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Research Article

Influence of Funding on University Education in Kenyan Universities

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Abstract

There is an issue which has been ignored for long by the Kenyan Government, which is composed of University students who do not qualify for Joint Admission Board Government sponsorship, but still qualify for admission in University. Most of them are not well endowed financially to be able to pay their fees. As the Government concentrates on mainly Grade' B' Plain and above, this group of students are neglected and left to struggle on their own. Studies have shown that there is a relationship between availability of funds to support learning programs and how this influences on choice of courses, quality of lecturers employed and general student satisfaction in the learning process. This study sought to establish the relationship between education funding and the rate at which form four leavers with admissible grades enroll for university course at various levels. The study objective is to determine the influence of access to funding on enrolled students; to establish the influence of duration of funding on the programs enrolled by students; to establish the influence of repayment of funding on the course and levels students enroll in. The study employed co-relational research design and the target population will be 2,500. Stratified random sampling method was used to get samples at each level of sampling from the subgroups within the population to arrive at a study sample of 10% which is equivalent to 250. Questionnaires and interview schedule were the research instruments. The study found that access to funding significantly and positively relate with student education in Kenyan universities; duration of funding significantly and positively relate with student education in Kenyan universities and loan recovery period significantly and negatively relate with student education in Kenyan universities.

Keywords: Funding; University; Education; Kenya.

Introduction

As mentioned by [1], if Sub-Saharan African countries want to benefit from investment in their human capital, the universities should have enough financing to fund the education they provide to students. Pressure from the economy and continued rise of university students has resulted to the universities seeking for other sources of funding in the Kenyan 1970-74 and 1974-1978 Development Plans, there was a proposal to do away with university grants to students and come up with a loan scheme instead [2]. This saw the withdrawal of the students free university education in the 1974/75 academic year and in its place a Students' Loan Scheme was provided for the students who were seeking for university education [3]. Students' Loan Scheme was a noble idea, however it had its own challenges especially when it came to recovery of the loan from graduates [4]. This led to the creation of the Higher Education Loans Board (HELB) in 1995. The board was tasked with monitoring the loan scheme and ensuring adequate recovery of the loan from past beneficiaries. The Kenyan public universities get a higher percentage of funding from the government. However 80% of this funding is used to pay for emoluments leaving only 20% of the funds to be used to operate and maintain these universities. Private universities get their financing from private fees and they are operated as 'not-for-profit' trusts. They do not receive any financing from the government. However, they are at liberty to apply for tax waivers for some of their equipment that they import [5].

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University education is costly and needs a high investment. For instance, the Kenyan government spent 11% of its 2009/10 education budget on university education. The direct household spending made by private students was not included in this proportion of spending. Research on Kenyan university education funding confirms that there is not enough public resources to fund [6]. This will likely affect the quality of education provided to the students and will also see the quality of equipment used by the universities for teaching and research be of low quality. Further, the Kenyan economy has been characterized by changes because of the global recession and shocks and these fluctuations have grown by 2.6% in 2009 from 1.6% in 2008.

Education financing comprises all financial outlays by Central, County Government, the Private Sector, NGOs, households, communities and bilateral and multilateral partners. The average government spending on education and training ranged between 5 and 7% of GDP in 2003 [7]. The recurrent Government expenditure on education has been higher than any other social service undertaking over the years. For example, in 2003/2004 financial year, the share of budgetary allocation to education in the social services sector was 73%. The Ministry of Health was allocated 19%, Ministry of Home Affairs, National Heritage and Social Services 6%, and Ministry of Labour and Human Resource Development was allocated 2% [8]. The recurrent budget in the Ministry of Education rose from 35% of public recurrent budget in 2000 to 39% in 2007 as seen in [9].

As the government deviate from using historical budgets, they adopt an input measure and use it as the basis for their budgeting [10]. The most commonly used budget input is the staff members or their salaries and the non-salary portion d the budget is seen as a percentage of the total payroll. The student enrollment number can be multiplied by the average cost of each student [11]. This simple formula is used for funding. The costs for every student may be determined using different methods [12]. The first is the use of historical student costs as reported by the university [13].

Research methodology

Research design

The study employed a case study design. Case study is a quantitative research design that is done in an intensively, descriptive and holistic manner looking at one entity or more than one entity [14]. Its purpose was to study a single entity intensively to gain more insight into the bigger case. It also enabled the researcher to describe and explain rather than to explain a phenomenon. It was justified because of its use of smaller samples for analysis [8]. This was why the researcher considers it to be appropriate to address the objectives of the present study.

Area of study

This study was conducted in Jaramogi Oginga Odinga University of Science and Technology, Bondo-Kenya. Since this was the selected case study.

Target Population

The population that was targeted by the research were all undergraduates from JOOUST. Comprising of Diploma and Bachelor's degree students. This was approximately 6,000 Degree and Diploma students.

Sampling procedure

The sampling method used was purposive sampling. This method was preferred because it allows the researcher to choose cases that are seen to be more informational or related to the study purpose. Respondents were drawn from Jaramogi Oginga University. Stratified cluster sampling was used to categorize the subjects of study into private sponsored and government sponsored students of the university. These strata exposed the researcher to various stakeholders who have different experiences with the issues under study. An equal number of students from both categories were selected. Choosing an equal number of respondents facilitated comparison in the difference in patterns of student funding practices in the institution.

Sample size

Sample size is part of the whole population that is used in the study intended to give statistical data that represents the total population. In statistics, it is said to be a subset that is to be looked into in detail and it is chosen to represent the whole population. They are representative of

a whole (McNeill & Chapman, 2005). Sample size determination helps in the sampling of the elements number that will be part of the sample [9]. We note that an adequate sample size should be 10% of the whole population. The researcher chose 600 respondents representing 10% of the population. The sample was picked from JOOUST. The researcher used respondents from Degree and Diploma courses to get the data required. Once the research tool was filled, they were analyzed and correction made where necessary. This also helped the researcher determine if the respondents understood the concept of the research. The process was repeated with the same set of respondents used in the first process. This helped the researcher to know whether the respondents have understood what is required by the questionnaire.

Research instruments

The researcher used questionnaire and interview schedule as data collection instruments. Both the questionnaire and interview schedule were used to collect primary data from the respondents whereas secondary data was gotten from the internet, newspapers, journals, government publications and magazines. Questionnaire which is probably the most used instrument of all is preferred because it allows participants to be as true as they can since there is no interference as they fill them, hence maximum privacy. Questionnaire was also deemed suitable for this study owing to the high literacy levels of the respondents, thus, senior and middle level academic and non-academic staff. The interview schedule on the other hand was suitable since it was conducted through discussions by use of a set of structured interview questions which involved subjecting every respondent to the same stimuli. This in turn was expected to create confidence in respondents to give more valid and objective data hence boosting the reliability of the information gathered. Interview schedule was also known to provide in-depth information on specific subject(s) of interest to the researcher. Research instruments refer to data collection tools.

Validity and Reliability of research instruments

The pilot test in this study was drawn from Jaramogi Oginga Odinga University of Science and Technology which stimulated the procedures and protocols that will be designed for data collection. This will ensure that the queries are understandable and do not have ambiguity. To determine the content validity of the research instruments, a panel of experts from Jaramogi Oginga Odinga University of Science and Technology research department examined the instruments, assess them on basis of their judgment and appraise them. Questionnaires and interview schedules were also given to 5 personnel to ascertain that they are paralleled to the student funding management practices and to make the necessary corrections, offer constructive criticism to the language pattern and adequate coverage of the study area.

The reliability of the research tools was established through test-retest method. An interview schedule containing both open and closed-ended items were administered to the Jaramogi Oginga Odinga University of Science and Technology, containing items investigating the student funding and its management practices. The draft copy was administered to 16 Jaramogi Oginga Odinga University of Science and Technology government and private sponsored students over a period of time to give criticism of it as the initial draft. These instruments were subsequently given to another sample of students who had similar traits to allow for full representation and to allow for similar interpretations by the main study participants. After all the suggestions were taken into consideration, the final research tool was drawn and the reliability of the tool was tested using Cronbach's Alpha. The acceptable Cronbach's Alpha value is 0.7 which indicated reliability and stability of results. From the findings presented in Table 3.1 access to funding had an alpha of 0.745, duration of funding had an alpha of 0.763, and loan recovery period had an alpha of 0.751. This is an indication that all the variables were reliable.

Results and discussion

In this section, the study presented the findings of the general information of the participants of the study. The information that was sought included gender, age, marital status and education level of the respondents. The findings are presented in the subsections below.

Gender of the respondents

Respondents indicate their gender and the results were as presented in Table 1.

Table 1. Gender of the respondents

Gender	Frequency	Percent
Male	296	59.0
Female	206	41.0
Total	502	100.0

The results in table 1 indicate that, 296(59%) of the respondents were male while 206(41%) were female. This shows that the study was not gender biased as the two genders were well represented. Most of the respondents were male as represented by 59%.

Age of the respondents

Respondents provided the age bracket they belonged in and the results obtained were as presented in Table 2.

Table 2. Age of the respondents

Age in Years	Frequency	Percent
18-20	141	28
21-30	160	31.8
31-40	112	22.4
41-50	52	10.3
Above 50	38	7.5
Total	502	100

The findings presented in Table 2 show that 31.8% of the respondents were aged 21-30 years, 28%, 18-20 years, 22.4% 31 to 40 years, 10.3% 41 to 50 years and 7.5% above 50 years. This was clear that the participants' ages were not the same and therefore the researcher was not biased based on gender. Most of the respondents were aged 21 to 30 years.

Respondents marital status

The respondents indicated their marital status as the study sought to establish. The results were as presented in Table 3.

Table 3: Respondents marital status

Marital Status	**Frequency**	**Percent**
Single	233	46.4
Married	126	25.1
Divorced	42	8.3
Widowed	101	20.2
Total	**502**	**100**

The findings in table 3 showed that 233(46.4%) of the respondents were single, 126(25.1%) were married, 101(20.2%) were widowed and 42(8.3%) were divorced. This shows that the study participants had different marital status but most (46.4%) were single. The study was not biased based on marital status when selecting the respondents.

Respondent's highest level of education

Respondents gave their highest educational level as the study had sought to establish and the findings were as presented in Table 4.

Table 4. Respondents level of education

	Frequency	Percent
Certificate	234	46.6
Diploma	172	34.3
Degree	96	19.1
Total	502	100

From the findings in table 4, 234(46.6%) of the respondent had a certificate as their highest level of education, 172(34.3%) diploma, and 96(19.1%) degree. This shows that most (46.6%) of the respondents used in the study had certificate as their highest educational level. There was no biasness in this study since the participants had different education levels.

Influence of funding on higher education

In this section, the study presents the findings of respondents on different questions relating to various measures of findings and how they affect student education in Kenyan universities.

Education category

The participants were asked to show the category they belonged in and the outcome is as shown in Table 5.

Table 5. Respondents education category

Education Category	Frequency	Percent
Government sponsored	137	27.2
Self-sponsored	365	72.8
Total	502	100

From the findings in table 5 it is a clear indication that majority 365(72.8%) of the respondents were self-sponsored while only 137(27.2)% were government sponsored. This is an indication that majority of students at Jaramogi Oginga Odinga University of Science and Technology are self-sponsored.

Types of funds

Respondents were requested to also indicate the findings they have benefited from and the results were as presented in Table 6.

Table 6. Funding type respondents have benefited from

Types of Fund	Frequency	Percent
HELB Loan	208	41.4
Wings to fly	55	10.9
CDF bursary	110	21.9
NGO funding	38	7.5
None	77	15.3
Any other	15	2.9
Total	502	100.0

From the findings in table 6 the funding type that has benefited most of the students was HELB loan as indicated by 208 (41.4%) of the respondents, CDF bursary followed benefiting 110(21.9%), the next was Wings to fly with 55 (10.9%) of the respondents benefiting from it followed next by NGO funding which benefited 38(7.5%) of the respondents and finally other forms of funds benefited 15 (2.9%) of the respondents. The findings also established that 77(15.3%) of the respondents benefited from none of the findings. This showed that the fund that benefited most of the respondents was HELB Loan, CDF bursary, Wings to fly, and NGO findings respectively.

Respondents further asked to show whether they think students funding affects the level of enrollment into university education. The results were as presented in Table 7.

Table 7. Whether students funding affects enrollment

	Frequency	Percent
Yes	81	16.1
No	421	83.9
Total	502	100

The findings in table 7 show that majority 421(83.9%) of the respondents agreed that students funding affects the level of enrollment into university education while 81(16.1%) indicated that it had no effect. Therefore it can be said that students funding affects the level of enrollment into university education. Respondents were also asked to indicate the reason why they thought it affects enrollment. The respondents indicated that if they lacked funding's they would be spending most of their time looking for finances and therefore if funds are available majority of qualified students would enroll for higher education. Funding gives a chance to those who are not financially stable a chance to pursue education. Despite sponsorship by placement being available it does not cater for food and other personal needs and therefore if the funds requested for is rejected or reduced then the students have to differ from their education to find money or seek alternative funding which is not always guaranteed.

Funding body for diploma students

Respondents were requested to show if they knew of any funding body that funds Diploma students who enroll for courses in the University. The results were as shown in Table 8.

Table 8. Aware of funding body for diploma students

	Frequency	Percent
Yes	65	13
No	437	87
Total	502	100

The findings in table 8 show that 437(87%) of the participants confessed that they were not aware of any funding body that funds Diploma students who enroll for courses in the University while only 65(13%) were aware of it. This is an indication that majority of the respondents were not aware of any funding body that funds Diploma students who enroll for courses in the University.

Dropout of funding students

Respondents were asked to indicate whether they were aware of any sponsored student who dropped out. The results were as shown in Table 9.

Table 9. Sponsored student who dropped out

	Frequency	Percent
Yes	308	61.3
No	194	38.7
Total	502	100

From the findings in table 9, it is evident that majority 308(61.3%) of the respondents indicated that they are aware of any sponsored student who dropped out while 194(38.7%) of the participants confessed that they were not aware. This is an indication that there are some sponsored students who have dropped out of

school. Respondents were further asked to indicate the reason why some of the sponsored students dropped out. The respondents indicated that some of the students dropped out of school because their parents lost their jobs and therefore they had issued with their fee payment. CDF funds are not sufficient and therefore students depending on those funds are forced to stay out of class most of the time and therefore they get tired and finally decide to quit. Another reason given was Government placement placed some of the student to some courses that they did not want to pursue forcing them to quit.

The funds that the government provides to students is not sufficient to cater for their personal expenses after it has been distributed to fee payment and therefore forcing students to quit their education. Some of the students are from very humble backgrounds and since most of the funds provided cover partial requirements, the students is not able to cover the remaining portion and this forces them to quit.

Importance of students funding

Respondents were asked to indicate how much they know about the importance of student funding. The results were as shown in Table 10.

Table 10. Respondents knowledge extent on importance of funding

	Frequency	Percent
Nothing	15	2.9
Very Little	26	5.2
Moderate	254	50.6
Very Much	207	41.3
Total	502	100

The findings from table 10 show that majority 254(50.6%) of the respondents indicated that they had moderate knowledge about the importance of student funding, 207(41.3%) indicated that they knew very much, 26(5.2%) knew very little and 15(2.9%) knew nothing. This indicates that most of the participants had moderate to very much knowledge on importance of students funding.

Convenient form of student funding

Respondents were asked to indicate what the most convenient form of student funding was. The findings were as indicated in Table 11.

Table 11. Convenient form of student funding

Type of Funding	Frequency	Percent
Loans	427	85.1
Bursary	47	9.3
Grants	28	5.6
Total	502	100

From the provided results in table 11, it is evident that majority 427(85.1%) of the participants showed that loans were the most convenient form of student funding, 47(9.3%) indicated bursary was most convenient and 28(5.6%) indicated grants. This is an indication that the most convenient form of students funding was loans.

Challenges faced by students when seeking sponsorship

Participants were requested to include whether they were aware of any challenges that students faced when they were seeking sponsorship. The findings were as indicated in Table 12.

Table 12. Aware on challenges faced by students seeking sponsorship

	Frequency	Percent
Yes	382	76.1
No	120	23.9
Total	502	100

From the provided results in table 12, 382(76.1%) of the participants confessed that they were aware of the challenges that students faced when they were seeking sponsorship while 120(23.9%) indicated that they were not aware. This therefore means that students face some challenges when they are seeking sponsorship.

Participants were requested to include whether they knew of any Diploma students who were through with their studies without any form of sponsorship or external financing. The findings were as indicated in Table 13.

Table 13. Students through with their studies without any form of sponsorship

	Frequency	Percent
Yes	109	21.7
No	393	78.3
Total	502	100

From the provided results in table 13, 393(78.3%) of the participants showed that they didn't know of Diploma students who were through with their studies without any form of

sponsorship or external financing while 109(21.7%) were aware of some. It means that there are very few Diploma students who were through with their studies without any form of sponsorship or external financing as indicated by majority (78.3%) of the respondents.

Participants were requested to include whether their institution has procedures for handling fee balances for sponsored students. The findings were as indicated in Table 14.

Table 14. Whether institutions have procedures for handling fee balances

	Frequency	Percent
Yes	266	53
No	236	47
Total	502	100

From the provided results in table 14, 266(53%) of the participants showed that their organization had procedures for handling fee balances for sponsored students while 236(47%) didn't have them. This showed that there are some of the institutions that did not have procedures for handling fee balances for sponsored students but majority (53%) did have.

The respondents whose organizations had no plan were asked to indicate whether they plan to introduce policies for managing sponsored student fee balances. The findings were as indicated in Table 15

Table 15. Whether institutions plan to introduce policies for managing sponsored student fee balances

	Frequency	Percent
Yes	335	66.8
No	167	33.2
Total	502	100

From the provided results in table 15, 335(66.8%) of the participants showed that their institution plan to introduce policies for managing sponsored student fee balances while 167(33.2%) indicated they do not plan. This is an indication that majority of the institutions that haven't adopted policies of managing sponsored student fee balances are having plans in place to start managing them. Participants were requested to include how they would prefer to receive student funding. The results are as shown in Table 16.

Table 16. Respondents choice to receive student funding

	Frequency	Percent
Personal Account	79	15.8
School Account	287	57.2
Parent's/Guardian's Account	136	27
Total	502	100

From the provided results in table 16, majority (57.2%) of the participants showed that they prefer receiving student funding in their school account, 27% indicated parents/guardians account and 15.8% indicated personal account. This shows that majority students prefer receiving the funds in their school account.

Correlation analysis

The computed correlation analysis was to establish the relationship between the predictor variables and the response variable and also to establish whether there is interdependency between the response variables. The study used Pearson Product Moment Correlation and the results were interpreted based on the results with 0 indicating no relationship and 1.0 showing perfect relationship. If $r = \pm 0.1$ to ± 0.29 the association was interpreted to be small, and when $r = \pm 0.5$ or higher, the association was concluded to be strong. The outcome was as shown in Table 17.

The results in table 17 reveal that Access to funding and student education in Kenyan universities were positively and strongly associated (r=0.877, p-value=0.001). Duration of funding and student education in Kenyan universities were also found to be strongly and positively associated (r=0.794, p-value=0.000). The findings also established that Loan recovery period and student education in Kenyan universities were strongly and positively associated (r=-0.847, p-value=0.001). These results show that the independent variables (Access to funding, Duration of funding and Loan recovery period) influence student education in Kenyan universities.

Multiple regression analysis

The study computed multiple regression models to determine how the predictor/independent variables affect the response/dependent variable

that is to establish the influence of funding on higher education in Kenyan Universities. The outcome was as shown in three tables as shown in below. Model summary was used to show the variation in student education in Kenyan universities as a result of change in Access to funding, Duration of funding and Loan recovery period. The results as presented in Table 18.

Table 17. Correlation analysis

		Level of enrollment	Access to funding	Duration of funding	Loan recovery period
Level of enrollment	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	502			
Access to funding	Pearson Correlation	0.877**	1		
	Sig. (2-tailed)	0.001			
	N	502	502		
Duration of funding	Pearson Correlation	0.794**	0.475	1	
	Sig. (2-tailed)	0.000	0.062		
	N	502	502	502	
Loan recovery period	Pearson Correlation	-0.847**	0.457	0.461	1
	Sig. (2-tailed)	0.001	0.058	0.079	
	N	502	502	502	502

Table 18. Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.883[a]	0.780	0.759	0.00286

The relationship as shown in table 18 between the study variables was shown the correlation coefficient which is the R value. In case the value was 0 there was no existing relationship between the variables while value of 1 show they are perfectly related. A value of ±0.5 and above showed that the relationship between the variables was strong. From the provided results, there is a strong favourable association between the funding and student education in Kenyan universities (r= 0.883). The adjusted r-square vaslue shows that there was 78% variation of student education in Kenyan universities as a result of change in Access to funding, Duration of funding and Loan recovery period. The remaining 22% show that there other factors responsible for student education in Kenyan universities which were not part of this research.

Analysis of variance

In order to establish whether the data used in the study was significant, the study computed ANOVA. Significance level selected was 5%.

The results show in table 19 that the p-value for the processed data is 0.001 which implies that the data was ideal for making conclusion because the p-value was less than the selected level of significance i.e. 0.05. The F critical was less than F calculated (2.663 < 45.369). The F-critical value was obtained from the f distribution table, and since the calculated value was greater than critical value it implied that, Access to funding, Duration of funding and Loan recovery period significantly influence student education in Kenyan universities. The relationship was considered to be significant because the significance value in the above table was less than (≤ 0.05).

Beta coefficients of the study variables

The regression model is given by eq. (1)

$Y = 0.533 + 0.371X_1 + 0.464\ X_2 - 0.455\ X_3$ (1)

The equation above reveals that holding Access to funding, Duration of funding and Loan recovery period constant, the variables will significantly influence student education in Kenyan universities as shown by constant = 0.533 as shown in Table 20.

Table 19. Analysis of variance

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	8.129	3	2.710	45.369	0.001[b]
	Residual	29.743	498	0.060		
	Total	37.872	501			

Table 20. Regression coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.533	0.051		10.451	0.001
	Access to funding	0.371	0.041	0.387	9.049	0.011
	Duration of funding	0.464	0.059	0.472	7.864	0.002
	Loan recovery period	-0.455	0.049	-0.438	-9.286	0.008

The study found that duration of funding is statistically significant to student education in Kenyan universities as shown by ($\beta = 0.464$, $P = 0.002$). Duration of funding significantly and positively relate with student education in Kenyan universities. Therefore, increasing Duration of funding by a single unit would lead to an increase in student education in Kenyan universities. The study therefore rejected the null hypothesis and accepted the alternative that there is statistically significant relationship between the duration of funding and the enrollment rate in Kenyan universities.

Conclusions

The study established that duration of funding is statistically significant to student education in Kenyan universities. It was also established that duration of funding significantly and positively relate with student education in Kenyan universities. From the provided results, the study concludes that increasing duration of funding by a single unit would lead to an increase in student education in Kenyan universities. The study concluded that increasing access to funding will have a positive influence on student education in Kenyan universities. The study recommends that government to scrape off sponsorship and make more funds available to students through HELB loans. All students regardless of the level of education should access loans because some of them are from humble backgrounds and therefore are not able to pay tuition fee needed.

Conflicts of interest

Authors declare no conflict of interest.

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