

Funding Challenges and Their Effect on Growth of Public Universities in Kenya: A Case of Pwani University

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Abstract: Funding is a central pillar in the growth and development of any organization. The Kenyan Government funds public universities through annual budgetary allocations with a view of achieving its national goals. Over the years, demand for university education in Kenya has increased exponentially, thereby triggering growth. This has forced public universities to operate with an element of financial distress. The presence of financial trouble in public universities has led to limited growth. The study sought to assess the effects of funding challenges on the growth of public universities in Kenya using Pwani University as a case study. The study targeted top management, Deans of schools, Chairpersons of departments, and Heads of administrative sections. The study used a cross-sectional survey research design, and questionnaires were used as the primary tool of data collection. Data was processed and analyzed with the aid of the Statistical Package for Social Sciences (SPSS) software. Descriptive and inferential analyses were duly conducted. The study revealed that funding challenges affect the growth of Pwani University as supported by an R-value of 71.9%. Further, the findings also revealed that problems with internally generated funds greatly influence the growth of the University as supported by a p-value of 0.809. The study recommends that public universities diversify their income generation activities to sustain and foster their growth.

Keywords: Development Grants, Funding Challenges, Growth, internally generated funds, Public Universities, Recurrent Grants.

primarily funds these institutions of higher learning through annual recurrent and development grants. Over the years, demand for university education in Kenya has increased, thereby necessitating the need for growth of academic staff, academic programs, and expansion of educational infrastructure. This notwithstanding, instances of financial constraints to accommodate growth have been a reality in various institutions. The increasing funding challenges provoked this study, which sought to assess the effect of funding challenges on public universities in Kenya. Previously, various other scholars made significant contributions to higher education funding, including Gudo (2014); Ahmed (2015) and Teferra (2013); however, their studies did not examine the effect of funding challenges on the growth of public universities in Kenya. It is on this premise that this paper examines the impact of funding challenges on the growth of public universities in Kenya using Pwani University as a case study.

The study specifically wanted to:

- i. Determine the effect of recurrent, development and internally generated funds (A-in-A) challenges on the growth of Pwani University and,
- ii. Investigate the effect of funding challenges on growth of Pwani University.

I. INTRODUCTION

Worldwide, governments play a significant role in higher education funding. In the recent past, there have been increased cases of deficits in annual budgets of public universities. According to (World Bank, 2018), the problem of higher education funding is more persistent in African countries. However, universities in Sub-Saharan Africa are the most financially challenged (Teferra, 2015). In Kenya, the situation is similar to that of other African countries. For example, during the 2014/2015 financial year, the estimated budgetary allocation for all public universities was KShs. 45 billion, but the actual funding received was KShs. 33 billion. Similarly, in the financial year 2015/2016, the estimated budget allocation was KShs. 50 billion and the actual capitation received was KShs. 35 billion (GoK, 2016).

Public universities in Kenya exist to fulfill the mandate of teaching, learning, research, and innovation. The government

II. METHODOLOGY OF THE STUDY

The study adopted a cross-sectional survey research design to draw a sample from a population of 52 administrators comprising the Vice Chancellor, three Deputy Vice Chancellors, middle level administrators and operational level administrators. This study used Yamane's formula (Yamane, 1967) in selecting 46 administrators. Data was collected using questionnaires with open ended and closed questions. The closed ended questions were in form of a 5 point Likert scale with items for each construct. Administrators were given questionnaires and requested to fill in. The questionnaires were collected on agreed dates and were checked for inconsistency and errors. Collected data was coded, categorized and keyed in using Statistical Package for Social Sciences (SPSS) software for analysis. The analyzed data was presented in graphs, pie-charts and tables.

III. RESULTS OF THE STUDY

Reflection on the Demographic Characteristics

This section captures the responses by gender, age, highest education level as well as length of service, presented and analyzed in tables and figures.

Distribution of Respondents by Gender

In order to show the gender distribution and parity among the administrators included in the survey, the study sought to determine the respondent's gender. Respondents were thus required to indicate their gender affiliations by checking either male or female response categories provided. Figure 1 below presents the findings.

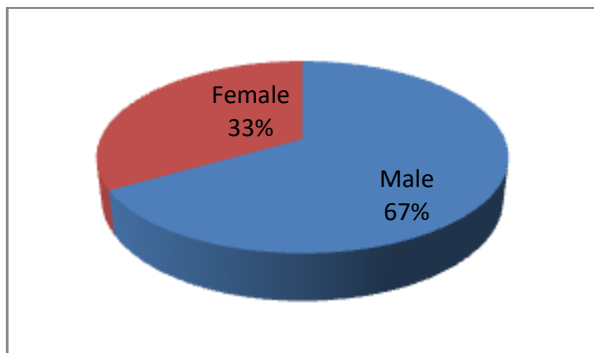


Figure 1: Distribution of respondents by gender

As presented in figure 1 above, 67% of the respondents were male and 33% were female. From the findings, it followed that the males made the dominant gender in key administrative positions in the University. The findings also imply that there was adequate representation of both genders hence diverse and balanced perspectives with respect to gender.

Age distribution of the respondents

The study deemed age an important demographic characteristic as an indicator of the age distribution in the study area. Figure 2 illustrates the findings.

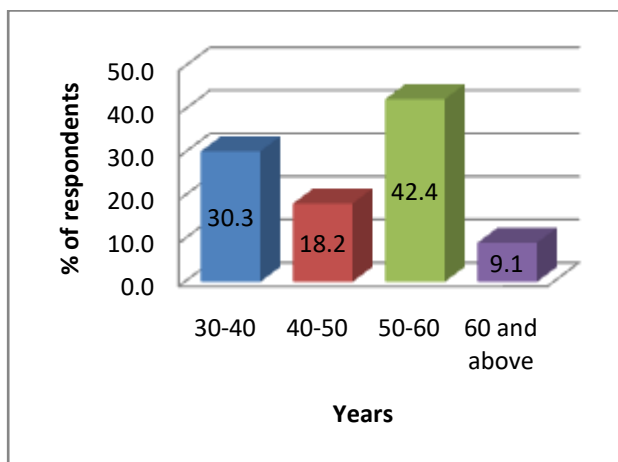


Figure 1: Distribution of respondents by Age

Results as illustrated in Figure 2 reveal that a majority of respondents (42.4%) fall within the 50-60 years of age category. This is closely followed by (30.3%) within 30-40 years category then (18.2%) within 40-50 years category. Only 9.1% of respondents fall within 60 years and above category. A rich diversity in experience was thus established.

Response by Education Level

Respondents were also asked to indicate their highest levels of education. This would serve to show the academic qualifications among respondents in their respective positions. Figure 3 below presents the findings.

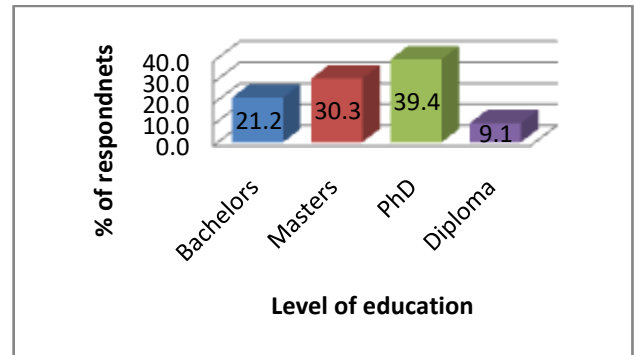


Figure 2: Response by Level of Education

From the findings, a majority of respondents (39.4%) attested to having attained a Doctorate degree level, followed by 30.3% who claimed that they had attained masters' level education. An additional 21.3% indicated that they had attained an undergraduate degree while 9.1% had attained a Diploma. Overall, the study area can be said to comprise staff from relatively high levels of education. This was expected because universities require professionals with high levels of education to discharge their mandate of teaching, research and community outreach.

Category of Staff

Employment is a vital aspect of the society because it explains the income level of the members and offers an understanding of relations amongst its members. Nature of employment is important for this study because it explains the reasons to why people engage in management and running of institutions. The findings from the study are as shown below.

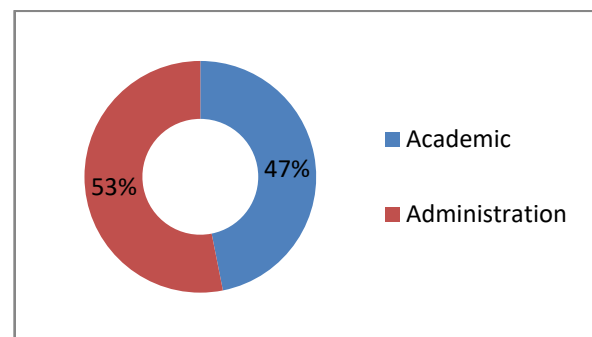


Figure 3: Response by category of staff

Results as illustrated in Figure 4 reveal that 53% of the respondents served as administrators in the administration section while 47% served in academic section category. The findings also implies that there was adequate representation of administrators from both sections hence diverse and balanced perspectives with respect to area of service.

Response by Length of Service

With some level of working experience necessary in establishing the study objectives, the study found it appropriate to establish the length of service of the respondents in the University. This would ascertain whether respondents were informed owing to their respective lengths of service. Figure 5 below illustrates the finding.

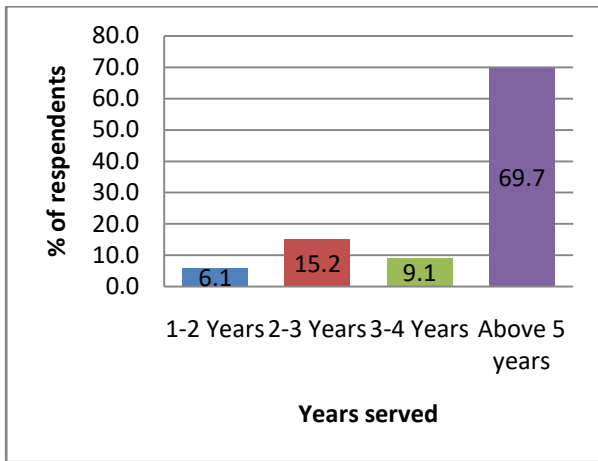


Figure 4: Response by Length of Service

Findings in Figure 5 above shows that less than one third (21.3%) of the respondents had worked in the University for less than three years while more than two thirds (78.7%) of the respondents had worked in the University for more than three years.

Reflection on recurrent, development and internally generated funds (A-in-A) challenges on the growth of University

This section attempts to analyze the findings on the effect of the various determinants of funding challenges in Pwani University which include recurrent grants, development grants and A-in-A.

Effect of Recurrent Grants Challenges on the Growth of the University

The study sought to establish the effect of recurrent grants challenges to the growth of the University. The outcomes were presented in Table 1 below.

Table 1: Effect of Recurrent Grants to the growth of the University

Statement	Strongly agree	Agree	No opinion	Disagree	Strongly disagree
Delayed disbursement of recurrent grants affects timely payment of salaries and wages.	75.1	18.8	6.3	0	0.0

Delayed disbursement of recurrent grants affects timely remittance of employees' pension and other statutory deductions.	64.5	29.0	6.5	0	0.0
Budget cuts constrain implementation of operational activities.	58.0	32.3	9.7	0.0	0.0
Budget cuts limit implementation of routine maintenance activities.	62.5	31.1	6.3	0.0	0.0

Results as illustrated in Table 4.2 reveal that 87.6% of respondents agreed that delayed disbursement of recurrent grants challenges negatively affect timely payment of salaries and wages while 6.3% respondents did not agree. A higher percentage (90.3%) of respondents agreed that delayed disbursement of recurrent grants challenges negatively affect timely remittance of pension and other statutory deductions while 3.2% respondents did not agree. 90% of the respondents agreed that budget cuts constrain implementation of operational activities in the University. Lastly 93.6% of respondents indicated that budget cuts limit implementation of routine maintenance activities in the University whereas 6.3% had no opinion.

It can be deduced from the findings that the slow growth of Pwani University can, to a large extent, be attributed to the challenges of recurrent grants. Most notably, constrains on implementation of operational activities and routine maintenance activities have been significantly attributed to budget cuts on recurrent grants.

Effect of Development Grants Challenges on Growth of the University

The study sought to examine the effect of development grants challenges on the growth of the University. The outcomes were presented in Table 2 below.

Table 2: Effect of Development Grants Challenges on Growth of the University

Statement	Strongly agree	Agree	No opinion	Disagree	Strongly disagree
Non-disbursement of allocated funds affect development of infrastructure such as lecture theatres and laboratories negatively	75.7	15.2	0	9.1	0.0
Budget cuts affect acquisition of equipment for teaching and learning negatively.	68.7	28.1	3.1	0	0
Major repairs and improvements cannot be easily due to budget cuts.	62.5	28.1	9.4	0	0
Challenges with development grants limit research and innovation activities.	56.2	37.5	0	6.3	0.0

Results in table 2 above reveal that 90.9% respondents agreed that non-disbursement of allocated funds affect development of infrastructure including lecture theatres and laboratory negatively while 9.1% respondents disagreed. 84% of the respondents agreed that budget cuts affect acquisition of equipment for teaching and learning negatively while 12.5% disagreed. 81.5% of the respondents agreed that major repairs and improvements cannot be easily undertaken due to budget cuts while 9.4% disagreed. 93.7% of the respondents agreed that challenges with development grants limit research and innovation activities while 6.3% of the respondents disagreed. From the foregoing findings, it can be deduced that the slow growth of Pwani University can, to a large extent, be attributed to the challenges of development grants. It is particularly notable that development of infrastructure and acquisition of equipment for teaching and learning has been affected negatively due to budget cuts and non-disbursement of development grants.

Effect of Internally Generated Funds Challenges on Growth of the University

The study sought to examine the effect of internally generated funds challenges on the growth of the University. The findings were presented on the next page in Table 3

Table 3: Effect of internally generated funds challenges on growth of the University

Statement	Strongly agree	Agree	No opinion	Disagree	Strongly disagree
Reduced student numbers decrease revenue for supporting growth requirements of the University.	60.5	30.4	9.1	0	0
Limited donor funding inhibits growth of the University.	30.4	42.4	24.2	0	3.0
Income generating activities generate sufficient income to support growth requirements of the University	3.0	0	6.1	30.3	33.4

The results from table 4.4 reveal that 90.9% of the respondents agreed that reduced student numbers decrease revenue for supporting growth requirements of the University while 9.1% of the respondents had no opinion. 72.8% of the respondents indicated that limited donor funding inhibits growth of the University whereas 24.2% of the respondents had no opinion while 3% of the respondents disagreed. Only 3% of the respondents agreed that income generating activities generated sufficient income to support growth

requirements of the University whereas 6.1% had no opinion. On the same front, 63.7% of the respondents disagreed that income generating activities generate sufficient income to support growth requirements of the University.

It can be deduced from the finding that the slow growth of Pwani University can to a large extent be attributed to the challenges of internally generated funds. It is particularly notable that income generating activities (IGA’s) of the University do not generate sufficient revenue to support growth requirements.

Effect of Funding Challenges on Growth of the University

The study sought to examine the effect of funding challenges on the growth of the University. The findings were presented in Table 4 below.

Table 4: Effect of funding challenges on growth

Growth Indicator	Strongly agree (%)	Agree (%)	No opinion (%)	Disagree (%)	Strongly disagree (%)
Increase of academic programs in the University is hindered by funding challenges	50	50	0.0	0.0	0.0
Funding challenges inhibit recruitment of required faculty in the University	59.3	37.6	3.1	0.0	0.0
Increase of Research and innovation output is negatively affected by funding challenges	59.3	37.6	3.1	0.0	0.0

As illustrated in Table 4 above, all respondents (100%) agreed that increase of academic programs in the University is hindered by funding challenges. Similarly, 96.9% of the respondents agreed that funding challenges inhibit recruitment of required faculty in the University, while 3.1% of the respondents had no idea. 96.9% of the respondents agreed that increase of research and innovation output of the University is negatively affected by funding challenges, while 3.1% of the respondents had no idea.

Regression Results

Model of Fitness

Table 5 below shows fitness of the regression model in explaining the study phenomena, recurrent grants, development grants and A-in-A and their influence on growth of public universities. This is supported by coefficient of

determination also known as the R square of 0.719. This means that 71.9% of the variations in the dependent variable, which is growth of public universities in Kenya, are explained by the explanatory independent variables present in the model. This further indicates that the model applied to associate the variables was satisfactory.

Table 5: Model Fitness

Indicator	Coefficient
R	0.848
R Square	0.719
Std. Error of the Estimates	2.21163

Predictors: (Constant), A-in-A, Development grants, Recurrent grants

Regression of Coefficient

A multivariate linear regression model was fitted to determine whether there existed a relationship between the dependent variable and the response variables. The general model was:

$$Y_0 = \beta_0 + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + e$$

After running the regression model the results were as displayed in table 6 below.

Table 6: Regression of coefficient

Model	B	Standard Error	t	p-value
Constant	14.092	2.637	5.344	0.000
Recurrent	0.300	0.082	3.658	0.001
Development	0.360	0.091	-3.951	0.000
A-in-A	0.038	0.157	0.244	0.809

*p-value<0.05

Therefore,

$$Y_0 = 14.092 + 0.30 x_1 + 0.360 x_2 + 0.038 x_3 + e$$

The regression coefficients were used to determine whether there is a positive or negative correlation between the explanatory factors and the dependent factor. Results in the table above indicate that there exists a positive relationship between engagement in recurrent grant challenges, development grant challenges, A-in-A challenges and growth of public universities. These were supported by coefficients of 0.300, 0.360 and 0.038 respectively, meaning a unit change in any of the variables will have a positive change in the growth of public universities in Kenya. Further, the results indicate that A-in-A has a higher influence on growth of public universities as compared to development grants and recurrent grants since its significant value is 0.809. Recurrent grants and development had significance values 0.001 and 0.000 respectively which is lower than the p value of 0.05. This can be interpreted to mean that public universities do not fully rely on recurrent and development grants for their growth as compared to the income which is generated internally. Further, this could be attributed by budget cuts and non-disbursement of allocated funds to the University by the government.

Funding Challenges Facing the University

The study set out to explore funding challenges experienced by Pwani University. The discussions on challenges hindering growth are elaborated in this sub section.

- Budget cuts from the government that are done or implemented after the university budget is approved and is operational. The study revealed that budget cuts that are undertaken by the government after approval of the University's budget is one of the major funding challenge hindering growth.
- Delayed remittance of allocated funds. The study revealed that Pwani University experienced delay in funds remittance from the government. This was a challenge with allocated recurrent and development grants.
- Inadequate funds. The study revealed that allocations for recurrent and development grants were inadequate. Respondents indicated that annual allocations for both grants were less than the University's budget requirements thus undermining growth.
- Funding from the government is irregular, unpredictable and based on no set criteria. Respondents indicated that allocation of development grants by the government was not based on any formulae. Moreover, they indicated that disbursement of development grants was irregular and unpredictable in nature.
- Lack of adequate income generating activities thus lack of enough facilities in the university. The study revealed that Pwani University has limited income generating activities to supplement the limited funding from the government.

Effects of Funding Challenges on the University's Growth

The study set out to explore the effects of funding challenges on Pwani University's growth. Among the effects that the respondents highlighted include:

- The University finds it difficult to implement market oriented courses like MBChB, Agricultural Engineering and courses associated with the blue economy since they are capital intensive.
- Enrolment limitation. The University has not managed to increase its enrolment capacity to full potential due to inadequate infrastructure.
- Recruitment of academic staff is not up to the recommended ratios.
- Expansion of learning facilities such as lecture rooms, laboratories and offices is hampered by limited funding.
- Implementation of the University's Strategic and Master Plans has been frustrated.
- Completion of approved construction projects take longer than scheduled and sometimes stall because of

limited funding, delayed disbursements of development grants or non-disbursement.

- g) Implementation of e-learning has not been possible since ICT and e-learning infrastructure is generally expensive at the initial startup stage. Huge capital outlay is required and the University has limited funding.
- h) Research activities of the University are limited.

IV. RECOMMENDATION ON MITIGATING FUNDING CHALLENGES

The study set out to establish the possible ways to mitigate the University's funding challenges. Among the possible strategies that the respondents recommended that Pwani University could undertake to address the funding challenges include:

- a) Invest in robust income generating activities to supplement revenue from the government such as ICT and e-learning to reduce costs such as salaries and wages and increase revenue by enrolling students to undertake studies online.
- b) Policy change – the government should change the funding model from the current 'one-size-fits-all' approach to financing programs based on their delivery cost.
- c) The University should invest in innovation and patent its intellectual property.
- d) The University should charge fees for all programs at market rates including fees charged to government sponsored students.
- e) Services offered to students such as accommodation and meals should be benchmarked with the market.

V. CONCLUSION

The conclusions of this study were drawn from the findings on the three independent variables of the study which include recurrent grant challenges, development grant challenges and A-in-A challenges. The results revealed a correlation value of 0.719 which depicts a good linear dependence between the independent and dependent variables. This implies that there is a positive correlation between funding challenges and growth of the University. Further, results of the study revealed a positive relationship between growth of the University and all the independent variables. This was supported by 0.001 p-values for recurrent grant challenges, 0.000 p-values for development grant challenges and 0.809 p-value for A-in-A challenges. From the research findings it can be concluded that A-in-A challenges had a greater influence on the growth of the University since it had a p value of greater than 0.05. These findings have significant implication to the University for example the A-in-A significance value of 0.809 can denote a need to diversify income generating activities in order to overcome the effects of funding challenges.

Further, the study established that Pwani University faces a number of funding challenges which include but are not limited to budget cuts, delayed disbursements of allocated grants, non-disbursements of allocated development grants, disbursement of less grants and limited income generating activities. The study also revealed that funding challenges affected the University in the following ways: limits implementation of market oriented programmes, limits student enrolments, limits recruitment of academic staff, limits expansion of learning facilities, limits research activities, limits implementation of e-learning, hinder implementation of Strategic and Master Plans and negatively affects completion timelines of construction projects. It is evident from the findings that the aforementioned funding challenges impede the University's growth to a great extent. It can be deduced from the foregoing results that funding challenges have to a great extent affected the growth of Pwani University.

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