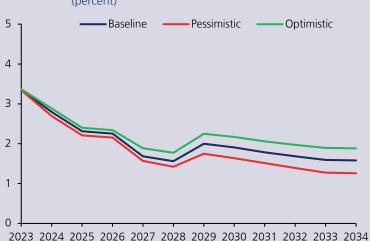
## BOX II.1:

## Trend GDP

Trend GDP growth is a variable related to the economy's medium- and long-term growth capacity'/. The current estimate does not show major differences with respect to the estimate made in <u>December 2023</u>. Thus, an average expansion of 1.8% is estimated for the period 2025-2034 (figure II.12). The latter value is 0.1 percentage points (pp) lower than the estimate for the period 2024-2033, which mainly reflects the time lag of one year for the calculation of the relevant average. This, in a context in which non-mining trend growth declines over time due to the gradual decrease of the labor participation recovery to prepandemic levels<sup>2</sup>/.

The estimation considers two alternative scenarios that yield similar trajectories for non-mining trend growth. The pessimistic scenario considers a less favorable convergence of variables such as hours worked and participation rates to OECD levels. The optimistic one considers a more favorable convergence of these variables to OECD levels and higher investment in non-mining projects associated with the energy transition, which could have significant impacts on the level of investment in the next decade.





(\*) These projections include actual data on hours worked and the labor force in 2023. The 2022 National Socioeconomic Characterization Survey (CASEN) is used to construct the education quality index. For more details, see <u>Bauducco et al. (2024)</u>. Source: Central Bank of Chile.

<sup>1</sup>/ The concept of trend GDP differs from potential GDP, since the latter refers to the level of GDP consistent with stable inflation and is therefore the appropriate measure of the activity gap associated with inflationary pressures in the short term. Since trend GDP is related to the medium-term growth capacity of the economy, in the long run both measures converge to the same number. However, in the short term, transitory elements that alter productive capacity, such as temporary productivity shocks and factor use limitations, can generate differences between the two measures. Hence the importance of analyzing them separately (for more details, see Chapter 1 in <u>Central Bank of Chile, 2017</u>).

<sup>2</sup>/ See Bauducco et al. (2024).



As usual, the estimation of trend growth separates the GDP between mining and non-mining sectors. For the non-mining sector, the methodology is based on a Cobb-Douglas type production function, in which trend growth can be decomposed as follows:

 $\Delta Y = \Delta TFP + \alpha \ \Delta L + (1-\alpha) \ \Delta K$ 

Where  $\Delta Y$  is trend GDP growth,  $\Delta TFP$  is trend total factor productivity growth,  $\alpha$  is the labor share of GDP (assumed to be equal to 0.5, as in previous exercises),  $\Delta L$  is trend growth of the labor factor —labor force per hours worked per human capital index— and  $\Delta K$  is capital growth.

In this exercise, the contribution of the labor factor to non-mining GDP growth in the 2025-2034 decade is 0.4pp (table II.5). The contribution of labor is 0.1pp lower than that estimated in 2023 for the 2024-2033 decade. This is mainly due to the lower incidence of the recovery of labor participation to pre-pandemic levels in the coming years. This estimate also incorporates the finding that those aged 55 years and older at the time of the pandemic would not recover their labor force participation, in line with the analysis presented in the <u>March 2024 IPOM</u>. However, this population group is relatively small in terms of the labor force, so the effect of this adjustment on trend growth is limited<sup>3</sup>/.

The contribution of capital to non-mining GDP growth in the 2025-2034 period is 1.1pp, similar to that estimated in 2023. This factor is also somewhat influenced by investment in non-mining projects associated with the energy transition, in addition to other considerations already included in the past estimate.

## TABLE II.5 TREND GDP FORECAST (\*) (percent)

	Trend growth			Contributions to non-mining GDP		
	Non-mining GDP	Mining GDP	Total GDP	Capital	Labor	TFP
2025 - 2034	1.8	1.9	1.8	1.1	0.4	0.35

(\*) Mining accounts for 12% of total GDP. Source: Central Bank of Chile.

To obtain the trend growth of total GDP, a growth projection for the mining sector is added, which is estimated to be 1.9% per year in the 2025-2034 decade. This value is 0.4pp higher than that used in 2023 for the 2024-2033 decade, reflecting the improved outlook for the mining sector, mainly due to lithium production<sup>4</sup>/. With this assumption, total trend GDP growth is 1.8% in the period 2025-2034.

Finally, for the purposes of calculating the medium-term projections of this IPoM, the average non-mining trend GDP growth for the five-year period 2025-2029 is used, which corresponds to 2.0%. This time horizon is the appropriate one to feed the medium-term projections, given that longer horizons correspond to an economy whose productive factors are projected to be significantly different from those relevant for the medium-term projection horizon.

<sup>3</sup>/ The impact of the pandemic is assumed to be permanent in the participation of the cohort aged 55 years and older in 2020. Cohorts entering that age group in the post-pandemic period would show participation similar to that of these groups in the pre-pandemic period. See <u>Bauducco *et al.* (2024)</u>.

<sup>4</sup>/ The trend growth scenario presented in this Box does not consider material structural changes in the global environment that Chile could face in the coming years. In particular, the potential effects of the transition to green energies that could affect the growth of the mining sector are not considered, as their effect is still uncertain.