INFLUENCE OF SCHOOL ACCOMMODATION STATUS ON COST EFFICIENCY IN PUBLIC SECONDARY SCHOOLS IN BOMET COUNTY, KENYA

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Abstract

Public secondary schools in Kenya are expected to operate at affordable and sustainable costs. Despite this expectation, the cost of education in relative terms in most public secondary schools in Bomet County is still high. This may be an indicator that public schools are cost inefficient in their operations. The purpose of this study was to investigate the influence of school accommodation status on cost efficiency in public secondary schools in Bomet County, Kenya. The target population was two hundred and seventy principals of public secondary schools and all the five Sub-County Directors of Education in Bomet County. A sample of one hundred and seventy-five principals was selected using stratified and simple random sampling techniques. A semi-structured questionnaire was used to gather data from the principals and an interview schedule was used to solicit data from the Sub-County Directors of Education. The validity of instruments was examined using Content Validity Index. The study found that all variables had achieved Scalar-Content Validity Index of above 0.9 meaning that they were all valid and could thus be utilized in the study. The study results revealed that the Cronbach alpha coefficients of above 0.7 achieved for all variables imply that the variables had sufficient internal reliability to enable their usage in the study. The descriptive statistics including frequencies, means and standard deviations were used to analyze and summarize data. The simple linear regression analysis in inferential statistics was used to test the hypotheses in order to determine the extent to which cost efficiency could be predicted by school accommodation status, school size, and school type and school location. Statistical Packages for Social Sciences (SPSS) statistics version 25 software was used to perform only statistical operations on data analysis. The study found that the respondents agreed to a very small extent in respect to school incurring huge bills on water expenses, electricity expenses, food related expenses and teacher subsistence costs due to accommodation status. The study further found that the respondents were in agreement to a small extent on incurring huge bills on security expenses, administration costs, maintenance costs, transport costs, and subordinate staff costs on the account of school accommodation status. The study concluded that there was no statistically significant influence of the school accommodation status on the cost efficiency of public secondary schools in Bomet County. This was attributable to most of the schools within Bomet County being day schools and the cost indicators being examined having no major differences between day and boarding schools. Day schools in Bomet County need to improve on cost control in order to gain sufficient cost efficiencies in their operations.

Keywords: Cost Efficiency, Public Secondary Schools, School Accommodation Status

Introduction

Substantial research has consistently documented the influence of school accommodation status on school organizational and non-organizational factors. Ahmed and Oliver (2017) found that boarding and day secondary schools performed equally in Biology due to good facilities of boarding schools and the influence of parental support in motivating their day secondary school learners. Thus, day schools and boarding secondary schools can yield good results, holding other factors constant. According to Kareem et al.(2019) day secondary schools has a strong positive impact on shared norms and vision in Peninsular Malaysia. On the other hand, Shutao(2018) found that boarding schools had negative effects on academic achievements in China. The study attributed the results to the poor state of facilities and management. The findings show that the negative effects on academic performance were prevalent in rural boarding schools. However, boarding schools have been praised for offering economies of scale with regard to teacher utilization and avoiding students' commuter costs associated with day secondary schools(Mbunde, 2018b). Cost savings made through higher student-teacher ratio in boarding schools can be utilized

to provide teacher support services such as laboratories, libraries and workshop assistants, duplicating machines and other teaching aids. In view of boarding school costs, it is possible to at least elevate the number of students covered for the same amount of funds expended for both capital and recurrent costs in day secondary schools. Therefore, cost savings can be realized in both boarding and day secondary schools.

Staffing, educational materials, machine time, and other production parameters are all examined for efficiency variance. The difference between the theoretical number of inputs required creating a unit of output and the actual number of inputs used to produce the unit of output is known as efficiency variance(Gourio et al, 2016) Models or experience are used to create the expected inputs for the unit of output. Inefficiencies in labor or resource utilization, as well as inaccuracies in the assumptions used to create input expectations, can cause a disparity between expected and required inputs. Efficiency variance is a term used in education to describe the success of a program in terms of labor, materials, machine time, and other production aspects. Table 1 displays the average education unit costs in Bomet County from 2016 to 2019.

Table 1
The Average Unit Costs for the Years 2016-2019 in Kenya Shillings

Accommodation status	Expected	Actual	Variance	Variance (%)
Boarding	69,288.50	71,854.10	2,565.60	3.7
Day	32,244.00	34,709.90	2,465.90	7.6
Boarding/Day	49,507.30	54,300.40	4,793.10	9.7

Source: Ministry of Education Science and Technology, 2019

Table 1 shows the existing discrepancy between predicted unit costs and actual unit costs incurred, which could indicate cost inefficiencies. The percentages represented the cost variation. The levels of cost efficiency vary depending on the characteristics of the institution.

In Bomet County and across the country, public secondary schools are classified by school accommodation status. Within the school accommodation status, there are three options: day, boarding, or day/boarding. However, no research has been done to see how these school features affect cost efficiency in Bomet County's public secondary schools. As a result, this research aims to address a need in the market.

Research Objective
To examine the influence of school accommodation status on cost efficiency in public secondary schools in Bomet County, Kenya.

Research Hypothesis
Ho: There is no statistically significant influence of school accommodation status on cost efficiency in public secondary schools

Empirical Literature
Studies have suggested that boarding schools are more likely to be cost efficient in their operations and in realizing students' academic performance than their day schools counterparts. In a study to investigate the effects of boarding schools on students' academic performance using a survey of

169 schools in France,Behaghel et al.(2017) found that cost per student in the boarding school is twice as large as in day schools due to the component of the programme. This indicates that day schools could be operating few programmes to realize their desired objectives. The study attributed the high cost per student in boarding schools to high teacher salaries. The results of the study show that boarding schools tend to dramatically increase the quantity and the quality of learning resources. In addition, the study found that boarders benefit from smaller class sizes, spend longer study hours, rarely experience classroom disruptions, and more likely to be exposed to more engaged teachers. The results of the study also indicate that students in boarding schools perform better than their counterparts in day schools. The authors attributed the findings to high academic demands by teachers, academically strong peers, high motivational levels and much time spent on home works in boarding schools. The study concluded that boarding schools although costly was an efficient way of attaining high academic performance. The study also recommended the improvement of home environment in day schools to close the existing cost efficiency gap. The results were consistent withClark and Del Bono(2016) whose findings reveal that boarding schools were likely to be cost efficient in achieving better students' academic performance in the United Kingdom due to significant parental support and involvement. The parents support the school in form of making the necessary provisions for their children which ultimately enhance cost efficiency levels.

Studies relating day schools and cost efficiency are limited in developing countries. A study investigating the influence of commuting on cost efficiency of day schools in Brazil using descriptive survey design conducted byTigre et al.(2017) established that duration of commuting and public transportation policies targeted at students affected cost efficiency levels of the schools. A predictive correlational research design could have been the better choice for the study as it allows predictions of dependent variable based on the independent variables. The findings were attributed to commuting, the need to change school, the need to attend extra particular classes by the students, students' academic performance, use of internet for studying, ability of parents to supervise homework, school quality and school proximity. The results of the study indicate that making decisions on the choice of a day school to be attended by students was based on school quality and infrastructure with a view to minimizing commuting costs to school. The study concluded that additional time spent commuting from home to school could be spared to activities related to optimal cost efficiency of the school. The findings are consistent toMutegi et al.(2017) whose study investigated the impact of transport differentials on efficiency of secondary schools in Kenya established that transport cost and distance to school from home may be a barrier to attaining optimal efficiency by a school. The results imply that distance from home to school ought to be reduced by establishing more day schools and parents need to be encouraged to take their children to schools near home. These would enhance cost efficiency by lowering the cost of transport from home to school.

School accommodation status and its relationship to cost efficiency have been documented by a few studies in the past. In using only, a questionnaire to collect the required data from 120 respondents, Maina and Aji (2017) in a study to investigate the effects of accommodation on students' academic achievements in higher education in Nigeria established that room size significantly influenced students' scores. Enjoining an interview to collect data from key information rich respondents in order to gain in- depth understanding of school accommodation could have enriched the results of the study. The current study differed from the study in using a larger sample size to ascertain characteristics in school accommodation status affecting cost efficiency. This improved the validity of the results. Results of the study revealed that conditions including cleanliness, electricity and water supply, overpopulation and territoriality significantly influenced students' academic performance. The findings also show that students boarding within

the educational institution performed better academically than the non-boarders. The study recommends that stakeholders should prioritize current management practices in accommodation facilities and plan for adequate infrastructure to cater for future students' accommodation needs. The findings of the study concurred with Kolawole and Boluwatife(2016) who found that school characteristics such as day schooling and boarding significantly influenced school efficiency levels. There was need to investigate how school variables such as costs, school fees, transportation and facilities influenced cost efficiency.

Past studies have made attempts to link boarding schools and cost efficiency. In a study using descriptive survey research design to investigate the relationship between boarding schools and academic performance in Tanzania, Makewa (2015) found that there was a strong and significant positive correlation between boarding schools and academic performance. Correlational research design could have been a better choice for this study as it allows the researcher to determine the strength and direction of the relationship between the independent variables and the dependent variable. The authors observed that boarding schools were enforced due to diverse reasons including broken families, long illness of the parents, orphans and sponsorships among them. This study recommends that the government should intervene for quality and make boarding schools affordable, safe and friendly for learning where good food, caring and committed teachers are found. The current study differed from this study by investigating cost efficiency in public secondary schools. The results were consistent with (Baguma, 2018) whose findings indicate that boarding schools in Western Uganda experienced improved academic performance due to ample time that students enjoy while residing in school premises under teachers' supervision. Improved academic performance is an indicator of cost efficiency as the desired educational objective is being achieved using the given educational resources.

Utilization of school resources as a cost saving measure in analysis of cost efficiency in boarding schools is a widely discussed subject. Using descriptive survey research design, Mbunde (2018a)in a study investigating savings on costs by utilizing school resources in Kenya observed that enrolment in day schools could be doubled for the same amount of financial resources expended for capital and recurrent costs in boarding schools. The findings of the study show that cost saving in schools could be made possible by making school farms to be self-sustaining, fairly maintaining school facilities and buildings, disposing obsolete school facilities, purchasing goods in bulky, using cheap source of transport and communication, allowing students to carry out specified manual work and study programme, harvesting rain water, multitasking of staff, hiring out school resources, using energy saving bulbs and fuel. In addition, the results show that that sharing of resources among schools, rationalization of unit cost per student, accountability and transparency and rational mixture of both day and boarding schools enhanced cost efficiency in learning. The study concluded that schools enhanced cost efficiency by adopting cost saving measures in using school resources. The study recommended that strengthening monitoring and supervision in managing school resources through regular audits and inspection exercises and in-servicing of school principals ensured cost efficiency in the utilization of resources. The findings are in agreement with Hendrayana et al.(2019) who found that students' academic performances are associated with high costs in boarding schools in Indonesia. Schools could be made cost efficient and affordable by reducing wastages, improving financial management, rationalizing reading and learning materials and improving cost effectiveness in areas including the production of class materials, evaluation and examinations.

In Kenya, substantial amount of financial resources committed to public secondary schools by the various stakeholders has not shown improvement in efficiency. In a study using a survey research strategy to assess the influence of unit cost on students' academic performance in day and boarding

secondary schools in Nandi county in Kenya conducted by Kosgei et al,(2018)established that there was a significant positive relationship between academic performance and the unit cost in boarding and day secondary schools. The study used recurrent expenditures only to determine cost per student. A choice of a predictive correlation research approach could have enhanced the validity of the results of the study. The authors noted that rising costs of education, inappropriate allocation of resources, poor management of financial resources and poor academic performance were hindered attainment of optimal efficiency in public day and boarding secondary schools. The study concluded that an increase in resources used in education does not necessarily enhance cost efficiency and therefore allocating more resources to secondary schools has to be done with caution not to result in cost inefficiency. The study recommended the need to prioritize expenditure for acquisition of teaching and learning resources in schools in order to enhance efficiency in secondary schools. The current study differs from this study in assessing the influence of day and boarding school characteristics on cost efficiency. The results concurred with the findings of a study examining the effects of unit costs on students' academic performance in Vihiga County conducted by Nyawanda(2019) that established a positive influence of unit costs on students' academic performance. The use of cost effective measures of reducing unit cost of boarding and day secondary schools in order to enhance efficiency is therefore essential.

Diverse studies have linked unit costs to the accommodation status of secondary schools. A study conducted by Mutegi et al.(2017) to examine policies related to per secondary school student costs in Kenya established that distance from homestead to school is a significant determinant of cost efficiency. The study used interview schedule, questionnaire and document analysis as tools for collecting the relevant data. The results of the study reveal that the challenge of high unit cost in boarding and day secondary schools is attributable to costs of school uniforms, transport costs, pocket money, motivational fees, remedial fees, boarding fees, development fees and other levies. The study concluded that the money allocated to public secondary schools by the government could not sustain a student in school and therefore schools compelled parents to pay additional fees in form of motivation fees, boarding fees, building fees among other payments in order to foot the bills. The findings also indicate that students in day schools spend less money on transport than their counterparts in boarding schools. The study recommended more government allocations to schools to cushion parents from the burden of paying large amount of school fees. The findings were in line with Simiyu(2016) who established that parents are required to meet school requirements including lunch fees, transport costs, boarding fees for those in boarding schools and fees for development projects. There is need to encourage the construction of more day schools in order to reduce the distance from home to school while ensuring the cost effectiveness of such schools.

Studies in the past have linked academic performance to school cost efficiency. A study conducted by Wasike(2020) to examine Women's education in Western Kenya found that cost inefficiency occurs in many boarding and day secondary schools because students did not take academic work seriously. The study used qualitative data collection methods including interview schedule and open ended questionnaire. A choice of mixed method approach of using both qualitative and quantitative data collection tools expand and strengthen the conclusions of the study by providing a better understanding of the research phenomenon than either of each singly. The study also established that boarding schools provide students with more time to focus on their academics than day schools did. The study observed that majority of the students' attained low grades in the national examinations. This raises questions about the quality of efforts that the schools put in to ensure the attainment of optimal cost efficiency levels. The results reveal that school development costs, providing lunch programme, providing uniforms and other basic requirements to students were not affordable to parents, thus making schools not to perform efficiently. The study

recommended that the government should step in to provide free or reduced cost lunch programme, uniforms and textbooks and increase allocations to schools. The results concur with Wambugu and Mokoena(2017) whose findings show that students' academic performances in day and boarding schools are affected when students are frequently sent home due to non-payment of school fees in Limuru Sub County in Kenya. The cost associated with this in terms of time wastage and possible dropouts and repetitions are enormous and this hinders efficient operation of the schools.

Waste was found to increase the cost of education in Kenya in the form of dropouts and repetition. A study using a descriptive survey research conducted by Bernard and Orodho(2018) to investigate wastage in public day secondary schools in Kericho County in Kenya found that child labour, students' absenteeism, peer pressure and lack of parental support of school development projects hindered the attainment of optimal efficiency. The study recommended that parents and the community should provide support to school development projects. Additionally, the study recommended that the school Board of Management should identify and cushion potential dropouts due to school fees. These were in line with Musangi et al.(2017) whose findings show that the wastage in form of dropouts and repetition were apparent despite the subsidies provided by the Kenya government to all public secondary schools in Machakos County in Kenya. When students drop out of school and repeat classes, student learning, human capital in the form of teachers and non- teaching staff and school facilities are lost.

Methodology

The current study adopted post- positivism research philosophy owing to its flexibility in using various research instruments to examine cost efficiency of public secondary schools clearly and closely. Post- positivism world view considers both quantitative and qualitative methods to be valid in investigating a research phenomenon (Gathii et al, 2019). A post- positivist philosophical research approach advocates methodological pluralism based on the assumptions that the method to be applied in a particular study should be selected on the basis of research questions being addressed (Panhwar et al, 2017). Therefore, principal's questionnaire and the SCDE interview schedule were used in the present study to investigate the research phenomenon from various perspectives which helped to minimize the risk of biases and maximize reliability.

This study adopted predictive correlational research design in which the researcher uses simple linear regression statistical processes to predict the value of the dependent variable based on the known value of the independent variable (Pituch & Stevens, 2015).Predictive correlational design is used in those cases when there is an interest to identify predictive relationship between the predictor and the outcome/criterion variable (Lau, 2017).

The target population refers to a group of individuals or entities with some common characteristics that the researcher plans to study with the aim of generalizing the findings (Asiamah et al, 2017). In this study, the target population comprised all the two hundred and seventy (270) principals of public secondary schools and all the five (5) Sub- County Directors of Education (SCDE) in Bomet County. There were two hundred and seventy (270) public secondary schools and five (5) Sub Counties in Bomet County at the time of the study (Bomet County Education Office Data, 2019). Therefore, there were two hundred and seventy (270) principals and five (5) Sub County Directors of Education at the time of the study. The principals and SCDE were chosen to participate in the study because they are charged with the responsibility of effectively planning, implementing and managing the school budget in order to achieve the desired objectives of the school (Kamunge, 2016). The ability of the principals and the SCDEs having adequate and authoritative information on cost efficiency of public secondary schools influenced the validity of the research results. The

target population of this study was considered as accessible population. Table 2 shows the accessible population by sub-county.

Table 2
Accessible Population by Sub-county

Sub-county		Sotik	Konoin	Bomet East	Bomet Central	Chepalungu	Total
School Accommodation status	Boarding	16	9	8	9	12	54
	Day	59	32	28	30	45	194
	Boarding/ Day	7	4	3	3	5	22
Principals		82	45	39	42	62	270
SCDE		1	1	1	1	1	5

Source: Bomet County Education Office Data, 2019

According to Showkat and Parveen(2017)when accessible population is greater than 100 (N>100), sampling is necessitated. Given that the study population comprised 270 principals, sampling was adopted. The sample size for the principals selected for the study was determined according to the formula by Krejcie and Morgan(1970) for a finite population as follows:

$$S = \frac{X^2 NP(1-P)}{d^2(N-1) + X^2 P(1-P)}$$

Where:
S = Required Sample
X = Z- value (e.g. 1.96 for 95% confidence level)
N = Population Size
P = Population proportion (expressed as decimal) (assumed to be 0.5 (50%))
d = Degree of accuracy (5%), expressed as a proportion (0.05); it is a margin of error

Inserting the required information into the formula where X= 1.96, Z= 270, P= 0.5 and d= 0.05
gives: $S = \frac{1.96^2 \times 270 \times 0.5(1-0.5)}{0.05^2(270-1) + 1.96^2 \times 0.5(1-0.5)}$

= 158.8021311777 =159 principals.

This sample was increased by 10% to cater for possible non- responses (Guetterman et al, 2015). Therefore, the sample size increased to 175 principals. This represents the sample for the study and was obtained from the target population using proportionate stratified and simple random sampling methods. In addition, a census technique was used in selecting all the sub counties in the study area. Therefore, all the five (5) SCDE was sampled using purposive techniques in which a SCDE was selected to participate in the study. Table 3 shows the sampling matrix of the study.

Table 3

School Accommodation Status

Sub- county	Boarding	Day	Boarding/Day	Total
Sotik	10	38	5	53
Konoin	6	21	3	30
Bomet East	5	18	2	25
Bomet Central	5	19	2	26
Chepalungu	9	29	3	41
Stratified Random Sample	35	126	14	175

Source: Ministry of Education Science and Technology, 2019

Table 3 shows that thirty five (35), one hundred and twenty six (126) and fourteen (14) out of the total one hundred and seventy five (175) schools randomly selected for the study was boarding, day and day/boarding respectively. The number of schools selected in this category from Sotik, Konoin, Bomet East, Bomet Central and Chepalungu was: fifty three (53), thirty (30), twenty five (25), twenty six (26) and forty one (41) respectively. The principal was the respondent for the study.

Data was collected using a semi-structured questionnaire designed to collect the required data from the principals of public secondary schools in order to address the research objective of the study. Thesemi-structured questionnaire was chosen because it gathers information over a large sample and was more appropriate when addressing sensitive issues since it offers greater anonymity. An interview schedule aimed at obtaining the data required to meet the specific objectives of the study using open ended questions was administered to SCDE. The guide solicited information covering accommodation status and cost efficiency in public secondary schools.

Results and Discussion

The secondary school accommodation status was examined using diverse indicators. These indicators included the school expenses associated with accommodation status such as water expenses, electricity expenses, security expenses, administration costs, maintenance expenses, transport costs, food related expenses, subordinate staff salaries expenses, and teacher's subsistence expenses. The study used Likert based questions with five-point Likert scale of 1= Very Small Extent (VSE), 2= Small Extent (SE), 3= Moderate Extent (ME), 4 = Large Extent (LE) and 5 = Very Large Extent (VLE). In addition, f=frequency, M=Mean and SD=Standard Deviation. The descriptive statistics were presented in Table 4.

Table 4
Descriptive Statistics of Principals' Perception on School Accommodation Status

Statement	1 f %	2 f %	3 f %	4 f %	5 f %	Total M	SD
Our school incur huge water expenses due to its accommodation status	92 63.9%	35 24.3%	13 9.0%	2 1.4%	2 1.4%	1.52	.828
Our school incur huge electricity expenses due to its accommodation status	95 66.0%	35 24.3%	9 6.2%	2 1.4%	3 2.1%	1.49	.845
Our school incur huge security expenses due to its accommodation status	25 17.4%	88 61.1%	28 19.4%	3 2.1%	0 0.0%	2.06	.671
Our school incur huge administration costs due to its accommodation status	33 22.9%	42 29.2%	60 41.7%	9 6.2%	0 0.0%	2.31	.897
Our school incur huge maintenance expenses due to its accommodation status	18 12.5%	95 66.0%	7 4.9%	3 2.1%	21 14.6%	2.40	1.190
Our school incur huge transport expenses due to its accommodation status	1 0.7%	76 52.8%	20 13.9%	43 29.9%	4 2.8%	2.81	.968
Our school incur huge food related expenses due to its accommodation status	63 43.8%	63 43.8%	11 7.6%	4 2.8%	3 2.1%	1.76	.871
Our school incur huge subordinate staff salaries expenses due to its accommodation status	7 4.9%	57 39.6%	52 36.1%	26 18.1%	2 1.4%	2.72	.866
Our school incur huge teacher's subsistence expenses due to its accommodation status	56 38.9%	67 46.5%	17 11.8%	3 2.1%	1 0.7%	1.79	.783
Average						**2.10**	**0.49**

n=144

The principals were asked on whether their school incurred huge water expenses as a result of the school accommodation status. The study found that the respondents agreed to a very small extent *(M=1.52, SD=0.828)* on the school incurring water expenses due to accommodation status. The study found that the schools largely incurred small water expenses on the account of school accommodation status. Most of the schools would incur a huge water related bills if they were boarding schools. Wada, Oloruntoba, Adejumo and Aluko (2020) in their study based in Nigeria noted that boarding schools incurred huge water related expenses due to the sanitation requirement of the boarding students in terms of bathing, toilets, washing of clothes, and washing of the dormitories amongst other water requirements. These aspects are minimized in day schools as is the case of a majority of secondary schools in Bomet County.

On whether the school incurred huge electricity expenses due to the school accommodation status, the respondents were in agreement to a very small extent *(M=1.49, SD=0.845)*. The study noted that the schools in Bomet did not incur a huge electricity expenses which was attributable to a huge percentage of the schools being day schools. The day schools have the student going back home after school activities unlike the boarding secondary schools that would require electricity for undertaking their evening preps, use within their dormitories and for security installations across the school. On incurring a huge security expenses as a result of school accommodation status, the respondents were in agreement to a small extent *(M=2.06, SD=0.671)*. The study noted that there was a small amount utilized on the schools in Bomet as a result of their accommodation status. This can be attributable to the day status of a majority of the secondary schools in Bomet County.

The boarding schools often have complex security requirements as a result of the students boarding and their safety must be enhanced at all time and especially at night. These security measures serve to increase the cost of both one off expense and recurrent expenses on security related aspects. Anikoh and Ayuba (2019) in a study undertaken in Nigeria noted that diverse security related measures which have a cost implication were undertaken. These measures include erection of bollards, raised concrete planters, standoff distances, fences and having security results within the compound. Other measures include enhanced security staff numbers in order to respond to security related challenges. Odhiambo (2020) further noted the need for enhanced security for boarding schools in order to deter students from sneaking out and engaging in drug abuse and other antisocial behaviours. Security related costs as indicated by Odhiambo (2020) as well as Anikoh and Ayuba (2019) in their studies are minimal in Bomet county as a result of most schools being day schools.

The respondents were in agreement to a small extent on the school incurring huge administration costs due to school accommodation status *(M=2.31, SD=0.897)*. The role of school administration costs on the running of the school was noted by interviewee #2 and interviewee #7 as follows;

> *"The costs of educating a child in a boarding school are far much higher than in a day school. Boarding schools have more financial responsibilities which they have to cater for even amidst raising costs of products and services" Interviewee #2*

> *"Boarding schools use a lot of money than day schools on transport, administration, personnel emoluments, electricity and local travel" Interviewee #7.*

The respondents were further asked on the aspects of maintenance costs due to the school accommodation status. The study found that the respondents on average were in agreement with the variable to a small extent *(M=2.40, SD=1.190)*. The schools had low maintenance costs due to their day school status. The boarding schools often have a higher maintenance costs due to a prolonged stay of the students within the school resulting in several breakages. The students are also in touch with diverse school facilities within the course of their stay in schools. The results was also picked by the interviewee #7 who also raised the issue of maintenance costs in boarding schools as follows;

"The cost of maintenance in a boarding school is also quite high because the rate of breakages is also high" Interviewee #6.

The respondents on the examination on whether the school incurred a huge transport expenses due to its accommodation status found that the respondents were in agreement to a moderate extent *(M=2.81, SD=0.968)*. The respondents were further asked on whether the school incurred a huge food related expenses on the account of its school accommodation status. The study found that the respondents on average agreed to a very small extent on the incurring of a huge food related expenses *(M=1.76, SD=0.871)*. The schools in Bomet being largely in agricultural rich areas and being in mostly rural set up have easy access to food items from the surrounding farmers leading to low costs associated with food procurement aspects.

The study further examined on school incurring a huge subordinate staff salary due to its school accommodation status. The study found that the respondents were in agreement to a moderate extent in respect to the school incurring a huge subordinate staff costs on account of its accommodation status *(M=2.72, SD=0.866)*. The respondents were further asked on whether the school incurred huge expenses on teachers' subsistence items on account of the school

accommodation status. The respondents were in agreement to a very small extent (*M=1.75, SD=0.783)* in respect to the school incurring a huge expense due to the teacher's subsistence items. The fact that a majority of the schools within the context of Bomet County were day schools implied that there were little expenses that were paid in respect to the teachers' subsistence needs. The costs incurred by the teachers such as housing, water and electricity bills may be catered for by the school in order to encourage teachers to reside in school and thus assist in school management aspects. Schools have frequently accrued subsistence demands as a result of instructors remaining in schools to take care of the safety of the pupils when the institution has boarding facilities.

The respondents on average indicated that they thought the school accommodation status holistically influenced cost efficiency to a small extent *(M=2.10, SD=0.49).* This can be attributable to existence of a large number of day schools in Bomet County that do not require extensive expenses as boarding schools on water, electricity, security and safety of learners, administration, repairs and maintenance, food and non- teaching staff salaries. The standard deviation indicated that there was a high consensus amongst the respondents due to a standard deviation of less than 0.5.

The study sought to test the hypothesis that school accommodation status did not have statistically significant influence on the cost efficiency of public secondary schools in Bomet County. The simple linear regression was used to test the following hypothesis:

H₀: There is no statistically significant influence of school accommodation status on cost efficiency in public secondary schools

The simple linear regression statistics of the correlation coefficient *(R)*, coefficient of determination (R Square), F test and the t test were examined in the study. The examination of the simple linear regression statistics commenced with examining the model summary which provides the results for R (Correlation coefficient) and R Square (coefficient of determination). The results were presented in Table 5.

Table 5
Model Summary of School Accommodation Status

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.157ᵃ	.025	.018	.21945

a. Predictors: (Constant), School Accommodation Status

The correlation coefficient of the association between school accommodation status and the cost efficiency of public secondary schools was 0.157. This indicated a weak positive correlation between school accommodation status and cost efficiency in public secondary schools in Bomet County. The study further found that the R square was at 0.025. According to Best and Wolf (2015)the coefficient of determination (R Square) is used for the purposes of determining the variance in the dependent variable that is attributable to the independent variable. In the context of this study, the coefficient of determination of 0.025 indicated that it was only 2.5% of the variance in the cost efficiency that is attributable to the aspect of school accommodation status in Bomet County. This finding was attributable the schools not incurring a huge expense in respect to water bills, electricity bills, food related expenses, subordinate staff salaries and teacher subsistence costs as a result of the school accommodation status. This was further attributable to a

majority of the schools in Bomet being rural schools enabling ease of access to food items from the local communities.

The one-way ANOVA was used in examining the overall significance of the model in predicting the dependent variable. In this study, the one-way ANOVA at 5% level of significance level was used in examining that the regression model is able to predict the cost efficiency of public secondary schools in Bomet County. The results were presented in Table 6.

Table 6

Anova of School Accommodation Status

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	.173	1	.173	3.596	.060[b]
1	Residual	6.838	142	.048		
	Total	**7.012**	**143**			

a. Dependent Variable: Cost Efficiency
b. Predictors: (Constant), School Accommodation Status

The F test results of the one-way ANOVA were $F_{0.05}$ (1,142) =3.596, *p* value =.060. According to Gordon (2015) a p value of above 0.05 (level of significance) for the F test indicates lack of statistically significance in the overall model capacity to predict the dependent variable. In this study, since p value >0.05, a conclusion was reached that the school accommodation status had no capacity to predict the cost efficiency of public secondary schools in Bomet County. According to Bingham and Fry (2010), the F test is an equivalent test to the t test within the context of simple linear regression analysis. Having found that there was no overall significance of the model using the F test, a conclusion was further reached to accept the null hypothesis that there was no statistically significant influence of the school accommodation status on the cost efficiency of public secondary schools in Bomet County. The results were attributable to most of the schools being day schools and the cost indicators being examined having no major differences between day and boarding schools.

The findings of this study are however inconsistent with other studies that have examined the aspects of school accommodation status on the cost efficiency aspects in public secondary schools. Ngetich *et al,* (2018) in a study based in Nandi County empirically linked the aspects of school accommodation status to the cost efficiency aspects. Ngetich et al,(2018) that within the context of Nandi County an average unit cost of Ksh. 22,263 and Ksh. 54,828 for Day and Boarding public secondary schools respectively in the county. Salikin, Wildan and Rokhmat (2019) in a study examining the management of the boarding schools noted the high cost of running secondary schools. In this context, Salikin et al,(2019) noted that high operational costs of the boarding schools necessitates the critical fund raising skills to enable cost efficiency in running the school.

Conculsion and Recommendation

The study concluded that there was no statistically significant influence of the school accommodation status on the cost efficiency of public secondary schools in Bomet County. This was attributable to most of the schools within the Bomet county being within the day schools and the cost indicators being examined having no major differences between day and boarding schools within the context of Bomet County.

Day schools in Bomet County need to improve on cost control in order to gain sufficient cost efficiencies in their operations. This is due to the absence of boarding expenses that are common in boarding schools.

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