Higher Education Financing in East and Southern Africa

Pillay, Pundy

Published by African Minds

Pillay, Pundy.
Higher Education Financing in East and Southern Africa.
Project MUSE. muse.jhu.edu/book/16888.

For additional information about this book
https://muse.jhu.edu/book/16888

For content related to this chapter
https://muse.jhu.edu/related_content?type=book&id=546919
Introduction: Structure and Financing of Higher Education

In the new democracy, South Africa’s racially-based higher education institutions were rationalised through a merger process into 23 non-racial universities. There are currently three categories of universities in the country: universities (those institutions that were defined as such during the apartheid period and remain so); universities of technology (the former technikons or technical universities); and comprehensive universities (which are merged universities and technikons).

The 23 universities serve about 800,000 students of whom more than 200,000 study through distance education offered by the University of South Africa (Unisa). The end of apartheid also witnessed a tremendous growth in both local and international private higher education. Currently, there are more than 90 private institutions serving about 35,000–40,000 students. The most prominent international provider of higher education is Monash University from Australia.

The public universities are state-funded institutions, with a varying base of private income and all increasingly dependent on student tuition income. The private higher education institutions receive no state funding and are largely dependent on tuition income and private sector investment.

All higher education institutions, public and private, are regulated through an accreditation system led by a statutory body, the Council on Higher Education (CHE), and its implementation arm, the Higher Education Quality Committee (HEQC). The HEQC has been responsible for closing down programmes and even whole institutions that have failed to meet specific quality assurance standards.
There are several features of the South African higher education financing framework that are somewhat unique in the African context. First, given intersectoral competition for financial resources, there appears to be a fairly serious public commitment to spending on higher education as manifested, for example, in the recent substantial increase in the higher education budget in nominal terms between 1996 and 2008 (Table 8.1). As a percentage of the education budget, higher education spending increased from 4% to 14.5%. However, spending on higher education as a proportion of both GDP and overall government expenditure, declined during this period (Tables 8.2 and 8.3). Moreover, there has been a significant decline in student per capita expenditure across the system.

Table 8.1: Higher Education Spending in South Africa (ZAR billion)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total education</td>
<td>42.1</td>
<td>51.1</td>
<td>83.3</td>
<td>110.2</td>
</tr>
<tr>
<td>Higher education excluding NSFAS*</td>
<td>4.1</td>
<td>7.1</td>
<td>10.8</td>
<td>14.5</td>
</tr>
<tr>
<td>NSFAS*</td>
<td>0.30</td>
<td>0.44</td>
<td>0.86</td>
<td>1.18</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total education</td>
<td>6.62</td>
<td>5.36</td>
<td>5.27</td>
<td>5.14</td>
</tr>
<tr>
<td>Higher education</td>
<td>0.82</td>
<td>0.74</td>
<td>0.68</td>
<td>0.68</td>
</tr>
</tbody>
</table>

Second, the system has always had a fee-paying component. In fact, tuition fees comprise a significant component of institutional revenue, on average about 32% (Duncan 2009).

Third, higher education institutions are free to generate ‘third stream’ income through, inter alia, research and entrepreneurial activities. Such third stream income constituted 23% and 27% of total revenue in 2004 and 2007 respectively (Duncan 2009). In 2007, the government subsidy as a proportion of total revenue ranged from 60% in the Central University of Technology and Walter Sisulu University to 31% at the University of Stellenbosch. Fees as a proportion of revenue ranged from 43% at Unisa to 19% at North West University. The total of first and second stream income for historically white universities (HWUs) was
64% in 2004 and 60% in 2007; for historically black universities the respective figures were 83% and 76%. The average for all higher education institutions was respectively 77% and 72% (Duncan 2009).

Fourth, South Africa has developed one of the most effective student loan schemes for higher education. Called the National Student Financial Aid Scheme (NSFAS), it is an income-contingent scheme designed for needy students. The scheme is funded by the government (to the tune of ZAR 1.18 billion [about US$ 170 million] in 2008, up from ZAR 300 million [US$ 43 million] in 1996) and loans are paid back through the tax administration system when the graduate is employed and has reached a particular income threshold. Under this scheme, the number of grants awarded increased from almost 100,000 in 2002 to nearly 141,000 in 2007. The number of students assisted increased from more than 86,000 to 113,500 in the same period. Moreover, unlike most student loan schemes, this scheme has one of the most acceptable recovery rates internationally. In South African rand terms, the amount recovered increased consistently from ZAR 155 million in 2002 to ZAR 479 million in 2007.

Fifth, there is a close link between planning (at both the institutional and system levels) and funding. Higher education institutions are required to submit three-year ‘rolling plans’ to the government as part of the state’s planning and Medium Term Expenditure Framework (MTEF) budgeting process.

Sixth, a key component of the higher education financing framework is that it is underpinned by a funding formula.

**Historical Background**

Before the advent of democracy in 1994, the South African government’s tertiary education funding policies mirrored apartheid’s divisions and the different governance models which it imposed on the higher education system (Bunting 2002). The original funding framework was introduced in 1982/1983 when the main focus of government was to address the needs of the historically white institutions, specifically the historically white universities.

Between 1994 and 1997, there were no substantive changes to the funding framework. In 1997 the government announced its intention to introduce a new funding framework which was intended as a mechanism for steering the higher education system towards the goals and targets established in the National Plan for the transformation of the higher education system.

The original funding model developed during the apartheid era had two key features. First, it treated students as agents who were able to respond rationally to
the demands of the labour market. It was assumed that their choices of institutions, qualifications and major fields of study followed labour market signals and their reading of these signals. As a consequence, the only role which the model gave to government in the national higher education system was that of funding student demand, and of correcting any market failures which might occur.

The main concerns with the original funding framework related to equity (access, particularly of the disadvantaged black majority of the population) and efficiency (of outputs and outcomes, particularly, but not only, at the historically black higher education institutions).

The 1997 Education White Paper rejected this student-as-rational-agent model. It stated that the model had not worked in South Africa, and added that this rationale had to be dropped if higher education were to emerge from its apartheid past. The White Paper replaced the student-as-rational-agent model with a planning-steering model of higher education funding that aimed to bring equity and efficiency into the system. In this new model government takes account of labour market signals, but does not adopt either a narrow ‘human resources’ planning stance or the ‘hands-off’ stance which is embedded in the student-as-rational-agent model.

In a dual economy such as South Africa’s, the student-as-rational model was only partially successful. It worked for a relatively small proportion of students (largely from the minority population groups, and who were mainly city-based), for whom adequate labour market information and career guidance was available. For the majority of the black population, such labour market information was extremely limited. Poor labour information coupled with an almost total absence of vocational counselling at black schools had resulted in a failure of the student-as-a rational model for many. Furthermore, the new government felt that the higher education system needed some ‘guided intervention’ as the ‘market’ did not always ensure optimal outcomes in terms of developing countries’ human resource needs.

The new model represented a major change in focus. It emphasised that the primary purpose of higher education is to teach, research and play a pivotal role in the improvement of the social and economic conditions of the country. Hence government would fund institutions for training students, conducting research and assisting with the development needs of society and the economy. The ‘production process’ would be left in the hands of the institutions.

The second feature of the apartheid model was that it contained an implicit assumption that government is the funder of last resort of the higher education system. As such, government subsidies for universities and technikons are supposed to be based on (a) determinations of the actual costs of reasonably efficient institutions; and (b) decisions on which of these costs should be covered by
government subsidies. The costs not covered by government subsidies would have to be met by institutions from their private income sources, primarily their student tuition fees.

The new model’s view on prices is radically different from that of the old model. In the new model, government first decides on how much it can afford to spend on higher education and then allocates the funds according to its needs and priorities. It would be possible to determine the underlying unit costs for the activities but, within this new framework, the government’s basis for allocation is not computed unit costs.

The capacity of the institutions to understand and work with the formula varies substantially, particularly between the historically white and black institutions. With the old formula, the government provided bulky and incoherent supporting documents, a substantial disincentive to enhancing the understanding of the workings of the system. With the new formula, the Ministry of Education (MoE) has produced succinct explanatory documents to foster a greater understanding of the formula.

The Planning Framework for Higher Education

In the Education White Paper 3: A Programme for the Transformation of Higher Education (1997), it was stated that a new funding framework was required to facilitate the transformation of the higher education system.

The White Paper argued that the new funding framework must be goal-orientated and performance-related in order to enable it to contribute to fulfilling the vision and goals for the transformation of the higher education system, which include:

- More equitable student access;
- Improved quality of teaching and research;
- Increased student progression and graduation rates; and
- Greater responsiveness to social and economic needs.

The implementation framework for achieving the vision and goals of the White Paper was outlined in the National Plan for Higher Education (NPHE 2001). The NPHE established indicative targets for the ‘size and shape of the higher education system, including overall growth and participation rates, institutional and programme mixes and equity and efficiency goals’, including benchmarks for graduation rates (NPHE 2001: 12).
The NPHE furthermore indicated that the ‘planning process in conjunction with funding and an appropriate regulatory framework will be the main levers’ (NPHE 2001: 10) for achieving goals and targets set. The NPHE goes on to state that the ‘effective’ use of funding as a steering lever requires the development of a new funding formula based on the funding principles and framework outlined in the White Paper.

The White Paper argued that the development of the higher education system cannot be left to the vagaries of the market as it was singularly ill-suited to addressing the legacy of the past and the reconstruction and development challenges of the future.

The White Paper proposed the replacement of this market model with a planning model in which the development of the higher education system would be ‘steered’ and national policy goals and objectives achieved through a combination of instruments, namely national and institutional three-year rolling plans, that is, ‘indicative plans which facilitate the setting of objectives and implementation targets that can be adjusted, updated and revised annually’ (MoE 1997: 13), a responsive funding framework and an appropriate regulatory framework.

The planning model of higher education funding therefore involves three steps:

1. The Ministry determines national policy goals and objectives;
2. Higher education institutions develop three-year rolling plans indicating how they intend to address the national goals and objectives; and
3. Interaction between the Ministry and institutions results in the approval of institutional plans, which would lead to the release of funds based on the quantum of funds available.

As stated earlier, the new funding framework is radically different from the previous framework. It replaces the market-cum-cost model with a planned model in which the starting point for the allocation of funds to higher education institutions is not institutional costs, but affordability linked to the achievement of national policy goals and objectives. The new framework accepts the principle that institutional costs tend to be functions of income, that is, of what is available to be spent. In this regard, funds allocated by the government to institutions are not designed to meet specific kinds or levels of institutional costs, but are intended to pay for the delivery of teaching and research-related services linked to approved institutional three-year ‘rolling’ plans.
In short, the new framework is a goal-orientated and performance-related distributive mechanism, which explicitly links the allocation of funds to academic activity and output, and in particular to the delivery of teaching-related and research-related services which contribute to the social and economic development of the country.

The new funding framework and the associated planning processes are in line with the government’s Medium Term Expenditure Framework (MTEF), which underpins the national budget process. The MTEF involves the development of three-year rolling budgets, which are adjusted, updated and revised annually based on a review of factors such as the growth of departmental budgets in the context of revenue generation and affordability, the relationship between departmental policy priorities and the government’s strategic objectives, expenditure patterns, inflation adjustments and sector specific issues. In the case of higher education, examples of such sector specific issues are enrolment and output patterns and trends, cost pressures and efficiency measures, in particular, in relation to personnel and infrastructure and special policy initiatives such as the current institutional restructuring process.

The Minister of Education releases an Annual Statement on Higher Education Funding for each MTEF period. This contains the review of key trends and indicates what changes, if any, are to be made in determining the allocation of funds to the different categories and sub-categories of the funding framework.

The New Funding Framework

The various mechanisms in the new funding framework come into operation only after government has determined (a) the total of public funds that should be spent in a given year on higher education; and (b) what services should be delivered by the higher education system. Higher education institutions play no role in the determination of the overall amount of funds for higher education. This is primarily an outcome of the government’s budgeting process. However, institutions are required to submit to the Ministry three-year rolling plans indicating their planned inputs and outputs.

Main Elements

In terms of the new funding framework, higher education institutions receive (i) block funds, which are undesignated amounts made available to each institution; and (ii) earmarked funds, which are designated for specific purposes.
Block funds consist of:

- Research funds generated by approved outputs;
- Teaching funds generated by (a) planned full-time equivalent (FTE) student enrolments and (b) by approved teaching outputs; and
- Institutional factor funds.

Institutions know in advance the total amount of block funds that have been allocated to them. However, because of National Treasury regulations these funds are disbursed over the first eight months of the fiscal year as follows: a three-month allocation paid in April (the first month of the fiscal year); another three-month allocation in May; from June to October, monthly allocations; and the remainder of the allocation paid during November. The process is further complicated by the fact that the fiscal (April–March) and academic (January–December) years do not coincide. This forces some institutions to obtain bridging finance from commercial banks (and hence at some cost) for the first three months of the academic year.

The details of the various elements of the new funding framework are outlined below.

**Separation of Teaching and Research Funds**
The new block-funding formula includes requirements that (a) teaching and research funds are separated; and (b) teaching funds must be standard across institutions. The two central features of the new funding framework are therefore as follows:

- **Teaching funds**: Teaching funds are based on teaching inputs and teaching outputs. In allocating teaching funds to institutions, the model treats all institutions equally.
- **Research funds**: Research funds are based on research outputs and on earmarked funds for specific developmental purposes. The new framework makes no separate provision for a ‘blind’ research element or so-called research input funds, that is, a subsidy amount which institutions will receive regardless of whether or not they engage in research activities. Research training is regarded as a sub-component of teaching and provision for research training has therefore been made within teaching funds.

**Block Grant Funding**
Block grant funding has three components: research output funds; teaching funds;
and institutional factor funds. Furthermore, teaching funds are further broken down into teaching funds based on outputs, and teaching funds based on inputs.

*Research Output Funds*
With the new funding arrangements the total funding available for research is divided into earmarked and block grant funds. The earmarked component is used for such activities as capacity development, collaborative research projects and research student scholarships. Between 10 and 15% of the total for research is allocated each year to the earmarked component.

The block grant component is based on the research outputs of institutions. The total allocated in the form of block grants for research outputs is based on publication units, on research master’s graduates and on doctoral graduates. Because of delays in obtaining data from institutions, research output funds for year \( n \) will be based on the publication units and research master’s and doctoral graduates of year \( n-2 \). The weightings employed are: publication units 1, research master’s graduates 1, and doctoral graduates 3. These weightings are intended to emphasise the need for the doctoral graduate total to increase, and to give added incentives to institutions to achieve these goals.

*Teaching Funds: Outputs*
The National Plan for Higher Education emphasised that student graduation rates must improve from historically low levels. Incentives designed to encourage institutions to increase their graduation rates have thus been included in the new funding framework. These incentives take the form of a teaching output subsidy built into the framework.

Teaching output funds for year \( n \) are based on the total of non-research graduates produced in year \( n-2 \). Research master’s and doctoral graduates are not included in the teaching output subsidy because they are major components of the research output subsidies discussed earlier. Teaching outputs are weighted according to the ratios shown in Table 8.2.

**Table 8.2: Weighting Factors for Teaching Outputs**

<table>
<thead>
<tr>
<th>Degree Type</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st certificates and diplomas of 2 years or less</td>
<td>0.5</td>
</tr>
<tr>
<td>1st diplomas and bachelors' degrees: 3 years</td>
<td>1.0</td>
</tr>
<tr>
<td>Professional 1st bachelor's degree: 4 years and more</td>
<td>1.5</td>
</tr>
<tr>
<td>Postgraduate and postdiploma diplomas</td>
<td>0.5</td>
</tr>
<tr>
<td>Postgraduate bachelors' degrees</td>
<td>1.0</td>
</tr>
<tr>
<td>Honours degrees/higher diplomas</td>
<td>0.5</td>
</tr>
<tr>
<td>Non-research masters' degrees</td>
<td>0.5</td>
</tr>
</tbody>
</table>
Teaching Funds: Inputs
Inputs for teaching funds for year \( n \) are based on two main elements:

- A funding grid based on aggregations of educational subject matter categories and course levels.
- Full-time equivalent (FTE) student places and/or planned FTE student enrolments.

Funding Grid
This funding grid for teaching inputs is set out in Table 8.3.

On the basis of cost studies, a fixed set of ratios should hold between the average costs per FTE students in the various funding groups. These are shown in Table 8.4.

Table 8.3: Funding Grid for Teaching Inputs

<table>
<thead>
<tr>
<th>FUNDING GROUP</th>
<th>DISCIPLINES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>education, law, librarianship, psychology, social services/public administration</td>
</tr>
<tr>
<td>2</td>
<td>business/commerce, communication, computer science, languages, philosophy/religion, social sciences</td>
</tr>
<tr>
<td>3</td>
<td>architecture/planning, engineering, home economics, industrial arts, mathematical sciences, physical education</td>
</tr>
<tr>
<td>4</td>
<td>agriculture, fine and performing arts, health sciences, life and physical sciences</td>
</tr>
</tbody>
</table>

Table 8.4: Ratios between Funding Groups in Funding Grid

<table>
<thead>
<tr>
<th>Funding group</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding group 1</td>
<td>1.0</td>
</tr>
<tr>
<td>Funding group 2</td>
<td>1.5</td>
</tr>
<tr>
<td>Funding group 3</td>
<td>2.5</td>
</tr>
<tr>
<td>Funding group 4</td>
<td>3.5</td>
</tr>
</tbody>
</table>

FTE enrolments in the funding grid are weighted according to course level as well. These are shown in Table 8.5 and they take account of (a) the high priority the National Plan gave to the need to increase postgraduate student enrolments, especially at master’s and doctoral levels; and (b) an argument that, given the ways in which FTE enrolments are calculated, weighted totals of FTE enrolled postgraduate students constitute better strategic incentives to institutions than the unweighted ones.
Table 8.5: Weightings of FTE Enrolments within the Funding Grid

<table>
<thead>
<tr>
<th>Funding Group</th>
<th>Undergraduate &amp; Equivalent</th>
<th>Honours (4th Year) &amp; Equivalent</th>
<th>Master's &amp; Equivalent</th>
<th>Doctoral &amp; Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
<td>4.0</td>
</tr>
<tr>
<td>2</td>
<td>1.5</td>
<td>3.0</td>
<td>4.5</td>
<td>6.0</td>
</tr>
<tr>
<td>3</td>
<td>2.5</td>
<td>5.0</td>
<td>7.5</td>
<td>10.0</td>
</tr>
<tr>
<td>4</td>
<td>3.5</td>
<td>7.0</td>
<td>10.5</td>
<td>14.0</td>
</tr>
</tbody>
</table>

Table 8.6 sets out the full funding grid which is to be used to generate teaching input subsidies for universities and technikons.

Table 8.6: Weightings within the Funding Grid

FTE Student Places and Planned FTE Student Enrolments
The funding formula had to make provision for both FTE student places and planned FTE student enrolments as the primary input values for the new block formula. It refers in particular to planned FTE student places because of the necessary link between funding and planning in the new funding framework. This link implies that teaching funds cannot be paid to institutions solely on the basis of historical student enrolments. These inputs have to be moderated by approved institutional three-year rolling plans.

A key issue for the new block formula is that of finding a proxy for FTE student places. Given that most institutions lack the capacity to provide acceptable forward projections of their student enrolments, it was decided that enrolled data for year n-2 would have to be used as proxies for student places in determining the input teaching subsidies of institutions. Provisions are made for later adjustments to these figures on the basis of actual enrolments and other necessary modifications.

The new framework does not include regular inflation-based adjustments of the rand values of cost unit. Since the proposed model contains no cost units, inflation is dealt with in terms of government’s annual budgetary allocation for higher education, the assignment of planned FTE-enrolled students to institutions and the calculation of prices per cell in the funding grid.
Institutional Factors
The original formulas for higher education institutions made provision for institutional set-up subsidies. These are amounts which higher education institutions received to compensate them for basic running costs, irrespective of the size of their student body. These set-up subsidies had an important effect on the block funds of higher education institutions. They increased the unit subsidies of smaller institutions (their subsidy payments per enrolled student) and dampened those of larger institutions.

In the new funding framework, the set-up subsidies are replaced by institutional adjustment factors, which take account of three sets of institutional circumstances: (a) the proportion of contact (or on-campus) FTE student enrolments from previously disadvantaged groups; (b) the approved size of each institution in terms of FTE student enrolments; and (c) the approved shape of the institution in terms of FTE student enrolments in the teaching input funding grid. In each case the FTE student enrolment total is an unweighted one; that is, one which does not take account of the weightings by level built into the new funding grid.

A further important point to note is that these institutional adjustment factors are applied only to the teaching input funds of each institution. They are not applied to teaching and research output funds.

Students from disadvantaged or poor backgrounds are, for this purpose, deemed to be African and Coloured students who are South African citizens and who are enrolled in contact education programmes. It was recognised that these population group categories are too broad to serve as long-term indicators of disadvantage and some new factor would have to be developed as a proxy for ‘disadvantage’.

Earmarked Funding
Earmarked funds budgets are used primarily for the following purposes:

- The national student financial aid scheme;
- Research development;
- Foundation programmes and teaching development;
- Interest and redemption payments on approved loans;
- Approved capital projects, as and when funds for these purposes are made available as part of the national higher education budget; and
- Any other purpose either identified in the current national higher education plan; or
- Determined by the Minister from time to time.
**Foundation Programmes**

The new funding framework also provides funds for ‘foundation’ programmes to enable students from educationally disadvantaged backgrounds to adjust to the demands of higher education. Foundation students are funded as additional FTE student places awarded to an institution. This means that such students generate more funds for the institution than it would otherwise receive.

It was decided that foundation programmes would be funded in this way for at least the first five years of the operation of the new funding framework.

A total equivalent to about 15% of the expected FTE enrolment of first-time entering undergraduate students in contact education programmes were to be assigned each year to foundation programmes. This proportion would be increased in the future if assessments of institutional foundation programmes suggested that appropriate provision should be made for larger totals of first-time entering undergraduate students. These FTE foundation students would be funded at the price applicable to funding Group 1 in the teaching input grid. The foundation funds generated will be earmarked, in the sense that they will have to be used for foundation purposes only. These funds would be allocated to institutions by the Ministry when assessments are being made of their three-year rolling plans.

**Assessing the Funding Framework**

The new funding framework developed for higher education in South Africa has a number of important implications for equity and efficiency (Pillay 2006).

**Predictability**

Implementing a formula-driven approach ensures a level of predictability, particularly with regard to ‘certainty of revenue’. Institutions are aware of the factors driving the formula and will know within certain parameters, the magnitude of resources that will flow to them over a certain period. Such certainty undoubtedly enhances institutional planning.

**Recognition of a Hard Budget Constraint**

The new funding framework is driven by the availability of public resources for higher education rather than by the costs of provision. The various mechanisms in the framework come into operation only after government has determined (a) the total of public funds that should be spent in a given year on higher education and (b) what services should be delivered by the higher education system.
**Promoting Institutional Autonomy and Equity**

By using a mixture of block and earmarked grants the formula achieves both these goals to a certain degree. Block grants confer a degree of freedom of use of funds by institutions while earmarked grants by definition are directed towards the attainment of specific goals such as equity – for example, in research development, and through foundation programmes for the historically disadvantaged.

**Efficiency Incentives**

The formula-driven framework provides for this in a number of ways:

- The block grant component rewards efficiency of outcomes in research. Grants are based on the output of publications and of master’s and doctoral graduates. Research grants are moreover not based on a predetermined monetary amount but against benchmarks based on academic capacity.
- Inadequate research performance by the system as a whole will result in surpluses of funds allocated for research. These funds provide a further incentive to stimulate output in that they are distributed on a pro-rata (output) determined basis.
- The formula is designed in such a way that it rewards the output of certain categories of graduates more than it does others (for example, professional bachelors’ degrees as against other bachelors’ degrees). Such a funding mechanism can enable the government to stimulate the development of skills that are in short supply. As with research, teaching output funds are determined not by pre-set amounts of funding but developed through a set of benchmark graduation rates, based on the National Plan for Higher Education. In line with this, the formula promotes differential funding in line with the country’s human development needs (for example, Agriculture and Health Sciences as against Librarianship and Psychology).
- Through institutional funding, the framework promotes economies of scale and thus lower institutional unit costs.

**Equity**

Equity is enhanced in a number of ways:

- Earmarked funding, inter alia for capacity building, research development and foundation programmes for the historically disadvantaged;
• Institutional factoring for students from historically advantaged backgrounds (African and Coloured students); and
• Institutional factoring for small institutions, especially those in rural areas.

However, Le Roux and Breier (2007) argue that the funding formula is likely to have significantly different outcomes from those intended by the government. They argue that the funding formula needs to be adjusted, in order to allocate more funds to institutions which accommodate students from socio-economically disadvantaged backgrounds.

The main argument developed by Le Roux and Breier is that the new funding framework has the unintended consequence of discouraging higher education institutions from accommodating students who might have the ability to succeed but are badly prepared for university and/or cannot afford full-time study. The new funding framework places a strong emphasis on improving success rates for diplomas and degrees. Institutions are effectively penalised if they admit students who cannot complete the degree or diploma in the required time, either because of an inability to pass all the courses or because they may wish to study part time in order to also earn an income. Moreover, the new funding framework further cuts back significantly on the rewards for a course-work master’s degree compared to a master’s degree based on a full thesis, which again discourages institutions from accepting students from disadvantaged backgrounds for a master’s programme. In this view, the new funding framework also penalises universities if students take longer than the standard period to complete their degrees or diplomas, which means that it strongly discourages universities from accommodating part-time students.

In Le Roux and Breier’s view, a situation has arisen in which universities are rewarded for selecting students who are well prepared for universities and punished if they are not. This builds in a strong bias against accommodating students from disadvantaged backgrounds and puts higher education institutions that traditionally focused on these students at a tremendous disadvantage, particularly at a time when most historically white institutions have managed to attract many of the better qualified black students from the traditionally black institutions. Ironically, the very low African and Coloured participation rates are far more likely to improve if the present race-based elements of the formula are scrapped and replaced by a number of measures aimed at increasing the throughput of students from socio-economically disadvantaged backgrounds. (Le Roux & Breier 2007)
Le Roux and Breier suggest that the reasons for not effectively applying the new formula are obvious. All of the traditionally black higher education institutions that have remained separate institutions will do significantly worse than the historically white institutions. As far as teaching output is concerned, the black universities have, since apartheid legislation disappeared, lost many of their stronger students to the historically white institutions, and they are taking in students primarily from the old ‘Bantu education’ system, who are far less prepared for university, than students from the former white schools as well as private schools. For these reasons as well as the poor quality of staff at many historically black institutions, these institutions are unlikely to ever come close to meeting the output demands of the formula.

Le Roux and Breier note that the new funding framework brought in a scale factor, rewarding universities which had a large number of black students or increased their contingent of black students, changed the funding given to different disciplines, restricted the expansion of distance students to a low rate, and gave a much higher reward to research publication, full theses master and PhDs, simultaneously reducing the subsidy for course-work masters significantly. However, in their view, some of these changes have been to the detriment of students from poor and educationally disadvantaged backgrounds and also part-time students. They also suggest that the most fundamental weakness of the new funding framework is that like the NSFAS it uses race as a proxy for disadvantage, rather than developing a direct measure of socio-economic need.

**Trends in Higher Education Financing**

As pointed out by Wangenge-Ouma and Cloete (2008), the funding of higher education is critical for the attainment of the key policy goals identified by the National Plan on Higher Education. These policy goals are:

1. Producing the graduates needed for social and economic development;
2. Achieving equity in the higher education system;
3. Achieving diversity in the higher education system;
4. Sustaining and promoting research; and
5. Restructuring the institutional landscape of the higher education system (NPHE 2001).

The most important source of funding for South Africa’s public universities is the state. However, the degree of dependence varies. Some universities receive slightly
more than 30% of their total income from government while others receive 65% of their total revenues from this source (Wangenge-Ouma & Cloete 2008).

A recent study at Rhodes University (Duncan 2009) has shown that the proportion of institutional revenue received from the state (the so-called first stream of income) has declined, on average, from 62% in 1986 to 41% in 2007. ‘Second stream’ income (tuition fees) increased from 15% to 32% and ‘third stream’ income (research, consultancies, investment income, etc), increased from 23% to 27% during the same period.

However, in both real and student per capita terms, funding has declined. A recent analysis shows that between 2000 and 2004, government funding of higher education declined by 3.1% in real terms (DoE 2007b). From 1995 to 1999, total state spending per FTE student in higher education increased annually by ZAR 352 in real terms (in 2000 rand) but declined annually by ZAR 515 between 2000 and 2004. This decreasing pattern continued in the period to 2009 and is unlikely to be reversed in the light of the MTEF projections to 2012 (Table 8.7).

As a percentage of GDP, state funding of higher education has also declined from a high of 0.82% in 1996 to a low of 0.68% in 2008. As a percentage of the government budget, after peaking at 3.0% in 2000, it has consistently declined reaching 2.4% in 2008.

<table>
<thead>
<tr>
<th>Table 8.7: Average Annual Increase in State Funding of Higher Education per FTE Student (2000 ZAR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher education (formula funding)</td>
</tr>
<tr>
<td>Higher education (total)</td>
</tr>
</tbody>
</table>

Importantly, discretionary funds per FTE student (i.e. as per the funding formula) have declined more rapidly than earmarked funding, that is, subsidies not directly contributing to operational costs such as NSFAS (Wangenge-Ouma & Cloete 2008). For instance, whereas, the state’s total funding for higher education per FTE student increased by an annual average of ZAR 352 (in 2000) between 1995 and 1999, discretionary funding in the same period increased by an annual average of ZAR 173. In the 2000–2004 period, discretionary funding per FTE equivalent declined by an annual average of ZAR 655 in real terms compared to an decrease of ZAR 515 for total state expenditure on higher education per FTE student.

Expenditure on higher education comprises only about 2.5% of total government expenditure. Table 8.8 shows that for 2008/2009 and 2009/2010
this proportion stood at 2.4% and is projected to rise only marginally to 2.5% for the next two years of the current Medium Term Expenditure Framework.

Table 8.8: Higher Education Expenditure as a Proportion of Total Government Expenditure

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher education (ZAR, billion)</td>
<td>15.5</td>
<td>17.1</td>
<td>19.5</td>
<td>21.6</td>
</tr>
<tr>
<td>Total (ZAR, billion)</td>
<td>633</td>
<td>739</td>
<td>792</td>
<td>849</td>
</tr>
<tr>
<td>Higher education total %</td>
<td>2.4</td>
<td>2.4</td>
<td>2.5</td>
<td>2.5</td>
</tr>
</tbody>
</table>

Source: National Treasury 2009

In the higher education budget, the two main items are transfer payments to the higher education institutions and the NSFAS. Table 8.9 shows that the transfer payments to NSFAS ranged between 8% and 10% for the fiscal period 2005/2006–2007/2008, but is expected to stabilise around 12.0–12.5% for the next four fiscal years.

The transfer payments to the higher education institutions increased at an average annual rate of 12.3% between 2005/2006 and 2008/2009 (this was significantly above the average inflation for this period, and thus represents a ‘real’ increase of around between 3-5%). This expenditure is projected to continue to increase at an average rate of 11.2% over the medium term, again significantly above the projected inflation rate for the period (6–7%) (computed from National Treasury 2009 figures).

Table 8.9: Higher Education Budget: 2005/2006–2011/2012 (ZAR, billion)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>NSFAS</td>
<td>0.864</td>
<td>0.926</td>
<td>1.333</td>
<td>1.702</td>
<td>2.145</td>
<td>2.333</td>
<td>2.710</td>
</tr>
<tr>
<td>NSFAS/HE (%)</td>
<td>8.1</td>
<td>7.8</td>
<td>10.0</td>
<td>12.4</td>
<td>12.3</td>
<td>11.8</td>
<td>12.5</td>
</tr>
</tbody>
</table>

Note: Higher education institution (HEI) allocation here excludes capital allocations. Source: National Treasury 2009

Transfers to NSFAS are expected to rise at an average annual rate of 16.6% over the medium term ‘mainly due to additional allocations for specific bursaries such as the initial supply of teachers bursary and for students at FET colleges’ (National Treasury 2009).

The National Student Financial Aid Scheme (NSFAS)

As stated earlier, by developing country standards, South Africa has developed an effective loan scheme for higher education students.
The parameters of NSFAS assistance in 2007/2008 are summarised as follows:

- Financial assistance is only made available to those who are both financially needy and academically competent;
- The maximum award is ZAR 35 000 and the minimum award is ZAR 2 000;
- Up to 40% of the award may be converted into a bursary where the extent of this conversion is determined by the student’s academic results;
- Interest on loans accrues as at 01 April 2007 at 7.0%;
- Interest on the component of the award which is converted into a bursary will be written off;
- A credit balance on a student’s fee account will be returned to NSFAS by 31 March 2007 and will be regarded as the student’s first loan repayment;
- The loans are income-contingent, with loan repayments beginning at 3% of salary at ZAR 30 000;
- Funds are recovered from debtors at the remuneration source; and
- NSFAS awards can be packaged with other awards as long as the total amount granted does not exceed the student’s full cost of study for the year; and
- an own contribution of some kind must form part of the total package.

Table 8.10 shows the trends in awards and recovered funds between 2002 and 2007.

<table>
<thead>
<tr>
<th></th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of awards</td>
<td>99 949</td>
<td>112 264</td>
<td>113 693</td>
<td>122 696</td>
<td>124 730</td>
<td>140 901</td>
</tr>
<tr>
<td>Number of students assisted</td>
<td>86 147</td>
<td>96 552</td>
<td>98 813</td>
<td>106 852</td>
<td>107 586</td>
<td>113 616</td>
</tr>
<tr>
<td>Recovered funds (ZAR, million)</td>
<td>155</td>
<td>208</td>
<td>245</td>
<td>329</td>
<td>392</td>
<td>479</td>
</tr>
</tbody>
</table>

Source: NSFAS 2008

Notwithstanding the impressive data presented above, NSFAS does continue to present a number of challenges to policy-makers and implementers, the most important of which are the following:

- Providing adequate funding to all financially needy students who qualify to enter the higher education system, so that they are able to meet the ‘full costs of study’;
• Financial allocation to higher education institutions is based on race (as a proxy for need) rather than on direct measures of socio-economic need; and
• Further improvement is needed in the loan recovery rates.

Conclusion

South Africa has reached a relatively high level of sophistication in the development of its higher education funding mechanisms particularly with the close link between its planning and budgeting processes, and its implementation of a relatively simple funding formula. The system has also benefited from always having had a fee-paying system so no new cost-sharing mechanisms had to be developed. Finally, there is also a strong systemic thrust towards greater equity exemplified in both the funding formula and the student loan scheme.

However, the South African system does face enormous challenges with respect to quality and efficiency. The apartheid legacy of differentiated systemic quality and efficiency continues except that the main determinant is no longer race but socio-economic status and region.

With respect to the new funding framework, more recently, serious questions are being raised about the adequacy of the instruments within the formula to promote inter-institutional equity. In fact, it is being argued that the funding mechanism currently in place may be serving to entrench and even accentuate inequalities between previously advantaged and previously disadvantaged institutions. In practice, this is occurring for at least three reasons at the current time:

1. The formula rewards research outputs but most disadvantaged institutions do not have research capacity and in the light of their heavy teaching burdens are not likely to develop this capacity in the short to medium terms.
2. Capital expenditure, while increasing substantially in the past few years, falls far short of requirements in the light of increased access.
3. Earmarked grants provided for in the funding formula, may be inadequate to ‘level the playing field’ and thus address the equity challenge more effectively.