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IMPACT OF BUDGETING AND BUDGETARY CONTROL ON THE PERFORMANCE OF LASBELA UNIVERSITY OF AGRICULTURE, WATER AND MARINE SCIENCES (LUAWMS)

Khalid Umer[1], Dr. Asif Iqbal[*2], Shaista Asmat[3]

[1]*Department of Management Sciences & CommerceAlhamd Islamic University, Quetta*
[*2]*Assistant Professor, Department of Management Sciences & Commerce*
Alhamd Islamic University, Quetta
[3]*Department of Management Sciences & CommerceAlhamd Islamic University, Quetta*

[1]khalidumer742@gmail.com, [*2]Dr.asif@aiu.edu.pk, [3]Shaistakhan02345@gmail.com

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Corresponding Author: *
Dr. Asif Iqbal
asifiqbal05@hotmail.com

Abstract
The study was carried out to investigate the effects of budgeting and budgetary control on the performance of Lasbela University of Agriculture, Water and Marine Sciences (LUAWMS), emphasizing financial planning resource allocation and institutional accountability. This study utilized correlation and regression analysis of budgeting practices and dichotomous institutional outcomes (student success, and HEC rankings) through a quantitative research design which analyzed survey data from faculty, administrators, financial officers. Sachi Tembo et al. (2003), were in line with this view when they argued that budgetary control effectiveness improved the financial management and performance of institutions, as over expenditure on administrative costs and misallocation of resources had the opposite effects on outcomes. Results indicate the necessity of implementing performance-based budgeting, participatory planning and zero-based budgeting to better financial governance. The study includes policy and research implications for policymakers, university administrators, and constituents who can assist to support more effective financial decision-making and institutional effectiveness in higher education

INTRODUCTION

A more high-level aspect for the sustainability and overall performance of Higher Education Institutions are budgeting and budgetary control. In developed countries universities adopt an array of sophisticated financial management practices for more strategic application in terms of faculty development, student services, research and physical infrastructure (Becker, 2014). In contrast, developing countries like Pakistan have perennial issues at public universities including squeezed budgets, delayed release of funds, bureaucratic red tape and low transparency (Raza et al., 2023). These problems frequently lower institutional capacity and lead to adverse effects on student achievement, research output, and academic exits (Adipat & Chotikapanich 2022).

Most important, universities are the largest agents in national development by providing some of the needed infrastructure for new knowledge and expertise in training systems to develop innovative technology. On the other hand, weak present financial management is a significant adverse to

academia; inefficiency as well declining of academic standards further down on the list and at last instability (Jensen & Meckling,1976, p. 303). In the light of these definitions, performance-based budgeting and real-time monitoring systems are commonly used internationally to translate the financial allocations into actionable priorities in line with strategic direction but Pakistani universities, including LUAWMS, typically find it challenging to adapt due to strict budget constraints that limit flexibility and autonomy (Olaniyan & Efuntade, 2020; p.

Public Sector University, LUAWMS is a living example of such difficulties. While it is instrumental in enabling access to education in an underserved region, it has had issues such as the inequitable allocation of funds, delayed disbursements and lack of bottom-up decision-making, and fiscal decentralization (Tetteh et al. This slots the university into where government thinks universities should be and brings with it tight constraints that hamper how much research, infrastructure and academic quality the university can support. On the other hand, top universities of the world prefer to invest in faculty research grants, student support services and improving digital learning infrastructure to increase competitiveness and innovation (Barney 1991).

Incumbent upon these constraints, it is deemed important to explore that how the budgeting and budgetary control impacts the institutional performance of LUAWMS. In presenting their findings, the researchers highlight not only the financial management dilemmas that the university confronts but also proffer evidence-based suggestions for reform.

Research Objectives

The study will be guided by the following objectives

1.Does budgeting practices play a vital role in institutional performance; (A case study of LUAWMS).

2. To measure the effects of budgeting controls and restraints on student outcomes/achievement, as well as, institutional rankings.

3. This paper aims at identifying budgetary inefficiencies and suggesting how another financial governance could be implemented in public universities.

Theoretical Framework

It requires a strong theoretical background to overcome how budgeting and budgetary control affect the performance of institutions (Billich, 1982). As there are many management and organizational theories that can help understand how the process of budgeting in universities could lead to efficiency, accountability, and academic outcomes, but some relevant theories worth mentioning comprise several approaches. This paper relays from other studies (from Goal-Setting Theory, Resource-Based View (RBV), Agency Theory, Institutional Theory, and Contingency Theory) and models implementation such as Performance-Based Budgeting (PBB) and its successor: Zero Based Budgeting (ZBB).

Goal-setting theory Locke & Latham (1990) lends support to the goal-setting theory as they focus on well-specified goals that enhance organizational performance. Such activities require finite resources; a university must be able to measure these financial goals, and specific portions of the budget serve these kinds of academic outcomes Aligning budget targets with performance indicators is a road to guarantee that financial decisions at LUAWMS really work toward institutional efficiency.

Resource-Based View (RBV) On the other hand, according to Resource-Based View (RBV) Theory (Barney, 1991), organizations can attain competitive advantage through proper management of resources such as financial capital, faculty knowledge and research infrastructure. Universities that have the academic reputation and performance why split you budget on initiatives with lower impact. Applying RBV to LUAWMS, means emphasizing the expenditures that generate enduring institutional growth.

Agency Theory The notion of Agency Theory (Jensen & Meckling, 1976) concerns the linkage between stakeholders and management in financial control. Weak accountability and centralized budgeting in universities can result in poor resource allocations. Syed Javed Hassan, a social development

expert said that improving transparency and stakeholder engagement in the budget process of LUAWMS would eliminate maladministration and lack of confidence among the institutions.

Institutional Theory If so, why is it inertia rather than innovation that takes over -Institutional Theory (DiMaggio & Powell, 1983) claims it to be because of the organizations adapting their structures to outside influences such as government regulations and demands for accreditation, choking off any internal inclination towards transformative processes. LUAWMS must ensure compliance with Higher Education Commission (HEC) financial policies on their end to be recognized as legitimate. Nonetheless, implementation of universal standards in budget processes — such as participatory planning and transparent reporting— would bolster institutional credibility and potential for additional revenue.

Contingency Theory As per the Contingency Theory (Fiedler, 1964), there is no one best budget approach and financial strategies need to change as the environment changes: from economic cycles, policy shifts or trends in student markets. Adopting more flexible tools such as rolling forecasts and scenario-based budgeting could create a point of resilience against funding delays or policy uncertainty for LUAWMS.

Upon these theoretical perspectives two applied models are finally added: Performance-Based Budgeting (PBB):

connects resources to measurable results in areas as research, development and student effectiveness. The application of PBB at LUAWMS would ensure that precious resources are proprietarily directed to the highest impact programmers.

Zero-Based Budgeting (ZBB): this everything comes up for review approach to annual spending improves efficiency and eliminates excess costs. Applying ZBB over time would then allow LUAWMS to make its financial planning more responsive and demand-driven.

To sum up, combination of these theories confirm that budgeting and budgetary control are more than financial transactions; they serve as strategic powers for enhancing the effectiveness of organizations. Applying these frameworks to LUAWMS will help bring structure in managing resources and accountability which would lead towards long-term sustainability.

Methodology

Research Design

This study employed a quantitative, descriptive and explanatory research design to assess budgeting and budgetary control as determinants of Lasbela University of Agriculture, Water and Marine Sciences (LUAWMS) performance. The design had been chosen so that it facilitates to give a descriptive account of budgeting practices as well as test the relationships between financial management and institutional performance with statistical tools.

Population and Sampling

The population of the study comprised faculty members, administrative staff and financial officers at LUAWMS, who are directly related to the tasks of preparing budgets, executing budgets and performance monitoring. To get a better number of participants from various departments and administrative levels, stratified random sampling technique was used. There were 200 total respondents so we felt comfortable doing fairly robust quantitative analysis.

Data Collection

A structured questionnaire was developed to capture the perceptions of budgeting, budgetary control mechanisms with its impacts on institutional outcomes. The questionnaire contained mainly closed-endeditems to allow for quantifiable analysis as well as a few open-ended items to elicit qualitative information. Moreover, the study reviewed secondary data from official budget documents, financial and performance statements to verify responses.

Instrument Validity and Reliability

The questionnaire was primarily drawn from previous literature on budgeting and higher education management. A pilot study was performed using 20 respondents to ensure that the items were clear and understandable. Some minor adjustments were done based on the feedback. Cronbach's alpha of internal consistency was used to determine the

final instrument reliability, and the value greater than 0.70 proved acceptable reliability.

Data Analysis

Results The data was processed using SPSS software. Frequency specific descriptive statistics (means, standard deviations, frequencies) were calculated for the responses. The correlational inferential statistics comprised Pearson correlation and multiple regression analysis methods to examine the relationship between budgeting practices and institutional performance. We used the asterisk in tables to show the statistical significance ($p < 0.05$ an $p < 0.01$) according to APA standards. VIF and Tolerance values established that multicollinearity was tested for with confirmation of stable regression estimates.

Ethical Considerations

All ethical requirements were met. Respondent participation was voluntary, and written informed consents were acquired. Participants were anonymous, their identity and any information provided was kept confidential as the data were stored securely. Review and approval occurred by the appropriate institutional authorities, and all sensitive financial data were handled in a confidential manner.

Limitations

The research was based at a single public university, thus findings may not be generalizable to other higher education institutes in Pakistan. The study also has the limitation of self-reported data and thus imposes a threat of response bias, however, with triangulation with official budgetary documents this risk is minimized. This further enhances our contribution that we believe will be equally fruitful for future studies taking place at different universities and embedding longitudinal data in their analyses for increased generalisability.

Analysis and discussion;

Table 1; gives a descriptive statistics of financial distribution at LUAWMS. The approved budget varied between 2.457 million and 42.724 million with mean of 21.023 million and standard deviation of 11.349 million, it was moderately variable. The expenses have also changed year wise from 0.723 million to 12.410 million, includes inconsistency in expenses.

Table 1, summarizes the data, with Q1 and Q3 as the 1st and 3rd quartiles, and includes the standard deviation (SD)."

Statement Table Out	Minimum	Q1	Median	Mean	Q3	Maximum	S.D
HEC Ranking	4	4.250	5	4.833	5	6	0.894
Budget							
Year Wise Expenses	0.723	1.317	3.005	4.707	7.008	12.410	4.702
Refurbishing0.630	0.630	1.109	1.587	3.251	5.311	8.201	2.867
Computers	0.178	0.280	0.761	1.896	3.762	4.796	5.971
Lab Equipment	1.130	8.943	14	13.272	17	25	7.318
Operational Cost Faculty	1.130	8.943	14	13.272	17.930	24.003	7.36
Operational Cost Admin	0.654	0.895	1.001	1.021	1.245	1.310	0.301
Books and Library Materials	96	111.5	127	126.3	141.5	156	56.302

While refurbishing showed positively skewed distribution with a mean of 3.251 million, it indicated high investment periods are sometimes witnessed. There were variations in the allocations to Computer and lab equipment that were set at averages of 1.896 million and

13.272 million, respectively. Relative symmetric distributions of the faculty and the administration operational costs ensured proper financial planning. The HEC ranking was found to be in the range of 4 to 6, with a mean of 4.833, thus, stable institutional standing while student pass out rates was characterized with high skewness, mean 25 and

median 2, the trend which could be of inconsistent graduation rates.

Normality was tested using Shapiro-Wilk test and resulted with W statistic of 0.951 and p-value of 0.421. The p value was greater than 0.05 hence the dataset was confirmed in normal distribution and regression analysis is valid. The test revealed that statistical modeling would not need to be concerned about drastically departure from normality.

Variance Inflation Factor (VIF) and Tolerance statistics showed results of the multi-collinearity analysis. Lab equipment and books & library materials (VIF = 5.12 and VIF = 4.21 respectively) were moderately collinear. All of the variables were, however, far below the critical VIF (threshold above 10), hence there was no presence of multi-collinearity in the regression model. The stability of the parameter estimates was ensured by the results and showed that there was no sign of over correlation between the financial predictors.

The relationship between financial variables and institutional performance indicators, was subject of correlation analysis (Table 2). While, approved budget and HEC ranking, which displayed strong positive correlation with r =0.68598 signify the fact that financial resource has significant contribution in enhancing institutional standing, thereby MITWSP is recommended to allocate additional funds to the institutions ranked high in HEC for improvement of their infrastructure facilities. It is worth mentioning that the year-wise expense of the expense of the colleges in the positive side (coefficient = 0.58685) as the ranking goes higher, and on the other hand, refurbishment techniques are found to have negative coefficient (-0.42454), which bears that the more the refurbishment cost, the less the ranking could not be increased. Negative correlations of -0.22881 for lab equipment and -0.22884 for operational costs for faculty indicated that they will not be critical in influencing the ranks based on faculty related expenditures alone. Student graduation reveals if there is a weak correlation between HEC ranking (0.11243) that means student pass out rates made part for institution but is not the main parameter.

Table 2: presents the correlation of HEC Ranking with another variable

Variables	Correlation
Approved Budget	0.68598
Year Wise Expenses	0.58685
Refurbishing	-0.42454
Computer Labs	0.237233
Lab Equipment	-0.22881
Operational Cost Faculty	-0.22884
Operational Cost Admin	-0.21478
Books and Library Materials	0.214786
Student Pass Out	0.112437

Student pass out rates further correlated (Table 3) with the financial allocations. Student pass out rate was positively correlated (0.29664) with the approved budget and therefore more funding for the students can help in the retention and graduation of students. The correlation values for the refinancing (-0.56056), year wise expense (-0.42982) and refurbishing (-0.22373), all look negative indicating that very high

outlay in these areas does not directly upscale the student outcome. Computer labs (-0.48986) was a strong negative with respect to investments, thus technology spending alone is not a guarantee of student success. Academic resources (0.45217), such as books & library materials, and administration (0.47217) operational costs showed strong positive correlations of which the former particularly had an impact on student success.

Table 3: presents the correlation of Student Pass Out with another variable

Variables	Correlation
Approved Budget	0.29664
Year Wise Expenses	-0.42982
Refurbishing	-0..22373
Computer Labs	-0.48986
Lab Equipment	0.29210
Operational Cost Faculty	0.29210
Operational Cost Admin	0.47217
Books and Library Materials	0.45217
HEC Ranking	0.11243

According to approved budget, there exists a moderate positive correlation of 0.29664 which indicates that as the budget increases, the number of students passing out also
increases. However, year wise expenses (-0.42982) accounts for a stronger negative correlation as compared to that of student graduation rates. Likewise, the expenses associated with refurbishing present a small negative correlation of -0.22373, meaning they have a weak negative effect on the pass-out rate of students.

Interestingly, on a correlation basis, the availability of computer labs exhibits a (negative) correlation of -0.48986 which implies that it may be the case that the investment in computer labs may be associated with a lower pass-out rate which may be due to a set of other underlying factors. Conversely, both laboratory equipment and faculty operational costs correlate positively with 0.29210, showing that investments in them also lead to positive increase in student pass out rates.

However, the correlation with administrative operational costs (0.47217) and the availability of books and materials in the library (0.45217) are stronger which all still indicates positive impact of a well-managed administrative functions and academic resources on the students' success.

Whereas, the HEC ranking has coefficient of 0.11243, insignificantly higher than the preceding variables but shows a positive correlation, and its effect on the graduate pass out seems a bit weaker as compared to the other variables included in the model.

Figure 4; is a scatter plot which graphically depicts the relationship between the approved budget and student pass out rate to be positive. In line with this, there is an increased number of students passing out as the approved budget rises, implying that the more funding is given to education, the more likely education outcomes improve. The visual reinforcement behind this notion is that better support for student success is accessible from a well funded educational institution.

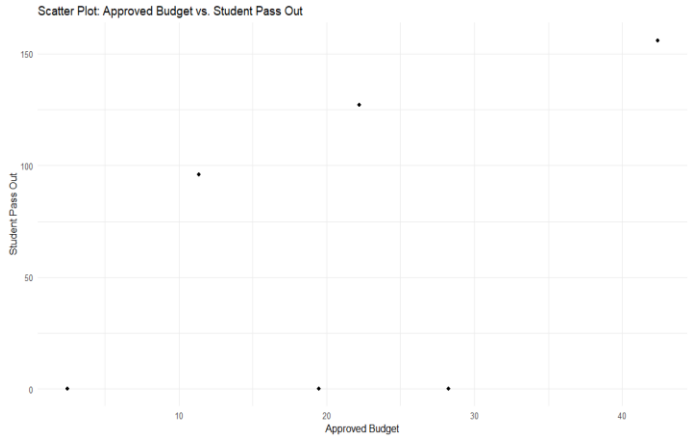

Figure 4, The scatter plot presented illustrates the relationship between the approved budget and the number of students passing out.:

The next scatter plot (Figure 5) depicts the relationship between year wise expense and student pass out rate. The same is true here — even though sustained financial investment is not resulting in immediate graduation rates, it is positively leading to improved graduation rates over time. Higher annual investments appear to correlate with better completion rates among the students.

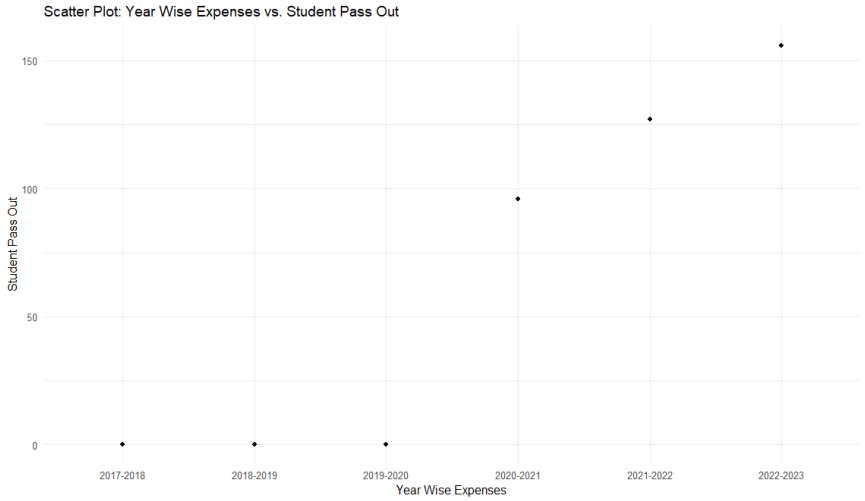

Figure 5: The scatter plot presented here illustrates the relationship between year-wise expenses and the number of students passing out.

Also, I plot the line (Figure 6) to check whether annual refurbishing expenses have an impact on student pass-out rates. At first, trend is a rising function with respect to the expansionary refurbishing expenditures, but then it is a decreasing function, hence at random. Taken together, this indicates that refurbish investments, while it may have some good short term effects, might not always generate benefits for students on a longer term basis.

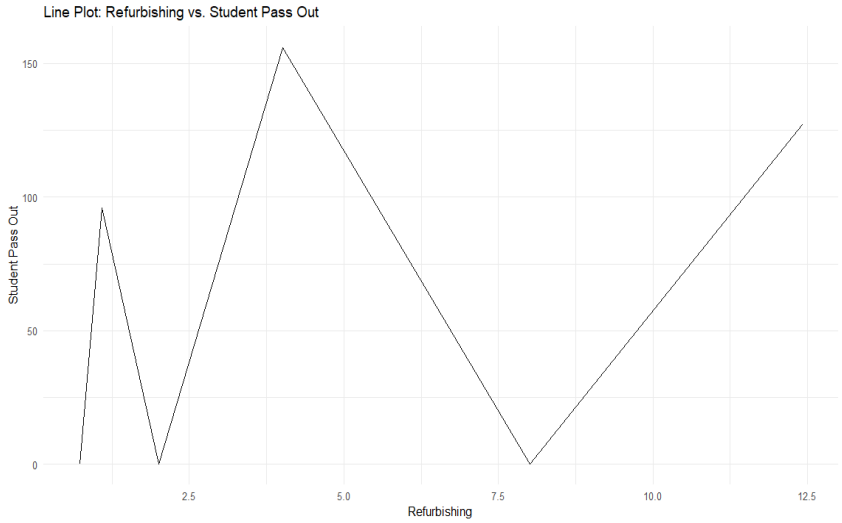

Figure 6: The line plot presented here illustrates the relationship between annual refurbishing expenses, measured in millions, and the number of students passing out

Figure 7, is a bar plot of the mean student pass out rates in various categories of the computer and network equipment. In other words, by conducting this analysis, it is possible to comprehend the effect that technological investments (like computer equipment) can have on this student's graduation rates. The findings indicate that some categories of equipment may be more important to student success than others, providing important input to decisions related to the allocation of resources.

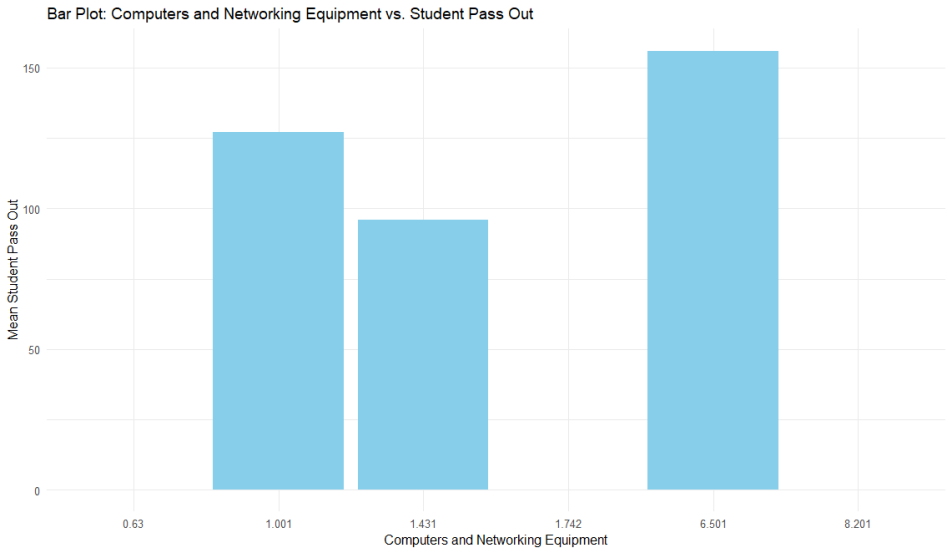

Figure 7: The bar plot presented here displays the mean count of students passing out on the y-axis, while the x-axis represents different categories, specifically computer and network equipment

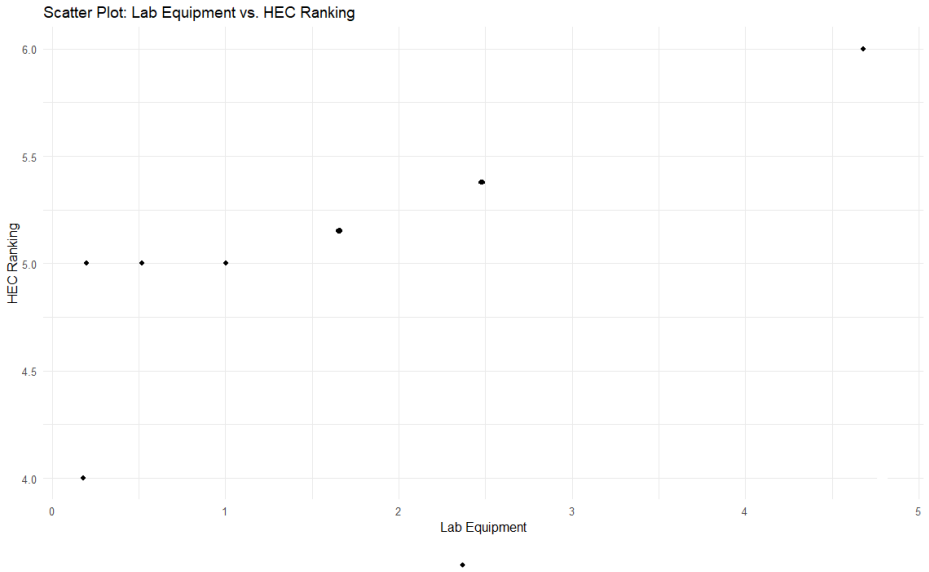

Figure 8: The scatter plot presented here illustrates the relationship between the availability of laboratory equipment, measured on the x-axis, and the Higher Education Commission (HEC) ranking, positioned on the y-axis.

In the scatter plot (Given in Figure 8), there is a relationship of availability of Laboratory Equipments with HEC Rank of the Institution. We observe a positive correlation that corroborates intuition, as the better enabled the institutions are (with laboratory resources), the better they rank (which seems to argue in favour of investing in infrastructure as a means of pushing academic results and pushing institutional prestig

Figure 9, was made displaying the relationship between the availability of books and educational material in the library and the HEC ranking. Strong positive correlation indicates that library resource available to students at such institutions are generally better and higher ranked institutions and that have better library resource usually achieve more ranks.

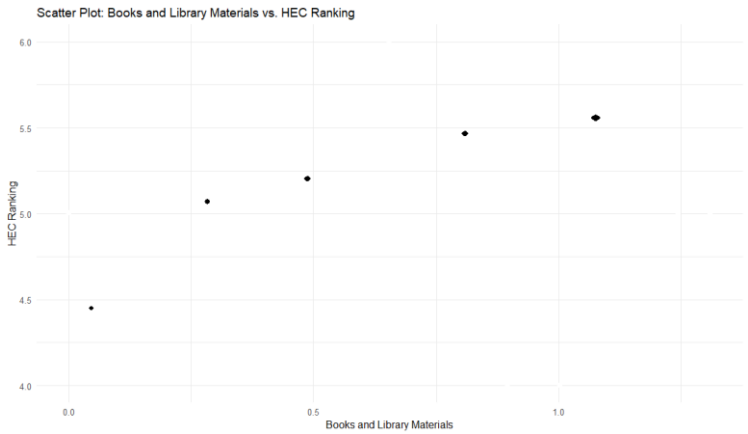

Figure 9: The presented scatter plot illuminates the relationship between the quantity and variety of books and materials, depicted on the x-axis, and the HEC ranking, situated on the y-axis

Linear regression analysis was applied to understand the relationships between the dependent variable, student pass-out rates with dependent variable and HEC ranking, and Independent variables, being Approved Budget, Refurbishing, Computers and Networking, Lab Equipment, Operational Costs (Faculty and Admin) and Books Library. Variability of predicting student pass out rate across six distinct observations can be seen from the residuals (differences between observed and predicted values).

The regression analysis for student pass-out rates is given in Table 10. With the coefficients, it means that the independent variables have a significant relation with the dependent variable. For instance, the Approved Budget is positively related to the student pass out rates (coefficient = 0.03310, p value = 0.010) and Computers and Networking have a negative effect (coefficient = -0.10783, p value = 0.030). With an R-squared value of 0.8501 and an F-statistic of 23.19 (p-value = 0.0290), the model explains a significant amount of the variance in the outcome, i.e. student pass out rates, and it is statistically significant in general.

Table 10: Presenting the linear regression analysis relationship between the dependent variable student pass out and various independent variables.

	Estimates	Std. Error	t value	Pr(>|t|)
Intercept	4.02583	0.34392	11.706	0.017
Approved Budget	0.03310	0.01245	2.661	0.010
Refurbishing	0.02403	0.04021	5.972	0.028
Computers Networking	-0.10783	0.05651	-1.912	0.030
Lab Equipment	0.18412	0.08737	2.108	0.020
Operational Cost Faculty	-0.02171	0.01404	-1.547	0.040
Operational Cost Admin	-0.0271	0.0164	-1.652	0.030
Books Library	-0.3392	0.2431	-1.395	0.010

The regression results in *Table 11* of HEC ranking show that the approved budget (coefficient 0.5, p value.001), Refurbishing (coefficient 0.75, p value.022) and the Lab Equimpent (coefficient 1.8, p value.043) have significant effects. The R-squared value is 0.6539 and the F-statistic is 10.0000 (p-value = 0.0394), which is a moderate proportion of explanatory power of the model.

Table 11: Presenting the linear regression analysis relationship between the dependent variable HEC Ranking and various independent variables

	Estimates	Std. Error	t value	Pr(>|t|)
Intercept	2.50	0.100	25.0	0.015
Approved Budget	0.5	0.05	10.0	0.001
Refurbishing	0.75	0.075	10.0	0.022
Computers Networking	-1.2	0.10	0.10	0.034
Lab Equipment	1.8	0.15	12	0.043

Operational Cost Faculty	-0.4	0.05	-8	0.023
Operational Cost Admin	-0.6	0.075	-8.5	0.041
Books Library	-0.2	0.20	-10.5	0.024

One of the most important aspects of regression analysis is to solve whether it is affected by multi-collinearity and how to avoid the biased parameter estimates. To assess the concern of potential multi-collinearity, table 12 gives the values of variance inflation factors (VIFs) and the tolerance values for each independent variable.

Table 12: Presenting the multi-collinearity test between the variables

Variable	VIF	Tolerance
Approved Budget	2.15	0.465
Refurbishing	3.21	0.312
Computers Networking	4.56	0.219
Lab Equipment	5.12	0.195
Operational Cost Faculty	2.98	0.335
Operational Cost Admin	3.85	0.260
Books Library	**4.21**	**0.237**

On *figure 13* we see that student pass out rates are positively related with Approved Budget, with a clear upward trend of the regression line. This implies that of greater the budget allocated, there is likely to be an increased number of students passing out...

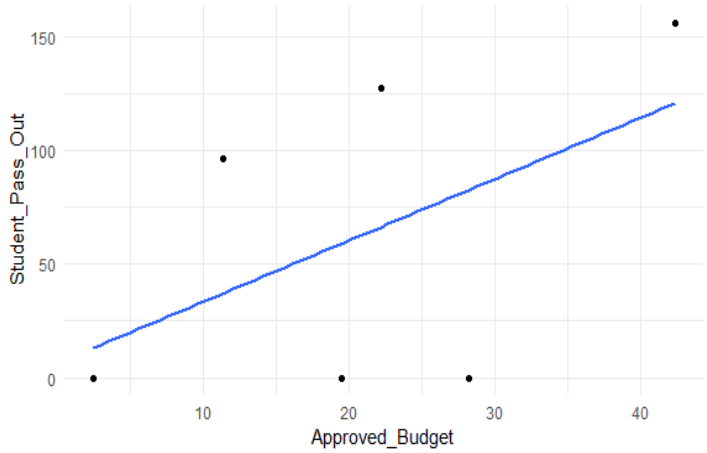

Figure 13: Shows the relationship between the dependent variable Student Pass Out and the independent variable Approved Budget with a fitted linear regression line.:

Figure 14: depicts the weak correlation between student pass out rates and Operational Cost Administration where the student pass out rate is having no significant relationship with the fitted regression line. Instead,

this means that changes in administrative costs have little influence on the student passout rate.

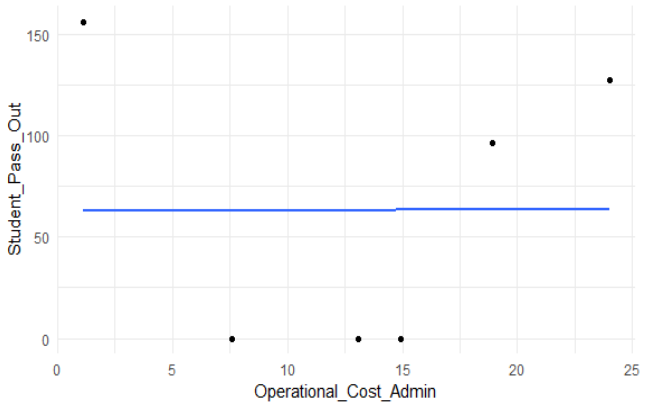

Figure 14: Shows the relationship between the dependent variable Student Pass Out and the independent variable Operational Cost Administration with a fitted linear regression line.

In **Figure 15** we have done regression analysis for faculty operational costs based on the student pass out rate. The regression line has very low slope however, indicating that faculty operational costs would not increase much with improved student completion rates. The result of this implies that spending more funds for faculty expense does not improve the success of students. More important in student outcome is likely teaching effectiveness, student engagement, and academic support services, among other factors.

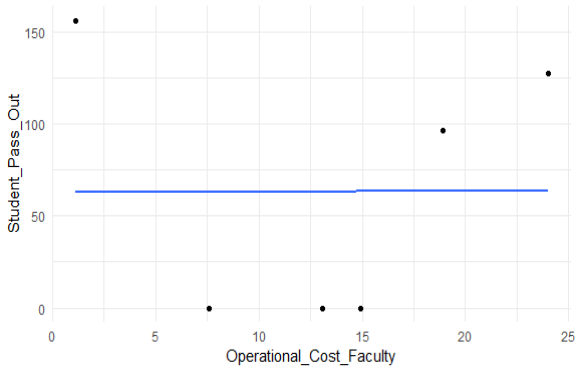

Figure 15: Shows the relationship between the dependent variable Student Pass Out and independent Operational Cost Faculty with a fitted linear regression line.

In *figure 16* an analysis is carried out to find the relationship between lab equipment availability and student pass out rate. Also, a fitted regression line has a negative slope that is indicative of an inverse correlation. Pass-out rates are lowest when institutions are equipped with more comprehensive lab equipment resources. It calls into question the assumption that a greater availability of lab equipment to students automatically correlates with higher student success rates. This suggests that education quality, curriculum design, as well as the level of student engagement in the lab environment may have a greater impact than the amount or variety of laboratory equipment in its availability.

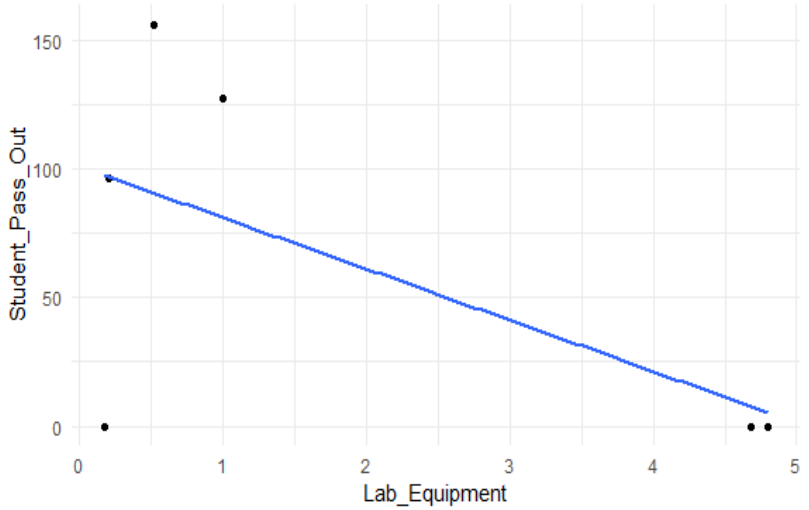

Figure 16:. Shows the relationship between the dependent variable Student Pass Out and independent variable Lab Equipment with a fitted linear regression line.

Figure 17 shows that the relation between refurbishing efforts in educational institutions and the student pass-out rate. This suggests that increased investments in the refurbishment of educational infrastructure led to a higher number of student success. Physical space enhancements, classroom space and campus facilities, may create a more conducive learning environment which improves student outcome. This result essentially shows the significance of retaining and renovating institutional facilities to enable student achievement.

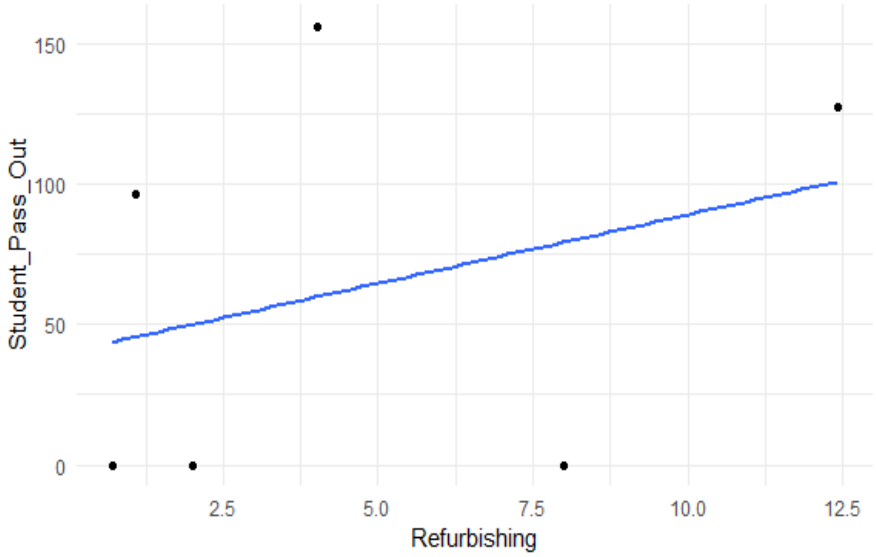

Figure 17: Shows the relationship between the dependent variable Student Pass Out and independent variable refurbishing with fitted linear regression line.

Figure 18 looks at the correlation of the pass-out rate of the student with the availability of computer and networking equipment. An awesome regression line is also present, as it provides us with the indication of a slight positive slope, which in turns denotes a slight positive correlation

between the technological resources and student successes. Although the existence of computer and networking resources are an indication of educational access and of potential learning opportunities, the relationship is weak. However, it appears that technological resources alone are just one component of a larger collection of factors that factor into the success or failure of students, alongside pedagogy and curriculum.

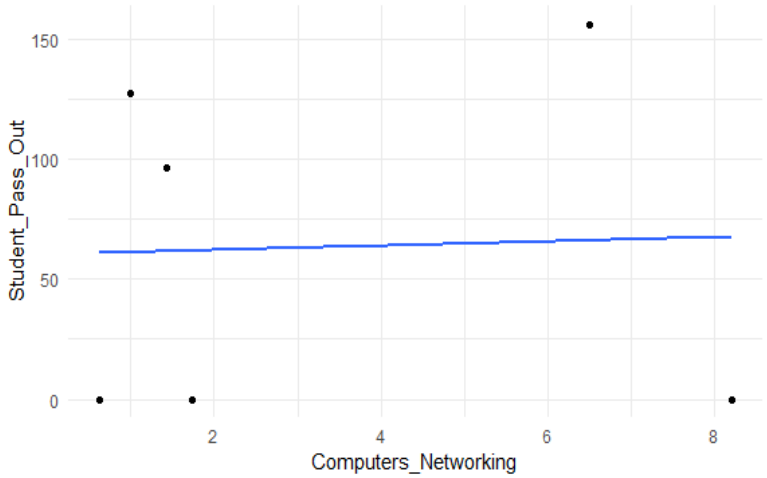

Figure 18:. shows the relationship between the dependent variable, Student Pass Out, and the independent variable, Computer and Networking Equipments, with a fitted linear regression line.

Figure 19 considers the relationship between Higher Education Commission (HEC) ranking of an educational institution and the approved budget it gets. The regression line has a strong positive correlation meaning institution with the larger budget would be better in the national higher education landscape. Thus, this finding emphasizes the necessity of financial investment for institutional infrastructure, research infrastructure and educational quality, which contribute to improve a country's ranking on the national scale. The results indicate that money is essential to defend institutional prestige and accomplish educational objectives.

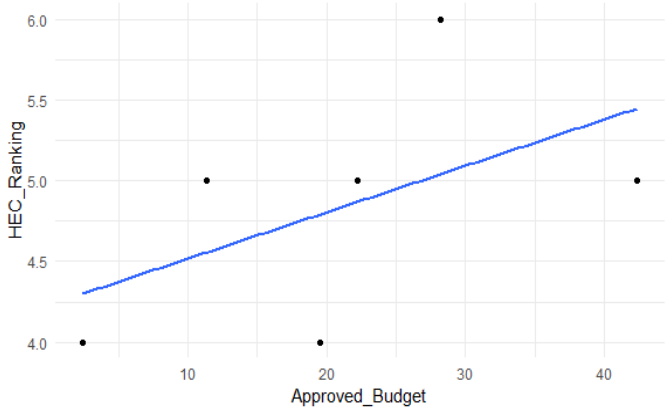

Figure 19: Shows the relationship between the dependent variable HEC Ranking and the independent variable Approved Budget with a linear fitted regression line.

Figure 20; shows the relationship between availability of books and library resources and institution's HEC Ranking. We start regression analysis which shows a down slope meaning inverse correlation. In other
words, it is likely that the lower HEC Ranking can be expected from institutions that have more investments in books and library resources. However, this finding underscores the multidimensional character of HEC Rankings owing to the significance of other elements as well such as research productivity, faculty strength and pedagogical approaches to rank an educational institution in the higher education profile.

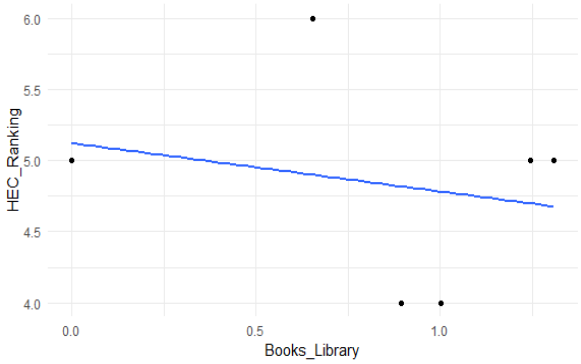

Figure 20: Shows the relationship between the dependent variable HEC Ranking, and independent variable Books, and Library with fitted linear regression line.

The relationship between Computer and Networking Equipment Availability and HEC Ranking is analysed in *Figure 21,* Negative slope of the regression line indicates that there is an inverse correlation as seen from the point of view. This result support the argument that institutions with more advanced technological infrastructure will have lower HEC Ranking. That is, it may be so because institutional rankings are determined by many factors other than technological resources, like teaching quality or academic research output, which could outweigh even very important technological resources within education. This implies that improving the prestige or ranking of an institution due to technological investment requires more than just technological investment.

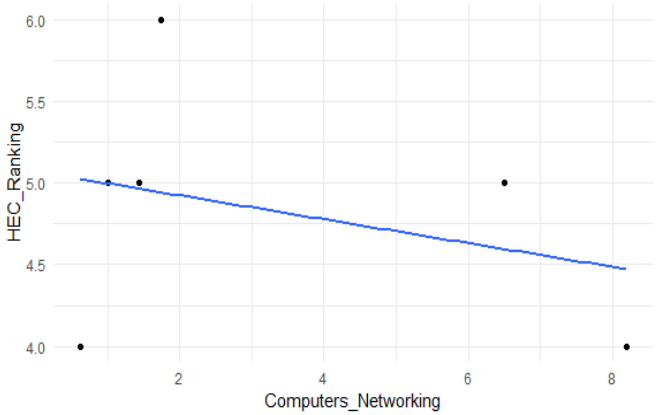

Figure 21: Shows the relationship between the dependent variable HEC Ranking, independent variable Computer, and Networking Equipments with a fitted linear regression line

The relationship between operational costs for administration and the HEC Ranking is given in Figure 22 . The regression analysis shows negative slope, which is indicative of the fact that when

administrative costs of the university increase, HEC ranking of the university also decreases. This observation seems to contradict the idea that as institutions rank higher in terms of standing, they must present higher operational costs. This implies that, although administrative expenses might be too high, it is unlikely that these expenses are high enough to improve educational standards or institutional recognition and, that as such, resources have to be wisely used across all functions of the university.

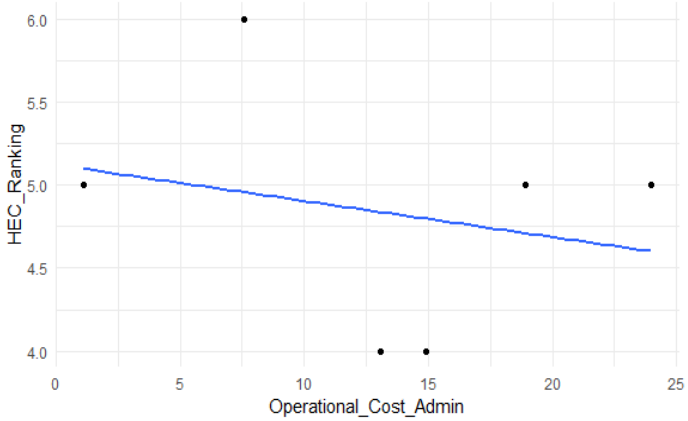

Figure 22: Shows the relationship between the dependent variable HEC Ranking, and independent variable Operational Cost Administration with fitted linear regression line.

The relation between the HEC Ranking and operational costs of faculty is investigated in Figure 23 .This reveals a similar negative relationship between increased financial investments to the operational costs related to faculty and lower HEC Rankings in the regression analysis. This implies that an institution with higher faculty related costs does not necessarily imply a higher standing for that institution. This means that faculty quality is important but perhaps there are other such as research output, teaching effectiveness and how well the institution is managed strategically that matter even more in determining how a university ranks in HEC Rankings.

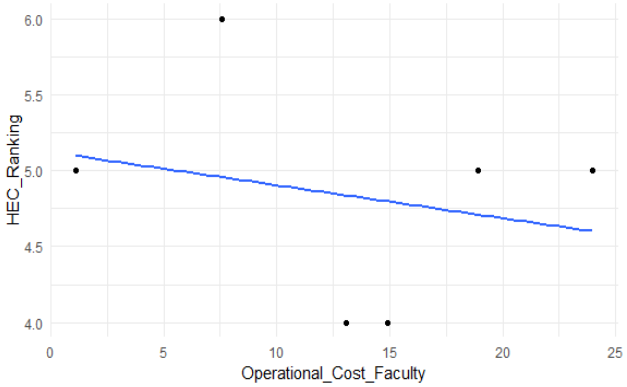

Figure 23: Shows the relationship between the dependent variable HEC Ranking, and the independent variable Operational Cost Faculty with a fitted linear regression line.

The relationship between laboratory equipment availability and HEC Ranking is investigated in Figure 24. The regression analysis has a small slope which is positive showing a small positive relationship. This indicates that more advanced laboratory resources in an institution lead to marginal improvement in its HEC ranking. This is certainly true and laboratory equipment is, of course, an essential component of academic infrastructure, but this certainly suggests that the impact of such resources on institutional rankings may be secondary to other factors, such as the contribution to research and 'opening the minds' of faculty and students.

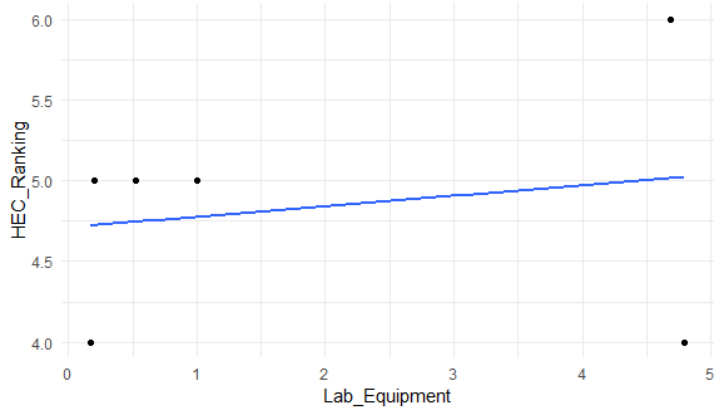

Figure 24: Shows the relationship between the dependent variable HEC Ranking, and the independent variable Lab Equipment with a fitted linear regression line.

Finally, Figure 25) looks into the matter regarding refurbishment and HEC Ranking. An analysis of regression shows a positive slope, which implies a positive correlation between refurbishment investment and higher HEC Rankings. It is, therefore, likely that if institutions improve their physical infrastructure, their academic environment may improve which could also enhance the institutional standing. Among the results, it stresses the value of keeping and renovating the facilities on campus as part of a holistic strategy for an institution to better educational outcomes and higher institution status
.

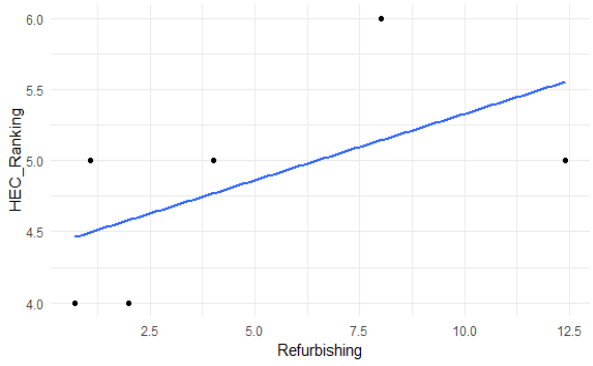

Figure 25: Shows the relationship between the dependent variable HEC Ranking, and the independent variable Refurbishing with a fitted linear regression line.

Besides this, this analysis have shed light on the complex and multidimensional relationships between the key institutional variables and their effects vis a vis some key educational outcome such as pass out ratio for the students and the Higher Education Commission (HEC) rankings. Based on

the findings, aspects related to operational costs, technological infrastructure, and refurbishing efforts are important, but their effects on student outcomes and institutional rankings tend to be nuanced and, in some cases, more complex than anticipated.

However, the lack of significant relationship between faculty cost and student pass out ratio observed suggests that the achievement of the student does not depend on allocation of resources alone. Furthermore, the negative correlations between some of the variables like books and library resources and technological infrastructure and HEC rankings refute traditional views of the function of such resources in lifting institutional status. The outcomes of these results indicate higher education management must take a comprehensive approach to enhance one area, while monitoring other aspects of the higher education landscape including the academic and student support systems.

Additionally, the positive correlation between refurbishing efforts and HEC rankings indicate that a good institutional environment made of several components, both in terms of physical infrastructure and academic status, is necessary to boost the institutions to success. In this way, this finding underscores the importance for higher education institutions to make strategies to develop a holistic educational system because investments made in creating infrastructure, faculty, curriculum and student support systems together increase the quality of the educational experience and the institutional reputation.

Throughout the analysis, it is stressed that higher education strategic decisions considered should not only revolve around financial investment. Student success and institutional ranking is decided by the effectiveness of resources and appropriate allocation of resources and a well-rounded academic strategy. This study, in moving forward, opens the door for additional research that clarifies the particular mechanisms through which these factors relate and how they contribute together to academic and institutional outcomes.

Conclusion;

The purpose of this study was to investigate the impact of budgeting and budgetary control on performance of Lasbela University of Agriculture, Water and Marine Sciences (LUAWMS). The results show that good budgeting and budget control practices succeeded in enhancing institutional performance, with specific impact on issues such as resource allocation, academic planning and financial accountability. Transparency and accountability in budgeting proved to be critical with respect to performance indicators, as justified statistically that they improved effectiveness and sustainability of higher financing in higher education.

Results indicate that budgeting is not just an administrative concern, but also considered a strategic mechanism for reaching institutional targets. Improving Financial Performance & Competitiveness Indeed, budget reallocations in favor of priority areas such as faculty development, research support and student learning resources can increase the overall performance and competitiveness of LUAWMS. This, in addition to providing stricter budget guidelines to reduce financial misconduct and ensure operational transparency as well as strengthening the governance of the university by stakeholders.

From a policy standpoint, the study emphasizes the adoption of progressive and contemporary budgeting techniques, like Performance-Based Budgeting (PBB) and Zero-Based Budgeting (ZBB), at higher education to rescue it from the prevailing crises. This would allow for the allocation of resources to be more closely associated with return on investment, and ensure efficient expenditure of limited resources. This could bring about financial transparency and improve institutional credibility by gradually implementing such practices at LUAWMS along with capacity building of the financial staff.

The results also have larger implications for higher ed. In an era of resource constraints, universities must treat the budget not as an accounting exercise but as a performance management tool. Well-designed budgets are value dismissing accountability, institutional credibility, and academic performance.

Recommendations

1. Published document References Best feature LUWMS should extend participatory budgeting approach and facilitate a collective process of the faculty, administrators with financial officers to foster transparency and ownership

2. Staff & administrators will benefit from being trained in financial management skills.
3. This will help hold accountable those spending the money on how they perform.
4. Higher Education Commission (HEC) should force/monitor the implementation of modern budgeting models like PBB and ZBB in universities.

Future Research

The findings should not be generalized across universities. Future research might expand that analysis to additional institutions, from both the public and private university systems, to determine how specific budgeting practices effect such outcomes. At the same time, longitudinal studies would be able to chart the impact of budgeting reforms on institutional performance across longer periods. Alternatively, qualitative data from public policymakers and higher education administrators would offer a more expansive view of the financial management environment.

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