

The Effect of Modes of Funding on the Performance of Zimbabwe State Universities: Incites from Administrators

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Abstract

The study investigated the different sources of funding available to State Universities in Zimbabwe and their effect on universities performance. The Universities' performance was defined to mean teaching and learning, research, community services, innovation and industrialization which is defined by the Heritage based Education 5.0. The Zimbabwean Universities had in the twenty first century been underperforming ever since the massification of students. There has been inadequate infrastructure, poor remuneration, research apathy, unequipped laboratories, among other evidence of poor funding of public universities in the country. The researcher implore the shift of public funding referred to as first stream income or government funding to other funding sources and how they affect university performance over the years. Over the years the ranking of Universities in Zimbabwe has been declining due to poor performance. The quantitative study using a semi-structured researcher designed questionnaire was used to gather data from University Administrators of ten state Universities in the country using stratified random sampling. For analysis, the gathered data was coded, arranged in spreadsheets, and imported into the Statistical Package for Social Sciences (SPSS, Version 29.0). The data was analysed using descriptive statistics like mean and standard deviation. To determine the link between the independent and dependent variables, correlation and regression analysis were performed. Tables and graphs were used to display the data.

Keywords: Sources of funding, Public Universities, Performance

Introduction

According to Liu *et al.* (2020) public universities across the world are experiencing diminishing funding from government resources. This has been necessitated by the massive increase in student enrolments all over the world. Public Universities are universities established by the government through acts of parliament. The main funding of public universities come from the government coffers. There has been rising costs and demands for higher education.

Sanyal and Johnstone 2011, 168 as reported in Liu *et al.* (2020) propounded that public funding for Higher Education could not keep pace with rising demand and costs of the sector across the world. The performance of Universities in Africa, Nigeria in particular is dwindling due to poor funding from government (Jacob *et al.*, 2022). Jacob *et al.* (2022) propounded that inadequacy of funding for Universities in Nigeria was the primary cause of other problems in the sector. According to Nwankwoala, (2018); Daniel-Kalio, (2019) and Ogunode & Abubakar (2020) quoted in Jacob *et al.* (2022) inadequate funding has a major effect on the performance of universities in Nigeria. According to Isabirye *et al.* (2022) political motivation in many African countries had been behind many university expansion motives despite the diminishing funding from public purse. Muyunda (2021) advocated that despite the fact that university education is capital intensive, many governments, Zambia in particular has been dropping due to the economic meltdown yet there has been massive increase in students enrolment. Muyunda (2021), reiterated that due to the inadequate funding for universities from government and other private players, Research, Innovation, and Development have suffered. This has contributed in poor quality of teaching and learning, dearth of research, innovation, consultancy and community services from universities.

Zimbabwean Context

The first university in Zimbabwe was established in 1957 with only students' enrolment of 77 students (Kariwo *et al.*, 2014). In 1980s UZ was regarded as a world class university which was among the best in Africa and had a student enrolment of 2300 full time students as indicated by Kariwo *et al.* (2014). 'Upon gaining independence, the new government introduced aggressive policy reforms to address colonial inequalities and anomalies, as well as to satisfy the growing need for workforce with high-level qualifications' as highlighted by Garwe and Thondhlana (2019:2). In 1989 the country still had only one university the University of Zimbabwe (UZ) which had a student population of 9300. Zimbabwe was a regional leader in education with highest educated workforce in Southern Africa (Garwe & Thondhlana, 2019). Thus the only university in the country (UZ) could not cater for the growing demand for university education in the country. That time the university was fully funded by the government with very little funding coming from the international donor community. Due to the pressure caused by ripple effects of Education for all Policy, in 1991 the government established another state university, National University of Science and Technology (NUST) in the second largest city of the country, Bulawayo to cater for the increasing demand of higher education. "The challenge for Zimbabwe is not only one of redressing the educational qualitative and quantitative imbalances in the inherited system but also that of meeting the exceedingly large demands with limited resources." (Kariwo and Gounko, 2014:30)

Public universities could not afford to offer university education to the rapidly growing number of applicants, the government gave in to private players in Higher Education sector. In 1992 a private university's charter was approved by the parliament to cater for private students. Thus Africa University in Manicaland province was formed. During the 1990s the country was experiencing economic downfall due to the adopted Economic Structural Adjustment Programme yet the demand for Higher education was escalating exponentially. As from 1996 the country embarked on an ambitious policy to enable access to many started to build a university in each province, a motive which was politically driven (Kariwo & Gounko, 2014). This resulted in the small cake being spread too thinly among newly established and already existing universities. According to Isabirye *et al.* (2022) political motivation in many African countries had been behind many university expansion motives despite the diminishing

funding from public purse. To date there are 14 public Universities in the country according to Garwe and Thondhlana (2019). The country had been undergoing political and economic turmoil ever since 1990s, at the same time the growing demand for university education needed to be fulfilled. The levying of fees at all Higher Education Institutions (HEI) in the country began in 2001. This was due to failure of the government to maintain the level of funding due to pressure to fund other social services (Kariwo & Gounko, 2014). Thus cost sharing policy was introduced and it failed to be successful due to political influence, high level of unemployment and depressed economy. The parents of students in Zimbabwe could not afford to pay fees for their children because of poverty levels which increases everyday due to economic meltdown.

Statement of the Problem

Zimbabwean state universities are grappling with a myriad of challenges, among which inadequate and inconsistent funding is a major obstacle to optimal performance. Given the economic challenges facing Zimbabwe, it is imperative to understand how various funding streams influence key performance indicators such as teaching and learning, research, community service, innovation and industrialization defined by Education 5.0 (E5.0).

Despite the escalating students' enrolments in public universities, the funding has been decreasing to the sector thereby negatively affecting the output of the research, infrastructure, innovation, teaching and learning, community service and industrialization as products of the university. While research has explored the impact of funding on higher education institutions, the specific effects on Zimbabwean state universities remain understudied. This study seeks to address this gap by investigating the relationship between different sources of funding and the performance of these institutions of higher learning.

Limitations

The study focused on Zimbabwe state universities only and was not focused among the private institutions. Another limitation if the study was it focused on the administrators not any other stakeholders.

Literature Review

With its emphasis on innovation and industrialization as the new pillars of Higher Education in Zimbabwe, Education 5.0 represents a dramatic advance in the field of Universities. In this setting, it was necessary for public universities hoping to adapt and prosper to understand how various modes of funding affect their operational performance. This review of the literature looks at the studies that have been done on different funding models and how they affect university research, teaching and learning, community services, innovation and industrialization.

Education 5.0

Education 5.0 was a new Higher Education model meant to add the three pillars of the sector with the other two which was innovation and industrialization. Prior to this there was Education 3.0 which was anchored at teaching and learning, research and community service. A more flexible and student-centered learning environment could be created through the use of digital technology, artificial intelligence, and personalised learning, according to the cutting-edge educational paradigm known as "Education 5.0." According to Salmi (2019), Education 5.0 is a response to the demands of the Fourth Industrial Revolution, with the goal

of using creative and adaptable learning methods to get students ready for a job market that is changing quickly. This change requires large investments in infrastructure and technology, which affects university funding requirements and tactics. Rumbidzai Muzira & Maupa Bondai (2020) asserted that in their recent study conducted in Zimbabwe's public universities to investigate how students Education 5.0 that it lacked resources such as financial to implement it. The Education 5.0 strategy placed emphasis on innovation and industrialisation, as per the research findings of Alharbi (2023)(Maringehosi, 2022). Its main goal was to create educational programs that would enable people to solve problems through industrialisation and innovation. The objective of the policy was to create a competitive, modern, and industrialised Zimbabwe through the development of a problem-solving and value-generating education system. Education 5.0 in this study signifies the operational performance of universities in Zimbabwe. Education 5.0 was implemented throughout the nation in an attempt to match the curriculum to Zimbabwe's developmental and cultural needs (Muzira & Bondai, 2020). The heritage-based philosophy being promoted by the current Minister of Higher and Tertiary Education, Professor Dr. A. Murwira (Ministry of Higher and Tertiary Education, Science and Technology Development, 2018a), supported the application of acquired knowledge to the local environment in order to produce relevant goods and services. In his research, Keche (2021) discovered that the lecturers he interviewed were of the opinion that teaching and learning shouldn't conclude with the memorisation of dry facts since doing so is a waste of time.

Modes of Funding

Government Funding

Government support has long been the main modes of university budgets, giving public universities a secure financial foundation. Government grants were a fundamental source of financing for higher education that were provided by citizens through the collection of duties and taxes (Onanwa et al., 2023). According to Ogunode (2023), 90% of university income in Ghana and 85% of university income in Egypt comes from government support for higher education. According to Johnstone (n.d.) and Lepori et al. (2021), government support was necessary to keep public universities accessible and affordable to the general public citizens. But universities that depend on public money were also vulnerable to political and economic upheavals, which resulted in financial instability and budget cuts during recessions. The priorities and operations of universities were impacted by the regulatory requirements and performance-based funding methods that were frequently associated with government funding. As per Hazelkorn's (2015) observations, universities enhance their operational efficiency and academic success by means of performance-based funding that was linked to measures like research production and graduation rates. Through governments funds to public universities enrolment was still the main factor used by many countries to fund public institutions, more and more of them were now doing so with financing formulas that incorporate performance metrics (Jongbloed & Vossensteyn, 2016).

Private Funding

Private funding, especially endowments and gifts from alumni and donors, provides universities with a substantial amount of financial support. Heller (2001) emphasises how financial freedom and the ability to invest in creative enterprises and infrastructure were made possible by private donations. However, because donors may try to sway university

obligations and activities in accordance with their interests, private financing could bring possible biases and influence.

Private investment could result in mixed effect on academic performance. Huge donations potentially improve research capabilities and academic quality, but they also lead to inequalities and dependency between institutions with more resources and those with less (Geuna, 2001). Long-term financial planning is further complicated by the erratic nature of private donations, which might change in response to prevailing economic conditions.

Tuition and Other Fees

Lepori et al. (2021) and Jongbloed and Vossensteyn (2016) state that funding for public higher education institutions (HEIs) came from three sources: Students pay tuition fees; governments (or taxpayers) receive grants authorised by the legislature (also known as core funding, or general allocations); and other entities (both public and private organisations) receive projects, contracts, income-generating ancillary operations, and donations.

Many public universities across the world primarily rely on tuition fees as their mode of finance, especially in nations with little governmental funding. In his discussion of the political and economic aspects of cost-sharing in higher education, Johnstone (n.d.) points out that while increasing tuition boost university profits, it give rise to issues with fairness and access. Exorbitant tuition costs may discourage low-income students from pursuing higher education and contribute to student debt accumulation.

There was a complicated relationship between tuition costs and academic success. One way that greater tuition costs might benefit universities was by allowing them to make investments in better facilities and instruction, which enhance student outcomes and academic performance. However, an over-reliance on tuition income result in unstable finances, particularly in times of dwindling enrolment or a downturn in the economy (Leslie & Slaughter). According to Kelchen & Pingel (2023), there were increasing limits on tuition fees in a number of US jurisdictions. Laderman et al. (2022) contended that tuition was used to pay for recurrent expenditure and that attempts to finance university operations were hampered by placing a cap on fee increases. Chinara & Rout (2016) noted that tuition fees were viewed as an addition to government handouts, and that they were typically used to fill the funding void created by government assistance. Tuition fees were utilised by Kenyan universities as a cost-sharing strategy to meet the growing demand for higher education and counteract the reduction in government funding (Mutiso et al., 2015). Chihombori (2016)'s study concentrated on the cost-sharing model utilised in Zimbabwe to finance higher education from 1957 to 2009. It demonstrates that when Zimbabwe's oldest institution was founded in 1957, the government provided loans and grants to students, tuition fees were instituted. The problem was that the government stopped paying students, thus the cost-sharing arrangement that had involved those receiving loans and grants from the government was no longer viable and only parents were left to sponsor their children. These were the same parents; according to Bhebhe (2017) study, the majority of them were unemployed due to Zimbabwe's 95% unemployment rate and this resulted in an increase in university tuition and other fees defaulters.

Income from Auxiliary Services and Fundraising Activities

Universities were becoming more and more involved in the commercial world through joint ventures with corporations, commercialisation of research, and university-owned enterprises (Etzkowitz & Leydesdorff, 2000). These endeavours bring risks, including possible conflicts of

interest and the commercialisation of academic agendas, but they could bring substantial financial benefits and foster innovation (Tashakkori & Creswell, 2007; Creswell et al., 2014; Clark, 1998). One of the main issues facing universities involved in these operations was striking a balance between economic interests and academic integrity. According to Murray et al.(2016), it has been challenging to undervalue the challenges of operating in a nation like Zimbabwe, which was the focus of trade restrictions by influential Western nations, when it comes to fundraising obstacles. Generosity has been a major contributor to higher education in a number of countries. Giving is more of a custom in some cultures than in others. For example, subsidies for low-income families in the United States were made possible by philanthropy, which was tremendously helpful. According to Maria & Bleotu (2014), philanthropic giving constitutes a substantial share of university profits in the United Kingdom. Iruonagbe, Imhonopi, David and Egharevba(2015) proposed that income generations and resource mobilization funds were minimal in universities in Nigeria. In Uganda at Makerere University under the dual-track fees system, enrol more fee-paying students than typical traditional students in an endeavour to generate and augment income (Musisi & Muwanga, 2003). In as much as Zimbabwean universities ventures in income generation, Chinyoka & Mutambara(2020) lamented that the problem was that these endeavours were not particularly profitable and consumed a lot of faculty time that could have been used to produce academic business.

Research Questions

The main research question of the study is; what is the effect of sources of funding on performance of Public Universities in Zimbabwe?

1. What are the sources of funding for public Universities in Zimbabwe?
2. To what extent is the adequacy of funding on performance of the University?
3. What are the recommendations on how funding can be improved in state Universities in Zimbabwe

Research Objectives

The main objective of the study is to investigate the effect of funding on Public University performance and the specific objectives are as follows:

1. To analyse the sources of funding for public universities
2. To explore the adequacy of funding on performance of public universities in Zimbabwe?.
3. To suggest on how funding can be improved in Public Universities in Zimbabwe.

Hypothesis

- H1: Universities' policies directly affect performance
- H2: University policies moderate the effect of funding on the performance of Universities
- H3: University policies and regulations moderate the effect of government grants on universities' performance.
- H4: University policies and regulations moderate the effect of tuition fees on universities' performance.
- H5: University policies and regulations moderate the effect of funds from international and local donations on universities' performance.
- H6: University policies and regulations moderate the effect of funds from running business enterprises on universities' performance.

Research Methodology

The research design used in this study is descriptive and quantitative approach. Ten public universities in Zimbabwe were the target population. Among the respondents were the 278 department heads. The utilisation of structured questionnaires were employed to gather data from Administrators from public universities. A response rate of 90.64% was obtained from a total of 252 completed and returned questionnaires, as indicated in Table 1. The study required that response rate to be adequate. This confirms observations made by Booker (2021) that return rates of 50% are appropriate for publication and analysis, 60% are decent, and 70% are exceptional. As a result, the study's 90.64% response rate was considered excellent. Stratified random sampling was employed for the study.

Data Analysis

Table 1

Universities' Modes of Funding

Code	State University Modes of Funding	SD	D	U	A	SA
C1	Our university is partly funded through government grants.	2%	4.4%	11.9%	42%	39.7%
C2	Our university is partly funded through tuition fees	1.2%	4.4%	5.6%	42.8%	46%
C3	Our university is partly funded through international and local donations.	6%	14.7%	22.6%	45.2%	11.5%
C4	Our university is partly funded by running business enterprises.	0.8%	3.2%	6.3%	52.8%	36.9%
C5	Our university is partly funded through residence fees and hiring of premises for functions.	4.4%	9.5%	11.5%	43.3%	31.3%
C6	Our university is partly funded through research projects and patents.	2.8%	7.2%	22.6%	46.4%	21%

Source: Researcher

In the above Table 1, 2.4% of 252 (5) respondents severely opposed, 4.4% (11) disagreed, 11.9% (30) were neutral, 42% (106) agreed, and 39.7% (100) strongly agreed that government grants sponsored colleges in part. Just 16.4% of respondents (81.7%) disagreed that government grants contribute to the institutions' partial funding, while more than half (81.7%) said they agreed. The neutral group comprised 11.9% (30). The graph clearly shows that a higher number of respondents believed that government grants partially subsidized public universities.

Table 2

Tests of Association Between Modes of Funding and Universities' Performance

Mode of Funding	Chi-square	p-value	Decision
Our university is partly funded through government grants.	89.066	0.0021	Associated
Our university is partly funded through tuition fees	97.660	0.004	Associated
Our university is partly funded through international and local donations.	147.529	0.000	Associated
Our university is partly funded by running business enterprises.	164.792	0.000	Associated
Our university is partly funded through residence fees and hiring of premises for functions.	125.325	0.000	Associated
Our university is partly funded through research projects and patents.	159.552	0.000	Associated

Source: Researcher

The Table 2 above indicates that all modes of funding were associated with the Universities' performance. Funding through government grants shows a Chi-square value 89.066 with p value 0.0021 indicating association with the Universities' performance. Funding through tuition fees has a Chi-square value 97.660 with a p value 0.004 indicating association with the Universities' performance. Funding through donations has a Chi-square value 147.529 and p value 0.000 indicating association with the Universities' performance. Funding through running of businesses has a Chi-square value 164.792 and a p value 0.000 indicating association with the Universities' performance. Funding through residence fees and hiring of premises has a Chi-square value 125.325 and a p value 0.000 indicating association with the Universities' performance. Finally funding through research projects and patents has a Chi-square value 159.552 and a p value 0.000 indicating association with performance.

Table 3

University Performance

Code	Performance indicator	SD	D	U	A	SA
B1	The university is doing well in terms of teaching and learning.	12.7%	30.6%	31.3%	23.0%	2.4%
B2	The university is doing well in terms of research by both students and members of staff.	12.7%	38.1%	27.4%	19.8%	2.0%
B3	The university is doing well in terms of promoting innovations by students.	21.4%	40.9%	18.7%	17.7%	2.0%
B4	The university is doing well in terms of promoting community development (Community services).	6.3%	27.8%	37.7%	25.4%	2.8%
B5	The university is doing well in terms of promoting industrialisation.	15.1%	36.9%	21.4%	26.6%	0%

Source: Researcher

The results in Table 3 above highlight that universities were not doing well in terms of teaching and learning as the majority of respondents disagreed as compared to those who

agreed (43.3% disagreed against 25.4 agreeing) 31.3 were neutral. 50.8 % (128) of the respondents disagreed that the university was doing well in terms of the research pillar of the university and only 21.8 % (55) respondents disagreed. The results of the university doing well in innovation depicted that 62.3% (157) of the respondents were in disagreement and 19% (48) were in agreements. This shows that the majority were in disagreement that the universities were doing well in the Education 5.0. This was supported by (Rumbidzai Muzira & Maupa Bondai, 2020; Keche, 2021; Mpofu-hamadziripi et al., 2022)

Findings and Conclusions

A university's priorities and strategies can be influenced by its various modes of funding, which have an impact on student resources, teaching quality, and overall academic results. A more robust and equitable educational environment can be supported by a balanced approach that integrates various modes of funding and solves their particular limitations, even though each funding model has advantages and disadvantages of its own.

Different University funding modes have complex effects on various aspects of university operational performance. Government funding tends to support broad access and quality but may face stability issues. Tuition fees provide financial stability but can impact accessibility. Private funding and research grants drive innovation and industrial collaboration but can influence research agendas and introduce dependencies. Performance-based funding can promote accountability and focus but may create pressures and equity issues.

The study also concluded that the public universities in Zimbabwe were not doing well in terms of teaching and learning, research, innovation, community engagement and industrialization.

The inadequacy of funding in the areas of: teaching and learning, research and innovation, community services and industrialization pillars of Education 5.0 result in universities performing below stakeholders' expectations in comparison to regional and international universities.

The quality of teaching was deteriorating, research projects were not commensurate with the number of researchers, there was need for more and effective community services and goals of the innovation and industrialization pillar of Education 5.0 were not being realized.

Recommendations

- a) The government should priorities the education sector and allocate an annual budget to education that comply with the UNESCO recommendation of 26%.
- b) Government should reintroduce a meaningful students' loan facility to assist students from disadvantaged backgrounds to access higher education.
- c) Universities should venture in more revenue generation activities so as to augment the funds from government and tuition fees through research, innovations and industrializations.
- d) Lecturers and students should be resourceful and raise funds through research and innovations and not just wait for handouts from the government and donors.
- e) Conduct further studies in other H.E institutes like private universities, vocational colleges and polytechnics

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