

HOW INDUSTRY AND GOVERNMENT CAN WORK TOGETHER TO FACILITATE THE LINKAGE OF MULTINATIONALS WITH LOCAL FIRMS TO SUPPORT INNOVATION AND LOCAL SUPPLIER PARTICIPATION

Framework Step:

STEP 3. Unlock opportunities for in-country shared value creation

Opportunities for in-country shared value creation can be found in sector-specific demand for workforces and for goods and services. Extractives sector projects can also be leveraged to develop multi-purpose and multi-user infrastructure, enabling systemic linkages and economic diversification as well as affordable access to power and water. Combined together, these measures can generate positive impact on job creation, skills development, and poverty reduction.

3.1. Local workforce and supplier development

3.1.A. What can host governments do?

- Prioritise approaches that enable progress towards achieving common objectives, goals and targets over compliance with and enforcement of local content quotas.
- Facilitate the linkage of multinationals with local firms, in particular local small and medium-sized enterprises.
- Match training opportunities with documented industry demand, in priority segments/activities with the highest growth potential.

3.1.C. Host governments and extractives industries can work together to:

- Identify and prioritise quick wins for local workforce and supplier participation and leverage other opportunity areas for long-term collaboration.

Tags: *In addition to the Framework step(s) that they fall under, examples will also be tagged by crosscutting issues. Please select all applicable tags.*

- local employment
- local supplier participation and development, including SMEs
- marginalised groups (women, indigenous people)
- skills development and upgrading
- access to credit
- shared infrastructure (transport, water, power)
- technology transfer
- innovation
- economic diversification
- Other: _____

Problem Statement:

The mining sector in Chile faces a number of environmental and economic challenges. These include the concentration of mining activities within a small number of large firms, decreasing mineral grades, and high operational costs stemming in part from limited skilled employees and rising labour costs. Given the relatively low levels of research and development investment in Chile, a focus on upgrading technological capacity and innovation in the performance of local suppliers was seen as a means to enhance the sector's competitiveness. Suppliers to the sector also varied in their technological capacities, and their largely transactional relationship to large multinational mining limited the scope for in-country shared value creation through technology transfer. Limited information access for suppliers to the needs of industry further constrained the scope for innovation through collaboration.

Parties Involved:

- BHP Billiton
- Corporación Nacional del Cobre de Chile (Codelco)
- Fundación Chile
- Chilean firms and suppliers
- Government of Chile

Common ground:

The case of Chile's Development of World-Class Suppliers programme provides an example of a private-sector supplier development initiative, led by a large multinational mining company (BHP Billiton) that was then further developed in co-operation with the government. The co-operation of publically-owned Codelco with a multinational mining company helped to ensure that the knowledge, skills and capacities that workers gained were relevant and could lead to creation of employment or business opportunities later on. Such co-operation also helped to reduce the cost of associated training programmes, particularly as BHP Billiton contributed resources, such as through the provision of specialists and staff. The linkage of a large multinational with local firms therefore facilitated the programme's dual aims: to strengthen in-country innovation and to increase collaboration.

Actions taken:

In Chile, BHP Billiton initiated in 2008 a programme for the Development of World-Class Suppliers (Programa de Proveedores de Clase Mundial, PPCM), with the objective of leveraging the cluster of SMEs around large mining firms operating in the country. The programme aimed at facilitating the development of innovative solutions to the operational and environmental challenges faced by BHP in its Chilean operations, and to help local suppliers develop into world-class businesses with the ability to export services and technology abroad to other mining sectors, and to other sectors of the Chilean economy. The first projects started to operate by 2009, and Codelco joined the initiative in 2010. Public sector support for the programme after 2011 included tax exemptions and the development of a supplier database listing the challenges firms were looking to resolve. At the beginning of 2012, more than 60 suppliers were participating in the programme and as of 2017 it had facilitated the development of over 100 projects.

In practice, the programme functioned by supporting suppliers that were identified as having development potential in solving challenges flagged by specific operational areas of the mining firms. After identifying the need for a specific innovation or solution within an operational area of the mining firm, and selecting participants from among the potential suppliers, the programme supported the process in part by providing a framework to test-out ideas within the context of real-time mining operations. In addition, it offered external consulting support to provide the selected suppliers with advice and training on the competencies required to improve their business performance, while also promoting linkages with local research centres and universities.

In the initial stages of the programme, the problem identification process led to the identification of 177 challenges within mining activities that required technological solutions. It then prioritised 35, to which a supplier was assigned to work towards a solution. The 60 projects on which the suppliers initially worked addressed challenges such as dust reduction and management, water, energy, equipment maintenance, human resources, and leaching. Nine of these projects were defined by the leaders of the programme as having a high level of complexity; and a further 53 were classified as incremental, suggesting a medium level of complexity.

The selection criteria for identifying local suppliers to work on each problem or challenge included economic benefit, replicability, technological risk and impact on operation, in terms of health, safety and environmental standards. Once selected, the successful supplier and the mining firm would then engage in a bilateral relationship involving investment and innovation. In the programme's final stage, suppliers were provided with external expertise and support to scale-up their innovative solutions, such as by taking the solution to international markets.

The result in theory was the provision of a scalable solution to both the operational challenge identified by the mining firm, and the increase of the technological and organisational capabilities of local suppliers. In 2010-12, BHP cited savings of USD 100 million from innovations developed through the programme.

Obstacles:

The sharp drop in copper prices has affected Chile's mining sector, and the administrators of the World Class Suppliers Development Programme for Mining in Chile have recognised that the programme is now undergoing a transition phase. Further, despite the significant potential for scaling-up the results, the programme itself remains small with a positive but limited impact on Chile's economy to date. While the initiative has successfully fostered innovation, the scaling-up and internationalisation aspects are less evident. This may be due to incentive problems: while there are incentives for joint collaboration during the innovation phase, it is not clear what major firms gain by providing facilities for the piloting and testing of innovations during the scaling-up phase of a project.

Information asymmetries and market challenges in the functioning of the mining sector in relation to suppliers in Chile have also provided obstacles in terms of the initiative's potential, while the environmental and social demands to the sector in Chile have also been increasing over time, putting further pressures on the sector.

Enabling factors:

The World Class Supplier programme evolved over time to support the development of local suppliers and to address the challenges facing large mining firms in Chile. BHP Billiton created the program in 2008, and the state-owned firm Codelco joined the program later in 2010, ensuring the support of two major industry actors. Together the mining firms contribute to about half of the total copper production in the country. The active public-private cooperation, such as public sector support, was also essential in promoting the programme.

Lessons Learned:

- The programme has benefitted from the willingness of mining firms to use their significant purchasing capacity to support the development of local suppliers. To achieve this, the mining companies had to modify to some extent existing procurement processes, as these processes tended to give priority to standardised solutions, over more innovative and less standardised practices.
- Suppliers have benefited from working with two of the world's largest mining firms, and in particular, the collaborative and specialised approach. The methodology implemented through the programme, and thereby adopted by the suppliers, was tailored to help identify the specific demands of the firms, and to select and support potential suppliers. The process also benefited from the collaboration of universities and technological centres as well as the participation of a team of external advisers, mainly from Fundación Chile (a public-private institution that promotes innovation), which provided training and technical assistance to the new suppliers.
- The programme remains small and it should be noted that the firms that were chosen through the selection process tended to be already quite well performing. It has had a positive but so far still limited effect on the economy. This is in part due to persistent information asymmetries within the sector, and that while many proposed solutions were taken through to the development phase, challenges have been faced in terms of scaling up. Greater involvement of policy makers may help contribute to expanding the impacts of the programme. It also remains necessary to implement an impact evaluation for monitoring and evaluation of the performance of the programme itself.