

BUSINESS MODELS TO CREATE SHARED VALUE: A CASE STUDY OF THE LUNDIN FOUNDATION AND LUNDIN GOLD'S FRUTA DEL NORTE MINE

Introduction

Mining makes an important contribution to society. From infrastructure projects to cell phones, computers, and a host of other items, mined materials are essential components of the goods and services valued by society. In addition, the transition to a low carbon economy requires numerous metals and materials signifying the key role the mining industry will play in global decarbonization efforts.

Nevertheless, challenges confront the industry. There are technical difficulties associated with finding commercially viable mineral deposits, concerns about job loss due to the increasing use of automation and artificial intelligence, and changing perceptions on the obligations of mining companies to society. It is the last issue that has perhaps the most potential to disrupt the industry. As a diverse group of stakeholders pressure companies to deliver greater value to communities impacted by mining, industry executives point to “social license” to operate as the top business risk facing the mining sector ([Top Business Risks](#))

The notion of creating value for all stakeholders gives rise to questions about the viability – and efficacy – of conventional mining business models. Definitions of “business model” vary, but most agree that the term describes a system where various features interact, often in complex ways, to determine how a company creates and captures value. Sustainability scholars have suggested that a focus on a broad range of stakeholders - and the objective of creating sustainable value - stretches the conventional view of a business model.

To create value, business models need strategy. In a 2011 [Harvard Business Review](#) article, Michael Porter and Mark Kramer popularized one management strategy - creating shared value (CSV). The objective of CSV is to identify opportunities to improve socio-economic outcomes and related core business performance (e.g. decreased operational costs, enhanced productivity, and/or a predictable and stable business environment) simultaneously.

Creating shared value (CSV) seems a promising business strategy for the mining sector but the business model literature dedicated to it is scant. In 2019, researchers at UBC undertook a research project to examine the relationship between shared value and business models in the mining sector, selecting Lundin Gold's Fruta del Norte project in Ecuador to explore an in-depth practical application of the shared value theory and business model innovation. The research included one-to-one qualitative interviews with company and Foundation personnel, and a review of publicly available materials such as annual and sustainability reports, web sites, and media coverage.



Lundin Gold's Fruta Del Norte Project



Lundin Gold is a Canadian mining company listed on the Toronto Stock Exchange and Nasdaq Stockholm. The company's wholly-owned Fruta del Norte underground gold mine is located in the southeastern province of Zamora Chinchipe in Ecuador.

Fruta del Norte began operations in November 2019 with commercial production achieved in February 2020. The mine is expected to produce approximately 4.7 million ounces of gold over a 15 year mine life.

Figure 1: <https://www.lundin角度.com/en/fruta-del-norte/project-overview/>

Lundin Gold acquired the Fruta del Norte exploration project in late 2014. The project is located in a jurisdiction considered relatively high risk by financial institutions and lending agencies. This creates a suitable environment for assessing CSV as a strategy to address macro-economic issues at the intersection of business and social needs.

One of Lundin Gold's first initiatives was to establish a team to deliver on the company's commitment to "responsible mining", defined as a commitment to work safely, demonstrate environmental stewardship and to show respect in all activities.¹ As a first step, the company initiated a structured process to learn about local issues and development priorities, and to hear what people in the surrounding communities were thinking about a mine being developed in their region.

"To address social license effectively and in a strategic manner – that is, doing something that is not purely philanthropic but rather that will help move us towards meeting the expectations of communities – we have to identify what are a given community's priorities, expectations and concerns. Our number one priority was to build trust with local communities . . . How do you build trust? We felt we had to start by listening." Interview quote

The Lundin Gold team spent six months going community to community hosting dialogue round tables to hear residents' thoughts about Fruta del Norte's transition from exploration to construction.

¹ Lundin Gold 2019 Annual Report p.ii

Dialogue processes are typically set up in response to a crisis. The Fruta del Norte round tables were established to proactively talk about issues. Hundreds of opinions, concerns and interests were identified. The local communities, the local church, local government, indigenous peoples, and the company then worked together with an independent facilitator to prioritize the issues in a simplified risk assessment matrix with eight focus areas².

While Lundin Gold focussed on building stakeholder relationships and managing risk to ensure the proposed mine could come into production as planned, the Lundin Foundation was called upon to extend the mining company's core competencies in community relations. Leveraging the Foundation's track record in facilitating economic development and measuring impact was viewed as a strategic way to address a number of the prioritized issues identified at the round tables.

The Lundin Foundation

The Lundin Foundation is a non-profit organization established in 2006 to support the 14 publicly traded resource development companies, including Lundin Gold, that form the Lundin Group. The companies operate in 11 countries around the world and have a combined market capitalization of ~US\$20.3 B as of June 2020. A unique feature of the Foundation is that it is not controlled by a single corporate partner, as is the case for many other mining company foundations, instead it provides a service to each company within the Lundin Group.

The Foundation's mission – to create lasting benefits for communities impacted by resource development – has remained constant over the years. However, the Foundation's business model has undergone significant change from its inception as a philanthropic investment vehicle for the Lundin Group of Companies. In 2009, the business model changed as the Foundation shifted from charitable donations to impact investing in Africa focussing on the social enterprise space --access to energy, access to finance, agriculture – the critical building blocks of a strong economy. In 2016, in response to requests from Lundin Group members for the Foundation's support, the business model changed again. A number of the Lundin Group companies had evolved from exploration projects to become operating mines and a key business priority for the miners was to mitigate social risk and find opportunities to create shared value.

² The eight focus areas are: inter-institutional co-ordination; agro economic development; environmental responsibility; road safety and infrastructure; promotion of community ethics and cultural values; opportunities for local business; employment and capacity building; tourism development (Lundin Gold 2018 Sustainability Report).

“[Creating shared value means] ensuring that the communities see tangible benefits and economic opportunities – jobs, income improvements – as a result of the resource development. The company benefits because there is a lot to be gained if the local communities are prospering and resilient.” Interview quote.

The Lundin Foundation was then asked to help its corporate partners to mitigate social risk by designing community investment initiatives to create value shared by company and communities. It was at this time that the Foundation also broadened its work in Africa to include Scandinavia, Southeast Asia and Latin America where a number of the Lundin companies had operations and began using the [UN Sustainable Development Goals \(SDGs\)](#) to frame the efforts undertaken with their corporate partners to contribute to resilient local communities.

As the Foundation began to focus on providing financing to realize market opportunities surrounding a resource development there was recognition that a different business model would be required. Today, the Foundation’s objective is to work with its corporate partners to complement the community relations work undertaken by the individual mining companies. The Foundation’s business model, which focusses on creating benefits for communities impacted by resource development, makes it a more suitable vehicle than a conventional mining business model, to take the financial risks associated with community economic development.

The new business model is driven by Foundation’s relationship with the individual companies it serves and by a mutual desire to manage risk effectively and create shared value. The new business model is built on four pillars that correspond with the community relations priorities of the Foundation’s corporate partners.



Figure 2 – The four pillars of the Lundin Foundation’s business model

What makes the Foundation’s model different is the focus on looking for innovative financial solutions versus philanthropic or charitable investment. For the Foundation to consider a project there needs to be an opportunity to convert a market limitation into a financially viable business opportunity that will not be exclusively dependent on the mine. An example comes from the work Lundin Gold and the Lundin Foundation did to support employees at Fruta del Norte who had a business idea.

Catering Las Peñas³.

In 2015, a group of cafeteria workers at Fruta del Norte approached project management to express interest in forming their own catering company. The prospective entrepreneurs were passionate about the business opportunity they had identified, but had never managed a business before. They knew they needed working capital but had no track record to help them secure bank financing. Project management endorsed the proposal and asked the Foundation to help. The entrepreneurs were provided with a strategic grant for business and management assistance, Foundation personnel guided the managers through the start-up phase of their business, and the Foundation co-signed a \$100,000 loan to cover the start-up costs.

Within three years, Catering Las Peñas became the third largest employer in Ecuador's Zamora Chinchipe province behind two multinational mining companies. Fruta del Norte now outsources catering and hospitality service to the company, which has fully repaid the Foundation's start-up loan, generated US\$8M in revenue, recorded a 170% year-over-year growth, and in 2019 employed over 200 employees. No longer completely dependent on the mine for revenue, the catering company has diversified its customer base to provide services to other businesses in the region.

In 2018, Catering Las Peñas, Lundin Gold, and the Lundin Foundation embarked upon a new collaboration to develop Catering Las Peñas' own local supplier program. Due to the mine's diverse requirements, CLP had needed to source food from outside the region, yet smallholder agriculture is a major source of income for local families. Developing a local supplier program was viewed as both a sustainability priority and an opportunity to create an additional source of economic activity. Once again the Foundation provided a strategic grant and created a loan fund that could be accessed by local producers needing capital to start, or enhance, their operations, or to make investments in farming equipment or infrastructure. Within the first year that the program was in place, Catering Las Peñas purchased over \$1.7m in goods from over 70 local agriculture producers and other small businesses in the local communities.

The initiative to develop the supply chain of a supplier is an innovative approach to create shared value: more goods were purchased from local farmers, strengthening the local economy while at the same time reducing Catering Las Peñas operating costs. As noted, the impetus for Takataii was to bring more farmers into the catering company's supply chain. A later, added, benefit was that the additional jobs created helped to provide employment for locals who had been working on the mine's construction and who were displaced once operations began.

Business models to position mining as a catalyst for economic development

The business models of the mine and of the Foundation are fundamentally different yet complementary. For the mining company, the business model is anchored by the idea that mining –

³ Facts are sourced from Lundin Gold's 2018 Sustainability Report, and the 2018 Lundin Foundation Annual Report

the company's core competency – can be a catalyst for economic development. Rather than employing a conventional business model designed with the interests of customers and financial stakeholders in mind, Lundin Gold has built a business model to create sustainable value from responsible mining. That model recognizes that a mining company is not a NGO, development agency, or government, and therefore needs to work with other actors.

“We want to be a sustainable organization. To become that we must understand the local context, what is driving risk, what the people themselves are thinking about the presence of a mining project in their community. And we must find ways to work with other stakeholders that have a common vision for the future . . . At the end of the day, creating shared value is what we are after.” Interview quote.

The Lundin Foundation's business model is also anchored by the idea of creating shared value but its core competency is economic development not mining. The Foundation works with the Lundin Gold to create new sources of revenue for local communities that are catalyzed by mining while taking the business risk inherent when supporting entrepreneurial pursuits to get established. Where the mining company focusses on ways to address stakeholder concerns and create programs to mitigate risk, the Foundation looks for competitive market opportunities.

For example, in the south east part of Ecuador, milk was being brought into the region from other parts of the country. Yet there were some milk producers in the region. Foundation staff recognized there was a local market opportunity for milk. The question was how to help local milk producers improve their techniques and expand their access to market to make their operations viable. A detailed study was done looking at market opportunities from an economic development perspective: the link between the number of cows, the right soil, and the appropriate kind of agricultural environment for this opportunity. This research demonstrated the economic viability of the project. Working collaboratively with local experts, parameters for participation were created. Engaging beneficiaries in the planning process to discuss how they could promote milk production and the ways in which co-ops or associations could benefit the region was a key to success. Although Fruta del Norte now buys milk from the program, it was not set up to supply the mine – it was set up to take advantage of a market opportunity.

Measuring success

For both the mining company and the Foundation, measuring the success of the business model is important. The mining company can demonstrate the business case for responsible mining using traditional measures such as value capture, value protection and value generation (Table 1).

The change in the Lundin Foundation's business model from social impact investing to creating shared value mandated a change in measurement protocols. In 2018, the Foundation aligned its impact management practices with the [Impact Management Project](#) - a global consensus on how to define,

measure, manage, compare and report impacts on environmental and social impacts of investments. The Foundation tracks its investments along a continuum from input to impact, balancing the need for short-term reporting – progress towards outcome indicators – and the long-term impact of its initiatives.

Short-term indicators include outputs like number of people (prospective employees and/or entrepreneurs) trained, number of social enterprises supported, or the number of business qualified as local procurement suppliers. Outcomes, which can be expected one to three years post activity, include indicators such as jobs created, local business growth (how many new suppliers are contracted each year, what percentage of their revenue is from the corporate partners what is their year-on-year revenue growth, how many non-corporate partners have they recruited, have they secured additional local suppliers, etc.) and indirect economic value add. The long-term value of the work is measured in impacts such as improved household income, increased access to health and education, increased quality of life and well-being, and improved economic outcomes from new business development.

A distinguishing feature of the Foundation's business model is that it must provide value to its corporate partner, helping the mining company to reduce risk, capitalize on market opportunities, and achieve its business goals. As noted earlier, the Foundation's initiatives complement and extend the mining company's community relations work, and focus on creating shared value and advancing the agenda of the SDGs. Table 1 illustrates the ways in which the Foundation's sustainability initiatives supports the business objectives of Lundin Gold at Fruta Del Norte.

MEASURING LUNDIN GOLD'S BUSINESS MODEL FOR RESPONSIBLE MINING	THE LUNDIN FOUNDATION'S BUSINESS MODEL TO CREATE SHARED VALUE AT FDN	IMPACT INDICATOR (Data is disaggregated by gender)
<p>Value protection</p> <ul style="list-style-type: none"> Commissioned on schedule Continued confidence of shareholders Community round tables, organized in conjunction with the local government, provide proactive insight to community interests: action reduces risk that social opposition will impede production. 	<ul style="list-style-type: none"> Accelerated high school equivalency program for members of local and indigenous communities. Workforce training program for underground mine and process plant operators 	<p>Education and Skills:</p> <ul style="list-style-type: none"> Number of trainees (outputs) Graduation rate (outputs) and post-graduation outcomes (e.g. employment at FDN, wages paid, % change in wages earned as a result of training, ability to save)
<p>Value capture</p> <ul style="list-style-type: none"> Equity investments by Newcrest Mining Limited and Orion Mine Finance in 2018 Newcrest earn-in and joint venture arrangement started in 2019 Reputation capital: supports access to future financial capital, talent, markets, and partnerships 	<ul style="list-style-type: none"> Working capital loans for SME and strategic grants for business training and technical assistance. 	<p>Aggregate indicators across programs)</p> <ul style="list-style-type: none"> Jobs created and employees of supported businesses Household income (through wages paid, and on-farm purchases from small agricultural suppliers)
<p>Value generation</p> <ul style="list-style-type: none"> Commercial production achieved ahead of schedule First gold produced First concentrate exported 2020 updated Life of Mine Plan resulted in an increase in the projected average annual gold production from 310,000 ounces to 325,000 ounces per year over a 14-year mine life 	<ul style="list-style-type: none"> Support for high potential non-mining related sectors such as dairy, coffee and cocoa, improving market opportunities and production capacities of local producers. Integrate local dairy producers into regional supply chains, opening economic opportunity for local communities and for the mine's local procurement program. Support for Catering Las Peñas to develop a local supply chain and support economic diversification in the region. 	<p>Local suppliers</p> <ul style="list-style-type: none"> # local suppliers (direct and indirect) Value of commercial contracts secured with FDN % of total revenue of suppliers linked to FDN Jobs created and employment retained Wages paid <p>Economic diversifications</p> <ul style="list-style-type: none"> Revenue and growth of small businesses Jobs created and employment retained Wages paid

Table 1 – The intersection of business models to create shared value



Conclusions

The research set out to investigate the attributes of business models for creating shared value. The case study of the Lundin Foundation's work with Lundin Gold at the Fruta del Norte project illustrates the value of partnerships to deliver on the commitment to responsible mining and to support sustainable outcomes for resource-rich communities. For Lundin Gold and the Lundin Foundation, the conventional business model of mining, which prioritizes the interests of shareholders, required innovation to create shared value for a broad range of stakeholders.

"I think we need innovation within existing business models - tweaks to existing models. But we also need to look at things differently. When we think about the challenges industry is facing - the social movement in Latin America, climate change, certain perspectives that investors are requiring, at every aspect of the business - innovation is needed. . . Companies that have a transactional approach to social performance with communities (where they identify risk and do a donation or a grant) are really going to struggle [in the future]." Interview quote.

Empowering communities was seen by both the mining company and the foundation as a critical attribute for long-term success. Ultimately, the goal is to have communities become full partners in shared value strategies, laying a foundation for greater post-mining business certainty. However, in situations where communities have little past experience with mining, as was the case with Fruta del Norte, engaging communities may require small steps to build the decision-making capacity of individuals and groups. For example, when Lundin Gold and the Lundin Foundation launched a training program for those interested in jobs at the mine, there were approximately 2500 applicants for the program. Everyone was invited to a four-hour orientation, then asked if they wished to continue. About 70% chose to continue with training while the rest realized that those jobs were not as attractive as they initially envisioned and selected not to continue. In a similar manner, people who earned their high school equivalency through a company-sponsored program, choose for themselves whether they wish to move on to training for operations to employment at FDN. Over time, it is anticipated that over time more of the decision-making related to sustainable development and local capacity building can evolve to the community. For example, the communities around Fruta Del Norte play an important role in setting the agenda for the meetings which are convened in conjunction with local government.

The findings of one case study cannot be generalized across the global mining sector. However, the approaches to business model change and innovation employed by Lundin Gold and the Lundin Foundation offer encouragement for others considering how to transition from conventional business models towards those that move beyond shareholders to include all stakeholders and endorse a new [purpose of the corporation](#).

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Related Readings

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