419 565,00	R 5 437 362 203,33	R 100 100 000 000,00	5,43%	R 149 200 000 000,00
2029	R 1 227 492 876,00	R 804 086 042,51	R 0,00	R 5 973 419 565,00	R 5 169 333 522,49	R 100 100 000 000,00	5,16%	R 149 200 000 000,00
2030	R 1 227 492 876,00	R 1 072 114 723,34	R 0,00	R 5 973 419 565,00	R 4 901 304 841,66	R 100 100 000 000,00	4,90%	R 149 200 000 000,00
2031	R 1 227 492 876,00	R 1 340 143 404,18	R 0,00	R 5 973 419 565,00	R 4 633 276 160,82	R 100 100 000 000,00	4,63%	R 149 200 000 000,00
2032	R 1 227 492 876,00	R 1 340 143 404,18	R 0,00	R 5 973 419 565,00	R 4 633 276 160,82	R 100 100 000 000,00	4,63%	R 149 200 000 000,00
2033	R 1 227 492 876,00	R 1 340 143 404,18	R 30 590 354,90	R 5 973 419 565,00	R 4 663 866 515,72	R 100 100 000 000,00	4,66%	R 149 200 000 000,00
2034	R 1 227 492 876,00	R 1 340 143 404,18	R 114 028 973,57	R 5 973 419 565,00	R 4 747 305 134,39	R 100 100 000 000,00	4,74%	R 149 200 000 000,00
2035	R 1 227 492 876,00	R 1 340 143 404,18	R 274 799 842,16	R 5 973 419 565,00	R 4 908 076 002,98	R 100 100 000 000,00	4,90%	R 149 200 000 000,00
2036	R 1 227 492 876,00	R 1 340 143 404,18	R 539 797 918,55	R 5 973 419 565,00	R 5 173 074 079,37	R 100 100 000 000,00	5,17%	R 149 200 000 000,00

Diagram 1: Consolidated 10 year forecast

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