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PUBLIC ACCEPTANCE OF MINING COMPANIES IN INDONESIA

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ABSTRACT. This study aims to provide empirical evidence on community acceptance of mining sector. The survey involved in particular the department of environment in all regencies / cities in Lampung province. This survey model is very effective in obtaining data that is suitable for target participants, relatively faster because access to mining locations is easier, and cheaper. The questionnaire was compiled using simple sentences to avoid the possible maturation in a prolonged survey. There are seven variables measured in this study. First is governance, measured by the existence of rules and legislation. The assumption is that these rules and regulations can ensure companies carry out mining activities according to the rules and the government can guarantee the accountability of mining companies. The second is mining acceptance, measured by tolerance, accept, approve, and embrace. Third is living cost, measured by how much the community sacrifices to fulfill basic needs. Fourth is environmental cost, measured by environmental quality (low pollution). Fifth, improving infrastructure, measured by improvements and facilities in supporting economic activities. Sixth is the impact of other industries, measured by the growth of other industry sectors, and the seventh is increasing welfare and greater employment opportunities for the community. The study found empirical evidence that public acceptance of mining companies is influenced by several factors, including the cost of living, quality of the environment, community involvement, improved infrastructure, the impact of other industries, and public welfare.

Keywords: Regulation, Governance, Mining, Public Acceptance, Environmental Cost, Living Cost.

1. INTRODUCTION

Lampung Province's spatial planning rules have been prepared through Regional Regulation No. 1 of 2010 concerning Lampung Province Regional Spatial Planning for 2009-2029, and Regional Regulation Number 1 of 2018, concerning the Zoning Plan for Coastal Areas and Small Islands of Lampung Province for the period 2017- 2037.

The right to a healthy environment and is well contained in Article 28H of the 1945 Constitution, Article 9 Paragraph (3) of Law No. 39/1999 concerning Human Rights and Article 65 Paragraph (1) of Law No. 32 / 2009 concerning Environmental Protection and Management. Thus, the state (government) and business actors are obliged to respect, protect and fulfill these rights. Article 66 of Law No. 32/2009 states that anyone who fights for the right to a good and healthy environment cannot be prosecuted in criminal or civil suit (https://www.mongabay.co.id/2017/05/17/ damage -environment-effect of coal-mining-continuous-what is the solution /).

Therefore, the community and / or environmental institutions have the right to fight for these rights. Not only to obtain a decent living environment for now, but also to ensure the sustainability of the ecosystem for future generations.

Based on Law Number 23 of 2014, since 2015 the authority to administer government affairs in mineral and coal mining has been transferred to the Province. The purpose of transferring this authority to the Provincial Government is to control many conflicts that occur when the ownership rights of mining permits are in the hands of the Regional Head. Conflicts in various dimensions often occur, even though the reason of triggering the conflict is to prosper the community. But in fact, people always become victims of the conflict in the mining area (https://setkab.go.id/konflik-tambang-dan-manfaat-dana-desa/).

This research involves community participation in assessing environmental management in mining areas. This assessment will provide relevant information for policy making related to the existence of mining. Data on reclamation guarantees, and post-mining guarantees recorded in the Provincial Government of all mining companies active in Lampung Province show that the compliance of mining companies in fulfilling the company's responsibility for the environment is very low. The low awareness of mining companies to provide guarantees of reclamation and post-mining is shown in Figure 2. From figure 2, it can be seen that there were only 36% of mining companies out of a total of 168 companies that paid collateral for reclamation. Meanwhile, companies that pay post-mining guarantees are only 18%, and all of them come from companies that also pay

collateral for reclamation.

This study successfully confirmed of both theories, legitimacy theory and stakeholder theory, that in its operational activities, companies must pay attention to the interests of their stakeholders. Community acceptance of mining companies is one of the keys for companies to perform and continue operations in a sustainable manner.

2. LITERATURE REVIEW

Some theories that are often used by researchers in environmental issues in social research are legitimacy theory, stakeholder theory, and public policy theory. The theories can explain that companies must carry out responsibility activities to society and the environment. In this study also uses these the theories and enriched with regulatory theory.

2.1 The Legitimacy Theory

Legitimacy was states that legitimacy is important for organizations because it explains the limits of emphasis on social norms and values [1]. Legitimacy is also a response to the importance of analyzing organizational behavior that takes into account the environment. The company's legitimacy will be obtained if there are similar results expected by the community from the company, so that there are no demands from the community. Companies can make social sacrifices as a reflection of the company's attention to society [2]. In order to gain legitimacy, companies must improve their image [3] by communicating their environmental activities with the disclosure of the social environment [4].

Legitimacy theory explains that companies must carry out operational activities in line with the expectations of the surrounding community [5: 8]. If the company's activities are contrary to the expectations of the community, then the company will not get the legitimacy of the community. This is what further tends to cause conflict between the company and the community [6].

2.2 The Stakeholder Theory

In general, stakeholder theory explains that a company is an entity that not only operates for its own interests, but also must provide benefits to stakeholders. The stakeholder theory also explains that each stakeholder group has an unequal impact on the environment. This explanation also indicates that all stakeholders have the right to obtain information about company activities so that their diverse decision-making can be used [7]. Consequently, the company has an obligation to fulfill all its obligations to stakeholders. Stakeholders have different expectations from the company [8]. To pursue this expectation, stakeholders can put pressure on the company directly or indirectly in making environmental disclosures. To deal with this, the company is required to always work with stakeholders so that the company's vision is in line with them. However, stakeholders can also choose not to use information and cannot play a role directly in the company [9].

This study attempts to confirm whether the legitimacy theory and stakeholder theory are in line with the real conditions of mining companies in Lampung Province. Where the two theories predict that in its operational activities, the company must pay attention to the interests of its stakeholders. If the company's activities are in line with the interests of stakeholders, the company will be legitimized in the community.

2.3 The Public Interest Theory

Public interest theory was introduced by Arthur C. Pigou in his book entitled The Economics of Welfare in 1932. Regulation refers to the availability and enforcement of legal instruments, such as laws and other government rules. In general, the Public Interest Theory explains that regulation provides protection and benefits to the wider community [10]. In the case of mining, the theory of public interest leads to the assumption that the legal instruments issued are to provide a balance of allocation of these scarce resources, for all parties. Communities that are powerless stakeholders and who cannot be sacrificed from mining activities. To provide protection to the public, regulation is needed.

2.4 Previous Research and Hypothesis Development

Mining companies are types of companies whose operations are very sensitive to the environment. This type of industry is very easy to generate profits, but on the other hand also has a negative impact on humans and the environment. Zhang and Moffat [11] conducted a study that aims to examine how people around mining companies evaluate the benefits and negative impacts of mining, and from this evaluation data is obtained about the extent to which mining activities in Australia affect community acceptance of mining activities.

Conflicts between companies and communities (including indigenous peoples) are an integral part of the mining area. The frequency of this conflict occurs, resulting in mistrust of indigenous peoples in the government [12]. The Center for Social Responsibility in Mining (CSRM) also recognizes that conflict is an inherent part of the mining community throughout the world. Conflicts that occur in mining areas occur in various elements of

society, on several scales, concerning a number of problems; politics, economy, socio-culture, and environment [13], [14].

The study conducted by Zhang and Moffat [11] found that the role of government can play a role (moderating) in public acceptance of the impact of mining activities. Literatures that discuss impact assessments especially on social impact assessments also find positive and negative impacts on mining activities on, especially on a small scale [15]. Islam [5] explains that one form of corporate social responsibility is assessed from the welfare of the community.

Meanwhile, Boyd and Banzhaf [16] explain that the explanation in ecosystem services must involve environmental costs. This explanation is quite a reason for the importance of research to assess the acceptance of people around the mining area for the impact caused by the company's activities. The hypothesis formulated is the role of government can play a role (moderating) in public acceptance of the impact of mining activities. Prolonged conflicts that occurred in the mining area, one of which was the conflict between diamond and mining areas (titanium oxide) in the Sierra Leone region. This conflict between the company and the people of Sierra Leone eventually contributed to the formation of the Revolutionary United Front (RUF) and civil war in Sierra Leone [17]. Conflict in the mining area is one of the centers of economic, social and environmental problems that are key to the country's development, therefore, the impact of the mining sector needs to be seriously assessed [18].

The rules issued by the Indonesian government through Law No. 23 of 2014, effectively valid for 2016, are essentially in favor of the public interest (see Public Interest Theory). So that the policy of business practices should properly create regional economic growth. In relation to mining companies, the law has the potential to reduce poverty and improve the quality of human development [19]. This explanation is quite a reason for the importance of research to assess the acceptance of people around the mining area for the impact caused by the company's activities. For theoretical explanations and previous research, the research hypothesis formulated: Government governance can play a role (moderating) in public acceptance of the impact of mining activities.

3. RESEARCH METHOD

This study will use a questionnaire survey to measure community acceptance (including indigenous peoples) of mining companies, by involving Regency / City / Province of Lampung. Government involvement will greatly influence the achievement of this research, because the government has easy access to meet people in mining areas. The participative design is very effective in order to obtaining data from participants, and also relatively faster because access to mining locations is easier, and cheaper. In addition, the government should also show concern for the community for the possibility of corporate irregularities in existing rules and regulations. Thus, the government has an interest in achieving the objectives of this research.

The surveys conducted are manual (not on-line) related to the condition of the community surrounding mining companies that may not have WIFI access. Even if they have WIFI access, their expertise in taking orders and filling out online surveys is predicted not to be as expected in this study. Questionnaires were built using research designs that had been carried out in previous studies [11], with adjustments as needed. This adjustment is considered important because of the different natural and community conditions between Australia and Indonesia.

Through the local government, this research will spread questionnaires to the community including indigenous peoples in the area where the mining company is located. Furthermore, the role of local governments to determine respondents (residents around the mining area) will greatly simplify the survey method of this study. At the end of the 20th century indigenous peoples were excluded from any important role in the management of the resource development environment in traditional lands [11].

The instrument of this study adopted the previous research instrument [10]. All variables used in their study were also measured in this study, with some modifications, if needed. Governance is measured using two question items, laws and government guarantees [20], [21], [10]. Participants were given 22 questions (consists of 8 criteria of questions) with a 7-point scale (1 = strongly disagree / very bad / very unsatisfactory, 7 = very agree / very good / very satisfying). Acceptance of mining was measured using four items of questions that tolerate / Accept / Approve / Embrace [22].

The questionnaire was compiled using simple sentences to avoid the possible maturation in a prolonged survey. There are seven variables measured in this study. The respondent group was divided into two groups. The first group is the Regency / City, where the mining company is located, and also and Lampung Province (the first variable). The second group is community groups who live around mining companies (second-seventh variables).

The **first** is mining acceptance, measured by tolerance, accept, approve, and embrace. **second** is living cost, measured by how much the community sacrifices to fulfill basic needs. The **third** is environmental quality, measured by environmental

quality (low pollution). The **fourth** is community involvement, measured by involvement of local residents in mining activities. The **fifth is** improving infrastructure, measured by improvements and facilities in supporting economic activities. The **sixth** is the impact of other industries, measured by the growth of other industry sectors, and **the last** is increasing welfare and greater employment opportunities for the community.

Before collect the data, surveyor team educated by researcher to guide how data could be collected and why survey conducted. Each Regencies/ Cities respondent was not similar. It was depended on the number of mining corporations in its area. The final participant of this study consisted 78 participants.

4. RESULT AND DISCUSSION

The mean of the respondent's answer to this research questionnaire shows a reasonable value. The mean value for each study variable, respectively, is: (1) the Mining Acceptance = 3.52; (2) Living cost= 4,26; (3) Environmental Quality = 3.15; (4) Community Involvement = 3.36; (5) Infrastructure Improving = 3.38; (6) Impact of Others Industry = 3.09; and (7) Public Welfare = 3.48. The whole has a relatively similar value. Except for living cost which has a mean value that tends to be highest. Table 1 explains each correlation test result between variables. In addition, the mean and standard deviations are explained in the table. Furthermore, a discussion about the acceptance of mining companies using consideration of living costs.

Table 1 The result of relationship testing between variables

	1	2	3	4	5	6	7
1	1						
2	-,53**	1					
3	,86**	-,61**	1				
4	,87**	-,57**	,69**	1			
5	,87**	-,52**	,71**	,95**	1		
6	,92**	-,60**	,90**	,86**	,89**	1	
7	,76**	-,45**	,45**	,91**	,92**	,71**	1
Mean	3.52	4.26	3.15	3.36	3.38	3.09	3.48
SDev	0.69	0.48	0.96	0.99	0.91	1.3	0.84

Note: 1. Mining acceptance; 2. Living cost; 3. Environmental quality; 4. Community involvement; 5. Infrastructure Improving; 6. Impact of others industry; 7. Public welfare.
** Significant level <0,01

The community will reject the existence of mining when the necessities of life are getting higher. Statistics on the correlation between mining receipts and living costs show a negative relationship (R = -0,531**). The higher of living cost that the public must pay, the lower the public's acceptance of mining companies, and vice versa (see Figure 1). Another finding demonstrates that mining companies need to pay attention to the elements of community needs around mining activities carried out, such as the presence of clean water and ease as well as relatively low prices to obtain basic needs, and so forth.

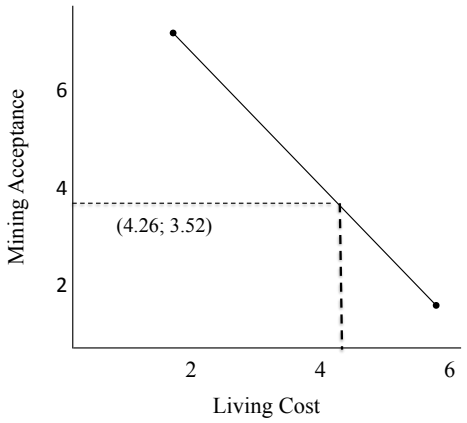

Fig. 1. Illustration relationship of mining acceptance and living cost.

Low environmental quality (indicated by poor air quality, high noise, garbage, declining soil fertility, damage to post-mining ecosystems, etc.) will result in more public acceptance of mining companies. Statistics shows a positive correlation value (R = 0.858 **). In other words, this study found that the higher the quality of life of the community, the higher the public acceptance of mining companies, and vice versa (see Figure 2).

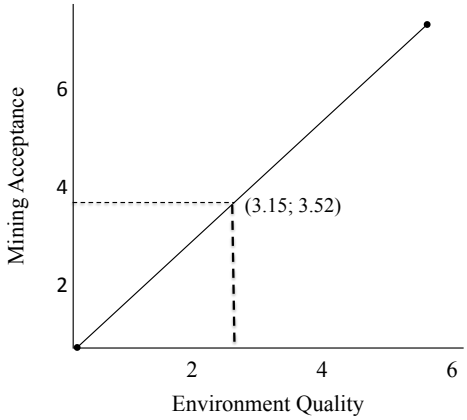

Fig. 2. Illustration relationship of mining acceptance and environmental quality.

Other analysis shows that environmental quality has a negative impact on people's living costs (R = -0.607 **). This means that the lower the quality of the environment, the higher the cost of living that will be paid by the community.

The relationship between community involvement and mining company revenue is positive (R = 0.874 *). Figure 3. indicates that the higher the community involvement in mining companies, the higher their acceptance of the company, and vice versa. Community involvement in mining company activities will increase community income. That way, the community will be able and easier to meet the cost of living. The cost of living feels lower when the ability to pay is higher. Finally, with the low cost of living, community income to mining companies is higher (R = -0.569 **). The involvement of the community in mining must be considered by the company. The involvement of the community in mining companies can be as mining workers, or as providers of supporting activities for mining companies (such as transportation, food or food providers, business partners, etc.).

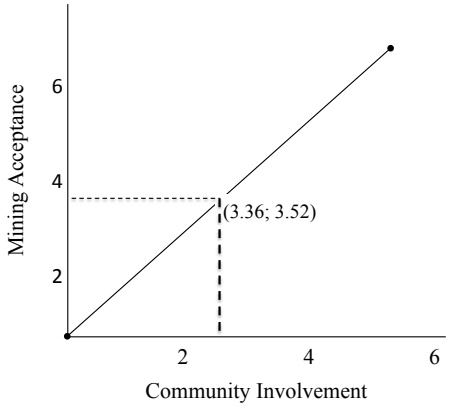

Fig. 3. Illustration relationship of mining acceptance and community involvement.

Figure 3 indicates a positive relationship between community involvement and their acceptance of the mining activities around them (R= 0.874). These results indicate that the more publicly involved in mining activities, the higher their acceptance of mining activities around them, and vice versa. When the survey was conducted, we found community enthusiasm in mining activities because they benefited greatly from mining and were given the opportunity to be involved in the mining process. These concrete findings confirm the statistical results.

Infrastructure improvements around the company will result in a smooth production process. In addition, the community benefits from the infrastructure built in the company environment. In accordance with the concept of CSR, the company's concern for infrastructure will gain the sympathy of the surrounding community, so that it will gain legitimacy. The results of this study are in line with what the legitimacy theory predicts, where the relationship of infrastructure development is positively related (R = 0, 875 **) to the acceptance of mining companies (Figure 4).

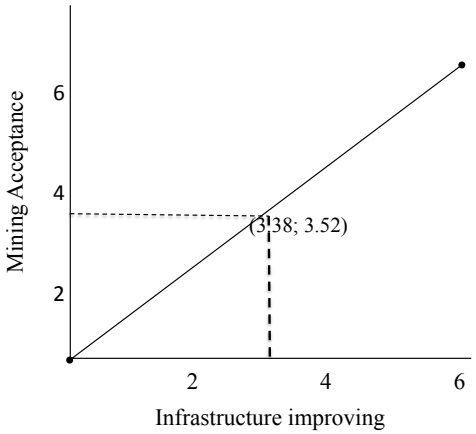

Fig. 4. Illustration relationship of mining acceptance and infrastructure improving.

Communities around mining companies also need infrastructure improvements, such as the availability of electricity and good main roads. As with conditions in the village area, the availability of electricity is still relatively limited. If the availability of electricity is mostly absorbed by mining activities, it can be ascertained that the community will often experience a long duration of blackouts. Infrastructure that is not well developed will have a high cost of living. The quality of the main road to community settlements must be maintained. Damaged roads will cause economic movements to require a relatively long time, and ultimately increase the cost of goods. The study found that the worse the infrastructure, the lower the acceptance of mining (R = -0,521 **).

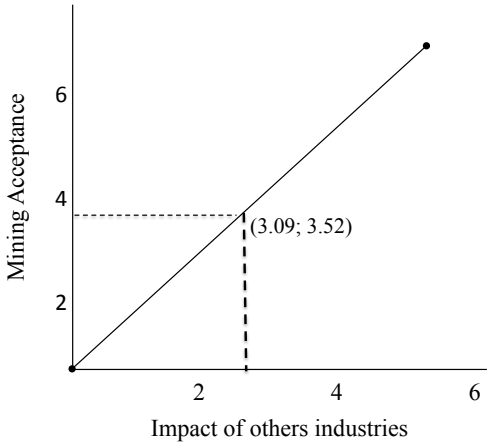

Fig. 5. Illustration relationship of mining acceptance and impact of others industries.

The correlation test results between industrial growth and mining company revenues were found

to be positive (R = 0.922 **). These results indicate that the more industries grow around mining companies (especially if the mining company triggers the growth of the new industry), the higher the community's acceptance of the mining company

This result is in line with the legitimacy theory and stakeholder theory. Both theories predict that in its operational activities, the company must pay attention to the interests of its stakeholders. If it is in line with stakeholder interests, the company concerned will obtain legitimacy in the community.

This study also found empirical evidence that industrial growth reduced living costs (R = -0.604 **). The growth of other industries around mining companies was also a concern in this study. The presence of mining activities followed by the growth of other business activities in the surrounding areas indicates that mining activities can drive economic growth in the region. Economic growth will encourage the ability of the community to fulfill their needs (see figure 5).

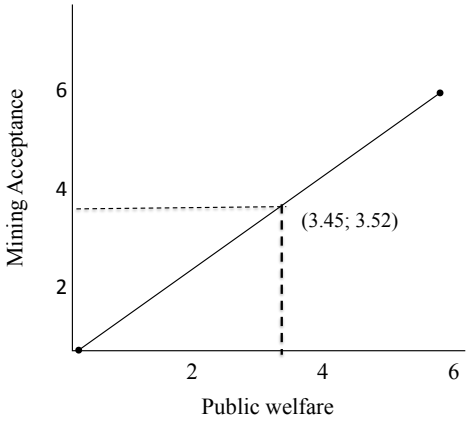

Fig. 6. Illustration relationship of mining acceptance and public welfare.

Statistical test results that public welfare was positively related to the acceptance of mining companies around them (R = 0.759 **). This study shows the higher the public welfare, the higher their acceptance of mining companies, and vice versa (Figure 3.a). In general, the concept of public welfare is indeed the main measure of economic success. The results of this study also found a positive correlation between the welfare of the community and the acceptance of mining companies in their area (R = 0.455 **). Low public welfare will encourage the difficulty of the community in fulfilling their needs

5. CONCLUSIONS

The study found empirical evidence that public acceptance of mining companies is influenced by several factors, including the cost of living, quality of the environment, community involvement, improved infrastructure, the impact of other industries, and public welfare. These results are increasingly interesting when considering the cost of living in interacting between variables.

These results are increasingly interesting when considering the cost of living in interacting between variables. Where it was found that the cost of living statistically was negatively related to the variable. An important implication of this research is the need for attention from the company to maximize the interests of the community around the company. Because, community acceptance is absolutely needed by the company to ensure the sustainability of the company's operations. Finally, we hope that this paper can contribute to policy making related to mining activities in Indonesia.

Several limitations of the study were encountered, especially when the surveyor team went to the field to get respondents. The difficulty in reaching the location of the mining company and the research schedule that coincided with the days of Ramadan (when Muslims fasted for a full month) caused the low number of respondents to this study. However, the conduct of surveys is still carried out with a high level of caution, to obtain quality research results. Further research can be developed in many regions in Indonesia. Collaboration with other researchers will greatly assist in obtaining generalized research results.

6. ACKNOWLEDGMENTS

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