AN EMPIRICAL INVESTIGATION INTO THE DRIVERS OF SECONDARY SCHOOL FUNDING DISPARITIES AND THEIR EFFECTS ON SCHOOL PERFORMANCE: EVIDENCE FROM SELECTED PUBLIC SECONDARY GENERAL EDUCATION SCHOOLS IN THE NORTH WEST REGION OF CAMEROON.

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Abstract.

Purpose: School funding has been and remains a source of worry to governments of many countries in the world. The government of Cameroon in an attempt to attend to this worry spends huge financial resources each year as funding to the school system. This study attempted to investigate into the appropriateness of government funding to public secondary general education schools in Cameroon, using the North West Region as a case study. Specifically, the study aimed at: (a) investigating the causes of funding disparities between schools, (b) scrutinizing the effects of funding on school performance, and (c) elucidating the grass root perspectives on appropriate measures to enhance funding to schools.

Methodology: The study made use of the stratified random sampling technique to select a total of 115 schools, and data was collected using questionnaires. To ascertain the reliability of the instrument used, a pilot test was carried out. The data was analysed using both descriptive and inferential statistics. The probit and ordered logistic regression models were employed to test the hypotheses of the study.

Findings: The findings from the study reveal among others that: (a) school enrolment, school needs, influence by some stakeholders and age of school all have significant effects on funding, (b) that funding in the form of infrastructure, running credits and staffing all affect school performance, and (c) that schools should be funded based on their actual needs.

Contribution to policy, practice and policy: These results policy wise suggest that funding to schools should take into consideration the enrolment, needs, and age of the school. Also, that adequate infrastructure, running credits and staff should be provided to schools since these affect academic performance.

Keywords: *School Funding, School Performance and Funding Desparity*

1.0 INTRODUCTION

The education of citizens of any country is perceived as investment in human capital which increases economic growth, Schultz, (1961) whereas illiteracy imposes both relative and absolute burden on the economic wellbeing of such a country (UNESCO, 2000). The importance of education cannot be shadowed as it remains a powerful instrument for reducing poverty and inequality. It increases productivity through skilled manpower, and lays the foundation for sustained economic growth, Dorleku, (2013) as well as promoting the political, economic and social development of any country (Adan & Orodo 2015). This prominent role of education in global development was recently confirmed by both the Millennium Development Goals (MDGs) and Sustainable Development Goals (SDGs). In Cameroon, the

Growth and Employment Strategic Paper (GESP, 2009) and (Vision 2035) bring to the lime light the important role education has to play in ensuring the sustainable development initiative of the country.

The importance of educational development provoked countries across the globe to engage in financial support to this sector. Such financial engagement was discovered to be an essential element for any successful education system in the world, Twene (2014), since provision of public funds for education enhances national unity, Cohen & Geske, (1990) as well as it maintains equality of opportunities and income redistribution (William, 1973). Despite the importance of education, its provision and management has continued to meet with many challenges including poverty, thus governments of countries have taken the engagement to provide financial interventions to reduce costs on poorer families (Sineta, 2012). Such financial aid programs to poor families in schools which in theory should be efficient and effective have proven the contrary (Gillen, 2010). This state of affairs has attracted criticisms on educational systems in sub-Saharan Africa as concerns the unequal distribution, inefficient use and misallocation of resources between schools (World Bank; 1986, 1988).

Many African countries started putting in lots of investments for the provision of free secondary education UNESCO, (2000) and Cameroon wasn't left out of this race. Funding to schools started during the pre-colonial days when the Baptist missionaries offered tuition-free education, and even made gifts to pupils to encourage them to attend school. The German colonial administration on its part made huge financial grants to mission schools in Cameroon and other financial incentives in exchange for the teaching of the German language (Gwanfogbe, 1995). Later, the Cameroon Constitution of 1996 was crafted to guarantee every child's right to free and compulsory education, and that the organization and supervision of education shall be the responsibility of the state. In this light Cameroon's successive governments have taken this responsibility to finance education from the state budget as stated in law No. 98/004 (1998), to lay down guidelines for education in Cameroon.

Statement of the Problem

The Government of Cameroon puts enormous financial resources into the education sector with the intention of providing quality education to its future leaders. Such financial resources are intended to reach all the nooks and crannies of the national triangle, to provide investment funds through the government scheme "Public Investment Budget" (PIB) and running credits to all schools. Nevertheless, the manner in which these funds are distributed has raised and is still raising great concerns. In the Secondary General Education Sector which is the focus of this study, there are schools with high enrolment that lack basic infrastructure like classrooms and benches, no access to electricity, no portable water, lack of toilets and other basic facilities. On the other hand, some schools with very low enrolment paradoxically receive more funds for these facilities. Running credits too are distributed without regard for enrolment. Generally there are schools with almost everything, while others lack just everything and are left at the mercy of their local communities.

To illustrate this, the Cameroon National Institute of Statistics, (2010) carried out a survey on the monitoring of public expenditures and the level of recipients' satisfaction in the education sector. Results of the survey showed that in the area of infrastructure, there are schools constructed with temporary material, some without functional computers, libraries, some with few benches, no electricity and portable water, all differences observed between urban and rural areas. In terms of human resources, the East, Adamawa, North and Far North regions largely needed personnel.

The above survey suggests that there is actually no basis for funding especially as it is noticed that there is no follow-up or accountability of public expenditure. All these are indications that there is no level playing ground as far as the distribution of the limited resources as funding to schools is concerned. The criterion for award of PIB and running credits to schools has thus remained a mystery, an unresolved puzzle.

Such prevailing circumstances may have serious consequences on teachers' in-put and out-put, consequently on school performance. Demoralised students too may abandon school to become a social menace. Even parents and students may not prefer schools with infrastructural difficulties, thus students may move to other areas or simply abandon school, consequently affecting enrolment.

It is this deficiency of proportionate funding to schools which this work is out to analyze. It seeks to find out the reasons for these funding disparities, while at the same time tracing the relationship between funding and school needs, enrolment, performance, and the expectations or opinions of grass roots.

Based on the above background and the problem statement, the main objective of this study is to investigate into the drivers of public secondary school funding disparities and their effects on academic performance. From the main objective, the following specific objectives were formulated:

i. To find out the causes of funding disparities between public secondary schools in the North West region of Cameroon.
ii. To investigate the effects of funding on public secondary school performance in the North West region of Cameroon.
iii. To scrutinize the perspectives of grassroots on appropriate measures to enhance public secondary school funding.

Following the objectives of the study, the main research question is; what are the drivers of public secondary school funding disparities and their effects on school performance? From the major specific question, we formulated the following specific questions;

i. What accounts for funding disparities between public secondary schools in the North West region of Cameroon?
ii. What are the effects of funding on public secondary school performance in the North West region of Cameroon?
iii. What are the perspectives of grass roots on appropriate measures to enhance funding to schools?

In order to achieve the above objectives, the following hypotheses were tested:-

i. Funds for project are not based on enrolment, school needs, influence and age of school.
ii. Funds for infrastructure, as running credits and teachers do not affect school performance.
iii. There are no clear grass root perspectives on appropriate measures to enhance funding to schools.

This study is motivated by the absence of empirical studies related to the appropriateness of school funding in Cameroon as far as we understand, with focus on the causes of funding disparities and their effects on school performance. The relationship between funding and school enrolment, school needs, influence and their effects on school performance is a lacuna which if handled could lead to the awareness of appropriate measures of funding to secondary schools in Cameroon.

The rest of the paper will be arranged as follows; section two will examine literature review, section three will duel on methodology, section four will highlight issues relating to findings, section five will conclude and section six will bring out recommendations of this paper.

2.0 LITERATURE REVIEW

Works previously written in the area of school Funding were reviewed, specifically those that handle causes of funding disparities, funding and school performance, and finally grass root perspectives on school funding.

Samuels (2016) investigated into the causes of funding disparities in America's school system and found out that funding disparities are as a result of schools funded from local property taxes, with a minimal percentage of school budgets from government. This leaves poor districts with little resources for their schools and vice-versa. In a similar survey, Hillman and Jenkner (2004) set out to find if government's finances for free education causes funding disparities in schools. An investigation of some Asian and Sub Saharan African countries revealed unequal resources put at the disposal of schools by their governments. Similarly a World Bank article (2011), reports of differences between schools and regions in terms of infrastructure in Cameroon as a result of lack of transparency. While these studies are important for revealing causes of funding disparities, their recommendations for equitable distribution of resources do not fully satisfy the aims of this article since they do not touch on the effects of disparities on school performance.

The correlation between funding disparities and school performance was investigated by Weyss et al (2016) who were interested in finding out if equitable distribution of available funds improves on learner's performance. In a comparative research method, they compared the South African funding models to models adopted by Brazil, Chile, South Korea, Gambia, Malawi and Uganda. Findings indicated that a multi-faceted approach to allocate funds could improve on performance though it would be complicated to handle. McGowen (2007) was interested in the impact of school facility on student achievement, and results indicated that aging school structures had an impact on learners' performance. Ntondumu (2010) was, focused on determining the factors that influence students' performance in schools in Cameroon. From a comparative study of mission, public and private schools, findings showed that the availability of equipped libraries lead to better student performance.   Here, recommendations of providing appropriate infrastructure to schools to improve on students' performances without investigating on the views of grass root people wouldn't satisfy the aims of this article. Malhoit (2005) sets out to measure the impact of grass root perspectives with regard to school funding. Findings showed that grass root people and community groups are a force to reckon with as concerns adequate education, thus should be involved in defining its cost. The study thus recommends that grass roots and other local groups need full participation, a form of local democracy and concerted action in adopting the formula for allocating school funds.

3.0 METHODOLOGY

Model Specification

The model in this paper is structured to find out if existing independent variables influence funding to schools, leading to funding disparities, and also how funding may affect school performance.

The model is thus stated as follows;

$$AF = \beta_o + \beta_1 EN + \beta_2 SN + \beta_3 IN + \beta_4 AS + \varepsilon. \quad SP = \beta_o + \beta_1 INF + \beta_2 RC + \beta_3 NT + \beta_4 EN + \varepsilon$$

Where: AF = A dependent variable which stands for Availability of Funds for school projects or nothing. β_o = the constant term

Independent Variables: EN = Enrolment, SN = School Needs, IN = Influence, AS = Age of School, ε = error term.

SP = A dependent variable which stands for School Performance,

Independent Variables: INF = Infrastructure, RC = Running Credits, NT = Number of Teachers.

The dependent and independent variables in this study are used to find out the causes of funding disparities between schools, the effects of funding on school performance and perspectives of grass root on appropriate measures to enhance funding to schools. The table below indicates how the main research questions were investigated.

Table 1: Operationalization of Variables.

DEPENDENT VARIABLE	INDEPENDENT VARIABLES	VARIABLES/INDICATORS	MEASUREMENT OF VARIABLES/INDICATORS.
RESEARCH QUESTION 1.		What accounts for funding disparities between schools?	
Available Funds (AF)	• Enrolment • School needs, • Influence. • Age of school	• Increasing/Decreasing enrolment. • Got/Did not get needs • Contacts made, • Year of creation.	• Quantitative Questionnaire: Close-ended Open-ended
RESEARCH QUESTION 2.	What are the effects of funding on school performance?		
School Performance. (SP)	• Infrastructure • Running credits. • Teachers.	• Percentages passed. • Got infrastructure/Did not get. • got running credits/did not get • Got teachers/did not get.	• Quantitative Questionnaire: Close-ended Open-ended .
RESEARCH QUESTION 3.	What are the perspectives of grass roots on appropriate measures to enhance funding to schools?		
PIB Projects (Funds)	• infrastructure • Running Credits.	• General views • Individual views.	• Questionnaire, • Discussions

Source: Constructed by authors

Study Design

This study is the case study type which uses the quantitative and comparative survey methods as means of gathering data. Case study is used because it provides detailed information about funding which could not be gotten from all the schools in Cameroon due to many constraints, including distances, finances and even time. The target population for the collection of data for this study is made up of all the 262 government secondary general education schools located

in all the seven divisions of North West Region of Cameroon. The stratified random sampling technique was used to randomly select the 115 schools for questionnaires distribution from which 92 filled and returned. The researcher thus through questionnaires and document analysis for a period of five years, got a generalized view of funding in all the schools of the ten Regions of Cameroon. Open and closed-ended questions were administered to selected school heads to gather information from 2012 to 2016. Primary and secondary sources of information were used for data collection and for analysis, descriptive statistics, Pearson's correlation matrix, multiple regression, that is; probit and ordered logistic regression models which were used to capture relationship between variables.

4.0 FINDINGS AND DISCUSSIONS

Presentation of Demographic Related Data and Analysis

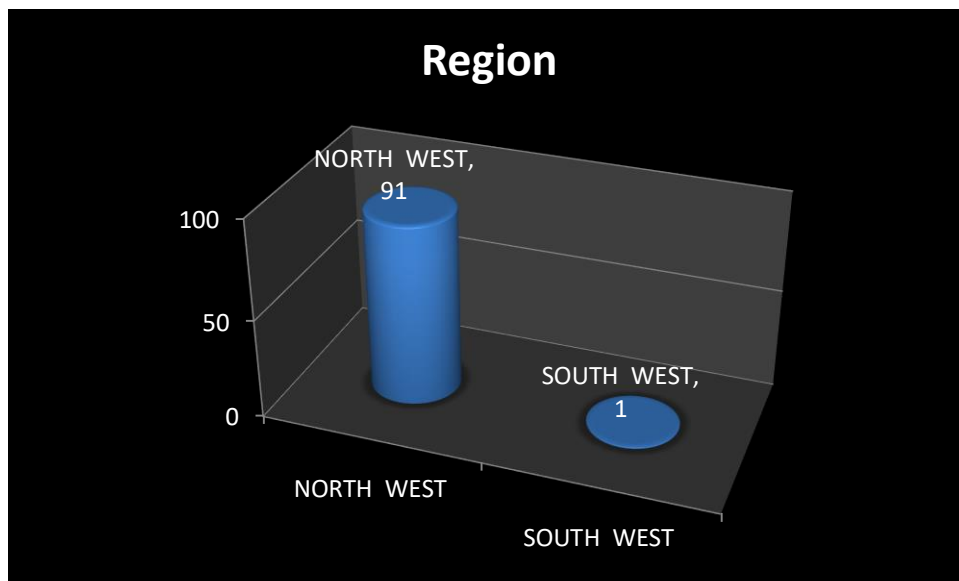**Distribution of Respondents by gender**

 Figure 1 below shows that 91% of the principals were male while only 9% of the principals were female. It shows that majority of principals are males while an insignificant number of the principals are females. This can be justified by the fact that most parents especially in the rural areas still believe that only the male child should be sent to school, while the female should simply be sent to marriage. Secondly, this suggests that in Cameroon, appointments are still gender biased.
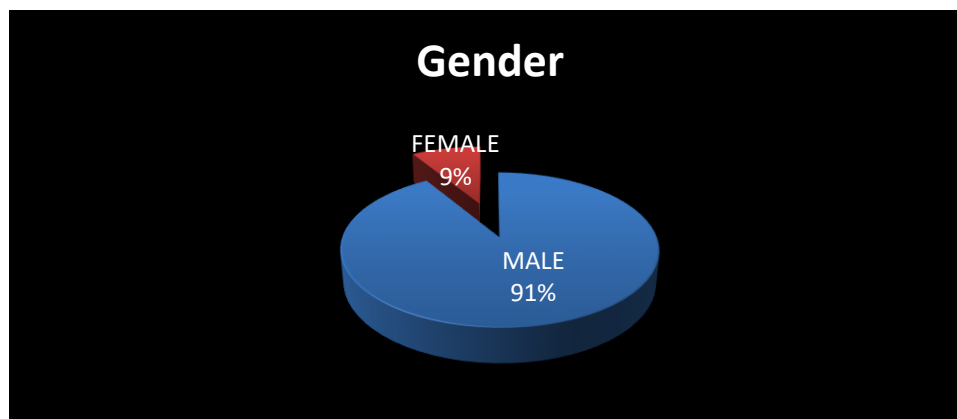
Figure 1: Gender of Respondent
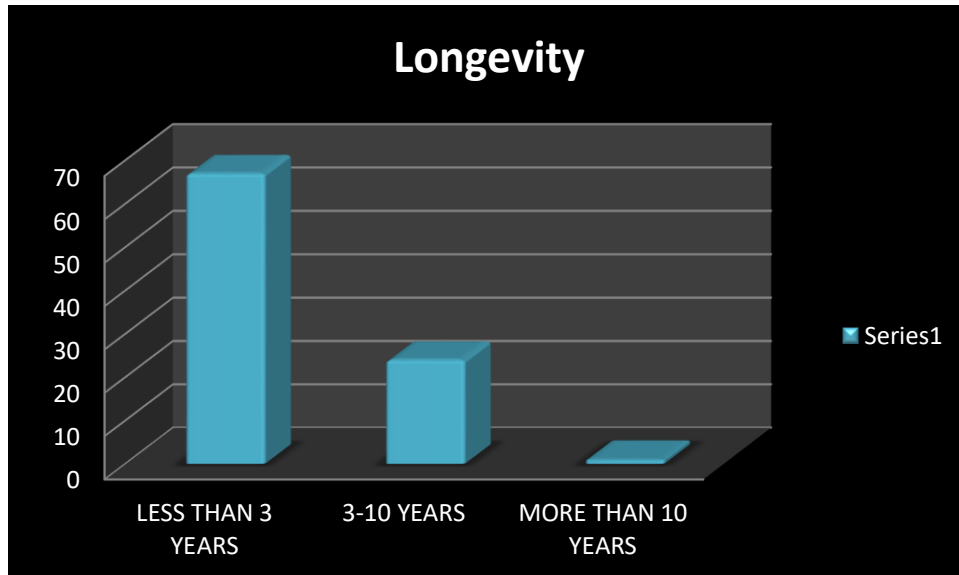
Distribution of Respondents by Region of Origin

Figure 2 below, 91 of the Principals out of 92 are of North West origin, whereas only 1 of them is from the South West Region. So a greater number of Principals are from the North West Region. This suggests that the government has the tendency of appointing Principals to posts only in their regions of origin, all other things being equal.

Figure 2: Region of Respondents

Distribution of Respondents by Longevity in Post

Figure 3 shows that 67 Principals have stayed for less than 3years in their present schools, while 24 of them fall between 3-10years old in their present schools, and only 1 Principal had stayed for more than 10years in the present school. The suggestion here is that Principals do not stay for long in various posts.

Figure 3: Longevity of Respondents

Distribution of Respondents by Years as Principal

Figure 4 shows that there are 25 Principals with less than 5years of experience as school heads, whereas 40 of them have between 5-10 years of experience as school Principals, and 26 of them have above 10 years of experience as school Principals. The implication is that many Principals have from 5 years and above experience as school heads.
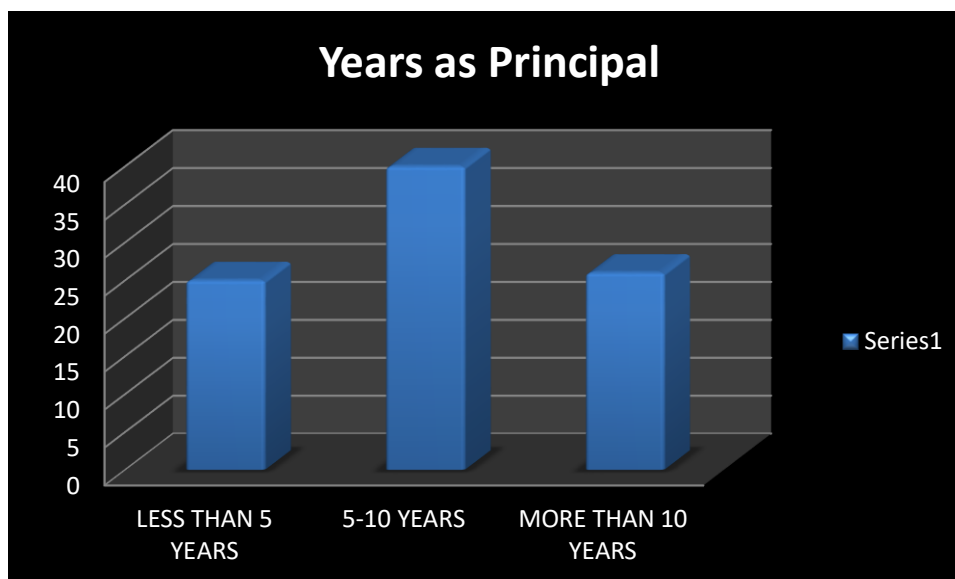
Figure 4: Years of Respondents as Principal.

Distribution of Respondents by Qualification

Concerning qualification, figure 5 shows that 3 Principals are holders of B.A or Bs.C, giving a percentage of 3%, while 82 Principals are holders of either DIPES or DIPLEG, with 89% and 7 Principals are holders of M.A or Ms.C, giving 8%. The implication here is that holders of the teachers' professional diploma; DIPES II or DIPLEG are given preference to head schools.
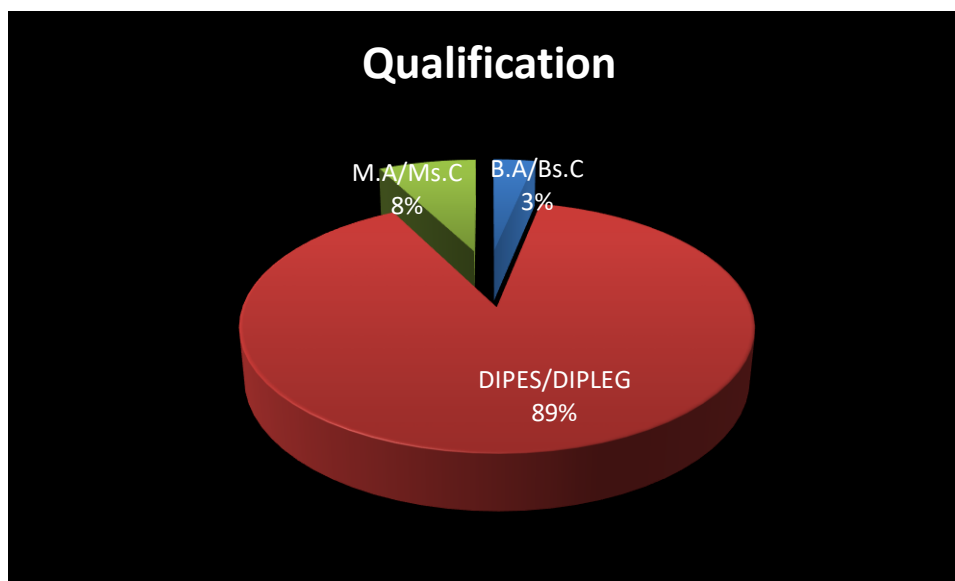
Figure 5: Qualifications of Respondents

Presentation of Other Important findings

School Funding Situation

Table 3 below shows that 68 out of 92 school in 2012 received funds for projects, giving a percentage of 73.9%, while 24 did not receive any funds giving a percentage of 26.1%. In 2013, 16 schools received funds, that is, 17.4%, while 76 schools did not receive funds for projects. In 2014, 16 schools received funds, while 71 schools did not. In 2015, 21 schools received

funds as against 71 which did not receive. Finally in 2016, 20 schools received funds for projects, while 77 schools did not. Generally, fewer schools received funds between 2013 – 2016, but given the near constant envelop attributed to the region, it is implied that some schools are always forgotten. (Appendix 4)

Table 3: Reception of funds by schools from 2012 to 2016

Years	Yes	No
2012	68 (73.9%)	24 (26.1%)
2013	16 (17.4%)	76 (82.6%)
2014	21 (22.8%)	71 (77.2%)
2015	21 (22.8%)	71 (77.2%)
2016	20 (21.7%)	72 (78.3%)

Source: Computed by Author

School Enrolment Situation

In table 4 below, 75 out of 92 schools in 2012 had an enrolment of below 500 students, 8 schools with enrolment between 500-1000 students, 7 schools with 1001-2000 students, and 2 schools with enrolment of above 2000 students. In 2013, 70 schools with below 500 students, 10 schools with between 500-1000, 9 schools with enrolment of 1001-2000, and 3 schools with enrolment of above 2000 students. In 2014,68 schools recorded enrolment below 500 students, 10 with between 500-1000, 10 with 1001-2000, and 4 schools with enrolment of above 2000 students. In 2015, 64 schools had enrolment below 500 students, 15 schools with enrolment between 500-1000, 7 schools with 1001-2000 students, and 3 schools with enrolment of above 2000 students. Finally in 2016, 64 schools were with below 500 student enrolment, 15 schools with between 500-1000, 10 schools with between 1001-2000 student enrolment, and 3 schools with above 2000 student enrolment. The general observation is that most schools have yearly enrolments of less than 500 students, while very few schools have yearly enrolments of above 2000 students.

Table 4: School Enrolment Situation from 2012 to 2016.

Year	Below,500 Students	500-1000 Students	1001-2000 Students	Above,2000 Students
2012	75 (81.5%)	8 (8.7%)	7 (7.6%)	2 (2.2%)
2013	70 (76.1%)	10 (10.9%)	9 (9.8%)	3 (3.3%)
2014	68 (73.9%)	10 (10.9%)	10 (10.9%)	4 (4.3%)
2015	64 (69.6%)	15 (16.3%)	7 (7.6%)	6 (6.5%)
2016	64 (69.6%)	15 (16.3%)	10 (10.9%)	3 (3.3%)

Source: Computed by Author

School Performance Situation

Table 5: School Performance Situation

Year	Below 25%	25% to 50%	51% to 75%	Above 75%
2012	31 (33.7%)	27 (29.3%)	29 (31.5%)	5 (5.4%)
2013	32 (34.8%)	28 (30.4%)	24 (26.1%)	8 (8.7%)
2014	22 (23.9%)	43 (46.7%)	24 (26.1%)	3 (3.3%)
2015	15 (16.3%)	32 (34.8%)	37 (40.2%)	8 (8.7%)
2016	13 (14.1%)	42 (45.7%)	31 (33.7%)	6 (6.5%)

Source: Computed by Author

Presentation of Specific Objective Related Findings and Interpretation

Presentation of Finding as Per Specific Objective One

Table 5 above shows that in 2012, 31 schools scored below 25% at the GCE "O" level, 27 schools scored between 25% and 50%, 29 schools scored between 51% and 75%, and 5 schools scored above 75%. In 2013, 32 schools scored less than 25% pass, 28 schools had a score of 25% to 50%, 24 schools between 51% to 75%, and 8 schools scored above 75% at the GCE. In 2014, 22 schools scored below 25% at the GCE "O" level, 43 schools scored between 25% to 50%, while 24 schools were in the range 51% to 75%, and 3 schools scored above 75%. By 2015, 15 schools performed below 25% at the GCE, 32 schools had a performance of between 25% to 50%, while 37 schools scored within the range 51% to 75%, and 8 schools scored above 75%. Finally in 2016, 13 schools had a performance of below 25% at the GCE, 42 schools had a score of 25% to 50%, 31 schools within the range of 51% to 75%, while 6 schools scored above 75%.

The first objective was to find out the causes of funding disparities between schools. To achieve this, questions were formulated which aimed at determining the causes of funding disparities between schools, using the dependent variables; school enrolment, school needs, influence and age of school. Results obtained are presented in the tables 6, 7, and 8 below.

Table 6: Summary of Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	.	Min	Max
Available funding	92	.4673913	.2016695		0	1
School enrolment	92	.6413043	.1822457		0	1
School needs	92	.2065217	.2070274		0	1
influence	92	.5869565	.1950785		0	1
Age	92	3.152174	.53318		2	4

Source: Computed by Author

Available funding has a mean of 0.4673913, a standard deviation of 0.2016695 with a minimum number of 0 and a maximum number of 1. School enrolment has a mean of 0.6413043, a standard deviation of 0.1822457 with a minimum value of 0 and a maximum

value of 1. School needs have a mean of 0.2065217, a standard deviation of 0.270274 with a minimum value of 0 and a maximum value of 1. Influence has a mean number of 0.5869565 with a standard deviation of 0.1950785 and also a minimum value of o and a maximum value of 1. Age has a mean of 3.152174, a standard deviation of 0.53318 with a minimum value of 2 and a maximum value of 4. Descriptive statistics here show a very weak relationship between variables.

The table below represents the pair-wise correlation matrix which shows the correlation which exists among the variables included in our model. The correlation coefficients of the leading diagonals stand at 1.0000 which indicates that each variable is perfectly collinear to itself. Furthermore, the results show a weak positive correlation between some of the variables included in the study, while there is also a weak negative correlation between the remainder of the explanatory variables of our model. The relatively low correlation coefficients are indications of the absence of multi collinearity, thus correlation could not be used for policy implication.

Table 7: Pair-wise Correlation Matrix

	Available funding	School enrolment	School needs	Credit/ influence	Age	Competence	Longevity
Available funding	1.000						
School enrolment	-0.1624	1.000					
School needs	0.0064	-0.1223	1.000				
Influence	0.5204	-0.0750	0.0462	1.000			
Age	-0.1456	0.4710	-0.1464	-0.0091	1.000		

Source: Computed by Authors

The Pseudo R2 of 0.2535 shows that 25% of variables that affect funding have been included in our model. Therefore 25% of variations in school funding situation is being accounted for by the variables included in this current study. The Wald chi2 statistics acting as the F ratio in this case is 33.36, which is greater than its probability value of 0.0000 showing that the model is globally significant at the 1% level of significance. Therefore the findings from this study are 99% reliable for policy prescription.

The coefficient of School enrolment is negative showing that there is a negative relationship between school enrolment and the likelihood not to receive funds. Therefore an increase in school enrolment will decrease the likelihood not to receive funds. Quantitatively, a unit increase in school enrolment will decrease the likelihood not to receive funds by the value of its marginal effect of 0.0759784.These findings are significant at the 1% level of significance. We therefore reject the null hypothesis that school enrolment has no significant effect on funding.

The coefficient of school needs is negative showing a negative relationship between school needs and the likelihood not to receive funds. Therefore an increase in school needs will lead to a decrease in the likelihood not to receive funds. Quantitatively, a unit increase in school needs will decrease the likelihood not to receive funds by the value of its marginal effect of

0.0683688.This finding is significant at a 1% level of significance. We therefore reject the null hypothesis that school needs has no significant effect on the funding.

Table 8: Presentation of Specific Objectives Related Findings.

Variables	Coefficients (Standard error)	Marginal effect (Standard error)
School Enrolment	-0.1920164*** (0.3758581)	-0.0759784*** (0.14871)
School Needs	-0.1748455*** (0.340894)	-0.0683688*** (0.13193)
Influence	1.556342*** (0.300855)	0.5460726*** (0.0854)
Age	0.3323405** (0.2845896)	0.1312415** (0.11254)
Cons	-0.1658521 (1.296382)	

Probit regression
Number of obs   =   92
Wald chi2(6)   =   33.36
Prob> chi2   =   0.0000
Log pseudo likelihood = -47.457213
Pseudo R2   =   0.2535

Source: computed by Author

NB: *, **, * stands for the 1%, 5% and 10% levels of significance respectively**

Base out-come. Not to Receive Funding

These findings are contrary to those of a World Bank article (2014) in which the Cameroon government is reported to transfer equal financial percentages to all regions. Such funds in most situations do not reflect actual needs at the regional or school level, and it is done without consulting either the local authorities or schools for their real needs. The article further explains that these financial transfers do not take into consideration the number of classrooms, the number of teachers or even enrolment figures, and under these circumstances, resource-poor schools remain disadvantaged.

The present research presents findings which are in line with this survey because the findings show that the coefficient of influence is positive meaning that there is a positive relationship between influence and the likelihood not to receive funds. Therefore an increase in the act of influence will increase the likelihood not to receive funds. Quantitatively, a unit increase in influence will lead to an increase in the likelihood not to receive funds by the value of its marginal effect of 0.5460726. These findings are significant at a 1% level of significance. These results corroborate those of (Hillman and Jenkner, 2004). So we reject the null hypothesis that influence has no significant effect on funding. Influence here is indicative of poor management, inefficiency and outright corruption as stated by (Hillman and Jenkner, 2004).

The coefficient of age is positive showing a positive relationship between age of the school and the likelihood not to receive funds. Therefore an increase in age of school will increase the likelihood not to receive funds. Quantitatively, a unit increase in age will increase the likelihood not to receive funds by the value of its marginal effect of 0.1312415.This finding is significant at a 5% level of significance. We therefore reject the null hypothesis that age of a school has no significant effect on the funding.

Presentation of Finding as Per Specific Objective Two

The second objective was to investigate the effects of funding on public secondary school performance, and to achieve this aim, the researcher formulated questions using the variables; infrastructure, running credits, and number of teachers. Questions a-d in section three of the questionnaires were meant to achieve this aim. Results obtained are presented in tables; 9, 10 and 11 below.

Table 9: Summary of Descriptive Statistics

Variable	Observations	Mean	Standard deviation	Minimum	Maximum
School performance	92	.3695652	.1853319	0	1
Infrastructure	92	.2065217	.1070274	0	1
Running credit	92	.5108696	.2026209	0	1
Number of teachers	92	.9021739	.2987072	0	1
School enrolment	92	.6413043	.4822457	0	1
Age	92	3.152174	.13318	2	4

Source: computed by Authors

School performance has a mean of .369565 and a standard deviation of .1853319 with a minimum value of 0 and a maximum value of 1. Infrastructure has a mean value of .2065217 and a standard deviation of .1070274 with a minimum value of 0 and a maximum value of 1. Running credit has a mean of .5108696 and a standard deviation of .2026209 with a minimum value of 0 and a maximum value of 1. Number of teachers has a mean of .9021739 and a standard deviation of .2987072 with a minimum value of 0 and a maximum value of 1. School

enrolment has a mean of .6413043 and standard deviation of .4822457 with a minimum value of 0 and a maximum value of 1.

Age has a mean of 3.152174 and standard deviation .13318 with a minimum value of 2 and maximum value of 4. Descriptive statistica here also show a weak relationship between variables.

Table 10: Pair-wise Correlation Matrix

	School performance	Infrastructure	Running credit	Number of teachers	School enrollment	Age	Competence	Longevity
School performance	1.000							
Infrastructure	-0.1125	1.000						
Running credit	0.2536	-0.1991	1.000					
Number of teachers	0.0247	-0.0128	0.1901	1.000				
School enrolment	0.1031	-0.1223	0.2656	0.2877	1.000			
Age	0.2474	-0.0958	0.4038	0.301	0.4710	1.0		

Source: Computed by Authors

The table above represents the pair-wise correlation matrix which shows the correlation which exists among the variables included in our model. The correlation coefficients of the leading diagonals stand at 1.0000 which indicates that each variable is perfectly collinear to itself. Furthermore, the results show a weak positive correlation between some of the variables included in the study, while there is also a weak negative correlation between the remainder of the explanatory variables of our model.

The relatively low correlation coefficients are indications of the absence of multi collinearity, thus correlation again could not be used for policy implementation. The Pseudo R^2 of 0.3045 shows that 30% of variables that affect funding have been included in our model. Therefore 30% of variations in school funding situation is being accounted for by the variables included in this current study.

The Wald chi2 statistics acting as the F ratio in this case is 13.28 is greater than its probability value of 0.0656 showing that the model is globally significant at the 10% level of significance. Therefore the findings from this study are 90% reliable for policy prescription.

The coefficient of infrastructure is negative showing a negative relationship between infrastructure and the likelihood for the school performance to be below 50%. Therefore an increase in infrastructure will lead to a decrease in the likelihood for the school performance to be below 50%. Quantitatively, a unit increase in infrastructure will decrease the likelihood for the school performance to be below 50% by the value of its marginal effect of .0921636.This

finding is therefore significant at a 1% level of significance. We therefore reject the null hypothesis that infrastructure has no significant effect on the school performance.

These findings on funding and school performance concur with Elger's (2017) theory of performance. This theory explains that knowledge acquired within specific contexts can be used to produce expected results. The theory further postulates that academic performance of students depends on infrastructural variables as classrooms, benches, computers and others. To corroborate this, Ntondumu (2010) in determining the factors that influence students' performance states that the availability of infrastructure in a school helps to produce better performance by students. In conclusion, infrastructure plays a vital role in school performance.

Table 11: Presentation of Specific Objective Related Findings.

Variable	Coefficients (Standard error)	Marginal effect (Standard error)
Infrastructure	-0.4242141*** (0.6314526)	-.0921636* (.12996)
Running credit	-0.6818117* (0.5013241)	-.1533119*** (.11142)
Number of teachers	-.4246224 *** (.929461)	-.1004914*** (.22757)
School enrolment	-.1651389* (.561074)	.0377219*** (.12899)
Age **Ordered logistic regression Number of obs = 92 Wald chi2(7) = 13.28 Prob> chi2 = 0.0656 Log pseudo likelihood = -54.270752 Pseudo R2 = 0.3045**	-.9420734*** (.5361904)	-.2137903* (.12025)

NB: *, **, * stands for the 1%, 5% and 10% levels of significance respectively**

The base outcome is below 50%.

The coefficient of running credit is negative showing a negative relationship between running credit and the likelihood for the school performance to be below 50%. Therefore an increase in running credit will decrease the likelihood for the school performance to be below 50%. Quantitatively, a unit increase in running credit will decrease the likelihood for the school performance to be below 50% by the value of its marginal effect of .1533119.This finding is significant at the 10% level of significance. We therefore reject the null hypothesis that running credit has no significant effect on the school performance.

The coefficient of number of teachers is negative showing a negative relationship between number of teachers and the likelihood for the school performance to be below 50%. An increase in the number of teachers will decrease the likelihood for the school performance to be below 50%. Quantitatively, a unit increase in the number of teachers will decrease the likelihood for the school performance to be below 50% by the value of its marginal effect of .1004914.This finding is significant at the 1% level of significance .We therefore reject the null hypothesis that number of teachers has no significant effect on the school performance.

The coefficient of school enrolment is negative showing a negative relationship between school enrolment and the likelihood for the school performance to be below 50%. An increase in school enrolment will decrease the likelihood for the school performance to be below 50%. Quantitatively, a unit increase in school enrolment will decrease the likelihood for the school performance to be below 50% by the value of its marginal effect of .0377219.This finding is significant at the 10% level of significance. We therefore reject the null hypothesis that school enrolment has no significant effect on the school performance.

The coefficient of age is positive showing a positive relationship between age of school and the likelihood not to receive funds. Therefore an increase in the age of a school will lead to an increase in the likelihood for the school performance to be below 50%. Quantitatively, a unit increase in age will increase the likelihood for the school performance to be below 50% by the value of its marginal effect of -.2137903.This finding is significant at the 1% level of significance. We therefore reject the null hypothesis that age has no significant effect on the school performance.

Presentation of Finding as Per Specific Objective Three

Objective three was to scrutinize the perspectives of grass roots on appropriate measures to enhance government funding to schools. To get to this, the researcher formulated the question in section four of the questionnaire and the result is presented in figure 6 below.
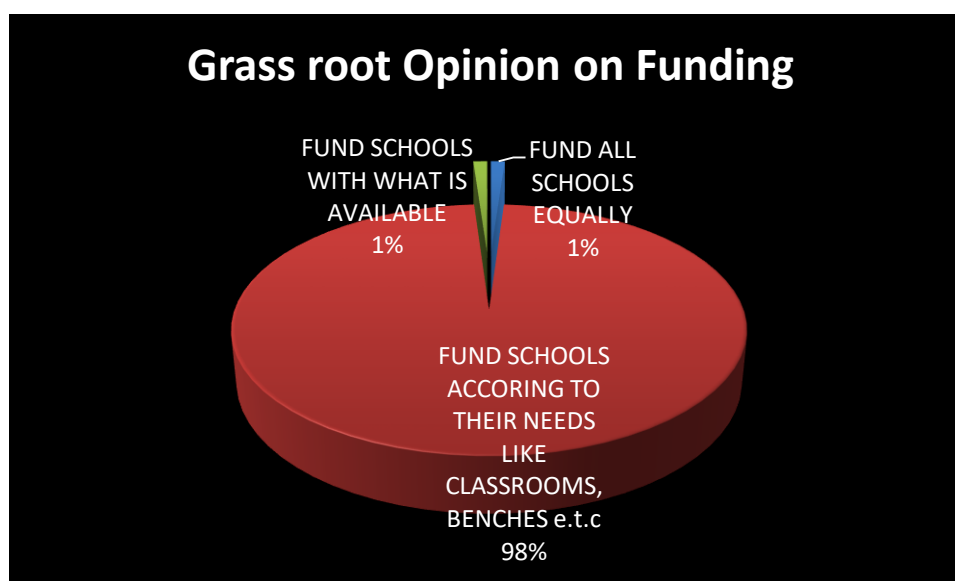
Fig 6: Grass root Opinions on Appropriate Funding

Figure 6 above shows that 1 respondent out of the 92 was of the opinion that schools should be funded equally giving a percentage of 1%, while 90 respondents out of 92 were of the opinion that schools should be funded according to their needs, giving a percentage of 98% and 1 respondent of the opinion that schools should be funded with what is available, thus a percentage of 1%. Here, the 90 respondents who favour funding based on school needs represent the voices of the grass root people. These findings fall in line with Tan's community theory, a theory which places grass root people at the centre of every solution search, so as to close-up socially existing gaps. The findings are further supported by Malhoit (2005) who in an investigation to measure the impact of grass root people on society thinks that grass root people should fully participate in deciding on any issues concerning them.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Conclusion

This study attempted to analyse the appropriateness of government funding to public secondary general education schools in Cameroon. It specifically sets out to find the causes of funding disparities between schools, to investigate the relationship between funding and school performance, and to scrutinize the perspectives of grass roots on appropriate measures to enhance government funding to schools.

To resolve these in a Pair-wise correlation, the probit regression model was used to find out causes of funding disparities. From the results, the correlation coefficients suggested the absence of any relationship between school enrolment, school needs, influence, age of school, and funding, that is, the variables; enrolment, school needs, influence and age of school all affect school funding. Thus, the higher the school enrolment, the greater the amount of funds the school should receive, and the higher the needs of a school, the greater the amount of funds it should receive and vice versa. In the same vein, the more school heads influence the award of funds to their schools, the more their schools will receive funds for projects at the detriment of other schools. Concerning school age, the older a school becomes, the higher the chances it has for receiving funds.

On funding and school performance, the Ordered logistic regression model was used, and from results, the correlation coefficients suggested the absence of any relationship between infrastructure, running credits, staffing situation, and school performance, that is, all these variables affect school performance. Thus, the more a school has adequate infrastructure, like classrooms, benches and many others, the better will be the results obtained at official exams. Same with running credits for day-to-day running of school that will also improve on the results obtained at official exams. The staffing situation also will affect the performance of learners, that is, the more teachers there are in a school, the better the results will be.

For grass root opinion on funding, findings reveal that schools should receive funding for their projects based on their actual needs.

These results, policy wise suggest that enrolment, school needs, influence and age of school determine the amount of funds to be allocated to schools, while infrastructure, running credits and staffing situation influence school performance. So we can conclude that all these ideas and concepts taken into consideration will result in actions to adopt measures of appropriate funding to government secondary general education schools in Cameroon.

Recommendations

It is strongly recommended that the Government of Cameroon should create an effective decentralized mechanism in which local councils would keep statistics of all schools in their respective council areas. Such statistics will show when schools were created, their yearly enrolment, what the schools already have and what they need. Added to this would be the yearly performance at internal and external exams so as to detect funding related problems and to solve them.

If this option is acceptable, it will enable the government to know what to give to a school which will actually be useful. The government will take the enrolment of any school into consideration before providing funds for projects. Through this, there will be no arbitrary award of funds to schools as these schools will receive just precisely what they need. Schools will not receive funds for projects that will lie fallow. For example, a school receiving funds for benches which will remain under the rain and sun due to lack of classrooms to keep them.

The availability of such statistics will render the act of influence difficult since records will show what a school has and what it needs, and even in the face of limited resources on the part of the government, the schools and their needs in any area would be prioritized. This will actually bring into play a sense of proportionate distribution of funds to schools. When years of creation of schools are indicated, the basics that these schools have are also indicated such that older schools are not favoured at the detriment of younger schools which do not have the basics to operate.

The government is also encouraged to take care and provide infrastructure as administrative blocks, laboratories, toilets and computers all which have serious impact on school performance. It is but true that a disciplined school atmosphere under a well settled administration is a source of improved school performance, while the availability of laboratories for both science and computers creates the way for practical exercises which improve on school performance.

 School heads of government secondary general education are encouraged to be very honest in submitting their exact needs and excesses to their immediate hierarchies. This will enable the government to send just what is needed and to the appropriate place. They are also encouraged to desist from going out to influence the award of projects to their schools. This would also bring in that sense of appropriate funding to schools.

Areas for further research

This study has made useful contributions towards measures for appropriate funding to secondary schools in Cameroon. In spite of the number of limitations observed in course of the study, there is need for clear funding measures to secondary education. Thus, further studies could use the very notions to analyse funding challenges in the higher education sector.

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