

The Socio-Economic Impact of Mining Companies to Their Host Communities in Northern Part of Surigao Del Sur Province

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Abstract

The operation of mining companies in the province has generated various impacts on their host and surrounding communities. No wonder, mining companies consistently provide inputs and support to sustain their services for the welfare of the community. This paper reports the findings of a study undertaken to assess the socio-economic impact of mining companies to their host communities in the northern part of Surigao Del Sur Province. This paper also presents the perceptions of respondents based on their socio-economic background and identified possible ways on how to deal with its impacts. Purposive sampling was employed in the selection of the participants. Data were collected through the researcher-made questionnaire, which solicits the socio-economic impacts and how these impacts are perceived by the host community. Findings revealed that mining companies have brought positive impacts on the socio-economic status of the people. The resources were wisely shared to the community through offering various activities and programs. However, even if the companies have been helpful to their community, yet, they have not done much to please the other aspects. The increasing records on low-paid employment position stressed public and health services, occurring prevalent diseases and over population are few of the evident that require much attention from the companies. Hence, conscious effort with the assistance of the government and other concern agencies should be practiced to mitigate the increasing undesirable impacts.

Keywords: Socio-economic impact; Host communities; Perceptions on impact; Alternative practices.



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1. Introduction

Mining companies have contributed towards the improvement of social development by implementing socially and environmentally responsible practices through all phases of the mine-life cycle (Northgate Minerals Corps, 2010). It can particularly make a difference in the condition of people through the industry's support to the promotion of education of children and to the improvement of public access to social infrastructures and services. However, it is also important to nurture the integrity and quality of people who will manage the opportunities brought about by mining for the pursuit of sustainable development (Balanay and Yorobe, 2014). Everingham (2007) stated that considerable attention has been devoted to reducing environmental damage associated with mining, yet, less is known about how to manage the socio-economic impact of mining.

Surigao Del Sur is located along the north eastern coast of Mindanao facing the Philippine Sea representing 27.75 percent of the total land area of Caraga Administrative Region of Mindanao, Philippines (Census of Population, 2015). It endows with metallic minerals such as copper, gold, chromite, cobalt, nickel and lead zinc, as well as non-metallic. At present, there are only two mining industries operating in a large scale namely, Carrascal Nickel Corporation (CNC) situated in Barangay Bon-ot and Marcventure Mining and Development Corporation (MMDC) in Barangay Panikian, Carrascal, Surigao Del Sur.

Carrascal Nickel Corporation (CNC) is a company focused on operating, acquiring, exploring, and developing nickel properties in the Philippines. The company is known to its clients from China where it exports low to high grade nickel (Cnc Mining Corp, 2013). The company's current mining operations are all conducted above ground using bench mining techniques (Retrieved from: www.cncnickel.com, 2011). The use of the world's best practices on mining and social environmental management and sustainability of the host and surrounding communities are the main goals of CNC. Conversely, the Marcventures Mining and Development Corporation (MMDC) has almost the same mission and vision with that of CNC mining company. MMDC is also engaged in nickel mining operations in the municipalities of Cantilan, Carrascal, and Madrid in the province of Surigao del Sur covering an area of 4,799 hectares. Selling nickel ore through direct shipment to China, Japan, and other Asian countries is its major marketing effort. The company remains committed to enhancing its practices and contributing to the socio-economic growth of its host communities. MMDC has long been pursuing the safety and welfare of the people while endeavoring to reduce its environmental footprint (Accessed at: https://marcventuresholdings.com/corporate_profile).

The mission and visions of the operating mining companies in the areas contradict to the results of the study of Cuartero (2014). According to her, social sector is not contented with the implemented activities of mining companies based on its social development and management program (SDMP) for reasons that very little in the way of obvious benefits have been translated into the local communities. Cawood (2005); Mtegha (2013) added that the social issues are closest to the hearts and minds of local communities because, with the right administrative structures, tangible benefits could be accessed by them within the immediate future.

Social issues are a top priority owing to inherent poverty, particularly in rural communities that are more likely to experience disruption of their life styles through mining activities development, and in locations where inhabitants observe mining operations as an opportunity for alleviating their status. Based on the report of [Jumalon \(2014\)](#), mining companies continue their contribution to economic growth in northeastern Mindanao revenues with 3 billion pesos and of total increase of 19,310 jobs or 17% employment rate. However, cost and profits are not fairly distributed among agencies. This can be observed in private enterprises that make more profits than agricultural communities while local economies are seriously disturbed by various types of pollutions brought by mining activities to the environment. Agricultural sectors though contribute to the economic progress through exports yet their mechanisms are deprived by machineries in mining related activities. In fact, [Cuartero \(2014\)](#) and [Noronha \(2001\)](#) stipulated that mining industries have provided poor social and environmental contributions to their surrounding community. The social and environmental impacts are becoming more and more pervasive in the locality. [Ivanova \(2007\)](#) indicated that there are a number of reasons why economic and social impact of mining should be assessed carefully through the life cycle of mining operations. A better understanding of these impacts can help avoid or mitigate the worst effects, as well as the negative reputation of mining companies to their host communities. CNC and MMDC as the leading mining companies in the area have committed to provide the host communities with sustainable social and economic development by integrating the best practices they can offer ([Maier, 2014](#)). However, the socio-economic status of their host communities has not been quantified that have drawn attention and highlighted some negative reasons associated to their operations.

Thus, the prevailing situation prompted the researcher to determine the socio-economic impact of mining industries in the area to their host and neighboring communities. The study also aimed to fill in the gap between the arising issues on the socio-economic status of the host communities and the mining companies' formulated interventions that can address the concerns. The findings of the study could be used by the government, private institutions, and mining companies to redress socio-economic impact relating to adequate social services. It further provides new existing knowledge and data on the socio-economic status of host communities in the northern area of Surigao Del Sur province.

2. Objectives

The study aimed to determine the socio-economic impact of mining industries to their host and neighboring communities in the northern part of Surigao Del Sur province. Specifically, the study obtained the following objectives:

1. Assessment of the socio-economic impact of mining companies on their host community;
2. Determination of how these socio-economic impacts of mining companies are perceived by the host communities;
3. Identification of possible alternative practices for the improvement of the socio-economic status of the host communities.

3. Review of Related Studies and Literatures

The Philippines boasts some of the world's vastest precious metals reserves, valued at around \$840bn at 2010 prices. In 2013, the Philippines was tied with Indonesia as the largest nickel producer in the world, producing some 440,000 tons. The country's vast and largely untapped mining potential continues to draw strong interest from foreign and domestic actors despite decreasing investment in the short term. Although overall output and revenue are being sustained by existing operations, new investment continues to lag, as mining companies wait out the finalization of new mining regulations. The question is, "Will the regulatory framework catch up with the demand?" ([Oxford Business Group, 2015](#)).

The notion of sustainable development has given rise to various visions of the future of the world, possible trade-offs and of externalities ([Hilson, 2001](#)). Although sustainable development requires the integration of the economic, environmental and social dimensions of development, the economic considerations often override the environmental and social considerations in most developing countries. According to [Obiri \(2016\)](#), many of the social elements of sustainable development can be cast in the light of socio-economic considerations as link between the economic, environmental, and social dimensions. The ultimate goal should be on identifying the ways to maximize the positive effects of mining on the lives of people while minimizing the negative effects. These effects should reflect the impact of mining on the present generations as well as future generations of miners and their families. Based on the paper of [Morris and Baartjes \(2010\)](#), it is widely accepted that developmental activities like mining are expected to contribute to both the social and economic development of the localities in which they are situated, either directly or indirectly. Yet socio-economic impact is a concept that has many different connotations for development practitioners and academics; it is an evolving concept that defies an agreed upon definition. In a general sense, the phrase 'socio-economic impact' represents both the negative and positive developmental influences that mining activities have on the social and economic well-being of communities.

Understanding the impact of mining on local communities before, during, and after the life of a mine is a vital part of responsible mining. This includes dealing not only with national governments, but understanding the needs and aspirations of indigenous communities to ensure positive impacts ([World Gold Council, 2018](#)). According to [Holden \(2007\)](#), mining companies are expected to provide employment opportunities to communities in their vicinity directly during the construction and operation phases of their processes, and indirectly through the demand

of goods and services from the miners. This process creates a cycle of revenue generation and circulates currency, which is expected to enhance the quality of life of those living in mining localities.

Responsible mining companies are mindful of their impact on the local environment, but some are also using their expertise in assisting communities in remote locations. While responsible mining creates jobs and economic opportunities, many companies also choose to invest in social infrastructure outside of their immediate sphere of operations. Often, this takes the form of partnerships with national or regional governments or community organizations so that investments are targeted to meet the needs of local populations (World Gold Council, 2018).

The statements agreed with the report of Colina (2018) that identified mining operations in the Municipality of Carrascal in Surigao Del Sur as one of the sources of contamination, and claimed other mining operations in the nearby province of Surigao del Norte, affect the marine habitat in the province. Gregorio E. de la Rosa Jr., conservation science and research manager at the Haribon Foundation, underscored that the problem involving the runoff wastes in the area could have been prevented if the requirement of setting up settling ponds to trap the sediments from mining sites has been strictly enforced and strengthened. He emphasized the need to strictly enforce the Philippine Mining Act of 1995, National Integrated Protected Areas System, and Wildlife Resources Conservation and Protect Act, as well as local legislations like the land use plan to mitigate the effects brought about by mining operations.

From the review of Mancini and Sala (2018), the impacts of mining relates mainly to three areas: land use and territorial aspects, environmental impacts affecting health, and human rights. Demography-related impacts emerged, especially in terms of migration and gender imbalance in the mining communities. In the study of Darkoh (2015) on the socio-economic impact of mining, it was revealed that the positive impacts are seen in terms of employment generation; development of infrastructure for other economic and social activities to take place; improvement in revenue generation for the country where they take place; and technological advancement amongst others. The social and economic effects that are commonly critical are severe human health problems due to pollution, displacement of local people, alteration of socio-cultural life of the local community resulting from high influx of people into the mining area for employment reasons, and land-use changes. The physical environment suffers severely in terms of the destruction of vegetation, soil and water pollution, and displacement of wildlife from their natural habitat. The more recent environmental issues associated with mining include use of toxic chemicals, disposal of hazardous waste, accidents, and release of ozone-depleting substances and greenhouse gases.

Thus, mining companies have a tedious challenge to lead by example and show their commitment to work with the communities they operate in as partners and not as exploiters of capital. Furthermore, communities need to be assured that their voices directly influence the decisions made at the engagement forums. This strategic approach will potentially build trust and strengthen relationships amongst stakeholders. Other benefits of such dialogue activities may include reduced conflicts between the entity and communities; a shared ownership of decisions leading to enhanced accountability and better services; and lastly, increased transparency and access of information by communities from the mining industry at large Ngobese (2015).

4. Materials and Methods

4.1. Description of the Study Area

The study was conducted in the northern part of Surigao Del Sur province, particularly in the municipality of Carrascal, a fourth class municipality with an increasing income sourced from mining activities. The place has a population of 16, 529 people which is politically subdivided into 14 barangays (National Statistics Office (NSCB), 2007). Before the mining started its operation, Carrascal had an income of 1.3 million pesos from its main source of livelihood that is agriculture. In 2012, the LGU's income hit 185 million pesos from local tourism. When Carrascal municipal officials decided to let mining companies in, local ordinances were created, as well as Memoranda of Understanding with the mining firms, with the goal of equitable sharing of profits to give maximum benefits to the town and its people. The mining companies operating in the area include Carrascal Nickel Corporations (CNC) and Marcventures Mining and Development Corporation (MMDC) (Lopez, 2013).

4.2. Participants and Procedure

The participants of the study were selected residents or household heads in the northern part of Surigao Del Sur where mining companies are operating. A household in this sense is defined as one person living on his/her own or those living together, sharing eating arrangements and working and contributing to the household income. The household head (respondent) is the individual or person who takes responsibility of the entire household collective matters on behalf of the other members, including him/herself, and can be a male or a female (Asare, 1999). The choice of the respondents was done through purposive non-probability methods. Respondents were chosen based on the criteria that they have at least resided the mining areas for 15 years and more; at least 25 and above years of age; and non-employee of mining companies.

A researcher-made questionnaire as the main tool was administered to 150 household heads to collect the socio-economic data. The data collected include the profile of the respondents and their perceptions on the socio-economic impact of mining companies in the host community. In addition to the questionnaires, the holding of formal and informal discussions with key informants such as the elders who have stayed in the area for a long time, was employed. The collected data were all recorded and analyzed using frequency count, percentage distribution, mean, and analysis of variance.

5. Results and Discussion

Table 1 (please see Appendix –I) presents the profile of the respondents as to age, sex, educational background and occupation. It can be gleaned in the table that most of the respondents are male with ages ranging from 35-44, having graduated in high school level. Most of the respondents surveyed were employed and managing their own business establishments while 20% of them were unemployed.

Table 2 (please see Appendix I) presents the socio-economic impact of mining companies to their host and neighboring communities. It is reflected in **table 2** that socio-economic impact of mining companies on their host and neighboring communities is moderately observed with the mean total value of 3.15, qualitatively interpreted as moderate impact. Most of the socio-economic impact descriptions that receive high impact responses are in accordance with the mining company's Social Development Management Programs (SDMP). These include, *imposing of all applicable standards, laws, regulations, and requirements; and achieving industry's goal of zero incidents, injuries, and illnesses* (\underline{M} = 3.29) which can be categorized under social aspects, economic, and health and safety indicators. *Investing projects in education especially to Indigenous Peoples (IPs) and maintaining the wellbeing of the employees or communities* are both under employment and education category, which yield the second highest mean of \underline{M} = 3.28, also interpreted as high impacts. This means that the mining companies have maintained their quality service to the host and neighboring communities by maintaining their practices on responsible mining. Most of the indicators with high impact responses are focused on how mining companies show transparency and on time implementation of its SDMP. The assurance of securing the health and needs of the community is one of the priorities of the companies; hence, the community's expectations are directly addressed and communicated through the provisions of employment with safe working areas. The results are supported by the study of **Cuartero (2014)** that the extent of implementation of SDMP of the mining companies is high, which can be attributed to the mining companies' goal of developing a better relation with the community. The projects and activities included in the companies' SDMP are the top priority of mining industries which may involve a concealed program to win the interest of the community. **Wise and Shtylla (2007)**, mentioned in their study that it is worth noting that the construction of infrastructures by mining industries in the communities has direct positive impact on the communities. It is therefore evident that being audited and certified by TÜV Rheinland Philippines, the mining companies have improved in their socio-economic service performance that gains positive and very satisfactory impact to the host community (Retrieved from: <https://www.certipedia.com>). **Sayre (2018)** identified those mining companies that are certified ISO 9001: 2008 and ISO 14001: 2004 have competitive advantages among other companies. Benefits that mining companies can offer to the host communities include effective management practices to achieve and improve environmental performance and progressive improvement to reap economic benefits.

On the other hand, most of the identified socio-economic indicators of CNC mining company obtained moderate impact. The indicators in *supporting the community in establishing small and medium-sized enterprises (SMEs) and focus on recruiting more employees by prioritizing the local knowledge and socio-economic benefits of the host community* gave same responses with the mean total of 3.06. The results point out to employability and livelihood status of the host communities where most of them contentedly received the positive impacts of the mining companies' implemented activities. The host community generally perceived that the presence of mining activities in their place has increased job opportunities in many aspects such as the establishment of small and big enterprises among host communities and prioritizing local applicants for job listing. Instances where local residents are indirectly engaged in mining include being involved in secondary services like selling basic commodities and supplies to mining employees, and offering accommodation and relaxation activities. **Petkova (2009)** and **Luyet (2012)**, indicated that individuals may be disillusioned when the new mining jobs are taken by migrants into the community and may have a negative view of job opportunities. However, the relatively high income of people working in the mines and the indirect benefits they gained were seen by the local community, hence, mining generates positive impacts on the communities. **Wang et al. (2016)** agreed that in order to reduce the perception dissonance between the mining industries and the host community, it is important for mining sectors to understand the factors that shape a community's perception regarding mining activities. Contrariwise, mining for instance has been shown to affect local economies positively via boosting local incomes, employment, labor reallocation, gender empowerment and others (**Aragon and Rud, 2013; Tolonen, 2015**). It is important therefore that host communities that are dependent on mining benefits should diversify their economies and better seek strategies to create well-equipped socio-economic status whenever faced by any challenges (**Moritz, 2017**).

The indicators with the least mean total, yet still give moderate impact are observed in *reducing the environmental footprint of the operations and related activities and reducing the negative effects on land, water, and air for environment and health sustainability* (\underline{M} = 3.03). The results reflect that there is still a need for mining companies to intensify the implementation of their existing environmental protection programs. It has been said by **Rajaram (2005)** that mining itself may occur on a relatively small land area, however, the associated infrastructure and pollution from its activities has the potential to affect the health of ecosystems and reduce their ability to provide the goods and services necessary for human and environmental well-being. Hence, in order to be more environmentally sustainable, mining operations should further intensify and conduct activities that minimize their impact on the surrounding environment, and leaves mine sites in an acceptable state for re-use by people or ecosystems. Proliferation of a number of management strategies and technologies should be developed and used by the mining industry to reduce its environmental impacts (**Fraser Institute, 2012**).

The mining companies have maintained their outstanding record over the years by consistently putting concerns to the host community and environment. In fact, one from the two existing companies, CNC mining company was

recognized and awarded by the Department of Environment and Natural Resources (DENR) the "Best Mining Forest" award for 2013 and 2014 (<http://www.asiabusinesschannel.tv/cnc/> Accessed: 03-05-18). At present, the company continues to improve its advocacy on environmental protection through livelihood projects that caters not only the economic aspect of the community but also its care for the environment. As a continued effort to find ways to improve the CNC's system and methods to protect the environment, different researches on plant growth were conducted to help the farmers and to ensure sustainable good harvest (Retrieved from: <http://www.cncnickel.com>). Similarly, the MMDC has signed MOA with the DENR to strengthen and accelerate mine rehabilitation through the government's flagships reforestation program dubbed as Enhanced National Greening Program (E-NGP) (<http://www.marcventureholdings.com>).

Table 3 (see Appendix – I) presents the analysis of variance on the relationship of respondents' age with regards to the socio-economic impact of CNC mining company. It can be gleaned in the table that the p-value of .667 is greater than the significant value of 0.05; hence, there is enough evidence to accept the hypothesis that there is no significant difference between the ages of the respondents and the socio-economic impact of mining companies. This means that ages of the participants, regardless of maturity, has no contribution on how they perceived the socio-economic impact of mining companies. Although, most of the participants have ages ranging from 25-34 as the young group and 35 – 44 as the older group, still, there has no variation on how they view the existence of mining companies in the area. The results conformed to the previous claim of [Cuartero \(2014\)](#); [Freiberger \(2013\)](#) stating that ages of the participants are not operant factors causing variations in the participants' perception about the phenomenon being investigated. *The young and old are the same, younger people can follow the same decision made by older people. Though, young people literally still lack the experiences the older people had experienced, they can be reliable when it comes to ideas and knowledge.*

As shown in **Table 4** (see Appendix-I), the p-value of .996 is greater than the significant value of 0.05; hence, the hypothesis is accepted that there is no significant difference between the respondents' sex and the socio-economic impact of mining companies. This means that both male and female neutrally perceived the socio-economic impact of mining companies. The benefits that most male received from mining activities are the same with what the female population receives. It can also be observed in the mining companies' SDMP that some programs implemented have leading consideration on gender equality. It can be observed in [Black \(2016\)](#) report on the mining industries' initiative to supporting both male and female employees to enjoy flexible working arrangements to have balance in their work and family commitments. The result is supported by [Conway \(2013\)](#) who stated that mining is gender neutral where both male and female cannot hardly be compared as to their perceptions on mining and the way they receive the benefits from it. Contrary to the study conducted by [Chuhan-Pole \(2015\)](#); [Ranchod \(2001\)](#) who revealed that men are more likely to benefit from direct employment as miners while women are more likely to gain from indirect employment opportunities in services. Hence, male and female work differently when it comes to mining activities and priorities. Women and men tend to do different work and have different responsibilities. In many parts of the world affected by landmines, women and men tend to spend their days differently.

Table (5) presents the analysis of variance between the respondents' educational qualification with regards to the socio-economic impact of mining companies. The p-value of .883 is greater than the significant value of 0.05 which means that the respondents' educational qualification and the socio-economic impact of mining companies do not significantly differ. It was reflected on the profile that most of the respondents have only finished high school level, yet the way they perceived the socio-economic impact of mining with those respondents with higher educational attainment, resulted to no difference. It can be observed that most of the respondents are already contented of what they have as the mining company has provided them enough services regardless of what educational level they merely attained. Instead of just being ordinary spectators and nothing to offer to his or her family, respondents would, in a little way, appreciate whatever benefits and services they received from mining industries. The results opposed the study of [Loayza and Rigolini \(2016\)](#), who mentioned that local populations may benefit relatively less from mining activity than migrants, in part due to skills mismatch that hinders their employment in some of the better qualified mining jobs. Thus, the unequal effect of mining can be attributed to an influx of better educated immigrants attracted by mining activities and also by the limited job and business opportunities that only some native community can obtain the industries' services and other related works to mining activities.

Even if the companies have been helpful to their community, still, they have not done much to please the other aspects. Facts on the ground showed that there are still some local people who cannot afford the basic commodities like food, water, shelter, and descent works. There is a general increase in employment rate, yet some of the employees are still put in difficult working conditions without being cared or compensated. Environmental management is another case in point where people are dissatisfied with mining companies' limited initiative in reducing environmental footprint of their activities and their long-term sustainability. The companies have not been very honest with the environmental laws as evidenced by their repeated violations causing pollution of the environment. Although the companies have extended help in health aspects through the provisions of health facilities and health workers, yet again, not all are allowed to get free medications; instead, the community has to pay first the charged fees in order to access medical services.

The mining companies have maintained their reputation by their well-implemented SDMP that caters different programs concerning education, development of infrastructures, and other community services. Yet, in the opposite perspectives, the mining companies in the area still have to deal with their negative impacts on the lives of those

vulnerable groups. The increasing records on low-paid employment position, stressed public and health services, occurring prevalent diseases, and over population are few of the evident that even at present are observed.

6. Conclusions

The results of the study have contributed additional knowledge and new information on the socio-economic impact of mining companies to their host communities in the northern part of Surigao Del Sur province. In particular, mining companies in the area have substantially contributed positive impacts on economic, income, education, and employment aspects of the community. The companies, over the years of their operation, have been complying their legal obligations through their SDMP; and following regulations and achieving their goals through investing projects in education, economic, and social aspects. The mining companies have been able to help the local host community in various aspects. Similarly, the mining companies have reflected good financial reports and relation with the tax authorities. It is evident therefore that the economic and income aspects of the community have significantly yield the most positive impact that can be observed in employment and income generation, likewise on the increasing opportunities for various livelihood programs offered to people. Moreover, the mining companies have also brought moderately positive impact to the different socio-economic aspects like environment, health and safety, human rights, and other social aspects. The resources were wisely shared to the community through offering various activities and programs empowering the role of male and female in the society, ensuring health security, healthy environment, and quality risks to the people. The positive impacts on health can be observed through the provisions of accessible health facilities and services. There are also social activities that provide the transfer of technology to the local communities to empower them with skills and knowledge necessary for their social development.

7. Recommendation

On the basis of the findings, the following recommendations are adapted and derived from the study of Darkoh (2015) and shall serve as possible alternative practices for the improvement of socio-economic status of the host communities. There is need to undertake further socio-economic evaluation of the impact of the mines on the neighboring communities. An overall survey to establish the dynamics of the human population including migration in the surrounding area would provide a good basis for informed decision to be made on the operations of the mines. Once the dynamics are known, the main sources of income for the community could be determined. Proper mitigation measures can be established to correct the negative impact of the mines on the local economy. As part of the government development programs in the area, there should be a conscious effort of both government and the local council to promote entrepreneurship development training programs that will go a long way to equip the youth with marketable entrepreneurship skills. Finally, mining companies should adapt existing concepts on sustainable development introduced by DENR and MGB that should serve as their priority mission and vision.

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Appendix I -Tables

Table-1. Profile of the respondents

Variables	f(n = 150)	%
Age		
25 – 34	44	29
35 – 44	47	32
45 – 54	38	25
55 and above	21	14
Sex		
Male	128	85
Female	22	15
Educational Background		
Elementary	13	8.7
High School Graduate	71	47.3
Bachelor's Degree	66	44
Occupation		
Government Employees	30	20
Small Enterprises/Business owners	30	20
Large Enterprises/Business owners	30	20
Unemployed	30	20
Private Employees	30	20

Table-2. Socio-economic impact of Mining Companies

Impact Category	Impact Descriptions	M	QD
Economic and Income	Reflect financial reports and good relations with tax authorities	3.22	MI
	Establish local small and medium-sized enterprises (SMEs)	3.06	MI
	Impose all applicable standards, laws, regulations, and requirements.	3.29	HI
	Maintain broad-based support for any local activities	3.07	MI
	Increase local income with strong relationships with partner agencies	3.23	MI
	Sub-total	3.17	MI
Employment and Education	Conducts training for communities to reach their highest potential	3.16	MI
	Prioritize recruiting local employees from the host communities	3.08	MI
	Invest projects in education especially on IPs	3.28	HI
	Instill a positive and pro-active safety culture among employees/people	3.09	MI
	Maintain the wellbeing of the employees and communities	3.28	HI
	Sub-total	3.16	MI
Environment and Health and Safety	Achieve industry's goal of zero incidents, injuries, and illnesses.	3.29	HI
	Ensure health security, environment, and quality risks to the people	3.32	HI
	Seek to reduce environmental footprint of the mining operations	3.03	MI
	Transparent reports on incidents that may occur within workplace	3.07	MI
	Address in long-term the sustainability of the environment and health	3.03	MI
	Sub-total	3.15	MI
Human Rights and Social Aspect	Initiate mutually beneficial relationships with the communities	3.07	MI
	Provide immediate actions to any issues of multi-sector expectations	3.06	MI
	Foster a culture of involvement	3.05	MI
	Meet industry's SDMP through regular assessment	3.29	HI
	Manage major hazards and commission research that are not understood	3.23	MI
	Sub-total	3.14	MI
Grand Total		3.15	MI

Table-3. ANOVA on respondents' age with regards to the socio-economic impact

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.492	4	.123	.595	.667
Within Groups	30.394	146	.207		
Total	30.886	150			

Not significant

Table-4. ANOVA on respondents' sex with regards to the socio-economic impact

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.000	1	.000	.000	.996
Within Groups	30.886	149	.206		
Total	30.886	150			

Not significant

Table-5. ANOVA on the respondents' educational qualification with regards to the socio-economic impact

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.137	4	.046	.219	.883
Within Groups	30.461	146	.209		
Total	30.598	150			

Not significant