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The Effect of Number of Schools, Classes, Pupils and Teachers on Net Enrollment Ratio (NER) with the Education Budget as a moderating variable in Aceh Province

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Abstract

This study investigates the influence of number of schools, classes, pupils and teachers on net enrollment ratio (NER) with the education budget as a moderating variable in Aceh province. Using a quantitative analysis method, the data is collected for the period of 2010-2012. While, the population of this study are consists from 23 districts/cities in Aceh province with as many as 21 number of sample selected using purposive sampling method. The result of the study is simultaneously, the variables of number of schools, classes, pupils and teachers influence the net enrollment ratio (NER). While partially, only variables of number of pupils and teachers are having an influence to the net enrollment ratio (NER). Additionally, the education budget variable does not function as a moderating variable that connects the variables of number of schools, classes, pupils and teachers against net enrollment ratio (NER) in Aceh province.

Keywords: Gross Enrollment Ratio (GER), Number of Schools, Classes, Pupils and Teachers, Education Budget.

Introduction

Aceh is one of the Province that has a distinctive feature. Aceh specialties stated in Law No. 44 of 1999 on the Special Status of Province, Law No. 18 of 2001 on the Special Autonomy for the Province as the Province of Nanggroe Aceh Darussalam, and the latter is expressed in the Law No. 11 of 2006 on the Government of Aceh. Basically the administration privileges include the organizing religious life, organization of indigenous life, education, and the role of the Ulama' (Islamic Scholar) in the determination of regional policy. To fund the full authority of the special autonomy, some types of transfers that given to Aceh province is set higher percentage than other provinces, apart from funding of special centers includes one type of adjustment fund as a special autonomy funds. In Indonesia, the government has made an Act on compulsory education for 12 years that will begin in the academic year 2013/2014. The creation of the Act could not be separated from the role of government, especially the Ministry of Education that aims to make

children in Indonesia to get supplies for a better future. This aligned with the modern times that proven on the greater attention of a country/nation/community to education which will lead the prosperity to their people (Poaterba, 1994).

This is the government's initiative to educate the children who is the younger generation successor to the nation. Later, the progress and development of the nation is on the hands of young people who have a high sense of nationalism that will make the beloved country better than before. In addition to the educational program, the government hopes that the young generation will not fall behind in terms of gaining information, science and technology. Not only the presence of 12-year compulsory education, the Indonesian government has indirectly reduce the number of societal illiterate, unable to read and write. The government hopes that there will be no longer illiterate people exist in the future.

Most of the people in Indonesia are still not familiar with the letter or called as illiterate, unable to read and write. This can happen because the community who are low-income economy, they prefer to look for a job in order to earn money compared to enroll to the school. By attending the school will only waste time and better then used their time to seek the money to meet their survival. To support the initiatives, it needs to provide infrastructure, the availability of schools, number of classes, sufficient number of pupils and teachers. The availability of basic educational facilities, especially junior high school in Aceh province reached to 827 total of schools. In North Aceh district, there are 86 junior high school and while in Sabang city only 9 schools. Based on the number of its pupils, the North Aceh district has the highest number of junior high school pupils as many as 24,613 students, while the fewest are in Sabang city is only 1,171 students. Moreover, the highest number of teachers is in junior high school of North Aceh district as many as 2,204 teachers. In meantime, the capacity ratio of student/school in the junior high schools of Langsa city is 506.87 pupils per school as the highest ratio among other cities, while the lowest ratio is in the Aceh Jaya district by 120.35 pupils per school. One indicator of the success of regional primary education is by seeing the net enrollment ratio (NER)of junior high school age. The highest NER in 2009/2010 is in Langsa city by 99.57 and the lowest is in the Pidie Jaya district by 45.15.

The school size is considered in isolation situation when it has reached between 500 and 1,000 students that are probably operating at peak economic efficiency (Turner & Thrasher, 1970).

Meanwhile Mustika in Bali (2009) indicate that the there is a strong link between GDP per capita with GER, where the higher the GDP per capita, the higher enrollment rates. A study by Laode and Maulana (2009) states that education funding policies undertaken by local governments is expected to increase the enrollment of each school in its region rapidly. That is the reason why the allocation budget of educational function becoming one variable as the determinant on GER and NER. Hutomo (2013) concluded that the influence of primary school enrollment rates at all the provinces are the same, while the influence of the number of poor people has different findings on each province in the Island of Java. Yoto (2011) stated that the high participation of children who do not attend school is one of the economic factor. In meantime, Slate (2008) stated

that the two curvilinear relationships are identified, namely; an economic efficiency and educational outcomes. Optimal school size can be defined by a range in which economic efficiency and educational outcomes both show positive relationships to larger school size.

Dostie and Jayaraman (2006) observed that there are several factors that determine the level of net enrollment ratio in educational activities including the factor of availability of classrooms, an adequate number of teachers and the number of schools that provided by the government at the villages in India. While Ntim (2013) investigated the determination of the demand and supply for the needs of teachers in Ghana by economic demand, demographics of the region and the market forces. While, a study conducted by Labe (2010) revealed that there are several components that support education, namely teaching staff, education expenditure, public expenditures per student. If these indicators are met, the sustainability of educational activities will take place. Moreover, Petrosino et al (2012) examined the forms of state intervention in the educational activity. The education is an important aspect because it involves the welfare of the people and means of achieving economic growth of a country. Firman (2011) examined the financing needs of primary education post-tsunami disaster in Banda Aceh. The results showed that the number of people who are still in school, out of school, and who do not/have not been to school aged 7-15 years made up of boys.

Moreover, Fox (1981) noted that as long as increasing school size results in larger pupil/teacher ratios, every pupils' expenditures will drop. That is the need for additional administrative staff that continues to grow with an increased the school size even after maximum student-teacher ratios are reached (Haller, 1992; McKenzie, 1983). Thus, both very small schools and very large schools tend to be very expensive to operate (Alspaugh, 1994). Fox (1980; 1981) noted that population density is an important factor. Monk (1992) found that savings projected for a number of expenses simply did not occur with large school size. For example, savings for central office administrative staff were not realized because that category represented such a small proportion of the overall system budget. Fox (1981) also finds a number of researchers have explored the causes of this U-shape relationship between school size and per pupil cost. Creating large schools in rural areas with low population densities can greatly increase the cost of transporting students whereas such additional cost may not be incurred in urban areas. Finally, McGuire (1989) concluded that schools with an enrollment above 2000 students were located on the upward slope of the cost and their combination of teaching personnel and course offerings could be made available in a smaller and more economical setting.

Given the disparity of education enrollment rate at the advanced level in Aceh province, the author is formulated a study with below objectives as follows:
1. To identify and analyze the effect of number of schools, classes, pupils and teachers' variables on net enrollment ratio (NER) in Aceh province.
2. To identify and analyze the effect of number of schools, classes, pupils and teachers' variables on net enrollment ratio (NER) with the education budget as a moderating variable in Aceh province.

Literature Review
Net Enrollment Ratio (APM)
The net enrollment ratio (NER) or gross enrollment ratio GER) is the percentage of students with age-related with education levels of the population in the same age (Ramesh, 2013). Likewise, the gross enrolment ratio (GER), NER is an indicator of absorption of school-age population at every level of education. However, when compared to GER, NER used as an indicator of better absorption because NER see the participation of the population in the age group of education standards that comply with the standards. This NER at a level of education obtained by dividing the number of students or school-age population who are in school to the population of the age group that is related to the school level.

Number of Schools
McGowen (2007) in his dissertation was found that there is a relationship and a close correlation between school facilities with students learning outcomes, namely the achievement of academic goals, discipline, achievement level graduation and transfer rates of teachers in schools. In addition, Schneider (2003) stated that if the school infrastructure is available, it can support the achievement of the government's program to educate the nation. The government and private sector both are providing the facilities so that there is a match in the achievement of objectives.

Number of Classrooms
Ralston (2003) states that that the adequacy of existing indoor facilities will support the teaching process of teaching so that if the classroom capacity is sufficient, it will be able to accommodate the public interest in the teaching process. Earthman and Lemasters (2011) found that faculty members were directly affected by their immediate surroundings and working conditions. If they are in a facility that is rundown and lacking in certain features such as thermal control of the environment, adequate lighting and windows, modern science equipment, and controlled acoustical environment, among other features, their attitude will not be as positive as that of faculty members in better kept and modern buildings (Earthman and Lemasters, 2011). Accordingly Cash's (1993) theoretical model indicates that condition of the school buildings can have a direct relationship to teacher attitudes. In addition, the similar findings found by Maphoso and Mahlo (2014).

Number of Pupils
Leigh (2012) stated that the large number of pupils also contributed to the increase in net enrollment. An increasing the number of pupils will need more classrooms so much to reform the school management. A study conducted by Dhaoui (2013) states that the gross enrollment rate in which one of the determinant is the large number of pupils who participate so that the number of pupils used as a valuable asset that is called human capital.

Education Budget
The education budget is a form of spending allocated by the state government for educational activities, especially for the compulsory level of education in primary and secondary schools (Anyanwu & Erhijakpor, 2007). A survey in Algeria reveal that the education budget (government

expenditure on education) can significantly boost the value of the net enrollment rate both for basic education (primary and secondary education enrollment rates). It is also the common phenomenon occurring in India as stated in a study done by (Kaur and Misra, 2003).

Education Facilities

Chamidi (2005: 26) stated the variables that measure changes in the quantity of public services in education as follows:

1. Measuring the quality of services consist of:
   a. The ratio of pupils per teacher is defined as the ratio between the number of pupils and teachers at the level of education. This measure is used to determine the average number of pupils served by one teacher in a school or a particular region. If the ratio obtained is high, it means that one teaching staff to serve more pupils. The high number of pupils who are taught will reduce pupils comprehensiveness on a given subject or reduce the effectiveness of teaching. The smaller ratio is the better, because it is expected to make the teachers easy to run classes. By knowing this ratio, the shortage/surplus of teachers will be known.
   b. The ratio of teachers per school is defined as the ratio between the number of teachers compared with the number of schools in a particular education level to reveal the shortage/surplus of teachers who teach in schools in a particular area. The lower the ratio, the more limited on the number of teachers who teach in a particular school, otherwise the greater the ratio value indicates the possibility of teachers' excess in the school.
   c. The ratio of pupils per school is defined as the ratio between the number of schools. This ratio indicates the large number of pupils are accommodated by the school. The greater the ratio of pupils to schools means more students are accommodated by the school.
   d. The ratio of pupils per class is defined as the ratio between the number of pupils by the number of classes in a particular education level. It is used to determine the average amount of density in a school class or a particular region. The higher the ratio means the class density is higher. The number for an ideal indicator is 40, which means that each class is filled by 40 pupils which is in accordance with the classroom standard size.

2. Measuring absorption, namely:
   a. The net enrollment ratio (NER) i.e. the comparison of the number of pupils in a particular education level corresponding to the level of education of the age group with the appropriate school age group and expressed in a percentage. This NER is useful for measuring the level of success in the government for equalizing the educational opportunities. It is also used to look at the affordability of units of a particular education by school-age population level at a particular school.
   b. The gross enrolment ratio (GER) is a ratio of comparison in number of pupils in a particular education level with the appropriate school age group and expressed in a percentage. This GER is used to measure the percentage of the number of residents in a particular age group who had attended the school for a certain range of education. The higher GER means more specific school-age population enrolled in school.

Review of Previous Studies

Below Table is the matrix of previous studies:

Table 1: Review of Literature

No	Author/ Year	Title	Variable	Findings of the Research
1	Baluch and Shahid (2008)	Determinants of Enrollment In Primary Education A Case Study in Lahore District	Psychology, the future career of a child, middle or matric level.	Our main results contradicted the prior determined thoughts, as some of the major characteristics were found to be independent of enrollment. Consequently, parental conceptual psychology, i.e.what would be the future career of a child equipped with education up to primary, middle or even matric level, was the main inhibiting factor in children's school enrollment decision of the households. Hence, there is a need to implement certain revolutionary measures to create awareness regarding importance of the basic education not only to adopt any income generating activity but also to comprehend the societal aspirations.
2	Ntim (2013)	Exploring the Mismatch Between Teacher Demand-Supply in Sub-Sahara Africa: Ghana as Case Study	Teacher, demand, supply, attrition, remuneration.	The research suggest that teacher demand-supply in Ghana is contingent upon and sensitive to three crucial interrelated factors: economic demand, demographic factors and market forces.
3	Labe & Olivier (2010)	Key indicators on tertiary education: calculation and interpretation	Teaching staff, education, expenditure, public expenditures per student	Growing attention to developments of tertiary sector and need relevant and reliable indicators to monitor trends in tertiary education.
4.	Etim (2014)	Education In The Middle Years/Junior Secondary School In USA and Nigeria:	Health, democracy and the nation's sustainable development	The study found out that there were very little similarities in the implementation of education for junior secondary school students in Nigeria when compared to the middle school in the USA. Based on the findings, the study made several

		A Comparative Analysis		recommendations on strategies to be employed for improving the junior secondary school in Nigeria in order to encourage Nigeria's sustainable development.
5	Firman (2011)	Needs Analysis on the Basic Education Fund Post-Tsunami in Banda Aceh	The number of schools and teachers for basic education, in accordance with the existing number of students, as well as the estimated cost of construction of school building needs for existing learners.	The results showed that the number of people who are still in school, out of school, and who do not/have not been to school aged 7-15 years made up of boys. As for the number of school buildings for elementary school buildings no longer need additional school facilities, while still short of 13 junior high school building again.
6	Widodo (2010)	An Influence Analysis of the Public Sector of the District/City in Central Java Province Against Poverty Through Improved Human Development	Public sector budget as independent variable and the poverty reduction as the dependent variable. While, an improved human development as an intervening variable	Public sector budget effect on the poverty in Central Java. Human development index acts as an intervening variable.
7	Aziz & Abdul (2009)	The Effect of School Operational Assistance Program at the Ministry of National Education Against GER: 2006 - 2008	BOS Program,, Education Policy, Funding Policy	The government can increase the amount of funds in the educational program as the result of estimation showing strong correlation between increased funding and increase in Gross Enrolment Ratio (GER).

Conceptual Framework

Below is the conceptual framework of this study:
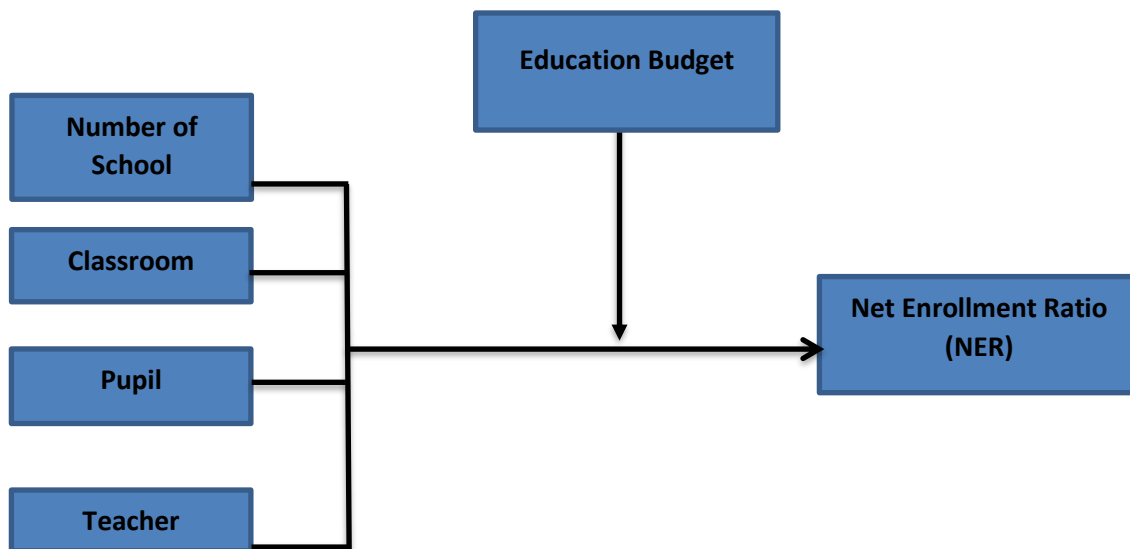

Figure 1. Conceptual Framework

Hypothesis

Based on the theoretical review and conceptual framework described above, the hypothesis of
the study are:

1. Variables of number of schools, classes, pupils and teachers affect the net enrollment ratio
   (NER) in Aceh province.
2. Variables of number of schools, classes, pupils and teachers affect the net enrollment ratio
   (NER) with the education budget as a moderating variable in Aceh province.

Methodology

Design and Scope of Research

The scope of this study is to analyze some of the variables that affect net enrollment ratio (NER)
in the form of the number of schools, classes, pupils and teachers with education budget as a
moderating variable in Aceh province. Meanwhile, this study uses the causal effect of a
phenomenon with quantitative descriptive method to describe such phenomenon.

Population and Sample

The population in this study was 23 districts/cities in Aceh province, while the number of schools,
classes, pupils, teachers, education budget and net enrollment ratio (NER) from 2010-2012 are
available from the Central Statistics Agency (BPS) of district and cities in Aceh province and the
sample in this study as many as 21 samples that was selected by the criteria of purposive sampling
method.

Data Analysis Techniques

To answer the first hypothesis, this study uses multiple regression analysis with ordinary least squares method and moderating regression analysis with residual method in which the model equations is formed as follows:

$$Y_{it} = \beta_0 + \beta_1 X1_{it} + \beta_2 X2_{it} + \beta_3 X3_{it} + \beta_4 X4_{it} + \varepsilon_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \text{(1)}$$

$$e_{it} = \beta_0 + \beta_1 Z_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \text{(2)}$$

where:

Y	= Net Enrollment Ration (NER)
X_1	= Number of School
X_2	= Class
X_3	= Pupil
X_4	= Teacher
Z	= Education Budget
a	= Constant
$b_1 - b_4$	= Regression Coeffesient
e_{it}	= Residual Absolute

Definition of Variables Operationalization

The definition of variables operationalizationbles of this research are:

1. The net enrollment ratio (NER) is the number of people living below the poverty line with the criteria set by the Central Bureau of Statistics. The unit used is a unit in number of people.
2. Number of schools (X_1) is the number of schools commensurate with the Junior High School measured by the ratio scale.
3. The number of classes (X_2) is the number of classes and study rooms in Junior High School as measured by the ratio scale.
4. Number of pupils (X_3) is the number of pupils enrolled in Junior High School measured by the ratio scale.
5. Number of teachers (X_4) is the number of teachers who teach at the Junior High School measured by the ratio scale.
6. Education budget (Z) is derived from the government budget allocated annually for educational activities measured by the ratio scale.

Findings and Discussion

Descriptive Analysis

Below Table is the descriptive analysis of this study:

Table 1. Descriptive Statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Y	63	789.00	9839.00	7797.5873	1268.86899
X1	63	8.00	86.00	36.4603	17.21480
X2	63	54.00	951.00	345.2381	221.80656
X3	63	191.00	2206.00	852.3016	521.52443
X4	63	1082.00	24613.00	8653.6032	4931.80721
Z	63	75027.00	378867.00	176189.2698	77086.25402
Valid N (listwise)	63				

Source: Data Output SPSS 22.

As depicted in Table 1 above, it can be seen that the number of observations (N) is 63, where the average of net enrollment ratio (Y) from 2010-2012 amounted to 77.97 points whereby the lowest is 78.90 and the highest is 98.39 points with a standard deviation of 12.68 points. The higher the value of NER, the more support to achieve the participation of secondary levels of education in Aceh province. Meanwhile, the average number of school (X_1) from 2010-2012 is 36.46 where has the lowest of 8 and the highest of 86 school buildings with a standard deviation of 17.21. The more buildings are built, the more support to the achievement of the net enrollment rate in the province.

Moreover, the number of classrooms (X_2) for a period of 3 (three) years i.e. 2010-2012 showed that the highest number of classrooms is 951 and the lowest is 54, while the average is 345 with a standard deviation of 221 classes. Meanwhile, the number of teachers (X_3) who teach in junior secondary schools with the lowest number of 1082 and the highest of 2206 teachers with the highest standard deviation of 521 teachers from an average.

Finally, the number of pupils (X_4) enrolled in the Junior High School with the lowest number of 1082 and as many as 24,613 pupils with the highest standard deviation of 4931 students from an average. For the total education budget (Z), the amount of allocated education budget each year with the lowest of Rp.75.02 billions and the highest of Rp.378.867 billions with standard deviation of Rp.77.086 billions from an average.

Data Analysis
Normality Test
Normality test aims to test whether the regression model of the dependent variable and independent variables both have a normal distribution or otherwise which can be detected through two ways; graph and statistical analysis (One sample Kolmogorov-Smirnov test).

a. Graph Analysis
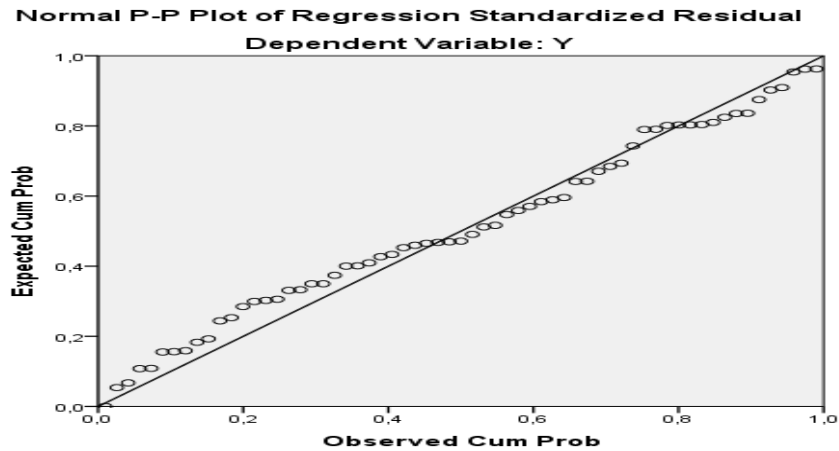
Figure 2. Data Normality Graph

Based on Figure 2, it is stated if the data distribution is normal, then the points spread around the diagonal line and the distribution follows the direction of the diagonal line. The results of the graph shown that the points are spread around the diagonal line, it can be stated that the data are normally distributed.

b. Statistical Testing

The normality test aims to see whether the regression model or residual confounding variables with normal distribution. Table 2 below is the results of one sample Kolmogorov Smirnov test.

Table 2. Results of One Sample Kolmogorov Smirnov Test

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		63
Normal Parameters[a,b]	Mean	0E-7
	Std. Deviation	1140.14442013
Most Extreme Differences	Absolute	.088
	Positive	.061
	Negative	-.088
Kolmogorov-Smirnov Z		.697
Asymp. Sig. (2-tailed)		.717

a. Test distribution is Normal.

b. Calculated from data.

From the test results shown in Table 2, it is shown the value of Kolmogorov- Smirnov is 0.697 and its significance of 0.717 which far exceed $\alpha = 0.05$. It conclude that H_o is accepted means that the data are normally distributed.

Multicollinearity Test

The multicollinearity test is done to see whether there is a correlation between independent variables in the regression model. A good regression model should not happen multicollinearity which is detected by the value of Variance Inflation Factor (VIF). According Ghozali (2005), if the VIF> 10, then the variables have the problem of multicollinearity with other independent variables.

Table 3. Multicollinearity Test

Coefficients[a]

| Model		Collinearity Statistics	
		Tolerance	VIF
1	X1	.232	4.315
	X2	.327	3.061
	X3	.291	9.001
	X4	.118	8.494

a. Dependent Variable: Y

From the Table above, it is seen that the value of Variance Inflation Factor (VIF) for the independent variables of number of schools, classes, pupils, teachers, education budget are below 10. This means there is no multicollinearity problem on the data of this study (Ghozali, 2005: 93).

Heteroscedasticity Test

According to Ghozali (2005), a good model of regression is homoscedasticity model or the heteroscedasticity does not occurred. To detect the presence or absence of heteroscedasticity can be done by the Scatterplot as stated in Figure 3 as follows:

Figure 3: Scatterplot Graph
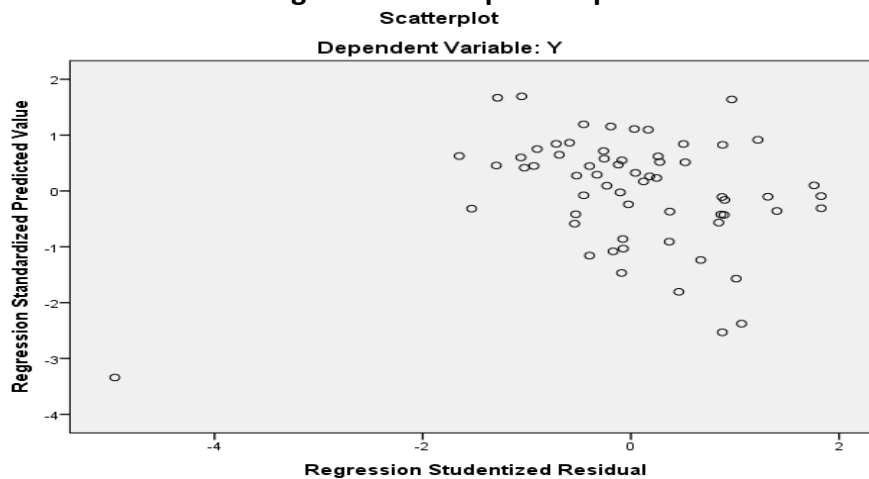
The conclusion is obtained by looking at the spread of dots randomly, does not form a specific pattern clearly, and spread both above and below the number 0 on the axis Y. Thus, it concluded that there is no heteroscedasticity in regression models.

Autocorrelation Test

The autocorrelation is analyzed using the Durbin-Watson test (DW). The d value is then compared with the value d_{table} with a significance level of 5% with df = nk-1. To determine the presence of autocorrelation through Durbin-Watson test, the following criteria is used:

- ▪ DW value below -2, means there is a positive autocorrelation.
- ▪ DW value between -2 to +2, means there is no autocorrelation.
- ▪ DW value above +2, means there is a negative autocorrelation.

The results shows that the DW value is 1.476, means the data is not affected by autocorrelation. It is also concluded that there is no positive or negative autocorrelation due to the DW value is within the range of -2 and +2).

Table 4. Autocorrelation Test

Model	R	R Square	Durbin-Watson
1	.439[a]	.193	1.260

a. Predictors: (Constant), X4, X2, X1, X3

b. Dependent Variable: Y

Analysis Result

The first hypothesis in this study, the variables of number of schools, classes, pupils and teachers affect the net enrollment ratio (NER) in Aceh Province is acceptable. The goodness of fit testing is done to determine the feasibility of a regression model since the variables in this study has more than two variables, thus the feasibility can be seen from the value of Adjusted R Square.

Table 5. Goodness of Fit Test

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.439[a]	.193	.137	1178.80431	1.476

a. Predictors: (Constant), X4, X2, X1, X3

b. Dependent Variable: Y

As depicted in Table 5, the Adjusted R Square value is 0.137. It shows that 13.7% of the number of schools, classes, pupils and teachers variables are influenced by net enrollment ratio (NER) in

Aceh province. The remaining portion of 86.3% is influenced by other variables that are not explained by the model of this research.

Hypothesis Test Model
Simultenous Significant Test (F Test)
Simultaneously, the variables of number of schools, classes, pupils and teachers influence the net enrollment ratio (NER) in Aceh province. To see significancy on the indicator parameter of coefficient Adjusted R^2, it can be tested using a statistical Fisher test method (F Test) with a level of confidence by 95%. The testing criteria used is if $F > F_{table}$ then Ho is rejected; and if $F \leq F_{table}$ then Ho is acceptable.

Table 6. Regression Result of F Test

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	19226150.747	4	4806537.687	3.459	.013[b]
1	Residual	80595616.523	58	1389579.595		
	Total	99821767.270	62			

a. Dependent Variable: Y
b. Predictors: (Constant), X4, X2, X1, X3

As depicted in Table 6, it obtained the value of F at 3.459 while the F_{table} at a confident level of 95% ($\alpha = 0.05$) is 2.54. This means that the value of $F > F_{table}$ (3.459 > 2.54) which indicate that the variables of number of schools, classes, pupils and teachers affect the net enrollment ratio (NER) in Aceh province, thus Ho is rejected while H1 is accepted.

Partial Significant Test (t Test)
Partially, only variables of number of teachers (X_3) and number of pupils (X_4) affect the net enrollment ratio (NER) as shown in Table 7 below:

Table 7: t Test

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	8741.921	359.589		24.311	.000
	X1	-27.004	18.065	-.366	-1.495	.140
1	X2	.553	1.181	.097	.468	.642
	X3	2.184	.952	.898	2.294	.025
	X4	-.232	.088	-.904	-2.628	.011

From the Table 7 above, the multiple regression equation is formulated as follows:
$Y = 8741.92 - 27.004X_1 + 0.553X_2 + 2.184X_3 - 0.232X_4 + e$
The elaboration of multiple regression equation model as follow:

1. A constant value of 8741.92 means that if the variables' values of number of schools, classes, pupils and teachers is zero, then the dependent variable of net enrollment ratio (NER) will increase by 8.74 units.
2. The variable of number of schools (X_1) negatively affect the amount of net enrollment ratio (NER) with a coefficient value of -27.004, means that every one unit decrease in the number of schools decreasing the net enrollment ratio (NER) value by -27.004 units.
3. The variable of number of classroom (X_2) has a positive influence on the amount of net enrollment ratio (NER) with a coefficient value of 0.553, means that every one unit increase in number of classes, will increase the net enrollment ratio (NER) value by 5.53 units.
4. The variable of number of teachers (X_3) has a positive effect on the amount of net enrollment ratio (NER) with a coefficient value of 2.184, means that every one unit increase in number of teachers, will increase the net enrollment ratio (NER) value by 2.18 units.
5. The variable of number of pupils (X_4) has a positive influence on the amount of net enrollment ratio (NER) with a coefficient value of 2.32, means that every one unit decrease in number of pupils will lower the net enrollment ratio (NER) value by 2.32 units.

The above table shows that the independent variable of number of teachers (X_3) of 2.294 >t_{table} of 1.684 significantly affects the net enrollment ratio (NER) where t >t_{table}, thus to reject Ho and accept H1. In addition, the variable of number of pupils (X_4) with a negative direction (-2,628> 2.074) has a significant effect on net enrollment ratio (NER) where t>t_{table}, thus to reject Ho and accept H1. While other variables do not affect the net enrollment ratio (NER) where t <t_{table}.

To test whether the role of education budget serves as a moderating variable that connects to the variables of number of schools, classes, pupils and teachers on the net enrollment ratio (NER), the residual test is done with the results as follows:

Table 8. Residual Test

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	840.028	251.684		3.338	.001
	Z	.000	.001	-.013	-.102	.919

a. Dependent Variable: Abs_Res

Based on the test results, it indicate that the education budget variable (Z) on the residual absolute with criteria of t or alpha value below 5% significant level (0.919> 0.05%), thus the Ho is acceptable and Ha is rejected. This means that the education budget is not functioning as a moderating variable that connects to the variables of number of schools, classes, pupils and teachers on net enrollment ratio in Aceh province.

The hypothesis in this study, the variables of number of schools, classes, pupils and teachers affect the net enrollment ratio (NER) in Aceh Province is acceptable. While the variables of number of schools, classes, pupils and teachers on net enrollment ratio (NER) with the education

budget as a moderating variable in Aceh Province is unacceptable. The main problems in the education sector in Aceh province at junior high school level still there is a shortage of school building facilities, as well as other supporting facilities. But there has been a surplus of teachers with average hours of teaching under 18 hours/week.

Conclusion and Recommendation
Conclusion
Based on data analysis and hypothesis test results, it can be concluded the results of this study are as follows:

1. Simultaneously, the variable of number of schools, classes, pupils and teachers influence the net enrollment ratio (NER) in Aceh province.
2. Partially, only number of pupils and teachers variables are affecting the net enrollment ratio (NER) in Aceh province.
3. The education budget does not function as a moderating variable that connects to the variables of number of schools, classes, pupils and teachers on the net enrollment ratio (NER) in Aceh province.

Limitation of the Study
The researchers realized that there are some limitations occur in this study as follows:

1. The research data only includes time series from 2010-2012. The rows of data is considered too small to describe the influence of factors that affect the net enrollment ratio (NER).
2. The variable of net enrollment ratio (NER) is used only for educational level Secondary School (JSS) when there are levels below it as elementary school (SD) and other levels such as upper secondary education (high school) in Aceh province.
3. The variable of education budget could serve as a dependent variable where allocation budget of education budget determined by the number of schools, classes, pupils and teachers.

Recommendation
Related to the findings and limitations of the study, it can be put forward suggestions as follows:

1. Subsequent research in order to post a net enrollment ratio (NER) at the level of Junior High School (JSS) and elementary school levels (elementary).
2. The research data suggests to be longer and done by taking wider samples.
3. The adoption of education budget variable as the dependent variable that can be determined by several factors on it's sizes.

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