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Title	The role of community trust in mining companies with focus on environmental perception : two case studies in Mongolia [an abstract of dissertation and a summary of dissertation review]
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Degree Grantor	北海道大学
Degree Name	博士(環境科学)
Dissertation Number	甲第13381号
Issue Date	2018-12-25
Doc URL	https://hdl.handle.net/2115/72376
Rights(URL)	https://creativecommons.org/licenses/by-nc-sa/4.0/
Type	doctoral thesis
File Information	Dagvadorj_Lavdmaa_review.pdf, 審査の要旨



学 位 論 文 審 査 の 要 旨

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学 位 論 文 題 名

The role of community trust in mining companies with focus on environmental perception:
two case studies in Mongolia

(地域コミュニティの環境認知が鉱山会社への信頼に及ぼす役割：モンゴルにおける2つの
事例研究)

Many countries face challenges to reserve natural environment while extracting mineral resources supplying minerals and metals for production of energy and goods. Mines operate in areas where communities are engaged in agriculture that supplies food in the countries. Agriculture and mining industry should co-exist to sustain both industries. Previous studies suggested that mining companies need to gain trust of local community to avoid resistances.

This research investigated local community's trust in two mining companies in Mongolia using a questionnaire survey. Mining industry have important role for the economy of Mongolia. In the same areas nomadic herders graze livestock for living and produce food in the country. During mining operations, some companies cause environmental problems e.g. water pollution or land degradation. These problems might cause negative impacts on residents' lives, however those impacts have not been studied. Therefore, it is crucial to study the local community's perceptions and opinions.

The respondents of the survey evaluated the mining companies by determinants of trust including motivation, ability and environmental protection. The trust level differences within the local communities were tested. Statistical analysis for the answers of the questionnaire included multiple and single regression analysis, analysis of variance and Pearson's correlations.

The questionnaire survey was conducted for the residents, who lived in same area of the mining companies. Two mining companies, abbreviated as G and U, are described as following. G company was a gold mining, foreign invested, private company located in Selenge Province. The respondents were grouped into three groups. U company was a fluorite and iron mining, state owned company, was located in Khentii Province. The respondents were grouped into two groups.

The results about G mining company by three groups showed that: 1. The nomadic herders residing close to the mine site had low trust being sensitive to the environmental changes of the mining operation which they observed the mining operation in daily lives. 2. The other herders, who lived in far distances from the mine site, had neutral opinions. 3. The town citizens, who lived in tens of kilometers distances from the mining, had high trust which was related to positive perceptions of financial contributions for the local area developments.

In U site in terms of all the respondents, trust correlated positively with motivation and environmental protection. The trust levels did not differ much between the two respondent groups. However, in open-ended answers about the mining company, the respondents expressed their concerns about various negative impacts on natural environment from the mining operation. Due to these concerns, the trust level was lower in U site than in G site.

Overall, the trust of local community in the two mining companies showed different characteristics. Low trust was related to their concerns about various negative impacts on natural environment from the mining operation and perceptions of environmental changes. Those impacts might be a sign of negative impacts on nomadic herders' lives e.g. if water sources decreased due to mining, nomadic herders would face difficulties of water shortage for drinking and livestock. Further researches are required about the impacts. Previous studies defined that people with low trust tend to oppose an institution. Therefore, mining companies need to study the trust of local community and take appropriate measures to maintain trust.

In addition to the excellent academic knowledge in the research, her academic records throughout the Ph. D course are excellent. Based on these evidences, the committee reached to a conclusion that Dagvadorj Lavdmaa deserves to become a Doctor of Environmental Science.