

The Effect of Student Financial Constraints on University Non-Completion Rates

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Abstract

The year 2009 saw the government of Zimbabwe redesigning cost-sharing in higher education to lean more towards higher contributions by students and private players. This study was aimed at investigating the effects that this strategy has on university completion rates by students from low socio-economic backgrounds. The study used a quantitative design methodology in a longitudinal study framework incorporating data from three cohorts embarking on four-year study programmes from 2009 to 2014. Administrative data from the Zimbabwe Council for Higher Education database involving six state universities was used. The findings reveal that the graduation rates decreased from 86% in the 2009 cohort to 76% in the 2010 cohort and 75% in the 2011 cohort. This finding coincides with the period from 2013 onwards when cadetship funds dried off. Thus the study clearly revealed a problem of increasing attrition rates creeping into the revered and quality-assured Zimbabwean higher education system. The study recommends the need for concerted efforts by the private sector, government and universities in funding higher education through loans and other forms of sponsorship.

Keywords: Dropout, university, quality, financial constraints, cost sharing

1 Introduction

The decision to enrol for university studies has been described by Bakewell (2008) as one of most celebrated shifts in life towards absolute freedom, greater financial responsibility and more effective time management. It is therefore imperative to note that dropping out of university before completion of studies has personal, institutional and social repercussions. At the personal level, there are economic costs such as wastage of the sunken financial resources, the greater risk of unemployment coupled with lower lifetime productivity and earnings (Arulampalam, Naylor & Smith 2005; Blundell, Sianesi & Dearden, 2003; Ulriksen, 2010; Yorke, 1998). Dropouts also undergo emotional and psychological stress arising from feelings of inadequacy and low personal worth (Edwards & Cangemi, 1990). For universities, dropouts are associated with financial loss and reduced academic reputation (Larsen, 2013; Vignoles & Powdthavee, 2009). The university dropout or non-completion rate is a quality indicator in the evaluation (Cabrera, Tomás, Álvarez, & Gonzalez, 2006; Draper & Gittoes 2004) and ranking (Yorke, 1998) of universities. At the societal level, university dropouts represent higher education inefficiency because the supply of university graduates affects both the returns to education as well as economic growth (Aubyn; Pina, Garcia & Pais, 2009; Fisher & Hood, 1987; Bound & Turner, 2011). In addition, high non-completion rates can undermine access to higher education, put off potential students and cause institutional instability (Lockhart, 2004).

Although the reasons for dropping out of university are many and varied, studies show that the socio-economic status of students is the most fundamental cause of non-completion rates world-over (CHE, 2013; Chen & DesJardins, 2010; Letseka & Maile, 2008; Lofstrom, 2007; Munro & Fisher, 2004; Quinn, 2004; Titus, 2006; Vignoles & Powdthavee, 2009; Walpole, 2003). Many of these studies indicate that students from less privileged family backgrounds have greater chances of dropping out of university as compared to those from well-to-do families (Blanden & Gregg, 2004; Carneiro & Heckman, 2003; Christie, Corrigan, 2003; Cunha & Heckman, 2007; Davies & Elias 2003; Dearing, 1997; Feinstein, 2003; Gayle, Berridge & Davies, 2002; Haveman & Wolfe, 1993; Meghir & Palme, 2005; McGivney, 1996; Thomas & Quinn, 2006; Vignoles & Powdthavee, 2009). Some studies have alleged that the most powerful socio-economic determinant forcing students to withdraw from university is financial exigency (Bennett, 2003; Bozick, 2007; Davies, 2000; Leppel, 2002; Sanders, 2002). Similarly, a study carried out in East Africa revealed that financial constraints were the greatest challenge to completion of university education (Griffin, 2007). In South Africa, Letseka & Maile (2008) reported that financial difficulties accounted for 70% of university drop-outs. It is therefore not surprising that several studies demonstrate that financial assistance is positively correlated to university completion (Alon, 2005; Adnett, 2006; Bean, 1983; Braunstein, McGrath & Pescatrice, 2000; Cabrera, Nora & Castañeda, 1992; Dowd & Coury, 2006; Henry, Rubenstein & Bugler, 2004; Hu & St. John, 2001; Jensen, 1981, Kalsner, 1991; Perna, 1998; St. John, Hu & Weber, 2001; Singell, 2004; Singell & Stater, 2006). In fact Gross, Berry & Reynolds (2015) declare that financial aid and completion rates are critical elements in the strategic management of academic success in higher education.

2.1. Cost-sharing strategies

In line with the pervasive global trends in higher education financing, most countries in Africa have adopted the cost sharing strategy (Johnstone, 2006). For example, by 2009, more than 26 countries had adopted it (World Bank, 2010) including those countries that had earlier on implemented policies on free higher education (Mamdani, 2007; Musisi & Muwanga, 2003; Wangenge-Ouma, 2008). Cost-sharing refers to the shared responsibilities of university costs of study between governments, institutions and students (Johnstone, 2004). The different forms of cost sharing adopted by each country are aptly described by Johnstone (2003). Although cost sharing has its merits, it has predisposed students from poor socio-economic backgrounds to the scourge of non-completion due to financial constraints. For example, McGregor (2007) found that in South Africa, students from low income families (average monthly family income of USD240) often drop out of university. Mdepa & Tshiwula (2012) explain that although South Africa has an effective National Student Financial Aid Scheme, the bursaries and loans given only caters for part of the costs of study. Although there is no consensus on the appropriateness of the cost-sharing strategy, it has become entrenched in the global higher education system (Li, 2007; Woodhall, 2002).

Unlike other African countries that have historically implemented policies on free higher education, Zimbabwe adopted cost-sharing at the inception of the first university in 1957 (Chihombori, 2013). However, Zimbabwe has since shifted from one cost-sharing model to another as shown in Table 1.

Table 1. Cost-sharing models in Zimbabwean universities (1957-2014)

Year	Student Enrolment	Grants (%)	Loans (%)	No. of Universities
1957	57	50	50	1
1968	Not given	25	75	1
1980	2240	50	50	1
1991	9017	25	75	2
1992		Introduction of private universities		3
1998		20	80	6
2002		0	100	11
2006		Introduction of the Cadetship Scheme		14
2007	55548			14
2009	49645			14
2010	54888			15
2011	62427			15
2012	64449			15
2013	77074	Cadetship scheme operating below optimum levels		15
2014	85556			15

Source: Adapted from Chihombori (2013) and Garwe (2014; 2015)

Table 1 shows that the first cost-sharing model used from 1957 up to 1991 entailed the government covering the cost of the university tuition and upkeep for students through a system of grants and loans. The loans were then recovered as instalments upon completion and securing of employment by graduates. Upon achieving independence in 1980, the new government embraced the loan and grant cost-sharing model but shifted the proportion of grants and loans to 50:50 and later to 25:75 and 20:80 in 1991 and 1998 respectively. In addition, the government implemented strategies to improve access to higher education in order to expedite the country's socio-economic transformation (Mandaza, 1986; Nherera, 2000; Zvobgo 2003).

In 1992, the government also introduced another form of cost-sharing by opening up the higher education space to private players. These efforts resulted in an increase in the number of both public and private universities and the total student enrolment (Garwe, 2014). This increase coupled with inadequate loan recovery capacity posed severe challenges to the government's ability to adequately fund higher education. Consequently, in 2006 the government introduced a cost-sharing model which required students to pay tuition fee upfront before they could be allowed to register and attend classes. However, many students from low income backgrounds were unable to pay for university education (Chihombori, 2013). Noting these discrepancies, the government introduced the Cadetship Scheme to assist students facing financial hardships with tuition fees. However, cadetship funds only covered tuition fees thus leaving beneficiaries to pay for ancillary costs, levies and upkeep during the study period. The illegibility of students to qualify for cadetship posed a challenge as there were technical difficulties in authenticating the ability of the student to pay leading to potential abuse of cadetship funds. Similar challenges to means testing were reported in the Zambian context by Masaiti & Shen (2013).

As from 2009 the number of students self-financing their studies increased tremendously and the level of government subsidies continued to decrease. From 2013 onwards, the cadetship scheme has been operating below the optimum level required to assist needy students. Private universities do not receive any subsidies from the government and their students pay full fees. There have been growing concerns that students who fail to pay fees are being forced to withdraw from university studies (Hwami, 2010; Makoni, 2007; Zimbabwe National Students Union, 2009). However, no study has been carried out to quantify the extent of this problem. From a background of very low dropout rates in Zimbabwean universities prior to 2006, it can be deduced that if indeed the graduation rates have decreased, the blame can be given to financial hardships. This study was therefore carried out with the aim of studying the effect of student financial constraints on university non-completion rates.

2. Methodology

2.1 Research design

The study used a quantitative design methodology to study the year-to-year progression and subsequent graduation rates. Cognisant of the suggestion by Wilson, Lizzio & Ramsden

(1997) for studies of this nature, a longitudinal study spanning from 2009 to 2014 was performed. The researcher used data on university student enrolment and graduation statistics from the database of that is kept by the Zimbabwe Council for Higher Education (ZIMCHE). Nordbotten (2012) avers that such data, collected for primary purposes other than research, is referred to as administrative data. Vignoles (2007) posit that administrative data can facilitate research that is of greater scope, more robust and can be generalisable. This is because administrative databases tend to be very comprehensive and thus enable longitudinal research that would otherwise be financially or logistically impossible to carry out using other methods (Whitworth, 2013). In addition to cutting costs, administrative data helps to avert the problem of low response rates arising from the use of laborious methods such as telephone calls, letters and one-on-one interviews. Einav & Levin, (2013) believe that the use of administrative data has virtually transformed quantitative research predominantly in the area of education and health.

2.2 Target population

The target population for the study included all students who enrolled in four-year programmes at public universities in Zimbabwe. Data on enrolment and graduation statistics were collected for the six public universities that offer four year programmes. The other three public universities that offer predominantly three year programmes were excluded from the study. The six private universities were also excluded on the grounds that private universities and their students fund their programmes and thus it can be assumed that by choosing to enrol at a private university, the student would have done the cost/benefit analysis. Longitudinal data on enrolments was collected from 2009, 2010 and 2011 cohorts in their first and then every year in the second, third and graduation years (2012, 2013 and 2014). This allowed the researchers to fully examine the stages at which attrition took place. A cohort in this study refers to students who share the same year of admission to university in common.

2.3 Procedure and data analysis

The researchers obtained permission to collect the data on enrolment and graduation statistics from the database that is kept by the Zimbabwe Council for Higher Education. The data was aggregated by university and by degree programme. Only data from programmes that run for four years was included in this study. Analysis on the year-on year persistence rates and the subsequent graduation rates was done using the excel spreadsheet. In order to compare the persistence and completion rates for the three cohorts, the year-on year persistence rates were used before trend analysis was performed. Otherwise comparing the raw data was not going to be useful considering that there were large variations in student numbers per cohort.

2.4 Methodological limitations

The researchers were fully aware of the limitation in the methodology regarding the fact that it was not possible to identify students who could have left to undertake studies in other universities or who switched between programmes. The enrolment data for the second and subsequent years would also invariably be contaminated with repeat students from earlier cohorts. In addition, data on the socio-economic backgrounds of students could not be

collected. However, the key assumption was that the significant factor that could affect completion of studies was financial constraints.

3. Results

3.1 Student enrolments

The student enrolments in Zimbabwean universities have shown an increasing trend since the establishment of the first university in 1957 as shown in Figure 1.

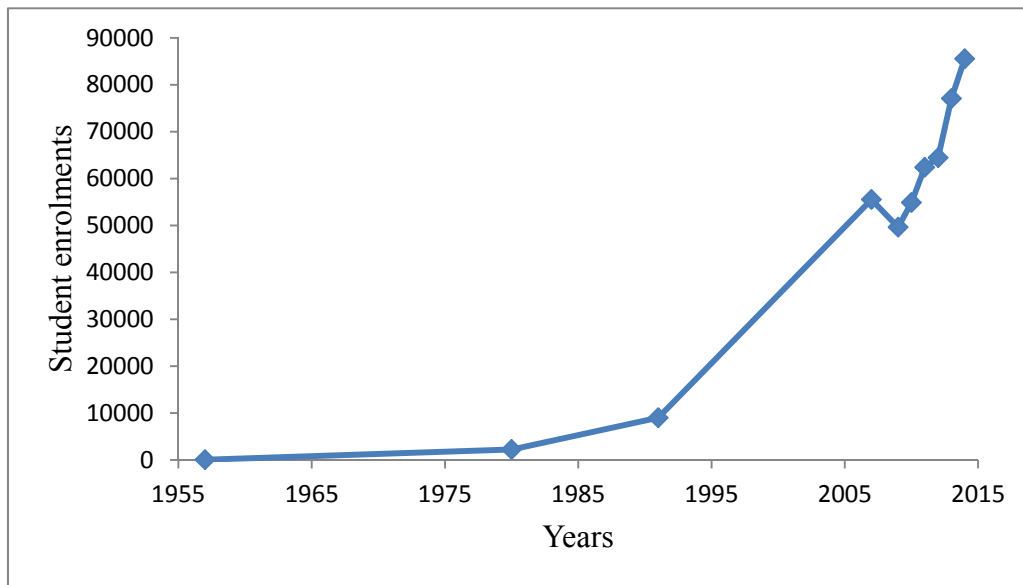


Figure 1. Trends in university student enrolment statistics (1957-2014)

The upward trend in student numbers shown in Figure 1 has not been matched with financial resources to provide loans, grants and cadetship support for students.

3.2 Year-on-year progression and graduation statistics for the 2009, 2010 and 2011 Cohorts

Table 2 shows the year-on-year progression and graduation statistics for the 2009, 2010 and 2011 Cohorts.

Table 2. Year-on-year progression and graduation statistics (2009, 2010 and 2011 Cohorts)

Institution	2009	2010	2011	2012	2013	2014
	794	729	700	658		
1		1006	920	889	800	
	641	601	555	500		
2		1535	1402	1341	1169	
	913	800	760	800		
3		369	360	349	320	
	332	311	300	271		
4		1535	1402	1341	1199	
	1711	1600	1519	1497		
5		2503	1980	1800	1711	
	1332	1299	1203	1187		
6		1520	1410	1325	1250	
			1800	1676	1585	1419

The statistics from Table 2 show a gradual decline in the number of students from enrolment through to graduation. The completion rates for the three cohorts are shown in Table 3.

Table 3. Completion rates for the (2009, 2010 and 2011 Cohorts)

Institution	2009 Cohort	2010 Cohort	2011 Cohort
1	83	80	67
2	78	76	71
3	88	82	68
4	82	78	69
5	88	68	79
6	89	82	79
Average	86	76	75

Table 3 shows that different universities had different progression rates for the different cohorts. For example, university number 5 had the lowest graduation rate (68%) for the 2010 cohort whilst university number 6 had the highest graduation rate (82%). It can also be seen from Table 3 that graduation rates gradually decreased from 86% for the 2009 cohort to 75% for the 2011 cohort.

Figure 3 illustrates the trend in the year-on-year progression for the three cohorts from enrolment to graduation.

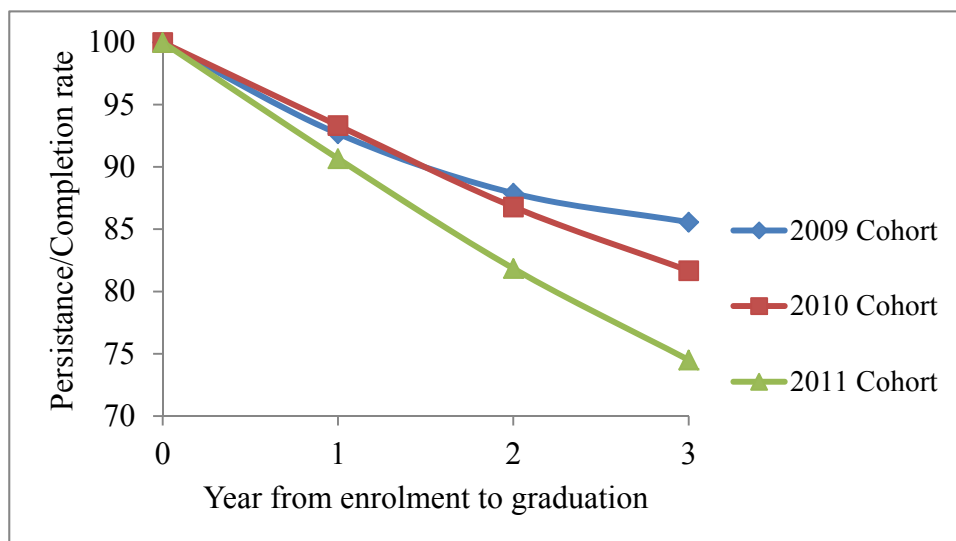


Figure 3. Year-on-year progression trends for the three cohorts from enrolment to graduation

Figure 3 shows that the 2011 cohort has the lowest progression and graduation rates. It also shows that the highest drop in progression rates occurs in year three.

4. Discussion

The findings reveal that the graduation rates decreased from 86% in the 2009 cohort to 76% in the 2010 cohort and 75% in the 2011 cohort. This finding coincides with the period from 2013 onwards when cadetship funds dried off. Although the year-on-year progression rates and graduation rates can be affected by many factors, it is the thesis of this study that in a country like Zimbabwe where graduation rates have always been upwards of 90%, the only variable that can lead to marked decrease relates to financial constraints. Several studies corroborate with this finding that financial assistance is positively correlated to university completion (Bettinger, 2004; Bresciani & Carson, 2002; DesJardins, Ahlburg & McCall, 2002; Herzog, 2005; Somers, 1995). It can therefore be argued that the removal of any form of financial assistance can lead to poor academic outcomes in the university sector. Although the private sector has contributed a lot in funding higher education notably through student sponsorship, the impact seems to be minimal. Special mention goes to the contribution of Econet - Zimbabwe, Delta and British American Tobacco. These companies have provided funds to thousands of needy and/or brainy students to see them through university. Recently, a renowned educationist, Mrs Rosemary Sibanda, worked tirelessly to introduce Eduloan, an organisation responsible for providing loans for university education, a feat that even established banks seemed to shy away from. The effective participation of the private sector in funding university education has been reported in other countries. For example, Kyodo (2014) reported that in 2013 alone, the contribution of private spending in Japan accounted for 66.7% of the total funding on education.

The findings also showed that the year in which the most attrition of students took place is the third year of study. This is the year when students go for work-related learning as a way

of including experiential learning in their curriculum (Rupande, 2013). Presumably due to the financial hardships, some students may prefer to continue working, thereby suspending or abandoning their studies. However, this proposition needs to be supported by a comprehensive qualitative study where the dropout students can proffer their opinions.

Much as this study focused on finances as the major cause of university student attrition in the Zimbabwean context, the researchers note that it is critical to undertake studies on other causes as well. The fact that student numbers continue to increase might maybe point to issues on the quality of the students themselves as inputs in higher education.

5. Conclusion

The study clearly revealed a problem of increasing attrition rates creeping into the revered and quality-assured Zimbabwean higher education system. The fact that at present there are no publications on the issue of university attrition in Zimbabwe shows that it had never been a problem before now. Accordingly, the study recommends that the time for remedial action is at hand. It is widely acknowledged that the university sector is bedevilled with funding challenges as the economy is underperforming and the government subsidies are largely inadequate. The private sector is called upon to assist in financing university education. The government and universities should encourage these private sector players through public private partnerships as well as creating favourable environments to facilitate smooth dealings.

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