

BOX I.1:

Mining investment and its spillover to the rest of the economy

Mining investment has been highly dynamic in recent years. As has been suggested by different sources of information, the central scenario of this IPoM foresees that mining investment will continue to grow during this and the next few years. This investment will have positive effects on construction activity and other economic sectors, offsetting the weak performance of non-mining investment. It will also contribute to maintaining mining production capacity, although it is not expected to increase it significantly, due to the downward trend in ore grade. This box describes the recent evolution of mining investment and its outlook, and quantifies its impact on the Chilean economy, extending previous analyses (Box I.1, December 2023 IPoM).

Mining investment's recent evolution and outlook

Since 2021, mining investment —in both copper and other mining including lithium— has performed favorably. Measured as a percent of real GDP, in 2023 it reached 6.5%, close to the historical peaks of 2012-2013 (figure 1.17a)¹/. Firm-level microdata indicate that this strong dynamism would have persisted during the first half of 2024, driven by copper mining²/. This contrasts with the evolution of investment in the other economic sectors, which is estimated to be around 17% of GDP in the most recent period, below the average of the pre-pandemic years.

In terms of the destination of this investment, the microdata suggest that it has been concentrated in projects to extend the useful life of existing mining deposits; in desalinization plants linked to the water shortage affecting the northern macro-zone of the country; and in maintenance services associated with extraction operations (figure I.17b). Accordingly, it is estimated that the increased investment will contribute to reduce costs and maintain mining production capacity, although no significant increase is expected in the latter.

Various indicators suggest that mining investment will continue to expand strongly in the coming years. According to information from Cochilco, the Capital Goods Corporation (CBC) and the Office of Major Projects (OGP), the average dollar amount of mining investment between 2025 and 2027 will be around US\$1.7 billion higher than in 2024 (figure I.18a). This increase is concentrated in just a few projects. It is worth noting that the surveys cover a portion —about one third— of the mining investment in the national accounts.

^{1/} Corresponds to gross fixed capital formation (GFCF). For 2023, the nominal estimate of mining investment is preliminary based on the notes to the financial statements on acquisitions of property, plant, and equipment, which was contrasted and/or supplemented with GFCF data by asset type from the national accounts. Nominal data were deflated using the quarterly national accounts investment price indexes. ²/ Sector-level official investment figures are available with a two-year lag. To review the methodology for obtaining the information from microdata, see Díaz et al. (2024).

³/ In copper mining, these projects include the Nueva Centinela, Quebrada Blanca, Los Bronces, Collahuasi and Santo Domingo upgrading and development initiatives. The recent announcement of the US\$7.5 billion expansion of the El Abra mine, to be executed starting in 2027, would provide an additional boost to medium-term investment prospects. Regarding lithium, the survey of the Capital Goods Corporation (CBC) includes two initiatives to increase SQM's production capacity, while OGP's information contains the Blanco project for US\$626 million.



Aggregate and sectoral impact of the mining investment increase

Beyond the implications for the mining sector production, the increase in mining investment has a positive impact on the activity of those economic sectors that provide goods and services for the sector's GFCF. To measure this impact and determine the most favored sectors, Andalaft et al. (2024) estimate the linkages of mining investment in aggregate and sectoral economic activity, using firm-level microdata for the year 2023 and information from the national accounts. This captures the composition of the most recent mining projects in the economy's investment and intermediate sales networks.

According to this study, the spillover effects are important: an increase in mining investment as is expected for 2024-2026 (20%) raises GDP by 0.75 percentage points (pp). About two thirds of this effect is generated by the increase in construction and works, and the remaining third is explained by purchases of machinery and equipment.⁴/ Among the most favored economic sectors, construction stands out, with an increase in activity accounting for nearly half of the increase in GDP. Positive impacts are also observed in wholesale and retail trade, business services and manufacturing, among other activities (figure I.19b).

An additional estimation using only national accounts information —GFCF by economic activity, supply and use tables and input-output matrix—for the year 2021, suggests that the aforementioned increase in mining investment raises GDP by around 0.6pp, a somewhat smaller impact than suggested by the microdata. Likewise, the sectoral linkages determined by the input-output matrix show a sectoral distribution similar to the previous one (Avilés et al., 2024).

Conclusions

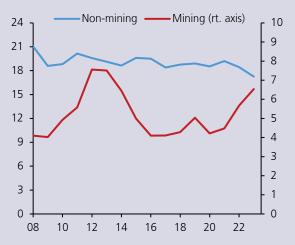
The dynamics of mining investment in recent years has been a relevant source of growth for the Chilean economy. The central scenario of this IPoM forecasts that mining GFCF will grow by around 20% cumulatively in real terms between 2024-2026. This would partly offset the weakness of non-mining investment, which continues to lag according to incoming data.

This outlook for mining investment is not free of risks in either direction. On the one hand, there is the usual uncertainty regarding companies' investment schedules and the approval of environmental and/or sectoral permits. On the other hand, factors such as the evolution of the Chinese economy, global financial conditions, and the global energy transition —most importantly the role of lithium and green hydrogen in the countries' decarbonization process could affect the companies' investment plans.

^{4/} This result assumes that all the other variables are constant, including mining sector productivity.



FIGURE I.17a) GFCF: Mining and other sectors (*) (percent of GDP, real series)



(*) The 2023 data are preliminary estimates. Sources: Central Bank of Chile and Internal Revenue Service (SII).

b) Detail of mining purchases according to microdata (billions of Chilean pesos, real series)

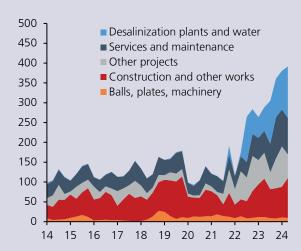
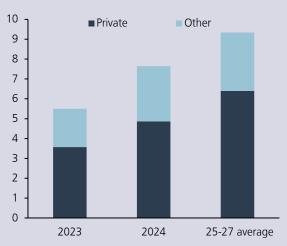
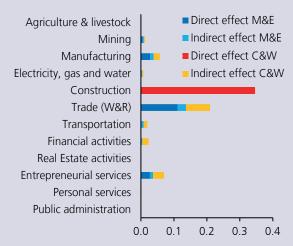


FIGURE I.18
a) Mining investment expectations

(billions of dollars)



b) Mining investment spillover (*) (contribution to GDP growth, percent of GDP)



(*) Direct effect is impact on a firm's value added from sales of capital goods to the mining sector. Indirect effect is the impact on a firm's value added from sales of materials to capital goods producing sectors that supply the mining sector. Trade (W&R): Wholesale and retail trade.

Sources: Andalaft et al. (2024), Cochilco, CBC and OGP.

CBC: Capital Goods Corporation. OGP: Office of Large-Scale Projects.