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An Economic Evaluation of *Galian C* Mining on People's Welfare Aceh Utara

[1]Rusydi Abubakar, [2]Irham Fahmi
[1]Economics Faculty, Malikulsaleh University, Lhoksumawe, Indonesia
[2]Economics Faculty, Syiah Kuala University, Banda Aceh, Indonesia

**Coorresponding Author*: rusydiabubakar130@yahoo.com

Abstract
The objective of the research was to find out the economic evaluation of galian C mining on people's welfare in Aceh Utara so that mining which did not support the future survival could be reduced since it was expected to make people prosperous. The research was conducted in some subdistricts of Aceh Utara District, Aceh Province. There were some variables which were observed as the parameter: employment, environtmental damages, and people's welfare. It also used regresion model in order to find out the influence of the economic evaluation of mining environtment on people's welfare and the company's obligation to pay the government by counting production cost and rent units. The result of the research showed that galian C mining activities which consisted of the variable of employement had positive influence on people's welfare, while environmental damages had negative influence on people's welfare according to the hypothesis. The result of the feasibility of the levy on the sand was IDR 80,000/truck, on the coral was IDR 120,000/truck, and on gravels was Rp 124,000/truck. The result of regression model test showed that the variable of employment had 62% of influence, mining activities had positive influence on people's welfare.

Keywords: Economic Evaluation, Galian C Mining Activities, and People's Welfare

Introduction

Mining operations are technology intensive activities and capital-intensive. It is a source of foreign exchange. Economic turnaround during the course of the project will stimulate the growth of related sectors of the economy. Available and work opportunities for local people despite the presence of migrant communities to participate in the competition cannot be avoided. With the inclusion of the diversity of culture and lifestyle of each person involved in the mining project, it will gradually affect the pattern of social and cultural life of local communities (Rissamasu et al., 2012).

In the construction of the future needs to be seen how to build reciprocal relationships between humans and the natural components should take place within the limits of the balance , if these interrelationships unbalanced implemented, it will result in any damage to the physical environment , economic , social and cultural (Sumarwoto, 1991) . As for the issue here is how the use of natural resources excavation C economically , fair and sustainable

Literature Review

Mining is part or all phases of activities in the framework of research, management and exploitation of mineral and coal which covers general investigation, exploration,

feasibility studies, construction, mining, processing and refining, transportation and sales, as well as post-mining activities (Rissamasu et al, 2012) , Mining activities have a responsibility to the environment, because the principle of sustainable development. Mining sector had the opportunity to alleviate poverty directly or indirectly, especially in areas of development of other sectors not yet started (Sudjana 1993).

Environmental management can be achieved by applying environmental economics as an instrument that governs the allocation of resources rationally (Ho-Sung Oh, 1993). The environmental policy is heavily influenced by the economic environment. A policy of reducing the environmental impact will be influenced by the calculation of costs to reduce the (preventive) or repair and the benefits to be obtained later (Salim, HS 2007). Understood as a preventive treatment before the impact (ex-ante), while the repair is the treatment after the impact occurs (ex-post). Ratings environmental benefits economically with very small or very large to be abandoned and environmental goods and services must be assessed in the economic benefits (Plastica, 1989)

Research Method

Research conducted at the mine site excavation C, the region of North Aceh District, Aceh Province. Respondents in this study were: (a) Employers quarry C; (b) Workers dug C ; and (c) communities around the mining excavation C. Mechanical sampling of respondents in this study conducted in convenience sampling and purposive sampling . Data collection techniques used in this research is through questionnaires (questionnaire), and observation .

Validity Test

The validity test used Singarimbun and Effendi (1987) with a significance level of 5 %. By using product moment correlation formula, as follows

$$r = \frac{n\,(\Sigma X_i\, Y_i) - (\Sigma\, X_i).(\,\Sigma\, Y_i)}{\sqrt{[n.\,\Sigma X^{\,2} - (\,\Sigma X_i)^2].[n.\,\Sigma\, Y^2 - (\Sigma Y_i)^2]}}$$

Reliability Test

Reliability is the degree to which variables are considered free of errors (error free) . (Ghozali , 2011) . , Where a construct or said to be reliable if the variable value Alpfa Cronbach (α) > 0.60 (Nunnally , 1967) . Used to measure the reliability of Spearman Brown formula as follows

$$r_i = \frac{2r_b}{1 + r_b}$$

Results

Making excavation C lot to do with not having clear standards for land Kuntur for example, are taken foothills areas that will result in rapid landslides will occur so that the impact will result in misery communities receiving such risks buried or house building fall into the location where the excavation C even for people who vanish paddy fields into the river approximately 5 ha that occurred in the river Sawuek Buloh Blang Ara districts of North Aceh, so many people demanding to be returned to the original form of rice as entrepreneurs how to build dikes.

Based on the validity of the test results showed that all the questions X_1 independent variables and the dependent variable Y is declared invalid. Of the 25 items contained questions on the independent and dependent variables declared invalid because the value>. The value is viewed on Corrected item-total correlations and compared with the value at the 5% significance level that is equal to 0.202 is seen in the table r statistics.

Reliability Test Results Analysis

Reliability Variable Research (Alpha)

No	Variable	Crombach Alpha	total Variable	Value of Alpha	Information
1	Opening Jobs	(X) > 0,60	5	0,769	Reliabel
2.	Public Welfare	(Y) > 0,60	10	0,915	Reliabel

Source : Primary data are processed

Effect of work opportunities Against Public Welfare

Estimation Results Table X To Y

Variable	Koefisien Regresion	t_{hitung}	Sig
Constants	-15,826	-2,635	0,010
Opening Jobs (X)	1,756	5,001	0,000
R	= 0,632		
R Square	= 0,400		
Adjusted R Squared	= 0,387		
F_{hitung}	= 30,979		
Sig	= 0,000		

Source : data are processed

Table : Data analysis of production conducted mining entrepreneur excavation C

$Q_{gal\ c}$	$Q^2_{gal\ c}$	$FC_{gal\ c}$	$VC_{gal\ c}$	$TC_{gal\ c}$	$TR_{gal\ c}$	$AC_{gal\ c}$	$P_{gal\ c}$	$MC_{gal\ c}$
157	24649	120000	23550000	23670000	64050000	350000	350000	150000
168	28224	120000	25200000	25320000	70000000	350000	350000	150000
184	33856	120000	27600000	27720000	80150000	350000	350000	150000
188	35344	120000	28200000	28320000	77350000	350000	350000	150000
193	37249	120000	28950000	29070000	78050000	350000	350000	150000
202	40804	120000	30300000	30420000	70000000	350000	350000	150000
208	43264	120000	31200000	31320000	84700000	350000	350000	150000
217	47089	120000	32550000	32670000	78750000	350000	350000	150000
224	50176	120000	33600000	33720000	78050000	350000	350000	150000
229	52441	120000	34350000	34470000	82950000	350000	350000	150000
233	59729	120000	34950000	35070000	84700000	350000	350000	150000
236	55696	120000	35400000	35520000	77700000	350000	350000	150000
244	59536	120000	36600000	36720000	79800000	350000	350000	150000
246	60516	120000	36900000	37020000	82950000	350000	350000	150000
251	63001	120000	37650000	37770000	81200000	350000	350000	150000
255	65075	120000	38250000	38370000	82250000	350000	350000	150000
259	67081	120000	38850000	38970000	81900000	350000	350000	150000
264	69696	120000	39600000	39720000	82950000	350000	350000	150000
267	71289	120000	40050000	40170000	77000000	350000	350000	150000
271	73441	120000	40650000	40770000	87150000	350000	350000	150000
279	77841	120000	41850000	41970000	83307894	350000	350000	150000
4871	1105997	120000	716250000	718770000	1664957894	7350000	350000	3007500

Source : Primary data are processed

$Q_{gal\ c}$ = Quantity , $FC_{gal\ c}$ = Fixed costs, $VC_{gal\ c}$ = Variabel Costs, $TC_{gal\ c}$ = Total Costs, $TR_{gal\ c}$ = Total revenue, $AC_{gal\ c}$ = Average Costs, $P_{gal\ c}$ = Price dan $MC_{gal\ c}$ = Marginal Costs.

V. Conclusion

From the results of statistical tests , it turns out the effect of the economic valuation of mining excavation C in North Aceh in Partial positively influence the welfare of the community , and when analyzed by partial opening of the job that a positive effect on the welfare of the people in North Aceh district . Which also cannot be ignored is that there are other factors that affect the well-being of communities in North Aceh district. The expectation is that the future use of the mechanism of excavation C for become more into account and brings prosperity to the society more prosperous.

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