

Relationship Between Bungoma County Government Bursary and Students' Access to Public Vocational Training Centres, Bungoma County, Kenya

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Abstract

The county governments have been subsidizing trainees in public Vocational Training Centers (VTCs) in form of bursary to enhance enrolment and completion rates. The objectives of this paper are to determine the relationship between the Bungoma County Government Bursary (BCBG), gross enrolment and completion rates between the years 2014 to 2019. Correlational research design was adopted, and socialist economy theory guided the study. The study selected 48 VTCs and Training officers and 358 VTC trainees. Data was then collected using questionnaires. The strength of the correlation was established using Karl Pearson's product moment correlation whereby, the study established that the BCBG had a weak positive correlation with enrolment and a very weak positive correlation with completion rates. Using the R² obtained from the model. It was also established that BCBG explains 2.7% of the variation in gross enrolment and 5.1% of completion rates. The study recommended further diversification of VTCs courses in line with the ever-changing technological world and market demand and the introduction of diverse programmes like lunch in VTCs to attract more enrolment and increase completion rates.

Keywords: Relationship, Enrolment, Completion and Retention

Introduction

The county governments have been spending money in terms bursary to boost enrolment and completion rates in the public Vocational Training Centres (VTC). However, national statistics indicated that private VTCs had a higher enrolment capacity in comparison to the public VTCs. This raised a great concern especially in Bungoma county where the VTC trainees had been receiving varied amounts of money in the form of the Bungoma county government bursary since the year 2014. This was unlike other counties like Kakamega county where for instance, the VTCs trainees would receive a uniform amount of Kshs. 15,000 per trainee per year in the form of county government bursary. There was thus, need to establish how the variation in the amount of bursary related with enrolment and completion rates in public VTCs in Bungoma county.

Moreover, VTCs were devolved from the national government and made a mandate of the county government yet, a study that was conducted had indicated that, TVET institutions in Bungoma County may have been getting more funding from national government sources like the CDF than from the BCGB. Furthermore, studies that were reviewed under the current study yielded contradictory findings on the relationship between bursary and access. Thus, there was need to conduct the current study in Bungoma county.

Osidipe (2017) affirmed that, TVET is considered pivotal to achieving both national and regional development goal. Therefore, there needs to be a steady increase in enrolment in VTCs each year for the VTCs to play a significant role and this, could explains why a lot of government funds are being and have been invested in the VTCs in terms of bursary sine the 2013/2014 financial year to enable the trainees meet the cost of fees in order to increase the number of those youths who are able to enroll into VTCs and acquire the required skills. It is for this reason that the current study endeavored to establish the relationship between the BCGB and gross enrolment in public VTCs.

A study by Nielsen et. al. (2008), “estimating the effect of student aid on college enrolment: evidence from a government grant policy reform.” established that the government grant policy reform had a positive significant influence on enrolment in colleges. This, while noting that enrolment was less responsive than was found in other studies. The purpose of the study by Nielsen et. al. (2008) was to establish the responsiveness of the demand for college to changes in student aid arising from a Danish reform and the objectives of their study were: to separately identify the effect of aid from that of other observed and unobserved variables for instance parental income, to exploit the combination of a kinked aid scheme and a reform of student aid to identify the effect of direct costs on college enrolment. Their study used the regression kink design and was conducted in Denmark.

Similarly, in Kenya, studies by Ng’alu and Bomett (2014), “the role of constitutional development fund (CDF) in provision of secondary education in Kenya,” Oyoo et. al. (2020) “influence of national government constituency development fund support on student enrolment in Muhoroni constituency in Kisumu County Kenya,” and Wasike et. al. (2020), “utility of government initiatives in technical, vocational training institutions on student enrolment in Bungoma County, Kenya,” established that there a positive significant relationship between bursaries and enrolment of students in secondary schools. The purpose of the study by Ng’alu and Bomett (2014) was to investigate the role of the CDF in the provision of secondary school education in Kilome constituency and the objectives of the study were: to assess the challenges

encountered by secondary schools in achieving CDF funds in Kilome constituency, to investigate the role of CDF on provision of facilities in secondary schools and to establish the role of CDF in improving enrolment in secondary schools. While the purpose of the study by Oyoo et. al. (2020) was to investigate the influence of NCDF support on student enrolment in Muhoroni constituency. The purpose of the study by Wasike et. al. (2020b) was to investigate the contribution of government initiatives in TVET on enrolment in Bungoma County Kenya. The three studies used the descriptive survey research design and the studies by Ng'alu and Bomett (2014) and Oyoo et. al. (2020) collected data using two methods thus: questionnaires and interview schedules. The study by Wasike et. al. (2020b) used questionnaires to collect data. This was unlike the current study that used three methods of data collection. moreover, even though the study by Wasike et. al. (2020b) was conducted in Bungoma county, its focus was on TVET in general, unlike the current study which focused specifically on VTCs.

A study by Ali (2017), "the impact of subsidized fees program on students' access to quality education in public secondary schools in Wajir County, Kenya" and a study by Tanui (2016), "effect of government financial interventions on education indices of the vulnerable secondary school students in Nandi North sub county, Nandi County, Kenya," both established that enrolment rates had remained low after the introduction of the subsidized fee program, The purpose of the study by Ali (2017) was to establish the relationship between subsidized fees programme and students' access to quality education in public secondary schools in Wajir County, Kenya. And the objectives of the study by Ali (2017) were: to establish the effect of subsidized fees on enrolment rates in public secondary schools, to determine the influence of subsidized fees on student's academic performance, to examine how schools adhere to subsidized fees utilization of financial resources on student access to quality education and to examine the impact of subsidized fees programme on procurement of instructional materials for effective quality secondary education in Wajir County. The study by Ali (2017) collected data using questionnaires, document analysis by use of checklists, interview schedules and observation schedules. The purpose of the study by Tanui (2016) was to investigate the effect of government financial interventions on the vulnerable secondary school students in Nandi North sub county. This study used the survey research design and collected data using questionnaires and interviews.

Studies by Nielsen et. al. (2008), Oyoo et.al. (2020), Ng'alu and Bomett (2014) and Wasike et. al. (2020) arrived at the same conclusion that bursary had increased enrolment, these findings were contrary to those of the studies by Ali (2017) and Tanui (2016) which established that enrolment remained low even after the introduction of the subsidized fee program. These studies were different from the current study in that their methods of data collection differed from the current study. For instance: studies by Ng'alu and Bomett (2014) and Oyoo et. al. (2020) collected data using two methods thus: questionnaires and interview schedules while the study by Wasike et. al. (2020b) used questionnaires to collect data. The study by Ali (2017) collected data using questionnaires, document analysis by use of checklists, interview schedules and observation schedules and the study by Tanui (2016) collected data using questionnaires and interviews. This study was unlike the current study that used three methods of data collection. moreover, even though the study by Wasike et. al. (2020) was conducted in Bungoma county, its focus was on TVET in general, unlike the current study which focused specifically on VTCs.

The government has been spending money in form of bursary on VTC trainees in Bungoma since the 2014 therefore it would seem sensible to obtain feedback for this expenditure in terms of completion rates. Because, if a trainee does not complete a course that he or she is enrolled in, then the trainees may lack

adequate skills and they may also lack certification that proves their competence in certain skills that they may possess, in case they may want to seek employment or secure government contracts both of which may require proof of competence. Similarly, delayed completion of VTC courses increases the cost of training as more money is spent on each additional year that trainee will be in the VTC. That is why it was important for the current study to establish the completion rates of the trainees from the VTC programs.

Dynarski (2007) in her work “The Economics of Student Aid,” expressed her fears that students induced into college by grant aid may be unable to handle the academic rigors of college. The study justified this conclusion by quoting the 2000 Census in the USA where, 37 percent of those aged 22 to 34 with any college experience had not completed even a year. The study by Dynarski (2007) was a summary of all previous studies by the same author. The findings of the study were not far from those of a study by Tanui (2016), “effects of government financial interventions on education indices of the vulnerable secondary school students in Nandi North sub county, Nandi County, Kenya,” and a study by Rukwaro et. al. (2017), “ways CDF promotes student access to secondary school education in Githunguri sub county, Kenya,” which established that there was a significant negative relationship between the government financial interventions and completion rates because the students failed to complete schooling due to inability to raise school fees. The purpose of the study by Tanui (2016) was to investigate the effect of government financial interventions on education indices of the vulnerable secondary school students in Nandi North sub county, Nandi County. The objectives and methods of data collection of the study by Tanui (2016) have already been discussed in the preceding section. The purpose of the study by Rukwaro et. al. (2017) was to investigate the influence of CDF on access to secondary schools in Githunguri sub county. The study by Rukwaro et. al. (2017) used the descriptive research design and collected data using questionnaires and interview schedules.

A study by Nzuki (2017), “Kenya’s CDF, free secondary education policy and access to secondary education,” established that CDF and the free secondary education policy had contributed to a decline in dropout rates in secondary schools. The purpose of the study was to understand the effects of the two policies on enrolment and dropout rates in Yatta constituency of Machakos County. The study used the descriptive survey research design and collected data using interview schedules.

A study by Obwari (2013), “influence of CDF on education development in the counties: a study of public secondary schools in Likuyani Constituency, Kakamega County, Kenya,” and a study by Dzuya (2020), “effects of county bursary. On completion rates among university students in Kwale county Kenya between the academic year 2014/2015 to 2017/2018,” established that the introduction of CDF contributed to increase in graduation rates. The study by Dzuya (2020) also found that the bursaries were inadequate to pay fees charged by the school. The purpose of the study by Obwari (2013), was centered around CDF in Likuyani constituency and the objectives of the study were: to determine the extend to which CDF has been equitably distributed, its role in provision of physical facilities, to establish its effect enrolment and on learners’ academic performance in public secondary schools in Likuyani constituency. The purpose of the study by Dzuya (2020), was to determine the effect of county bursary on completion rates of university students in Kwale county. The study by Dzuya (2020), used the descriptive survey research design and collected data using questionnaires, document analysis and interview schedules just like the current study but unlike the study by Dzuya (2020), which was conducted in Kwale county, the current study was conducted in Bungoma County. The objectives of the study by Dzuya (2020) were not stated in the online

version. The study by Obwari (2013), used the descriptive survey research design and collected data using questionnaires and interview schedules.

The reviewed studies yielded contradictory findings. For instance, whereas, studies by Dynarski (2007), Tanui (2016) and Rukwaro et. al. (2017) established that bursary had a negative relationship with completion rates, studies by Obwari (2013), Nzuki (2018) and Dzuya (2020) established that there was a positive relationship between bursary and completion. Moreover, all these studies were conducted on colleges and secondary schools in the United States of America, Nandi North sub County, Githunguri sub county, Likuyani constituency, Kilome constituency and Kwale county respectively. Furthermore, the purpose of the reviewed studies were different from the purpose of the current study. For instance: the study by Dynarski (2007) was a summary of all previous studies by the same author, the purpose of the study by Tanui (2016) was to investigate the effect of government financial interventions on education indices of the vulnerable secondary school students in Nandi North sub county, Nandi County, the purpose of the study by Rukwaro et. al. (2017) was to investigate the influence of CDF on access to secondary schools in Githunguri sub county, the purpose of the study by Nzuki (2017) was to understand the effects of the two policies on both enrolment and dropout rates among secondary school age children, the purpose of the study by Obwari (2013) was to determine the influence of CDF on secondary school education development in Likuyani constituency and the purpose of the study by Dzuya (2020) was to determine the effect of county bursary on completion rates of university students in Kwale county. This was unlike the current study whose purpose was to establish the relationship between Bungoma County Government Bursary (BCGB) and students' access and completion rates in public vocational education, Bungoma County, Kenya. The study was guided by the following objectives:

- To determine the relationship between BCGB and gross enrolment in public VTCs between the years 2014 to 2019.
- To determine the relationship between BCGB and completion rates in public VTCs between the years 2014 to 2019.

The study was guided by the socialist economy theory. Just like in a socialist economy, all trainees enrolled in public VTCs of Bungoma county are entitled to the Bungoma County Government Bursary. The bursary is awarded to the trainees with the hope that it would remove the disparity that existed between the youth from poor economic backgrounds and rich economic backgrounds in terms of access, by meeting part of the tuition fees for the trainees of the VTCs. This theory was applied to the current study in the sense that, when the poor are enabled to enroll into VTCs, the initial number of these enrolled will definitely increase. The principle of demand and supply states that, all things constant, when commodity prices rise, the quantity demanded of a commodity falls and vice versa Mankiw (2007).

In the school scenario, this theory implies that other things constant, when the amount of money required of a potential trainee to pay in terms of tuition fees in education institutions (like VTCs) is increased, the number of those who are willing and able to enroll into the institutions reduces and when the amount of tuition fees required of a potential trainee to pay is lowered, the number of those who are willing and able to enroll into the institutions increases. Therefore, the bursary reduces the amount of tuition fees that VTCs trainees have to pay in form of tuition and this would mean that more students would be able to enroll in

the VTCs and even complete the courses they were enrolled into, by sitting national exams in these respective courses they enrolled for and vice versa. The principle of demand and supply was noticed in the marketplace long before it was mentioned in a published work or even given its name. Some of the people who are credited with written descriptions of this principle in their publications include: John Locke's, Sir James Stuart's, Adam Smith's, and Alfred Marshal's, Investopedia.com (2019).

However, the principle is not so straight forward since, the type of market (thus: elastic, inelastic or normal supply market) may affect its behavior. In the scenario of an education institution, the level of education becomes the market and thus, whereas an increase in the amount of bursary may cause enrolment in a given institution to increase while tuition remains unchanged, in others, an increase in the amount of bursary may cause both tuition and enrolment to increase, Gillen (2012). Heller (2013) affirms this when he notes that, colleges have always been labor intensive. Implying that, even without government financial initiatives, some colleges will intent to attract enrolment. Just like there are different types of markets, there are different types of bursary and the amount awarded per trainee will vary from one institution to the next and from one region to the next. Warren (2012) for instance notes that, all subsidies are not created equal and react differently in different environments on the basis of the stage of economic development of a country, the history of the country and type of management in place.

Formal schooling in Kenya was introduced with the coming of missionaries and was later reinforced by the colonial administration in 1908 when the Fraser commission report RoK (1964) recommended the provision of technical education to Africans and the Phelps-stokes commission which recommended the adaptation of education to the needs of the rural African communities. Thus, technical education was perceived as a way through which the Europeans were using to keep their control over the Africans Eshiwani (1993). That is why it was abolished on attainment of independence, RoK (1964) and replaced with academic education. For this reason, the problem of negative attitude towards this level of education has persisted for some time. Therefore, even though there have been extensive research that have been conducted to investigate the relationship between government initiatives and the indicators of access like enrolment and completion to other levels of education like primary school and secondary school, it was still necessary to establish the state of affairs with regard to VTCs in Bungoma county.

Investopedia (2020) had noted that the challenge of the socialist economy is synchronization of the decisions of the government with the needs of the citizens. For instance, how can the government know just how much bursary is adequate for an individual student with certainty. Furthermore, when citizens are entitled to receive government support, some may tend to adopt a laid-back position in matters economic. Especially in instances where the government financial initiative is not pegged on performance. Osidipe (2017) for instances points to the fact that even though the west African region is well endowed with natural resources, it still faces development challenge and the challenge of unemployment. The question that could dote many minds here would be why the citizens of the said region are unable to exploit the minerals for their benefits and why there is a challenge in human capital development. That was why the researcher had to conduct the current study on VTCs in Bungoma County.

Methodology

The study used the correlation research design. The target population comprised of 3578 trainees enrolled in VTCs in the year 2019 and 54 principal instructors of VTCs (managers). A sample of 358 trainees were used in the study.

Findings and Discussions

The relationship between the BCGB and gross enrolment in VTCs

To measure the strength and direction between the independent variable (BCGB) and depended on variable (gross enrolment). The study used the Pearson product moment correlation coefficient. The findings shows that there was a statistically significant positive relationship between the BCGB and trainees' enrolment in the sampled public VTCs ($r= 0.335$) between the years 2014 to 2019. However, the strength of the relationship was weak.

Table 1: Pearson correlation coefficient of BCGB and gross enrolment in sampled VTCs

		Enrolment
County Government	Pearson correlation	.335
Bursary	Sig. (2 tailed)	.000
	N	48

Regression Analysis of the Relationship Between BCGB and Gross Enrolment

To test the null hypothesis $H_{01}: b=0$, the study used a simple linear regression analysis. In linear regression models the dependent variable is the factor being predicted and the factor that is being used to predict is the independent variable notes, Wasike et. al. (2020a). The model was in the form: $Y = a + bX + \epsilon$, Wasike et. al. (2020a).

Table 2 Regression analysis for the BCGB and gross enrolment in sampled VTCs

SUMMARY OUTPUT

Regression Statistics								
Multiple R	0.16575171							
R Square	0.02747363							
Adjusted R Square	0.02307306							
Standard Error	43.6168566							
Observations	223							
ANOVA								
	Df	SS	MS	F	Significance F			
Regression	1	11877.2436	11877.2436	6.24319551	0.01319515			
Residual	221	420437.07	1902.43018					
Total	222	432314.314						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	59.4662888	7.49994507	7.92889658	1.0866E-13	44.685725	74.2468525	44.685725	74.2468525
BCGB	0.00251333	0.00100588	2.49863873	0.01319515	0.00053099	0.00449567	0.00053099	0.00449567

For the t test, the t value (2.49) and p value ($p=.013$) meaning that there was similarity between the means of the BCGB and gross enrolment in the sampled VTCs between the years 2014 to 2019. The adjusted R^2 was 0.023, The null hypothesis that there is no statistically significance relationship between BCGB and gross enrolment in public VTCs between the years 2014 to 2019 was thus, rejected at a 2.3% significance level. The interpretation was that increase in BCGB in the sampled VTCs between the years 2014 to 2019 had a positive impact on enrolment. This was supported by the findings from the questionnaires that were administered on VTC trainees where majority of the responded felt that trainee attitude towards the VTCs was positive. However, the relationship was weak as was revealed by the coefficient correlation ($r=0.335$), and the interviews that were administered on the VTC principal instructors (managers) and the SVETOs on adequacy of bursary which found a median of 3.5 and 2.5 respectively meaning that the BCGB was neither adequate nor inadequate.

Coefficient Of Determination

To assess the amount of variation of gross enrolment that can be explained by BCGB, the coefficient of determination R^2 was 0.27. This was an indication that BCGB explained 2.7% of the variation in the gross enrolment and as such, 97.3% of the variation in gross enrolment could be attributed to other causes other than the BCGB e.g., fees charged, regularity of attendance, gender parity, adequacy of funding and nature and variety of courses offered in the VTCs.

The findings of the current study were supported by the argument of the socialist economy theory, i.e., a system of production where goods and services are produced directly for use, Wikipedia (2020). The courses offered in VTCs range from tailoring and garment making, masonry, plumbing and pipe fitting and architectural welding, motor vehicle mechanics, food technology and agri-business. These courses, when undertaken, will lead to acquisition of skills that are required in the labor market. The findings are equally supported by the principle of demand and supply which states that “other things equal, when the price of a good rises, the quantity demanded of a good falls, and when the price falls, the quantity demanded rises,” Mankiw (2007). Because the current study established that there was a positive relationship between BCGB and enrolment. Meaning that, as the bursary caters for part of the tuition fees in the VTCs thus, reducing the amount of fees required to be paid by the potential trainees, many youths from economically needy backgrounds were able to enroll in the VTCs.

Besides, the findings are in tandem with studies by Okwemba (2014), Oketch et. al. (2019), Wasike et. al. (2020b) and Nzuki (2017) which established that government financial initiatives, positively affected enrolment. However, unlike the current study that was conducted on VTCs in Bungoma county, the said studies were conducted on VTCs in Kakamega county, on secondary education in Siaya county, on TVET institutions in Bungoma County (not specifically VTCs) and on secondary schools in Yatta subcounty respectively. Besides, financial initiatives in the studies by Oketch et. al. (2019), Wasike et. al. (2020) and Nzuki (2017) included both bursary in terms of CDF and free day secondary school education. And financial initiatives fell outside the scope of the study by Okwemba (2014).

3.4 Pearson correlation analysis for BCGB and gross enrolment in the VTCs

To measure the strength and direction between the independent variable (BCGB) and depended variable (completion rate). The study used the Pearson product moment correlation coefficient.

Table 3: Pearson Correlation coefficient BCGB and completion rates in sampled VTCs

		Completion rates
County Government	Pearson correlation	.087
Bursary	Sig. (2 tailed)	.000
	N	48

The findings of the Pearson correlation coefficient established that there was a statistically significant positive relationship between BCGB and completion rates ($r= 0.087$) in the sampled public VTCs between the years 2014 to 2019. However, this indicated that the strength of the relationship was very weak.

Regression Analysis of The Relationship Between BCGB And Completion Rates

To test the null hypothesis $H_0: b=0$, the study used a simple linear regression analysis. The model was in the form: $Y = a + bX + \epsilon$, $\epsilon \sim N(0,1)$, Wasike et. al. (2020a)

For the t test, the t value (-2.8) and p value ($p=.005$) meaning that there was similarity between the means of the BCGB and completion rates in the sampled VTCs between the years 2014 to 2019. The table 4.14 also shows that the adjusted R^2 was 0.044. The null hypothesis that there is no statistically significance relationship between BCGB and completion rates in public VTCs between the years 2014 to 2019 was thus, rejected at a 4.4% significance level. The interpretation was that increase in BCGB in the sampled VTCs between the years 2014 to 2019 had a positive impact on completion rates. This was illustrated from the differed opinions of the respondents of the interviews thus, managers and the SCVETOs and which could not be far from truth as was established by the fact that the findings from the Pearson correlation showed a very weak positive correlation between BCGB and the completion rates in the sampled VTCs in Bungoma County $r(0.087)$

Coefficient Of Determination

R^2 was used to determine the amount of variation of completion rates that could be explained by BCGB. It was established that R^2 was (0.51) meaning that 5.1% of the variation in completion rates could be explained by the BCGB while the rest (94.9%) could be attributed to other factors like fees charged, adequacy of bursary, regularity of attendance and gender parity.

The findings of the current study were supported by the argument of socialist economy theory because, unlike the trainees of the mainstream education levels like primary school, secondary school or university, trainees of the VTCs, even without certification, can engage in gainful work and be economically productive in the society. This is to say that youths from needy backgrounds who are able to enroll into VTCs due to the financial help offered by the BCGB (principal of demand and supply) and even graduate and skills lead to employability, Powell and McGrath (2013). Similarly, a study by Nzuki (2017) on secondary schools in Yatta subcounty established that government financial initiatives, positively affected enrolment and a study by Obwari (2013) established that the graduation rates kept increasing after the introduction of the constituency development fund (CDF). These studies were different from the current study because they were conducted in other counties other than Bungoma county.

Conclusion

On the relationship between BCGB and gross enrolment, Pearson correlation was ($r= 0.335$), the t value (2.49), p value ($p=.013$), the adjusted R^2 was 0.023 and R^2 was (0.027). The study thus, rejected the null hypotheses at a less than 2.3% significance level. This means that there was a significant relationship between BCGB and enrolment. Thus the higher the amount of bursary provided, the higher the enrolment.

On the relationship between BCGB and completion rates, Pearson correlation was ($r= 0.087$), the t value (-2.8), p value ($p=.005$), adjusted R^2 was 0.044 and R^2 was (0.051). The study thus, rejected the null hypotheses at a less than 4.4% significance level. This means that there was a significant relationship between BCGB and completion rates. Thus, the higher the amount of bursary provided, the higher the completion rates.

Recommendations

- On the relationship between the BCGB and gross enrolment, the study recommends the county governments to enhance bursary allocation to VTCs. This will promote development of infrastructure in the VTCs to change the general outlook of the institutions. This will hopefully serve to change the attitude of stakeholders towards them and finally promote enrolment.
- On the relationship between the BCGB and completion rates, the study recommends increasing the amount of bursary to cater for examination fees. This will lead to more trainees sitting for final exams which is a precursor to completion of studies. The more the trainees complete their studies, the more others are motivated to enroll.

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