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# Do Educational Resources (ER) and Socioeconomic Status (Ses) Affect the Quality of Education?: A Case Study in West Java Indonesia

*Abstract*

*This study sought to examine whether Education Resources (ER) and Socio-Economic Status (SES) affect the quality of education?. The approach used in this research was quantitative. The data came from junior high schools from 26 districts/cities in the province of West Java (Indonesia) in the 2015-2019 period. The source of data was from the publications of the Central Bureau of Statistics and the Indonesian Ministry of National Education. The available data were compiled and statistically tested using SPSS software version 27. The results showed that the SDP and SES variables simultaneously affected the achievement of national exam scores as an indicator of the quality of education.*

*Keywords:* Educational Resources, Socioeconomic Status, Quality of Education, West Java.

## Introduction

In the last few decades, in various countries including China, Taiwan, Hong Kong, Burkina Faso, Mali, Tanzania, Singapore, Australia, there has been growing attention from academics, governments, and parents as consumers of education for their children. One of the considerations on the quality of education, in addition to relating to human rights to obtain quality educational services, is the demand for quality human resources which are the demands of the world of work in the industrial sector which is the accelerator of a country's economic growth. For this reason, it is believed that education will also contribute to reducing socioeconomic inequality in the future. These considerations encourage increased attention to various educational reform efforts to improve quality through improvements in various aspects, including curriculum, teaching methods, student guidance, number of students per class, management improvements, teacher-student relations, the physical environment, as well as various other efforts to improve teacher quality (Hanushek, 2006; Boeren, 2019).

To ensure the quality of education, one aspect that must receive significant attention of every education manager is the availability of

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resources that support the implementation of education systems and services. These resources include budgets, school buildings, classrooms, learning resources such as books, laboratories, technology, and other facilities needed to facilitate quality learning activities. The task of the education administrator is to be able to maximize all available resources to increase the productivity of education at the school level.

Currently, the availability and adequacy of ER in various regions in West Java in particular and generally in Indonesia remain a serious problem. This condition has created disparities in access and quality of education between regions. Many children from community groups who have less economic capacity cannot enjoy good education services. In addition, there is still a large disparity between rural and urban blood. Therefore, the quality of education in rural areas is increasingly becoming less competitive than in urban areas. This study sought to examine the correlation between ER and SES on the quality of education at the junior high school level as measured by national exam scores. The hypothesis (Ho) adopted in this study is: SDP and SES have a significant effect on the achievement of education quality.

## Literature Review

### *Educational Resources (ER)*

ER includes human and non-human resources. Personnel resources involved in it comprise teachers, laboratory assistants, librarians, learning media developers. Meanwhile, other resources include buildings, laboratories, learning materials, and technology used to support a good education system. In the implementation of an education system, the availability and supporting capacity of adequate ER and supported by competent human resources have an impact on improving the learning process and graduate competence. Thus, the availability of ER is a prerequisite condition for improving the quality of learning and graduates. Meanwhile, qualified graduates will have the capacity to be able to obtain various types of work in the labor market, and their derivatives will cut the cycle of poverty and social discrimination. (Bauzon et al., 2021). One of the important elements of ER is the availability of competent teachers in leading learning. Competent teachers will be able to make a positive difference in the life of a young individual. The teacher is not only someone who educates in schools, but also as a pioneer, role model, and individual who must be respected. It is not enough for a teacher to have sufficient information and proficiency in teaching strategies. He must also have a good understanding of the culture of his community. As a learning leader, he needs some information and skills in pedagogic interactions with his students. For this reason, in addition to the need for adequate talent, professional education preparation is also needed to form competent teachers (Taghizadeh & Hajhosseini, 2021). Teachers have professional assignments based on a combination of knowledge and practice, namely teaching, management, skills, personality development, and guidance. The overall coordination and execution of these tasks are related to teaching skills. Teachers must have the ability to acquire, transfer and use their knowledge to do their job well. The teacher's actions and behavior are expected to provide positive behavior to students, build thinking, understanding, reasoning, interpreting, and communicating skills. The role of teachers today is increasingly important, their duties and responsibilities are increasing in helping the state to increase the capacity and type of human being desired. To carry out this difficult and important task, they must have the characteristics of a teacher's professional identity (Çetin & Eren, 2021). Good education also needs to be supported by the availability of a budget for financing and spending on the education sector. From a personal or family point of view, educational expenditures also include expenses incurred by the family, including the purchase of textbooks, paying for private tutoring for children, student living expenses, and other expenses for financing education as an investment for future benefits (Rowe & Perry, 2020). The phenomenon of the allocation of education funding in almost all developing countries is generally considered inadequate to provide quality education. However, each country is trying to find ways to manage existing resources more efficiently by optimizing national and external resources or attracting new resources through cost-sharing and diversifying financial allocations. In many countries in the world, education is still positioned as the main responsibility of the government and therefore becomes one of the main expenditure items. Governments in each country in the investment framework also try to link and calculate spending with education outcome indicators such as access, participation, and learning achievement. Even further calculation is how the economic impact of education. A number of studies show that an area that has a higher ratio of learning to spend consistently has a correlation with higher student achievement outcomes than a district with a lower ratio of learning to spend (Cullen et al., 2015). In this context, within the framework of public management, it is concluded that the amount of expenditure on financial resources is positively related to government performance. In most countries, education is an investment financed and provided primarily by the

government. Therefore, the expansion of education depends on the government's fiscal resources (Psacharopoulos, 1988). In this regard, (Schultz,1960) emphasize that education financing is seen as an investment for individuals and the state that will provide long-term benefits and benefits of investment. These experts have tried to build a theoretical framework of economic returns for individuals, while the social benefits of education will be felt in the social life of the community. Nevertheless, there is still ongoing academic debate about the relationship between increasing financial resources and increasing the effectiveness of efficient and effective management services to improve student learning outcomes (Hanushek, 1987) while another study as reported by (Jackson, et al., 2018) also found that a decrease in the financial resources of public organizations had a negative impact on their performance in the context of education provision in public schools. Related to this, several scholars (Lafortune et al., 2018) illustrate based on their studies that changes in school budgets will increase the level of investment in low-income areas, which in turn positively affects students' academic achievement in the short term and profits in the long term. A good ER factor will strengthen and provide effective support for educational practice, both in the family and at school so that educational quality and achievement can be achieved (Pinard, 2016). The influence of resources such as class size on academic achievement is also of concern to academics. An econometric study on the effect of reducing the number of students per class on student academic achievement demonstrates that reduction in class size from 24 to 15 tends to strongly result in an increase in academic achievement. Reducing class size is seen as one of the mechanisms that schools can take to improve student achievement. In addition, the gender gap is also a significant factor triggering student achievement. Likewise, the level of parental education, learning resources in home environment is positively and significantly related to learning achievement. There is a phenomenon that in various countries, both in the US and in Europe, it turns out that high achievers are those who benefit more from a reduction in class size. Smaller classes have on average more achievement gaps in learning outcomes and that reducing class size is relatively more effective at closing learning outcomes gaps (Konstantopoulos & Li, 2017). However, the relationship between class size and student learning performance remains a controversial issue. Many studies seem unconvincing whether a smaller student-teacher ratio results in better student learning performance. However, much of the educational economics literature shows that the principle of class size statistically has a positive and significant impact on student learning performance. Among other things, smaller classes are associated with better reading ability than large classes, class size has been taken into account effectively. It is a phenomenon, that there is a general tendency for families to choose or transfer their children to schools with good school resources, including a relatively proportional student-teacher ratio with an expectation that their children can get better educational services. Likewise, if students in schools or students in a university tend to choose classes with high teaching quality, it is strongly suspected that class size has a strong possibility of being positively correlated with learning achievement (Maringe & Sing, 2014). From this elaboration, of course, general logic will still take into account proportional class sizes because of the positive influence on the quality of teaching that occurs A number of other studies provide an illustration that small classes can have a teacher effect on effective class control, the average gap in achievement in learning outcomes is relatively smaller than large classes. Similarly, the effect of class size on test scores is concluded that class size is statistically significant on test score achievement. Thus, it can be concluded that the reduction in class size has a beneficial effect on student achievement, including for students who are in the disadvantaged category and in the social environment that is sociologically in the lower class category of society. A smaller number of students in class is also effective in facilitating learner-centered group activities. (Zenda, 2020).

### *SES and Student Achievement*

Hypothetically, it is believed that family SES which includes parents' occupation variables, financial ability, family social conditions, social capital in their environment has a positive effect on the achievement of children's learning outcomes. Scientifically, the hypothetical framework found that, when the multidimensional level of SES was used as a parameter to examine variables that had a positive correlation to student achievement, family foundations showed a more substantial impact on student achievement across the countries studied. In other words, differences in the availability of these forms of social capital between households ultimately lead to disparities in children's academic achievement. (Coleman, 1988).

Meanwhile, it is believed that quality education is an important prerequisite for improving the economic life of each individual and a way for progressive social change to occur. With this belief, the quality of teaching in the implementation of the education system is a step that has been and continues to be the concern of all parties in various countries, including

international institutions (Wang & Li, 2018). The factor of family economic resources can also be an important factor in paying for educational activities. On the other hand, children from disadvantaged SES backgrounds do not have good access to education. In addition to economic capital, another important factor is cultural capital which is embedded in the mindset of every parent to be able to encourage their children to achieve education as a way to reproduce social class. Based on empirical phenomena as revealed by various studies, it seems reasonable that higher budget allocations per student usually result in higher quality of education (Lareau, 2011). According to several studies as reported by scholars (Tittenbrun, 2016) cultural capital in the family also has the most significant impact on student achievement in mathematics and science. For example, cultural resources are inherent in the family environment, such as language skills, attitudes towards the school curriculum, teachers, or habits that are manifested in practice among certain social classes such as physical appearance, body language, eating patterns, polite speech patterns, the habit of neat handwriting. Another condition as cultural capital inequality can be expressed in the form of inequality inaccessibility to books, dictionaries, information technology, and other learning resources. Children from higher social classes usually have an advantage in obtaining the educational discriminatory variable because their families have the ability. In the overall social construction, this cultural capital is considered an important factor for school success.

Parents in several countries prefer children from families that already have a dominant cultural advantage. For example in the U.S. private schools emphasize cultural inequalities between classes and family groups that drive educational inequalities among their children. Middle-class parents have different parenting styles in developing their children's talents through organized activities. While working-class parents tend to have a natural growth parenting style, letting their children create their activities with more unstructured time. As a result, middle-class families prepare their children better for school because their parenting style is more valued by the school system. The ownership of social capital also reflects the resources embodied in social relations, which can be invested with expected benefits. Differences in educational success can be attributed to different levels of existing social capital, which results in the networks and family connections that the school serves (Rogosic & Baranovic, 2016).

The education factor of parents will also affect how someone hopes to send their children to school. Educated parents are proven to have an advanced mindset so that they are more motivated to send their children to school. Education in this case is important to change a person's mindset so that they tend to have a positive view of education. In this regard, self-quality, motivation, and individual expectations of education are closely related to one's education. Even in a broader perspective, education is seen as an investment in intelligence and the formation of human capital. Therefore, educational participation does not only depend on the technical aspects of the opportunities provided by the government to its people but is also determined by how the motivation and attitude of thinking of the people themselves. (Dockery et al., 2021). Parental education factors also play a role in increasing children's school participation. In general, the higher the education of the head of the family, the higher the caution in sending their children to school. A number of other studies reported by scholars (Suryadarma et al., 2006; Listianawati, 2012) concluded that father's education as the head of the family affects the likelihood of boys going to school or not because the father is seen as a role model in the family. The determinants that also influence the family's demand for schooling are an investment in education and the wealth owned by the family. However, of all the factors studied, parental education is the most important factor driving the demand for the education itself.

### *The Concept of Education Quality and Output*

The concept of "quality" has been widely used both in the industrial sector, the service sector, and in the world of education. Quality in the education sector has a different perspective between countries. In general, indicators to measure the quality of education include access, repetition rate, dropout, student achievement. The concept of "quality" in education is quite complex to understand, and is often used to measure the quality of an educational system working, both on the dimensions of input, process, and output. However, in practice, the concept of quality education itself is not always properly defined. Quality education will benefit many parties, and the consequences are determined by what the values and goals are. The concept of quality of education is influenced by the contextual circumstances in which education takes place. Therefore, the analysis of the quality of education is always associated with educational goals linked to what the development goals of a country are (Hanushek et al., 2006).

Discourse on quality in education generally sees quality as a relative concept, what is important is whether one educational context has more or less quality than another, not whether it meets absolute threshold standards so that adequate quality can be seen, or whether

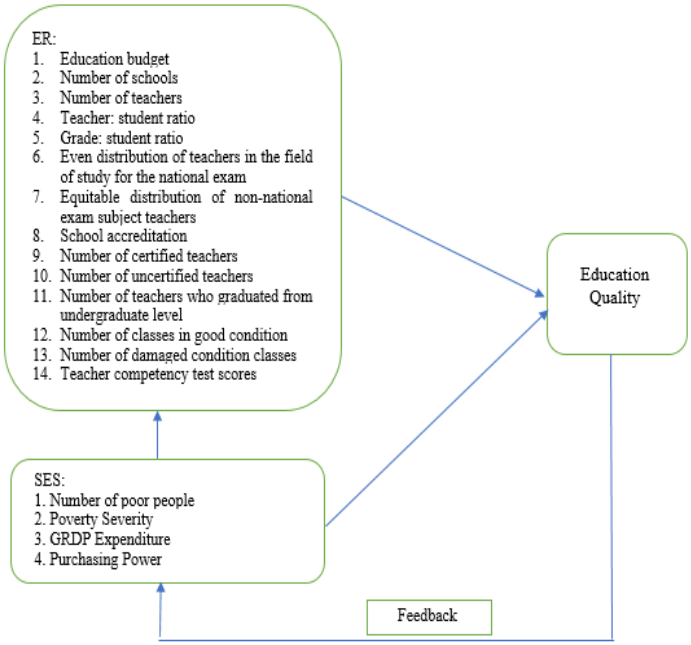
educational outcomes reach the threshold. high quality and can be viewed as of exceptional quality. Quality can also be seen as relative to goals, whether in line with customer goals and views or relative to the institutional mission. The conception of quality in education focuses on what is known about the dimensions of quality that have been found to be related to the effectiveness of education in general. A further conception of the quality of education also positions quality as a transformation, which involves improving students' abilities, the quality of student learning, learning outcomes, the benefits of education, the achievement of certain standards (Rao et al., 2021). From an economic point of view, measures of quality of education use quantitative output indicators, such as enrollment ratios and grade repeat rates, returns on investment in education in terms of income, and cognitive achievement as measured by test results. Meanwhile, the humanist tradition tends to emphasize the quality of education in processes that take place in a quality environment. This tradition measures the quality of education, tends to be based on what happens in school and the classroom as a sacred place that is believed to be a place where students acquire cultural attitudes and values. Therefore, from a humanist point of view, the characteristics of student-centered pedagogy are indicators of quality education (Thorpe et al., 2021). Indicators of quality education can also be viewed from various perspectives according to their interests, including: democratic and inclusive school governance, supporting the principles of sustainable development, access to schools, participation in education, internal efficiency, availability of educational resources, literacy, grade promotion, process good education, learning outcomes, financial and human resources support invested in education, good learning environment, individual achievement and relevance to the labor market (Siraj et al., 2019).

In the review of the production function model, the educational output is influenced by a series of educational inputs such as government programs, student and parent time, student abilities, family environment, peer groups, and other factors. In this case, educational inputs are defined as factors that contribute to the production of the education system (schools) to produce educational outputs. The terms output, output, and quality of output, interchangeably refer to the same set of indicators. The output measure of the education system is generally divided into two components, namely: (i) output volume (number of students and cohort flows), and (ii) quality of output (test score achievement). In evaluating educational outcomes, several indicators are used, including participation rates, graduation rates, repeat rates, dropout rates, and student test scores. All education output indicators have been used in the literature as proxies for educational outcomes. Referring to this concept, the education system can be treated analytically as a unit of production. The basic idea is to use another resource input to produce a certain output. Inputs in the education system are taken into account to produce certain outputs from the education system. In this case, the output is the achievement of educational outcomes (Hanushek, 2020).

## Methods

### *Research Design*

This study used secondary data officially issued by the central bureau of statistics (CBS) and regional education balance from the Ministry of National Education. The data were taken from 27 regencies in West Java. Data processing was carried out using correlational statistical analysis and regression on West Java education data for 5 years (2015-2019) by calculating educational resources, economic conditions, and the education level of the population. Statistical data testing used the "production function" analysis model in education which calculates the relationship between resource input and educational output.




***Scheme 1.***

*The relationship between ER, SES, and quality of education*

From this thinking scheme, this study establishes the following hypotheses:

1. ER has a significant macro effect on the quality of education.

2. SES of the population has a significant effect on the quality of education.
3. In aggregate, the ER and SES factors have a significant effect on the quality of education.

This study took a population setting of 26 districts/cities in the province of West Java. For the purposes of this study, data were taken from all the districts/cities. All areas are made into study areas to see a map of educational attainment in the West Java region in general.

***Population***


***Figure 1.***

*Map of the province of West Java, Indonesia.*
*(Source: https://www.pta-bandung.go.id/index.php/tentang-pengadilan/profil/peta-yurisdiksi)*

***Instruments and Data Collection***

Data collection was performed directly by extracting data from CBS and the Ministry of Education and Culture. The data were sorted and data entry was carried out using excel. Then the data was tested statistically using SPSS version 27 software.

***Data Analysis***

Data analysis began with testing the correlation between the variables of ER and SES with the national examination score. From this analysis, it can be seen which variables are partially correlated with the achievement of the quality of junior high school education in West Java. Then, mapping the correlational relationship patterns for each region was performed, as can be seen in the map description for all districts and cities in West Java.

## Result

***Table 1.***

*The effect of ER on national examination score*

| Model Summary b | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | | Durbin-Watson |
| | | | | | R Square Change | F Change | df 1 | df 2 | Sig. F Change | |
| 1 | 0.911 a | 0.830 | 0.802 | 5.04716 | 0.830 | 29.756 | 20 | 122 | 0.000 | 1.390 |
| a. Predictors: (Constant): education budget; number of schools, number of teachers; teacher: student ratio; class: student ratio; equal distribution of national examination teachers; equal distribution of subject teachers; school accreditation; number of certified teachers; number of uncertified teachers; number of graduated teachers undergraduate level; number of classes in good condition; number of broken class; teacher competency test scores. | | | | | | | | | | |
| b. Dependent Variable: National exam score | | | | | | | | | | |

Based on the data as presented in table 1, it can be explained that simultaneously the educational resource variables consist of: education budget, number of schools, number of teachers, teacher:student ratio, class:student ratio, number of teachers with undergraduate teacher education, number of educated teachers not graduate, number of certified teachers, number of uncertified teachers, teacher competency test scores, equal distribution of subject teachers in national exams, equal distribution of subject teachers, school accreditation, number of classes in good condition, number of broken classes significantly affect the achievement of junior high school national exam scores in the province of West Java (probability value of 0.000 <0.05). The value of the coefficient of determination (R Square) is 0.830. This can be interpreted as an educational resource variable capable of explaining the effect of approximately 83% on the achievement of national exam scores. Meanwhile, the results of the partial test (t-test) can be seen in table 2:

***Table 2.***

*The influence of the variable ER on the National Examination*

| No | ER Variable | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| | (Constant) | -0.194 | 2.537 | | -0.076 | 0.939 | | |
| 1 | Education Budget | -0.130 | 0.067 | -0.118 | -1.950 | 0.053 | 0.378 | 2.647 |
| 2 | Number of schools | -0.010 | 0.013 | -0.778 | -0.724 | 0.470 | 0.001 | 826.595 |
| 3 | Total number of teachers | 0.000 | 0.001 | 0.504 | 0.564 | 0.574 | 0.002 | 571.723 |
| 4 | Teacher:student ratio | 0.082 | 0.162 | 0.034 | 0.506 | 0.614 | 0.303 | 3.304 |
| 5 | Class ratio: students | -0.026 | 0.116 | -0.017 | -0.226 | 0.822 | 0.252 | 3.960 |
| 6 | Number of teachers with undergraduate education | 0.167 | 0.213 | 0.237 | 0.783 | 0.435 | 0.015 | 65.536 |
| 7 | Number of non-graduate educated teachers | 0.135 | 0.289 | 0.061 | 0.468 | 0.641 | 0.083 | 12.016 |
| 8 | Number of certified teachers | 0.009 | 0.094 | 0.011 | 0.092 | 0.927 | 0.098 | 10.180 |
| 9 | Number of uncertified teachers | 0.090 | 0.074 | 0.136 | 1.223 | 0.224 | 0.113 | 8.879 |
| 10 | Teacher Competency Test | 0.613 | 0.334 | 0.561 | 1.836 | 0.069 | 0.015 | 66.882 |
| 11 | Even distribution of teachers in the field of study for the national exam | -7.685 | 6.465 | -0.113 | -1.189 | 0.237 | 0.154 | 6.486 |
| 12 | Equitable distribution of non-national exam study teachers | 6.243 | 4.967 | 0.103 | 1.257 | 0.211 | 0.207 | 4.830 |
| 13 | School accreditation | 0.354 | 0.300 | 0.514 | 1.180 | 0.240 | 0.007 | 135.942 |
| 14 | Number of good classes | 0.000 | 0.001 | 0.195 | 0.687 | 0.493 | 0.017 | 57.757 |
| 15 | Number of broken classes | -0.001 | 0.004 | -0.062 | -0.256 | 0.798 | 0.024 | 42.518 |
| 16 | National examination integrity | -0.388 | 0.077 | -0.570 | -5.038 | 0.000 | 0.109 | 9.178 |
| | Dependent Variable: National exam scores | | | | | | | |

Based on the data as presented in Table 2, it can be explained as follows: Without the influence of the SDP variable, the national exam score is -0.194 (Constant). This means that if there is no SDP variable as is the current condition, the achievement of the national exam score will decrease by (-0.194). This shows the importance of local governments to provide adequate SDP if they want to improve the achievement of national exam scores as an illustration of the quality of education. While the partial test obtained the following data: (1) Education budget has no significant effect on national exam scores (probability value of 0.053 > 0.05; (2) Number of schools has no significant effect on national exam scores (probability value of 0.470 > 0 0.05); (3) The number of teachers has no significant effect on the achievement of national examination scores (probability value of 0.574 > 0.05); (4) The teacher : student ratio has no significant effect on the achievement of national examination scores (probability value of 0.614 > 0 0.05; (5) The class : student ratio has no significant effect on the achievement of national exam scores (probability value of 0.822 > 0.05); (6) The number of teachers with undergraduate education has no significant effect on the achievement of national exam scores (probability value of 0.435 > 0.05), (7) The number of education teachers below undergraduate has no significant effect on the achievement of national exam scores (probability value of 0.641 > 0.05); (8) The number of certified teachers has no significant effect on the achievement of national exam scores (probability value of 0.927 > 0.05); (9). The number of uncertified teachers has no effect on the achievement of national exam scores (probability value of 0.224 > 0.05); (10). Teacher competence does not affect the achievement of national examination scores (probability value of 0.069> 0.05; (11) The distribution of teachers in the field of study of the national examination does not affect the achievement of national examination scores (probability value of 0.237> 0.05; (12) Teacher equity non-field of study the national exam has no significant effect on the achievement of the national exam score (probability value of 0.211> 0.05); (13) School accreditation has no effect on the achievement of the national exam score (probability value of 0.240> 0.05; (14) The number of good condition class has no significant effect on national exam scores (probability value of 0.493 > 0.05; (15) Number of broken classes has no significant effect on national exam scores (probability value of 0.465 > 0.05); (16) Integrity of examination administration national examination has a significant effect on the achievement of national exam scores (probability value of 0.000 < 0.05). The integrity of the national examination has a negative effect on the national exam score (beta value -0.570), meaning that if there is a decrease in the integrity of the national exam, the achievement of the national exam score will increase, and vice versa if the integrity of the supervision of the national exam increases, the national exam score will decrease. This indicates the dynamics of changing the behavior of students and schools to cheat when the integrity of the national exam decreases, and when the system of supervision is tight, cheating behavior is difficult to manipulate the results of the exam.

***Table 3.***

*The influence of SES on the national junior high school exam scores in West Java Province*

| Model Summary b | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | | Durbin-Watson |
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change | |
| 1 | 0.820a | 0.672 | 0.660 | 6.60712 | 0.672 | 56.554 | 5 | 138 | 0.000 | 1.136 |
| a. Predictors: number of poor people, severity of poverty, GRDP expenditure, purchasing power | | | | | | | | | | |
| b. Dependent variable: national exam score | | | | | | | | | | |

From the data presented in table 3, it can be explained as follows: (1) simultaneously the number of poor people; (2) the severity of poverty; (3) total GRDP expenditures; (4) purchasing power has a significant effect on the achievement of junior high school national exam scores in West Java (probability value of 0.000 <0.05). The value of the coefficient of determination (R-squared) is 0.672, an indicative that the overall economic capacity variable is able to explain the effect of 67.2% on the achievement of national exam scores.

***Table 4.***

*t-test calculation results*

| Coefficients a | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | 1.185 | 3.286 | | 0.361 | 0.719 | | |
| | Number of poor people | -3.780E-8 | 0.000 | -0.002 | -0.048 | 0.962 | 0.969 | 1.032 |
| | Severity of poverty | -1.134 | 5.791 | -0.017 | -0.196 | 0.845 | 0.313 | 3.197 |
| | Total GRDP expenditure | -2.561E-6 | 0.000 | -0.628 | -3.438 | 0.001 | 0.071 | 14.035 |
| | Purchasing ability | 1.084 | 0.154 | 1.248 | 7.036 | 0.000 | 0.076 | 13.233 |
| a. Dependent Variable: National exam scores | | | | | | | | |

From the data presented in Table 4, it can be explained as follows: Without the influence of economic variables, the national exam score is 1.185 (Constant). The t-test value is 0.361, this shows that overall economic capacity has a significant effect in determining the achievement of national exam scores. Based on the regression value, the number of poor people has a significant effect on the achievement of national exam scores (probability value of 0.962 > 0.05 and beta value -0.002). This can be interpreted that every time there is an increase in the number of poor people by 1 unit, it will reduce the national exam score by (0.002). The effect of poverty severity on national exam scores is not significant (probability value of 0.845 <0.05 and beta value of -0.017), this can mean that every time there is an addition of 1 unit of poverty severity level, it will be followed by a decrease of (-0.017) national exam scores. This means that both the number of poor people and the severity of poverty both have a negative effect on the achievement of national exam scores. While the amount of GRDP expenditure has a significant effect on the achievement of national exam scores (probability value of 0.001 <0.05). The ability of people's purchasing power has a significant effect on the achievement of national exam scores (probability value of 0.000 <0.05). This means that GRDP and high purchasing power in an area will have a significant impact on the achievement of the national exam.

## Discussion

Based on the results of research data processing, it can be seen that the ER variable simultaneously has a significant effect on the achievement of junior high school national exam scores in the province of West Java (the coefficient of determination is 83%). The results of this test provide a factual picture that the availability of ER in an area is very basic to support the achievement of quality education. This research also provides a factual picture of a strong relationship between the availability of ER and the quality of education. This is in line with several studies that have been carried out by other researchers (Chimombo, 2005; Chin et al., 2015) that underscore the importance of ER to facilitate quality education. The availability of adequate ER as a whole is not only correlated with increasing access to education but also with the achievement of quality education.

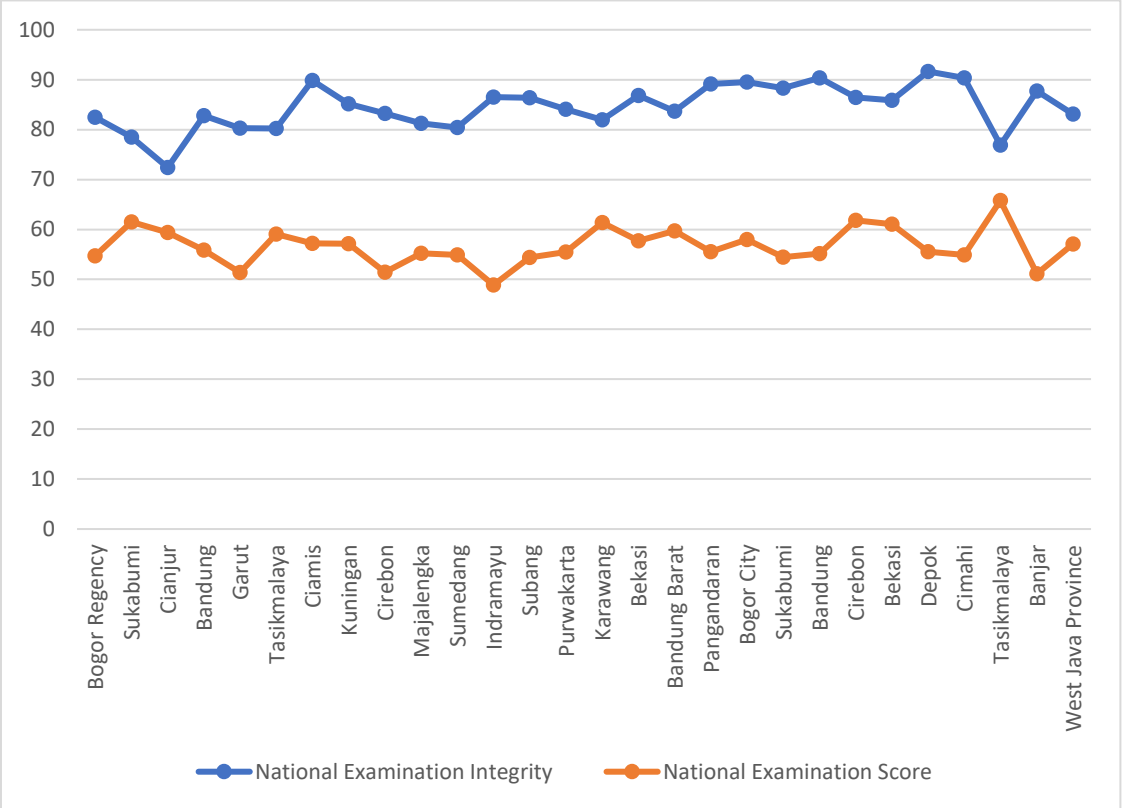
In this study, the results of the statistical data showed that without the ER, the national exam score was -0.194 (Constant). This means that if there is no ER variable as is the current condition, the achievement of the national exam score will decrease by (-0.194). This shows the importance of the government to provide adequate ER if the results of the national exam as an illustration of the quality of education are to be improved. Although the test results partially the majority of the variables do not have a significant effect on the national exam scores, simultaneously the ER variables have a significant effect. While the integrity factor of the implementation of the national exam has a significant effect on the achievement of the national exam score (probability value of 0.000 <0.05).

The integrity of the national exam negatively affectsthe achievement of the national exam score (beta value -0.570), meaning that if there is a decrease in the integrity of the implementation of the national exam, the achievement of the national exam score will increase, and vice versa if the integrity of the supervision of the national exam increases, the national exam score will decrease. This indicates the dynamics of changing the behavior of students and schools to cheat when the integrity of the national exam decreases, and when the supervision system is tight, cheating behavior is difficult to manipulate exam results. This condition is indicated by

numerous researchers (Crooks,1988; Strietholt et al., 2021) reporting phenomena of cheating, moral crimes and public lies related to the achievement of national exam scores in the West Java region.

Of course, this phenomenon is not good for the implementation of quality education. From a review of SES conditions, overall, the economic capacity variable is able to explain the effect of 67.2% on the achievement of national exam scores. Without the influence of economic variables, the national exam value is 1.185 (Constant). Based on the regression value, the number of poor people has a significant negative effect on the achievement of national exam scores. This means that when in an area where the number of poor people/poverty rates is high, the national exam score will be lower. Likewise, the amount of GRDP and the purchasing power of the population have a significant effect on the achievement of national exam scores. A number of other studies have also illustrated that SES is correlated and affects the achievement of the quality of education both at the family level, community group, and country. Family SES condition factors will affect absenteeism at school, learning barriers which result in poor quality of the learning process and ultimately result in low educational quality achievement. (Pov et al., 2021).

The paradoxical situation that illustrates the inconsistency between the integrity of the national examination and the achievement of national examination scores in the province of West Java can be seen as follows (Graph 1):




***Graph 1.***

*The relationship between national exam integrity and junior high school national exam scores in Regencies/Cities in West Java for the 2015-2019 Period*

Graph 1 provides a macrodescription of the results of data analysis regarding the pattern of the relationship between the integrity of the national exam and the achievement of the national exam score that occurred during the 2015-2019 period. In the macro-context in the province of West Java, it can be confirmed that when the integrity score of the national exam falls (low) then the achievement of the national exam score tends to rise (high). This pattern has become a phenomenon in almost all districts and cities in the province of West Java. The phenomena that identifiable in the context of this study are in line with the results of research conducted by Asrijanty (2018) concluding that in the group of schools that have a low national examination integrity index score, there is a higher national examination score. This indicates that there has been a massive fraud.

***Table 5.***

*Quadrant of the Relationship of the Integrity of the National Examination with the National Examination Score of Junior High Schools in West Java for the 2015-2019 Period*

| | |
|---|---|
| Quadrant II:<br>(High National Examination Integrity – Decreased National Examination Score) | (Quadrant III:<br>High national exam integrity – National exam score increase) |
| Regency: Bogor, Sukabumi, Bandung, Garut, Ciamis, Kuningan, Cirebon, Indramayu, Subang, Purwakarta, Bekasi, Pangandaran.<br>City: Bekasi, Depok, Cimahi, Banjar, Sukabumi. | Regency: Tasikmalaya.<br>City: Bogor, Bandung |
| Quadrant I:<br>(Low national exam integrity – decreased national exam scores) | Quadrant IV:<br>(Low national exam integrity - Increase National exam score) |
| | Regency: Kuningan, Majalengka, Sumedang, Karawang, Bandung Barat.<br>City: Cirebon, Tasikmalaya |

From the grouping, as shown in the quadrant table, the following important information emerges: (1) 17 regions have a relationship pattern: high national examination integrity – lower national examination scores; (2) 7 regions have a relationship pattern: low national examination integrity – National examination scores increase; (3) 3 areas have a relationship pattern: high national examination integrity – National examination scores increase. This fact shows that the implementation of national examinations with integrity with a strict supervision pattern has turned out to be an important variable in predicting the ups and downs of achieving national examination scores so far. The comparison description of the situation in 17 regions with 7 other regions provides information that provides reinforcement elated to dishonesty in the administration of the national exam in the province of West Java.

## Implications

From the information obtained through this research, it can be concluded that the community's ER and SES are important factors that must be taken into account in the context of improving the quality of education. Therefore, local government policies are needed to adequately provide the required ER. While the description of the existing educational quality achievements does not describe the actual quality of education because in reality, it provides a "false" quality picture that does not describe the actual quality achievements. It is believed that the true picture of quality can be lower than what is quantitatively achieved today. Thus, it is necessary to measure the quality of education with more integrity, independence and honesty. Local governments must change the direction of quality measurement policies so that they can describe the actual quality of education outcomes and are not full of lies.

## Limitations of the Study

In this study, it has not been revealed why if the partial ER correlation test on the quality of education shows an insignificant correlation, whereas if it is tested simultaneously it shows a strong and significant correlation pattern. Therefore, a more careful study on a more limited scale is needed to examine the correlation of ER on the quality of education. While the SES variable shows a more convincing pattern that the poverty factor, purchasing power, has a strong correlation and regression relationship to the achievement of education quality. This study also reveals a macropicture that illustrates the occurrence of a paradoxical relationship between the integrity of the administration of the national exam and the score of the national exam results. This conclusion is a macropicture at the provincial level and does not yet describe a more microscope, district/city level, and the school scope. Therefore, further research is needed regarding this matter.

## Conclusion

The number of teachers, teachers with undergraduate and certified education has no effect on the achievement of the national exam test scores. Likewise, the equal distribution of subject teachers in general and the subjects tested on the national exam at the junior high school level had no effect on the achievement of the national exam test scores. School accreditation also does not have a significant effect on the achievement of the national junior

secondary school skort test. The ratio of teachers to students and teacher competence has a significant effect on the achievement of the national exam test scores. Achievement of the national exam score test is influenced by the integrity of the supervision of the implementation of the national exam. In this case, if the supervision of the implementation of the test is strong then the test scores are low, in this context, it is suspected that there is dishonesty from the parties related to the implementation of the national test and this is a real "moral crime". Conversely, if the examination supervision is weak, the test score increases. Overall, the population's average length of schooling has no significant effect on the enrollment rate for junior secondary school level education in West Java. Men's education has no effect on the enrollment rate of junior high schools in West Java. Meanwhile, the education level of women has a significant effect on the enrollment rate of junior secondary schools. Likewise, women's empowerment has an effect on the enrollment rate for junior secondary school.

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