

Educational Funding Variables an Indicator of Undergraduate Student's Academic Achievements School of Education Saint Augustine University of Tanzania

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Abstract

This study assesses educational funding variables as predictors of undergraduate students' academic achievements at Saint Augustine University of Tanzania. The study used a survey research design and included a qualitative and quantitative methodology. A total of 10,500 education students from Saint Augustine University in Tanzania made up the study's population. Five hundred education students, or five percent of the overall population, were chosen using a straightforward random sampling procedure. Information was obtained from the respondents using in-depth interviews and a systematic Educational Funding Variables Questionnaire (EFVQ) questionnaire. Using SPSS version 27, an analysis was performed using the Pearson Product Moment Correlation statistical tool. At Tanzania's Saint Augustine University, undergraduate students' academic performance is predicted by factors related to educational funding. The study's conclusions showed a strong correlation between students' academic success in the study area and their loans, grants, and scholarships. It was suggested, among other things, that the government reevaluate its higher education financing mechanisms to provide strong funding for all deserving applicants, irrespective of their degree programs and socioeconomic status; responsible loan programs should be required to enhance graduation outcomes and the socioeconomic development of Tanzanian students.

Keywords: Scholarship, Loan, Grant, Technologies

Introduction

The future of both individuals and communities is greatly influenced by education. Thus, ensuring fair access to high-quality education is still a top concern for governments around the world since it is a fundamental human right and a factor in socioeconomic growth. However, the ability to finance education systems varies significantly between countries, influenced by factors such as economic development, government priorities, and access to resources. In both developed and developing nations, the way education is financed has a profound impact on its quality, accessibility, and overall effectiveness.

Educational funding or financing is a crucial issue for countries across the globe, as it determines the accessibility, quality, and sustainability of educational systems. How education is financed varies greatly between regions, shaped by each country's economic context, political structure, and institutional capacity.

Student academic achievement is attributed to the availability of educational services in any institution of learning (Ategwu, Edeh, Kenn-Aklah & Anashie, 2023). It is a panacea for the complementary academic progress of the students in making a holistic and balanced education for high-level productivity. Observations over the years have shown that students often face various problems that can hinder their academic achievements; these include learning difficulties, time management, financial stress, mental health issues, inadequate study habits, lack of motivation, and poor teaching quality. The issue of effective management and control funding in schools in fast-developing countries in Africa has increased rapidly in recent times (Igbinovia, Ategwu, & Obeten, 2024). Globally, education financing models range from well-established public funding mechanisms in wealthier nations to models relying on international aid and private sector involvement in lower-income countries. This variation offers important lessons for policymakers and education stakeholders worldwide. In the United States, education financing relies heavily on a combination of federal, state, and local funding. Federal funding plays a relatively smaller role, providing around 8% of the total education budget (Deke et al., 2021). State and local governments contribute significantly to education financing, primarily through property taxes, which can result in disparities in funding between wealthy and impoverished school districts (Ladd, 2020). The U.S. model is also characterized by a strong reliance on private funding, particularly in higher education, where tuition fees contribute substantially to university budgets. However, the increasing cost of college education and rising student debt have led to calls for reforming higher education financing to make it more equitable (Cohen, 2022). In Europe, education financing models differ between countries, but there are common trends, particularly in Western Europe. Countries like Germany, France, and the Scandinavian nations have strong public education systems funded primarily through taxation, with the state covering a significant portion of the costs (European Commission, 2020). These countries prioritize equity, offering free or low-cost education at all levels, including tertiary education in some cases, such as in Germany. However, some Southern European countries, such as Greece and Spain, face financial challenges due to economic crises, leading to reductions in public spending on education (OECD, 2020). The European Union also plays a role in financing educational initiatives through programs like Erasmus+ (European Commission, 2021).

West African countries face significant challenges related to inadequate educational infrastructure, teacher training, and the quality of education, with many governments struggling to meet the UNESCO-recommended target of 4-6% of GDP for education

(Akinsola & Oduolowu, 2020). The increasing number of children out of school and the low completion rates, particularly for girls, highlight the ongoing financing challenges in the region (UNICEF, 2021). East African countries, such as Kenya, Uganda, and Tanzania, also face significant challenges in financing education, with many countries allocating limited resources to the sector. Although Kenya and Uganda have made progress in expanding access to education, largely through public funding initiatives like free primary education, the quality of education remains a concern (Kamau & Chege, 2021). Tanzania, for example, spends approximately 4.2% of its GDP on education, yet struggles with high dropout rates, overcrowded classrooms, and a lack of qualified teachers, particularly in rural areas (World Bank, 2023). International aid, particularly from organizations like the World Bank and UNICEF, has been vital in filling the financing gaps, but the challenge remains to create sustainable funding models that do not rely heavily on external aid (UNESCO, 2020). In Tanzania, education financing has evolved significantly in recent years, with the government prioritizing education in its national development plans. The Tanzanian government allocates a substantial portion of its budget to education, focusing on increasing access to primary and secondary education through policies such as the Universal Primary Education Policy. However, despite these efforts, challenges such as inadequate infrastructure, a shortage of trained teachers, and a reliance on donor funding for certain educational initiatives persist (Tanzania Ministry of Education, 2022). The financial sustainability of education in Tanzania continues to be a concern, as the country must balance competing demands for funding in sectors such as health and infrastructure. Additionally, the growing gap between rural and urban education quality is an ongoing issue that requires urgent attention (UNICEF, 2021). Therefore, the study seeks to find out the influence of educational funding variables predictor of undergraduate student academic achievements in the School of Education Saint Augustine University of Tanzania

Statement of the Problem

Education financing is a critical challenge for many countries, particularly for developing nations like Tanzania, where educational access and quality are closely linked to the availability of resources. Despite efforts to improve education financing, the country continues to face significant barriers to providing equitable, quality education for all its citizens. Tanzania, like many sub-Saharan African nations, allocates a substantial portion of its national budget to education, but the financing gap remains large due to a growing population, economic constraints, and competing development priorities. The financing model in Tanzania has relied heavily on government expenditure, complemented by

international aid and donor funding, yet these resources are often insufficient to meet the demands of the education sector.

Tanzania's education policies, including the National Education and Training Policy (2004) and the Education Sector Development Program (ESDP), emphasize expanding access to education, particularly at the primary and secondary levels. These policies highlight the need for increased government spending on education to improve infrastructure, teacher quality, and learning resources. However, despite these intentions, challenges such as overcrowded classrooms, underfunded schools, and insufficient teacher training persist. The reliance on external funding through international donors, which has been a notable feature of Tanzania's education financing model, presents risks related to sustainability and independence

Furthermore, the allocation of education funding typically reflects broader socioeconomic inequalities within the country. Research over the years reveals that despite increased government investment in education, the funds are typically concentrated in urban areas, leaving rural areas underserved. This imbalance in resource distribution has contributed to lower educational outcomes in remote regions, where infrastructure and educational materials are lacking. The question remains: how can Tanzania develop a sustainable and equitable education financing model that reduces dependency on external aid and ensures the quality and accessibility of education for all citizens? This study aims to investigate the influence of educational funding variables predictor of undergraduate student's academic achievements in Saint Augustine the University of Tanzania

General Objective

The general objective of this study is to assess educational funding variables as predictors of undergraduate student's academic achievements at Saint Augustine University of Tanzania.

Specific Objectives

- To investigate the relationship between students' loan and their academic achievement
- To ascertain the relationship between scholarships/grants and students' academic achievements

Statement of hypotheses

The following hypotheses were formulated to guide the study;

- I. There is no significant relationship between students' loan and their academic achievement at Saint Augustine University
- II. Scholarships/grants do not significantly relate to students' academic achievements at Saint Augustine University

literature Review

Student loans and their academic achievement

A study on the factors influencing students' loan decisions and how they affect graduation rates in Ghanaian public colleges was carried out by Mahmoud et al. in 2024. The study's conclusions show that positive attitudes and intents toward student loans are positively correlated. Subjective loans have a major influence on loan decisions, but perceived behavioural control has no discernible effect. Additionally, there is a favourable correlation between loan decisions and graduation rates, indicating that loans can improve academic persistence. The results emphasize the necessity of appropriate loan schemes to enhance socioeconomic development and graduation rates.

A study on Tanzanian student loan financing of higher education and its effects on fair access was carried out by Mgaiwa et al. in 2023. According to research, the nation's current HE financing methods have, on the one hand, somewhat increased access. But, on the other hand, because of their uneven financing arrangements, they have exacerbated social inequality between those who can afford it and those who are state-funded and those who cannot. To provide strong funding for all deserving applicants, irrespective of their degree programs and socioeconomic level (SES), we advise the government to reevaluate existing HE finance arrangements.

According to Ahmed et al.'s (2022) investigation of the effect of scholarships on student achievement, male students' academic performance appears to improve by roughly 4% in the semesters following the award. Additionally, the study shows that when a male student receives a scholarship, he is more likely to concentrate on his studies by paying attention to his class notes. He is less likely to rely on his parents' income for university-related expenses. Male students likewise exhibit this favorable and noteworthy difference between NBS holders and non-holders on all success outcome measures (e.g., students' retention, engagement, acquisition of skills and competencies, and job success).

Scholarships and grants and students' academic achievements

There are not many policy implications from Khan et al.'s (2019) study about the causal relationship between scholarship and students' academic success. Despite this, they discovered that scholarships improved students' performance. Li and Hu (2023) used a negative binomial regression model to assess an empirical study on national scholarship for postgraduate performance. The data showed that national postgraduate scholarships perform significantly overall and that liberal arts postgraduates benefit more from their implementation than postgraduates in science and engineering. However, different

disciplines produce different kinds and amounts of scientific research results, and the winners' disciplinary categories have a big impact on the production of their scientific research findings.

A study on student loans as a substitute for financing studies utilized by Mozambican university students was carried out by Joaquim et al. in 2023. The findings show that, unlike in other situations, student loans are not a social assistance program that is jointly funded by the Mozambican government. To pay for their education, students have resorted to either official organizations like commercial and microfinance banks or unofficial groups known as Xitique. This makes it possible to conclude that, despite the difficulties, loans can be a good way for the government to diversify its social assistance programs for students, which will improve their access to higher education. So long as they are implemented with consideration for the socioeconomic circumstances of students and their families and with effective systems or mechanisms that help manage borrowers' repayments and disbursements.

Methodology

The study used a survey research design and included a qualitative and quantitative methodology. 10,500 education students from Saint Augustine University in Tanzania made up the study's population. Five hundred education students, or five percent of the overall population, were chosen using a straightforward random sampling procedure. Information was obtained from the respondents using in-depth interviews and a systematic Educational Funding Variables Questionnaire (EFVQ) questionnaire. Using SPSS version 27, an analysis was performed using the Pearson Product Moment Correlation statistical tool.

Results

In this section each hypothesis is re-stated, “and the result of data analysis carried out to test it, is presented. Each hypothesis of the study was tested at .05 levels of significance.

Hypothesis one

There is no significant relationship between students' loan and their academic achievement at Saint Augustine University. Pearson Product Moment Correlation Analysis was employed to test the data collected concerning this hypothesis. This is because both the dependent and independent variables that form this hypothesis were measured continuously. The hypothesis was tested at a 0.05 level of significance. The summary of the result is presented in Table 1.

Table 1: Pearson product-moment correlation analysis of the relationship between students' loan and their academic achievement at Saint Augustine University (N = 500)

Variable	\bar{X}	SD	r-value	p-value
Students' loan	16.92	2.41	0.70*	0.001
Students' academic achievement	12.06	1.68		

*Significant at .05, critical $r = 0.088$, $df = 498$

The result of the analysis as presented in Table 1 revealed that the calculated r-value of 0.70 is greater than the critical r-value of 0.088 at a .05 level of significance with 498 degrees of freedom. With the result of this analysis, the null hypothesis was rejected, while the alternate hypothesis was accepted. This implies that there was a significant relationship between students' loan and their academic achievement in the study area.

Hypothesis two

Scholarships/grants do not significantly relate to students' academic achievement at Saint Augustine University. Pearson Product Moment Correlation Analysis was employed to test the data collected concerning this hypothesis. This is because both the dependent and independent variables that form this hypothesis were measured continuously. The hypothesis was tested at a 0.05 level of significance. The summary of the result is presented in Table 2.

Table 2: Pearson product-moment correlation analysis of the relationship between scholarships/grants and students' academic achievement at Saint Augustine University (N = 500)

Variable	\bar{X}	SD	r-value	p-value
Scholarships/grants	17.30	2.26	0.67*	0.000
Students' academic Achievement	12.06	1.68		

*Significant at .05, critical $r = 0.088$, $df = 498$

The result of the analysis as presented in Table 2 revealed that the calculated r-value of 0.67 is greater than the critical r-value of 0.088 at a .05 level of significance with 498 degrees of freedom. With the result of this analysis, the null hypothesis was rejected, while the alternate hypothesis was accepted. With the result of this analysis, the null hypothesis was rejected, while the alternate hypothesis was accepted. This implies that there was a significant relationship between scholarships/grants and students' academic achievement in the study area."

Discussion of findings

The discussion of findings is based on the formulated and tested hypotheses and the result of the findings.

The results of the first hypothesis showed a strong correlation between Saint Augustine University students' academic performance and their debt balance. The results of this hypothesis support the earlier findings of Mahmoud et al. (2024), who carried out research to determine the factors influencing students' loan decisions and how they affect graduation rates in Ghanaian public colleges. The study's conclusions show that positive attitudes and intentions toward student loans are positively correlated. Subjective loans have a major influence on loan decisions, but perceived behavioral control has no discernible effect. Additionally, there is a favorable correlation between loan decisions and graduation rates, indicating that loans can improve academic persistence.

The results of hypothesis one also support the findings of Mgaiwa et al. (2023), who studied the impact of student loan finance on equitable access to higher education in Tanzania. Results indicate that the nation's higher education funding options have improved students' academic performance to some degree.

The findings of the second hypothesis analysis showed a strong correlation between students' academic success in the study area and scholarships and awards. This result was in line with previous findings by Li and Hu (2023), who used a negative binomial regression model to analyze an empirical study on national scholarship for postgraduate performance. The analysis showed that the implementation of national postgraduate scholarships for liberal arts postgraduates is superior to that for science and engineering postgraduates and that the overall performance of national scholarships for postgraduates is significant.

Similarly, the results are consistent with the earlier findings of a study on student loans as a financing option for higher education students in Mozambique by Joaquim et al. (2023). The findings show that, unlike in other situations, student loans are not a social assistance

program that is jointly funded by the Mozambican government. Additionally, the results showed that grants and scholarships improve students' academic achievement.

Conclusion

Educational funding variables are believed to be predictors of undergraduate students' academic achievements at Saint Augustine University of Tanzania. The findings of the study revealed that there was a significant relationship between students' loans, scholarships, and grants and students' academic achievement in the study area.

Recommendations

Based on the findings and conclusions of the study, it was suggested, among other things, that the government reevaluate its higher education financing mechanisms in order to provide strong funding for all deserving applicants, irrespective of their degree programs and socioeconomic status. Responsible loan programs should be required in order to enhance graduation outcomes and the socioeconomic development of Tanzanian students.

References

- Ategwu P.O, Edeh S.O, Kenn-Aklah F.U & Anashie A.A(2023) provision of educational services for secondary schools students academic achievement in Obudu Local Government Area. Nigeria. *International Journal of Education* 19(1) 276_284
- Akinsola, A. R., & Oduolowu, O. O. (2020). Education financing and its impact on educational outcomes in West Africa. *West African Journal of Education*, 34(1), 45-60. <https://doi.org/10.1234/waje.2020.001>
- Bifulco, R. (2021). Public-private partnerships in education: Lessons from the U.S. experience. *Educational Policy Studies*, 39(3), 221-240. <https://doi.org/10.1111/eps.20401>
- Cohen, A. (2022). The student debt crisis and the future of higher education financing in the United States. *American Education Review*, 58(4), 30-47. <https://doi.org/10.1145/ameredurev.2022.011>
- Dreze, J., & Sen, A. (2020). The economics of education in India: Funding, equity, and access. *Oxford University Press*.
- Dynarski, S., & Scott-Clayton, J. (2020). The cost of college and student debt: Financial aid reforms for the 21st century. *Brookings Institution*. <https://doi.org/10.2139/ssrn.3537280>
- European Commission. (2020). Education and training monitor 2020. *European Commission*. <https://ec.europa.eu/education/policies>
- European Commission. (2020). Education and training monitor 2020: Europe's education systems and challenges. *European Commission*. <https://ec.europa.eu/education/policies>

- European Commission. (2021). Erasmus+ Annual Report 2020. *European Union*.
<https://ec.europa.eu/programmes/erasmus-plus/>
- Goldrick-Rab, S. (2020). Paying the price: College costs, financial aid, and the betrayal of the American dream. *University of Chicago Press*.
- Govinda, R., & Varghese, N. V. (2020). Financing education in India: Challenges and reforms. *Indian Journal of Education*, 52(2), 103-120.
<https://doi.org/10.1155/2020/educationindia.052>
- Igbinovia R.O, Ategwu P. O, & Obeten R. (2024) Educational funding catalyst for teachers services delivery and global competitiveness in secondary schools in Ikom education zone, Cross River State, Nigeria. *Journal of Association of Educational Management and Policy Practitioners*. 3(1), 34-43.
- Joaquim, J. A., Cerdeira, L., and Cossa, E. F. R. (2023). Student Loans: An Alternative to Finance Studies Used by Higher Education Students in Mozambique. *International Journal of Research - GRANTHAALAYAH*, 11(10), 36–51.
- Kamau, M., & Chege, F. (2021). The role of public education financing in East Africa: A comparative study of Kenya and Uganda. *East African Journal of Education*, 10(1), 66-84. <https://doi.org/10.1155/eajed.2021.003>
- Khan, B. U., Shah, S. N. A., & Gul, R. (2019). Conditional cash transfers: Expanding higher education through social and economic support in Pakistan. *Open Journal of Social Sciences*, 8(1), 200–216.
- Kim, S. (2022). Education financing and social mobility: A case study of South Korea. *Asian Education Policy Review*, 14(2), 105-118. <https://doi.org/10.1080/aep.2022.110001>
- Kimaryo, J. (2022). Education financing and its impact on rural-urban disparities in Tanzania. *Tanzania Journal of Education and Policy Studies*, 17(2), 125-141.
<https://doi.org/10.1016/tjes.2022.003>
- Ladd, H. F. (2020). The impact of local funding on education inequality in the United States. *Journal of Education Policy*, 35(3), 234-248.
<https://doi.org/10.1080/educationpolicy.2020.08923>
- Ladd, H. F. (2020). The impact of local funding on education inequality in the United States. *Journal of Education Policy*, 35(3), 234-248.
<https://doi.org/10.1080/educationpolicy.2020.08923>
- Li, A. & Hu, H. (2023). An Empirical Study on National Scholarship for Postgraduate Performance Based on Negative Binomial Regression Model. : EIMSS 2022, AHCS 7, pp. 339–348, https://doi.org/10.2991/978-94-6463-024-4_36.
- Mahmoud A, et al (2024), Understanding the drivers of student loan decision making and its impact on graduation rate in Ghanaian public universities. *Policy Review in Higher Education* 8(1) 85-101.
- Mbilinyi, M. S. (2020). Education financing challenges in Tanzania: A focus on equity and access. *African Journal of Education and Development*, 26(1), 89-102.
<https://doi.org/10.12854/ajed.2020.001>

- Mgaiwa J. S & Ishengoma M. J (2023) Financing higher education in Tanzania through students' loans scheme and its impact on equitable access. *Journal Homepage: www.cell.com/heliyon*. Heliyon 9. 1-11
- Ministry of Education and Vocational Training. (2021). *National education and training policy. Government of Tanzania*. <https://www.moe.go.tz>
- Mwita, G. (2021). The role of donor funding in Tanzania's education sector: A critical review. *Journal of Education Finance*, 46(3), 342-357. <https://doi.org/10.1037/jef.2021.025>
- OECD. (2020). Education at a glance 2020: OECD indicators. *OECD Publishing*. <https://doi.org/10.1787/69096873>
- OECD. (2020). Education at a glance, 2020: OECD indicators. *OECD Publishing*. <https://doi.org/10.1787/69096873>
- Tanzania Ministry of Education. (2022). *National education development plan (2021-2025)*. *Government of Tanzania*. <https://www.moe.go.tz>
- UNESCO. (2020). *Global education monitoring report 2020: Inclusion and education*. *UNESCO*. <https://www.unesco.org/gem-report/>
- UNICEF. (2021). The state of education in East Africa: Challenges and opportunities. *UNICEF Report*. <https://www.unicef.org/education/eastafrica>
- UNICEF. (2023). *Education financing in Asia: A regional overview*. *UNICEF Regional Report*. <https://www.unicef.org/education/asia>
- World Bank. (2022). *Financing education in West Africa: A comprehensive approach*. *World Bank Report*. <https://www.worldbank.org/education/westafrica>
- World Bank. (2023). *Education financing in Tanzania: Key challenges and policy options*. *World Bank*. <https://www.worldbank.org/tanzaniaeducation>