

Influence of Government Subsidy on Students' Retention in Public Secondary Schools in Uasin Gishu County, Kenya

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Abstract

Despite the government effort of subsidizing education, children from humble backgrounds fail to complete in public secondary schools. Therefore, the study sought to find out the influence of government subsidy on student retention ratio in Uasin Gishu County. The specific objectives were: to assess the influence of government subsidy on student retention ratios in public secondary schools. This study was anchored on the human capital theory by Schultz in 1961. A descriptive survey research design was employed to study selected public secondary schools in Uasin Gishu County. The target population was derived from 192 public secondary schools in Uasin Gishu County. The study targeted 192 principals, 2384 teachers and 6 QASO Officers. The sample size for principals and class teachers was derived using—Yamane formula. The study used the questionnaire to collect quantitative data and unstructured interview guide was used for qualitative data. Data were analyzed using both descriptive and inferential statistics. Regression analyses were utilized for inferential statistics. It was found that government subsidy significantly influenced retention. Using linear regression and the overall multilinear regression was statistically significant. The regression model significantly predicted retention indicating that the models are significantly better predictor and that retention is influenced by the model representing government subsidy and with two other predictors, namely adequacy of government subsidy and impact of government subsidy. The study concluded that government subsidy was critical in retention. The study recommended timely disbursement of government subsidy.

Keywords

Subsidy, Retention, Ratio, Public, Influence

1. Introduction

1.1. Background to the Study

A higher secondary school retention rate is significantly correlated with societal advancement, economic expansion, and the achievement of the Sustainable Development Goals (SDGs) (UNESCO, 2014). The perfect method for transferring knowledge to human resources—a crucial part of human capital—has been demonstrated throughout the world through education.

The education waiver had a considerable impact on secondary schooling because it was so easy to obtain, according to Sunde's (2017) research on Mauritius. The donation of books, computers, and science lab equipment to community schools in Pakistan in Pakistan resulted in a 92% retention rate for the student body at those institutions (Darling-Hammond, Burns, Campbell, Goodwin, Hammerness, Low, & Zeichner, 2017). The use of scientific laboratory tools encourages students to become more involved in the teaching and learning of science. This is because, in contrast to objects that are seen closer up during a demonstration, genuine objects used in laboratories have a deeper psychological impact on learners (Sahlberg, 2014).

In the 1993/1994 fiscal year, the government established the Secondary Education Bursary Fund (SEBF) to help students who were dropping out of school before completing their education (Masaiti, 2018). Despite the implementation of the SEBF, the nation continues to struggle with problems including poor rates of transition from elementary to secondary schools and an increase in the number of incidents of pupils quitting school (Masaiti, 2018). The government published Sessional Paper No. 1 on Education in 2005, which had the main objectives of lowering educational fees, providing teaching and learning resources, particularly to government schools, and boosting the morale of both parents and society in regards to the payment of operational costs. The report was released with the goal of lowering education-related fees. A group has been formed to develop strategies for offering secondary education at a reasonable cost. According to the Institute of Policy and Research, it suggested the start of the waiver but identified issues that were likely to arise, such as sustainability, ineffectiveness, and politicization (I.P.A.R, 2007). No evidence was found in the study to suggest that more government financing had any impact on the rates of student retention, retention, or graduation from public secondary schools. Whether or not the implementation of the waiver was successful in overcoming the problems of sustainability, ineffectiveness, and politicization is likewise not totally obvious.

The years spent in secondary school should be ones that are rich in possibilities, advancement, and development. As a result, children from underprivileged households have better employment possibilities. Since gaining independence, Kenya's elementary education system has progressively improved. The country's government made elementary schooling free for all kids in 2003, which significantly increased the number of kids participating in the program (Ngugi et al.,

2015). However, achieving a GER of 100% is not a requirement to fulfill the duty to enroll all eligible children in schools. A proper interpretation of GER in this context necessitates the gathering of additional information in order to pinpoint additional variables that affect retention rates.

Despite the introduction of bursary to assist bright and need students, there exist drop outs in secondary education students in Kenya (Masaiti, 2018). The retention rates continue to dwindle despite the existence of the bursary fund in all administrative constituency in the republic of Kenya. There is concern on possible ways of retaining needy and bright students through the provision of bursary.

Based on this context, the study investigated Uasin Gishu county to see how government aid affected students' retention.

1.2. Objectives of the Study

The general objective of the research is to assess the influence of government subsidy on student retention in government schools in Uasin Gishu County, Kenya.

1.3. Research Hypotheses

This study tested the following hypotheses:

Ho: There is no statistically significant influence of government subsidy on student retention in public secondary schools in Uasin Gishu County.

1.4. Theoretical Framework

The human capital theory was extensively developed by Shultz (Shultz, 1961). The theory explains the positive correlation between education levels and earnings. Better trained workers are considered more skilled and productive than less skilled workers. Education is considered an investment with effect on future earnings. More schooling is assumed to attract more wages. The longer the students stay in school to graduation, the higher the skills they acquire. The theory of human capital was used to determine the retention rate of learners.

2. Methodology

2.1. Research Design

This study used a descriptive survey approach to determine how government funding affects student enrollment. In Uasin Gishu County, the study was carried out at a few chosen government secondary schools.

2.2. Population of the Study

The targeted demographic was drawn from Uasin Gishu County's 192 government secondary schools.

Table 1 shows the population of the study. 6 QASO Officers, 2384 instructors, and 192 principals were the focus of the study.

Table 1. Target population.

| Categories | Target population |
|-------------------|-------------------|
| Principals | 192 |
| Class teachers | 2384 |
| QASO Officers | 6 |
| Target Population | 2582 |

Source: Uasin Gishu County education office (2020).

A questionnaire was employed in the study to collect quantitative data, and an unstructured interviewing process was used to collect qualitative data. As principals' records of student enrollment were obtained, as were QASO officers' reports of student enrollment rates at the sub-county level, document analysis was also employed to gather data.

Cronbach's alpha was used to verify the reliability, and all results were larger than .7. As a result, the data could be used for additional analysis with confidence.

The study looked at the reliability of the questionnaires used to gather data from secondary school principals, teachers, and QUASOs. The overall results of the content validity analysis showed that the content validity of this instrument is sufficient.

2.3. Data Analysis

Thematic and content analyses were used to examine qualitative data. Data were coded, and then both descriptive and inferential statistics were used to examine them. The nature of the retention rate was then predicted using multiple regressions, which were utilized to examine quantitative data.

The study came up with regression model:

$$Y = B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + \dots + B_{n-1}X_{n-1}$$

where government subsidy is Y , B_1 , B_2 , B_3 , and B_4 are constants and X_1 , X_2 , X_3 , X_4 represents enrollment rate.

3. Findings

Influence of government subsidy on student retention ratio

This study's objective was to assess the impact of government funding on the rates of student retention in public secondary schools in Uasin Gishu County. In the survey on the impact of government aid on student retention rates, respondents were asked to score their level of agreement with five-point Likert scale items. The results of the analyzed information are presented in **Table 2**.

Table 2 reveals that 139 respondents (31%) and 63 respondents (14%) agreed strongly with the statement that government subsidies have increased the number of kids remaining in school to form four in public secondary schools. In contrast, 102 respondents (23%) were unsure about the remark, followed by 70 respondents (16%) and 76 respondents (17%) who strongly disagreed with it.

Table 2. Responses on effect of government subsidy on retention rate.

| Statement | Government subsidy has raised the number of students completing form four in public secondary schools | Government subsidy has seen the students who had dropped from school go back to school to continue with their studies | Government subsidy has improved student progression from one class level to the next | Government subsidy has raised transition levels in public secondary schools | Government subsidy has increased class sizes in public secondary schools | Students who transfer to another school has reduced since the introduction of subsidized secondary education |
|-----------|---|---|--|---|--|--|
| SA | 63 | 128 | 50 | 91 | 35 | 59 |
| %SA | 14% | 28% | 11% | 20% | 8% | 13% |
| A | 139 | 140 | 125 | 141 | 113 | 142 |
| %A | 31% | 31% | 28% | 31% | 26% | 32% |
| N | 102 | 73 | 108 | 86 | 127 | 111 |
| %N | 23% | 16% | 24% | 19% | 29% | 25% |
| D | 70 | 60 | 84 | 66 | 84 | 68 |
| %D | 16% | 13% | 19% | 15% | 19% | 15% |
| SD | 76 | 49 | 83 | 66 | 77 | 70 |
| %SD | 17% | 11% | 18% | 15% | 18% | 16% |

Source: Field data, 2021.

The study discovered that a sizable portion, 146 respondents (32%) in Uasin Gishu County, reported that the government subsidy has not increased the number of students completing form four in public secondary schools, in contrast to the 202 respondents in Uasin Gishu County who acknowledged the increase in the number of students completing secondary level of education. The 202 respondents, in contrast, acknowledged the rise in the number of pupils completing form 4. This illustrates that the percentage of pupils who continue their education in secondary school has increased as a result of the availability of government scholarships. This finding is consistent with those made by [Githaka et al. \(2017\)](#), who reported that the introduction of educational subsidy programs has increased the student retention rate in public secondary schools.

Similar to the last example, 128 respondents (28%) strongly agreed with the assertion that students who had dropped out of school returned to complete their education as a result of government subsidies, while 60 respondents (13%) and 49 respondents (11%) disagreed with the statement. In addition, 73 respondents (16%) said they weren't sure how they felt about the remark. The majority 268 (60%) of the respondents 63, according to the study's findings, said that students who had dropped out of school returned to finish their education due of the government's financial assistance.

Additionally, 125 respondents (28%) concurred with the assertion that student progression from one class level to the next has been improved as a result of government funding. 50 people (11%) responded that they strongly agreed with the statement. There were 84 respondents who disagreed with the statement (19%), and 83 respondents who strongly disagreed (18%). A total of 184 res-

pondents (24%), were not sure about the statement. According to 175 (39%) of the respondents in the study area, it appears that a sizable proportion of respondents believe that the government subsidy has enhanced students' transition from one class level to the next. The results are analogous to those of Lewin's (2018) research on Mauritius's educational funding, which demonstrates that subsidized secondary education in Sub-Saharan Africa contributes to high student advancement rates (SSA).

Additionally, 66 respondents (15%) strongly disagreed with the claim that government funding for public secondary schools had increased transition levels. While 86 (19%) respondents were impartial and 91 (20%) respondents strongly agreed with the statement, 141 (31%) respondents agreed with it. It was evident from the responses that 232 respondents, or 52% of those who took part, claimed that government subsidies had raised transition levels in public secondary schools.

Despite this, 84 respondents (19%) disagreed with the statement that increased government funding has resulted in larger class sizes in public secondary schools; 77 respondents (18%) strongly disagreed with the statement; 127 respondents (29%) were unsure; 113 respondents (26%) agreed; and 35 respondents (8%) strongly agreed. The responses showed that 148 people (34%), a sizeable portion of the population in Uasin Gishu County, claimed that government subsidies had increased class sizes in public secondary schools. It's possible that something other than a government subsidy is to blame for this.

Additionally, 59 of the respondents (13%) agreed with the assertion that fewer students are transferring to other schools since the implementation of subsidized secondary education. 68 respondents (15%) disagreed with the statement, 70 respondents (16%) disagreed strongly with the statement, 111 respondents (25%) were unsure of their opinions, and 142 respondents (32%) agreed with the statement. It appears that 201 respondents, or 45%, concur that since the start of the implementation of subsidized secondary education, the proportion of students transferring to another school has decreased.

One of the informants named R3 said during the interview with the QASO officers that the retention rate for boys has increased by 13% from the previous level of 76% to 89% and by 12% from the previous level of 82% to 94% ever since the introduction of government subsidy.

This assertion gave the impression that a number of students were quitting school or failing to finish their academic degrees due to the financial burden of tuition.

Linear regression analysis

The study utilized Simple linear regression to test the hypothesis H_0 : There is no statistically significant influence of government subsidy on student retention in public secondary schools in Uasin Gishu. Regression model was $y = c + b * x$, y = estimated dependent outcome variable score, c = constant (intercept) b = regression coefficient (R_strength) x = score on the independent predictor variable. The following test procedures were carried out.

Normality of distribution for linear regression

The study checked against assumptions of normality and collinearity of variables namely government subsidy and retention.

To carry out a snap normality test, a histogram was generated as displayed in **Figure 1** below to evaluate the normality of the data set for government subsidy as predictor variable and dependent variable, retention rate, in public secondary schools.

The histogram in **Figure 1** confirmed a fairly good normality.

Consequently, it was necessary to draw a normal Q-Q plot for the purposes of counter confirmation and checking against potentially misleading histogram.

Q-Q Plot Standardized Residuals for linear regression of students' retention rate

The plot in **Figure 2** describes a good normality and hence justification for the regression analysis.

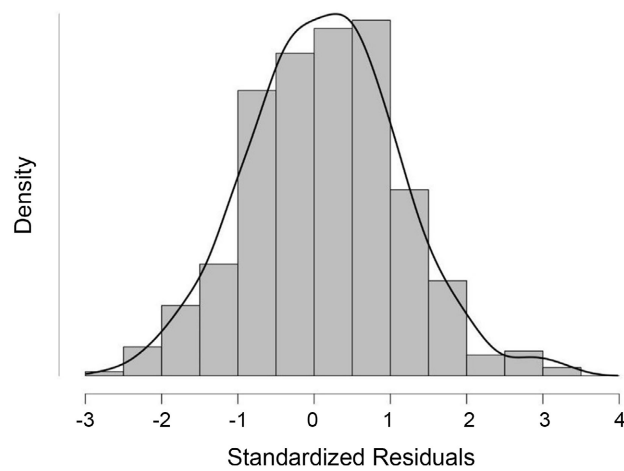


Figure 1. Standardized residuals histogram.

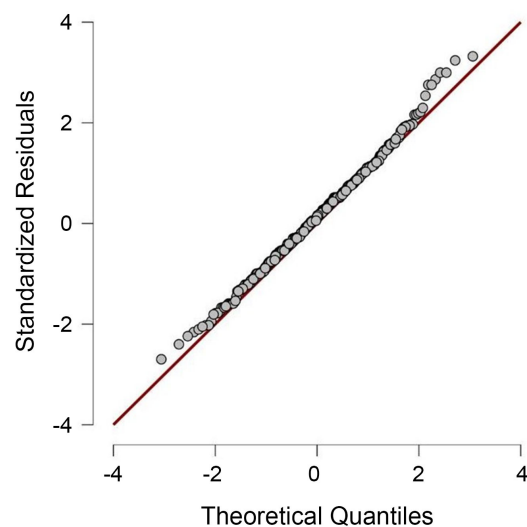


Figure 2. Q-Q Plot standardized residuals for students' retention rate and government subsidy.

Linear regression coefficients for retention and government subsidy

Table 3 below shows one model and the constant (intercept) and one regression coefficient (unstandardized) namely government subsidy fitted into the model.

It was important to check for collinearity statistics and as per the table, the tolerance levels is 1 and the VIF is less than 3 which implied that there is no problem of collinearity in the data set.

Linear regression model between government subsidy and retention

The adjusted R^2 used for the Model Ho as indicated, shows that the model can predict 96.6% of the outcome variance (**Table 4**).

The Durbin-Watson statistic check for correlations between residuals produced a value of 2.021, which falls somewhere between 0 and 4 on the scale. As a result, it has been demonstrated beyond a reasonable doubt that there is no correlation between residuals, and the correct position of independence of errors in data has been maintained. In addition, the assumptions for the independence of the data were not significant at $p = .818$ as a result of the fact that this would lead to a problem. Since there were no errors that were correlated with one another, it is safe to say that linear regression was an appropriate method for conducting the analysis.

Statistical significance of the model for government subsidy and retention model

The statistical significance of the model is presented as p -value in the ANOVA **Table 5** below.

The ANOVA **Table 5** shows the F-statistic (1, 449) = 12,699 to be significant, $p < .001$. This means that government subsidy is statistically significant predictor of retention.

Table 3. Linear regression coefficients for retention.

| Model | | Coefficients | | | | Collinearity Statistics | | |
|-------|--------------------|----------------|----------------|--------------|--------|-------------------------|-----------|-------|
| | | Unstandardized | Standard Error | Standardized | t | p | Tolerance | VIF |
| Ho | (Intercept) | .476 | .064 | | 7.400 | <.001 | | |
| | Government Subsidy | .897 | .022 | .887 | 40.711 | <.001 | 1.000 | 1.000 |

Linear regression coefficients for retention.

Table 4. Model summary for retention in linear regression.

| Model | R | R^2 | Adjusted R^2 | RMSE | Durbin-Watson | | |
|-------|------|-------|----------------|------|-----------------|-----------|------|
| | | | | | Autocorrelation | Statistic | p |
| Ho | .983 | .966 | .966 | .575 | -.011 | 2.021 | .818 |

Note. Null model includes Government Subsidy.

Table 5. ANOVA table: significance of linear regression model on retention.

| Model | | Sum of Squares | df | Mean Square | F | <i>p</i> |
|----------------|------------|----------------|-----|-------------|-----------|----------|
| H ₀ | Regression | 4197.479 | 1 | 4197.479 | 12699.795 | <.001 |
| | Residual | 148.401 | 449 | .331 | | |
| | Total | 4345.880 | 450 | | | |

Note. Null model includes Government Subsidy.

Conclusion of linear regression test for retention and government subsidy

Simple linear regression was used to test hypothesis H₀: There is no statistically significant influence of government subsidy on student retention in public secondary schools in Uasin Gishu.

The fitted regression model was: retention = .476 + .897 * government subsidy score. The overall regression was statistically significant ($R^2 = .966$, $F(1, 449) = 12699.795$, $p < .001$). It was found that government subsidy significantly influenced retention ratio ($\beta = .897$, $<.001$) and therefore the null hypothesis was rejected.

4. Conclusion

The objective of this research was to investigate the impact that governmental aid has on the proportion of students who continue their education at the public secondary schools located in Uasin Gishu County. According to the findings of the study, the majority of respondents acknowledged the positive impact that government subsidies have had in increasing the number of students who complete secondary school level of education, however, an equal number of respondents did not agree with this statement, implying that the subsidies have not eliminated all of the barriers that cause students to drop out of school. This demonstrates that despite the availability of government subsidies, there has not been an improvement in the percentage of students who continue their education into secondary school. In a similar vein, the findings of the study revealed that the majority of the respondents believed that the financial assistance provided by the government was the primary factor in the re-enrollment of students who had previously abandoned their academic pursuits. In addition, the vast majority of people who participated in the survey in the area under investigation stated that the student progression from one class level to the next has been enhanced as a result of the government subsidy.

In addition, the responses indicated that the majority of the respondents acknowledged that the increase in the number of students who complete form four in public secondary schools can be attributed to the government subsidy. In addition to this, it was discovered that the majority of respondents stated that the transition levels in public secondary schools have increased as a direct result of government subsidies. Despite this, the majority of people who responded to the survey in Uasin Gishu County stated that an increase in the number of students per class has occurred in the public secondary schools that receive funding from

the government. In addition, the vast majority of those who participated in the survey acknowledged that the number of students who switch to a different school has decreased since the implementation of subsidized secondary education.

Recommendations

Based on the findings, this study's findings indicated that government subsidy has a positive influence on the student retention. Therefore, the government should engage other players so as increase the ratio of financial support especially the needy students in public secondary schools.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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