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Social license to operate in the mining industry: the case of Peru

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ABSTRACT

Mining is an important industry in Peru, but local communities where mining takes place do not perceive its benefits. Mining corporations need to achieve legitimacy within these communities. The main objective of this study is to identify the factors that determine the provision of social licenses to operate in Peru's mining regions. We conducted this research using a case study of two Peruvian mining companies. Our study concludes with the identification of four essential factors needed to achieve a social license to operate within these communities: a deep understanding of the socioeconomic environment, a strong commitment to the community, an active presence of Government, and effective communication between the actors involved in mining activities. The combination of these elements can result in improved trust levels between companies and society, enabling all agents to recognize the costs and benefits resulting from mining.

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Corporate social responsibility; social license to operate; mining; social conflicts

Introduction

Social License to Operate (SLO) 'refers to the intangible and unwritten, tacit, social contract with society, or a social group, which enables an extraction or processing operation to enter a community, start, and continue operations' (Franks and Cohen 2012, p. 1231). Different authors have addressed this concept, hailing Jim Cooney in 1997 as a pioneer (Franks and Cohen 2012). Also, Wilburn and Wilburn address that 'SLO requires industries that operate in the territories of indigenous people to secure free, prior, and informed consent (FPIC) from those indigenous people' (2011, p. 4). Authors like Prno and Slocombe (2012, 2014), Prno (2013), Boutilier and Thomson (2011), Wilburn and Wilburn (2011) have developed models to explain how this license can be achieved.

In Peru, there is a permanent state of unrest among residents living in certain mining areas: since April 2013 until December 2018, more than 60% of social conflicts were social-environmental conflicts (*Defensoría del Pueblo* [Office of the Ombudsman], 2013, 2018). Claims and complaints related to the extraction activities affect companies within the country because residents cannot perceive the benefits derived from their activities, as Jaskoski explained: 'the most intense conflicts between communities and companies have been driven by community complaints about companies' failing to provide promised benefits, (...) and about insufficient community participation in distributing the benefits' (2014, p. 874). Similarly, McMahan and Tracy conclude: 'international experience shows us that there can be enormous

stress on communities, particularly if they do not see themselves as receiving significant social and economic benefits from the mining operations' (2011, p. 50). Coulson et al. (2017) associate conflicts between local communities and large-scale mining companies to social aspects, environmental problems, and the economic impact of mining. Owen and Kemp explained that 'within the context of a growing divergence around the expectations of minerals-led development, social licence has emerged as an industry response to opposition and a mechanism to ensure the viability of the sector' (2013, p. 29).

Following Moffat and Zhang's observation that 'limited research to date has been conducted in order to investigate what factors contribute toward and/or undermine acceptance of mining developments by host communities' (2014, p. 62), the main purpose of this research is to identify the factors that determine provision of social licenses to operate in Peru's mining regions. To identify these factors, we analyzed stakeholders' perceptions of two mining companies' representative of the large-scale mining sector, located in different geographic locations with different population distributions and socioeconomic realities (Sícoli 2016).

Literature review

Literature on SLO shows that the concept has evolved over time. Holden and Jacobson (2006) and Maconachie (2014) in the Philippines and Sierra Leona, respectively, both analyze the concept of a model supporting the

social license focused on specific groups of stakeholders. Browne et al. (2011), in Australia, and Koivurova et al. (2015) in Nordic countries, relate social license with a vague concept that if awarded, would enable companies to obtain acceptance within the communities where they develop their projects. These authors conclude that permission to operate is strongly linked to the specific requirements and idiosyncrasy of residents in each location. Dare highlighted that 'to operationalize social license, it needs to be understood as a continuum of multiple licenses achieved across various groups within society' (2014, p. 189). Jijelava and Vanclay (2014) go further and conclude that to obtain SLO, companies need to take into consideration a gender approach because women have different needs and interests, especially in some traditional communities, where women's external communication is low.

Several models attempt to explain determining aspects about how SLO is provided. Boutilier and Thomson present a model that establishes four possible levels that a company can reach regarding its relationship with a community, considering SLO from the standpoint of the community and about their experiences and expectations (Prno and Slocombe 2012). Another standpoint is that SLO can be viewed as an institution (set of rights, rules and procedures to make decisions) where these rules are negotiated between mining companies and local communities during a mine's operating cycle (Prno and Slocombe 2012). Bebbington and Bury (2009) studied local institutional changes that have emerged in Peru as a response to challenges faced by the mining industry. Some examples include water monitoring in Cajamarca and participatory ecological zoning in Piura and Cajamarca, as institutional incipient innovations that remain incomplete because of social conflicts and resistance.

Morgan identifies that many countries 'have incorporated some form of impact assessment process into formal procedures or legislation relating to planning or to other areas of environmental decision-making' (2012, p. 5–6). In Peru, companies are obligated to obtain approval from the competent authorities of their environmental impact assessment (EIA). This assessment must detail a community participation program and execution (Law 27446, 2011) before they can start a project which represents environmental impact. This is one important reason for companies to obtain social support to carry out extractive activities: 'the need to attain a social license to operate continues to be front in the discourse of both extractive industries and in natural resources management' (Mercer-Mapstone et al. 2017, p. 347). Boutilier and Thomson described the local community will comply with a project, if they can make a strong connection

with the project proponent and perceive shared interests between the community and the company (Jijelava and Vanclay, 2018). In the same line, Harvey and Bice (2014) argued that a successful approach to obtain social license to operate requires working directly with affected stakeholders. For that matter, companies must define what constitutes a community and who its relevant stakeholders are, in order to develop procedures and systems to prioritize stakeholder's expectations and requirements.

Prioritizing the stakeholders serves as a basis to define strategies for developing relationships with each of these groups. According to some authors, this can be a difficult process, because it is based on judgment that could favor industry over individual rights (Wheeler et al. 2002). These authors consider it necessary to establish a dialogue between stakeholders and companies in order to put socially responsible programs into practice. However, this can result in a paradox: a dialogue between companies and a community requires sharing language and meaning, which may ultimately not exist when there are two opposing truths and worldviews (Wheeler et al. 2002). Bebbington and Bury state: 'the mining sector also needs to learn from local systems as it enters new and complex environments for which its knowledge may be inadequate' (2009, p. 17297).

Methodology

This research applied a qualitative exploratory approach selecting two companies for the application of case study analysis to define a model that outlines the factors that can facilitate SLO provision to mining companies operating in Peru. This design is justified because the phenomenon under observation requires in-depth research to obtain a better understanding of relationships that arise between different agents (Yin 2009). Therefore, we study the interaction of local people involved in problems associated with granting SLO, in the context of each company, as well as the causes and possible consequences derived from these interrelations.

Study cases selection

This research takes into consideration two initial assumptions, based upon preliminary perceptions:

- (i) Both cases present substantial differences:
 - Companies A and B are two representative cases within the industry, which held different relationships with the community where they carried out their activities, as was discovered in an initial document review.
 - The extraction activity of these companies is geographically located on the outer limits of

the country: Company A carries out exploitation activities in different locations in Cajamarca, province located in the northern region of Peru. Company B is located in Arequipa, province situated in the south. Because of their locations, requirements of each population may be different, based on differences in cultural heritage.

(ii) Similarities can be identified that qualify both companies for analysis in the same research:

- Both companies initiated operations with private capital during the early 1990s and their shares are divided between local and foreign capital.
- Both companies are considered significant because of their contribution to national mining in the 2008–2017 period (Ministerio de Energía y Minas del Perú [Peruvian Ministry of Energy and Mines], 2018). Company A is the largest gold producer, and Company B has maintained its rank as second or first (since 2016) in copper production during the same period.

Data collection instruments

Document review: Analyzing documents such as companies' annual reports and the Social Conflict Reports prepared by the Office of the Ombudsman pinpointed conflicts that affected mining activities. Also, players involved in these conflicts were identified, aiding in the classification of different stakeholders.

Interviews: to stakeholder representatives, company executives and government agencies, considering the essential role they play, so they could offer well-informed testimonies from different perspectives (Yin 2009). The questionnaires used during the interviews were prepared based on studies by Boutilier and Thomson (2011) and a document from the World Economic Forum (2013), adapting the questions to the groups being interviewed (Appendix 1).

This study also considered a direct informal observation in communities surrounding selected mining exploitation companies.

Population and sample

Stakeholders are the units of analysis in this study, because they are individuals negatively or positively affected by mining activities. They were interviewed to understand their perceptions about mining activities in their communities. In Cajamarca, the sample included three professors and two students of a local university, an official of the local municipality, a sociologist, a former member of the Cajamarca Environmental Defense Front, a group of workers from the company A and a tourist guide. In Arequipa, stakeholders were represented by three professors of a local university, an official of the municipality, a taxi driver, and a housewife. Company B did not allow us to interview their workers.

The selection of government institutions takes into consideration their relationship with mining activities, the analysis of their declared functions, institutional mission and vision, as well as their primary role in the mentioned reports for the Office of the Ombudsman. These institutions were: (a) the Agency for Environmental Assessment and Enforcement (OEFA), (b) the Office of the Ombudsman, and (c) the Supervisory Board for Investment in Energy and Mines (OSINERGMIN).

Results

Analysis of results allowed the comparison between the initial assumptions of the research with the perceptions of the interviewed groups (Table 1).

Contrasting initial assumptions

- Different Contexts

An initial assumption is that a significant difference between both case studies arises from the particular context of each operation, because mining activities are set in different geographical locations and it can modify the requirements of surrounding communities due to regional cultural differences.

During the analysis of the interviews, we identified successive references for demographic and economic characteristics for each study case. The context of Company A illustrates an impoverished area with a mostly rural population, low industrial development, small-scale agriculture, and cattle breeding, a location strongly dependent on mining. The context of Company B reveals some references to poverty as a general characteristic related to mining, but not experienced in the area, given its mostly urban population; also showed a significant diversification of production and a proud population. These characteristics allow us to confirm the first assumption.

- Opposing Cases

A second assumption arises from the perception that selected companies represent opposing cases in terms of their relationship with the communities that host them. This initial idea is based on the great amount of conflict reports published by the Office of the Ombudsman, related to the company in Cajamarca, as opposed to the finding of a single conflict report centered on the company in Arequipa.

This assumption is also evidenced in the interviews carried out regarding the relationship between Company A and the community, showing a higher frequency of negative, conflictive relationships, combined with a strong sense of distrust (Table 1). In the case of Company B, except for some negative isolated observations, perceptions were more associated with

Table 1. Confirmation of initial assumptions of the research.

Assumptions	CASE OF STUDY: CAJAMARCA	CASE OF STUDY: AREQUIPA
Context	Impoverished area	Reference to poverty as a general characteristic related to the mining activity
	Mostly rural population	Mostly urban population
	Low industrial development levels, small-scale agriculture and cattle breeding; strongly dependent on mining	Significant production diversification
	High levels of distrust in certain population segments regarding how companies, the state and co-landowners act.	Idiosyncrasy of pride
Opposing cases	Company- community Relationship: more frequency of negative, conflictive relationships, combined with a strong sense of distrust	Except for some negative isolated observation, perceptions are more associated with a positive relationship, of trust between company and the community

Source: Developed by the authors.

CASE OF STUDY: CAJAMARCA

'This mining company has been in Cajamarca for several years, however we are still the most impoverished region in the country' (Tourist guide).

'In Cajamarca, the rural population is much larger than the average in the country and that is the issue' (University professor – Cajamarca).

'Cajamarca should have something, at least one industry or somewhere to work because there are currently no options' (operator of the mining company).

'in the northern area there is agro-industrial production where you can find cacao, coffee; in the central area, cattle breeding: south, really small farms, poverty... ' (Frente de Defensa de Cajamarca representative).

'another issue is the GDP, if you compare it to La Libertad and Arequipa, their mining GDP is 10%, and in Cajamarca it is 25%, therefore this province has a large dependency on the mining industry' (University professor – Cajamarca)

'in Cajamarca, most of its residents, at least 50%, have a level of distrust regarding what companies can do and that distrust is surely handled or taken advantage of by other industries, opponents of the extractive activity obtain an advantage' (Office of the Ombudsman official)

'The people do not trust the Government... nor mining companies' (Cajamarca councilor)

'There are expectations that are not met... by the company that for 20 years has not brought any development to Cajamarca' (Frente de Defensa de Cajamarca representative)

'Most issues in the mining industry are generated by mining companies, basically because they are unaware of the reality and do not act the way they should' (Advisor to the Municipal Councilor of Cajamarca)

'The issue that is most underplayed is contamination and all environmental issues, also personnel issues' (University student – Cajamarca)

CASE OF STUDY: AREQUIPA

'There is a great contradiction that wherever mining companies are located, so are the poorest communities' (University professor – Arequipa).

'considering its direct influence zone only the district of Yarabamba is considered as rural' (Advisor to the Mayor)

'Arequipa (...), we have agriculture, industry, tourism, mining, fishing, exports... Arequipa is a strategic city for the entire southern region in Peru, from here you can connect with everybody, Moquegua, Tacna, Cuzco, Matarani, even the port, we have everything we need' (University professor – Arequipa)

'Faced with an imposition, Arequipa can be a little rebellious, there is an explosive reaction, but if a resident from Arequipa is persuaded, they can be very diligent' (Advisor to the Mayor)

'I don't say this just because I am from Arequipa, but Arequipa has no need to envy other cities, we have agriculture, industry, tourism, mining, fishing, exports' (University professor – Arequipa)

'people have started to see: "I want to work in this mining company because it pays well and treats its employees well", so that, in my point of view, changed the view of people in Arequipa' (University professor – Arequipa).

'the company immediately made a pact with Arequipa and signed agreements to make work for taxes, construction, a bunch of stuff' (Osinergrmin official)

a positive relationship and trust between the company and the community.

Categories of analysis

After corroborating the initial assumptions, we classified answers obtained during interviews into three different analysis categories. This classification was to simplify the findings of common ideas between interviews, to contrast different individual perceptions within the same study case and to analyze categories' frequencies and possible associations to identify determining factors communities take into consideration to provide the social license to operate to mining companies.

- Mining effects

A first level of analysis to determine the model that permits granting social licenses was made through consulting with different individuals on what their perceptions were on the effects resulting from mining activities in their areas of residence. The answers comprehend positive effects related to economic and social issues, corporate social responsibility activities and work; and negative effects, associated to contamination, damages, insufficient social investment, as well as decreasing benefits due to a decline in the mining activity (Figure 1).

In Cajamarca two opposite effects were more frequently listed. On one hand, positive effects were mentioned relating to economic and social benefits as a result of company activities, mainly in the urban area. The negative effects cited relate to contamination, particularly water contamination:

"There are improved in economic indicators because of *canon minero*, obviously: road infrastructure, electrical infrastructure, sanitation, some achievements because there is more income". (Frente de Defensa representative)

"People say, I don't have any data, that heavy metals level in drinkable water are increased all over Cajamarca". (University Student)

"Some locals say 'hey, I don't know, my water is kind of blue, milky, with some strange little things,' is what we heard" (Municipality official)

In Arequipa's context, more mentioned benefits relate to corporate social responsibility activities developed by the company; and, similar to the other case, negative effects are associated with pollution. However, interviewed individuals could not identify concrete damages caused by the company:

"The company works in a direct way, supporting some districts with demands and needs related to each community, especially those located nearby the mine influence zone..." (Advisor to the Mayor)

"All the pollution goes to Yarabamba, that way because it is where the wind blows, to that way, in Arequipa everything is ok" (Taxi driver)

- Conflicts

To identify other factors that could affect the provision of social licenses, we asked interviewees about situations that resulted in difficulties or conflicts between mining companies and the community. Responses obtained were classified under the category 'Conflicts,' distinguishing between different types of problems such as issues related to water, socio-economic differences resulting from mining activities, corruption, non-compliance of companies and the government, and presence of foreigners, which presented diverse levels of relevance in each study case (Figure 2).

In Cajamarca, water, socioeconomic differences, corruption, and government noncompliance were the most frequently cited problems.

'Water' is the subcategory that drives allusions about water shortage, perceptions of water contamination as a consequence of mining activities, and the

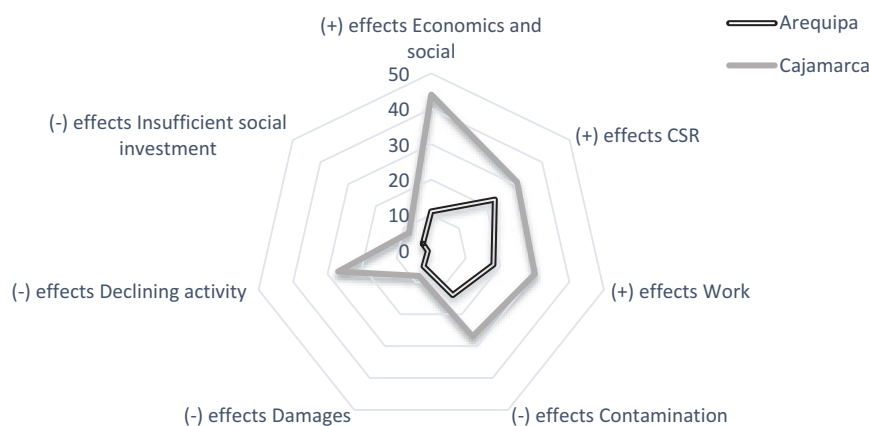


Figure 1. Mining effects answers frequencies.

Source: Developed by the authors.

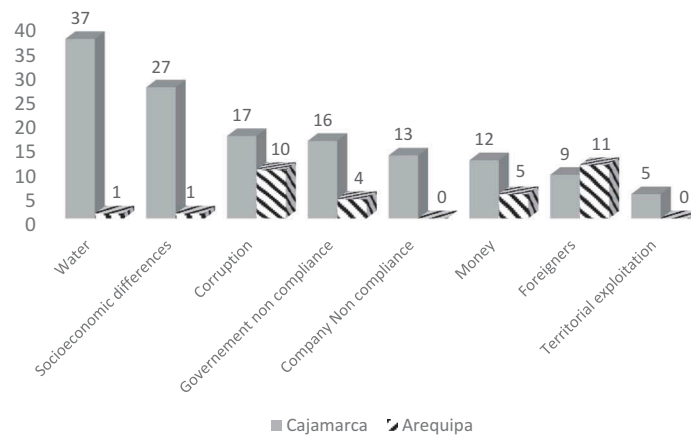


Figure 2. Sources of conflicts answers frequencies.

Source: Developed by the authors.

lack of an competent government authority that guarantee water quality.

“The company should provide water in the first place and then mining, so it would be interesting if you ask them if they supply potable water to people” (Cajamarca council member).

‘Socioeconomic differences’ refers to answers associated to treatment differences to locals by people related to the company (engineers, engineers’ wives, and mining workers), income differences and historical circumstances of the community.

“Engineers believe they are from a higher culture and there are not horizontal relationships...” (Municipality official).

‘Corruption’ is about problems caused because of pay-offs to government officials by the company, and statements about the misuse of public money by the government authorities.

“Sadly, the *modus operandi* of mining companies in Peru is like a vicious circle, they separate the people from the community, they bribe the most distinguished local leaders” (*Frente de Defensa* representative).

The subcategory ‘Government noncompliance’ is about what interviewees said about conflicts the government is creating because it is not acting as a mediator between the company and the community, nor is it supervising the mining activity.

“And the Central Government almost never acts as a good mediator, and above all remote communities are left behind” (University Student).

In Arequipa, conflicts relate more frequently to corruption and foreigners.

“Sadly, the mine’s team of community relations usually pays off presidents, current community boards; with some money, it is solved” (University Professor, referring to a mining project near to Apurimac).

‘Foreigners’ is a set of references about problems associated with the company hiring people from other parts of the country, not locals.

“Some of them came from Lima or from other places and believe (they are the same) ... but conducts, behaviors are not the same” (Advisor to the Mayor)

- Government participation

An important agent identified in the analysis is the Government, represented by different agencies and levels. Representatives from institutions identified themselves as agents who, during the development of their functions, improved levels of trust between mining companies and communities by offering information, intervening as mediators, and regulating how companies carry out their activities. However, these representatives from public organizations recognize that there is still a weakness in the government to meet the population’s demands, guaranteeing an adequate relationship between communities surrounding mining activities as well as promoting actions to improve quality of life.

“Local governments don’t work and royalty money and the resources generated by the company are misused or robbed, as everyone can see in some cases” (Osinermin Official)

Companies, government and community actors were interrelated in a unique way according to the context in each case.

Social licenses in the case studies

The following analysis is focused on each mining company in order to evaluate its position within the host community regarding social license to operate.

- Case study: Company A

Company A carries out a constant effort to create a positive relationship with the community, identifying

relevant players to do adequate development activities. In turn, this effort outlines social responsibility strategies that are translated into supporting activities for stakeholders and investors in different kinds of projects:

“During the last year, several mechanisms have been continuously implemented to establish relationships with communities. Among the most important mechanisms, the following have been highlighted:

- Appointing a person responsible or coordinator for community relations with determined sectors or areas within the communities (...)
- Developing informative workshops for projects and/or programs that are implemented in an influenced environment to discuss scopes of said projects and/or programs (...)” (Yanacocha - Reporte de Sostenibilidad, 2013, p. 45).

However, the information collected in the interviews reflects the existence of a conflictive relationship and a lack of trust between the company and certain stakeholders. Even though the community recognizes the importance of the company’s activity to generate job positions and improve infrastructure. Yet, some participants held the company responsible for such problems such as air and water contamination, environmental accidents due to filtrations, diseases due to the increase of metals in water, among other damages.

Stakeholders also demanded an increase in social responsibility activities carried out by the company because they consider that they are insufficient compared to the gains obtained, from exploiting the soil that they consider the community owned.

“It [the company] has made multimillion gains, and in 20 years it hasn’t given Cajamarca what it needs, potable water” (Municipality Advisor – Cajamarca).

The group comprised by company collaborators is different from other stakeholders because their perceptions clearly reflect the benefits generated in the region by the company, even when they recognize events that could have contributed to society’s negative perception.

“Growth was motivated due to the mine’s expansion because Cajamarca, to be sincere, I remember it as being a little dead, there was no movement” (Operator of the mining company).

Another relevant issue was the constant mention of the lack of institutional and technical ability of government officials to invest funds received from companies. This fact means that communities, especially within the rural area, are not able to perceive the benefits resulting from mining activities because they cannot see improvements in their quality of life, provoking a rejection towards the companies.

“Mining royalties, taxes, who decides? The district, the capital? They receive taxes and invest them in the city, but no investments are made in the areas surrounding the mining site and that is a social problem between the city and the community” (University Professor).

Consequently, even though the company has an explicit social responsibility policy and develops concrete community support activities, it has not been able to overcome social conflicts or to establish close ties with the community. Nevertheless, we could identify stakeholders, like operators of the mining company and representatives of the academic community, who recognize the concrete benefits resulting from mining operations.

Its location in an area with high poverty levels, with a large portion of the population dedicated to agriculture and livestock who have not obtained concrete benefits from mining activities combined with a marked perception of the company’s responsibility regarding water quality reinforce a negative view of the mining company.

- Case study: Company B

Company B highlights the development of activities focused on achieving an adequate relationship with its environment, prioritizing works to improve potable water as well as periodic meetings with representatives and members of the community in the influenced area.

Interviewees in the area recognized that the mining activity generates significant benefits for the community. Residents and other groups in the area considered that mining activity had a direct influence because it provides work, develops community support activities and makes infrastructure investments within the framework of its corporate social responsibility.

“Lately, (the company) has contributed with funds to carry out water treatment plants, water purification plants and other infrastructure works” (University Professor).

As in Cajamarca, there is a shared vision that authorities are not adequately applying mining royalties:

“The problem is with the authorities, authorities that do not know how to invest the money they receive” (Arequipa community representative).

In Arequipa, the relationship between the company and the community is much better:

“People in Arequipa think that the company will provide and that companies are not something negative, they are positive” (Community representative).

In this study case, the mining activity has a high level of acceptance among the people.

The model

As a result of the previously performed analysis, four factors were identified that determined the relationship between companies and communities within the context of extraction activities of mining companies, considering the environment of the companies chosen for the case studies: socioeconomic context, commitment with the community, government presence, and effective communication (Figure 3).

- (i) Socioeconomic Context: Companies when preparing their social responsibility policies and activities in the influenced area must take into consideration the context of each community is an essential element. Understanding this concept will enable them, at first, determining the characteristics of the inhabitants of each region to identify then what are the requirements that should be prioritized by the company as well as the ideal method to adequately establish relationships.
- (ii) Commitment with the Community: communities recognize positive aspects derived from the mining activity, but it is unclear in some cases how the direct benefits can flow towards the region where a mining company has decided to operate. Therefore, hiring local experts is recommendable as a means to understand the population’s demands. The company should associate with communities in the influenced area to obtain long-standing relationships, establishing concrete commitments assumed during its interval in the community. This association can arise by creating direct or indirect labor relationships as well as by developing projects that fulfill the

community’s needs. Successfully building these commitments is directly related to the knowledge of the socioeconomic context of the community where mining operations are carried out.

- (iii) Government Presence: because companies exploit natural resources, they are forced to contribute to the Government through of mining royalties, according to Peruvian law currently in force:

“Mining royalties represent an effective and adequate participation provided to regional and local governments for total income and revenue obtained by the Government for economic exploitation of natural resources” (art. 1 of Law 27506, 2002).

Therefore, regional authorities must invest these funds in infrastructure works. However, community representatives have not felt the effects of these investments. Therefore, the ability of government agencies to generate infrastructure that will translate into community development, reporting on the origin of funds invested, is an essential element for the community to accept mining operations.

An additional role the Government must play, especially through several organisms that have decentralized offices in each region, is that of an agent capable of identifying possible conflicts in a timely manner to implement adequate solution mechanisms before situations result in social crises.

- (iv) Effective Communication: this element intervenes for all agents involved in the mining industry. The company should have clear communication channels to reach society, as a transparent means to

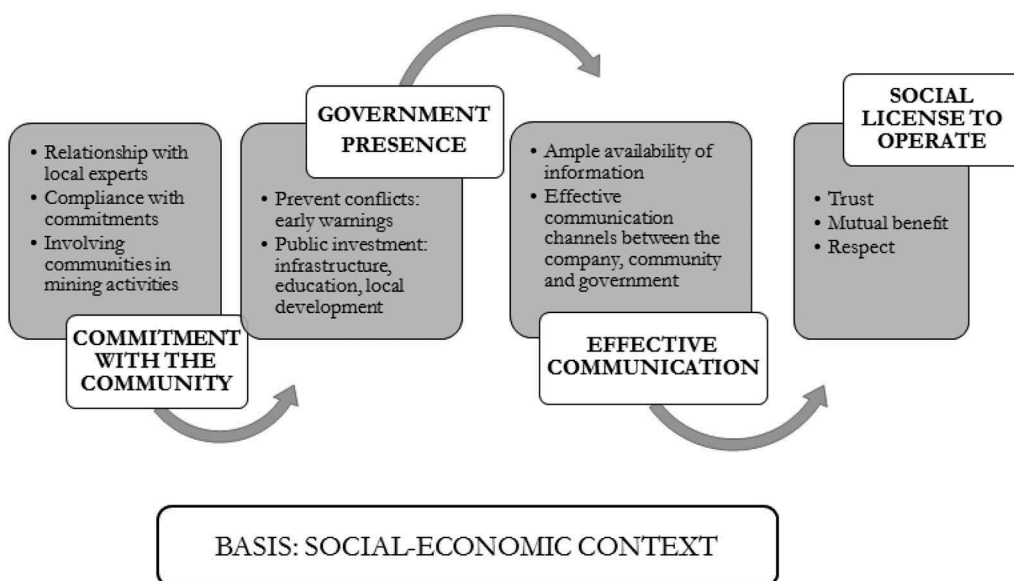


Figure 3. SLO model for large-scale mining in Peru.

Source: Developed by the authors.

provide information of all operations performed within the area of influence. Is necessary for the community to have detailed indicators for relevant issues such as water quality, contamination levels allowed according to the standards of activity and pollution registered. Also necessary are activities developed in the framework of corporate social responsibility policies, directed at issues of interest for stakeholders. This information should also be submitted using a language adapted to the different audiences that use them. The community should request information from companies and government institutions, in order to avoid developing erroneous perceptions about mining operations, as well as to prevent people who have different interests from manipulating inadequate information. Finally, the Government plays a double role: as an intermediary that can receive requirements, doubts and inquiries from the community and transmit them to companies, as well as a regulator of extraction activities.

The combination of these four elements can improve trust levels between companies and communities in locations where mining activities are carried out prior to the provision of the social license to operate. Hence, this relationship fosters the recognition of the benefits generated by the industry, combined with the promotion of a communication of culture and mutual respect.

Conclusions

We analyzed perceptions regarding the relationship between communities and companies, grouped into three categories: mining effects, conflicts and government participation. After analyzing the situation of social licenses, we conclude that the company located in Cajamarca, despite having an explicit social responsibility policy in place and developing concrete activities to support communities, has not developed a close relationship with the community. In Arequipa, interviewees recognized that mining activity generates significant benefits for the community, for residents within the area of direct influence as in the rest of the area within the framework of their corporate social responsibility policies. Contamination did not arise as a relevant issue among interviewees, even when we find some references to the issue.

The analysis of previous indicators, allow us to propose a model with four factors that companies need to consider to attain a social license to operate:

- *Contextual socioeconomic knowledge*, from the company, as a source to obtain information on community's characteristics and needs. This understanding will help identify community

requirements as well as the better methods to relate to its stakeholders.

- *Commitment with the community*, from the company, which implies associating with the community residing in the influenced area to establish long-lasting relationships. It is necessary to define for the area specific commitments assumed by the company during the period it will be carrying out its activities. Achieving successful consequences of these commitments require a deep knowledge of the socioeconomic context of the community where mining activities are carried out, represented by the first element of this model.
- *Government presence* is necessary to provide development to communities through the adequate investment of mining royalty's funds. Government authorities should act as mediators between company and society, and be capable to generate early warning signs on possible conflicts. They also ought to establish regulating mechanisms that minimize damaging effects of the activity, such as soil or not permitted levels of water contamination.
- *Effective communication*, which enables providing transparent information about the industry, through efficient and permanent communication channels between all agents involved.

The combination of these elements can improve trust levels between the company and communities. Thus, all agents involved are able to recognize the benefits that mining activities generate.

For future studies, it would be interesting to determine community relation mechanisms as well as profiles of specialists that should approach community members, to establish means to generate early warnings from government organizations and to identify and prevent social conflicts, as a mechanism to avoid social crisis. In addition, the identification of efficient communication channels that would enable adequate communication flow among three agents: government, company, and community.

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Appendix 1. Questionnaires

Groups of stakeholders	Questions
Communities representatives	<p>What changes have you noticed in your every-day life since the mining company has started operations in your community? How do you describe the relationship between mining and community? Has this relationship influence your goals? If so, in which way?</p> <p>Do you know if the company is developing any social Project in your community/region? What kind of effects does it have? Do those effects last?</p> <p>Do you think that mining activities are beneficial for the region?</p> <p>Do you consider mining companies are able to generate any dialogue or they impose their objectives?</p> <p>Do you think that the mining company goals are related to your own goals? If so, could you explain in what way?</p> <p>Which is the mean of communication between the company and the community? Does this channel allow a fluid and frequent communication?</p> <p>Did the company generate any adverse effect in the influence zone? If so, did the company repair the damages? How? Do you believe that the mining company keep their promises? What kind of promises have been made?</p> <p>Do you consider mining company makes any difference among persons?</p> <p>Do you feel the company keep secrets or avoid contact or answer any questions?</p> <p>Do you think the company admit its mistakes and difficulties about a mining project?</p> <p>When conflict arise, has the company keep the community interests as a priority?</p> <p>Which is your personal opinion about mining activity?</p>
Mining company officials	<p>In your own words, how would you describe the relationship between mining and the community?</p> <p>Does the company consider community interests and doubts about mining projects? With what kind of actions?</p> <p>Which is the mean of communication between the company and the community? How does the company share information about a project?</p> <p>How often does the company make consultations about community needs or requirements?</p> <p>Does the company know community goals? What channel does the company use to communicate with the community? How does the company contribute to fulfill community goals?</p> <p>The organizational culture have been modified to adapt to local culture and values?</p> <p>In your words, what would be to hold a "social license to operate? What relevant factors do you consider indispensable to obtain the SLO?</p> <p>When the company doesn't get an agreement among all the parties involved, what are the alternatives measures to be executed?</p> <p>Are there any projects related to educate local communities and regional governments about the value of mining activities? Did the company generate any adverse effect in the influence zone? If so, did the company repair the damages?</p>
Mining companies workers	<p>Are you original of this region? Do you know how many workers are from this region? If you are not born here, do you feel as a part of the community? In which way?</p> <p>Working for the company, has a separate you from the community? In which way? Has this job impact in your family? How? Are your interests different from those of the community?</p> <p>Which are the main benefits for you as a workers of the company? Please, explain if you consider that there are no benefits.</p> <p>How would you describe the relationship between mining and community? Has this relationship influence your goals? If so, in which way?</p> <p>Has the company trained you in CSR and environmental effects?</p> <p>How do you describe the relationship between company-workers? Does the company help you to achieve your goals? How?</p> <p>Which mean of communication is available for workers in case of complaints, needs or suggestions? Do you feel heard?</p> <p>Does the company make any difference between its workers? Do you consider that organizational culture allows the respect of diverse ideas and cultures? Please, explain.</p> <p>Do you consider the company keep their commitments to workers and to the community?</p> <p>Do you think that information shared by the company is clear?</p>
Government officials	<p>How would you describe the relationship between mining and community? There are any difference between company A and company B?</p> <p>How important do you think is the role of your institution in this relationship? Does your institution have any influence in the decisions mining companies make? Which are the challenges of this relationship?</p> <p>Do you consider mining companies have adapted to the local culture?</p> <p>There is any kind of collaboration between your institution and the company for regional benefit?</p> <p>Which mean of communication do your institution use to communicate with the company? Does this channel allow a fluid and frequent communication?</p> <p>Are there any coincidences between the organizational strategic planning of your institution and the mining companies?</p> <p>Does the institution make questions to the community members to acknowledge their needs and priorities and to communicate those of the organization?</p> <p>Which factors do you consider allow a good connection between companies and the host community?</p> <p>Are there any institution within the community able to generate a dialogue with mining companies?</p> <p>OSINERGMIN as the regulation institution, does have any mechanism to ensure that mining companies offer solutions to a negative effect caused by their operation?</p> <p>Do you think mining companies and communities have the predisposition to reach an agreement between them after a conflict? Do you consider that mechanisms to deal with social conflicts have been efficient during the last years?</p>