

Funding sources for public higher education in South Africa: Institutional responses

Isaac Ntshoe & Pierre de Villiers

Tuition fees and the use of student loans to complement government's allocations have become unavoidable because of increasing competing new priorities for funding. This article addresses the funding sources of public higher education through tuition and loans. We explore the effects of shifts from first-stream income (government appropriations) towards second- (tuition fees) and third-stream (philanthropic funding and academic entrepreneurialism), and how tuition fees and student loans might impact on access, equity and throughput rates in South Africa. The qualitative study using semi-structured interviews was adopted to obtain data with expert information selected by purposeful sampling from four types of higher education institutions in South Africa. The data were also obtained from national policy and institutional documents. We make a case for the indivisibility between first-, second- and third-stream money incomes and between public-private benefits of tuition fees and student loans. We argue that the ability of institutions to raise third-stream income depends on their history, geopolitical location, programmes offered and their proximity to industry, so as to engage research activities that promote third-stream income. We further argue that institutions in mainly rural provinces, and students from poor family backgrounds, most of whom are Black, generally lack the necessary cultural and social capital to make use of opportunities in the form of bursaries and student loans.

Keywords: Funding sources, institutional response, higher education, tuition fees, student loans, global competition

Introduction

Historically, funding higher education has been through governments' appropriations (first-stream income), although in some countries this source has been supplemented by tuition fees (second-stream income). However, shifts have globally occurred

Isaac Ntshoe
Faculty of Humanities,
Central University of Technology
e-mail: INtshoe@cut.ac.za
Telephone: 051 507 3636

Pierre de Villiers
Department of Economics,
Stellenbosch University
e-mail: apdv@sun.ac.za
Telephone: 021 808 2206

towards the second- and third-streams through academic entrepreneurialism, in order to compensate for the relative decrease in the state's contribution (Teferra & Altbach, 2004: 3-14). These shifts have resulted in the introduction (or increase) of tuition fees and of student loan schemes (Johnstone & Marcucci, 2007). In particular, we examine institutional responses to the government's changing funding policy and how tuition fees and student loans impact on equity and the throughput rate in some institutions in South Africa.

Notions of private-public or quasi-public and private good dimensions of higher education have been inserted in our discussions, using Blaug's (1972: 105-114, 203) classical work on which many subsequent works on this subject have been drawn (for example, Tilak, 2009; World Bank, 2002). In particular, the discussions explore competing views on the public-private good dimensions of higher education in relation to the issue of who should finance it (Jonathan, 1997, 2002; Tilak, 2009).

Our discussions on the tuition fees and the National Student Financial Aid Scheme (NSFAS) in South Africa have borrowed from Bourdieu's work on cultural and social capital. In terms of this work, students from working-class families are often incapable of maximising their educational opportunities, including bursaries and loans, because they lack the necessary cultural and social dispositions. Conversely, upper- and middle-class families transmit this cultural capital to their offspring that substitutes, or supplements the transmission of economic capital as a means of maintaining class, status and privileges across generations (Bourdieu, 1984). We have employed this framework to generate debate on how cost-sharing may broaden access, and how it may limit participation in higher education in South Africa.

Funding sources for higher education

The different types of funding for higher education will now be discussed briefly.

First-stream income

During the economic boom of the 1960s and 1970s, some governments covered the bulk of the costs of higher education, but a general economic slowdown and corresponding competition from new emerging priorities changed that (see, for example, Barr & Crawford, 2005; Johnstone & Marcucci, 2010; Teferra & Altbach, 2003). Similarly, De Villiers and Steyn (2006: 39-41) observe that government appropriations at all universities and technikons in South Africa decreased as a proportion of higher education institutions' income over the period 1986-2003. This point is corroborated by Bunting (2011: 4) for South Africa over the period 2000-2009.

Second-stream money

Generally, four parties directly or indirectly pay for higher education, namely *governments or taxpayers* (via direct and indirect taxes); *students* (via savings, current earnings or borrowing), or their *parents* (via savings, borrowing or sacrificing current consumption); *philanthropists* (via endowments or current contributions),

and *employers*. The charging of tuition fees and the subsequent introduction of user charges in cases where higher education was initially 'free' have become common sources to fund higher education (Johnstone & Marcucci, 2010; Massay, 2004; Teferra & Altbach, 2003).

Tuition fees have generally increased where they existed, while student grants or scholarships have been reduced, eliminated or replaced by student loans (Johnstone & Marcucci, 2007). Student loans have become prevalent based on the assertion that the beneficiaries of higher education (students, families and the society through higher income and the 'spillover' effects) should contribute towards educational costs (The World Bank, 2002: xxi).

However, student loans have inherent limitations, including the non-repayment, or the extended time taken by students to pay back the loan. Shen and Ziderman's (2009: 320-326) study in 39 countries over the period 1997-2004 for first-degree students revealed that, in Canada, the repayment ratio was over 99%, but the recovery ratio itself fell to 73.8%. In the highly subsidised schemes of Kenya and Ghana (repayment ratios of 27.9% and 39.1%, respectively), considerable repayment defaults reduced the recovery ratios to only 5.6% and 11.0%, respectively.

Ziderman and Albrecht's (1995: 35) argument echoes Bourdieu's thesis that "in most systems, the poor are denied access, not because of user charges, but because of poor access to cultural and social capitals and primary schools, social attitudes and the overall private costs of higher education".

Third-stream money income

Owing to the general decline in government allocations, institutions are forced to broaden their funding base through philanthropic funding, as well as through entrepreneurial initiatives (Massy, 2004). Entrepreneurial activities are embedded in university-industry funding partnerships. Institutions, therefore, adopt market-like behaviours to secure additional funding in the face of competition for scarce resources (Slaughter & Leslie, 1997). This phenomenon is underpinned by a belief that partnerships are beneficial to all parties involved (Nixon, 2004).

The university-industry partnerships through entrepreneurship are, in a sense, an acknowledgement of the private sector's contribution to higher education. In South Africa, industries are aiming to match the government's funding, especially in the fields of science and technology (S&T). The downside of these partnerships is that they are skewed towards S&T because of increasing demands for skills in S&T programmes required in the economy.

New Funding Framework (NFF) in post-apartheid South Africa

Although this article is about second- and third-stream incomes, the key features of first-stream income in the NFF warrant brief outline (see Ministry of Education,

2004). The NFF was the focus of one of the articles in *Perspectives in Education* (see Ntshoe & De Villiers, 2008: 20-23).

First-stream funding

Funding higher education in a democratic South Africa rests on three pillars: a policy of increased participation; greater responsiveness of the higher education sector to the changing social environment, and increased cooperation between the higher education sector, the state and civil society (Steyn, 2005: 3). Government appropriations still comprise the largest part of the total funding to higher education. Figure 1 illustrates the divisions of government’s allocations and subsidies in the NFF.

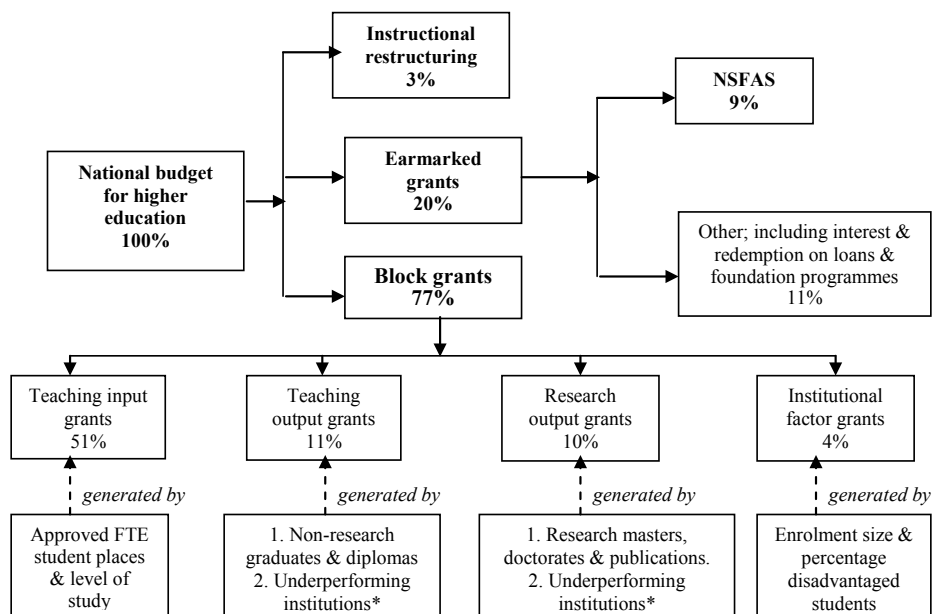


Figure 1: Division of government budget for higher education into categories and subcategories: 2011/12

*Underperforming institutions perform below centrally determined levels of graduation rates and research output Source: Bunting (2011: 7)

State allocations to higher education in South Africa increased from R1.422 million in 1987 to R10.215 million in 2005. However, this has not kept abreast of student numbers and real state appropriation per weighted full-time equivalent (FTE) student by 36% for universities between 1987 and 2005 and by 43% for technikons (Steyn & De Villiers, 2006). From 2000 to 2009, real state appropriations per FTE student decreased by 1% per annum (Bunting, 2011: 4). Over time, there has been a clear shift in South Africa from first-stream towards (especially) second- and third-stream funding.

Second-stream income

Tuition fees

Owing to the decrease in real state appropriations per student, tuition fees at universities increased in real terms by 49% between 1986 and 2003 and by 85% at technikons from 1987 to 2003 (Steyn & De Villiers, 2006). From 2000 to 2009, tuition fees per FTE student increased by 2.5% in real terms (Bunting, 2011: 4). This was confirmed by the Higher Education South Africa (HESA) Report (2008) which observed that some universities in South Africa experienced student protests because of fee increases. HESA proposed the regulation of fees as follows: a flat rate where all students pay the same; differentiated fees according to different programmes; a redistributive tuition fee model, where fees are based on the disposable income of the prospective student or the student's family, and a free-market model where market forces determine the fees. Although HESA (2008: 3-5) was concerned about high tuition fees, it concluded that placing an upper limit on tuition fees may not benefit the poor, but only make higher education cheaper for the rich.

Student loans

NSFAS has become an important source of second-stream financial income to promote the government's policy of expanding access to previously disadvantaged groups, and to recover the costs from those who benefit from it. In 1995, 40 002 students received NSFAS awards amounting to R154 million (see Table 1). In 2009, R2.8 billion was paid out to 135 208 students. In support of the government's policy of broadening access, Black students received 93% of the awards in 2008. **Table 1:** Number of students assisted through NSFAS awards and amounts awarded between 1995 and 2009

Table 1: Number of students assisted through NSFAS awards and amounts awarded between 1995 and 2009

<i>Year</i>	<i>Number of students assisted</i>	<i>Amount</i>
1995	40 002	R154m
1996	67 641	R333m
1997	63 272	R350m
1998	67 558	R394m
1999	68 363	R441m
2000	72 038	R511m
2001	80 513	R635m
2002	86 147	R733m
2003	96 552	R894m
2004	98 813	R985m

2005	106 852	R1.217m
2006	107 586	R1.358m
2007	113 519	R1.791m
2008	117 766	R2.375m
2009	135 208	R2.818m

Source: NSFAS Annual Reports 2007, 2008 and 2010

An incentive in the NSFAS loan scheme was included so that 40% of the loans could be converted into bursaries, provided students pass the courses for which loans have been allocated. According to the Annual Reports of NSFAS (2007, 2008), this has incentivised students because, on average, they passed 74.3% of the courses for which they enrolled during the period 1996-2008. These pass rates contradict the Ministerial Committee (2010: 69-70) which reported that only 28% of students funded by NSFAS (who are no longer studying) graduated, while the remaining 72% did not complete their studies. A recent research report by De Villiers, Van Wyk and Van der Berg (2012) corroborates the figures supplied by NSFAS.

However, student repayment remains a problem. Albrecht and Ziderman (1993: 71) found that students often repay only a small portion of the value of the original loan; that the default rate is high, and that high administrative costs erode the value of the repayments. In South Africa, recovered money of NSFAS increased from R31.7m in 1999 to R636.3m in 2009. However, Ms Fiona Lewis, former head of research at NSFAS, indicated in August 2009, at a NSFAS workshop, that the authorities were uncertain about what they were supposed to receive.

Case study of four higher education institutions

Methodology and approaches

Four institutions were sampled: the University of South Africa (Unisa) (the only university dedicated to providing distance learning in South Africa); the University of Pretoria (UP) (a previously advantaged institution); the University of Limpopo (UL) (a historically Black institution), and Tshwane University of Technology (TUT) (formerly a technikon). The data sources included national policy and institutional documents on the funding of higher education, senior managers in the four institutions, annual reports of NSFAS, and institutional documents on tuition fees.

Purposeful sampling was used to select twelve participants/informants from institutions. The participants included one senior financial officer from the selected institutions, one senior manager dealing with student loans, and one senior manager responsible for planning. Permission to conduct a semi-structured interview, using an interview schedule, was negotiated with the participants themselves. Written consent on the information gathered was obtained from the participants, as indicated in this article. Responses from informants were reported anonymously in order to

observe ethical protocol. Other responses were relayed electronically at the request of the participants. Consideration was given to the expertise and experience of the participants in the higher education environment and their positions within their institutions. Accordingly, participants were selected, because they could provide the required qualitative data, as well as being in a position to provide a critical analysis of the financial shifts that have taken place in their institutions. The data were analysed in terms of themes and issues on sources of funding. Data from the various sources were subjected to triangulation to establish collaborations and to highlight idiosyncrasies of individual institutions.

Results

Second-stream income at the four institutions

Traditionally, all four institutions charged tuition fees. Tuition fees varied according to institutions, programmes and level of study. However, there has been a prevalence of non-payment, especially at historically disadvantaged institutions.

The four institutions have had diverse experiences with second-stream income due to their history and experiences, which were reflected in the informants' responses. The UL, originally created for Blacks, experienced a decline in student numbers and a subsequent loss of revenue (from fees) during the 1990s (Steyn & De Villiers, 2006). This epitomised the general migration of Black students to historically White institutions in search of better learning facilities, resources, qualified staff and bursaries (CHE, 1999).

Table 2 reflects the allocation of NSFAS at the four institutions from 2004 to 2007. The table shows the country's demographics, the bias towards Black students, and a strategy for redressing previous racial inequities. In 2006, for example, 97.2% of the headcount of undergraduate students at the UL was Black, while the number for TUT was 85.4% (Department of Education, 2008).

Table 2: Number of National Students Financial Aid scheme awards by race at the four institutions: 2004-2007

<i>Institution</i>	<i>Year</i>	<i>African</i>	<i>White</i>	<i>Coloureds</i>	<i>Indian</i>	<i>Total</i>	<i>Amount (R million)</i>
Tshwane University	2004	9 503	114	n/a	n/a	10 886	123.7
	2005	5 846	146	n/a	n/a	11 073	135.8
	2006	6 514	117	n/a	n/a	11 738	144.4
	2007	2 119	122	n/a	n/a	12 480	168.0

University of Limpopo	2004	4 794	-	-	-	4 794	27.7
	2005	5 300	-	-	-	5 300	40.7
	2006	4 987	-	-	-	4 987	47.8
University of Pretoria	2004	1 901	n/a	n/a	n/a	2 515	31.8
	2005	2 311	n/a	n/a	n/a	3 031	48.3
	2006	2 293	n/a	n/a	n/a	2 921	55.1
University of South Africa	2004	6 536	139	88	133	6 896	n/a
	2005	6 790	120	61	122	7 093	n/a
	2006	8 947	82	89	119	9 233	n/a
	2007	11 800	139	87	71	12 042	n/a

Results suggest that throughput rates remained a challenge. For example, at Unisa, the module/course success rate was only 54% in 2006, below the approved ministerial target of 56% (Pityana, 2008: 3). The data on the throughput rate at the other three institutions could not be obtained, as these institutions were reluctant to make this information public.

Third-stream income at the four institutions

The responses of senior managers at the four institutions varied on this issue. The informants at Unisa concurred that the institution was unable to attract funding from industry, primarily because, historically, the institution has been strong in the provision of social and human sciences and has generally weak science-related offerings. According to the senior manager, participation in the THRIP Programme at Unisa prior to 2009 had been minimal because of poor science infrastructure, such as laboratories. Thus, in science and technology research, Unisa lacked equipment and so laboratory work was carried out in partnership with other partners, such as the ARC (Agricultural Research Council). However, by 2009, the College of Science, Engineering and Technology had 22 National Research Foundation (NRF)-rated researchers (Setati, 2012).

TUT, on the other hand, had only a 0.5% share of the THRIP grants awarded during the period 1994-1996, and an 88% accumulation of this grant in 2002. The institution had 14 Technology and Human Resources Programmes and three Innovation Fund projects that were part of the government's policy of encouraging university-industry funding partnerships in 2009 (Tshwane University of Technology, 2005). By focusing on

areas of engineering and health, which bring them closer to industry, the institution has been able to secure some external funding and provide bursaries for students (Van der Sijde, McGowan, Van de Velde & Youngleson, 2005). TUT, for example, was allocated R17.7m for research projects at the Faculty of Engineering, the Built Environment and the Faculty of Science (Tshwane University of Technology, 2008).

In response to the issue of the institution's ability to attract external funding, informants argued that, with its historical privileges, the UP has strong structures to raise third-stream income. Their views endorsed the view of the Council on Higher Education (CHE, 1999) that, because of its history and the programmes it provided, the institution has been able to respond to the changing higher education landscape by exploring, *inter alia*, technologically based distance education, in order to attract non-traditional (working) students. The Senior Partnership Manager pointed out that "the institution has adopted a generally strong relationship with industry and business, and receives donations from these sources because of its history". His view was endorsed by the NRF (1997: page no?), which observes that "with the same vigour as always, UP increasingly looks for commercial research funding for frontier sciences and engineering projects that are tied to national policy initiative and partnered by prestigious firms, usually those that are national and international in scope". Informants argued that, because of its history and offerings, the institution retains a strong relationship with industry and business, encourages academic entrepreneurialism, and engages in basic research or commercial research funding for the sciences and engineering projects that are tied to national policy initiatives (CHE, 1999).

The literature suggests that the UL had a different experience compared to the other three institutions. The university did not seem to generate much funding from industry and was unable to take advantage of the government's incentivised funding opportunities because of its geopolitical location. The fact is that the university is located in a cash-strapped underdeveloped province of South Africa that lacks a strong industrial infrastructure and draws its students primarily from impoverished rural areas. This explains why the institution has relied primarily on government grants, tuition fees and student loans for its survival (see Steyn & De Villiers (2006) for the allocation of THRIP and NRF allocations, as well as income indicators).

Discussion of findings

Although government appropriations to higher education increased from R1.4 billion in 1987 to R10.2 billion in 2005, they were outstripped by the burgeoning demands for higher education. In real terms, state appropriation per full-time equivalent student decreased by 36% for universities and by 45% for technikons between 1987 and 2003.

The discussions suggest that, parallel to increased tuition fees, government continues to contribute the largest portion of funding for higher education, but

that these increases have not translated into improved throughput rates at Unisa (Pityana, 2008). Historically disadvantaged institutions such as the UL continue to rely primarily on tuition fees to survive, as they have limited capacity to generate third-stream income because of their history and geographical location.

Our discussions further indicate that, while higher tuition fees have become unavoidable to supplement declining per capita government subsidies, increases in tuition fees continue to be contested by evoking entitlement to higher education by Black students. Entitlement was evoked in 2009 at the Mangosuthu University of Technology and the TUT, while students' outstanding debt amounted to R2.8 billion in 2009/2010 (Munyaradzi, 2010).

The participants in this study argued that, despite the exodus of Black students from historically Black institutions to historically White institutions since the 1990s, the majority of Black students still enrol at historically disadvantaged institutions, because their tuition fees are lower. According to senior managers at the UP, Unisa and the TUT, they did not experience as many problems with student debt compared to the UL. The situation at Unisa could be attributed to the fact that the majority of students are either supported by families or are themselves working to cover tuition fees, together with the fact that tuition materials are not distributed unless fees are paid. The argument that beneficiaries of higher education should pay for their studies is challenged by a contrasting view that studies tend to underestimate the social benefits (spill-over) of higher education (see, for example, Schultz, 2004 for the African case, in general, and Keswell & Poswell (2004) for South Africa, in particular).

The NSFAS loans do alleviate the financial burden, improve access to higher education, and broaden the participation of students from poor backgrounds. Loan repayment is expected only when graduates enter permanent employment and earn at least R30.000 and then pay back 3% of this income. "The poor experience the monthly repayment in relation to monthly income as high and this leads to repayment default" (Ishengoma, 2002: 7). The burden to repay loans often leads to a general reluctance to take up loans and rather rely on families for financial support: "This is despite the fact that students who pass all courses qualify for a 40% loan rebate and those who pass half the courses qualify for a 20% loan rebate" (Ishengoma, 2002: 7).

Drawing from the discussions, we argue that, despite some of the economic value of tuition and student loans, cost-sharing should be understood within the influences of social and cultural capital on the successful use of educational opportunities. Accordingly, access and widening participation through state-subsidised tuition fees and student loans translate into high-status cultural capital and high-status credentials, including academic degrees from elite institutions (Bourdieu & Passerson, 1977). We, therefore, concur with the view that student fees, as a feature of cost-sharing restricts access for poor students and may reduce completion rates (Rumble, 2006: 89). Students from working-class families in South Africa are often unable to maximise the use of a student loan to study due to their class status.

Our research indicates that the capacity to raise third-stream money depends on the institutions' history, culture, core business and standing in communities. Institutions with an established research tradition and those offering industry-related programmes are thus more likely to engage in joint ventures with the private sector and raise third-stream money, compared to those that primarily provide social sciences and have weak research cultures. Research-oriented schools and divisions form more lucrative partnerships with industry than those that offer the humanities and the social sciences (De Villiers & Steyn, 2009: 59).

The strategy of broadening the funding base for higher education resonates with the funding model of the World Bank (Naert, 2004). However, while increasing university-industry partnership is a viable strategy in recognising private-sector involvement in higher education, some critics have warned that this tends to take a neoliberal and neutral liberalism bias, making these types of partnerships weak to guide social practice (Jonathan, 1997, 2002).

Conclusion

We make a case for creating space for the direct and indirect contribution by the private sector to address the imperatives of equity and efficiency in higher education. We, therefore, argue that recovering the costs of public higher education through second- and third-stream funding has become irreversible because of emerging priorities and the decline in real terms of government funding for higher education. We further maintain that the South African government is caught between a commitment to widen participation and social justice policies, on the one hand, and the fiscal pressure to recover costs through tuition fees, student loans and funding from outside government, on the other. We highlighted the simplistic approach and the belief in South Africa that the post-apartheid government has the duty to provide free higher education to communities that were previously excluded from it. Although this belief remains, to a large extent, unspoken, it is implied in entitlement to free higher education by Black students and a corresponding unwillingness/inability to pay for higher education.

Drawing from the analysis of the four different types of institutions and from the literature, we argue that some institutions are better able to diversify their funding base and become involved in higher education-industry partnerships than those offering courses in the humanities and the social sciences. Compared with historically advantaged institutions, historically disadvantaged institutions in South Africa will inevitably become increasingly dependent on government funding.

We contend that, although the perspective that students and their families should pay for higher education, because they are the major beneficiaries, this assumption is simplistic, because it underplays the possibility that these cost-recovery mechanisms have the potential to recreate and reproduce inequities, rather than reducing them because of social and cultural capital deficits for some students. We argue that these

deficits explain why students from poor family backgrounds do not maximise benefits from NSFAS because of their class status.

We further caution that policies directed to improve efficiency should also be tempered with the equity of outcomes and improved throughput/success rates. The conversion of student loans into bursaries is an innovative way of addressing imperatives of equity and is also an incentive for improving throughput rates, even though loan repayment remains problematic.

References

- Albrecht D & Ziderman A 1993. *Student loans: An effective instrument for cost recovery in higher education?* Washington, DC: The World Bank.
- Barr N & Crawford I 2005. Higher education in Britain 1987-2004. In N Barr & I Crawford (eds), *Financing higher education*. London: Routledge, 1-26.
- Blaug M 1972. *An introduction to the economics of education*. London: Penguin.
- Bourdieu P 1984. *Distinction: A social critique of the judgment of taste*. Translated by R Nice, 1984. Harvard: Harvard University Press.
- Bourdieu P & Passerson JC 1977. *Reproduction in education society and culture*. Beverly Hills, CA: California Press.
- Bunting I 2011. *Higher education funding in South Africa. First report to the HESA funding strategy group*. Pretoria: Higher Education South Africa.
- Council on Higher Education (CHE) 1999. *The state of higher education in South Africa. Annual Report*. Pretoria: Council on Higher Education.
- Department of Education 2008. Education statistics in South Africa 2006. Retrieved on 19 April 2011 from <http://www.education.gov.za/emis/emisweb/06stats/daddy.pdf>.
- De Villiers P & Steyn G 2006. Income and expenditure trends of higher education institutions in South Africa: 1986-2004. *Perspectives in Education*, 24(2): 35-48.
- De Villiers P & Steyn G 2009. Effect of changes in state funding of higher education on higher education output in South Africa: 1986-2007. *South African Journal of Higher Education*, 23(1): 43-68.
- De Villiers P, Van Wyk C & Van der Berg S 2012. *The first five years project – A cohort study of students awarded NSFAS loans in the first five years 2000-2004*. Research Report for NSFAS, February 2012. Cape Town: Stellenbosch University.
- Higher Education South Africa (HESA) 2008. *Tuition fees. Higher education institutions in South Africa*. Pretoria: HESA Task Team (Chair: R Stumpf).
- Ishengoma JM 2002. Financing higher education in post-apartheid South Africa: Trends, developments, and challenges ahead. Retrieved on 19 April 2011 from <http://www.uwc.ac.za/index.php?module=cshe&action=downloadfile&iled=81806115511691064443920>.

- Jonathan R 1997. Educational goods: Values and benefits. *Journal of Philosophy of Education*, 31(1): 58-82.
- Jonathan R 2002. Higher education and the public good: clearing some of the ground. *Perspectives in Education*, 20(4): 89-97.
- Johnstone DB & Marcucci P 2007. *Financial sustainability student loan programmes: The management of risk in the quest for private capital*. Washington, DC: Educational Policy Institute, Global Centre on Private Financing of Higher Education.
- Johnstone DB & Marcucci P 2010. *Financing higher education worldwide. Who pays? Who should pay?* Baltimore, MD: The Johns Hopkins University Press.
- Keswell M & Poswell L 2004. Return to education in South Africa: A retrospective sensitivity analysis of the available evidence. *South African Journal of Economics*, 72(4): 834-860.
- Massy W 2004. Markets in higher education. Do they promote internal efficiency? In P Teixeira, B Jongbloed, D Dill & A Amaral (eds), *Markets in higher education: Rhetoric or reality?* Dordrecht: Kluwer Academic, Chapter 1.
- Ministerial Committee 2010. *Report of the Ministerial Committee on the Review of the National Student Financial Aid Scheme*. Pretoria: Department of Higher Education and Training.
- Ministry of Education 2004. *A new funding framework: How government grants are allocated to public higher institutions*. Pretoria: Ministry of Education.
- Munyaradzi M 2010. South Africa: Cost woes spark student protest. *University World News*, 0047, 14 February. Retrieved on 15 February 2011 from <http://www.universityworldnews.com>.
- Naert F 2004. Higher education as an international public good and GATS: A paradox. United Nations University. CRIS Occasional Papers. Retrieved on 27 June 2006 from <http://www.cris.unu.edu/fileadmin//OP%20FRANK%20NAERT.pdf>.
- National Student Financial Aid Scheme (NSFAS) 2007. Annual Report. Retrieved on 6 October 2009 from <http://www.nsfas.org.za>.
- National Student Financial Aid Scheme (NSFAS) 2008. Annual Report. Retrieved on 16 February 2011 from http://www.nsfas.org.za/resources10/NSFAS_Annual_Report2008.pdf.
- National Student Financial Aid Scheme (NSFAS) 2010. Annual Report. Retrieved on 16 August 2011 from <http://www.nsfas.org.za/docs/annual-reports/2010/AnnualReport2010.pdf>.
- Nixon J 2004. Capitalism. Politics, policies and the entrepreneurial leadership. Retrieved on 2 October 2010 from <http://www.league.org/publication/abstracts/leadership/labs0412.htm>.
- Ntshoe IM & De Villiers P 2008. Steering South African higher education towards transformation. *Perspectives in Education*, 26(4): 17-27.
- Pityana NB 2008. The official opening of the academic year. Retrieved on 18 April 2011 from <http://www.unisa.ac.za/contents/about/principal/docs>.

- Rumble G 2006. The costs and costing of distance/open education. Retrieved on 1 December 2010 from <http://www1.worldbank.org/disted/management/benefits/costs-01.html>. Schultz TP 2004. Evidence of returns to schooling in Africa from household surveys: Monitoring and restructuring the market for education. *Journal of African Economies*, 13(2): 95-148.
- Setati M 2012. Electronic communication with Professor M Setati, Vice Principal: Research & Innovation at UNISA.
- Shen H & Ziderman A 2009. Student loans repayment and recovery. International comparison. *Higher Education*, 57 (3): 315-333.
- Slaughter S & Leslie LL 1997. *Academic capitalism. Politics, policies, and the entrepreneurial university*. London: The Johns Hopkins Press.
- Steyn C 2005. *The changing nature of research and development inputs in the South African higher education sector: Findings from National Research and Experimental Development Survey*. Paper presented at the Triple Helix Conference in Turin, Italy, 18-21, May 2005.
- Steyn G & De Villiers P 2006. *Higher Education Monitor: The impact of changing funding sources on higher education institutions in South Africa*. Pretoria: Council on Higher Education.
- Teferra D & Altbach PG 2003. Trends and perspectives in African higher education. In D Teferra & D Altbach (eds), *African higher education: An international reference handbook*. Bloomington IN: Indiana University Press, 3-14.
- The World Bank 2002. *Constructing knowledge societies: New challenges for tertiary education*. Washington, DC: The World Bank.
- Tilak J 2009. Higher education: A public good or a commodity for trade. Commitment to higher education or commitment to trade? *Prospects: Quarterly Review of Comparative Education*, 38(4): 148, 449-466.
- Tshwane University of Technology (TUT) 2005. Organising for effective academic entrepreneurship. Retrieved on 28 August 2010 from <http://www.utwentwe.nl/nikos/htsf/papers/vandersijde.pdf>.
- Tshwane University of Technology (TUT) 2008. Research, innovation and partnership, *R & I Fusion*, 2(1). Retrieved on 12 August 2009 from <http://www.tut.ac.za/Other/Rnl/Documents/FUSION%20VOL%202%20NO%201.pdf>.
- Van der Sijde P, McGowan P, Van de Velde T & Youngleson J 2005. Organising for effective academic entrepreneurship. Retrieved on 15 August 2012 from http://doc.utwente.nl/74151/1/Van_der_Sijde,P.C._et_al_paper.pdf.
- Ziderman A & Albrecht D 1995. *Financing universities in developing countries*. London: The Falmer Press.