MINING COMPANIES AND SUSTAINABILITY:
ROLE OF CSR IN CANADIAN MINING COMPANIES IN BRAZIL
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Thesis presented to Escola de Administração de Empresas de São Paulo of Fundação Getulio Vargas, as a requirement to obtain the title of Master in International Management (MPGI).

Knowledge Field: Internacionalização de Empresas
Adviser: Prof. Dr. Maria Tereza Leme Fleury

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Abstract

Given the rising interest in corporate social responsibility and tighter scrutiny in environmental regulation compliance, mineral extraction companies have encountered more challenges in their internationalization process. Despite extended research on CSR in developed countries, little attention has been paid to sustainability issues in emerging market economies. This document presents internationalization barriers mining firms from developed countries face in Latin America. This is illustrated by the analysis of two Canadian mining companies' (Kinross and Belo Sun) efforts to gain legitimacy around their golden mining operations in Brazil for further expansion. The work maps the literature systematically, assesses the embeddedness of CSR in business, discusses main empirical features, summarizes key findings and identifies best practices. The research finds that better environmental performance leads to overall cost reduction in the long term and can be associated with a better performance of the firm. The comprehensive review provided in the work also helps to understand CSR implementation practice in emerging countries and offers new frameworks that can set an agenda for future expansion strategies of foreign-owned companies in Latin America.

Key words: Sustainability, Mining Companies, Corporate Social Responsibility – Case Study
Resumo

Dado o crescente interesse na responsabilidade social das empresas e um exame mais rigoroso na conformidade com a regulamentação ambiental, as empresas de extração mineral têm encontrado mais desafios em seu processo de internacionalização. Apesar da extensa pesquisa sobre RSC nos países desenvolvidos, pouca atenção foi dada às questões de sustentabilidade nas economias de mercados emergentes. Este documento apresenta as barreiras à internacionalização que as empresas de mineração de origem nos países desenvolvidos enfrentam na América Latina. Isso é demonstrado pela análise dos esforços de duas empresas de mineração canadenses (Kinross e Belo Sun) para obter legitimidade em torno de suas operações de mineração de ouro no Brasil em seu projeto de expansão. O trabalho mapeia a literatura sistemática, avaliando a incorporação da RSC nos negócios, discute as principais características empíricas, resume as principais conclusões e identifica as melhores práticas. A pesquisa constata que um melhor desempenho ambiental leva à redução geral de custos a longo prazo e pode estar associado a um melhor desempenho da empresa. A revisão abrangente fornecida no trabalho também ajuda a entender as práticas de implementação da RSC nos países emergentes e oferece novas estruturas que podem definir uma agenda para futuras estratégias de expansão de empresas estrangeiras na América Latina.

Palavras-chave: Sustentabilidade, Empresas de Mineração, Responsabilidade Social Corporativa – Estudo de Caso
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1. Introduction

1.1 Context

Some territories are generally seen as the world’s largest repositories of biodiversity and, at the same time, as the source of a considerable economic profit. Under the direction of its new president, Jair Bolsonaro, Brazil has recently enacted a series of disastrous changes to its environmental policies including cuts to government agencies that enforce environmental protection laws. The current administration sees the Amazon rainforest as a natural resource that should be exploited, especially in a country with so many people living in poverty. Recent debates about the deforestation and the Amazon fires have only increased concerns of foreign mining companies that are already present or planning to expand into Brazilian market. Despite a seemingly business-friendly legislature in the country, there are many risks for foreign-owned companies acting in Brazil due to the lack of standardization, transparency and the ongoing international debate on the sustainability incompliance. Consequently, many developed countries, that are planning to expand their operations in the country have struggled trying to find a sound and profitable sustainable strategy in order to succeed in such a volatile business environment in Latin America.

1.2 Importance of the research

Since the publication of the Brundtland Report in 1987 and the subsequent Earth Summits in Rio de Janeiro (1992) and Johannesburg (2002), sustainable development has become one of the foremost issues facing the world (Ambec, Lanoie, 2008). It is recognized that natural systems can be especially vulnerable to human activities because of limited adaptive capacity, and some of these systems may undergo significant and irreversible damage. Managers have long associated environmental protection with additional costs imposed by government,
which in turn erode a firm's global competitiveness. In general, markets tend to work well to reach optimal use of scarce resources, so the government intervention is useful only when markets are no longer fulfilling their role effectively (Ambec, Lanoie, 2008). This is precisely what occurs in the case of environmental problems. Translating sustainability into business strategies and practices remains a challenge for most companies, especially in mining industry. Historically, large corporations have exposed local communities and environment to all kinds of dangers, as for this reason, many mining projects have become icons of social unrest and environmental degradation. Nowadays, firms are facing growing pressure to become greener. Various stakeholders press companies to reduce their negative impact on the environment; this is now seen as firm's social responsibility, what business people often refer as "corporate social responsibility" (Friedman, 1970).

Despite the growing interest in the sustainability regulations imposed by developed countries, emerging market economies have also started to implement additional laws regarding environmental and social foundations. Although many reviews of CSR have been published over the last decade, the insights and conclusions drawn from these articles have fallen short of how CSR manifests itself in markets outside the developed core (Egri, Ralston, 2008; Kolk, Lenfant, 2010; Kolk and Van Tulder 2010). Nowadays, many important research questions remain unresolved in the field of environmental sustainability, specifically, the relationships between CSR and expansion opportunities in emerging economy countries with respect to both social responsibility and environmental performance. As Egri and Ralston (2008, p. 325) put it, "it is particularly troubling that there has been relatively little on-the-ground corporate responsibility research in countries where the need for corporate responsibility is most pressing due to greater poverty, environmental degradation, and institutional governance issues". For this reason, it is
important to analyze CSR practices in emerging countries because of the pervasive institutional voids (Pisani, Kourula, Meijer, 2017).

1.3 Research question and objectives

For this reason, the research question of the study is: how can mining companies from developed countries benefit from sustainability initiatives in emerging markets? Despite the burgeoning interest in CSR in developing and emerging countries and abundant research made in the area, there is no systematic research in how CSR is commonly understood, expressed and implemented in these regions. Little attention has also been paid to sustainability strategies of mining companies expanding in highly protected areas, such as Amazon basin, which is the home for many native Brazilian tribes. Due to this gap in the literature, the general objective of the current work is to provide more comprehensive understanding of CSR factors that define positive outcomes of foreign-owned companies operating in Brazil. Due to a high number of institutional voids in emerging market economies, more and more firms are forced to diminish its presence and to abandon government-permitted and financially viable projects.

The research is to have an explanatory nature and will include the following specific objectives:
- analysis of CSR initiatives that led to improved/decreased performance in the region;
- derive inferences about the ways that might have produced such results;
- drawing out conclusions on how and under what conditions mining companies can achieve positive outcomes in emerging markets.
The current research has been branched out into **three main paths:** the first direction is the review of existing literature on sustainability issues. This part will include various approaches to CSR concept definitions, existing frameworks, sustainability regulations applicable for specific industries, mining companies in this case, for specific countries (Brazil). The main objective of the literature review is to identify relevant concepts and existing theories and positions the study within the field. The second direction would involve the results of the companies' performance in terms of sustainability regulation compliance (case study). The objective of this part is to illustrate how companies develop their relations with stakeholders around their mining sites in emerging countries (Brazil) and what issues they have faced. The work will illustrate these issues by describing current local initiatives by Belo Sun and Kinross with communities around their mining operations in Amazon basin and Minas Gerais state. Finally, the third research direction would draw a conclusion about the impact of new sustainability environment on the companies' performance and would propose suggestions for mining companies to further expansion in highly volatile and unstable emerging market conditions. The research addresses the following themes: social sustainability compliance, environmental performance of the largest mining companies operating in Brazil. The above-mentioned themes are to be used for understanding of trade-offs between sustainability regulation compliance and expansion opportunities.
2. Theoretical framework: does it pay to be green?

2.1 The definition of CSR

The current approach to environmental management was developed in several periods, beginning in the early 1970s. In this chapter, the work intends to see how the definitions of CSR changed, what theories prevailed and how alternative in order to understand better the essence of the corporate sustainability concept.

2.1.1 Resistant adaptation approach

In the first era, from 1970s to 1985, companies faced with new regulations just struggled to comply with these regulations and often fought against them. Some authors accurately described this phase as "resistant adaptation" and claim there were not any innovative initiatives during that period (Mydock, 2014). At that time, companies were unwilling to internalize environmental issues. This reluctance was manifested in the delegation of environmental protection to local facilities, which was a common practice that led to the failure to create environmental performance-measurement systems and a refusal to consider environmental issues as realities that needed to be incorporated into business strategy. (Walley, Whitehead, 1994, p. 2). It is important to mention that the difficulty to execute environmental strategies were related to many inconsistencies and debates regarding the proper definition of corporate social responsibility. These uncertainties also hampered scientific progress in understanding the antecedents and consequences of this activity (McWilliams, Siegel, 2000).

The most structured four-part definition of CSR was originally published in 1979 by Achie B. Carroll and has been modified several times since then. Carroll’s four-part definition of CSR was originally stated as follows: “Corporate social responsibility encompasses the
economic, legal, ethical, and discretionary (philanthropic) expectations that society has of organizations at a given point in time" (Carroll, 1979). Carroll defines them as follows: "Economic responsibilities of business reflect the belief that business has an obligation to be productive and profitable and meet the consumer needs for society. Legal responsibilities of business indicate a concern that economic responsibilities are approached within the confines of written law. Ethical responsibilities of business reflect unwritten codes, norms, and values implicitly derived from society. (Carroll, 1979). This statement is supported by legitimacy theory of Frynas and Yamahaki who state that firms are inseparable from societies and they have no inherent rights to exist – they exist only as far as society confers legitimacy upon them (2016). Discretionary responsibilities of business are philanthropic in nature and, as such, are difficult to ascertain and evaluate (Carroll, 1979). Indeed, whereas quality or design improvements can be transferred from organizational processes to the products and services bought by consumers, which becomes a "private profit", environmental protection is seen as "public good" and, therefore, cannot be directly transferred to products and be measured accordingly. (Orsato, 2006). The purpose of Carroll's pyramid was to single out the definitional aspect of CSR and to illustrate the building block nature of the four-part framework. The economic responsibility was placed as the base of the pyramid as it is a foundational requirement in business. Just as the foundation must be strong to support the entire structure, sustained profitability must be strong to support society’s other expectations of enterprise (Carroll, 2016). The point here is that the infrastructure of CSR is built upon the premise of an economically sound and sustainable business. Carroll's CSR Pyramid has been widely used by other authors, such as Aupperle, Hatfield, (Aupperle, Carroll and Hatfield, 1985, p. 455) and has been modified several times by Carroll.
To sum up, Carroll’s Pyramid is one of the first attempts to illustrate why companies must consider and take initiatives in CSR. The Pyramid shows the adherence to the “compliance” approach of the companies of that period and its transition into a more complex understanding of sustainability nowadays.

2.1.2 Shareholders’ wealth maximization view

As it can be seen from the first CSR model proposed by A. Carroll above, the economic performance still prevailed in the pyramid. Indeed, during that period, a number of scholars considered shareholder wealth maximization as the single social responsibility of business and cautioned against any broader conceptualization of CSR (Friedman, 1970; Jensen, 2002; Levitt, 1958). Friedman defends this point of view stating that the manager, in his capacity as a corporate executive, represents the individuals who own the corporation or establish the institution, and his primary responsibility is to act according to their interests (1970). He clearly divides personal responsibilities and values and business objectives: "if these are social responsibilities, they are the social responsibilities of individuals, not of business" (Friedman, 1970, p. 1). According to his perspective, if a corporate executive has a "social responsibility" in his capacity as businessman, it means that he is to act in some way that is not in the interest of the corporation and the sheer justification for a corporate executive to be chosen by stakeholders is that he acts as an agent serving the interests of his principle and this justification disappears when the corporate executive imposes taxes and spends the proceeds for "social purposes" (Friedman, 1970, p. 2). Friedman admits, that sometimes it may be well in the long run interest of the company that if a major employer in a small community to devote resources to providing amenities to that community or to improving its government, as it might make it easier to attract desirable employees and lessen losses from sabotage. Despite this justifications, it is still
believed that "there is one and only one social responsibility of business – to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, which is to say, engages in open and free competition without deception and fraud" (1970).

To conclude this part, one can say that CSR was viewed only from economic perspective in that period and only later gained a more socially centered treatment, when stewardship theory suggested that organizational actors can bring their personal morality-based values into the firm, which might go beyond economic interests. (Aguilera et al, 2007), which is going to be presented in the next part of the work.

2.1.3 Porter’s Hypothesis

During the middle of 1980s to 1995 a shift in the regulatory context and the maturing environmental movement created an incentive for managers to look beyond the narrow, predominantly technical approach. With the regulation focused more on ultimate environmental results and less on the mechanics of compliance, managers began to exercise greater discretion in their environmental response. For the first time, environmental strategy became possible (Walley, Whitehead, 1994, p. 3). Fischer and Schot called this second phase "embracing environmental issues without innovating" (1993). Many companies started to make significant improvements in this second era, using pollution-controlled equipment, tighter monitoring, and control systems and waste reduction process. Despite the emergence of win-win mindset, few companies made fundamental changes in their production processes or product designs. Nevertheless, many concluded that continued environmental action could more than pay for itself (Walley, Whitehead, 1994, p. 3). The broader debate about real sources of competitive advantages was
between the two leading schools: Michael Porter's positioning school and resource-based view of the firm.

In 1980, Porter identified two generic types of competitive advantage: low cost and differentiation. Through the efficient use of labor and capital, a firm can obtain competitive advantage by selling products and services with the lowest cost in its industry; on the other hand, a firm can use differentiation strategy to create unique features for its products and services. This strategy can be also applied to environmental management. Properly designed environmental standards can trigger innovations that lower the total cost of a product or improve its value and uniqueness. Such innovations allow companies to use a range of inputs more productively – from raw materials to energy and labor – thus offsetting the costs of improving environmental impact and ending the stalemate. Ultimately, this enhanced resource productivity makes companies more competitive, not less. Today managers regulators focus on the actual costs of eliminating or treating pollution, whereas it would be more viable to focus on opportunities costs of pollution (Porter & van der Linde 1995).

Innovation in response to environmental regulation can fall into two broad categories. The first is new technologies and approaches that minimize the cost of dealing with pollution when it happens. The key to this lies in taking the resources embodied in the pollution and converting them into something of value (procession of toxic materials and emissions, recycling and secondary treatment). The second type of innovation addresses the root causes of pollution by improving resource productivity such as efficient utilization of inputs, better productivity yields and better products (Porter & van der Linde 1995). Apart from that, many companies are using innovations to command price-premiums for "green" products and to open new market segments. Reinhardt identifies three main conditions for this process: the company needs to identify customers who are able and willing to pay more for an environmentally friendly
product; it has to communicate its products environmental benefits credibly and, finally, the firm has to protect itself from imitators for long enough to profit on its investment. (Reinhardt, 1999).

At the same time, Porter agrees that it is still a transitional phase in which companies are still inexperienced in handling environmental issues creatively; customers, too, are unaware that resource inefficiency means that they must pay for the cost of pollution (1995).

Porter also believes that regulation (but a different type of it) is still needed in order to create pressure that would motivate firms to innovate and to foster creativity; to improve environmental quality when innovation in resource productivity fail to offset the cost of compliance; to educate companies and raise overall awareness and to create demand for environmental improvements (1991). Governments have instrumental reasons to promote CSR policies to the extent those policies are understood to promote international competitiveness by fueling innovations, enhancing customer reputation, creating high-performance workplaces and maintaining important intangible assets such as community trust or employees’ goodwill. Stringent environmental regulation can put the same type of pressure on companies as competitive pressure does. So called "free opportunities" to improve environmental performance – in which the direct benefits to the company exceed the costs – are ubiquitous and stricter regulatory requirements or political changes can force companies to uncover them (Reinhardt, 1999). Moreover, the laws governments pass promote CSR are uniquely powerful because they can achieve broader coverage than voluntary initiatives (Aguilera et al, 2007). Undoubtedly, some government regulations and advocates can be very hostile to business, but they, nevertheless, will always play a role in environment management – the only question is what kind of role. It seems viable for some companies to ally with regulators and advocates to seek some benefit and even go against some competitors. For example, a company can join some similarly positioned companies within the industry to set private standards, or by convincing the
government to create regulations in favor of their products (Reinhardt, 1999). Porter admits that the main problem lies in so called "static thinking" when companies start to fight environmental standards that, on the opposite, could enhance their competitiveness (1991). On the one hand, company mindsets make the costs of addressing environmental issues appear higher that they actually are. Many companies do not account for a learning curve, although the actual costs of compliance are likely to decline over time. On the other hand, national systems of environmental regulations also deter innovative solutions (Porter & van der Linde 1995). Strict standards should promote resource productivity, prevention and new technologies instead of concentrating on cleanups.

To conclude this part, the Porter Hypothesis (PH) has met with great success in the world, especially in the United States, because it contradicts the idea that environmental protection is always detrimental to economic growth. The PH has been invoked to persuade the business community to accept environmental regulations, as it may benefit from them in addition to other stakeholders. In a nutshell, well-designed environmental regulations might lead to a Pareto improvement or “win – win” situation in some cases, by not only protecting the environment, but also enhancing profits and competitiveness through the improvement of the products or their production process or through enhancement of product quality (Ambec et al. 2011, p 3). In case of mining companies, the hypothesis explains for the first time that companies, apart from becoming more profitable, could also resolve some societal needs, such as education and employment as well as environmental issues, for instance, through conducting biological research, etc., which will be investigated below.
2.1.4 Criticism of existing theories

Although Porter's hypothesis has been widely recognized and supported by many scholars, there remain debates regarding how much innovation is induced by environmental regulations, and whether firms are net beneficiaries of this innovation. Indeed, the hypothesis rests on the idea that firms often ignore profitable opportunities (Ambec et al. 2011, p 4). Besides, managers of firms in general are paid to minimize costs and adding new regulatory constraints do not necessarily reduce costs; this dispute has gained the name "free lunch" debate, or the appropriate level of government regulation (Reinhardt, 1999). For example, Walley and Whitehead are questioning win-win solutions and criticize the ideas of M. Porter who believes that environmental initiatives systematically increase profitability (1994). Win-win solutions can exist, they claim that these cases are extremely rare and are likely to be overshadowed by the total cost of the enormous environmental expenditures (Walley, Whitehead, 1994). Whereas Porter writes mainly about how a country can gain competitive advantage through strict environmental policies, Walley and Whitehead argue that there is a lack of clear understanding how individual firms can seek to gain competitive advantage by becoming green (1994). They deny the focus on win-win solutions and state that companies would be better off focusing on "trade-off zone", where environmental benefit is weighed judiciously against value creation. (Walley, Whitehead, 1994, p. 5). They also add that due to many regulations imposed nowadays, it is impossible for a firm to focus on everything at once and only a value-based approach allows informed trade-offs. Walley and Whitehead divide these issues into three main categories: some environmental issues are strategic because their impact on value is high enough to put the core elements of the business at risk or to fundamentally alter a company's cost structure. In this case managers have to decide if the company had to lead or lag behind their competitors on
environmental issues, so the managers have considerable discretion; operational issues involve environmental decisions where the impact on value is medium and the manager's role is just to ensure that minimum expenditures achieve maximum environmental impact; and, finally, technical issues are those where the level of managerial degree can be different and relatively little value is tied up with any individual issue. In this case, manager must gain necessary information to make informed trade-offs between costs and environmental control. The best way to do it is to use third party audition (Walley, Whitehead, 1994).

Many other scientists also critically viewed CSR activities: Stefan Ambec and Paul Lanoieshow that a reduction of pollution is not always accompanied by a better financial performance, although the expenses incurred to reduce pollution can partly or completely be offset by gains made elsewhere (2008). They provide analytical framework focusing on opportunities for increasing revenues and opportunities for reducing costs; both types of opportunities can reinforce each other. Environmental performance can lead to an increase in revenues through the following channels: better access to certain markets, differentiating products and selling pollution-control technology, at the same time, better environmental performance can lead to costs reduction in these categories: risk management and relations with external stakeholders; cost of material, energy and services; costs of capital and cost of labor. (Ambec, Lanoie, 2008, p. 46-47).

At the same time, some companies face problems with non-market stakeholders in their operations. The framework exposed below (Lawrence, 2010) presents the ways out the company might take in order to manage disputes. It argues that management strategies fall into four categories: wage a fight, withdraw, wait, or work it out. Which strategy is chosen is likely to vary according to: the firm's dependence on stakeholders for critical resources, the firm's power in the
particular situation, and the urgency of the contested issue. Managers' effectiveness is, in large part, a function of their ability to assess these three conditions correctly.

Managing Disputes with Non-market Stakeholders: "Wage a Fight, Wait, Withdraw, or Work It Out?" (Lawrence, 2010)

The choice of the right CSR strategy may result in the following advantages for the company:

Increasing revenues: although there is little empirical evidence, Ambec and Lanoie suggest that reducing pollution and other environmental impacts may improve the overall image or prestige of a company and thus increase customer loyalty or support sales efforts (2008). Along the same lines, it is possible that better environmental performance through greener production or services can allow companies to use a differentiation strategy in order to exploit niche market segments which are environmentally conscious. Obviously, these products and services are more expensive to produce, but this extra cost can be covered by customers who are willing to pay more for environmentally friendly products and services. Indeed, many studies state that CSR can yield commercial advantages for the firms, for example, by enhancing product differentiation or creating barriers to entry for competitors. At the same time, CSR sometimes fails to lead to a sustainable competitive advantage as, in contrast to corporate political activities or technological resources and capabilities, CSR activities are visible, and rivals are able to imitate them. (Frynas&Yamahaki, 2016, p. 271). Ambec and Lanoie provide some examples, such as ecolabeling, biofood, and green energy market, but state that these
initiatives would work well only in developed markets, such as Europe or the USA and accept that there is still little empiric evidence available (2008). But it seems that differentiation strategy could work only if the information about the environmental features is credible (ex. ecolabels), consumers are willing to pay for extra environmental features (which is more difficult with low-end products) and if there is no barrier to imitation from competitors. If a company's customers are willing to reward it for improved environmental performance, the company must forestall the imitation by competitors. But if its customers are not ready to pay a premium for an environmentally preferable good that the firm developed, then the company has to force its rivals to match the firms behavior and also establish environmentally friendly strategy in order to use the investments used for the creation of a green product (Reinhardt, 1999). Analyzing pollution-control technology, R&D in this area can optimize manufacturing and waste-control management, which, in due course, can lead to technological breakthroughs and be attractive for companies, which can use this strategy as a "first-mover" advantage and eventually lobby government for stricter regulations. (Ambec, Lanoie, 2008, p. 49-50).

Reducing costs: apart from that, better environmental performance may make the relations between the firm and its stakeholders easier and reduce risks associated with these relations. Less pollution means lower liability costs and avoidance of costly litigation and fines. Firms have relational motives to engage in CSR practices in their industry in order to be legitimate by complying with industry norms and regulations, as well as instrumental motives to preempt bad publicity, investment divestment and penalties due to non-compliance (Aguilera et al, 2007). For example, goods that are environmentally friendly are less likely to suffer from boycott campaigns of ecological groups and media. This type of cost reduction can be interpreted as environmental risk management, when the primary objective is to avoid costs associated with industrial accidents, consumer boycott or an environmental lawsuit; it can be seen as an
environmental insurance policy against regulatory difficulties, sour community relations, business interruptions and etc. (Reinhardt, 1999). Similarly, companies with better environmental performance may obtain approvals from the government and the community faster to build a new plant or extend the existing one. The companies that are more likely to benefit from that are those scrutinized by the public and regulated by the government, such as chemical and metallurgic industries, pulp and paper industries and energy sector (Ambec& Lanoie, 2008). Following the resource dependence theory, these types of industries are dependent on their surroundings to guarantee the flow of critical resources for their survival and, consequently, firms have to attend to the demands of those in their environment. (Frynas&Yamahaki, 2016, p. 268). Accepting the underlying general premise that firm-specific resources can lead to a sustainable competitive advantage, resource-based view concentrates on how firms can acquire resource-based rents through the possession of valuable, rare and inimicable natural resources. CSR related studies from this perspective posit that specialized skills or capabilities related to investment in CSR can lead to firm-specific economic benefits for companies in terms of human resources too (Frynas&Yamahaki, 2016, p. 270). Employees judge the social concern embedded in their organizations' actions, the outcomes that result from such actions and how individuals both within and outside the organization are treated interpersonally as these actions are carried out. When employees see that their firms are strongly committed to environmental protections, they are more likely to generate ideas for making the firm's practices more environmentally friendly. Moreover, employees may view a socially engaged organization as one that is concerned about all people, both internal and external to the organization and, therefore, they seek and promote CSR in order to maximize their own outcomes (Aguilera et al, 2007). It is also possible that better environmental performance can be associated with a lower
cost of financial capital: greener firms have have easier access to capital markets through proliferation of all green or ethical mutual funds and can borrow more easily from banks (for example, those that have Equator Principles). For example, public funds have acted as catalysts for CSR initiatives in corporations by conducting a highly public screening of corporations that might lead to brand damage and deterioration of firms' reputation. (Aguilera et al, 2007).

“Sustainability Strategies: When Does It Pay to Be Green?” (Orsato, 2009)

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**Competitive Focus**

Shareholders in general can also be influenced by the information on the environmental performance of companies and their reactions can be perceptible on the stock market. (Ambec, Lanoie, 2008, p. 50-57).

Applying these views to the current research in mining, companies in this industry mostly benefit from reducing costs, as a better sustainability performance usually leads to fewer boycotts from media and NGOs. This way, mining companies use this approach as insurance
measures. Apart from that, mining usually requires government approvals to be able to operate in certain locations; a sound CSR policy tends to create a better corporate image of a company, which, in due course, could result in faster approvals from governments as well as from the local communities.

2.1.5 Country specific factors

Firms do not operate in a vacuum, but, rather, they are embedded in a national and industry institutional settings that enable their strategic decisions (Aguilera et al, 2007). Some comparative CSR frameworks have been developed recently, highlighting the importance of context in shaping CSR expressions. Frynas and Yamahaki (2016) explain the international CSR strategies by "institutional isomorphism", the idea that firm strategies and practices will become similar with a defined institutional environment, as similar firms face similar institutional pressures. The research shows there are convergence pressures for similar CSR strategies and practices between firms with similar attributes, normally firms sharing the same national context, albeit convergence pressures also exist within the institutional context of local communities and strategic groups within an industry. (Frynas & Yamahaki, 2016, p. 267). CSR is a complementary institution to the national system of corporate governance and national difference in the way CSR is perceived by the business community reflect variations in their corporate government systems. (Kang & Moon, 2010, p. 1). It is worth acknowledging that there are limitations of the adoption of such frameworks, as they are focused mainly on developed countries.

- Firms in liberal market economies (LME), such as the UK and the USA usually rely on liberal market to coordinate their CSR activities with stakeholders. In finance they predominantly rely on stock market for corporate financing. This gives large firms a
competitive institutional advantage in innovation as they can raise a significant amount of money in a short period of time. Nevertheless, in this type of system, there are two main stakeholders who could influence CSR strategy: shareholders and top managers; thus, labor remains marginalized from governance issues. (Kang & Moon, 2010). In this Anglo-American model these shareholders can have a big motivation to push for CSR strategies when CSR initiatives are directly related to greater competitiveness of the firm, for example, by protecting the firm's reputation (Aguilera et al, 2007). Generally, businesses in LME are likely to describe their CSR as "part of core values" which are performance driven; public policy in LMEs is designed to promote CSR as a voluntary and non-enforceable initiative.

- In coordinating market economies (CME) or Continental model, firms frequently rely on banks for corporate financing of their CSR activities. Large CMEs companies have competitive advantages in incremental innovation because they manage to introduce long-term initiatives, for example, promoting long-term employee welfare or investing in research and development of high-quality products. Managers in this Continental model tend to encourage the firm to engage in CSR when stakeholders' interests are fulfilled, since they are driven not only by short-term profit maximization, but primarily by relational motives such as long-term growth, the need for social legitimation, and achieving balance among stakeholders (Aguilera et al, 2007). The best examples of CMEs are Germany and Japan where CSR is strongly focused on society centered perspective of the firm. Scandinavian countries can also represent a good example (Porter, 1995), where the emphasis was made on organized interests and collective actions between managers, business owners and employees with external institutions, such as the government and NGOs (Kang & Moon, 2010). The regulation in
Scandinavian countries was established gradually, with more flexible approaches, enabling companies to focus on incremental innovation in production process itself, not just on secondary treatment of waste (Porter, 1995). Despite distinctive differences between Anglo-American and European types of CSR forms, they both share the predominance of market-based forms of organization supported by strong regulations and enforcement.

- The situation with emerging economy countries due to numerous voids in their markets is different (Matten and Moon, 2008). In contrast to LMEs and CMEs, state-led market economies (SMLE), such as Korea and France, tend to rely more on the state to coordinate their CSR activities with other stakeholders. SMLEs firms also can rely on banks in terms of financing, but the bank are usually public institutions, where the state makes decisions regarding the allocation of price and credit. In this type of capitalism, managers enjoy more freedom in taking decisions, although this freedom lies within the broad confines of the state directives when it comes down to large-scale investments. (Kang & Moon, 2010). Yet again, the existing framework does not cover those systems that are less coherent with dysfunctional markets, weakened labor institutions – typical characteristics of developing and emerging markets economies.

As it can be seen, there are three main CSR approaches that can be divided geographically: LME (UK and the USA), CME (Germany and Japan) and SMLE (Korea and France). As it can be seen from this part, there is a clear division of national differences regarding CSR activities mainly in the developed countries. Developing and emerging nations typically have less sophisticated market supporting institutions and legal and regulatory capabilities. (Gifford et al, 2009). Of course, these countries can have some impact from the developed world: the governments of Belgium, Canada, Denmark, the Netherlands, and the UK
have been particularly active in promulgating CSR statuses domestically and promoting CSR discourse transnationally. Nevertheless, there is no distinctive definition of the CSR mode that shall be executed in developing and emerging countries. Apart from that, given the absence of global government, globalization has produced a regulatory vacuum, where no single state has the capacity to regulate the totality of any global company activities. Still, emerging countries are now able to monitor and publicize the work of multinational firms and in the future it will be increasingly important for them to add local sustainable benefit into their strategies mix in order to get the social license and legitimacy that is needed to work in poorer communities (Gifford et al, 2009). Large companies and publicly owned companies should be particularly active in terms of CSR activities and reporting because they are more visible and open to public scrutiny, and hence have greater legitimacy needs. (Frynas & Yamahaki, 2016, p. 268). It is important to note that although there is gap in terms of defining national context for CSR activities in emerging market economies, these states have become host countries for various business activities of the developed countries' companies. The findings of Pisani et al. Illustrate that emerging country focus has steadily remained dominant in the host-country category throughout the last 15 years. (2017, p. 599). Thus, due to many institutional voids, these companies working in developing and emerging markets usually tend to partner with NGOs and non-traditional stakeholders such as local tribes in order to develop social responsibility strategies. (Gifford et al, 2009). The stakeholder theory states that the organization must identify which stakeholder interests are important and hence stakeholder salience becomes directly relevant. Thus, natural resource firms with high dependence on rural local communities usually invest in extensive local development initiatives. Firms with greater dependence on their local community exhibit better environmental performance in the community and it is generally assumed that investors and other key
stakeholders reward firms that are sensitive to stakeholder concerns. (Frynas & Yamahaki, 2016, p. 266-269).

It can be concluded that there is no clear definition of CSR model in emerging market and developing countries. For this reason, it becomes extremely difficult for mining companies expanding in emerging markets to choose the right strategy to in order to establish a successful sustainable strategy in a new location. Indeed, there is no common CSR tendency in Latin American countries, so companies must do a particularly thorough research about the local specifics of each country separately in order to expand successfully.

2.2 Mining and sustainability

Many of the environmental disasters or human rights incidents that have contributed to the growing public concern about CSR over the last 40 years took place in the mining or petroleum industries; thus, the mining industry is a key topic in debates about social and environmental responsibility (Jenkins, Yakovleva, 2004). It is commonly perceived that mining cannot be sustainable as long term gold production trends include declining ore grades and increasing solid wastes and open cut mining (Kumah, 2004). Conversely, core sustainability issues include water, energy and chemical consumption and pollutant emissions that are known as resource intensity. The major challenge in this regard is the evolving environmental and social costs of extracting mineral resources and this raises the question if future mining will cost more than in present (Mudd, 2007). The need to qualify development as sustainable has been accompanying mining industry for several decades and only after the 1987 Our Common Future Report the sustainable development was defined to some extent and the concept began to receive widespread attention. Despite an apparently paradoxical nature of the expression "sustainable mining", which is frequently questioned (Fonseca, 2010), several viewpoints defend the
possibility for mineral extraction to be sustainable. In the mining industry, progress within the three dimensions of sustainable development could be achieved in the following ways.

- First, the economic development can be achieved through the constant investment of generated revenues to ensure the future development and long-term livelihood of the communities (Jenkins, Yakovleva, 2004). Indeed, the economic benefit could be achieved for mineral reserves only if there are considerable savings and annual reinvesting of the amount that is equal to the present value of the annual net present revenue obtained from selling of mineral products (Kumah, 2004).

- Secondly, environmental protection and the environmental impact of natural resource exploitation should be minimized, and land rehabilitated to allow successive use. Here comes the question of the ability of the company to preserve the environmental benefits not only for the present generation but also for the future one. The depletion of mineral resources should be compensated by the generation of new wealth, which, in the form of useful lasting capital, can benefit present and future generations (Jenkins, Yakovleva, 2004). This idea is also reflected by Cowell (2001) who states that the problem of non-renewable mineral resources is critical in the sustainability debate as it relates to present generations meeting their needs for metal and minerals while still allowing for future generations to provide for their anticipated requirements. Sustainability means the design, construction, operation and closure of mines in a way that would respect and respond to the environmental needs of the present generations and anticipates those of future generations in the communities and countries where it works (Kumah, 2004).

- Finally, social cohesion can be achieved through the minimization of social and cultural disruption to the communities, maintenance of stakeholder dialogue and transparency of operation. In other words, mining can be acceptable where its negative effects are
largely corrected, and its social benefits succeed to provide a way to a more sustainable future for the local community.

Thus, considering all the three dimensions for the mining industry, CSR should be generally seen as balancing the diverse demands of communities, and the imperative to protect the environment, with the ever-present need to make a profit (Jenkins, Yakovleva, 2004). As a result, this part of the research states that sustainable approaches do exist in mining industry. The question how these approaches can benefit the company will be discussed in the next chapters of the current research.

2.2.1 Corporate Disclosure in Mining

Corporate social and environmental disclosure has grown considerably over the last 20 years. The mining industry accepted the legitimacy and a changed landscape and worked to improve industry standards and performance throughout the 1970s-1980s in order to meet legal requirements but also to be able to ensure social acceptance of existing mines. It encompasses both the voluntary and mandatory disclosure made by companies regarding issues that are important to a wide range of stakeholders, covering more than solely economic concerns (Gray, Kouhy, Lavers, 1995). There are a few reasons for firms' disclosure of the social and environmental data, such as imposed regulations and standards, legitimacy theory, a license to operate theory, stakeholders' pressure, public and external pressure; opposition to sustainable development has become politically risky (Fonseca, 2010). For example, maintaining ‘a license to operate’ is a constant challenge: the opposition to the mine is based on accusations of bribery for concessions, lack of community engagement, pollution and related health impacts (Jenkins, Yakovleva, 2004). Pressure groups have consistently targeted the sector at local and international
levels, challenging the industry’s legitimacy. An example of this is the numerous environmental, community and indigenous groups who oppose the development of mining operations. Thus, nowadays the negation to follow the sustainable development in the sector can create many hardships for the firms in the industry. The disclosure of information can include, first of all, firms’ annual reports, or the most visible documents created by companies according to the legislation. The main challenge here is the tendency of many companies to include qualitative information in their report instead of quantitative one, which impedes a more thorough and accurate analysis. Apart from that, a growing number of firms publish standalone environmental reports, although this practice in mining sector emerged only in the 1990s, but gradually gained momentum. A recent survey by KPMG shows that nowadays the mining industry is moving towards a greater disclosure of social and environmental information as more and more mining companies rely on good relationships with local communities in order to operate their mining assets successfully over long periods. Reporting on human rights performance can be an essential part of maintaining social license to operate for these businesses.

In the 1990s there appeared a tendency to join various sustainability issues into one report and, consequently, environmental and social reports are becoming more and more omnipresent. Still, only Annual Reports are considered to be the most reliable ones since they go through the auditing process, whereas other types of information disclosure have not created any kind of
"Companies Acknowledging Human Rights as an Issue for Business" (KPMG, 2017)

standardization and structure. In 1991 in response to increasing stakeholders’ pressures, large mining companies launched the Global Mining Initiatives (GMI) one of the most comprehensive sustainability-oriented efforts ever seen in the industry. The initiative aimed at gathering over 150 individuals and companies to understand the role that the industry could play in sustainable development (Fonseca, 2010). Another major effort was the creation of the International Council on Mining and Metals, an organization that helps mining companies in sustainability related issues. Nevertheless, the reporting system has seen a lack of universally accepted and verified standards for sustainable performance in the mining sector and for this reason, many mining companies have started to report on their sustainability performance alongside their financial numbers, based on firms' standards or some external guidelines, such as Global Reporting Initiative – GRI (Mudd, 2007), a broad initiative for the sustainability reporting and indicators which is the coalition of the UN, industry, government and civil society groups. GRI was established in 1997 and released its first edition of protocol in 2000 and the third in 2006. The objective of GRI is to achieve a consistent reporting on sustainability reporting of companies' performance, making this practice routine. Apart from a greater transparency, the main benefit of this systematization is the increasing abundance of data available to access the resources required
for opening a new mineral production. For the mining industry, one outcome of the CSR agenda is the increasing need for individual companies to justify their existence and document their performance through the disclosure of social and environmental information. GRI aims to bring together the numerous initiatives on corporate environmental reporting that have developed independently around the world, and to help them to shape them into one set of coherent, consistent global standards (Jenkins, Yakovleva, 2004). GRI framework requires disclosures of the three dimensions of sustainability and managed to make companies consider sustainability reporting as the norm, not the exception (Fonseca, 2010). Nevertheless, many assume that despite the growing number of companies reporting on their sustainability performance, these firms have always had substantial room for maneuvering the delivered message and portray optimistic views on their sustainability. Thus, it seems evident that there is a so-called "credibility gap" in sustainability reporting. Several tools can be used in order to prevent this. One of the ways to increase the credibility of information is via third party verifications (Jenkins, Yakovleva, 2004). These can include external assurance, internal audits, information systems, rating agencies, expert statements and reporting standards (Fonseca, 2010). Independent key social audits can play a key role in mediation between the mine and the local community.

To sum up, transparency over revenue flows is an important antidote to mistrust nowadays. Sustainability reports, that once were made voluntarily, are obligatory nowadays and the inability to deliver such reports can result in lower competitiveness of the firm even if it is acting in a developing country, like Brazil, where the rules and not stated clear as it will be discussed further on.
2.2.2 Main problems associated with gold mining

Many reports and papers present a broad-ranging data on key aspects of mineral recourse sustainability and environmental impacts associated with mining. There has been a long-term decline in gold ore grades with this principally linked to evolving prices, technology and gold ore.

"Cyanide Consumption of Gold Grade", (Mudd, 2007)

resources: as gold ore grades decline, unit resource cost or release increases. Basically, the negative impacts are the following: the use of cyanide in mining operations, greenhouse emissions, rock waste.

- Toxic sodium cyanide has been used in gold mining since 1887, and it remains the primary reagent in use for gold processing today because it allows for efficient extraction of gold from low-grade ore. Cyanide is acutely toxic to humans, other mammals and aquatic species at relatively low dosages, as it interferes with oxygen utilization. A 2011 report into cyanide use at mine sites claims that, in the past 25 years, more than 30 major accidents involving cyanide have occurred worldwide including the accident when at least six people died and more than 20 people were missing after an
iron ore dam burst at the Samarco owned Germano mine in south-eastern Brazil. (Mazzola, 2018). Using cyanide in gold mining poses environmental risks that need to be pro-actively managed (Mudd, 2007).

- There is also a clear trend of declining ore grades mentioned above in several countries, including Brazil, South Africa and Canada. While true ore grades used to be considerably high a century ago, nowadays it is likely to continue to gradually decline, though at a slow pace. The problem with the declining ore grades has a few important consequences for the industry. First, higher grade gold mines typically have a lower water cost per gold produced while lower grade mines generally require a higher water cost. Apart from that, high-grade mines use less energy per unit of gold produced while high grade throughputs use less energy per ton of ore milled. The extent of cyanide required to produce gold shows a similar relationship to ore grade. Cyanide consumption seems more likely to increase gradually in the medium term an, pointing to the need of greater transparency and focus on cyanide management.

- Mercury emissions has always been a problem in gold mining, especially in Latin America, where it used for silver and gold. The final recovery of fine gold particles extracted was always done through heating or burning of the amalgam with high mercury emissions to the atmosphere. Inhaled metallic mercury is rapidly absorbed through lungs and in the blood stream. Burning of amalgams in mining areas contaminates indoor areas and vicinities (Malm, 1998).

- The release of greenhouse gas emissions is a major problem in the world nowadays. As cyanide and energy, there is a reasonable correlation between unit greenhouse emissions per unit of gold produced and ore grade. All the problems mentioned above are aggravated by the fact that the relatively small mass of gold produced out of the ore has
a function for jewelry, which leads to major ethical and social issues in terms of accounting for the greenhouse costs.

- The lack of attention to waste rock and mineral depletion in sustainability reporting is also a gap: the discovery of new mineral deposits, and the advancement of technology for improved recovery of minerals from previously unprofitable deposits has always been lacking. At the same time, mineral depletion is not an issue for the foreseeable future due to the possibility of recycling many non-fuel metals and minerals (Jenkins, Yakovleva, 2004).

Thus, there are several problems associated with the gold mining and in case of Brazil, most of the gold ores are in remote locations (for example, Amazon) populated mainly by indigenous tribes and local communities that are exposed to the threats stated above.

**2.2.3 Mining in Brazil**

Many countries with emerging economies have abundant natural resources and have relied on their primary sectors, especially on extractive industries, which are a source of growth and wealth. Gold mining is known to be capital intensive and developing countries tend to rely on foreign direct investments for financing this industry. The liberalization policies have stimulated a missive inflow of foreign direct capital into the extractive industries of emerging market economies, which has resulted in the increase of gold production. Although the aim of mining project development in these countries are poverty alleviation, job creation, infrastructural development and sustainability enhancement, many huge investments into the mineral sectors of resource-rich countries have failed to achieve the desired results (Kumah,
The environmental and social health in the region and community affected by mining operations positively or negatively is still a contentious area for the sustainability debate and the industry itself, particularly for the developing world. And in this sense, the context for sustainable development for mining here is still essentially the same: balancing the potential environmental and social risks with the economic risks (Mudd, 2007). But regulatory frameworks and established legislation do not often translate into sound environmental practice in some countries. The developing world as well as emerging economies are the examples where environmental laws are still in the phase of their development and some mines operating in line with them are not necessarily contributing to environmental enhancement and sustainable development. Thus, in case of developing countries, this practice often needs to go beyond the requirements of legislation. Here, the increase in golden mine investment, which, in fact, should propel local economy and the expansion of companies’ operations are frequently associated with persistent environmental and socioeconomic problems (Kumah, 2004).

The gold mining boom started in 1970s and has been accelerated by the combination of a real price rise, the development of carbon in pulp milling technology and the evolution in large scale bulk earth moving vehicles and mining techniques. New mines started to be based on open pits that allow more complete extraction and processing of gold-mineralized ore. At the same time, inflation and political instability in Latin America adversely affected the flow of foreign direct investments which started to enter the region. In Brazil, there was a modest increase in gold production between 1980 and 1990, but following this period, gold production began to decline. According to the United States Geological Survey (USGS), nowadays Brazil has one of the 10 largest global gold reserves, is currently ranked as the 11th top producer in the world. It has a well-established mining industry with several major international mining companies operating successfully over a long period.
"Latin American leading countries in gold production 2016 (in kg)", Statista.

The Amazon currently plays an important role in the gold mining business although there are many obstacles in this region, since areas with large quantities of this mineral are protected...
either by environmental legislation or the presence of native Brazilians. Until the 1980 the deforested area of the Brazilian Amazon was below 300,000km or 6% of the total area and has almost tripled in less than 30 years. An environmental policy in the Amazon has increasingly focused on deforestation, but the environmental concerns have also been raised in relation to soil and water contamination from mining. (Sousa et al, 2011). The Pan American Health Organization maintains that the gold mining industry is directly responsible for the high levels of air and water pollution by toxic waste, which are the main problems in Latin America and the Caribbean (Kumah, 2004). Another problem in the region is informal mining in Brazil is seen by many as a scourge polluting the Amazon rain forest, poisoning indigenous tribes and robbing the nation of its wealth. (Brazilians Toil For, 2017). This type of mining is characterized by rudimentary processes to extract gold from any type of ore, typically employing low levels of mechanization. Informal mining produced around 6 tons Au/annum in 2008 and employed around 200,000 miners in 2008. Informal miners in Brazil are known as “garimpeiros” and often operate in sensitive ecosystems such as riverbeds and riverbanks (Sousa et al, 2011). The total area worked by “garimpeiros” in Brazil is thought to be relatively not large, but chemicals like mercury, which miners dump to separate gold from grit, can leave a large footprint of contamination (Independent).

In the past decade, the Brazilian government has often been criticized for putting minimal effort into regulating this illegal activity and various studies indicate that government focus has been on the creation of environmental laws rather than technical assistance programs on the ground (Sousa et al, 2011). The government still creates many laws that may be well intentioned but are not enforced effectively and, consequently, they just serve to keep up the appearances of following protocols and creating the impression that appropriate governance is being implemented. For example, the local laws forbid the use of mercury and cyanide without
previous licensing, which might at first seem like a reasonable decision, however a recent survey in the Tapajos Region showed 99.3% of miners using mercury or cyanide without any permit. According to Procopio (2008), the IBAMA, as the implementing agency of the environmental policies for the Amazon, has more employees, including Forest Engineers, working in Brasilia city offices than in the entire Amazon region. Despite a great number of laws and plans, actions on the ground to reduce environmental impacts and support technological innovation are still not evident. According to Oliveira (2005), Brazil is one of the few countries in the world that have characterized damages to the environment as a crime by extending not only financial but also penal sanctions to corporate entities and individuals. However, one of the main criticisms of this legislation is its frugal application. In other words, transgressors are not discouraged by stringent legislation if chances of getting caught are almost null. The laws that made environmental crimes punishable are not enforced, and in rare occasions a violator is arrested. From the mining side, the organizational structure is headed by the MME (Ministry of Mining and Energy), involving the SMM (Secretary of Mines and Metallurgy), the DNPM (National Department of Mineral Production) and the CPRM (Mineral Resources Research Company) (DNPM, 2010). The environmental requirements created by the legislation are aimed at harmonizing economic development with environmental protection, but in practice, different power dynamics within the various agencies responsible for mining sector governance and environmental governance lead to differing views on which priorities should command the government’s focus.

Despite the lack of efficiency, Brazilian legislation in the industry is still quite clear and can be compared with developed countries' legislation. There are basically 3 types of environmental licenses granted for different phases of implementation and operation:

1) Previous license requested in a preliminary stage of the undertaking planning and feasibility studies;
2) Installation license, requested on the development of the project, including the construction and extraction of raw materials for preliminary tests;

3) When the environmental controls are in place and an operation license which authorizes the company to start operations keeping environmental controls in place.

According to Brazilian law, mining in indigenous lands is a federal crime, but in practice, though, large swaths of the Amazon, including federal protected areas, have increasingly become stateless zones dominated by gold, land-grabbers and criminal timber rings. Gold production is affected mainly by two different fees: royalties and regular taxes. The royalties are charged monthly on top of the net revenue obtained from mineral production and sale. The aliquot charged for gold is 1.5% on top of the net revenue, being divided as follows: the Federal Government collects 12% of the charged amount, the government of the state where the gold field is located collects 23% and the government of the city where the gold field is located receives 65% (The Road Ahead, 2017). Thus, the requirements for mineral extraction resemble those in the developed countries and even if royalties increase, Brazil’s rates are considered low by international standards.

Scenario planning can contribute to sustainability by boldly facing future social-economic uncertainties as it holds much potential for enabling more sustainable development pathway (Freeth and Drimie, 2016). The future scenario for Brazil in terms of sustainability is not clear due to the political instability and the ongoing environmental crisis related to fires in the Amazon region. During the last decade several mining operations have been suspended in the Amazon region because of the environmental protection measures imposed by the former government, pressure from various NGOs and local communities. About 30 percent of Brazil’s territory is protected for either conservation or indigenous groups, mostly in the Amazon, according to Embrapa, a government-run agricultural research organization. But the presidential
elections in 2018 greatly influenced the legislation in sustainability. The economy has been struggling during the last years and the new government is now unleashing the mining potential of the Amazon.

The Brazilian government is pushing ahead with a bill that would allow mining companies to act on indigenous lands and would not give local communities any veto power. At the same time, a nationwide poll from Datafolha Institute in June 2019 found that 86% of Brazilians opposed mining exploration on indigenous lands. The government has also been criticized for fires in the Amazon forest recently. Apart from this, there has also been the criticism regarding the countries' environmental agencies for blocking promising projects. The new government has promised to reduce the wait time to license small hydroelectric plants to a maximum three months, rather than the decade it can sometimes take. Beyond that, indigenous reserves might not be expanded in the nearest future. Overall, it seems that getting lawmakers to approve mining in the Amazon may be less difficult, but there are some other hurdles in the industry such as bureaucracy and a decline in new requests for mineral research: in 1980 and 1990s, the mining regulators local branch received about 2,000 requests a year involving three Amazon states. This year, they received less than 100 (Amazon's mining treasure, 2018)

To sum up, it is clear that the current scenario in Brazil is highly unstable: the government is trying to implement a more business friendly legislation, but, at the same time, such decisions are being heavily criticized by international community, local tribes, NGO’s and Brazilian population in general.
3. Methodology

This section presents the methodological process of this work. The first part explains the choice of a qualitative research and a case study of two companies. The second part covers the research setting, data collection, analysis procedure and, finally, the validation of findings.

3.1 Qualitative research and case study

The current research is to be conducted through a qualitative study. Generally, research in international business often deals with dynamic and volatile situations that demand creative and flexible research designs and methodologies (Ghauri&Gronhaug, 2005). Qualitative methodologies are also frequently used to capture multi-dimensional phenomena and non-linear, sometimes fuzzy, patterns of reality (Yin, 2003).

According to Creswell (2018), there is a common agreement nowadays about the core characteristics that define qualitative research:

- **Natural setting**: Qualitative researchers tend to collect data in the field where participants experience the issue or a problem under study. The information is usually gathered by face-to-face interactions. This research involved data collection through personal meetings.

- **Multiple sources of data**: Qualitative researchers typically gather multiple forms of data, such as interviews, observations and documents rather than rely on a single data source. Then the information is organized into categories or themes across all of the data sources;

- **Inductive and deductive data analysis**: While the process begins inductively (from the bottom up), deductive thinking also plays an important role as the analysis moves
forward (when researchers look back at their data and from the themes to determine if more evidence can support each theme or whether they should get additional information). In the current research, the inductive method was used;

- Holistic account: Qualitative research tries to develop a complex picture of the problem or issue under study, which involves reporting multiple perspectives, identifying many factors and generally sketching the larger picture that emerges.

In the qualitative research, the case study methodology is the most prevalent method (Sinkovics, Penz, Ghauri, 2008). Yin (2002) defines case as “a contemporary phenomenon within its real-life context, especially when the boundaries between a phenomenon and context are not clear and the researcher has little control over them”. Through a case study, researchers collect detailed information using various data collection procedures over a certain period of time (Creswell, 2014; Yin, 2001). Given this definition, from Yinian point of view, case study is an empirical inquiry that investigates the case or cases by addressing the “how” or “why” questions concerning the phenomenon of interest (Yazan, 2015).

The current work is organized around two companies’ cases: Kinross Gold Corporation and Belo Sun Mining Corporation. The choice of studying two companies are explained by the fact that the researcher had an opportunity to be present in both countries in order to conduct the research: Canada, a country of origin of both firms, and Brazil, a country where both companies operate. The choice of industry can be explained mainly by the complex scenario in Brazil regarding Amazon basin territories with mining projects, which drew international attention. It is worth mentioning that Kinross case is already a completed project, whereas Belo Sun is an ongoing case; in other words, it is a phenomenon within its real-life context, as it was stated by Yin (2003).
Given this definition and the fact that the research question is “How can mining companies from developed countries benefit from sustainability initiatives in emerging markets?”, the case study seems to be the best way to conduct a research.

3.2 Data collection

The study was conducted in Brazil and Canada and the collection of data was conducted on the spot. Importantly, the headquarters of both companies, Belo Sun and Kinross are located in Toronto, Ontario, Canada.

As it was stated before, interviews are seen as an indispensable tool of data gathering in qualitative research. Regarding primary data sources, such as an interview, indigenous human rights activist YsaniKalapalo was contacted in November 15th, 2018, and the interview happened in November 25th, 2018 in Embu das Artes, SP, face-to-face. The interview lasted for three hours, was transcribed and later translated into English. The conversation was held in Portuguese that is the native language neither for the researcher (Russian) nor for the interviewee (Karib). YsaniKalapalo is a representative from one of the local tribes in the Amazon region that was affected by mining activities; being a daughter of a local cacique (tribe leader) and a human rights activist who frequently has meetings with the Brazilian president, the interview was of an extreme importance for this research. The interview used a semi-structured approach, which combined obligatory questions as well as flexible ones in order to provide a comprehensive overview of the issue. The information derived from the interview was used in the industry overview in Brazil. Relevant managers working for Belo Sun and Kinross were contacted in Toronto, Canada, but, unfortunately, could not be reached for an interview due to time constraints and hard accessibility.
Regarding secondary data, the research started in July 2018 with the research of literature about the sustainability concepts and strategies, mining industry and companies’ profiles. The sources included firms’ reports, specifically, CSR annual reports, academic papers and web articles (mainly international news sources). The topic covered different sustainability strategies and approaches, mining industry overview and, finally, Brazilian political and economic scenario.

### 3.3 Data analysis procedure

All the data received from primary and secondary sources was organized, coded and divided into themes before the findings of the research were reported, presented and interpreted. Firstly, the recordings of the interview were processes into text data of 5 pages. The next step was coding the information which is the process of segmenting and labeling text to form descriptions and broad themes in the data (Creswell, 2011).

Qualitative researchers often display the findings visually (Miles & Huberman) by using figures or pictures that augment the discussion (Creswell, 2011), which was used in this research. A comparison table was created (see Table 1) and all findings from the data analysis were summarized in detail. The interpretation of the findings contains a review of the major results, personal reflections, limitations of the study and suggestions for the future research.
4. Analysis of the data

This section aims at presenting key business information about the companies Belo Sun and Kinross. It will also cover the main points of their history and development, with a focus on the CSR activities of the firm.

4.1 Overview of Belo Sun business

This part aims at analyzing the company’s profile, which helps answer the question of the current research - how a foreign-owned firm can benefit from its CSR initiatives in Brazil.

The increasing pressure from non-government organizations, media and social activists has been creating additional pressure on companies' operations in developing nations. Belo Sun Mining Corp. has been in the spotlight due to the growing concern of sustainability issues in Brazil and is struggling to continue its expansion plans in the Brazilian Amazon rain forest.

Belo Sun is a Canadian mining company focused on gold exploration. The company focuses on generating long-term sustainable value for its shareholders by developing mine projects in Central and South America. The main project of the company is called the project Volta Grande, which is in Para State, approximately 60 kilometers southeast of the city of Altamira in the northern part of Brazil (Belo Sun website). The project comprises approximately 20 exploration permits, covering the area of 103,350 hectares. The Volta Grande project consists of an open pit, a gold recovery process facility, water and tailing management and supporting infrastructure. The project has 17-year life estimation and is supposed to be the largest one in South America. The next session of the current research will explore the problems associated with this project.
4.1.1 Volta Grande issue

Despite its positive economic outlook and high expectations, 100%-owned Volta Grande project has been facing fierce opposition from civil society groups due to its location close to the indigenous territory where a reserve for native Indians are in the process of being established. From the very inception the government investigation has been reporting inconsistencies in the company's environmental assessment. The problem is exacerbated by the project's location, Amazon river, that is under a tighter public scrutiny.

- First, the project is very close to the existing state-controlled hydro-electrical dam Belo Monte which has caused a lot of polemics in terms of environmental and social negative impact. Various reports indicated environmental laws violations in the region during the construction of the dam, which caused a lot of negative feedbacks regarding the inability to preserve the natural environment in the Amazon basin (Jamasmie, 2017). This precedent resulted in the protests against any business activities in the region, which negatively impacted the Volta Grande project.

- Secondly, areas of native Indians' settlements are protected by specific governmental laws and special licenses and indigenous communities’ approvals are required in order to proceed with the project.

- Finally, another potential stumbling block could be the 2,000 miners working illegally at three unlicensed gold mines in the area who would not welcome the Canadian firm, particularly if it gets the lion share of the local resources (Jamasmie, 2017).

In 2013 a Brazilian court has stopped Belo Sun's project after ordering immediate suspension of environmental licensing: the company was in its licensing process to receive the Preliminary License for Volta Grande but was requested to carry out a full analysis of effects on
indigenous peoples within the Environmental Impact Assessment (Jamasmie, 2015). The company had been asked to complete indigenous study in accordance with the reference terms of Funai, the Brazilian indigenous authority. In the requested feasibility report on Volta Grande project, the company established a series of policies and commitments with the respect to the management of environmental, health and safety, social and community issues. Baseline environmental and socio-economic studies have been conducted in the project area.

The Feasibility Report (See Table 2) is structured as follows: physical environment, biological environment and socio-economic environment. In the biological environment analysis, the report identified that the project area has been impacted by human settlement, artisanal mining, agriculture and cattle raising, so, much of the project area has already been historically affected by human activities. Approximately 125 hectares of the project area are classified as the Permanent Preservation Area according to the Brazilian legislation. The company has prepared deforestation plan. Flora species were inventoried, including species of conservation concern, state-defined vulnerable species and threatened species. Apart from identifying those species that are already known, the project related studies have discovered a few species potentially new to science in Brazil as they are not formally described by Brazilian taxonomists. Belo Sun environmental consultant claimed that this identification of new animal species is a positive sign and there is a chance to finance research of taxonomy in order to contribute to the knowledge of science. A relevant concern is the possibility that these potentially new species are geographically restricted and thus could be unduly impacted by the Project. The Feasibility Report expressed the probability of this to be very low because, in their experience in the Amazon, the distribution of species is usually not restricted to a few hectares such as the Project area. Importantly, none of these potentially new species was located within the defined Volta Grande area. In socio economic environment part, the limited transportation infrastructure and
the potentially affected communities are relatively isolated. There are less than 1,000 inhabitants combined in these five communities. Household surveys undertaken by consultants on behalf of Belo Sun indicate that a relatively big number of inhabitants of those five communities were artisanal miners, many of whom relocated from other areas of Brazil. Most of the households also practice some form of subsistence farming. Since 2013 the number of illegal miners has been decreasing due to the state police procedures, although some artisanal waste rock processing still occurs on the project site. Since housing and living conditions are poor, Belo Sun has developed a series of social investment programs designed to improve the living conditions of individuals in the neighboring communities. Belo Sun also provides teachers with materials for local schools, contributes to the staffing of medical personnel for the local hospitals and has already built a police station in the mining site. Additionally, Belo Sun has developed a series of capacity building programs in order to develop the skills of individuals and increase their chances of employment. There is little data on local health conditions and economic relationships between the communities in the project area and regarding the likely host communities for households being resettled away from the main site. No agreements have been negotiated with local communities. A resettlement framework and preliminary Action Report were developed at early stages of the project planning for the relocation of the communities, however a formal and agreed Resettlement Plan has not yet been completed. It is expected that the resettlement will not occur prior to the beginning of mining activities. In case the resettlement does not occur, the company is to complete a benefit impact analysis with all stakeholders taking into consideration all relevant regulatory statutes. There are still no details and budgets associated for resettlement.

In early 2017 the company finally received the approval from the environmental authority of the Para state, which was the final government approval required by Belo Sun to move forward. Despite the feasibility report, a group of locals has been asking the Brazilian state
of Para to suspend the license for the Volta Grande project. Opponents claim that the Canadian miner is expected to use cyanide to extract gold depositing toxic substances in a dam located just 1.5 km from the Xingu River. As a result of these protests, a Brazilian court once again suspended a construction license for Belo Sun in April 2017 (Jamasmie, 2017). The second suspension represents a significant obstacle for the company. A new requirement was to receive a new revision and the approval of Funai after many protests sparked in the region. The interim suspension is related to the fact that Funai did not accept the indigenous study conducted earlier for the following reasons: inappropriate index format, technical team and primary data. Despite the decision to suspend the construction license, the company claims that it managed to complete indigenous studies on the two closest indigenous lands, located 12 and 16 km away from the Volta Grande Project, which was accepted by SEMAS ("Secretary of State for Environment and Sustainability"). Belo Sun also claims that the law only requires indigenous studies if the lands are located less than 10 km from the project. According to the company's estimation, the nearest indigenous land is located 12 km from the project. According to the company, the next steps of the company in attempt to resolve the issue would include (Jamasmie, 2017):

1. Working with the State of Para to initiate a legal process directly to the President of the Federal Supreme Court in Brasilia to dismiss the injunction;

2. Appealing to Federal Court of Appeals in Brasilia;

3. Working with the Canadian embassy on the issue.
According to the information provided by YsaniKalapalo in the interview, the Juruna, or Yudjá, who live in the Paquiçamba Indigenous Land, drafted their consultation protocol last year, and demand that the document be respected: “Belo Monte has affected us directly and at no time we were consulted. We put it down on paper as is our custom. This is how the Juruna people want to be consulted: under Convention 169”. The convention, officially called as Indigenous and Tribal Peoples Convention, is known as the major international document concerning indigenous peoples that recognizes the aspirations of these peoples to exercise control over their own institutions, ways of life and economic development and to maintain and develop their identities, languages and religions. Until now the expansion plan of Belo Sun has been frozen.
Thus, one can notice that although Belo Sun advanced in its sustainability initiatives following the government and local communities’ requests, it found itself in the complex situation when the lack of a sound CSR plan prepared in advance went along with the changing and complex political scenario changes. The next parts of the document will compare the actions of this company with its competitors.

4.2 Overview of Kinross Gold Corp

4.2.1 Company Overview

Founded in 1993, Kinross Gold Corporation is a gold mining company with mines and projects in USA, Brazil, Chile, Ghana, Mauritania and Russia. Headquartered in Toronto, Kinross employs approximately 9,000 people worldwide. The company is listed in New York Stock Exchange and in the Toronto Stock Exchange. 60% of Kinross gold production comes from the USA and Brazil projects. With respect to CSR, the company focuses on delivering value through operational excellence and responsible mining. From the very inception, the company has claimed it adherence to sustainability values as guiding management principles. In order to comply with these principles, the company adopted Environmental Health and Safety Management System (according to the ISO 14001) and Occupational Health and Safety Assessment Series (OHSAS 18001) standard. In its various reports Kinross highlights its commitment to community engagement practices. In its latest Corporate Sustainability Report, it emphasizes its adherence to GRI framework as well as its commitment to the UN Global Impact principles.
4.2.2 Paracatu project

In 2004 Kinross acquired the Morro do Ouro mine in Brazil. The mine is a large open pit, an active industrial area with a large tailings pond and an earth dam. The mine occupied 5,362 ha and a few years later, the company began its expanding plan that included the construction of a second large tailings pond and a new high capacity processing plant. With the expansion plan, employment opportunities were expected to grow from 3,000 to 6,500 jobs (Report Investigates, 2017). The mine would directly generate considerable wealth through investments, taxes, purchasing goods and services. Company–community relations had always seemed stable until the claim for expansion was made: the company's expansion plan involved constructions on the territories of three quilombo settlements (former slave settlements) - Amaros, Machadinho and Sao Domingos. As a rule, the lands of these communities were supposed to be licensed by the government authorities in order to be defined as historical sites and legally protected. Due to highly bureaucratic procedures, quilombos' lands claim process was still underway, and the communities had not yet secured collective title to their land or any formal title in general. Because of the absence of state protections, Kinross gained control of territorial lands and purchased these territories from some local private vendors. The company entered into negotiations with some community members to access the land they occupied and used, but because quilombola residents lacked title to this land, they were unable to transfer any legal interest to the company. Agreements negotiated between Kinross and quilombola residents governed the latter’s abandonment of their land but the displacement of local quilombo communities proved to be highly controversial.
The same year, the federal agency responsible for quilombola land titling, the Institute for Colonization and Agrarian Reform (INCRA), as well as federal and state authorities raised concerns over the mine impact on quilombo community and natural environment. INCRA published reports regarding territorial claims of the communities of Amaros, Machadinho and São Domingos that insisted on receiving the title, a document regarding the extent of each community’s territory and the devastating impact the mine had already had on them. They also raised serious concerns over the process by which Kinross had acquired land within quilombola territory.

Before expansion plan introduction, the Federal Public Ministry conducted a study which stated that Kinross activity already had affected the local community. There were reports on the loss of the artisanal mining, land degradation, destruction and contamination of water resources. These constituted serious impacts for a community whose very existence is tied to its land, and whose members had for generations made their livelihood through small-scale mining and subsistence agriculture. Communities members complained that they were not consulted about Kinross expansion plan. According to them, Kinross employed intimidation tactics to pressure quilombola residents to leave their land. Although the company managed to acquire construction and operation licenses from the government, several legal challenges remained. In 2014 the Federal Public Ministry made a lawsuit that sought to block granting any additional installation licenses and opened a criminal investigation into allegations by local landowners that Kinross falsified documents in the context of the easement process in relation to the construction of its tailing dam. Kinross also became under a tight public scrutiny and was criticized by a Canadian NGO Above Ground (Report Investigates, 2017) that listed the following societal and environmental issues: conflict and security issues linked to clandestine mining; negative effects of blasting and heavy machinery; pressure on scarce water resources; pollution and public health
concerns related to the use cyanide and arsenic. The allegations were critical to the company as they could suspend ongoing construction processes, mining activity and freeze Kinross future expansion plans; Above Ground also published a statement asking to prohibit public institutions that support the company such as Export Development Canada that provided loans to Kinross standing at $800 million. The NGO published recommendations that public institutions such as Canada Pension Plan which holds an equity interest worth $60 million in Kinross Gold should reconsider its investments into the company. Both environmental and societal issues appeared critical to Kinross as there were high risks of financial losses and suspension of the company's mining activities.

Reacting to the above-mentioned requests, the company started the following initiatives: in its CSR Report, (Kinross Gold Annual, 2015) Kinross states that it adopted Social Investment Strategy aligned with the goals of the municipality sustainable development plan Paracatu 2030. The principal social and community development program, known as "Integrar", spans four primary areas: education, culture, environment, generation of income and jobs. The company initiated an open dialogue with the community through building "Casa Kinross" for walk-in access where small-group meetings and face-to-face communication between company representatives and locals were used to identify what had gone wrong. Kinross also developed a social investment plan in 2016 that was officially approved by the community and key outcomes include: development and startup of a biscuit and pastry factory owned by the community and operated by people from the community; recovery of traditions such as the "caretada", "dança dos balaios" etc.; a program called "IntegrarJovem" a youth leadership program directed at young people from vulnerable groups; (Corporate Responsibility Supplement, 2018) it included "The Integrar" education and culture program, instituted in 17 schools in the city, contributed to improved Basic Education Development Index (IDEB) scores (Report Investigates, 2017).
In general, since the very beginning, Kinross’ investment in CSR has been considerable and involved a range of different activities in various areas. Despite having problems with Brazilian state authorities, local communities and Canadian NGOs, the company already established its strong presence in the site and was able to react quickly to the issues.
5. Discussion

5.1 How could Kinross benefit from its sustainability initiatives?

The information collected in primary data and secondary data indicate that Kinross managed to benefit significantly from its CSR activities in Brazil.

It is clear from the research that Brazil follows a state-led market economy approach in its regulation process that tends to rely more on the state to coordinate CSR activities in the country. At the same time, the Canadian company appeared to be in a very controversial situation and could face losses because of institutional voids in Brazil, such as the absence of proper legislation; possible changes in the status of lands and communities; and a very unstable political scenario.

The company focused on the reduction of potential costs approach and started the CSR initiatives in education, culture, environment, generation of income and jobs. Also, as the company initiated an open dialogue with the community through building a walk-in access where small-group meetings and face-to-face communication between company representatives and locals were used to identify what had gone wrong, Kinross managed to improve its relations with the local communities and, consequently, was able to obtain a “social license” to operate. It also managed to prevent any boycott campaigns from the local communities, which, in due course, decreased the level of scrutiny from government officials and local NGOs.

Apart from the institutional voids stated above, there were some features that defined that Kinross also applied a resource-based view in its CSR activities in the region and managed to get an access to the valuable, rare and inimitable natural resources. This approach was crucial for the company, as mining industry is highly dependent on its surroundings to guarantee the flow if critical resources. In order to do that, the company went beyond compliance strategy focusing on differentiation in its organizational process as the national government failed to
provide sound and clear instructions about the land status. Kinross had a very high resource
dependence due to the industry it operates; it had a high firm power as it is a well-known and
internationally recognized player and, finally, since there was a threat to the company’s
expansion plan due to possible license suspension, the issue became a problem of a high urgency.
As a result, Kinross chose the “Work It Out” approach in resolving conflicts with the non-market
stakeholders.

The complete list of benefits acquired by Kinross from its CSR activities in Brazil is stated below:

- Easier relations between the firm and its stakeholders: since 2017 there have been no
complaints from local communities as well as from public schools located in the region.
- Reduced risk of tensions in relations with local communities: there has been an
increasing number of community members participating in activities organized by
Kinross such as cycling tours, company visits, etc.
- Lower chances of boycott campaigns;
- Lower risk of environmental lawsuit;
- Faster license approval from the government and better financial performance: Kinross
managed to resolve the problem with the license suspension and successfully continued
its expansion plans. As a result, the shares of the company rallied with record the
production from Paracatu mine in Brazil in 2018. Kinross also established a partnership
project with the Paracatu City Hall.
- Lower scrutiny from NGOs.

The conflict that resulted from the absence of a clear policy towards the lands with
special status had a negative impact on Kinross expansion plans. Nevertheless, existing
institutional lapses have allowed Kinross to perpetuate a powerful CSR discourse that sidelines the needs of host communities while simultaneously the company responsible. Kinross’s flexible and adaptable sustainability strategy helped the company resist this situation.

At the same time, some investigations indicate (Revista de Direito, 2018) that despite all policy commitment, it is still clear that business-community relations are not flawless and more attention should be paid to training of the local personnel and the availability of the company’s documents in Portuguese for the local population.

To conclude, the success of the company to maintain the license was mostly explained by its CSR commitment, transparency and proactive approach. The research, however, should consider the fact that the Kinross is a large company so it undergoes a more rigid scrutiny than companies with fewer operations, which can also explain its strategy.

5.2 How could Belo Sun benefit from its sustainability initiatives?

The findings indicate that Belo Sun found itself in a similar situation as Kinross: the absence of proper legislation, possible changes in the status of lands and communities, dealing with lands of “special protected status” and the pressure from the government and NGOs in an unstable political and economic scenario.

Some elements of the determinants of managerial strategies can explain the lack of actions of Belo Sun. The company had both high resource dependence and a high urgency; nevertheless, since it is a private company that is not internationally recognized and has a very limited number of operations abroad, it has a low firm power. Belo Sun chose to wait in that situation, which proves that in general the company adopted a reactive approach waiting for the government’s requests.
Nevertheless, most of its CSR history can also be explained by through the lenses of a resistant adaptation approach, which, nowadays, is not considered very efficient given the rising global concerns about sustainability issues. The reluctance of the firm to go beyond compliance approach was proved by its unwillingness to internalize environmental and social problems: Belo Sun delegated the environmental protection to local authorities. The company followed an outdated approach in its CSR strategy that stated that the only one responsibility of the company is to use its resources in order to engage in the activities designed to increase its profits.

It is important to mention that there have been some aggravating factors in Belo Sun case: the environmental crisis related to Amazon fires made the license obtaining even harder; the newly elected government implemented a number of environmental reforms that have not been finished and clearly stated. Beyond that, existing problems in the region caused by Belo Monte dam have worsened the situation significantly.

Still, certain steps helped Belo Sun improve its image, although did not prevent the suspension of its license:

- The research provided by Belo Monte had a positive impact: The Federal Justice in Brasilia confirmed in 2019 that the construction license granted in 2017 and the environmental license granted in 2014 remain valid.
- The company announced that it managed to receive the basic state licensing for the project. Nevertheless, in order to continue the operation, the company needs to seek one more federal license, which would likely delay the project for years;
- Although the company manages to delay its operations and is legally allowed to stay in the region, Belo Sun shares fell 4.1% on the Toronto stock exchange decreasing early gains (Plumb&Spring, 2019).
A complete comparative analysis is stated below:

**Table 1.**

<table>
<thead>
<tr>
<th>Comparative Analysis</th>
<th>Kinross</th>
<th>Belo Sun</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Similarities:</strong></td>
<td>Absence of proper legislation; Possible changes in the status of lands and communities; Projects and operations put &quot;on hold&quot;; Dealing with lands of &quot;special status&quot;; Developed – emerging economy relations; Pressure from: governments, local and Canadian NGOs, community members; Dealing with both environmental and social issues; Unstable political scenario; License suspension.</td>
<td></td>
</tr>
<tr>
<td><strong>Differences:</strong></td>
<td>Taking initiative facing the lack of actions from the government (proactive approach)</td>
<td>Waiting for the response from the government (reactive approach)</td>
</tr>
<tr>
<td></td>
<td>Conducting research and engaging with local communities while in crisis</td>
<td>Conducting research while in crisis</td>
</tr>
<tr>
<td></td>
<td>Obtaining social license to operate</td>
<td>Waiting for the final decision and focus on state license</td>
</tr>
<tr>
<td></td>
<td>Implementing initiatives according to the CSR Report</td>
<td>Conducting Feasibility Report and Action Report without implementation</td>
</tr>
<tr>
<td></td>
<td>Beyond compliance strategy</td>
<td>Minimum compliance strategy</td>
</tr>
<tr>
<td></td>
<td>Exposure to public scrutiny</td>
<td>Minimum public exposure</td>
</tr>
</tbody>
</table>
5.3 Conclusion

The current case study aimed at identifying potential benefits of sustainability practices applied by foreign-owned mining companies in their process of internationalizing in Brazil. The dissertation was structured and guided by the question “how” the companies could achieve advantages from their CSR activities in an emerging market. In order to answer this question, a number of theories including the Porter Hypothesis with its further development by Ambec and Lanoie’s framework were used.

After analyzing data from different types of sources, the results showed that both companies – Belo Sun and Kinross - tried to implement CSR activities in order to have opportunities to reduce costs in their operations (following Ambec and Lanoie framework). The reason for the choice of this approach was explain by the fact that mining industry is highly regulated and scrutinized by public; both firms are highly dependable on natural resources and, finally, they are located in areas where sensitivity to environmental and social concerns is important.

The research examined a series of criteria to explain how companies managed to improve their internationalization process and the results actually showed that the main benefit both companies expected was almost purely economic and very business-related. The differences in the outcomes of CSR activities found in the companies analyzed clearly show that with the right application of sustainable solutions a company can reduce risks, improve relations with external stakeholders, get an easier access to materials, licenses obtention, capital and reduce the public scrutiny to lower levels, which leads to purely economic benefits such as increased production and rising shares. At the same time, mistakes in the implementation of CSR practices can result in the license suspensions, inability for further internationalization and worsened public image, which, in due course, directly leads to financial losses.
The research provides a deep and insightful eye over the two specific cases in the mining industry in Brazil. As mentioned earlier, mining industry in emerging countries, especially in locations with special protected status, has been less studied recently, so the current work can provide new material in this field of study. The research can also be considered a root for other researchers who may wish to explore a bit more about mining in Brazil and maybe compared with the findings obtained.

### Table 2: The Feasibility Report, Belo Sun, 2013

<table>
<thead>
<tr>
<th>Area</th>
<th>Potential Risk Description</th>
<th>Mitigation and Control Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soil</td>
<td>1. Loss of productive soils by construction of the mine footprint through direct and indirect impacts. Direct impacts are caused by the footprint itself and indirect impacts are from soil erosion, compaction, and alteration of drainage as a result of the footprint. 2. Contamination of area soils by spills of fuels, oils, lubricants and process chemicals.</td>
<td>1. Minimize the footprint of the project and preferentially locate infrastructure in previously chosen areas. Soils will be salvaged where practicable and stored for later rehabilitation. 2. A Soil Management Plan and Erosion Monitoring and Control Program will be developed to support Project execution. 3. Soil contamination will be minimized by ensuring that vehicles are properly maintained, maintenance is carried out at designated locations which are properly designed with liners, berms and cleaning of spills is done in a timely manner.</td>
</tr>
</tbody>
</table>
| Groundwater          | 1. Reduction in the availability of groundwater for local users.  
|                     | 2. Impacts to the quality of groundwater as a result of infiltration from mine wastes (tailings management facility, waste rock facilities) | 1. Water will be intercepted on surface and collected in sedimentation ponds within the area of the project and used for dust suppression, mining and processing.  
|                     | 2. Groundwater that will be intercepted by the mining pits will be pumped to the ponds. |
| Hydrology           | 1. Disruption of the natural flow patterns of surface run-off and tributaries to the Xingu River due to the project footprint along with the collection and use of surface waters for mining and processing resulting impacts to local flora and fauna. | 1. Minimize the footprint of the project. A preliminary site-wide water management plan that maximizes the use of recycled water and does not require water from the Xingu River has been developed. Water will be returned to local tributaries in quantities to maintain minimum in-stream flows.  
|                     | 2. Further refinement of the water balance and subsurface permeability will be required to confirm that proposed pumping sites will be sufficient to support mine operations and maintain minimum stream flows. |
| Water Quality       | 1. Release of poor-quality water from project site to surface waters | 1. Water that comes into contact with surface infrastructure will be intercepted and directed to the sedimentation ponds.  
|                     | 2. Sedimentation ponds will form an integrated part of the site-wide water balance and the collected water will be used in dust suppression and ore processing.  
|                     | 3. Water quality monitoring will be required during operations.  
|                     | 4. Belo Sun has committed to meeting the |
requirements of the International Cyanide Management Code for all aspects of the mine including standards for sourcing, transporting and managing cyanide and cyanide solutions generated during ore processing.

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
</table>
| Air Quality    | 1. Release of airborne pollutants from mining operations, mineral processing and road use resulting in changes to air quality and potential impacts to flora, fauna, and people.  
1. Equipment will be purchased and will be maintained for optimum performance. Line power from the Belo Monte Dam will be used instead of on-site diesel electric power except where impracticable. |
| Biodiversity   | 1. Changes to the landscape and wildlife as a result of the Project physical footprint and interactions with the receiving environment including impacts to new or unique species.  
2. Increased human pressures as a result of the presence of the workforce and influx of job seekers to the area.  
1. The project layout has considered the biodiversity impacts and has sought where possible to locate project components on land areas already altered and affected by human activities.  
2. Monitoring programs will be developed to further understand the biodiversity characteristics. Additional surveys to confirm the taxonomy of and document the range and habitat requirements for the new to science species documented should be prioritized along with additional surveys for the known endangered species and other species of conservation interest in the biodiversity monitoring programs. |
| Socio          | 1. Increases in social issues as a result of the Project and the presence of the workforce and influx of job seekers to the area.  
1. Belo Sun will need to expand the scope of the |


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result of the presence of local communities and/or an influx of workers and job seekers including domestic violence, alcoholism, prostitution, and sexually transmitted infections.

2. Conflicts over land and natural resources as a result of changing populations.

social baseline to fully capture the socio economic situation of the communities adjacent to the project, including their health, and adequately assess the potential impacts on their livelihood. Additionally, Belo Sun should consider the potential cumulative impacts to those communities in the area of influence, particularly in light of the Belo Monte Dam.

2. Belo Sun should develop a Social Management System that outlines the benefits, potential risks and impacts to neighboring communities; identifies all stakeholders; and includes a Stakeholder Engagement Plan by which Belo Sun will engage with the communities in the area of influence and communicate Project-related information. Belo Sun’s capacity building programs, which the Company has begun to implement, should be included under this system.

3. Communities adjacent to the Project have already been in contact with Project staff and are familiar with the original plan to relocate the communities. As such, expectations in the area are high and Belo Sun will need to continue to engage stakeholders as a review of resettlement options progresses. Belo Sun should consider the potential benefits and impacts to local communities as the mine development proceeds prior to resettlement, or if resettlement does not occur, to ensure suitable
| | mitigation and management of impacts occurs to protect these populations and their livelihood. |
6. Resources


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