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Employment from Mining and Agricultural Investments

How Much Myth, How Much Reality?

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Executive Summary

Employment creation is often seen as a key benefit of investment in natural resources. However, this benefit sometimes falls short: job estimates may be inflated, governmental policies may fail to maximize employment generation, and, in some cases, investments may lead to net livelihood losses. A more thorough examination of employment tied to mining and agricultural investments is thus useful for assessing whether and how employment from natural resource investments contributes to sustainable economic development—a particularly timely topic as countries consider how they will achieve the Sustainable Development Goals adopted in 2015.

This report aims to clarify the processes and impacts of job creation driven by large-scale mining and agricultural investments,¹ and to suggest how policies can improve employment outcomes. While investments in mining and agriculture share some characteristics, including reliance on natural resources and some location-specificity, they also differ in significant ways. The report does not aim for a full comparison of such investments, but rather identifies similarities or differences that can contribute to a better understanding of their respective roles for employment.

Employment numbers: Terminology, methodology, and context

Assessing or comparing employment impacts from natural resource investments is complicated. There is no universal standard for measuring job creation.

Employment generated through natural resource investments can be created directly, indirectly, or through induced effects. Direct employment generally counts the investor’s employees and on-site contractors, while indirect employment includes off-site contractors, suppliers and their workers, and jobs that arise in relation to social investment activities. Induced employment results from the spending effect of direct and indirect employment and can often be far higher than the direct or indirect effects. Large projects may also lead to additional employment through linkages other than those flowing from production or consumption, such as through

¹ The discussion of agricultural investments focuses primarily on large-scale investments that require some transfer of land use rights, such as concessions for plantation agriculture. Sometimes described as “large-scale land-based investments” or “large-scale land acquisitions,” such investments also occasionally incorporate business relationships with smallholder farmers, such as through outgrower programs. We focus on these types of investments both because proponents of such investments, which are not without controversy, often point to employment creation as one related benefit, and because such investments share more commonalities with mining investments than other types of investment in agriculture, such as pure contract farming schemes.

infrastructure investment. The lack of a universal standard regarding how employment numbers are counted within each of these different types of employment complicates assessments and comparisons of anticipated or actual job creation arising from investments.

Additional complications arise from the complexities inherent in calculating the multiplier effect. Multipliers are used to estimate how an initial increase in economic activity—for instance, an increase in the output of a particular commodity—reverberates throughout the economy and translates into more indirect and induced employment. While multiplier calculations of indirect and induced employment from mining and agricultural investments can offer useful estimates, they should be viewed with caution, particularly since it is difficult to compare results between projects.

In the mining industry, factors influencing the job creation potential of an investment include:

- the type of ownership, with publicly-owned mines often employing more workers than market-driven companies;
- the size of the mine;
- the mining life cycle phase, as employment levels are much higher during the construction phase than during the production phase, with the types of jobs also changing as a project shifts phases;
- the type of mining operation, as underground mining typically generates higher employment than open-pit mining;
- the type of commodity being extracted, as well as the mineral grade; and
- the mine's need for the construction of ancillary infrastructure.

For investments in large-scale agricultural projects, factors that affect the number of jobs generated include:

- the types of crops, as the labor intensity linked to different crops leads to widely divergent employment needs;
- the level of mechanization, with highly mechanized projects generating fewer direct jobs per hectare;
- other methods of production, such as the high use of inputs, which can decrease labor requirements;
- specific project contexts, such as soil fertility or water availability;
- links to agro-processing, as value-addition or processing activities can create greater employment opportunities; and
- the incorporation of opportunities for smallholders, such as outgrower schemes, which may decrease the numbers of waged jobs but can dramatically increase the number of livelihoods supported by a project.

These various factors complicate generalizations regarding the job creation impact of investment in mining or agricultural projects.

Mining employment: Nuances and complications

In addition to understanding the types of employment generated by investments in the mining sector, it is also important to examine who benefits from such jobs, as well as what happens to the economic and social fabric of a mining region when investment occurs. While host communities reap economic and social benefits due to, for example, higher incomes, negative consequences can also arise.

What jobs and for whom?

While many mining projects commit to hiring local workers through preferential employment policies, the meaning of the term “local” varies. At the national level, “local” may simply refer to a citizen of the country; yet within the project area, the term may be interpreted to describe a person originating from and resident in the area in which the project is situated. In this context, recruitment may well be conducted locally, but it may not be a “local” who is recruited.

Local disappointment with employment opportunities is thus common. Despite a mine opening, local unemployment may persist due to a mismatch between the skills required by the investor or its sub-contractors and the skills possessed by the local population. Indeed, trends towards increased mechanization and automation mean that less manual labor is needed and that remaining jobs increasingly require sophisticated training. In addition, labor needs shift depending on the project phase, with low-skill labor needed primarily during the construction phase. The share of the local population that succeeds in finding employment with the mine might thus be relatively small.

Disappointment in job opportunities may be exacerbated by the potential for increased income inequality at the local level, as mining-generated employment has the potential to increase income beyond what could have been earned in alternative livelihoods. To mitigate this potential friction, some companies have adopted recruitment policies that aim to spread income more evenly, such as by distributing jobs between households and between different local groups.

A lack of requisite skills or access to finance in local communities can also limit the magnitude of indirect employment creation in the local area. If companies believe that their procurement

needs cannot be met in the host country, they may look to source from abroad, thus reducing indirect employment generation at the national and local levels.

Socio-economic change and net employment impact

Large-scale mining has drastic socio-economic impacts on the surrounding area. Employment and other opportunities often draw people to a mining region, leading to economic, physical, environmental, and social changes.

In-migration can bring benefits to local communities. For example, increased demand for goods and services can provide a boost to local businesses and the local economy, while in-migrants that bring new skills and resources can help host communities expand their capacities, skills, and knowledge. Not all aspects of in-migration are positive, however. Negative impacts include increased competition over jobs and resources; higher local inflation; and strains on infrastructure and on the environment.

When mining companies appropriate inhabited land for their operations, local communities are usually displaced and resettled. Resettlement—particularly when not carefully designed and if not coupled with the provision of comparable or better land, or other efforts to support renewed livelihoods—can severely disrupt livelihoods.

Artisanal and small-scale mining (ASM) can play a vital role in reducing poverty, although is often associated with environmental damage and other negative impacts. The development and operation of a large-scale mine can lead to significant losses of ASM jobs, which are generally not offset by increased employment in large-scale mining.

Every phase of mining, from exploration to closure, poses potential environmental threats to local livelihoods. Readying mine sites frequently requires clearing land and displacing surface and groundwater. Extracting and beneficiating ores, as well as subsequent waste disposal, uses significant amounts of water, and also holds the potential to contaminate water sources. These and other negative environmental spillovers of mining projects can disrupt local livelihoods and forms of subsistence and income.

Large-scale mining projects generally offer few direct employment opportunities for women, due in part to mismatched skills and a lack of accommodation for family and childcare responsibilities. This can be especially problematic given that women may be particularly affected by land loss resulting from mining projects. However, women often fill indirect and induced jobs tied to mining, such as laundry, catering, and agricultural production. Thus, the opening of a new mine can lead to localized structural changes in labor participation for

women, with a decline in agricultural self-employment leading women to either shift to the service sector or leave the labor market altogether. Such structural changes are not necessarily reversible once a mine closes. Women are not the only ones who feel the effects of a mine closure, of course, and stakeholders are not always prepared for this phase and its corresponding reduction in employment opportunities.

Employment from large-scale agricultural investments: Nuances and complications

Understanding the socio-economic issues tied to employment is equally important in the context of large-scale agricultural investment. These issues, which can affect sustainable development outcomes, should be incorporated into any assessment of the potential job creation impacts of large agricultural investments. However, local job impacts and job quality can be very context specific, and efforts to generalize often mask critical nuances. Assessments are further complicated by other factors: for example, over which timeframes should one measure outcomes, or from which perspectives should a situation be evaluated?

What jobs and for whom?

Job estimates for agricultural investments often do not specify whether the jobs that will be created are permanent or casual, year-round or seasonal, yet research indicates that casual or seasonal labor comprises a significant proportion of the jobs created through large agricultural investments. While seasonal jobs can sometimes provide a complementary livelihood strategy for rural dwellers, workers who rely on such jobs generally find themselves in insecure employment situations. In addition, agricultural jobs often pay low and inadequate wages, although whether wages are more or less attractive than other existing options remains highly context-specific.

As with mining investments, the jobs created through agricultural investments may not always benefit workers from the local community. This is particularly true for any higher skilled jobs that are created. Yet significant numbers of low-skilled jobs are also often taken by domestic or foreign migrants. In such situations, the corresponding in-migration can have both positive and negative effects, just as with in-migration encouraged by mining investments.

Socio-economic change and net employment impact

Assessments of the employment impact of large-scale agricultural investments should consider whether waged job creation arises at the cost of destroying non-waged labor opportunities. In some cases, the number of livelihoods affected by the investment might be diminished rather than augmented.

Understanding the longer-term labor impact of large-scale agricultural investments is difficult: direct jobs may increase or decrease as operations are established, while indirect and induced employment creation will help shape, and in turn will be shaped by, an increasingly monetized local economy. Yet existing qualitative assessments highlight the real possibility of net livelihood losses—at least in the short-term—when agricultural investments take place on land that was previously used for smallholder agricultural production or other livelihood activities.

Moreover, not only might livelihood loss lead to fewer individuals being able to sustain their livelihood strategies, but it may also mean that, in some contexts, former smallholder farmers who have transitioned to waged work on the plantations created by the investment earn less than they had as smallholders. The situation is rendered more complex when jobs created by an investment are not offered to those who have lost the most due to it, leaving some individuals better off as waged workers and others in the same area worse off, having lost land or suffered “economic displacement” through other disruptions to livelihood strategies.

Large-scale agricultural investments can affect women differently than men. In many low- and middle-income countries, women play significant roles in agricultural production, through both independent farming and waged labor, giving rise to what has been described as the “feminization” of agriculture. Whether women benefit from employment opportunities arising from agricultural investment is context specific, influenced by preexisting social norms and practices around labor. In addition, the gendered ways in which some commercial farms employ women and men can have both positive and negative impacts. For example, gendered roles may encourage the increased employment of women, but may limit such employment to work that is more hazardous or less compensated. Aside from questions of waged labor, large-scale agricultural investments can have particular impacts on women’s livelihood when the investments impede access to productive resources on which women rely. Any specific investment can thus have mixed impacts for local women, providing some benefits (such as new sources of cash income) while simultaneously producing certain harms (such as livelihood losses or increased labor burdens).

Although many agricultural projects could theoretically last indefinitely, they do close (or fail) for various reasons. These closures affect linked employment opportunities. Just as with mining investments, post-closure planning thus constitutes an important best practice for agricultural

investments. Host governments and other stakeholders should pay particular attention to what will happen to the land once a project ends; in many cases, providing mechanisms for formerly displaced people to gain renewed access to the land may be the most appropriate option.

Government policies for job creation

For governments seeking to increase the employment impacts of natural resource investments, realistic assessments of the potential employment effects are an important starting point. This includes considering the potential direct, indirect, and induced employment impacts, as well as the corresponding socio-economic concerns and potential negative consequences for livelihoods.

Against this backdrop, governments can strive to design appropriate policies, plans, and strategies that strengthen positive impacts and mitigate negative ones associated with investment in mining or agriculture. In terms of strengthening positive employment impacts, such policies may aim to increase the number of direct jobs supported by an investment, to generate indirect or induced employment, or to tie investments to local development more generally.

To maximize the creation of direct jobs tied to mining and agricultural investment, governments can:

- consider cost-effective policies to attract responsible investment that leads to increased employment;
- support subnational-level governments in managing their share of revenues, including through policies focused on employment impacts; and
- cooperate, in partnership with companies, on training programs that support individuals' abilities to benefit from the job opportunities offered by investment projects, potentially coupling such programs with agreed targets that encourage the employment of local or national workers.

To maximize the creation of indirect jobs tied to mining and agricultural investment, governments can:

- focus on policies aimed at increasing linkages, either backward through local content requirements or forward through measures intended to increase further processing, while ensuring that such policies are based on realistic assessments of local capabilities and are in conformity with relevant international rules; and

- refrain from granting investors the right to import inputs duty-free where such goods are available locally.

To maximize the creation of induced jobs tied to mining and agricultural investment, governments can:

- support subnational-level governments in developing capacity to plan for diversified economic development, as well as to deliver the public services that are needed by citizens and required for economic growth;
- support or encourage infrastructure investment tied to mining or agricultural projects, which can help other sectors to grow and/or can support improved livelihood activities; and
- ensure that appropriate consultation mechanisms underpin local development planning.

In addition, governments can require sustainable closure plans for any large-scale investment, including strategies for mitigating the negative employment impacts of project closure or failure. To address the particularly dramatic impacts of commodity price downturns, governments can also work with companies to establish programs focused on mitigating job loss in such contexts.

Moreover, governments working to develop policies to improve employment generation from natural resource investments can ensure that such policies are grounded in and shaped by consultations with communities. This can strengthen such policies while also managing community expectations.

In the context of agricultural investment, policymakers should also keep in mind that agricultural investment predicated on land acquisition is only one of many approaches for investment in agriculture. As the type of agricultural investment model used may affect its impact on job creation and livelihoods, governments should think carefully about the type of investment they wish to attract and encourage. Apart from investments that require land transactions, other options for public or private investment include investing in smallholder production, or using a more inclusive business approach to incorporate and support smallholder farmers. Such models may be more beneficial from a number of perspectives, including employment outcomes.

As employment impacts are context-specific, so are policy solutions. Efforts to optimize the employment impact of investments thus must be tailored to the particular contexts for which they are proposed. In some situations, this may require a more nuanced understanding of the

margins of maneuver for investors in terms of adapting their employment practices to national and local needs. In other situations, governments may need to undertake more targeted efforts to ensure that local development planning is used to maximize the potential employment and growth impact that can result from induced employment, which is not always sufficiently incorporated in such planning. A thorough understanding by governments of the relevant contextual variables related to employment from natural resource investments can help both in designing policies and evaluating potential investments.

Conclusion

Large-scale mining and agricultural investments create jobs, but how many and with what impact is not always clear. A deeper understanding of the topic helps policymakers, citizens, and others assess employment claims made in the context of investment in mining or large-scale agricultural projects. It also presents governments with a difficult task: developing approaches that are aligned with best practices but fine-tuned to local contexts, and which improve the direct, indirect, and induced job creation outcomes of investments while addressing the disparate needs and expectations of both investors and citizens. Although complicated, such efforts are important for ensuring that the expected employment benefits of such investments do indeed materialize.