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An Evaluation of Corporate Social Responsibility Initiatives Implemented by Alcoa, Votorantim, and Vale as a Means to Aid in Poverty Alleviation in the Brazilian Regions These Mining Companies Operate.

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I. The Role of Corporate Social Responsibility In International Development

Even though each year millions of people in developing countries are rising out of poverty to join the emerging middle class, a large portion of the developing world still lives on less than $2 a day. Governments, non-governmental organizations, non-profits, and corporations acknowledge this disparity and aim to address this issue using a variety of methods. Mineral extraction corporations, in particular, have the potential to play a key role in alleviating poverty. These firms are eager to meet the increasing demands of the newly developing global middle class by spreading their operations further around the globe. Their sprawling presence creates new opportunities to serve the world's impoverished through corporate social responsibility initiatives. Today, many of the problems seen in developing countries include inefficient distribution of resources, poverty, poor standards of living, overpopulation, malnutrition, disease, lack of education, gender inequality, and government corruption. Corporate social responsibility initiatives create new avenues to address these issues associated with developing nations.

In the past 20 years, the private sector has been experiencing a paradigm shift from purely focusing on generating profits to also contributing to the social good. Today, civil society pressures corporations to not only earn profits, but also contribute to the betterment of society. Corporate social responsibility initiatives are methods of how companies can provide services to society. They represent short term and long term investments in the local population, government, and economy to secure a prosperous business in the future (Henningfeld 2006). Corporations are driven to participate in corporate social responsibility by a compilation of altruistic and utilitarian motives. Altruistic components refer to a passion to help society. Utilitarian components refer to organization competitiveness and profitability. It is important to note that each factor does not represent a “right” or “wrong” corporate social responsibility method. There is not an innate tension between the two because both are essential in the corporate social responsibility process. While it is important to serve the needs of the community, it is equally important to meet the legitimate needs of a corporation (Austin 2004, 33). Discussed below are examples of methods in which corporations may construct corporate social responsibility initiatives. This information represents hypothetical strategies and possible results, not necessarily strategies proven to be most effective.

Corporate Social Responsibility Strategies

(1) Environmental Sustainability

Environmental sustainability initiatives aim to provide an environment that meets the needs of those today, without compromising the ability for future generations to meet their own needs (United Nations, 1992).

(2) Anti-corruption/ Anti-bribery

A company that participates in corrupt activities negatively impacts its reputation, thus, diminishing shareholder confidence and ultimately decreasing overall business value. To avoid this, a corporation should adopt anti-corruption and anti-bribery corporate social responsibility strategies.

(3) Local Economic Development

Corporations may choose to invest in local economic development through microfinance loans, education, and infrastructure investments.

(4) Education and Training

Corporate social responsibility focused on educational development helps people become more self-sufficient by teaching them skills that will attribute to being more productive members of society. This type of corporate social responsibility strategy, creates valuable human capital.

(5) Health and Wellness

Corporate social responsibility health and wellness strategies may include education about basic hygiene, nutrition, and sanitation. Corporations who open access to basic medicines reduce the risk of many common illnesses that could be avoided or significantly reduced.

(6) Gender Equality and Women Empowerment

Female leadership programs, increase corporate employment of women, provide microfinance loans for female entrepreneurs, and establish strict sexual harassment corporate policies are all possible corporate social responsibility gender equality initiatives (Plugge 2004, 6).

(7) *Employee Volunteerism*

Using employee volunteerism within the local community is another example of a beneficial corporate social responsibility strategy. When employees participate in volunteer work they also gain and perfect skills that will be more effective within corporate operations.

Corporate Social Responsibility Implementation Techniques

Corporations choose from a variety of implementation techniques in order to maximize the positive effects of each corporate social responsibility strategy within communities. Specific techniques are "aimed at mobilizing not only money, but also the company's people, products, and premises to help support and strengthen local communities and non-profit partners" (Nelson

2006, 7). Discussed below are examples of corporate social responsibility implementation techniques that multinational corporations invest in.

(1) Philanthropic Cash Donations

The philanthropic corporate donation is based upon responses to non-profit requests for donations with simple "check-writing," rather than a deeper interaction with charitable organizations. Interactions between corporations and non-profits are usually infrequent, with low engagement, and do not apply strategic planning. The basis for this implementation technique is to promote company image in a way that consumers and stakeholders perceive a compassionate and responsible institution. On the flipside, non-profits receive the necessary funding to maintain service operations (Austin 2004, 4).

(2) Independent Service Provider

Less commonly pursued, corporations may choose to develop an "in-house" philanthropic service department to carry out their corporate social responsibility strategies. This department would act as the management team for the creation and implementation of corporate social responsibility strategies autonomous from non-profits, non-governmental organizations or the government.

(3) Partnerships

Corporate and social sector partnerships resemble a joint-venture relationship in order to achieve common philanthropic goals central to the mission of each institution. Within the partnership each organization shares its resources equally and frequently communicates about specific initiatives. In addition, the managerial complexity required within a partnership typically precipitates a separate department to directly manage and implement the bilateral exchanges

(Austin 2004, 4-5). Multinational corporations frequently participate in cross-sector partnerships because most have a mission to engage with the local community.

Corporate Social Responsibility Assessment Methods

The evaluation of corporate social responsibility initiatives is extremely important for organizational analysis and public awareness. Documenting corporate social responsibility investments may influence corporations to be more accountable and take more ownership over their activities because it will be appraised by corporate and public experts. Reporting assessments may be an important and efficient way to communicate corporate social responsibility investments and achievements with academia, the financial community, government, policy makers, regulators, interest groups, non-governmental organizations, general public, the local community, employees, shareholders, and the industry (Tilt 1994). Jason Saul (2009) argues that quantitative analysis of corporate social responsibility initiatives and reporting is a key component of corporate social responsibility management. In addition, if companies choose to use the internet and their websites to disseminate their social and environmental activities they have the potential to increase their transparency. This is an advantageous mode of communication because of its wide accessibility, low-costs, and ability to easily create in-depth or interactive tools (Line et al, 2002).

Companies should be evaluating the performance of their corporate social responsibility investments to gain further intelligence about how to efficiently improve the use of their corporate resources. However, currently corporations are not required by law to report their corporate social responsibility activities. Those that do report use different methodologies, creating inconsistencies in appraisals techniques. Some models that companies are presently using could be omitting crucial key factors in corporate social responsibility efficiencies, thus, providing incomplete information. A comprehensive corporate social responsibility evaluation model needs to be established in order to effectively assess and improve corporate social responsibility activities.

II. Corporate Social Responsibility in the Mining Industry

Mining company leaders argue that the extraction of non-renewable resources is essential to world development (Jenkins and Yakoyleva 2006, 271). Even though the mining companies claim that they are a part of an important source of global wealth, public opinion has largely focused on the negative externalities of mining activities. In response to this public cynicism, corporate social responsibility represents a valuable impression management tool that all prominent mining corporations utilize (Jenkins and Yakoyleva 2006, 272). Corporate social responsibility is treated as a strategic response to social challenges that inevitably arise from mining extractive operations. Almost all mining companies allocate resources to these initiatives. Thus, it is necessary for corporations in this industry to participate in corporate social responsibility initiatives in some capacity in order to remain current among industry competitors. According to a poll of the ten largest mining companies in the world, the number one reason for participating in corporate social responsibility activities is to contribute positively to brand reputation. The International Council on Mining and Metals is an example of the joint commitment within the mining industry to facilitate corporate social responsibility initiatives. The organization consists of 18 mining and metals companies, as well as 30 national and regional mining associations and global commodity associations. This alliance encourages mining corporations to participate in corporate social responsibility, which neutralizes potential disparities between competitors because a significant amount of the world's most prominent mining companies are members of the International Council on Mining and Metals.

Challenges Faced by Mining Companies

Corporate social responsibility initiatives present many challenges to mining corporations. Scattered and piecemeal negotiations with multiple access points within the community can create significant confusion, disorganization, and lack of reliable information (Szablowski 2006, 53). If companies cannot create an efficient working relationship with community members, a lack of clear communication may arise. Thus, corporate social responsibility resources could be implemented less effectively because companies do not receive accurate information about community needs.

Mining companies find it challenging to fuse corporate social responsibility with enhancing shareholder value in the short term versus the long term**.** The short term is generally a period of no more than one year. In this time, companies often focus on sales, cost reduction, and revenue generation to attract and retain shareholders. Long-term strategies generally consist of activities that positively alter the context in which the firm operates. Corporate social responsibility initiatives, in general, benefit a company in the long term, but usually require setbacks to short term goals. The long term benefits typically do not hold specific monetary values. As a result, corporate executives frequently finds it difficult to justify to stakeholders short term costs for nonspecific long term gains. 80 percent of executives surveyed by McKinsey & Company expressed that "they would cut expenditure on research and development, marketing or corporate social responsibility to ensure that they hit quarterly earnings targets" (Davis 2005, 3). However, the same research article shows that up to "80 percent of a share's market value can be explained only by cash flow expectations beyond the next three years" (Davis 2005, 2). These findings illustrate that executives should consider committing to long term goals, including corporate social responsibility initiatives, because they could actually increase the company's market value.

III. Importance of Corporate Social Responsibility in Brazil

Even though Brazil's economy is ranked as the eighth largest economy in the world (IMF 2010), 50 million people are living on less than US$30 a month. Globally, Brazil is ranked 4th to last in income distribution and 73rd on the Human Development Index (Austin 2004, 215). This wealth disparity highlights the extensive potential corporate social responsibility initiatives could have upon the disadvantaged populations. To understand the remaining needs and opportunities for corporate social responsibility contributions, it is important to understand existing social policies. The Brazilian government heavily promotes corporate social responsibility activities, as well as, implements extensive corporate regulations in order to protect its environmental, social, and economic identities. Currently, the Brazilian government actively implements social service programs for poverty alleviation and social safety protection. The government of President Luiz Inácio Lula da Silva established the Ministério do Desenvolvimento Social e Combate à Fome (Social Development and Fight Against Hunger Ministry or MDS) in 2004. This ministry enacted "Assistencia Social" (Social Assistance), "Bolsa Familia" (Family Bag), "Segurança Alimentar e Hutricional" (Food and Nutrition Security), "Inclusão Produtiva" (Production Inclusion), and "Avaliação e Gestão oa Informação" (Information Management and Evaluation), which all aim at elevating poverty and promoting human development (Desenvolvimento Social, 2010). As a result, Brazil's poverty rate declined by 20 percent during the 1990s (Cardoso

2003). The past decade has shown even more social improvements. The World Bank justifies that living on less than US$1.25 equates to living in poverty. In 2003, 22.9 percent of the Brazilian population was impoverished, but by 2009 only 10 percent of the population was impoverished (Santos 2010). It is important to note that there are still many weaknesses within the social system. 33 percent of the active working population does not qualify for unemployment or social insurance, leaving them at risk against sickness, accidents or maternity leave. At the same time, 20.3 percent of children are still living in poverty (Santos 2010). Overall though, the system as a whole has been effective in reducing poverty.

IV. ALCOA in Juruti, Pará: Bauxite Mine and Shipping Port

The Region

Corporate social responsibility has the potential for contributing greatly to a poor region, such as Juruti. This region holds a prospective 700 million metric tons of bauxite deposits used to produce aluminum, which spurred Alcoa, the multinational mining company, to create a mine in this location. The Juruti region consists of an estimated 40,000 people in over 150 rural communities. The average per capita income for this region is US$23 per month, with about 60 percent of the population living below the poverty line (Bartolini, et al., 2010). The challenges in Juruti combined with the region's mineral richness presents an opportunity for Alcoa's corporate social responsibility initiatives to make a positive difference for the regional population.

Program and Impacts Analysis of Alcoa Corporate Social Responsibility

The table below illustrates the corporate social responsibility programs set up by Alcoa, the investment for each program, the duration of the program, and how the programs affect the community and company.

Table 1. Alcoa corporate social responsibility programs and impacts analysis.

Program	Investment	Time Period	Affects on Community	Affects on Alcoa
CONJUS	Alcoa management time	2007- undefined	Forum for structured negotiations	Reduce public conflicts
Positive Agenda	US$25 million for entire program	2004-2009	Improved quality of life	Adequate infrastructure and content community
Sustainable Juruti Fund (FUNJUS) managed by Brazilian Biodiversity Fund (FUNBIO) FUNJUS- Pilot Program Juruti Sustainability School Partnership with Peabiru Institute	Initial US$1 million US $250,000 Undisclosed amount from FUNJUS	2009- undefined 18 months 2009- undefined	Funding for community managed projects to improve environment and quality of life 21 projects received funding of US$5-25,000 Community leaders gain skills to sustainably build initiatives	Extend impact of corporate social responsibility through direct and indirect methods Community members manage projects
Development Indicators and Monitoring (Partnership with Getulio Vargas Foundation)	Unknown	2007- undefined	Documented measurements of community development initiatives to keep Alcoa and government accountable	Provides quantitative data for analysis, decision-making, and benchmarking
Total	**US $26 million plus Alcoa staff time**			

V. Votorantim in Niquelândia, Goiás: Nickel Mine and Processing Center

The Region

Corporate social responsibility initiatives have the potential to support and expand a developing economy, such as Niquelândia. Nickel was first discovered in the region during the 1930s, which signifies the city's name: Niquelândia. This is one of the largest nickel reserves in the world. Following the discovery of nickel, rapid development expanded across the region. Currently, it is the largest city in the state of Goiás and attracts many regional tourists. In 2007 the city had a population of 38,517 and by 2010 the population rose to 42,380 people (IBGE, 2010) with a per capita income estimated at US$ 6,415 (Sepin, 2011). This rapidly growing region creates opportunities for Votorantim corporate social responsibility initiatives to provide in depth and complex socioeconomic programs to assist in the process.

Votorantim Corporate Social Responsibility Strategy

Votorantim Group is a Brazilian family-controlled industrial conglomerate. The corporate operations include metals, steel, agribusiness, cement, energy, pulp and paper, and finance. Votorantim Metals controls the nickel mine in Niquelândia, Goias. Only in 2006 did, Votorantim Metals document that it directly invested about US$3.4 million to the corporation's social responsibility organization: Votorantim Institute (Votorantim Metals, 2007).

The Votorantim Group founded Votorantim Institute in 2002 with the goal to "create value for society and promote efforts focused on young people." The institute is dedicated to stimulating and guiding corporate social responsibility and sustainability practices of all units of the Group. After extensive research and regional data collection Votorantim Institute ruled that people aged 15-29 represent the focused demographic for the Group's corporate social responsibility initiatives.

Program and Impacts Analysis of Votorantim Corporate Social Responsibility

The table below illustrates the corporate social responsibility donations given by Votorantim Group and the programs set up by Votorantim Institute in the Niquelandîa region, the duration of the program, the investments, and how the programs affected the community and company.

Table 2. Votorantim corporate social responsibility programs and impacts analysis.

Program	Time Period	Investment (US$)	Affects on Community	Affects on Votorantim
Votorantim Group donations to the Institute	2005	18 million		Benefits from the goodwill generated by the national projects
	2006	18.8 million	70 projects across 170 municipalities directly benefiting over 156,000 people	Save management time and potential division restructuring by transferring CSR responsibilities from Metals to the Institute
Programs themes include: Education Vocation Culture Sports	2007	22 million		
	2008	23 million	150 projects across 273 municipalities directly benefiting 405,000 people	
	2009	24.3 million	148 projects across 216 municipalities directly benefiting 522,000 people	
	2010	22.5 million	153 projects across 241 municipalities directly benefiting over 550,000 people	
Votorantim in Niquelandia				
“People of Tomorrow”	2008	Undisclosed	Professionalization curriculum for students 15-29 years old	Investment in human capital for the local region and potentially the company
“Art of the People Project”	Undisclosed	Undisclosed	Support 25 youth in generating income from selling fish and products made from wood or yarn	Goodwill
Internship Program	2010	Undisclosed	Provide internships for 30 youth at the mining cite	Professional training for potential future employees
“Social Action through Music”	Undisclosed	Undisclosed	320 students receive musical scholarships	Goodwill
“Friends of Volleyball”	Undisclosed	Undisclosed	300 youth participants in regional Volleyball league	Goodwill
Total		**US$ 128.6 million**		

VI. Vale in Carajás, Para:
Iron Mine, Railroad, and Smelting Industry

The Region

Corporate social responsibility may positively contribute to the diverse and conflict-plagued Carajás region. Carajás is located in the southwestern region of the state of Para. Prior to the discovery of iron in the late 1960s, the Carajás region was inhabited by a native semi-nomadic tribe, the Guajajara. After exploration, it became evident that the Carajás region held one of the richest iron reserves in the world, close to 66 percent purity (Oren, 1987). The speed of the development in this region has largely been attributed to the military government's "Grande Carajás Program." This initiative has accounted for nearly 10 percent of the urbanization and "mechanization" (alteration of a land's natural growth, deforestation, farming, cattle-ranching, mineral extraction, etc) of Brazilian territory (345,560 square miles) (Denslow 1988). In 2008, Parauapebas' population was 110,000 and the per capita income was US$23,000. However, this estimation does not take into account the indigenous and landless workers movement in the region (Prefeitura Municipal Parauapebas 2011).

Along with growth in the city, in 1994, the Landless Workers' Movement (MST, Movimento dos Trabalhadores Rurais Sem Terra) created a settlement in the Carajás region. This group organizes landless and impoverished farmers in order to capture unused farmland from large scale farmers. The tactics used by this group have caused repeated conflict in the region.

Program and Impact Analysis of Vale Corporate Social Responsibility

The table below illustrates the corporate social responsibility programs supported by Vale, the investment for each program, the duration of the program, and how the programs affect the community and company.

Table 2. Vale corporate social responsibility programs and impacts analysis.

Program	Vale Direct Investment	Time Period	Affects on Community	Affects on Vale
National Indian Foundation (FUNAI)	US$13.6 million	1984-1989	Indigenous community was compensated for potential loss in quality of life due to mine operations	Repeated indigenous protests regarding additional compensation and services that halted operations
Vale Foundation	US$12.1 million	Undefined	72 community projects throughout Brazil including Paragominas housing project and Parauapebas sewage project	Urban centers near operation cites for labors and their families, which attract additional human capital and attribute to content employees
- Knowledge Stations	Undisclosed 18 built by 2012	1999-undefined	Community received economic development resources and social support	A more robust local economy, which may attribute to more stable communities. Improved goodwill
- Brasil Vale Ouro	Undisclosed	1999-undefined	Athletic education and opportunities for the youth. Potentially more athletic success internationally	Goodwill
Zoo and Botanical Park	US$6 million	1985-undefined	Aesthetic benefits, potential future use, potential research findings	Goodwill
Vale Technological Institute (ITV)	US$2 million for Pará scholarships Building investments-undisclosed	2010-undefined	Increased opportunities for technical research and education	Intellectual rights to research and possible discoveries. Benefits from new regional research
Vale Youth in partnership with IA and MPCE	Undisclosed	2007-undefined	~170,000 participants nationwide received emotional and sex education	Goodwill
Education Action in partnership with CEDAC, Department of Education	US$2.75 million	2000-undefined	172,420 participants nationwide received teacher training. Improved municipal education	Goodwill
Vale Literacy in partnership with Alfasol	US$ 1.2 million	2003-undefined	120,000 people nationwide participated in the eight month literacy course	Goodwill
Harpy Eagle Conservation Program	Undisclosed	2009-undefined	Aesthetic value	Goodwill
Total	**US$37.7 million and undisclosed investments**			

VII. Analysis of Corporate Social Responsibility Strategies Alcoa, Votorantim, and Vale

Corporate social responsibility implemented by mining companies operating in Brazil directly impact hundreds of thousands of Brazilian citizens each year. These acts of corporate social responsibility have the potential to positively contribute to the country's socio-economic development by providing additional resources to numerous local communities. The strategies to implement such programs appear to vary between multinational, state-influenced, and national mining companies. The analysis of Alcoa, a large multinational company; Vale, a government influenced company; and Votorantim, a private Brazilian-owned company, illustrate how differing organizational characteristics influence a company's behavior in investing in various corporate social responsibility programs.

Annually, the Brazilian-owned conglomerate, Votorantim, donates US$22.5 million a year to all of its Brazilian corporate social responsibility initiatives; the most of the three companies evaluated (Votorantim Group, 2009). Alcoa, the multinational company, donates about US$4.3 million a year to its corporate social responsibility programs in Juruti (Alcoa 2011). Lastly, the formerly government owned and currently private, but heavily government influenced company, Vale, donates the least amount of funds to corporate social responsibility programs, about US$1.9 million per year throughout the entire country (Vale 2011). It is important to note that these investments are allocated for multiple mines operated by Votorantim and Vale, but the amount invested by Alcoa is only representative for its mine in Juruti. Compared to each company's annual revenue generated in Brazil, Alcoa invests the most in corporate social responsibility, Votorantim the second most, and Vale the least. Of the revenues generated from Alcoa's mine in Juruti, US$975 million in 2009, the company's investment of

US$4.3 million represents 0.44 percent of the Juruti mine's total revenues.[1] Of Votorantim Group's total US$14.25 billion revenue, the entire Group invested US$22.5 million in its corporate social responsibility programs, which is equivalent to 0.16 percent of the company's total revenue.[2] Vale's Carajás mine earned US$38 billion in 2009 and invested about US$1.9 million in corporate social responsibility programs, representing about 0.005 percent of total revenues. [3] All the companies invest less than one percent of the company's total revenues, which may indicate that even though investment in corporate social responsibility is a norm in the mining industry, these investments are not necessarily a significant portion of corporate revenues. This also indicates that if a company increases its corporate social responsibility investments to one or two percent of total revenue, the company could significantly out-spend the other mining companies. Further, Vale's close relations with the national government may indicate the company's relative minimal investments in corporate social responsibility initiatives. Alcoa and Votorantim must strategize, negotiate, and persuade local communities to accept their operations, which may represent an indicator for increased corporate social responsibility programs. In contrast, Vale does not necessarily need to engage and negotiate with the community to conduct operations because the company has the support of the national government.

Differing Target Populations

The corporate social responsibility programs supported by each company possess differing target populations. For instance, Alcoa invests in regional infrastructure near its mine in Juruti that are all focused on regional stimulus. Since Alcoa is a multinational corporation that

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[1] Alcoa= (US$4.3 million/ US$975million) (100)= 0.44 %
[2] Votorantim= (US$22.5 million/ US$ 14.25 billion) (100)= 0.16%
[3] Vale= (US$1.9 million/ US$38 billion) (100)= 0.005%

will primarily operate in Brazil at the Juruti mine site, the company's major dealings will be with the citizens and officials of the local municipality and state community. Therefore, only citizens of this region benefit from Alcoa's corporate social responsibility. In addition, Alcoa implements a unique forum for corporate and community negotiations. The company uses this forum as a method to better gauge how to invest its corporate social responsibility resources. The two other firms, Votorantim and Vale, have not held community forums.

In contrast, Votorantim's corporate social responsibility programs focus on young adults ages 15-29 across the entire nation of Brazil. The existing programs span a wide range of needs from sports, to cultural development, to education, and occupational success. Investment in well-rounded youth development across the country represents an opportunity to additionally increase public relations and media publications in Brazilian society. Similarly with Alcoa, it is in the best interest of Votorantim to gain the support to operate within the regions of its mines. Votorantim pursues corporate social responsibility programs that focus on providing curriculum and training for the youth to achieve this goal, rather than infrastructure investments of Alcoa. Votorantim will most likely continue to operate in Brazil for the rest of its corporate existence because it is a Brazilian-owned corporation. Therefore, this may influence the company to invest more widely across Brazil in order to establish long term competitive advantage through corporate social responsibility activities. In addition, maintaining and improving the company's goodwill and the Brazilian public view of the company will be beneficial in the future because the company will always operate in Brazil.

Comparably with Votorantim, Vale invests in corporate social responsibility programs that enrich the youth across the nation, such as Brasil Vale Ouro, the Vale Technological Institutes, the Vale Youth Program, and Education Action Program. These programs focus on athletic, academic, and educational development. Vale further invests in its Knowledge Stations that are geared towards providing resources and support to the specific local economies and entrepreneurs in industries such as farming, fishing, crafting, and trading. The Knowledge Station resources are available for all citizens, not only the youth population. In addition, Vale has also compensated indigenous groups that have been affected by the company's operations, but, unlike Alcoa, the company has not engaged in community negotiations or fora. Vale, similar to Votorantim, will continue to operate in Brazil for the rest of its corporate life and will most likely maintain relations with the Brazilian government. These characteristics may attribute to Vale's national corporate social responsibility initiatives.

Differing Strategies for Implementation

Alcoa partners with third party organizations to implement its corporate social responsibility initiatives, such as non-governmental organizations and the municipal government. The non-governmental organizations that Aloca partners with are internationally well-known institutions such as, the Getulio Vargas Foundation. As a multinational corporation, Alcoa may prefer to partner with internationally respected non-governmental organizations because these organizations possess an internationally esteemed reputation, which makes it easier for management to justify the partnership to other Alcoa decision-makers and shareholders.

The Votorantim Group created the Votorantim Institute in 2002 in order to directly implement the majority of the corporation's corporate social responsibility programs throughout Brazil. Each division of the Group, including Metals, contributes to the Institute that uses these funds to conduct corporate social responsibility on behalf of the entire Group. This strategy may save time and money for each individual division of Votorantim Group because each group does not need to dedicate additional management time or organizationally structure corporate social responsibility management into divisional operations. In addition, the Votorantim Institute operates with the investments from every division, thus the organization can implement corporate social responsibility programs with significantly more resources compared to if a single division had to separately develop its own programs. Therefore, each division benefits as well because they can take credit for all the Institute's programs in order to improve divisional goodwill. Further, when the Votorantim Institute partners with non-governmental organizations, they are typically small and local organizations such as, Grupo de Afinidade em Juventude do Gife and Fundação Consceinciarte. Many factors may potentially contribute to the Institute's decision to partner with primarily local non-governmental organizations such as availability of non-governmental organizations, the amount of influence over the organizations the Institute desires, the business or personal connections that exist between the members of the Institute and the non-government organizations, or the Institute's decision to support small and local organizations.

Vale directly designs and implements the majority of its corporate social responsibility initiatives such as the Knowledge Stations, Brasil Vale Ouro, and the technical institutes. Vale gains significant support from the municipal governments because of the close-knit relationship between Vale and the Brazilian government. Vale partners with a few small and local non-governmental organizations, similarly as Votorantim, for the Vale Literacy Program, Harpy Eagle Conservation Program, and the Vale Youth Program. Potential factors for Vale's choice in partnering with small and local non-governmental organizations may be similar to those of Votorantim: desired influence and power in the partnership, supporting local organizations and local development, and business or personal affiliations. In addition, Vale appears to contribute to infrastructure development and invest in the development of human capital through programs that provide training and educational services to the participants.

Other Factors Contributing to the Variation in Corporate Social Responsibility Initiatives

The development stage of a mine may influence the style of corporate social responsibility activities a company implements. For instance, ten years ago a mine in Juruti did not exist (Alcoa, 2011); only in 2000 did Alcoa begin its surveying (Alcoa 2011). This was the local community's first contact with international business. Therefore, perhaps Alcoa was motivated to implement its corporate social responsibility programs as a way to build relationships with the local community, in order to gain access to the land and, in a sense, to gain "permission" from the local residents to operate. In addition, the local Juruti community has been developing rapidly, which lends itself to certain types of corporate social responsibility programs that support and enhance this development. Thus, Alcoa invested in the Sustainable Juruti Fund in order to support community projects that aim to improve the local environment and quality of life (Alcoa 2011).

In contrast, miners have flocked to Niquelandîa since the late 1930s and at this point in the town developed rapidly at that time. By 1957, Companhia Níquel Tocantins had already surveyed and began construction on the nickel mine currently operating in Niquelandîa. At that time, Votorantim acquired Companhia Níquel Tocantins, finished constructing the nickel mine, and began operations. Over the past 50 years, the Niquelandîa municipality has rapidly developed into a diverse and fully functioning city with a complex road system, an extensive school system, a healthcare system, an involved and relatively uncorrupt municipal government, and a police department. The region has nearly all of its basic needs met, so Votorantim has invested in secondary and tertiary community needs, such as the volleyball league, the media project in Niquelandîa, and the internship program.

The Carajás iron mine was first discovered by US Steel in the 1960s. In 1970, the Brazilian government engaged in a joint venture with US Steel, in which the government owned 51 percent and US Steel owned 49 percent. Only indigenous groups existed in this region. Since the indigenous groups in this area were semi-nomadic and moved away from the mine location once pressured, the Brazilian government quickly allocated the appropriate licenses to the project and construction began with insignificant regional resistance (Martins 2010). By 1977, US Steel sold its ownership to the government, making Vale the sole operator of the mine. In the 1980s, the government-owned company constructed numerous municipalities neighboring the mine in order to attract and maintain a sufficient labor force. Presently, these neighboring municipalities have developed into complex socioeconomic systems that center around the mining industry. Therefore, Vale does not need to focus its corporate social responsibility investments primarily on community acceptance, because of its in-depth presence; rather the company focuses on investing in human capital and diversifying the regional economies. This is evident in the company's investments in the Knowledge Stations, educational programs, and sports programs.

Differences in Community Conflicts

The majority of people and organizations that protested against Alcoa and Vale in order to halted operations did not receive corporate social responsibility investments from these companies. These groups did not have an established relationship and avenues to peacefully negotiate with its corresponding company. The communities that are receiving corporate social responsibility programs from Alcoa or Vale have not protested. Therefore, corporate social responsibility investments may deter local populations from using protest strategies that impede mining operations. Factors that may contribute to this occurrence include corporate social responsibility reducing community angst, communities not willing to risk losing the corporate social responsibility resources, communities developing other avenues to negotiate with the companies, or other socio-economic dynamics.

Degree of Monitoring and Evaluation Implemented by Alcoa, Vale, and Votorantim

In 2006, Alcoa contracted a third-party non-governmental organization, the Getulio Vargas Foundation, to monitor a wide range of comprehensive environmental, social, and economic indicators. The organization compiled its information into a book that reports the non-governmental organization’s findings. The report evaluates the following factors: eight environmental factors, eleven social factors, and ten environmental factors.

The Getulio Vargas Foundation found it difficult to access and monitor some community factors. Therefore, the organization devoted additional effort to gather these indicators. According to these indicators the Juruti region has benefited overall from Alcoa’s investments and has seen numerous social and economic improvements. Although the environment has been disturbed, this monitoring system has found that the water pollution and air pollution has been kept to a minimum where it will not hurt the local population. Even with Getulio Vargas Foundation’s monitoring information, it appears that evaluation, analysis, and responses by Alcoa corporate social responsibility management has not occurred. The complete value of this information will not be realized until the company implements strategic responses in order to best allocate corporate social responsibility resources.

Vale states that its corporate social responsibility officials evaluate corporate social responsibility programs on a case-by-case basis. The company asserts that managers refer to the initially-set project goals and examine whether or not those objectives are met. Vale does not use a standardized monitoring and evaluation model, which may cause a wide disparity between the quality and effectiveness of the information gathered. In addition, it does not appear that Vale consistently evaluates its corporate social responsibility programs. The irregularity of evaluations may make it difficult to estimate and pinpoint benefits and inefficiencies within the corporate social responsibility programs.

Votorantim Institute appears to implement an evaluation strategy on a case-by-case basis as well. Most frequently the Institute contracts the evaluation to a non-governmental organization. For example, in 2003 IDECA, an educational development non-governmental organization, conducted evaluations of six school districts that the Votorantim Institute supports with corporate social responsibility investments. The organization included recommendations for the Institute to optimize and better integrate its mission and objectives into the educational programs (IDECA 2011). It is unclear if Votorantim Institute acted upon the gathered information and recommendations.

VIII. Assessment and Recommendations

The corporate social responsibility strategies implemented by Alcoa, Votorantim, and Vale vary widely. Presently, it is unclear which corporate social responsibility programs provide the most benefit to the communities and corporations because of the lack of monitoring and assessment implemented by Votorantim and Vale, and the lack of thorough evaluations by Alcoa, Votorantim and Vale. Even though Alcoa contracted a non-governmental organization to monitor a variety of socio-economic and environmental indicators, the organization does not provide Alcoa with recommendations for improvement and it does not appear that Alcoa has revisited its corporate social responsibility strategies subject to the recent publication of the monitored indicators. Despite limited monitoring and evaluation information, this research highlighted that Alcoa, Votorantim and Vale generally possess three main goals for their corporate social responsibility initiatives: developing positive relationships with the local community to reduce conflicts and ensure the continuation of mining operations, provide strategic community development, and establish goodwill.

Considerations for Corporate Social Responsibility Development and Implementation

Stages of Development in Specific Mine Locations

This research indicates that mining corporations operating in Brazil must take into account the mine, the local community, and the local economy's stages of development when creating and operating corporate social responsibility initiatives. The characteristics of specific mine locations hold valuable information for corporate social responsibility development. Since mining companies operate in a variety of locations and affect a variety of different populations, location-specific needs may require a variety of different corporate social responsibility programs. These indicators provide important information regarding the type, style, and focus of corporate social responsibility programs that will be most valuable and effective in specific communities. Therefore, the most effective corporate social responsibility programs will not be identical programs at different mine locations nationally or internationally due to the variability in community characteristics. For example, Votorantim operates numerous mines in Brazil. However, its regional corporate social responsibility programs vary tremendously. In Niquelandîa, a relatively well-developed city, Votorantim sponsors a regional Volleyball league and an internship program for young adults. In contrast, Alcoa's Juruti mine is located in a relatively isolated and underdeveloped region. Therefore, Alcoa invests in corporate social responsibility focused on improving regional infrastructure. Further, Vale must take into account the company's affects on indigenous populations, so at the Carajás location the company focuses a significant amount of corporate social responsibility resources in maintaining a positive relationship with the various indigenous groups in the region. In contrast, Alcoa does not affect any indigenous populations, so the need for an indigenous program does not exist.

Organizational Structure of Corporate Social Responsibility Management

Alcoa, Votorantim, and Vale use differing organizational structures to implement their corporate social responsibility initiatives. Each corporate social responsibility structure lends itself to the strengths of each company. For example, Votorantim Metals is a division a part of a national conglomerate. Since Votorantim has multiple divisions that are all advised to invest in corporate social responsibility initiatives, Votorantim saw it in its best interest to construct the Votorantim Institute. The mission, strategies, and monitoring of Votorantim's corporate social responsibility initiatives are far more likely to remain consistent with the upper-management's corporate policies when implemented by a single institution compared to multiple divisions.

In addition, a company may consider reviewing its weaknesses in corporate social responsibility initiatives in order to improve these areas by potentially partnering with third-party organizations. For instance, Alcoa partners with the Getulio Vargas Foundation to monitor the region's development indicators and the Peabiru Institute to design and implement sustainability education. Alcoa does not possess the resources or know-how to implement these programs, so the company partners with organizations that do have the resources and experience.

Focus on Accurate and Specific Corporate Social Responsibility Publications

Throughout this research, it became evident that Alcoa, Vale, and Votorantim do not comprehensively publish information regarding the investments of each corporate social responsibility program. These companies may be forgoing opportunities to promote goodwill by not publishing quantitative data concerning their corporate social responsibility investments. Publishing information regarding the success and positive effects of a company's corporate social responsibility programs may contribute to its goodwill, which is an important benefit for companies engaging in corporate social responsibility initiatives. On the other hand, if the programs are not succeeding, publishing all the corporate social responsibility program information still illustrates transparency to stakeholders and the company gains valuable information regarding its corporate social responsibility performance.

Negotiating with Organizations and Representative Groups

The Alcoa and Vale cases illustrate the importance of understanding the characteristics of citizens that are represented by organizations and community groups during negotiations. In response to negotiations with community groups, a company aims to provide the appropriate corporate social responsibility programs desired by the citizens and in congruence with company vision. However, misrepresentation of the community in negotiations often results in ineffective corporate social responsibility programs. For example, Vale negotiated with FUNAI, an indigenous non-governmental organization, in order to provide the indigenous groups affected by the Carajás mine with fair compensation and corporate social responsibility resources as a method to compensate for the harmful effects incurred by the indigenous groups. However, FUNAI did not accurately represent all of the indigenous groups that were harmed and subsequent inaccurately negotiated indigenous expectations with Vale. Therefore, the indigenous have not been pleased with the results of the negotiations because Vale did not provide the appropriate corporate social responsibility investments. This led to those groups protesting and halting Vale's operations for two days. In addition, Alcoa facilitates community fora through its CONJUS program. However, community members of Juruti Velho were not represented in the initial community fora, which may have contributed to 150 people from this group to protest in 2009.

Regional Conflicts and Protest

This research highlighted the frequency and intensity of protests and conflicts between the local communities and mining corporations. It became evident that corporate social responsibility may be used to reduce the frequency and intensity of protests and conflicts by local communities. Corporate social responsibility programs may open venues for community groups to negotiate with the company. These instances may indicate the scope and success of corporate social responsibility programs; however this indicator is significantly incomplete in evaluating the full impacts of corporate social responsibility programs. Most of the groups involved in the documented protests did not receive corporate social responsibility investments. This information illustrates that those groups not included in corporate social responsibility investments may be more inclined to protests and engage in conflicts. A lack of corporate social responsibility programs may influence groups to use protests as a means to open negotiations. However, the *causation* of whether corporations do not want to support groups that engage in protest and conflicts, or that groups create conflict due to a lack of corporate social responsibility investment is unclear. Therefore, conflicts may provide insight into each mining company's corporate social responsibility strategies and programs; however it is not an adequate evaluation tool.

Implementation of Evaluations

Value of Evaluations

The effectiveness, efficiency, and success of Alcoa, Votorantim, and Vale's corporate social responsibility initiatives remain unclear due to a lack of comprehensive monitoring and evaluations. Drawing from the research, it became clear that these mining corporations strategized their corporate social responsibility programs in order to develop positive relationships with the local community, reduce conflicts to ensure the continuation of mining operations, provide strategic community development, and establish corporate goodwill. Without proper monitoring and evaluation of these strategic corporate social responsibility goals, firms do not possess the metrics to gauge success. In addition, firms do not possess the information to reallocate or re-think their investments to improve corporate social responsibility initiatives. Without proper evaluations that critically analyze the impacts of current corporate social responsibility resources, the most effective and efficient programs may not receive appropriate funding. When a company invests and reinvests in programs that it has not monitored and evaluated, the company may be investing in programs that do not produce significant results for the positive development of a community, and may not enhance goodwill. By evaluating the information gained from monitoring activities a corporation will most likely save resources and continue to improve goodwill and community development by investing in the most effective programs that benefit the most people and organizations. However, an all-encompassing method that accurately measures and evaluates corporate social responsibility programs has not been established.

Challenges of Monitoring and Evaluating Corporate Social Responsibility Programs

Monitoring and evaluating corporate social responsibility programs may present challenges that are detrimental to their implementation. From the Alcoa case, the Getulio Vargas Foundation stated that it was difficult for the organization to access various indicators. The unavailability of indicator metrics may require organizations to invest in conducting primary research or may influence the organization to overlook the inaccessible information. The Getulio Vargas Foundation chose to independently conduct primary research to quantify multiple indicators in its report. This collection required additional resources and manpower that other organizations or companies may not be able to access. The cost of administering the monitoring and evaluations internally or through contract with a third party organization may be too costly for some companies. However, if monitoring and evaluating corporate social responsibility programs becomes an industry-wide practice, just as investment in corporate social responsibility, then the costs become relatively equal across the industry, leveling the playing field. Currently, according to disclosed financial information, neither Alcoa, nor Vorotantim, nor Vale allocates corporate social responsibility funds to evaluation. Since these companies allocate less than one percent of revenue to corporate social responsibility initiatives, each company should consider allocating additional funds to monitor and evaluate its corporate social responsibility programs. This may represent a money-saving investment in the long run.

Monitoring and Evaluation Models

Although, Alcoa, Votorantim, and Vale each monitor their corporate social responsibility programs to some extent, it is unclear if the companies strategically respond to information gained from monitoring their programs in order to improve their corporate social responsibility investments. With a complete and thorough monitoring and evaluation model, corporations are able to improve performance of corporate social responsibility investments, report findings to improve goodwill and illustrate transparency to stakeholders, and use the findings to assist and improve partner organizations. To some extent, Alcoa, Votorantim, and Vale monitor and evaluate their input investments; however, a standard method that best evaluates corporate social responsibility initiatives and investments does not currently exist.

In developing and implementing a policy, program or project, seven decision functions are considered. According to Harold Lasswell, these seven decision functions are: intelligence, promotion, prescription, invocation, application, termination, and appraisal (1971). The appraisal function represents an essential factor for policy, program and project success because this requires decision makers to assess the progress and promote necessary changes. The appraisal function criteria include dependability and rationality, comprehensiveness and selectivity, independence, continuity, total quality and cost-effectiveness (Lasswell 1971). Therefore, we know how to enhance the appraisal function.

Since corporations may be motivated to overstate corporate social responsibility investments and understate challenges or inefficiencies, third party monitoring and evaluating will most likely yield more accurate results. Currently and most often, non-governmental organizations fill the role of the third party evaluator. Further, this need presents an opportunity for the development of corporate social responsibility specialty firms that offer dependable, accurate, and effective monitoring and appraisals of corporate social responsibility programs.

Corporate social responsibility appraisers must agree upon specific indicators to include in the evaluation. Typically, companies will consider multiple social, economic, and environmental factors to evaluate. These indicators will also be influenced by a company's corporate social responsibility goals. The initial step in the monitoring and evaluation process will include collecting baseline data to determine the initial state of the local community, economy and environment. This information will be used as a benchmark for subsequent data collection and analysis. In addition, companies should publish the results from the monitoring and evaluations. This is typically seen as annual corporate social responsibility reports. Publishing negative evaluations of corporate social responsibility programs may contribute to increased investor and stakeholder trust and the potential negative results signify useful information to aid in the improvement of future corporate social responsibility programs. The data acquired from monitoring should be used for corporate social responsibility evaluation in order to improve and reassess investment decisions. Five factors may be considered during the evaluation process (Alperson 1996): 1) make overall programs more strategic, 2) track a long-term program or project, 3) improve program quality and community awareness of the company, 4) maintain accountability from grantees by requiring evaluation within a grant, and 5) reevaluate corporate vision according to changing community needs.

Conclusion

In general, the corporate social responsibility programs implemented by Alcoa, Votorantim, and Vale illustrate positive trends of regional development. However, the extent of development varies among cases. Quantitative data that illustrate the outcomes of corporate social responsibility programs remain extremely rare. This makes it difficult to indicate whether corporations are significantly contributing to poverty elevation and development in Brazil. These cases demonstrate that if corporate social responsibility programs and strategies are developed in accordance with the factors discussed and combined with an appropriate monitoring and evaluation system, corporate social responsibility initiatives will enhance firms and local communities.

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