

**THE INFLUENCE OF GOVERNANCE AND INSTITUTIONAL ARRANGEMENTS ON
THE SLO**

A COMPARATIVE ANALYSIS BETWEEN MINING IN CANADA AND BRAZIL

DISSERTAÇÃO APRESENTADA À ESCOLA BRASILEIRA DE ADMINISTRAÇÃO PÚBLICA
E DE EMPRESAS PARA OBTENÇÃO DO GRAU DE MESTRE

ZACHARIAH LICOPPE

Rio de Janeiro – 2023

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Dissertation submitted in partial fulfilment of
requirements for the MSc in International
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Advisor: Marco Tulio Zanini

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Abstract

Purpose: This research seeks to understand which factors impact social responsibility in the mining industry. The goal of this research is to determine how governments and institutions influence company social responsibility by comparing Canada and Brazil.

Methodology: The study applies a qualitative approach through semi structured interviews. The interviews are conducted with experts who have worked in the mining industry in Canada and Brazil. The interview process involved asking a set of 5 questions on social responsibility with the goal of understanding which factors influence a company's decision to pursue a social license to operate.

Findings: The findings revealed that the impact governance and institutional arrangements have on the pursuit of a social license to operate differ between Brazil and Canada. In Canada governments and institutions seek to empower mining communities, while in Brazil they often are unable to do so.

Implications: The findings imply that the pursuit of a social license to operate is not solely based on the relationship between a mining company and its community. Both private and public institutions can incentivize companies through the implementation of policies and enforcement. For companies, this study demonstrates how these arrangements can distort the pursuit of a social license to operate. For policy makers, this study shows possible areas for improvement.

Keywords: Mining, SLO, Canada and Brazil, social responsibility in mining, international mining

Title: The influence of governance and institutional arrangements on the SLO: a comparative analysis between mining in Canada and Brazil.

Author: Zachariah Licoppe

Resumo:

Propósito: Esta pesquisa busca entender quais fatores impactam a responsabilidade social na indústria da mineração. O objetivo desta pesquisa é determinar como governos e instituições influenciam a responsabilidade social das empresas, comparando o Canadá e o Brasil.

Metodologia: O estudo utiliza uma abordagem qualitativa por meio de entrevistas semiestruturadas. As entrevistas são conduzidas com especialistas que trabalharam na indústria da mineração. O processo de entrevista envolve fazer um conjunto de 5 perguntas sobre responsabilidade social com o objetivo de compreender quais fatores influenciam a decisão de uma empresa em buscar uma licença social para operar.

Resultados: Os resultados revelaram que o impacto da governança e dos arranjos institucionais na busca de uma licença social para operar difere entre o Brasil e o Canadá. No Canadá, eles buscam capacitar as comunidades de mineração, enquanto no Brasil muitas vezes não conseguem fazê-lo.

Implicações: Os resultados implicam que a busca de uma licença social para operar não se baseia exclusivamente na relação entre uma empresa de mineração e sua comunidade. Tanto instituições privadas quanto públicas podem incentivar as empresas por meio da implementação de políticas e da fiscalização. Para as empresas, este estudo demonstra como esses arranjos podem distorcer a busca de uma SLO. Para os formuladores de políticas, este estudo mostra possíveis áreas de melhoria.

Palavras-chave: Mineração, Canadá e Brasil, responsabilidade social na mineração, mineração internacional.

Título: A influência da governança e dos arranjos institucionais na LSO: uma análise comparativa entre a mineração no Canadá e no Brasil.

Autor: Zachariah Licoppe

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List of Abbreviations

CEAA	Canadian Environmental Assessment Act
CPP	Canada Pension Plan
CSO	Civil Society Organizations
CSR	Corporate Social Responsibility
EIA	Environmental Impact Assessment
ESG	Environmental Social Governance
ESTMA	Extractive Sector Transparency Measures Act
GDP	Gross Domestic Product
IBAMA	Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis
IBRAM	Instituto Brasileiro de Mineração
KPI	Key Performance Indicator
MAC	Mining Association of Canada
MNE	Multinational Enterprise
NGO	Non-Governmental Organization
PNSST	Política Nacional de Segurança e Saúde nas Minas
TSM	Towards Sustainable Mining
USD	United States Dollar

Introduction

The mining industry has played a vital role in the global economy throughout history. This industry provides the raw materials that have been the backbone of economic and technological development in nations around the world for generations. It could be argued that this industry plays a more significant role today as minerals and metals increasingly sought after for new technology and sustainable energy transition (Neto & Mallett, 2023; World Bank, 2018; Sovacool et al., 2020). Despite being an industry that is an essential component of modern society, it is criticized harshly for its negative social environmental impacts and extraction of non-renewable resources. Even under circumstances where mining companies obey all legal social and environmental requirements, mining communities still suffer social and environmental consequences (Cruz et al., 2021; Moffat & Zhang, 2014). The industry responded by becoming an early adopter of corporate social responsibility strategies for good governance.

The industry is credited with the social license to operate (SLO) concept. This concept first emerged in 1997 when Canadian mining executive James Cooney used the term to describe issues related to community backlash facing the mining industry. Mr. Cooney was trying to highlight that there was a wider array of stakeholder interests that needed to be considered when operating mining projects. It became clear that abiding to the legal standards of a country and obtaining a formal license from regulatory agencies was the minimum requirement for operations. A social license to operate was necessary to ensure the fiscal viability of mining within communities and countries for longevity (Cooney, 2017; Hitch & Barakos, 2021). Since the first use of the term, the SLO concept has shaped the way mining companies engage in corporate social responsibility (CSR) practices within different communities.

Although the concept of CSR and SLO are deeply intertwined it is important to make a distinction between the two. CSR focuses on how businesses can operate in a way that improves and enhances the quality of life of those affected by the company, as well as the environment and society at large (Tuulentie et al., 2019; Fernando, 2023). Comparatively, SLO refers to the acceptance and approval of a company's operations by stakeholders who can have an impact on the firm's profitability (Kenton, 2022; Moffat & Zhang, 2014). CSR is concerned with a company's voluntary contributions to society, while SLO is concerned with the company's social impact and its relationship with its stakeholders. CSR is often seen as a proactive effort by a company to demonstrate its commitment to sustainability and social responsibility. Whereas SLO is typically

seen as a reactive concept; one that focuses on addressing the expectations and concerns of stakeholders with the goal of gaining acceptance from a group. Both SLO and CSR highlight the importance of genuinely engaging with the social side of business (Bice et al., 2017). SLO, however, promotes active engagement with essential stakeholders such as the community. In resource extraction the SLO theory provides a basis for companies to actively engage in CSR activity within a community. The literature from both CSR and SLO research is thus applicable to the scope of this paper.

A vast amount of exists on social responsibility in the mining industry. Researchers have focused on developing SLO frameworks and researching CSR practices in the industry. The purpose of this paper is to analyze how institutional factors influence a mining company's social responsibility decisions. The research question is "How do different Governance and Institutional arrangements impact company social responsibility decisions in the mining industry"? To understand the impacts of these institutional factors we compare Canada and Brazil. This comparative analysis will allow us to develop insight into how different institutional frameworks impact the decision of a company to pursue a SLO.

This dissertation is structured as follows: first, the literature review discusses fundamental concepts associated with social responsibility in the mining industry. This section analyzes applicable frameworks for the SLO concept and explains their relevance to the research. The research focus section identifies the relevance of the frameworks and how they will be used to analyze the influence of institutions on social responsibility. Following this, the paper will explain the research methodology, and the process used for gaining data through interviews. The paper will then explore the findings of the interviews and relate these findings to the research question. The paper will discuss the findings as well as their implications and future research that could be done.

Literature review

Mining has garnered attention as one of the most problematic industries. The mining business model consists of extracting nonrenewable resources while creating sizeable waste. The Environmental Social Governance (ESG) report ratings consistently gave this sector some of the lowest scores (Innis & Kunz, 2020). To combat this, companies in the industry have focused on developing policies in CSR and sustainable development (Franks et al., 2014). As a result, there was an explosion in academic research eager to analyze social responsibility on mining practices around the world. A significant portion of research has focused on understanding the perspectives

of communities directly impacted by mining operations. SLO theory has traditionally identified the community as the primary stakeholder that mining companies should focus their CSR strategies towards. For many researchers and industry professionals SLO theory has been used to understand ongoing community acceptance of company activities (Boutilier, 2017; Nelson, 2005). Unlike a formal license to operate however, a SLO to operate is not written, tangible, nor formal. It is dynamic and changes based on spatial and temporal contexts (Boutilier & Thomson, 2011; Cruz et al, 2021; Prno & Slocombe, 2013). This makes the SLO concept essential to understand but difficult to measure. Researchers have thus focused on developing frameworks to try to grasp the process of obtaining and maintaining a SLO.

Defining the Social License to Operate Frameworks:

The main framework used today for assessing a company's SLO was first developed by Boutilier and Thomson (2011) (Figure 1). The framework presents four categories that a company's SLO can fall into. At the bottom of the model the withheld/withdrawn category refers to an instance where a company does not have a SLO. In these circumstances the community will actively oppose the occurrence of a mining project. The second level is acceptance. This refers to a case where the community believes that they will be adequately compensated for the project and in turn, that allowing the project to move forward is the right decision. Approval is the next level, and it refers to a situation where a community actively supports a project. Achieving this level of SLO is dependent on credibility, which is built through time, transparency, and delivering on past commitments (Jijelava & Vanclay, 2018). The final level of SLO is labeled psychological identification and requires that community members identify on a personal level with a project. To

achieve this level of SLO a company needs to build a trusting relationship with the community which takes time and resources.

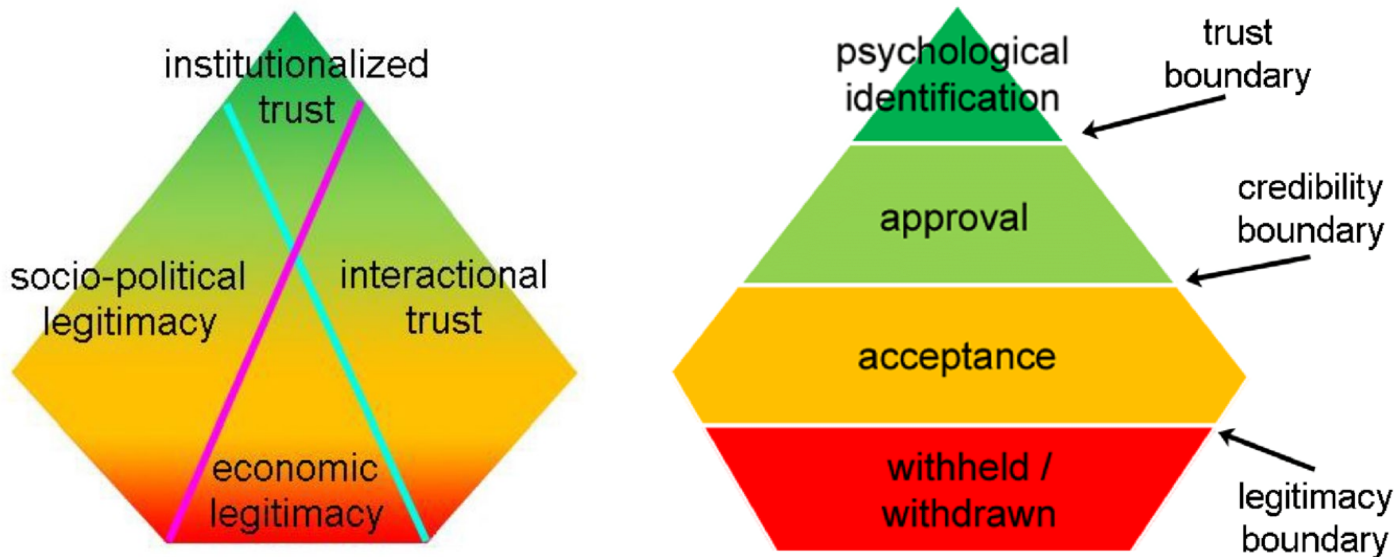


Figure 1 - Models of the SLO (Boutilier, 2017; Boutilier & Thomson, 2011)

Achieving a SLO is thus a complicated process that involves actively engaging with the community, analyzing the level of tolerance, acceptance, or approval of an organization’s activities, and assessing how best to address the needs of these stakeholders (Kabir et al., 2022). Moving from one level of SLO to another demands that the organization develops an understanding and active relationship with the community. Boutilier and Thomson identify that to achieve a SLO a company must establish economic legitimacy, socio-political legitimacy, interactional trust, and institutional trust. The theory implies that to achieve the highest level of SLO (Identification) all four of these factors must be present (institutional trust being the hardest to achieve). These authors explain that obtaining an acceptance level requires satisfying short-term stakeholder expectations. This involves providing economic legitimacy, some level of socio-political legitimacy and some level of interactional trust. This differs in comparison with obtaining a psychological identification level, which involves satisfying longer-term organizational requirements which are costly and difficult to achieve. To reach the level of psychological identification a company needs to convincingly develop all four elements presented in the model (Boutilier & Thomson, 2011). This framework therefore provides a solid base for understanding how to actively engage with primary stakeholders and obtain a SLO. Applying these frameworks can lead to a better understanding of stakeholder

needs and desires leading to reductions in conflict. Nevertheless, criticism exists regarding the theory and its application.

Gaps in efficacy of the Social License to Operate:

One main point of criticism is that the SLO theory is difficult to apply due to difficulties in understanding community sentiment. When a company lacks a SLO the community will communicate their unhappiness through radical, sometimes even violent action (Kemp et al., 2011; Mercer-Mapstone et al., 2019). In comparison, when a company possesses a SLO, understanding whether the community is at an acceptance, approval, or psychological identification level can be arduous. This makes it difficult to tell how a community feels about the project and thus how a company should behave (de-Miguel-Molina et al., 2018). This ambiguity can lead to inadequate social responsibility decisions, negatively impacting both the company and the community.

An additional criticism is that companies often use the SLO theory as a risk management tool with the goal of increasing profitability. Researchers have expressed fear that if a SLO is difficult to define and CSR behavior with the goal of achieving a SLO is used one dimensionally as a risk management tool, then the SLO theory can be used to mask the gap between stakeholder and company expectations resulting once again in inadequate social responsibility behavior. These critics identify that the SLO theory used as a framework premised on business risk, reward, and reputation, can lead to the treatment of sustainable development and community wellbeing as an afterthought (Owen & Kemp, 2013; Mercer-Mapstone et al., 2019). These critics have thus identified that using the SLO theory can lead to inadequate social responsibility practices. While this assessment is valid, these authors do not denounce the theory altogether, and fail to provide alternative strategies.

Justification of the Social License to Operate:

The use of the SLO theory often leads to an increased willingness to reduce social and environmental risks. This theory gives companies a mechanism to understand the financial implications associated with community dissatisfaction (Innis & Kunz, 2020). In most cases the costs to increase and maintain a higher SLO are less than the financial losses associated with social protests, interruptions in mining activities, and other aspects associated with the absence of a SLO (Cruz et al., 2021). Confronting businesses with the risks associated in failing to obtain a SLO allows companies to benefit communities through the justification of a business case for engaging with stakeholder expectations (Owen & Kemp, 2013). This is especially important in natural

resources extraction industries such as mining, where impacts are known to be significant but often do not get adequately measured and addressed due to difficulties with regulation, government legitimacy, and corruption.

Mining projects often occur in territories marked with political and cultural power imbalances. This leads to a complex environment where regulatory bodies fail to adequately protect and provide for these communities. In many circumstances these communities look to mining companies to provide them with infrastructure and services that the governments have failed to provide (Boutilier & Thomson, 2011; Boutilier, 2017; Kemp et al., 2011; Mercer-Mapstone et al., 2019). Companies are thus left with a duty and expectation to address CSR related issues in the communities in which they operate. The SLO theory addresses this responsibility by empowering the community through focusing on the perception of the stakeholder relationship rather than the perception of the impacts. This leads to the weight of these impacts to be placed entirely in the community's hands (Boutilier, 2017).

Stakeholders and Social License to Operate theory:

Academic research has heavily focused on understanding the influence of community perspectives on the applicability of SLO theory. Lacey et al. (2017) focused on understanding the SLO of a gold mining project in Waihi New Zealand. In this paper, the researchers focused on how community members perceived distributional fairness, procedural fairness, contact quality, and trust. This research provides a good example of authors attempting to understand the factors that influence a community decision to grant a SLO.

In Brazil, Cruz et al. (2021) chose to follow a similar path analyzing an active mining project in the amazon. The researchers in this study attempted to understand community perspectives through surveys and interviews with the goal of quantifying the SLO. Pursuing this approach once again indicates an attempt to elucidate ambiguity by understanding a community's decision to grant a SLO. Other Researchers such as França Pimenta et al. (2021), Macêdo Coelho et al. (2022), and Boutilier & Thomson (2011) have all solidified the importance of understanding how communities choose to grant a SLO.

Through their research these authors have expressed that the community is the most important stakeholder for a company to consider when pursuing a SLO (Cruz et al., 2021). Issues such as company community conflict, environmental degradation, relocation, local inhabitant

impoverishment, and risk of tailing dam failure can lead to a vast array of negative impacts for the local inhabitants (Cruz et al., 2021; Palheta da Silva et al., 2014; Bebbington & Bury, 2009). This stakeholder group faces the highest level of risk, while simultaneously having a clear ability to disrupt mining operations. Although the community remains as the most important stakeholder, changes in access to information, transparency, and societal expectations have led to a much wider array of stakeholders that need to be considered by mining companies choosing to pursue a SLO today (de-Miguel-Molina et al., 2018).

Stakeholders such as non-governmental organizations (NGOs), media organizations, institutional investors, private regulatory bodies, and parties outside the local community like international human rights activists need to be considered by modern mining companies (Cruz et al., 2021; Boutilier & Thomson, 2011; Innis & Kunz, 2020). Although these stakeholder groups may not have the same ability to disrupt company activity, they can still influence the success of mining operations. In modern society, it is hence never the case that there is only one SLO that a company needs to obtain from a homogenous group of stakeholders. In today's day and age an array of SLOs need to be obtained for each individual stakeholder group (Jijelava & Vanclay, 2018; Moffat et al., 2015). Researchers have admitted that there is a wide range of stakeholders that impact the pursuit of a SLO. However, little research has been done focusing on how stakeholders outside the community influence this license to operate. Mining companies may provide the community with taxes, infrastructure, and other services, but there are still factors outside of the company's direct control that can impact the SLO (Boutilier & Thomson, 2011; Cruz et al., 2021).

The influence of External and Internal factors on the pursuit of a social license to operate:

A company's decision to pursue a SLO can be attributed to internal factors such as a firm's resources, financial constraints, investments, organizational structure, and risk exposure (de-Miguel-Molina et al., 2018; Shipton & Dauvergne, 2022). Considerable research has been done in this area justifying the importance of financial metrics in determining social responsibility. It is well established that for companies, pursuing a SLO is both desirable and financially beneficial (Boutilier & Thomson, 2011; Cruz et al. 2021; Franks et al., 2014). Researchers have simultaneously indicated that these financial factors are not the only internal factors that influence a company's SLO decisions. De-Miguel-Molina et al. (2018) pointed to personal desires to make

society a better place as an important contributor for companies pursuing a SLO. Internal factors do not influence social responsibility decisions in isolation.

External factors such as the location of the mining project, the laws, regulations, mining organizations, institutions, societal norms, explicit and implicit CSR guidelines can all affect these decisions as well (de-Miguel-Molina et al., 2018; Steudt et al., 2020; Shipton & Dauvergne, 2022; Neto & Mallett, 2023; Buchanan & Marques, 2018). *A Systems-Based Conceptual Framework for Assessing the Determinants of a Social License to Operate in the Mining industry* by Prno & Slocombe. (2013) lays out a framework identifying the factors that influence SLO decisions (Figure 2). The authors separate the factors into three categories: Systems characteristics which include uncertainty, change, context, feedback, emergence, and cross-scaled effects. Multi-scale variables including socio-economic conditions, governance/institutional arrangements, and biophysical conditions on a regional, national, and international scale. Local variables which include the mine itself, the community, and the mine-community relationship. The authors explain that these factors all work in conjunction with each other to explain a SLO.

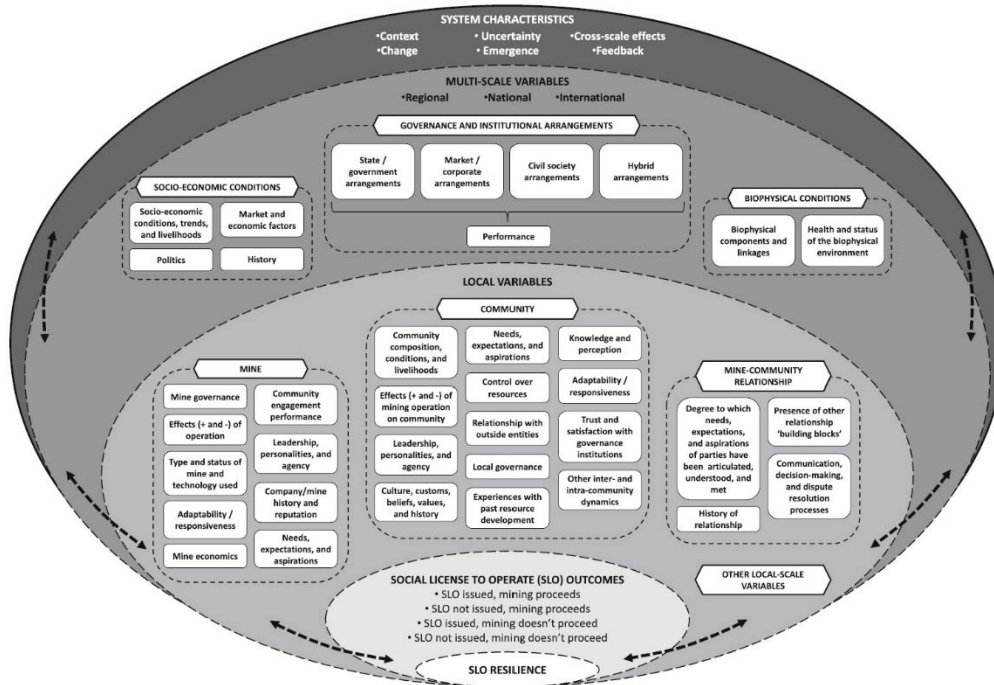


Figure 2 –A system-based framework for assessing the determinants of SLO (Prno & Slocombe. 2013)

Perhaps due to its complexity few authors have published work that implements the framework developed by Prno & Slocombe. (2013). Authors like Innis & Kunz. (2020) have taken inspiration and analyzed the role that stakeholders such as institutional investors play in

determining a company's social responsibility decisions. While other authors such as Dumbrell et al. (2020) have analyzed how market failures attributable to issues with governance contribute to the pursuit of a SLO. These researchers have contributed to the applicability of this framework in SLO research by analyzing how stakeholders outside of the community impact social responsibility decisions. Other researchers have taken different paths and chosen to use other theories to understand social responsibility in the mining industry.

Cesar (2019) proposes a stakeholder network analysis approach in identifying and mapping the stakeholders of mining projects in Peru. This paper investigates which stakeholders can impact a mining company's SLO through the combination of descriptive, instrumental, and normative stakeholder theories. This research highlights how other stakeholder groups can impact the pursuit of a SLO through the exertion of pressure. Buchanan & Marques (2018) follow a similar path analyzing the influence of regulative and normative pressures on mining company CSR decisions. To elucidate their research, Buchanan & Marques (2018) focus on the role of the Mining Association of Canada (MAC) in exerting normative pressures on multinational mining operations. Focusing their research in this area exemplifies two categories of external influences which impact SLO decisions.

There are explicit, regulatory, and political pressures that can be enforced in a coercive manner to influence a firm's decision to pursue a SLO (Buchanan & Marques, 2018; Slager et al., 2012). These pressures come from regulatory or governmental stakeholders. On the other hand, there are normative pressures that may emerge from society to incentivize company decisions. These pressures can manifest as cultural norms or behaviours that are incentivized by specific institutions and society at large. Any stakeholder group can impose normative pressures.

Research Focus

The frameworks used by Prno & Slocombe. (2013), Cesar (2019), and Buchanan & Marques (2018) provide a strong base for analyzing the influence of external factors on company SLO decisions. The purpose of this research is to understand how institutional factors influence a company's social responsibility decisions. To grasp this, we can combine the frameworks developed by Prno & Slocombe. (2013) with those developed by Boutilier and Thomson. This provides an avenue to understand how governance and institutional arrangements influence a company's decision to pursue a SLO. While not the primary focus, the theories and concepts used

by Cesar (2019) and Buchanan & Marques (2018) are instrumental in understanding how these bodies exert pressure on companies to pursue a SLO. Much of the emergent intricacy of defining the SLO comes down to differences in political, social, and regulatory regimes where company operations occur (Hitch & Barakos, 2021). To fully comprehend the influence of these factors, we can actively analyze and compare the influence of governance and institutional arrangements in different countries. This paper will compare the case of Brazil and Canada; two countries that are heavily invested in mining but have different social, economic, and political realities.

Taking a comparative approach is necessary for gaining a deeper understanding of the role that institutions play in impacting social responsibility decision-making in an international context. Crane et al. (2016) noted that comparative studies have the potential to enrich our understanding of individual or organizational practices that inspire our theoretical understanding. Additionally, Brammer et al. (2012) argued that comparative studies on a regional or international scale are needed to account for institutional variations. Although many authors have produced comparative studies in CSR research, comparative studies focusing entirely on the SLO are rare, and we were unable to find any academic research comparing Canada and Brazil in this field.

One of the only comparative studies regarding SLO in the mining industry is that of Boutilier (2017). This paper focused on comparing different SLO levels in over 50 different mining projects from 23 different studies. The study attempted to quantify SLO scores through community surveys indicating regional differences. The study found that North American projects had some of the highest scores, while projects in Latin America, Africa, Australia, and Asia typically had lower scores. While further research would need to be developed to understand whether these differences were statistically significant and attributable to regional differences, this research nonetheless provides a foundation for comparing the SLO. Research comparing how governance and institutional arrangements affect the decision of a company to pursue a SLO is even rarer. To make up for this gap, we can analyze comparative research on how these arrangements influence social responsibility decisions through the lens of CSR.

Asuncion et al., (2022) chose to focus on the influence of home and host country governance on the behavior of Canadian mining companies operating in the Philippines. The research highlights the impacts of weak governmental institutions on the power relationships within the mining industry. The authors emphasize that the discussion surrounding the role of

governance and institutional mechanisms in relations to social responsibility has traditionally focused on holding host countries accountable for weak governances (Asuncion et al., 2022). This research in combination with Buchanan & Marques (2018) contributes to the focus of this paper by highlighting how governance and institutional arrangements on an international, national, and regional scale impact social responsibility. Authors such as Steudt et al., (2020), Shipton & Dauvergne (2022) and Tuulentie et al., 2019 further support the objective of this paper by analyzing these institutions with a focus on Canada.

Academic research on this topic in the Brazilian mining industry is scarcer. Mazboudi et al., (2020) focused on comparing how the institutional and governance frameworks in Sweden and Brazil affect company CSR decisions without focusing on a specific industry. The researchers highlighted key differences between the structures in place in Brazil and Sweden concluding that there is more of an incentive for companies to implement CSR policies in the Brazilian environment due to weak governance and institutional arrangements. Alves et al., (2021) focused their research on the challenges and difficulties of implementing sustainability in the Brazilian mining industry. The paper indicated large gaps in the Brazilian governmental and institutional system ultimately suggesting that changes in policies and communication were necessary to ameliorate the implementation of CSR initiatives in mining.

Researchers such as Salvador et al., (2020), Alves et al., (2021) and Massaro et al., (2022) have all contributed to the area of focus by exploring the governmental and institutional arrangements in Brazil. This research has provided insight into how these arrangements influence social responsibility decisions, which can be taken and compared with the research produced in Canada. Through understanding how CSR relates to the pursuit of a SLO, key findings from the authors outlined in this section will be applied in the analysis that follows.

Research Justification and Methodology

This paper focuses on understanding how differences in governance and institutional arrangements affect a mining company's social responsibility decisions in different environments. The research shifts away from traditional SLO research by focusing on how these external factors interact and influence social responsibility through the given frameworks. The angle taken in this

thesis differs from classic SLO literature by focusing on factors outside of community-oriented perspectives. The comparison aspect of the research reflects broader concerns surrounding the role of institutions and governments in managing the behavior of multinational enterprises (MNEs), especially in problematic industries such as resource extraction. Differences between Brazil and Canada provide insight into how mining may be perceived and regulated in different regions. A focus on these two countries also represents a growing interest in understanding the role of governance and institutional arrangements in managing social responsibility differences between the global north and global south, ultimately showcasing broader concerns with international business ethics.

To further investigate the influence of these bodies on social responsibility, semi-structured interviews were conducted with mining company executives and experts in the field. These interviews present an opportunity to develop an understanding of the complexities behind the decision-making process of companies in the industry. Throughout the research more than 40 companies, organizations, and experts with experience working in Brazil and Canada were contacted to participate in an interview. The vast majority of those contacted did not reply or declined the offer to participate. To accommodate any concerns, all interviews upheld the highest level of confidentiality with all identifiable information regarding the participants and companies being concealed to protect their identities. In total seven experts participated in the interview. These interviewees came from Canada, Brazil, and Mexico. Many of the interviewees were made familiar with the questions beforehand to accommodate language barriers and incentivize participation in the process. These interviewees thus had time to think and develop their answers before the interview. All interviewees were familiar with the SLO concept and had experience using the concept in their working environment. In total 5 questions were asked, which can be viewed in Annex 1¹.

Findings

Internal Factors:

The concept of the SLO puts power into the hands of the external stakeholders. At the same time the actions taken in terms of how best to address these SLO expectations are internal

¹ A demographic breakdown of the interviewees is also available in Annex 2.

decisions. From an internal perspective, interviewees indicated internal factors such as company values and a broader desire to make society a better place, as well as financial mechanisms such as internal company policies and key performance indicators (KPI) that take the costs associated with SLO risk into account. The interviewees indicated that choosing to actively pursue a SLO is in a mining company's best interest, and failing to achieve a SLO invariably leads to business complications and thus profitability issues in the long run. Participant 4, a Canadian mining expert, expressed that the SLO is embedded in a mining company's internal environment through policies, and finance employees.

“Internally the CFO and the treasurer of the company have a lot of influence. A project that does not have social acceptability at its core will incur a lot of future costs. It's a numbers game. It's not just a matter of you can or you cannot develop the project. It will also be a matter of this project will cost you a lot more time and money if you don't take care of acceptability. You will have delays, roadblocks, people not performing, challenges in the court, you will be fighting with the central authority; and all these things are time and money that are wasted. That's why you have a number of internal guidelines, internal benchmarks and internal governance steps that you need to take into consideration. If a project proposal does not take into consideration whether it's accepted by the local population, then the project is risking failure.”

This finding is consistent with the literature. Franks et al., (2014) revealed that several interviewees in their research stated that large world class mining projects with capital expenditure between US\$3 and US\$5 billion endured expenses of roughly US\$ 20 million per week that a project was delayed. These costs associated with the failure to achieve a SLO have left mining companies with the need to take social responsibility into consideration. Interviewees indicated that there were other internal benefits in taking social responsibility into consideration. One critical factor that was identified by participant 2 and 3 was the importance of social responsibility in attracting talent and keeping employees in the modern business environment.

“From an internal standpoint, we feel as a company a certain degree of pride when we communicate to our employees what socially responsible practices the company engages in. It creates a certain sense of participation having pride within our group. As we move forward in time, we are seeing that newer generations are way more aware of sustainable and socially responsible practices. For them it becomes a critical factor in deciding to join a certain company. In mining we operate in remote locations thus it is already difficult to find people that want to work in these locations. If you combine that with a company that does not comply with certain standards, it's going to be very difficult to find good people that wants to work with you.”

The mining industry has traditionally been perceived in a very negative light, in a 1996 study (the year the SLO concept came to fruition), mining ranked as the most problematic industry even behind tobacco (Hitch & Barakos, 2021). When we pair this impression with the findings of a 2013 study by Cone Communication, which indicated that 78% of millennials take a company's CSR initiatives into consideration when determining whether they should work for a company (Taylor, 2016). Failure to properly achieve a SLO can negatively impact attracting new talent as an organization through reputational damage which can indirectly impact long term profitability.

As indicated, the mining industry has identifiable incentives in place to ensure social responsibility through internal mechanisms. In addition to this every interviewee indicated that the pursuit of a SLO is not only determined by the internal but also the external environment that a company is operating in. Participant 1, a Brazilian mining expert strongly expressed how these two concepts cannot be separated.

“I do not believe that the external and internal factors can be correctly separated. For a company to behave in a socially responsible manner, it needs to have an external apparatus for doing so.”

Participant 7, a Canadian expert in the field expressed a similar viewpoint.

“The internal and external factors come together as a formula, bringing together external voices from those that are investing in us, those that are buying our product, the international and national NGOs that are putting the pressure on the industry, and combining that with the legitimate desire to see communities that we affect do well, on its own merit, as a good corporate neighbor.”

The reoccurring theme illustrated by the interviewees was that any internal desire for mining companies to behave in a socially responsible manner is dependent on external factors that promote and allow social responsibility to flourish.

External factors:

Previous research showcases key stakeholders such as the community, regulatory bodies, shareholders, and NGOs; as essential in determining the success of mining operations. The decision to consider different stakeholder groups depends on factors such as the location and the

company itself. Participant 2 highlighted the importance of taking into consideration regional difference when choosing how best to address social responsibility.

“The way we address issues with the communities in Mexico is very different from the way we address issues in Canada or the US. In Mexico we operate in a very remote location we have several small communities all around the area where we operate, but the access to quality, education, health services, and other is very limited. As a company we are sometimes trying to resolve some of those problems for the communities where we operate. When we operate in Canada or in the US our neighbors could be completely different. For instance, in the US, our neighbors are big ranches with wealthy people. The approach, the negotiation, the needs that they have and what support we can bring them as part of our community is very different.”

All interviewees indicated that determining the needs, desires, and importance of these stakeholders is essential in achieving a SLO. The interviewees indicated different stakeholder mapping techniques used to determine stakeholder importance and needs in their operations. Participant 3 highlighted what techniques were used in their company when determining the importance of different stakeholder groups.

“Every year we conduct what we call a materiality study. We ask questions to these stakeholders so that we can gather information from the communities, from the government, from our suppliers, from our employees and so forth. And that is the basis that we take to then develop our social responsibility programs and budget for the following year.”

Interviewees indicated that understanding the needs and desires of different stakeholders was instrumental in ensuring the success of their operations. For many companies these actions are voluntary actions that ensure long-term profitability. For other companies like those associated with private regulatory bodies such as the Mining Association of Canada (MAC) these actions are mandatory. These bodies are voluntary yet impose restrictions on their members. Participant 7 pointed out that this association imposes specific stakeholder mapping requirements on the companies.

“One of the features that is included in the Towards Sustainable Mining (TSM) standard is the expectation that each mining company does a stakeholder map, and a big emphasis is placed on underrepresented stakeholders and rights holders. That's really about giving a voice to those people that don't have the same volume of voices as the majority in a community and that concept is becoming increasingly important in terms of stakeholder identification, making sure that we are getting broad representation from those that we affect or have an interest in our activities.”

What is highlighted in this quote, and what was a reoccurring theme during the interviews, is the need for companies to consider the power relationship present with different stakeholders. The choice of how a company goes about achieving a SLO depends highly on the risk associated with not achieving said license. The strength of governmental and institutional arrangements has a role to play in managing these relationships and influencing how companies acknowledge these stakeholders through the pursuit of a SLO. Differences in these elements between countries can lead to completely different SLO expectations, and thus different social responsibility decisions.

Differences Canada and Brazil:

Many interviewees identified that regulation, and public policies were not the main reason for differences in social responsibility between countries. While not every interviewee was well versed in the regulatory environment of Canada and Brazil, they indicated that transnational mining companies operating in different regulatory and political environments typically behave in accordance with international standards. Participant 5 expressed that fears of international criticism can lead companies to go beyond local standards.

“If I am a company and I have activity in various countries, the first thing that I must do is ensure that I respect the local regulatory framework. But in most cases, we as a mining company will go beyond the local standard in order to avoid being criticized internationally.”

Participant 6 expressed a similar opinion.

“The mining industry is a very special industry; natural resource industries are very international. If a company wants to operate in this industry, they must try to adapt to the harshest regulatory environment and try to apply these standards to all their operations.”

At first glance these responses seem to conflict with those of other interviewees and previous research that suggest that different political and regulatory environments greatly influenced social responsibility decisions. However, it must be noted that interviewees were speaking about large transnational mining companies, and not smaller national operations. Additionally, many of the interviewees expressed that differences had less to do with actual regulation and more to do with enforcement. Participant 4 highlighted this point when explaining their experience working in the international environment.

“In terms of rules and regulation, frankly, I'd say it's probably becoming as stringent in terms of regulation in most countries. There's a lot of best practices that countries look for and emulate when they put together their own regulation and rules, but the enforcement is different. In some developing country, the rule is there but if you don't respect the rule, the chances that you get caught and get let off is much higher.”

Interviewees indicated that these differences in enforcement were more prominent in determining social responsibility in Canada vs Brazil. Corruption was also mentioned by many of the interviewees as an issue associated with operating in economies less developed than Canada. Perverse institutional environments give rise to incentives for companies to behave in less socially responsible ways. Participant 1, a Brazilian interviewee, spoke about an experience where local governance decisions negatively impacted social responsibility in the community.

“In a previous experience I was at the negotiation table with the mayor and other public figures of a mining community. The mayor asked for a football stadium as an investment from the mining company but in his city more than 98% of the sewage was untreated, and they had no football teams. But the mayor nonetheless insisted on it... How can I say that the company that wants to invest in waste treatment units or in a technical school is not behaving sustainably; if at the same time the company is unable to do so, because the government wants the construction of a football stadium in a city that doesn't even have a football team.”

This quote highlights that governmental bodies on a local, national, or international level can alter a company's ability to pursue a SLO with the community. In countries like Brazil, corruption in the political environment can lead to inadequate social responsibility investment due to the prioritization of powerful governmental stakeholders. Ironically, it is precisely in these circumstances where government and institutional arrangements are weaker that the SLO concept becomes more important. Dumbrell et al. (2020) explored this concept in their paper *Is social license a response to government and market failure*. The authors ultimately found that the pursuit of a SLO stems from inadequate government support and market failures such as negative externalities, the undersupply of public goods, and the use of socially valuable assets to produce private profit. Interviewees confirmed this by indicating that mining communities in South America are often invisible to the government and society at large. Participant 1 explained how this can lead to communities relying on companies instead of governmental support.

“In general mining territories in Brazil, are socially underserved. The public policies address diffuse interests that do not always match the needs of the territory, often leading communities to fall to the companies to solve problems that the state should solve.”

In these circumstances communities are left in a place of necessity. This exacerbates the power relationship between the community and the company. Communities thus may be more willing to accept risks and less willing to protest actions which they may deem as socially irresponsible (Dumbrell et al., 2020). Participant 4 highlighted that this situation in Brazil can potentially lead to companies having less pressure to behave responsibly.

“In South America you don't necessarily have the same opportunities for employment. When there is a project that comes to a community in Canada, you would probably say “if this project does not work out, there will be another one”. But in a remote area in a developing country” if this project does not work, we might not eat tomorrow”. So, they're probably more likely to be tolerant to your misgivings as a company.”

Interviewees expressed that in more developed economies like Canada governments have more of an ability to provide for different communities. When paired with the fact that bodies such as MAC seek to empower traditionally neglected stakeholders, the company-community power dynamic in Canada appears to be more even. Certain concepts traditionally associated with the SLO such as community engagement have been implemented into legislation in Canada. Participant 7 gave the example of mandatory community engagement associated with treaties.

“One of the best examples of this is that in Canada there is an obligation to consult and accommodate indigenous communities based on section 35 of the Constitution.”

In Canada, many voluntary actions associated with the SLO process have been incorporated into the countries legal license to operate. This reduces the distinction between the two concepts and ultimately the need for companies to make voluntary social responsibility decisions. Institutions have a role to play in managing this legislation to balance power relationships between companies and communities. The power of different stakeholders ultimately influences how much these stakeholders need to be considered. In circumstances with weak governance and institutional arrangements, these stakeholders are left at the mercy of companies which can decrease social responsibility and conflict. Participant 7 declared that in Canada where governance and institutional arrangements actively seek to give a voice to those stakeholders with less power, the social responsibility and acceptability of mining projects may be higher.

“MAC does annual public opinion polling in Canada, and typically, the public support that we get around mining in Canada is roughly 75%. When you educate people on TSM, that typically goes up to 88%. What's interesting about that is that MAC also works with an

organization called ICMM and they work with a partner called Globescan that does global public opinion research around trust in industry and trust in institutions. What they found is that there's a degrading level of trust between society and mining companies. It's similar for government and for NGOs where generally there's a declining level of trust in institutions and corporations, but they found this past year that there's one exception to that and it's Canada where trust is going up in the mining industry.”

The interviews and literature indicate that communities in Brazil do not have the same support in place in order to incentivize companies to behave in socially responsible. What was evident in the interviews was that government and institutions have the ability to help communities by incentivizing the pursuit of a SLO, but that this was not occurring in Brazil.

Solutions:

When interviewees were asked how to incentivize the mining industry to behave in more socially responsible manners, they largely pointed to changes in public policy, international standards, and communication. The interviewees largely believed that the mining industry was moving in the right direction but that changes could still be made. Experts from Canada pointed mainly to international changes to improve mining standards elsewhere in the world. Participant 4 expressed that Canadian governance and institutional bodies have made significant efforts to ensure that Canadian mining companies are behaving in socially responsible ways in and outside of the country.

“There are laws in Canada forcing Canadian companies doing business abroad to give accounts of their behavior and their corporate social responsibility. In this case the arm of the Canadian government is extending outside the country. I think it's fine, because you are a Canadian company operating with Canadian values, and you're supposed to be exporting Canadian values. This law makes sure that those values are not weakened, or watered down, when you leave the country, when you leave the border, and start to do business abroad, especially in a developing country, where you probably think that you're shielded from exposure, because you're in the middle of nowhere.”

In comparison, experts from Brazil pointed to regulatory and political changes that focus on providing communities with the support that they need, as well as giving them a voice.

“In my view, for more responsible mining to occur in Brazil, public policies are needed, that focus more on the interests of the territories and less on the interests of the politicians. There is a big dichotomy when we analyze the mining process in Brazil and in other countries, it is relatively easier, socially speaking, to work in more developed countries. In Brazil, I see that the public system negatively affects good initiatives, which does not occur in countries like

Canada and Australia. I think that in developing countries we need to reinforce the importance of establishing a balance between the public and private bodies, and understand the context in the territory, by bringing the community affected to the discussion, and understanding the legacy that the company and the government will leave for this community in the near future.”

The above quote illustrates, that the pursuit of a SLO in Brazil appears to be negatively impacted by governance and institutional arrangements. Under these circumstances companies are left in a complicated position. It is precisely the failure of these institutions that enhances the need for the SLO concept, while these institutions simultaneously seem to diminish the company’s ability to address the needs of the community.

Discussion

The interviews provided insight in identifying some of the main ways that governance and institutional arrangements differ in influencing the pursuit of a SLO in Brazil and Canada. To further understand the influence of these factors we can analyze the history, context, and nature of each country’s institutions.

Governance and Institutional arrangements: Canada vs Brazil

Canada as a country is heavily invested in the mining industry. It remains home to roughly 75% of the mining corporations in the world and the industry is supported by a governmental environment that promotes investment and financial services for mining. The Canada Pension Plan (CPP) for example, is a retirement plan provided by the government that reported over \$500 billion in net assets of public funds in 2021. A significant portion of these funds are invested in Canadian mining operations (Asuncion et al., 2022). Canada is home to a total of 200 active mines and allegedly no significant illegal miners (Natural Resources Canada, 2023). Additionally, the GDP per capita in Canada was 51,987.94 USD, one of the highest in the world (Data Commons, 2021). Canada has had a long history of operating in the mining industry, and thus has had many years to adapt and address social responsibility. Legislation such as the Canadian Environmental Assessment Act (CEAA), the Extractive Sector Transparency Measures Act (ESTMA), section 35 of the Constitution Act 1982, and the Canadian Charter of Rights and Freedoms all contribute to promoting social responsibility within the extractive industry in Canada. Since the 1990s foreign economies have been opening their countries to new investors. Canada has been increasingly criticized by different stakeholder groups such as Civil Society

Organizations (CSO), about the misbehavior of mining companies abroad (Shipton & Dauvergne, 2022).

Increased criticism has left the institutions in Canada with a need to promote and address social responsibility in mining. One clear example of this is MAC's adoption of their Towards Sustainable Mining (TSM) program in 2004. All the standards laid out in the TSM program were made mandatory for mining operations in Canada but remain optional for operations abroad (Buchanan & Marques, 2018). The members of MAC, including some of the biggest companies in the industry such as Rio Tinto, and Vale, are thus held accountable for their operations in Canada. As a result, Canadian mining companies have been subjected to increasing regulative and normative pressures for greater accountability, transparency, and human rights protection (Shipton & Dauvergne, 2022). This has generally led to increased social and environmental responsibility which can be demonstrated by the decreasing level of criticism towards mining in Canada. In fact, as of 2022 a survey produced by the MAC showcased that 78% of Canadians claimed to have a positive feeling about Canadian mining companies (MAC, 2022).

In comparison, Brazil is like Canada in that it's large mineral deposits and geo-diversity has led the country to become one of most important economies in international mining (Alves et al., 2021). The Brazilian government has like Canada traditionally supported mining as one of the prominent industries. The Brazilian government for example has been heavily involved in developing Vale as a mining powerhouse (Gilroy, 2014). Brazil is a much larger country than Canada in terms of population and is home to over 8000 active mines and over 20 000 illegal miners (Buschschluter, 2023; Sobral de Miranda et al., 2017). On top of this the GDP per capita in 2021 in Brazil was 7,507.16 USD indicating very different socio-economic conditions (Data Commons, 2021). Brazil, like Canada has had a long history of investing in the mining industry, and thus has had the opportunity to develop governmental bodies and legislation. The primary legislation over seeing mining in Brazil include the Brazilian mining code (Código de Mineração), the Brazilian Environmental Impact Assessment (EIA) Process (Processo de Avaliação de Impacto Ambiental, AIA), the Brazilian National Policy on Mine Safety and Health (Política Nacional de Segurança e Saúde nas Minas, PNSST), as well as articles 20,225,231, and 232 from the constitution. All this legislation is akin to the legislation in Canada. Article 231 and 232 in the Brazilian constitution are analogous to section 35 in the Canadian constitution in that

they both recognize the rights of indigenous communities and require companies to consult with communities when operating on indigenous land. The Brazilian EIA system is also comparable to legislation in Canada in the fact that it requires mining companies to consult and engage with communities and different stakeholder groups (Neto & Mallett, 2023). Additionally, Brazil has public agencies such as MME, IBAMA, and IBRAM that oversee the actions of mining companies (Alves et al., 2021). As of 2019 IBRAM has even begun to implement the TSM protocol created by MAC for the mining industry in Brazil (IBRAM, 2022).

As we can observe, the regulation and institutions in Brazil are in many ways comparable to those of Canada, yet all the interviewees indicated that there are vast differences in social responsibility decisions in both countries. The literature and the interviews, point to differences in enforcement mechanisms, governance incentives, stakeholder power dynamics, and a lack of institutional resources for exerting regulative and normative pressure as some of the primary reasons for differences in between Canada and Brazil (Mazboudi et al., 2020; Salvador et al., 2020; Neto & Mallett, 2023). These factors work in conjunction leading to distortions and complications in the pursuit of a SLO in Brazil.

Reasons for social responsibility differences:

The extractive industry, especially in Latin America, has had a long history of government corruption and misconduct (Mazboudi et al., 2020; Steudt et al., 2020). It is not uncommon that both foreign and local mining companies failing to meet regulation in Brazil can bribe government officials to avoid paying larger fines and continue their operations (Massaro et al., 2022). This history has created an environment in which there is an understanding from both a public and private side that individuals can exploit their power positions to benefit their own interests. In some instances, it may not be the company initiating behavior that could be deemed corrupt, but rather the public officials. One instance previously pointed to in our interviews was that of a local government insisting on the construction of a football field, when the company knew that this money could be spent in better ways to help the community. Cruz et al., (2021) pointed to similar issues in the mining community that they analyzed. The data collected in their research indicated that although there was a significant increase in tax revenue attributable to the mining operation, the local government failed to equally distribute these benefits, and the region experienced massive increases in economic inequality.

In both circumstances, the local governance bodies have used their power as stakeholders to benefit their own interests at the cost of the community. What we notice is that governance and institutional arrangements in Brazil have the opportunity to rent-seek from companies acting against the public interest. This can diminish a company's ability to pursue the SLO with other more important stakeholders such as the community, leading to decreased social responsibility (Dumbrell et al., 2020). This behavior is attributable to either a lack of legislation, or lack of enforcement mechanisms. Researchers suggest that governments in Latin America often take a "growth-first" economic perspective. In these cases, while strict environmental and social regulations may be in place, the economic benefits of the extractive industry are seen as more important than the negative externalities, and thus the government favors the interests of large corporations by attempting to reduce regulation (Neto & Mallett, 2023). Former President of Brazil Jair Bolsonaro's decision to lower regulatory protection in the amazon can be seen as an attempt to create economic growth through the reduction of regulatory protection again acting against the interest of social responsibility (Siqueira-Gay et al., 2020; Neto & Mallett, 2023). However, differences in enforcement mechanisms and power dynamics are more compelling arguments for differences in social responsibility.

To illustrate this point, we can compare two of the largest tailing dam failures: Mount Polley which occurred in Canada and Brumadinho which occurred in Brazil. The Mount Polley incident resulted in 24 million cubic meters of mining waste being dumped. Following the incident, the company was required to pay roughly \$200 million in remediation activity, while having net earnings of only \$50 million. The market responded starkly with a drop in stock prices of almost 50%, an amount that the company has not been able to recover from since 2014 (Innis & Kunz, 2020). The Brumadinho incident involved 12 million cubic meters of mining waste being dumped and 270 people being killed. It was by far the most fatal tailing incident to ever occur. Vale, however, suffered practically no financial losses. The company has had to pay roughly \$1.5 billion (USD) in remediation costs, a mere fraction of their \$54 billion (USD) revenue in 2020 (Innis & Kunz, 2020; Macrotrends, 2023). The company's stock dropped 24% after the incident, however the stock had already recovered 94% of pre-incident levels in less than 6 months. Additionally, this accident was the second major tailing dam failure to occur in 4 years for the company. To many it appears that the risks associated with tailing dam failures were not material in curbing Vale's behavior (Torinelli et al., 2020; Innis & Kunz, 2020). The

recurrence of these events and the lack of financial punishment showcases the companies disregard for community well-being and ultimately some level of governance and institutional weakness. These incidents highlight an institutional environment that either lacks the ability to exert regulative and normative pressure on large companies, or actively chooses not to.

Impact on the SLO:

The lack of governmental and institutional resources in Brazil makes it difficult to enforce legislation and increases the likelihood of misconduct occurring. Mining communities in these circumstances exert pressure on companies to provide them with services the government has failed to provide (Dumbrell et al., 2020). The issue is that ultimately a company's decision to engage with community concerns comes down to their understanding of the probability and potential impact social license concerns may have on their objectives (Dumbrell et al., 2020).

In more developed countries such as Canada institutional bodies have intervened by implementing regulation and policies that reflect societal expectations and that seek to correct market failure. In these contexts, firms do not need to make as many active decisions to adopt social responsibility policies. In Canada, SLO concerns have been slowly incorporated into governmental policy in order to increase social responsibility. Through regulations and policies, these bodies seek to empower the local communities and stakeholders that traditionally lack voice. In contrast, the governance, and institutional arrangements in Brazil operate in a way that leaves room for more discretionary forms of social responsibility. These institutions suffer from weakening due to a lack of resources, changes in government policies, and negligence. To illustrate this point, Neto & Mallett (2023) examined the public participation process in Brazilian mining industry. Their research found that public bodies meant to benefit communities typically act intentionally and unintentionally in the interest of mining companies. Firms thus are left with the choice to engage with the community and decide completely of their own accord how to address social responsibility.

In Brazil, the governments and institutions fail to exert regulative and normative pressures to streamline the pursuit of a SLO resulting in the diminishment of social responsibility. Companies in mining communities are thus left in a circumstance where they are always providing more for the neglected community than the government. What this leads to is a vast power imbalance attributable to the dependence of the community on the company. In these

circumstances, social responsibility is subject to company decisions. Any social responsibility initiatives are contingent on the interests of powerful stakeholders such as local governments that often act against the interests of communities. Companies thus may need to make tradeoffs between the interests of these stakeholders and those of the community. If companies are uninterested in pursuing a SLO, there are elements that allow them to do so. The pursuit of a SLO in Brazil is thus at best ignored by governance and institutional arrangements, and at worst negatively impacted by them.

Implications:

The research conducted in this paper gives insight into how different governance and institutional arrangements influence the implementation of social responsibility in the mining industry. By comparing Canada and Brazil the research provides insight into how these different arrangements operate while simultaneously attempting to understand why they behave accordingly. For mining companies, this research provides a basis for understanding the impacts governments and institutions have on the pursuit of a SLO. Understanding how these bodies act for or against the interests of the SLO provides companies with a better awareness of the risks associated with entering a new market. For companies operating in Brazil, the question of “what is gained or lost in the pursuit of a SLO” arises. Past research indicates that mining companies need to pursue some type of SLO in the communities they operate in. However, the findings in this paper indicate that the level of social responsibility a company needs to engage in is much lower in circumstances with weak governance and institutional arrangements and uneven power dynamics.

For policy makers this research showcases these bodies influence the pursuit of social responsibility, and ultimately the impact that weakness in these arrangements can have on the wellbeing of communities. As the political and socio-economic situations in Brazil and Canada are vastly different, it would be unfair and euro-centrist to imply that the governance and institutional arrangements in Canada have the answers for incentivizing social responsibility in every country around the world. This is especially true considering that Canadian mining companies themselves have faced substantial criticism for their lack of transparency, bribery, violence, and neo-colonialism abroad (Steudt et al., 2020; Asuncion et al., 2022). Nonetheless, Canada has had success implementing policies that incentivize mining firms operating within

Canada to engage in social responsibility. Additionally, as IBRAM has begun to implement the TSM program developed by the mining association of Canada, it is evidently important to incentivize the pursuit of environmental and social responsibility in Brazil (IBRAM, 2022). This research thus provides policy makers with insight into possible areas for improvement, as well as what barriers may be present in incentivizing social responsibility in their mining industries.

Limitations and Future Research:

A limitation of this study is that it compares the influence of the governance and institutional arrangements on the SLO of only two countries. This opens the possibility for future research to be done in comparing other countries and the influence of their arrangements on the pursuit of a SLO. Additionally, this research does not capture an intensive understanding of the circumstances surrounding the government and institutions in both Canada and Brazil. While this paper provides insight into how the social, economic, and political factors influence the industry in Canada and Brazil, further research would need to be conducted in this to understand how policies encouraging social responsibility could be implemented. For example, research comparing more developed nations such as Canada, Australia, and the United States could be beneficial. The extent that crown land and indigenous treaties play in social responsibility would be interesting to consider in further research.

Another limitation of this study was the fact that only 7 interviews were able to be conducted. Although more than 40 experts, companies, and organizations were contacted to participate in the interview process, very few agreed to do so. For many individuals operating in this industry, especially in Brazil, the topic of social responsibility in mining can be extremely sensitive, and thus future research could focus on conducting a larger sample of interviews or collecting data in other manners. Case study analyses focusing on comparing one company's operations in both Canada and Brazil could provide substantial insight into how these arrangements influence internal social responsibility policies. Case study analyses focusing on how governments have responded to mining incidents such as tailing dam failures can provide a different perspective on their influence.

Understanding what incentivizes a company to pursue a SLO involves a deep knowledge of both internal and external factors. Our research has indicated that both these categories are genuinely important, and that institutions have an influence on determining social responsibility

decisions in the mining industry. To understand these relationships on a more profound level, researchers must analyze the impact of these relationships in other industries outside of mining. Pursuing research in different sectors can help create a broader body of knowledge related to the development of ethics and social responsibility in business. Seeking to understand the influence of these actors in industries that are transnational in nature can lead to insight that can benefit developing economies.

Additional research could also focus on different stakeholder groups and their influence. This could include the influence of NGOs, the media, employees, investors or the influence of specific policies, regulations, codes of conduct, and changes in education on pursuit of a SLO. Past research has examined the impact that investors and governmental institutions have on social responsibility and sustainability practices. However, there lacks research surrounding how other organizations and society at large impact the pursuit of a SLO. All interviewees indicated that social pressure especially from media groups influences social responsibility in mining, and thus it would be interesting to analyze to what extent this is true.

Finally, as TSM is being implemented in Brazil as well as many other countries, future analysis can focus on how the implementation of TSM changes the pursuit of a SLO in different countries. Analyzing from this perspective can provide insight into the effectiveness and applicability of TSM in different governmental and institutional contexts. This research could create a broader understanding of what solutions are available for countries seeking to improve social responsibility in their mining industries.

Conclusion

The comparative analysis between the influence of governance and institutional arrangements on social responsibility in Canada and Brazil, showcases how these institutions can influence a company's decision to pursue a SLO. Although decisions to engage in social responsibility through the pursuit of a SLO are internal decisions related directly to the community, the findings of this paper indicate that external institutions have the ability to impact internal social responsibility policies.

To summarize, the literature review demonstrated the importance of the SLO concept and its frameworks in determining social responsibility in the mining industry. The research focus of

this paper demonstrated how the governance and institutional arrangements discussed by Prno & Slocombe. (2013) in conjunction with the SLO theories developed by Boutilier and Thomson (2011) can be analyzed to better understand social responsibility in mining.

The interviews pointed to the importance of both internal company, and external environmental factors in determining how companies pursue a SLO. The interviews highlighted reasons for differences in social responsibility between the Canadian and Brazilian mining industry. The interviewees pointed mainly to differences in enforcement mechanisms, governance incentives, stakeholder power dynamics, and a lack of institutional resources as some primary reasons. Interviewees further speculated that changes in public policies and international mining standards were some of the main ways that social responsibility in mining could be incentivized.

The discussion portion of the paper analyzed more deeply the reasons for institutional differences in Canada and Brazil. Ultimately concluding that in Canada the governance and institutional arrangements seek to empower communities by incentivizing companies to pursue a SLO through regulatory changes. Additionally, due to differences in resources and socio-economic factors, the government in Canada has the means to provide services to the communities allowing communities to have a more even power relationship with companies. In Brazil on the other hand these bodies lack the means to provide basic services and fail to exert regulative and normative pressures to streamline the pursuit of a SLO. Communities are thus left in circumstances where they are dependent on companies to provide for them. In these circumstances, social responsibility is at the discretion of the mining company and subject to powerful stakeholders that may act against the interest of the community. Ultimately this leads to a situation where the pursuit of a SLO in Brazil is at best ignored by governance and institutional arrangements, and at worst negatively impacted by them. This suggests the need for changes in legislation and enforcement mechanisms that promote social responsibility.

Appendices

Appendix 1:

Interview Questions:

1. What stakeholders do you think are the most important to consider as a mining company? (Why? How do you determine this importance?)
2. What are major political, regulatory, and social factors that you believe are important to consider when determining how to achieve different levels of a Social License to Operate as a mining company? (Can you give some examples?)
3. What major external factor differences such as politics, regulations, stakeholders, and society at large affect the way your mining company operates in different countries?
4. What factors do you think determine whether a company behaves in a socially responsible way or not (Do you believe external or internal factors have a larger impact, if so why, and which factors?)
5. What do you think needs to be changed (if anything) to incentivize the mining industry to behave in more socially responsible ways? (On a national and international level?)

Appendix 2:

Participant description:

Participant 1: Brazilian mining expert with more than 13 years of experience in the industry

Participant 2: Expert with more than 14 years of experience in the mining industry. Currently working for a Canadian mining company.

Participant 3: Social responsibility coordinator for a Canadian mining company's operation abroad.

Participant 4: Canadian mining expert with more than 17 years of experience working in the industry. Past Vice president of a large mining company with substantial international experience.

Participant 5: Canadian mining expert with more than 8 years of experience working in the industry, and substantial additional work in the nonprofit industry. Expert in sustainability and social responsibility.

Participant 6: Brazilian mining expert with more than 4 years of experience in international business.

Participant 7: Canadian mining expert with more than 14 years of experience in the industry, and an additional 5 years of environmental expertise.

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