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Assessing global potential output growth: April 2026

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Abstract

We present the annual update of the Bank of Canada staff estimates for global potential output growth. Growth in global potential output is expected to remain broadly stable over the projection horizon at just above 3%, underpinned by the general strength in trend productivity growth, including a boost from the adoption of artificial intelligence tools. Partially offsetting these gains are higher tariffs and persistent uncertainty about trade policy that hamper productivity and suppress capital deepening. In addition, population aging slows growth in trend labour input across all regions. These estimates served as key inputs to the analysis supporting the April 2026 *Monetary Policy Report*.

Topics: Econometric, statistical and computational methods; Real economy and forecasting; Demographics and labour supply; Digitalization and productivity

JEL codes: E1, E2, F0, F1, O33, O4

Introduction

We present the annual update of Bank of Canada staff estimates of growth in global potential output. We produce these estimates using a growth accounting framework centred on a Cobb-Douglas aggregate production function, considering growth in:

- region-specific capital stocks
- trend labour input (TLI)
- trend total factor productivity (TFP) that is calculated from Solow residuals

More details can be found in the **Appendix**.

The 2026 assessment leverages new data and forecasts for capital stock, population and labour market variables. It also considers external forecasts, policy changes and other developments since the previous assessment in April 2025. The estimates of growth in global potential output that we provide served as key inputs to the April 2026 *Monetary Policy Report*.

At the time of the 2025 assessment, the major shift in US trade policy had led to a high level of uncertainty. As a result, Bank staff produced two illustrative scenarios with alternative views about the potential paths for US tariffs and trade policy.[1] In this analysis, we compare the latest estimate of global potential output with Scenario 1 from the 2025 assessment, in which most tariffs are negotiated away, but uncertainty remains elevated.[2]

Overview

Growth in global potential output is expected to remain broadly stable at just above 3% over the projection horizon (**Table 1**, **Chart 1**). This pace of growth is close to that observed in 2024 and 2025 but remains below its pre-pandemic trend.

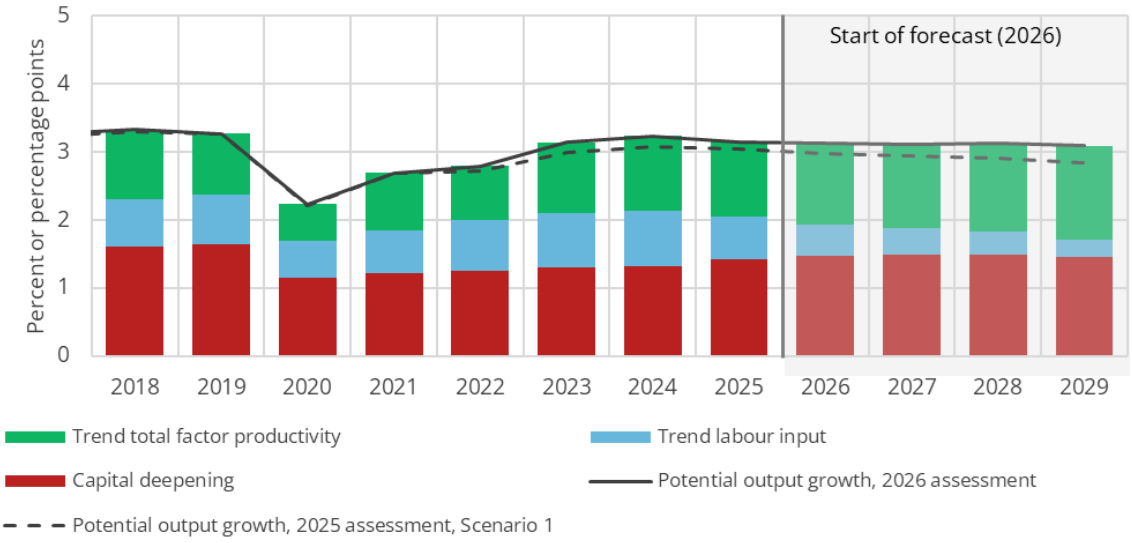
- Growth is expected to be underpinned by the general strength in trend productivity growth, including a boost from the broader adoption of artificial intelligence (AI).
    - Globally, TFP growth increases as AI affects an expanding share of tasks and leads to greater productivity gains. While the productivity benefits of AI are embedded to some extent in every region, the AI-related investment boom remains concentrated in the United States and provides an additional boost to US potential growth through capital deepening.

[1] For more, see Boulanger et al. (2025).

[2] At the time of writing, the impact of the war in the Middle East remains highly uncertain. The qualitative implications of this conflict on global potential output are discussed in the **Risks** section.

- Growth is anticipated to be partially offset by higher tariffs and persistent uncertainty about trade policy, which may hamper productivity and suppress capital deepening.
- Population aging slows TLI growth in all regions.
- Capital accumulation unrelated to AI is expected to continue at a roughly stable pace globally.

Chart 1: Global contributions to growth by input, annual data



Note: Scenario 1 from the 2025 assessment was one of two scenarios Bank of Canada staff developed as part of the April 2025 *Monetary Policy Report*. In that scenario, most US tariffs are negotiated away, but uncertainty remains elevated.
Source: Bank of Canada calculations, estimates and projections
Last data plotted: 2029

Table 1: Projections for growth in potential output
Change in annual rates (%)

	Share of global GDP* (%)	Projected growth (%)					
		2024	2025	2026	2027	2028	2029
United States	14.8	2.9 (2.7)	2.4 (2.4)	2.3 (2.3)	2.4 (2.2)	2.4 (2.2)	2.4
Euro area	11.5	1.2 (1.1)	1.1 (1.1)	1.2 (1.0)	1.2 (1.0)	1.2 (1.0)	1.2
Japan	3.3	0.8 (0.6)	0.7 (0.6)	0.6 (0.6)	0.6 (0.6)	0.6 (0.6)	0.7
China	19.3	4.5 (4.6)	4.5 (4.4)	4.3 (4.2)	4.3 (4.0)	4.2 (3.9)	4.1
Oil-importing EMEs ‡	34.2	4.0 (3.8)	4.0 (3.9)	4.1 (4.0)	4.1 (4.0)	4.2 (4.0)	4.2
Rest of the world §	16.9	2.5 (2.2)	2.4 (2.2)	2.3 (2.1)	2.2 (2.0)	2.2 (2.0)	2.1
World	100	3.2 (3.1)	3.2 (3.0)	3.1 (3.0)	3.1 (2.9)	3.1 (2.9)	3.1

Note: Numbers in parentheses are projections based on Scenario 1 used in both the April 2025 *Monetary Policy Report* and the 2025 assessment of growth in potential output.

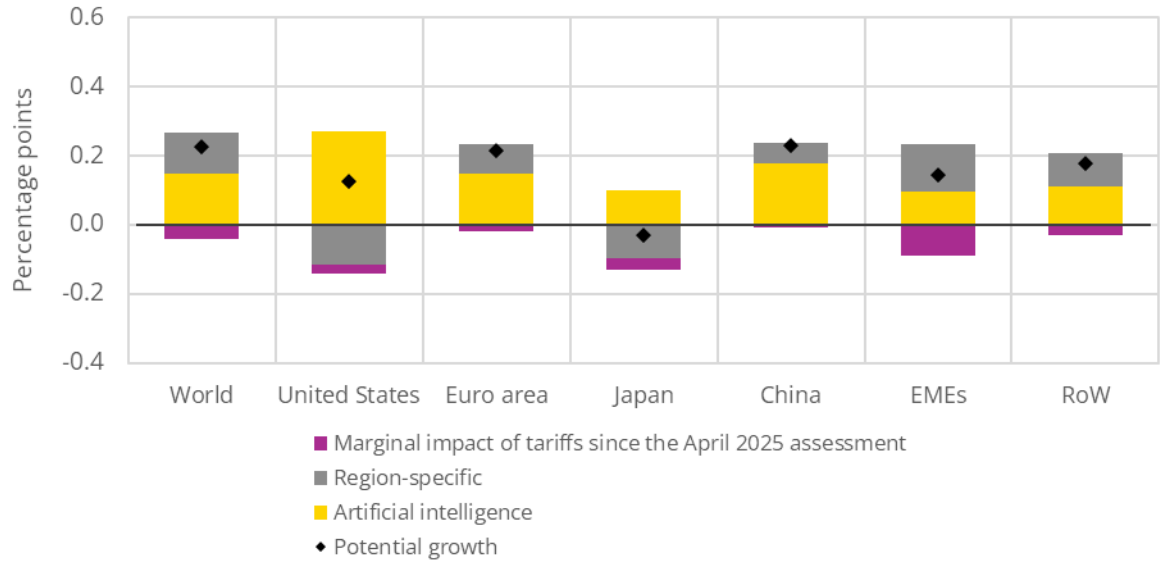
* Shares of gross domestic product (GDP) are based on International Monetary Fund (IMF) estimates of the purchasing-power-parity valuation of country GDPs for 2024 from the IMF's October 2025 *World Economic Outlook*. The individual shares may not add up to 100 due to rounding.

‡ The oil-importing emerging-market economies (EMEs) grouping excludes China. It is composed of large EMEs from Asia, Latin America, the Middle East, Europe and Africa (such as India, Brazil and South Africa) as well as newly industrialized economies (such as South Korea).

§ "Rest of the world" is a grouping of other economies not included in the first five regions. It is composed of oil-exporting EMEs (such as Russia, Nigeria and Saudi Arabia) and other advanced economies (such as Canada, the United Kingdom and Australia).

Compared with the 2025 assessment, annual growth in global potential output has been revised up modestly by around 0.2 percentage points (pps) over 2026–28 (Chart 2). This revision is widespread, including a stronger pace of potential growth in China, the euro area and the United States.

Chart 2: Contributions to changes to average annual potential growth, 2026–28 relative to April 2025



Note: EMEs is emerging-market economies, and RoW is rest of the world. RoW is a grouping of other economies not included in the first five regions. It is composed of oil-exporting EMEs (such as Russia, Nigeria and Saudia Arabia) and other advanced economies (such as Canada, the United Kingdom and Australia).

Source: Bank of Canada calculations, estimates and projections

The largest driver of the upward revision is a greater boost from AI. The 2025 assessment introduced a modest boost to TFP growth from AI in major advanced economies. Since then, there have been advances in AI capabilities and adoption, as well as a growing collection of analysis on its economic implications. Together, this suggests that the scope of its impact on potential output growth will be larger and more widespread across regions than previously expected.

- We apply the methodological framework in Acemoglu (2024) to calibrate the impact of AI on US TFP growth. To do this, we combine the AI-impacted task share of gross domestic product (GDP) with the average labour cost savings in these tasks. However, we adopt alternative and slightly larger estimates from Acemoglu (2024) for both the scope of tasks covered by AI and the productivity gains from using AI for these tasks.[3]
- We calibrate the impact of AI on TFP growth in each overseas region relative to the US impact. We do this by using external cross-country comparisons of various aspects of AI.[4] Overall, this approach suggests that the impact of AI on productivity is largest in the

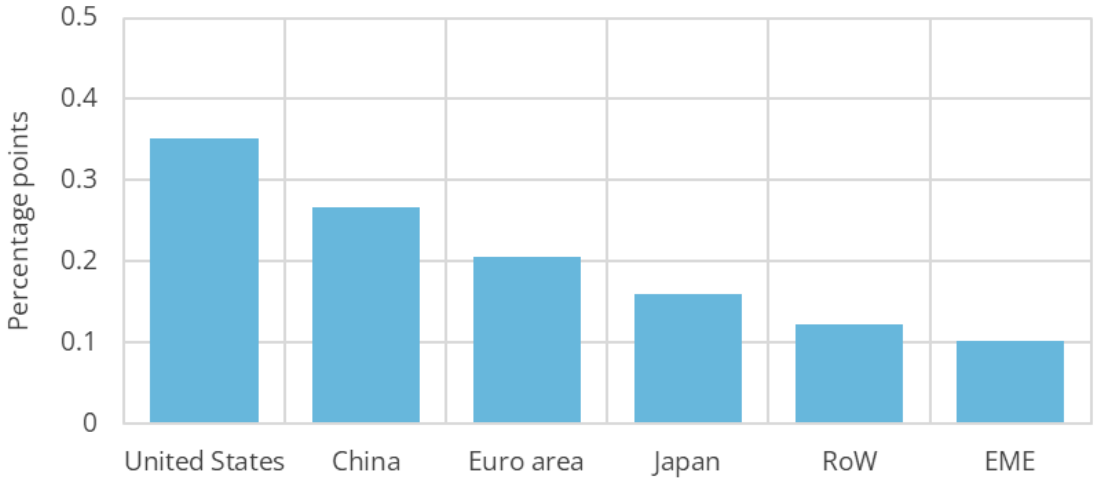
[3] Acemoglu (2024) calculates TFP gains over 10 years by multiplying four components in a Hulten framework: the GDP shares of tasks that are exposed to AI, the share of these tasks for which switching to AI would make them economically profitable, the average cost savings from AI adoption and the labour share of income adjusted for AI exposure. We adopt a larger value for the first component from Pizzinelli et al. (2023), corresponding to all tasks where AI is a substitute and half of the tasks where AI is a complement for labour. We then take the midpoints of ranges for the second and third components from Aghion and Bunel (2024). For the final component, we adjust the labour share in our framework using information in Acemoglu (2024).

[4] External comparisons look at a variety of AI aspects, such as innovation and diffusion. For example, the AI Economic Impact Index by Capital Economics provides a forward-looking measure that ranks each economy's ability to realize the long-term benefits of AI.

United States, followed in descending order by China, advanced economies and emerging-market economies (**Chart 3**).[5]

- The negative impact of US tariffs partially mitigates the AI-driven boost to productivity over 2026–28. Compared with Scenario 1 from the 2025 assessment, the drag on global growth from tariffs is expected to be less than 0.1 pp per year.[6]

Chart 3: Average annual impact on growth in total factor productivity from artificial intelligence, 2026–29



Note: EMEs is emerging-market economies, and RoW is rest of the world. RoW is a grouping of other economies not included in the first five regions. It is composed of oil-exporting EMEs (such as Russia, Nigeria and Saudia Arabia) and other advanced economies (such as Canada, the United Kingdom and Australia).

Source: Bank of Canada calculation, estimates and projections

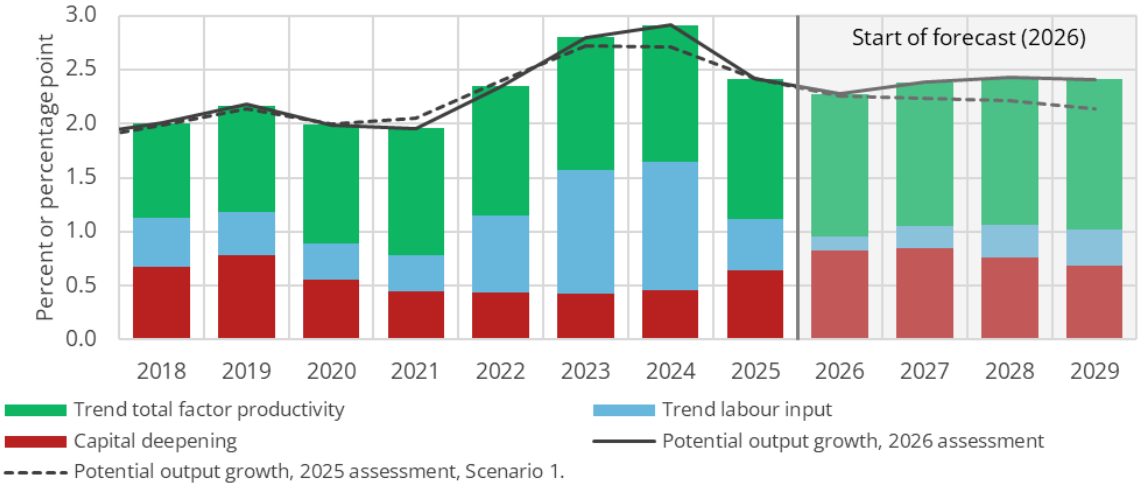
Region-specific developments

In the **United States**, potential output growth slows from 2.9% in 2024 to 2.3% in 2026, before stabilizing around 2.4% by 2029 (**Chart 4**). For the 2026–29 period, reduced immigration, an aging population and tariffs exert a drag on potential output growth that is more than offset by AI-related improvements in capital deepening and TFP.

[5] This relative order is consistent with the estimated impact of AI on Canada's productivity growth in Chernoff et al. (2026).

[6] Impacts are estimated based on current trade measures, including the 10% global duties under Section 122 of the Trade Act of 1974 and sector-specific tariffs under Section 232 of the Trade Expansion Act of 1962.

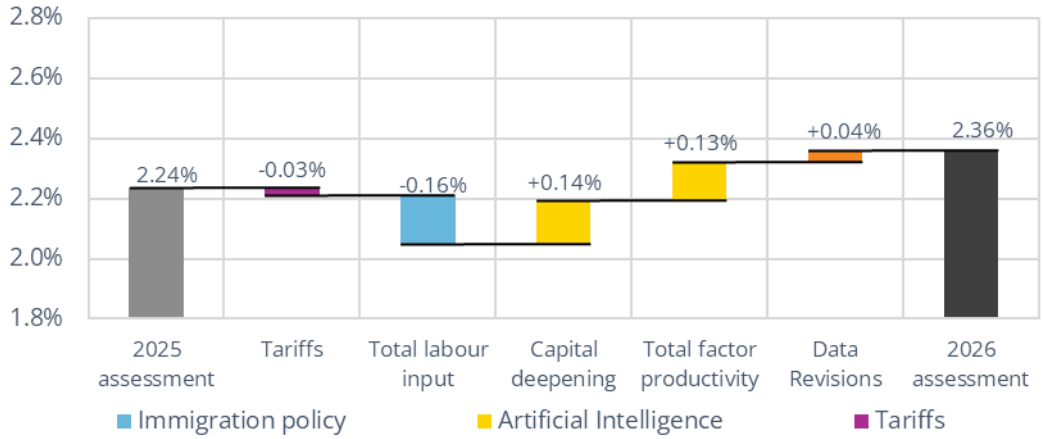
Chart 4: Contributions to potential GDP growth, annual data



Note: Scenario 1 from the 2025 assessment was one of two scenarios Bank of Canada staff developed as part of the April 2025 *Monetary Policy Report*. In that scenario, most US tariffs are negotiated away, but uncertainty remains elevated.
Source: Bank of Canada calculations, estimates and projections
Last data plotted: 2029

- A large influx of undocumented immigrants raised potential output growth in 2022–24. Tougher immigration policy reverses that trend, reducing potential output growth in 2025–26. Net immigration is expected to decline from 1.9 million people in 2024 to around 400,000 people in 2025 because of tighter measures at borders to prevent entry and deportations slowing growth in the labour force. Consistent with analysis by the Congressional Budget Office (2026), we now expect net immigration to gradually recover from 600,000 people in 2026 to 1 million by 2029 as immigration continues to normalize toward its pre-pandemic averages and current deportation policies come to an end. However, population aging keeps TLI growth below pre-pandemic rates.
- Major US tech firms are expected to invest heavily in AI capacity in 2026–27, contributing to a pickup in potential output growth through capital deepening. AI is also expected to boost annual growth in TFP by around 0.4 pps over the next 10 years in the United States.
- Tariffs are expected to lower the level of potential output by 0.2% by 2029, since they stifle competition, increase input costs and lead to resource misallocation and efficiency losses.
- **Compared with the 2025 assessment, annual potential output growth is 0.1 pp higher on average in 2026–28 (Chart 5).** The combined effects of greater capital deepening and productivity improvements from AI, along with a gradual pickup in immigration, more than offset the downward pressure from tariffs and population aging.

Chart 5: Change in annual average potential output growth over 2026–28 from the 2025 assessment



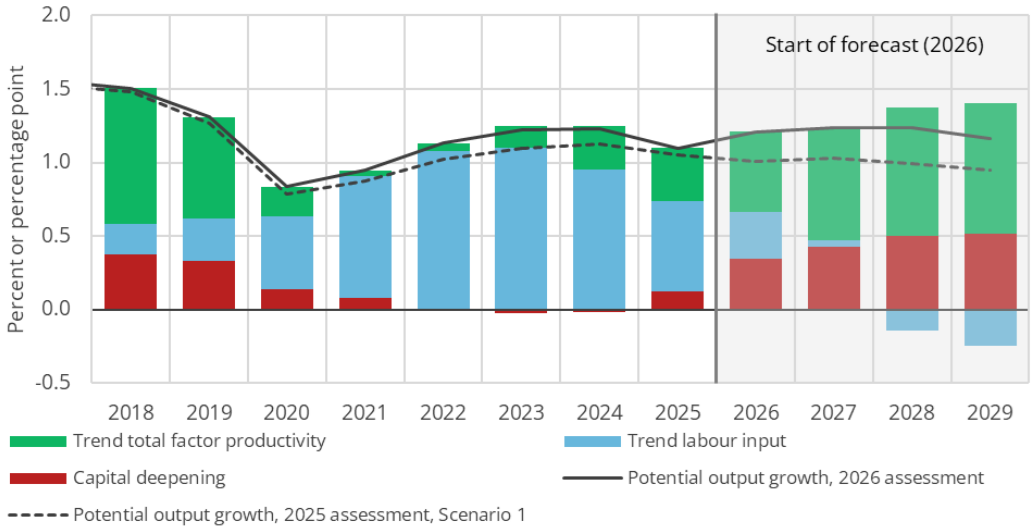
Note: The figure for 2025 assessment is based on Scenario 1 used in that assessment.
Source: Bank of Canada calculations

In the **euro area**, potential output growth is expected to remain close to 1.2% over the projection horizon, supported by rising TFP growth and capital deepening and partly offset by slowing TLI growth (**Chart 6**).

Widening AI diffusion supports rising growth in TFP. For example, results from the European Central Bank's Consumer Expectations Survey show that the share of employees adopting AI increased from 26% in 2024 to 40% in 2025.[7] Increases in capital deepening reflect announced increases in fiscal spending, led by Germany's expanding defence budget. The contributions from TLI growth weaken as the population continues to age and the temporary boost to the population from Ukrainian refugees dissipates.

[7] For more, see Lane (2026).

Chart 6: Contributions to the euro area's potential GDP growth, annual data



Note: Scenario 1 from the 2025 assessment was one of two scenarios Bank of Canada staff developed as part of the April 2025 *Monetary Policy Report*. In that scenario, most US tariffs are negotiated away, but uncertainty remains elevated.
Source: Bank of Canada calculations, estimates and projections
Last data plotted: 2029

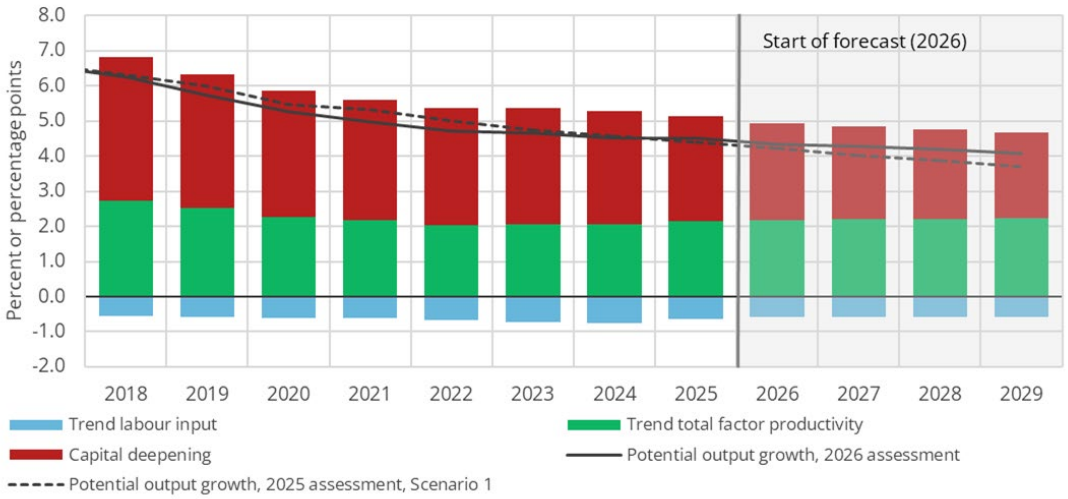
- **Compared with the 2025 assessment**, the annual pace of potential output growth is 0.2 pps higher on average over 2026–28, primarily due to a stronger boost to TFP growth from AI adoption. This revised impact from AI brings our estimates of the annual AI effect on TFP growth to 0.2 pps, broadly in line with the European Central Bank's scenarios assuming slower AI adoption.[8] The increase in potential output growth also reflects small upward revisions to TLI growth, following stronger-than-expected labour data, and to capital deepening, incorporating updated information about fiscal spending. A very small offset comes from a small drag on productivity due to US tariffs.

In **China**, potential output growth is expected to ease gradually over the projection horizon (**Chart 7**). The contribution from capital deepening softens as growth in capital stock decelerates, with high levels of public debt and efforts to improve firm profitability in some sectors limiting the scope for further policy-fuelled investments. Nevertheless, capital deepening is the main driver of growth in potential output as exports and the manufacturing sector continue to underpin China's growth model. While TLI growth remains negative due to an aging population, it does not weaken further due to reforms to raise the retirement age. Relatively stable trend TFP growth is supported by:

- growing development and adoption of AI technologies
- industrial policy focused on high-tech industries

[8] European Central Bank staff estimate that relatively fast AI adoption would boost annual TFP growth by between 0.3 pps and 0.4 pps over the coming decade. Slower adoption, similar to what has been observed in the past with general-purpose technologies, would instead lead to annual increases in TFP growth of around 0.2 pps (Lane 2026).

Chart 7: Contributions to China's potential GDP growth, annual data



Note: Scenario 1 from the 2025 assessment was one of two scenarios Bank of Canada staff developed as part of the April 2025 *Monetary Policy Report*. In that scenario, most US tariffs are negotiated away, but uncertainty remains elevated.
Source: Bank of Canada calculations, estimates and projections
Last data plotted: 2029

- **Relative to the 2025 assessment**, the annual pace of potential output growth is 0.2 pps higher on average over 2026–28. This upward revision primarily reflects higher TFP growth, itself largely driven by a stronger boost from AI technologies. Rapid advances in the performance of China's AI models as well as high rates of AI adoption are among the reasons for the AI-related boost. US tariffs provide only a very small negative offset because the majority of US tariffs imposed on China in 2025 were already embedded in Scenario 1 used in the 2025 assessment.

For the remaining regions, potential output growth over 2026–29:

- remains stable around 0.6% in **Japan**, as capital deepening and growth in productivity offset demographic headwinds to TLI
- is expected to be around 4.2% in **oil-importing emerging-market economies** (EMEs), partly supported by productivity growth from ongoing structural reforms and the diffusion and adoption of AI
- is expected to average 2.2% in the **rest-of-the-world** grouping, driven by capital deepening and TLI growth

Relative to the 2025 assessment, the annual pace of potential output growth over 2026–28 is higher on average by 0.1 pp in oil-importing EMEs and by 0.2 pps in the rest-of-the-world grouping, and broadly unchanged in Japan. Productivity growth is stronger across all three regions, reflecting a greater boost from AI. However, stronger productivity growth in Japan is offset by lower TLI growth, which has been revised downward due to weaker-than-expected labour data.

Risks

- **The magnitude of the impacts from AI remains highly uncertain.** On the one hand, the impact may be larger than anticipated if:
    - AI adoption occurs faster than expected
    - the scope of tasks impacted by AI expands
    - costs of adoption diminish further
    - AI sparks innovation in sectors beyond its own (e.g., discovering new pharmaceuticals or re-engineering of existing machinery)

  On the other hand, the impact may be smaller than expected if AI adoption stalls or AI leads to a structural decline in the labour share of income. Finally, investment in the sector could decline rapidly if realized returns from AI are less than expected.

- While US tariffs and related trade uncertainty are weighing on exports and investment, **the magnitude of the global trade restructuring from the shift in US trade policy remains uncertain**. For example, the resource reallocations currently underway may lead to larger-than-expected productivity losses in the short-to-medium term. However, this may boost investment as countries increase productive capacity domestically to enhance self-reliance or benefit from new trade arrangements.
- **Geopolitical tensions remain an important risk** to growth in potential output. A prolonged conflict in the Middle East and destruction of energy infrastructure could restrict oil and gas production capacity in Gulf states in the medium term, constraining global production. On the other hand, heightened geopolitical tensions may lead to larger investments in the energy or defence sectors.

Appendix: Methodology for estimating potential output

We estimate growth in potential output for every region using a growth accounting framework centred on a Cobb-Douglas aggregate production function. This framework assumes the following relationship between a country's aggregate output and each factor of production (where $\%\Delta x$ denotes the percentage change in variable x):

$$\%\Delta Y_t = \alpha\, \%\Delta \left(\frac{K_t}{L_t}\right) + \%\Delta L_t + \%\Delta TFP_t\,, \tag{1}$$

where Y is real gross domestic product (GDP), K/L is real capital stock per worker, L is labour input, TFP is total factor productivity and α is the share of capital income in output.

We construct country-level capital stocks using the perpetual inventory method based on:

- national accounts data on gross fixed capital formation or detailed asset-level investment data
- data on average depreciation rates and prices of various asset types[9]

Potential output is evaluated based on actual capital stocks because it determines the current limits on an economy's productive capacity.

Labour input—the total number of hours worked in the economy—is calculated as the product of four components: average work hours per person employed, the working-age population, the labour force participation rate and 1 minus the unemployment rate.

Finally, we calculate TFP growth as the Solow residual in equation (1) using national accounts data on real GDP growth. Thus, TFP growth captures contributions to productivity from many factors, including global improvements in technology, efficiency gains resulting from domestic innovation, structural reforms, terms-of-trade shocks, financial and geopolitical crises, and human capital accumulation.[10]

To abstract from the business cycle, we use trend levels of labour input and TFP to construct potential GDP growth as the sum of the respective input contributions according to the decomposition in equation (1). This notion of potential output coincides with production at full capacity—that is, the level consistent with full employment and long-run TFP.

[9] Where we use national accounts data on investment, we calculate geometric depreciation rates for the total capital stock as the weighted average of depreciation rates across underlying asset classes.

[10] For regions where human capital is estimated separately from the Solow residual—including China, oil-importing emerging markets economies and the rest-of-the-world grouping—the reported estimates of potential TFP include contributions from human accumulation.

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