

The background features a series of overlapping rounded rectangles in shades of orange and yellow, creating a layered, abstract effect. The rectangles are positioned on the left side of the slide, with the largest one being a bright yellow and the others being various tones of orange.

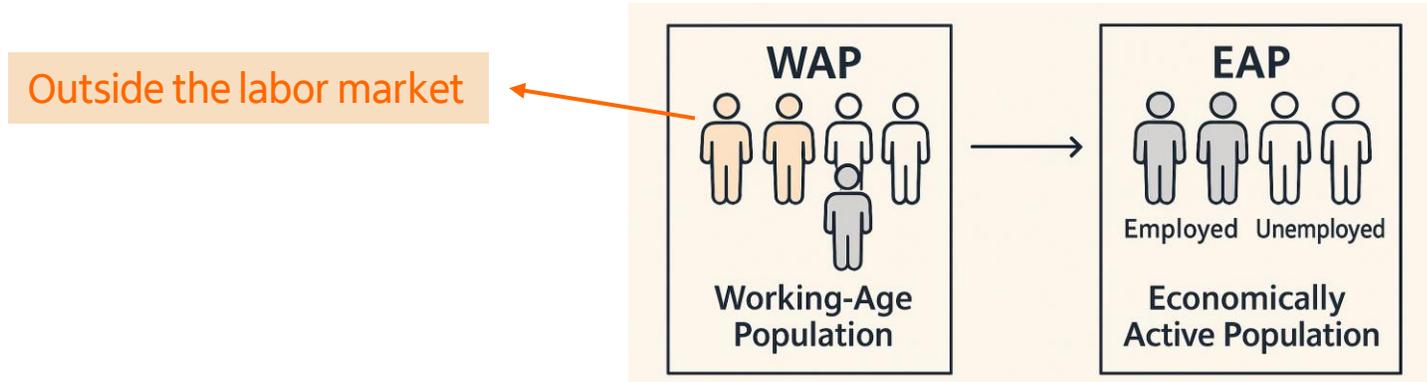
Macro Vision: Labor market topics

Natalia Cotarelli & Marina Garrido

Labor market topics:

- **Why is unemployment so low?**
 - Of the ~6pp drop (vs. 11.5% pre-pandemic), roughly –2.5pp is structural (labor reform, demographics, and app-based work) and –3.5pp is cyclical (growth above potential and income transfers).
- **How tight is the labor market?**
 - Structural factors justify a lower NAIRU (from 10% to closer to 7.5%–8.0%). Unemployment below 6% still signals a heated labor market.
- **Are there signs of moderation? Will it cool quickly?**
 - Signals are still limited.
 - With activity moderating, the employment-to-population ratio should decelerate (cyclical components), but a reversal may take time (especially participation).
- **Wage and labor income dynamics**
 - With a tight labor market, wages are likely to remain under pressure. Labor income should continue supporting consumption.
 - There is some evidence of labor shortages in the construction sector, but not in the services sector.

How Is the Unemployment Rate Calculated?



$$\text{Unemployment Rate} = \frac{\text{Unemployed } (U)}{\text{Labor Force } (LF)}$$

If

$$\text{Participation Rate (LFPR)} = \frac{EAP}{WAP}$$

Then,

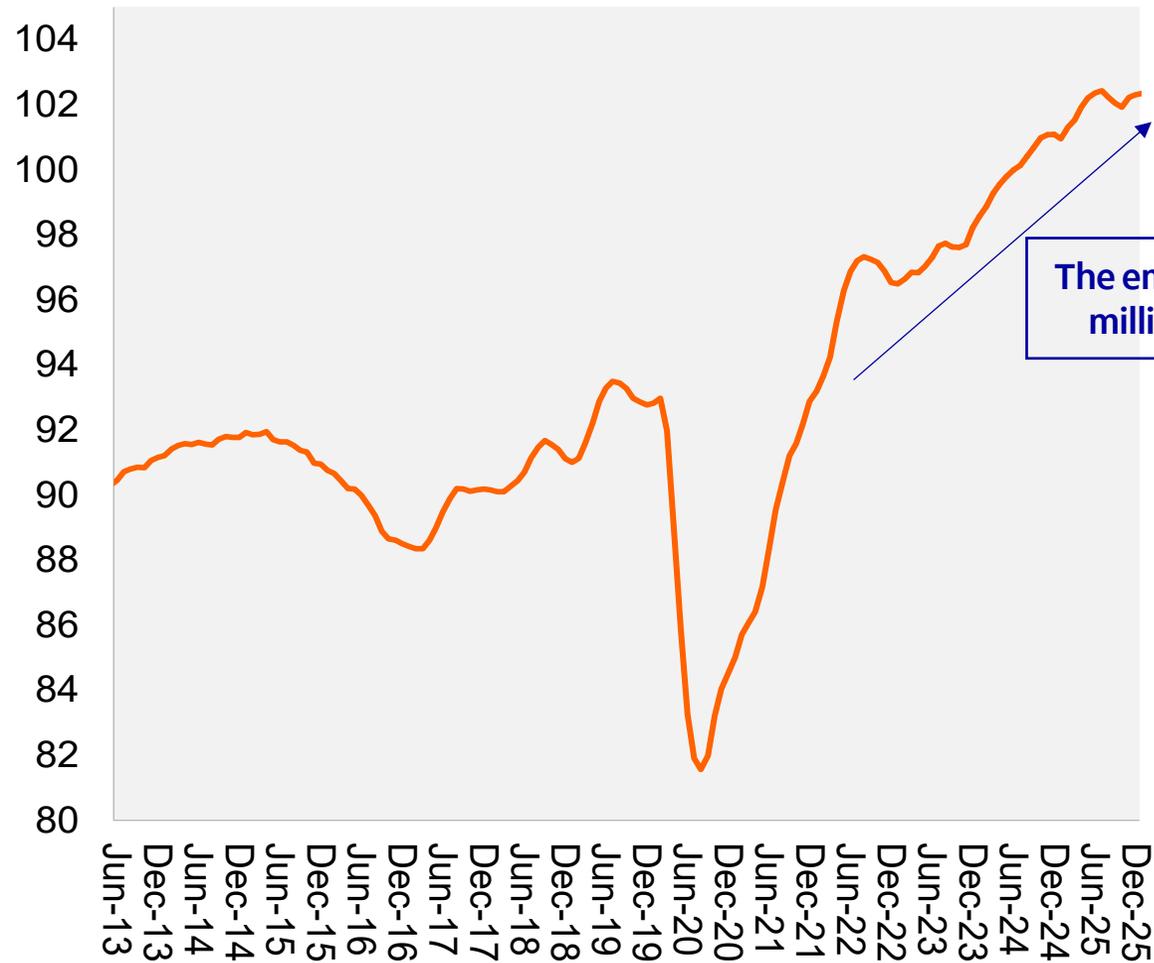
$$\text{Unemployment Rate} = \frac{U}{LF} = \frac{EAP - \text{Employed}}{EAP} = 1 - \frac{\text{Employed}}{EAP} = 1 - \frac{\text{Employed}}{LFPR * WAP}$$

The unemployment rate may fall due to **higher employment** and/or **lower participation rate**

- 1) WAP (Working-age Population): People old enough to work (>14 in Brazil). Within the WAP, some are in the labor force (working or looking for work) and some are not (students, homemakers, retirees without active job search, etc.).
- 2) EAP (Economically Active Population): Includes those employed and those unemployed who looked for a job in the reference period and were available to start working.
- 3) Labor force participation rate (LFPR): % of WAP in the labor market
- 4) Unemployment rate: % of the labor force that is unemployed

Unemployment at Post-Pandemic Lows: Higher employment

Employed Population (thousands, SA)

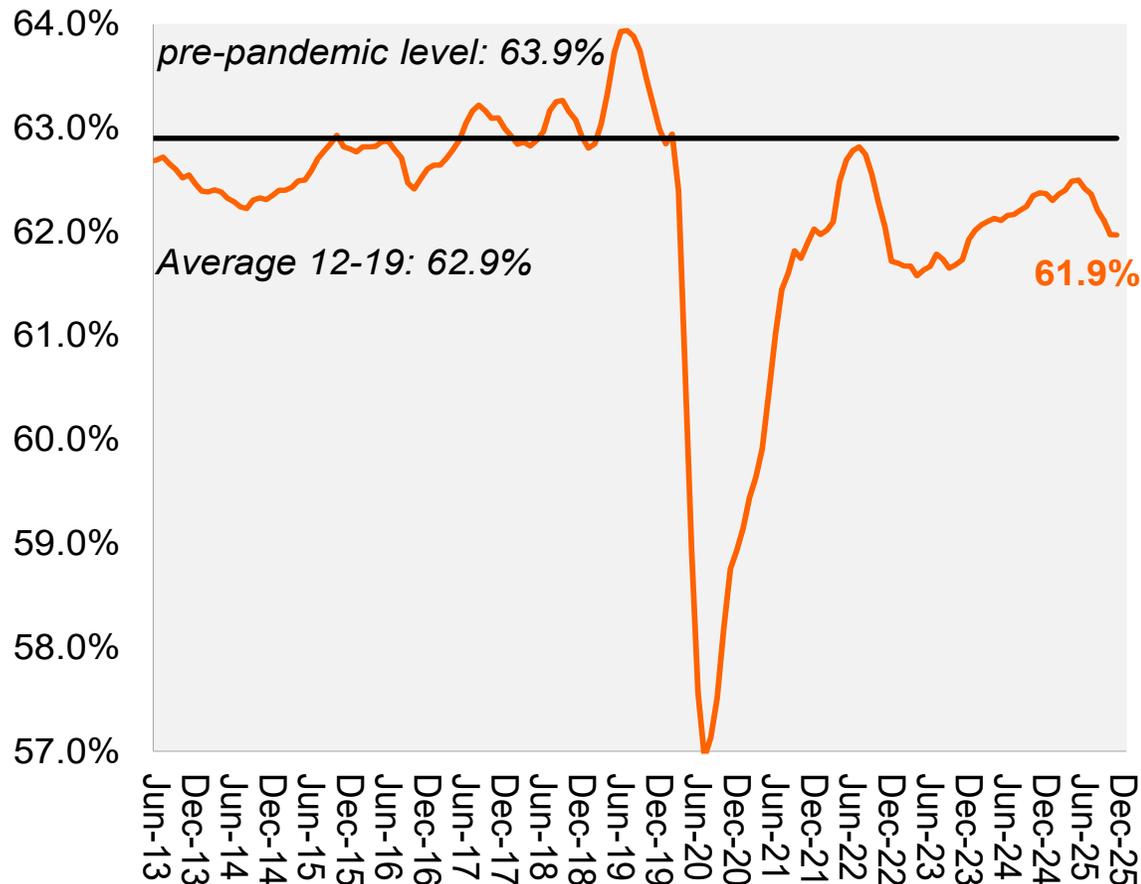


The employed population increased from 92.8 million in Dec/19 to 102.3 million in Dec/25.

Source: IBGE and Itaú

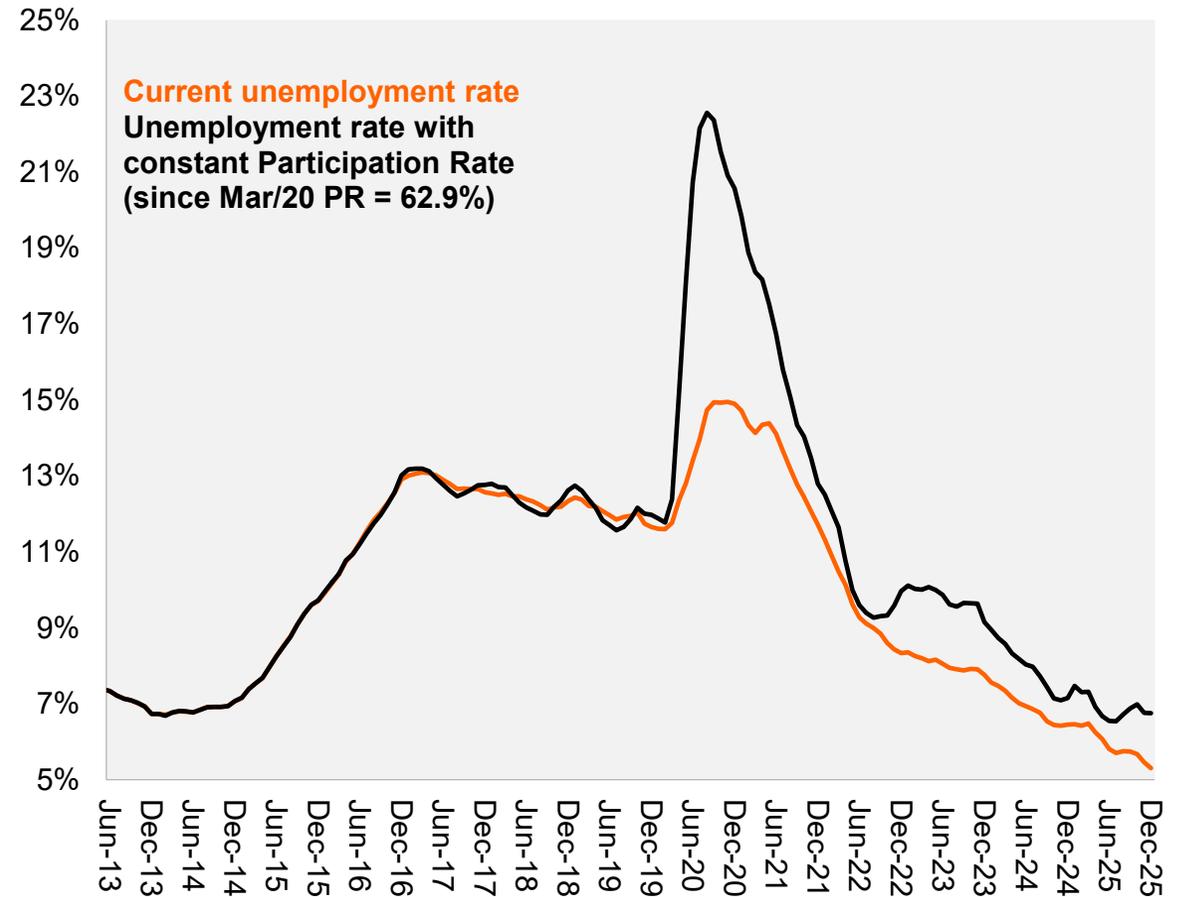
Unemployment at Post-Pandemic Lows: Lower labor force participation rate

Labor Force Participation Rate (%SA)



Source: IBGE and Itaú

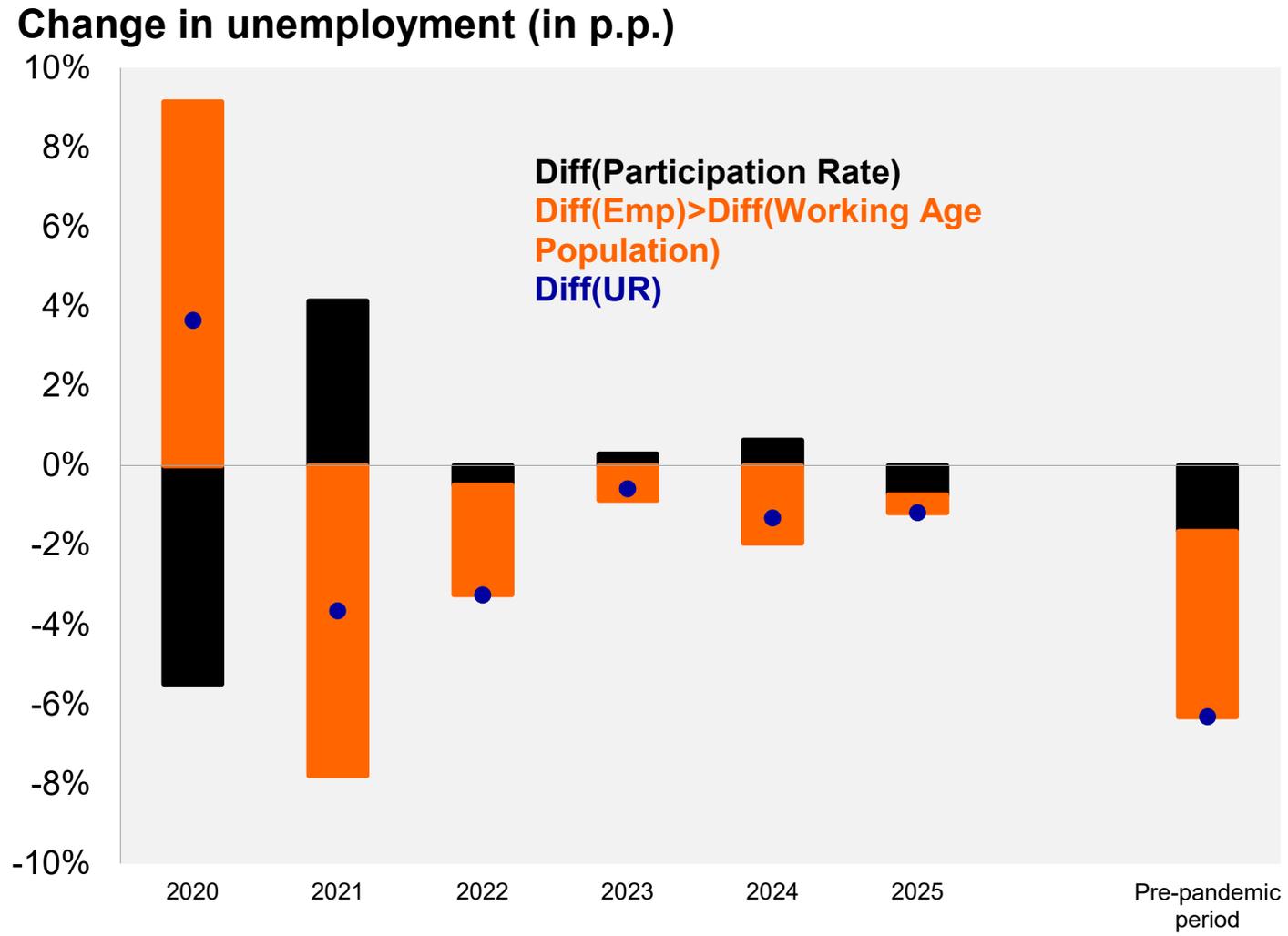
Unemployment rate (%SA)



Source: IBGE and Itaú

With the labor force participation rate at its historical average, the unemployment rate would be 6.8% (vs. 5.4%).

Decomposing the ~6pp drop in the unemployment rate vs. pre-pandemic: Increase in employment (-4.8pp) and decline in LFPR (-1.4pp)



Source: IBGE and Itaú

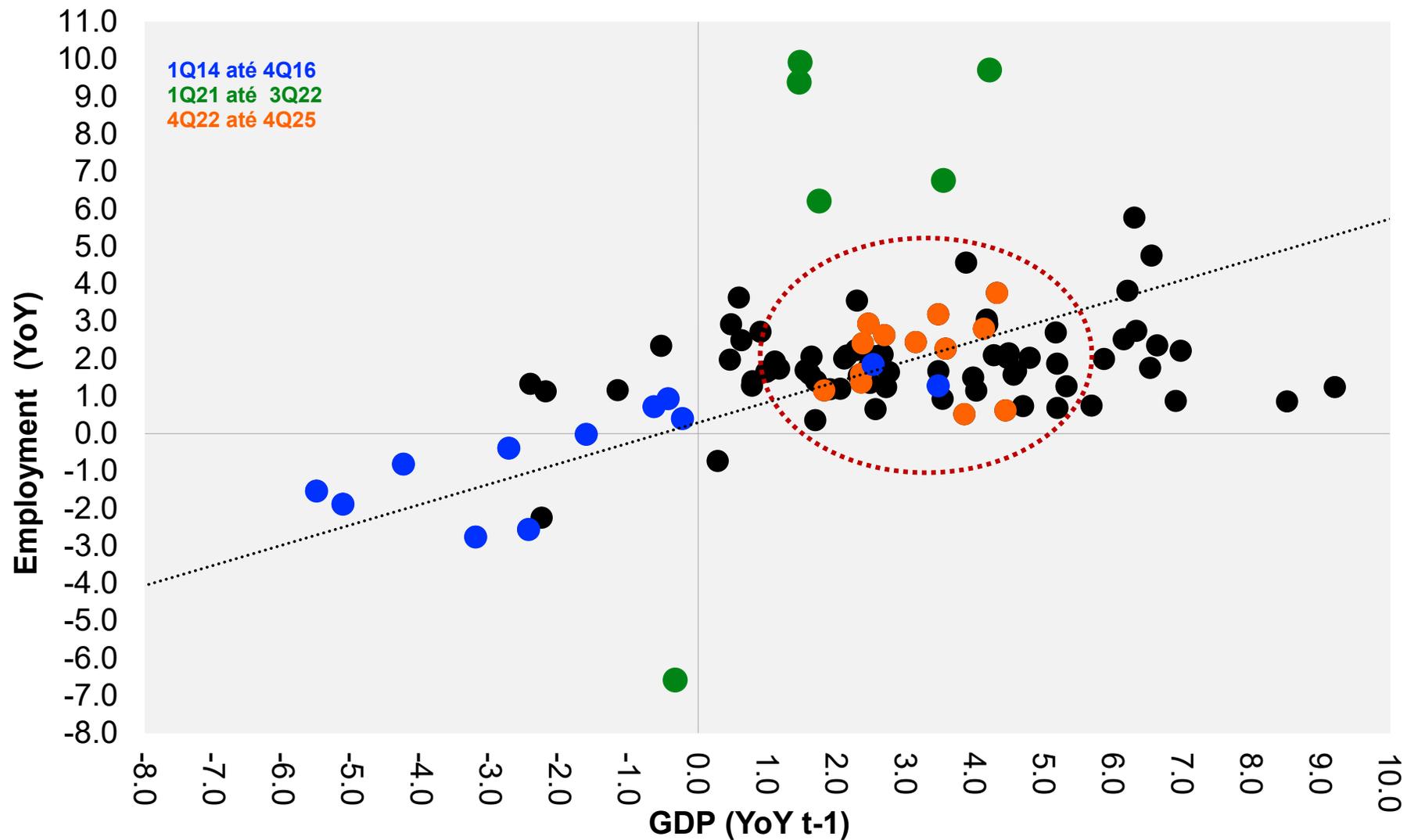
Cyclical and Structural Factors Behind Higher Employment and Lower Participation

		Impact on Employment	Impact on Participation Rate	Impact on Unemployment
Cyclical Factors	C.1) Growth above potential	↑	--	↓
	C.2) Post-pandemic recovery led by labor-intensive sectors	↑	--	↓
	C.3) Increased share of fiscal transfers in household income	--	↓	↓
Structural Factors	E.1) Labor reform boosting formalization	↑	--	↓
	E.2) Demographic and educational shifts	↑	↑	?*
	E.3) Introduction of digital labor platforms	↑	↑	↓

Source: Itaú

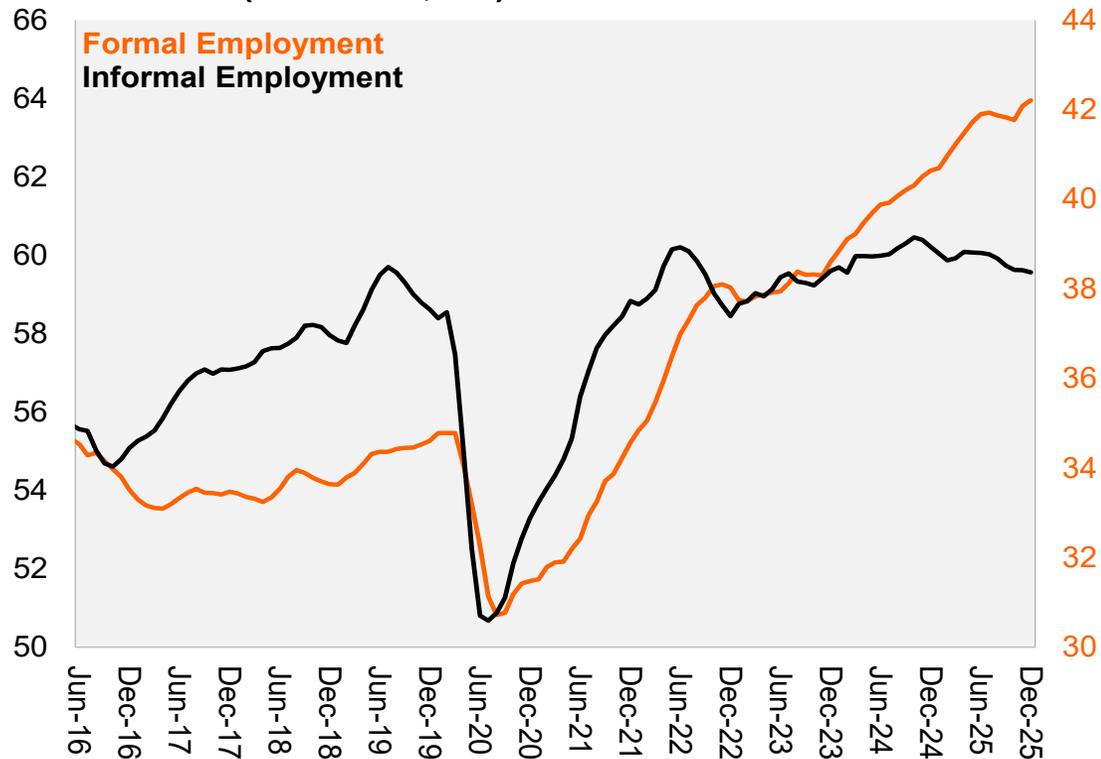
C1: Employment Growth Driven by Above-Potential GDP and Lagged Effects

Okun's Law: deviation occurred only during the pandemic (3Q00 - 4Q25)



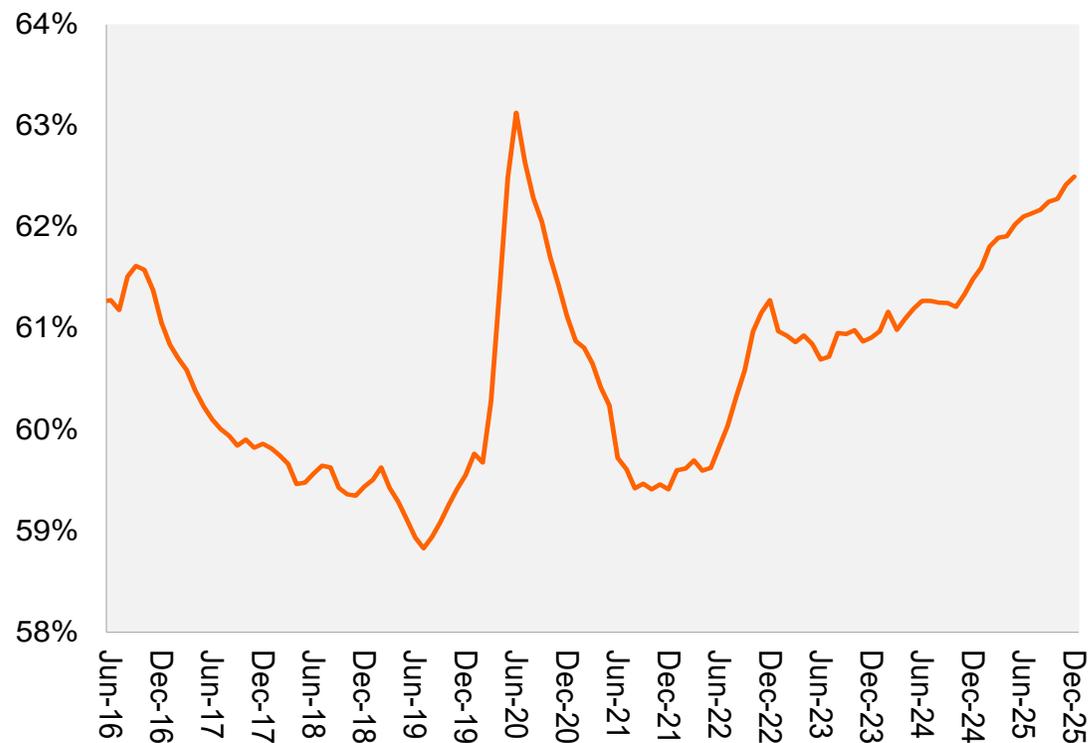
C1: Strong Growth Boosted Mainly Formal Employment (High Formalization)

Employed population: formal vs informal (thousand, SA)



Source: IBGE and Itaú

Formalization – formal employment / total employment (%SA)



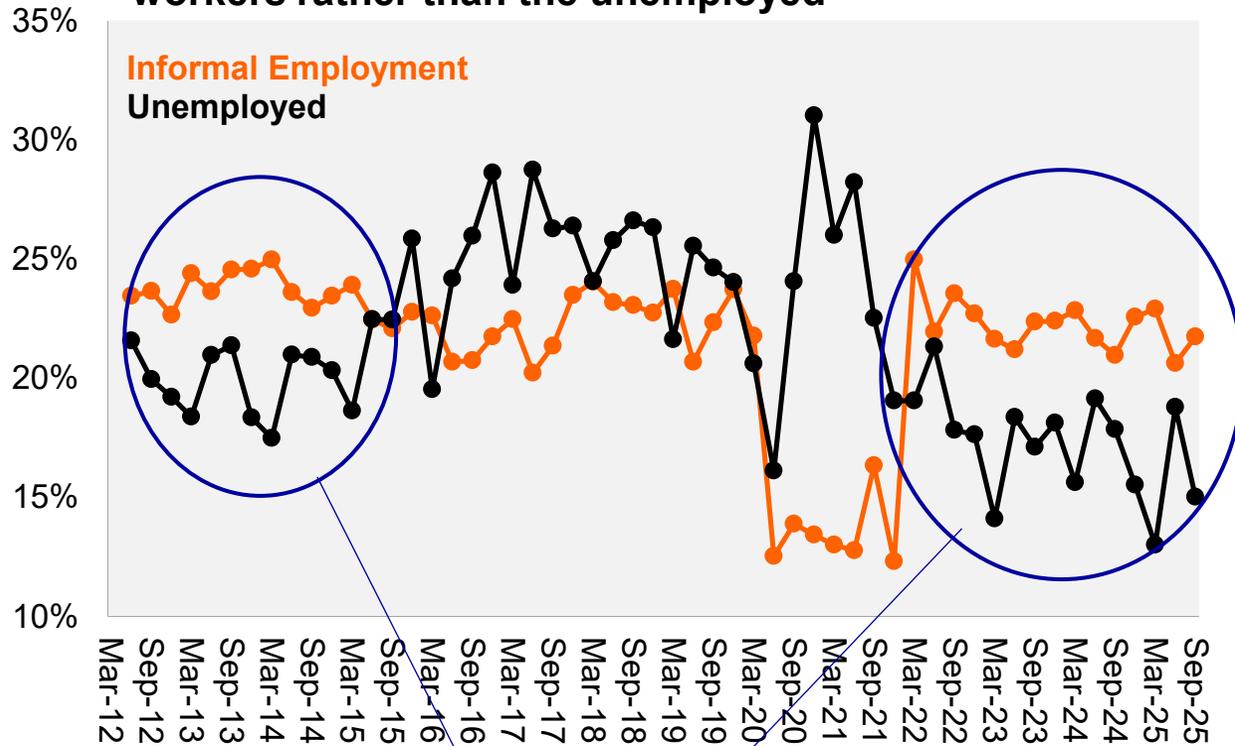
Source: IBGE and Itaú

Formal Employed Population: Private-sector employees with a formal contract, domestic workers with a formal contract, self-employed with a registered business (CNPJ), employers with a registered business (CNPJ), public-sector employees, and military/civil servants under statutory regime.

Informal Employed Population: Private-sector employees without a formal contract, domestic workers without a formal contract, employees without a registered business (CNPJ), self-employed without a registered business (CNPJ), and unpaid family workers.

C1: Formal Hiring Pulls from the Informal Sector — Not Only the Unemployed

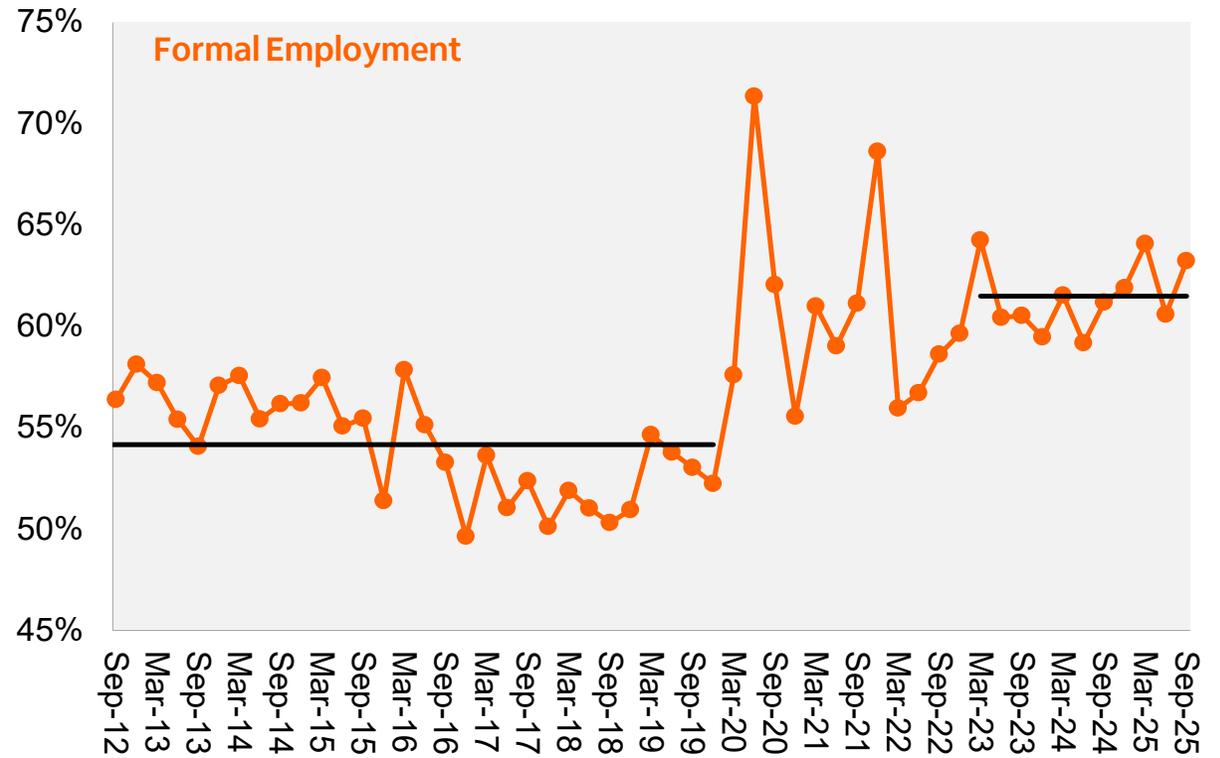
Formal hires increasingly sourced from informal workers rather than the unemployed



Source: IBGE and Itaú

Formal hiring draws workers more from the informal sector than from the unemployed during periods of a tight labor market.

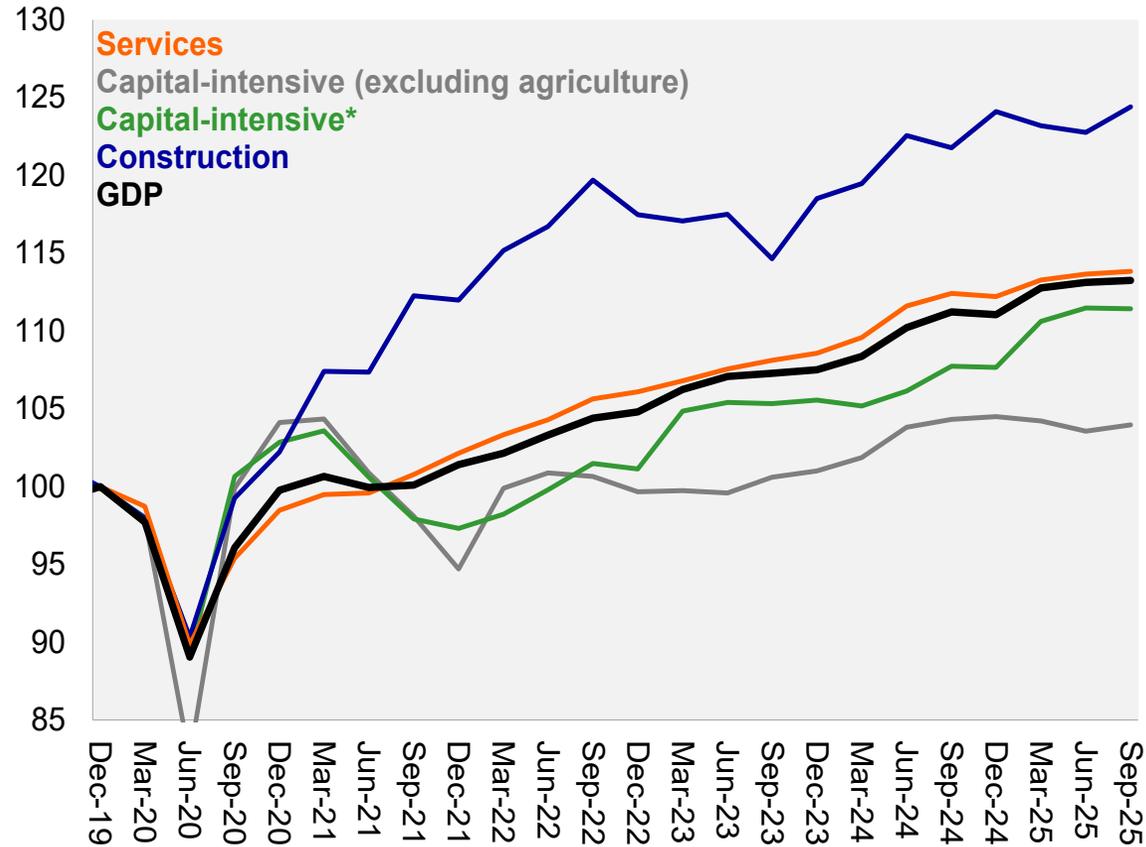
Source of new formal employment



Source: IBGE and Itaú

C2: Post-Pandemic Recovery Led by Labor-Intensive Sectors

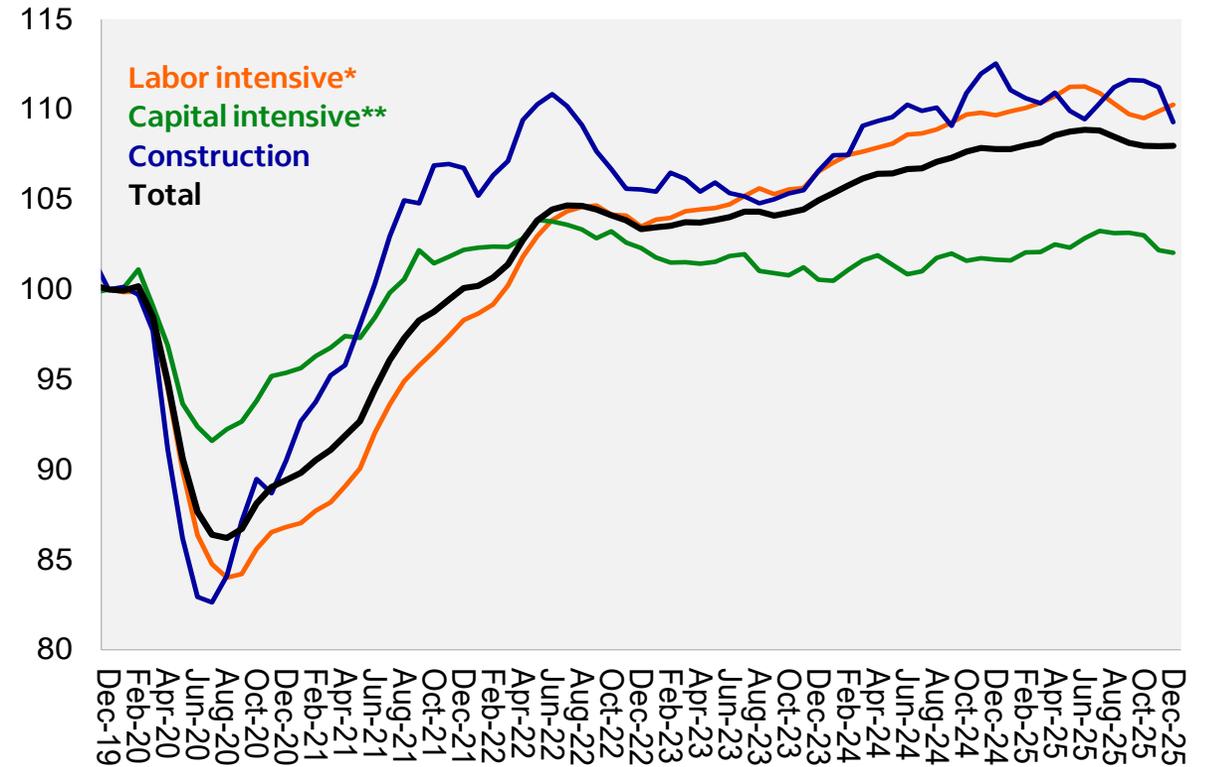
GDP sa (Dec/19=100)



*Agriculture and Industry excluding construction

Source: IBGE and Itaú

Employment (Dec/19 = 100)

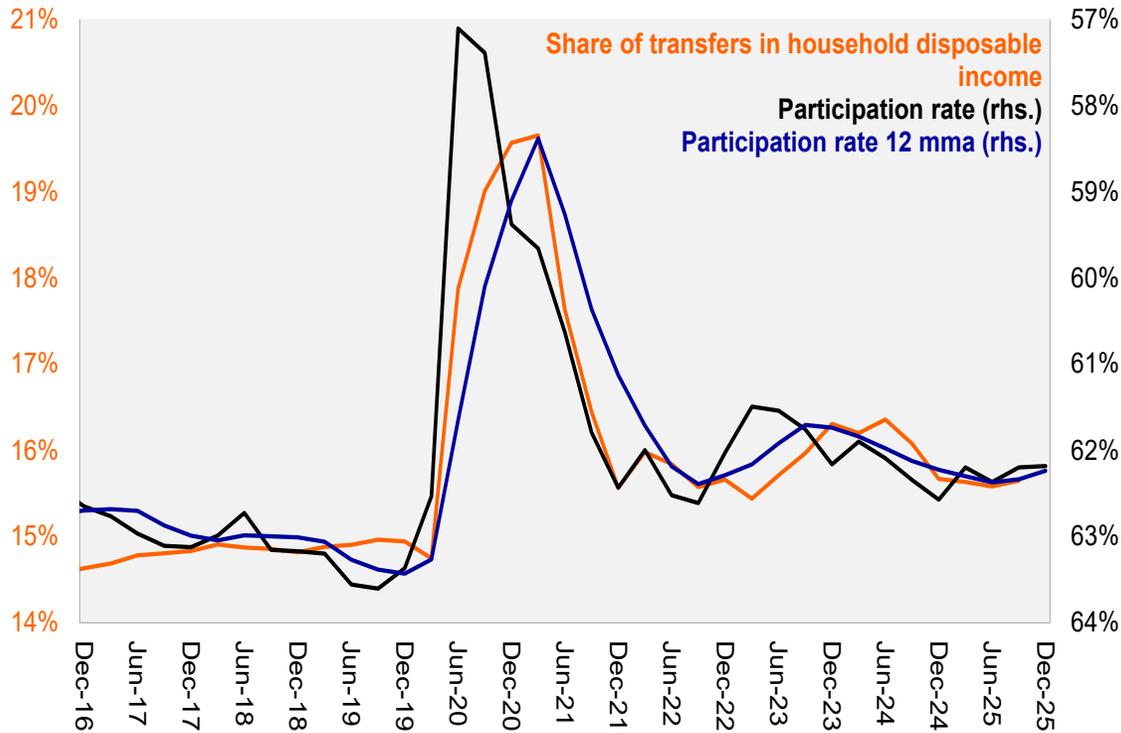


* Wholesale and Retail; Transportation; Accommodation; Services; Other Services; and Domestic Services
 **Agriculture and Industry

Source: IBGE and Itaú

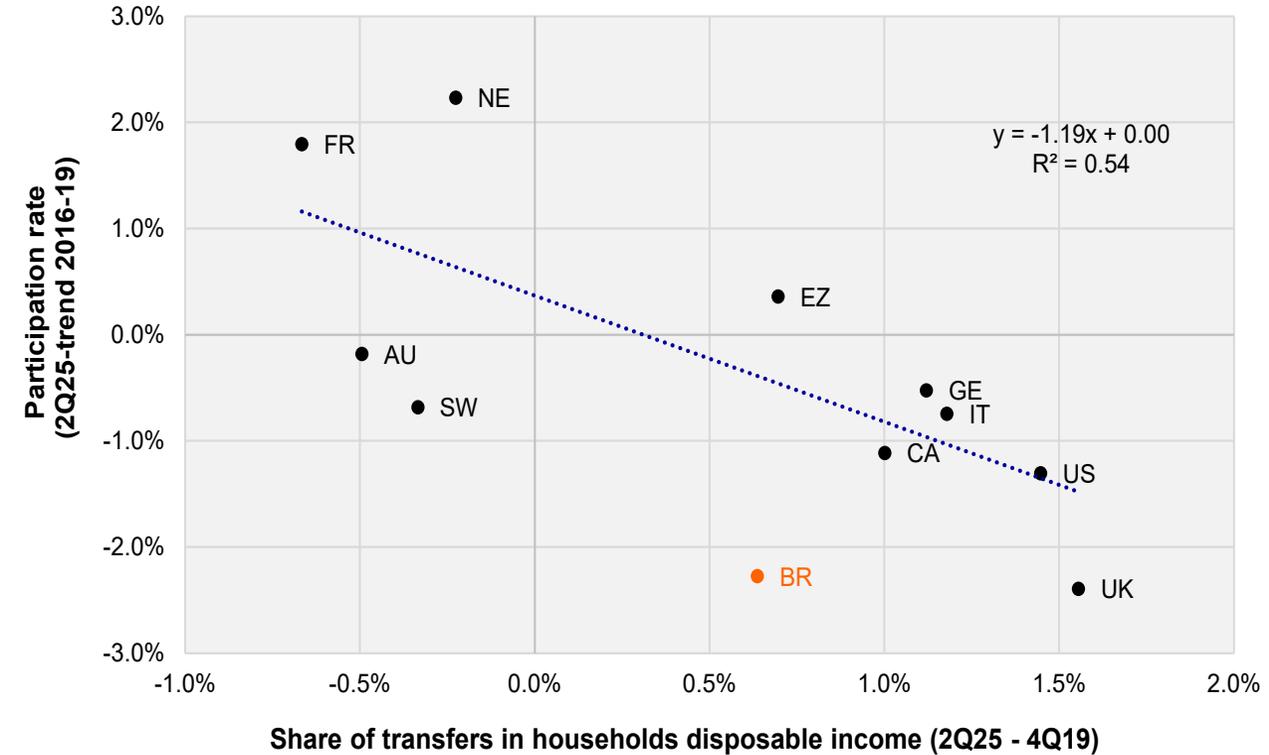
C3: Lower labor force participation may be influenced by income transfers (the share of transfers in household income increased; a trend that was also seen globally)

Brazil: Share of transfers in households disposable income vs Participation rate



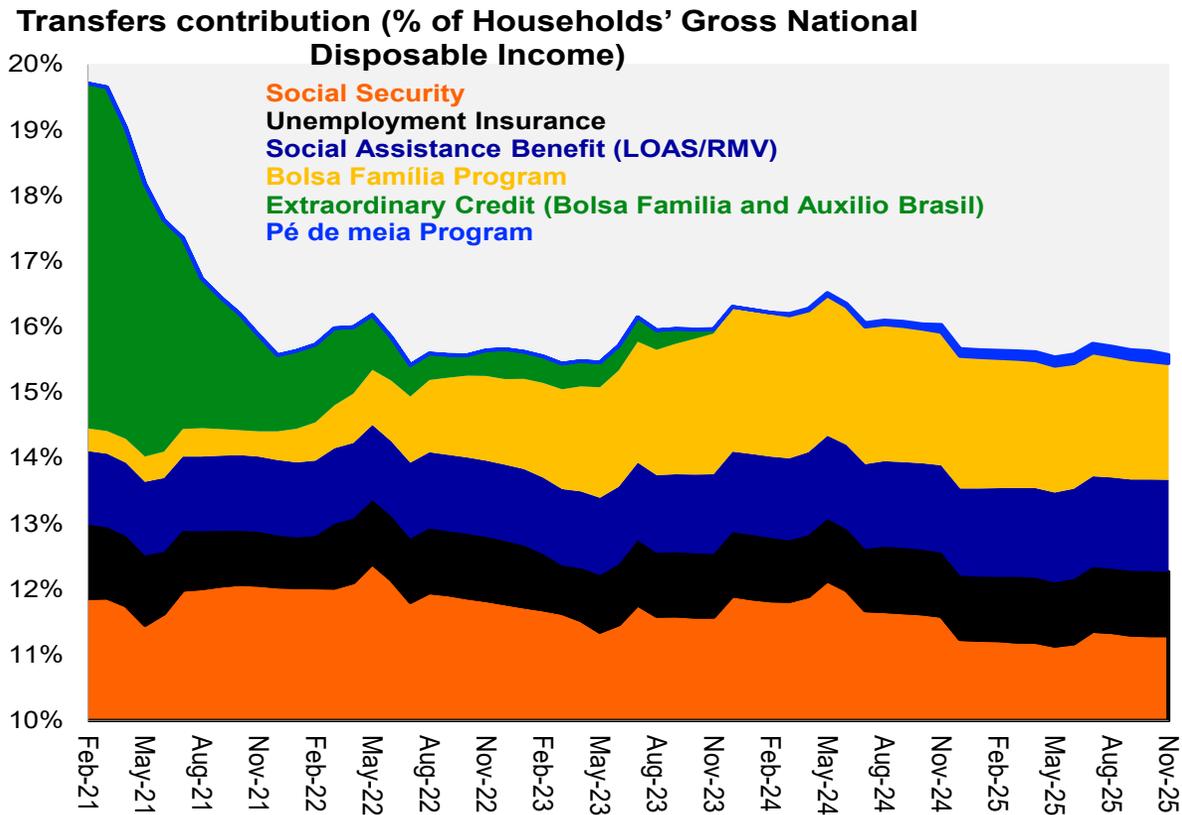
Source: Tesouro Nacional, BCB, IBGE and Itaú

Increase in transfers impacting the labor market



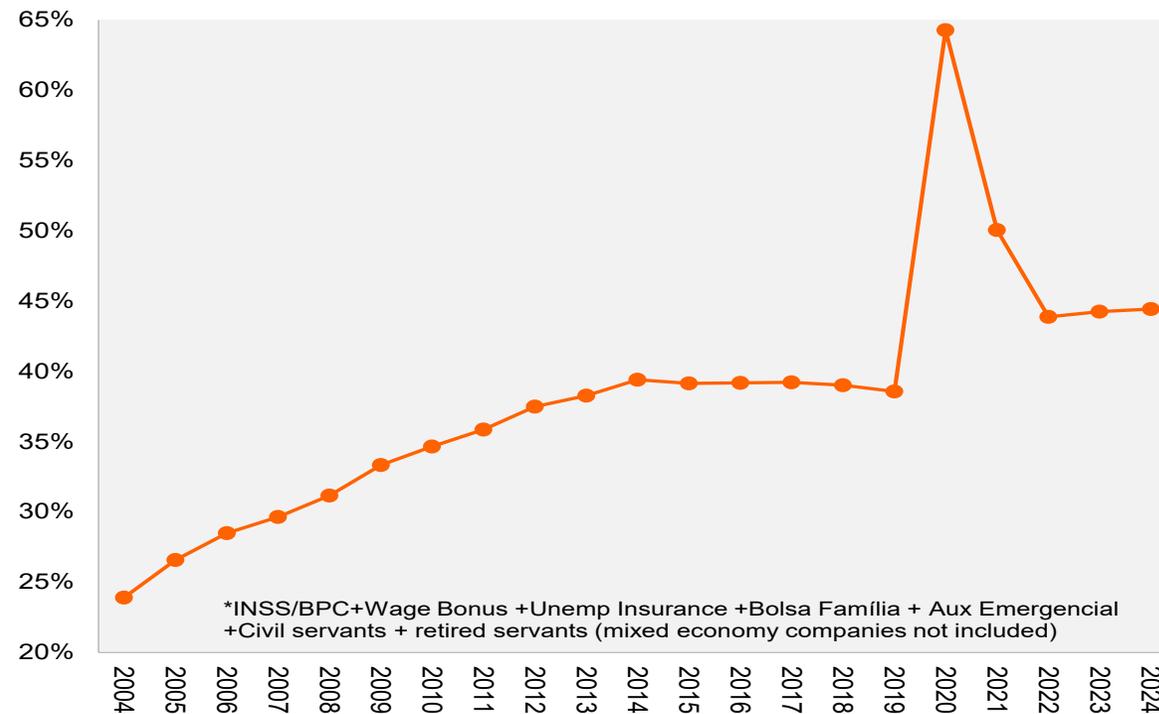
Source: Harver and Itaú

C3: Rise in Transfers (both higher benefit amounts and more beneficiaries)



Source: Tesouro Nacional, BCB and Itaú

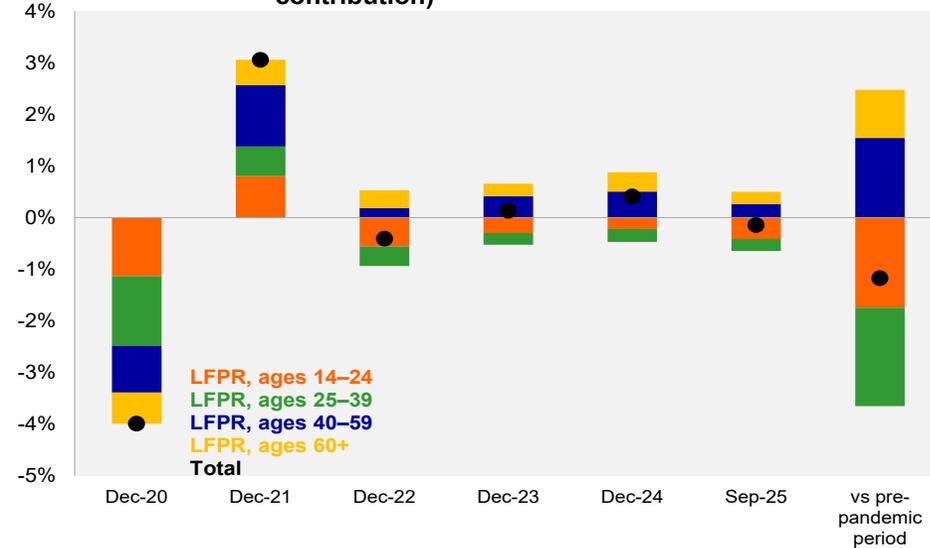
Total benefits paid by the federal govnt (% population)
Does not control for possible overlap



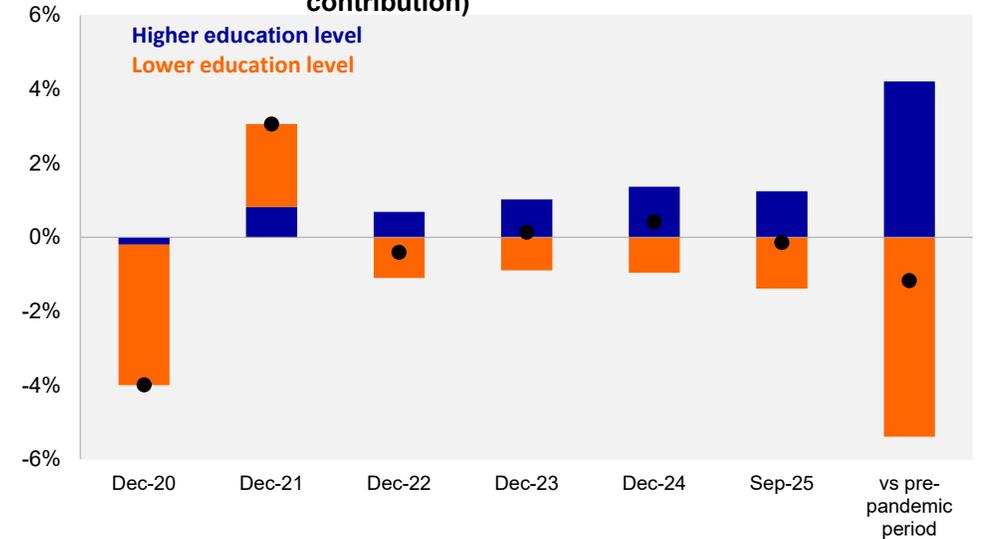
Source: Ministerio da Previdência, Ministerio do Planejamento, Ministerio do Trabalho, Ministerio do Desenvolvimento Social and Itaú

C3: Decline in Participation Concentrated Among Younger, Lower-Educated Individuals and Lower-Income Families

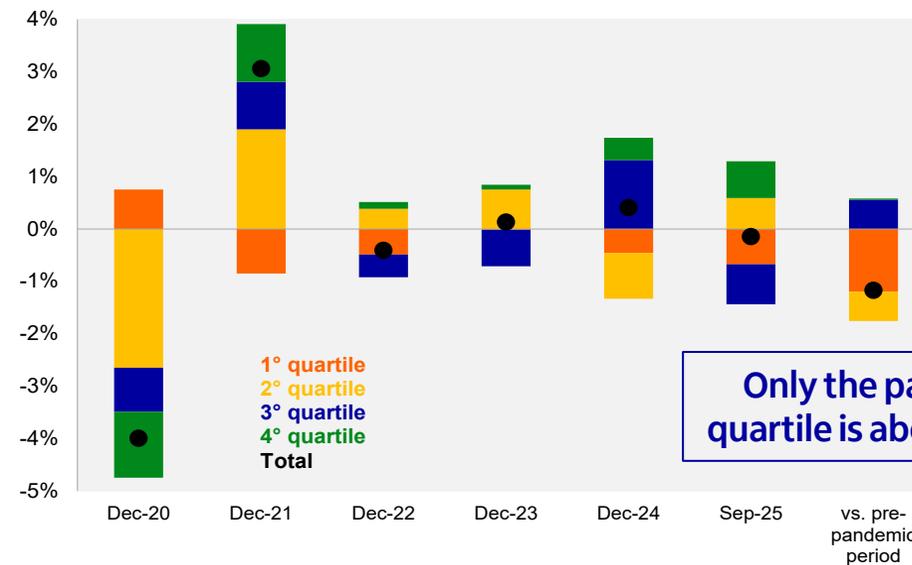
Annual change in the labor force participation rate (p.p. contribution)



Annual change in the labor force participation rate (p.p. contribution)



Participation rate change by household income quartile (pp contribution)



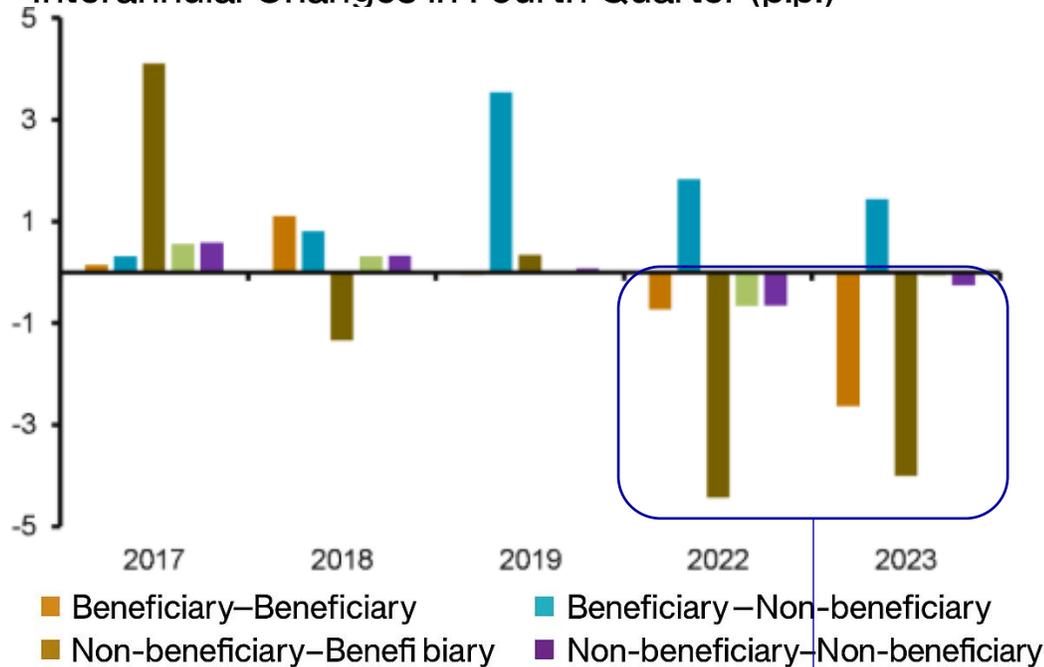
Only the participation rate in the 3rd quartile is above the pre-pandemic level.

C3: Bolsa Família Transfers Don't Explain Everything: Participation Also Fell Among Non-Beneficiaries

- The study compares participants' first and last interviews, one year apart, and classifies working-age individuals into four groups according to whether they received social benefits. For example, "Beneficiary–Beneficiary" indicates that the same individual was a Bolsa Família recipient in the first interview and remained a recipient in the last interview.

Chart 5 – Participation Rate Change, By Group

Interannual Changes in Fourth Quarter (p.p.)

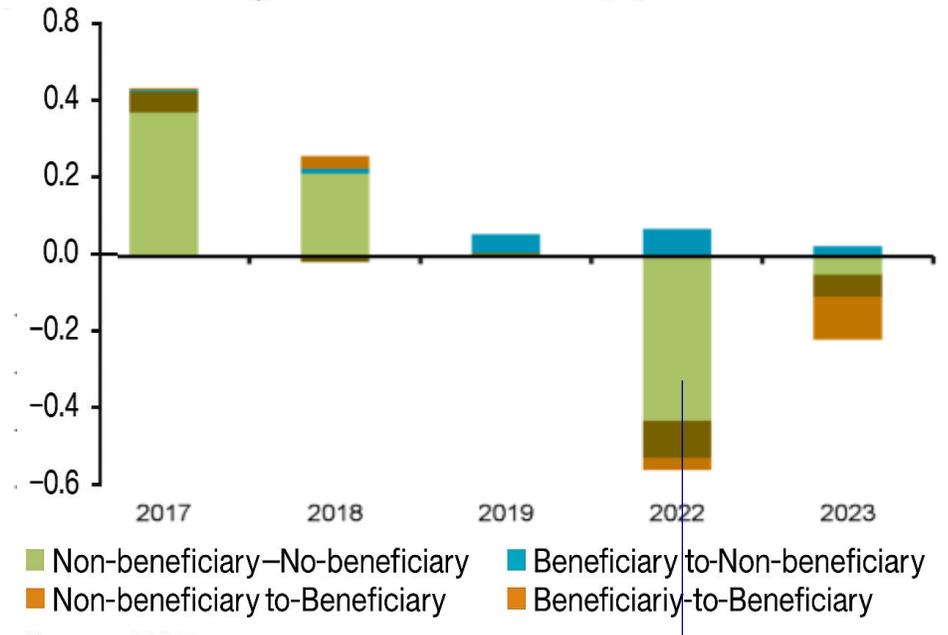


Source: IBGE

In 2022 and 2023, the highlight was the decline in participation among those who reported receiving Bolsa Família in the previous interview.

Chart 6 – Contribution to Participation Rate Change

Interannual Changes in Fourth Quarter (p.p.)

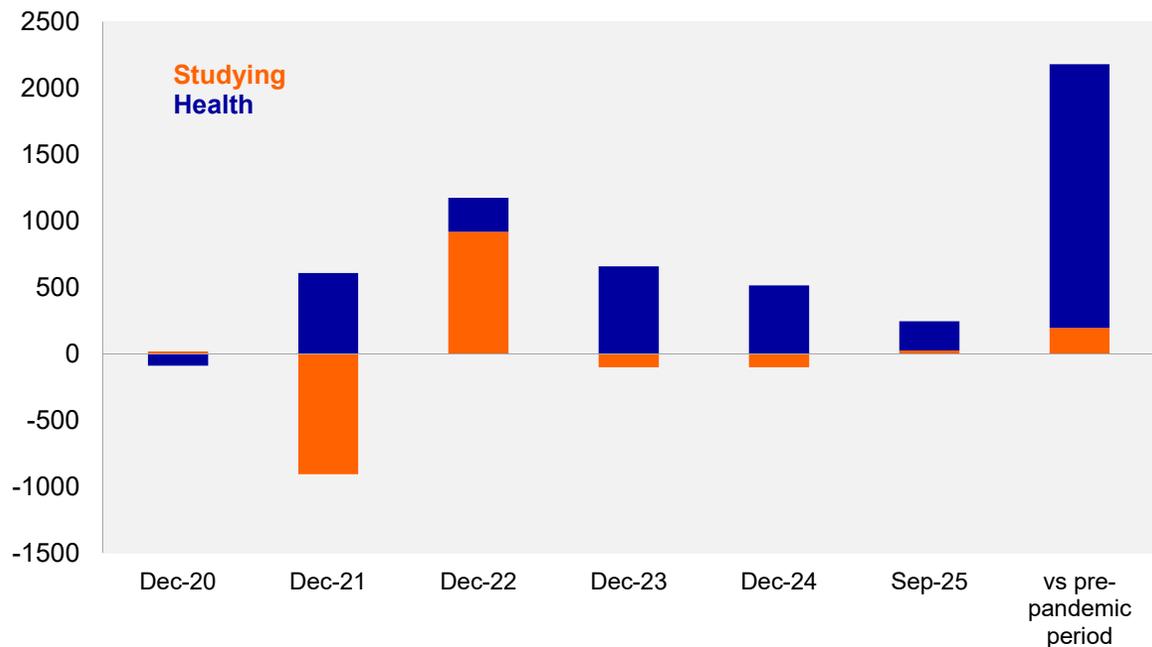


Source: IBGE

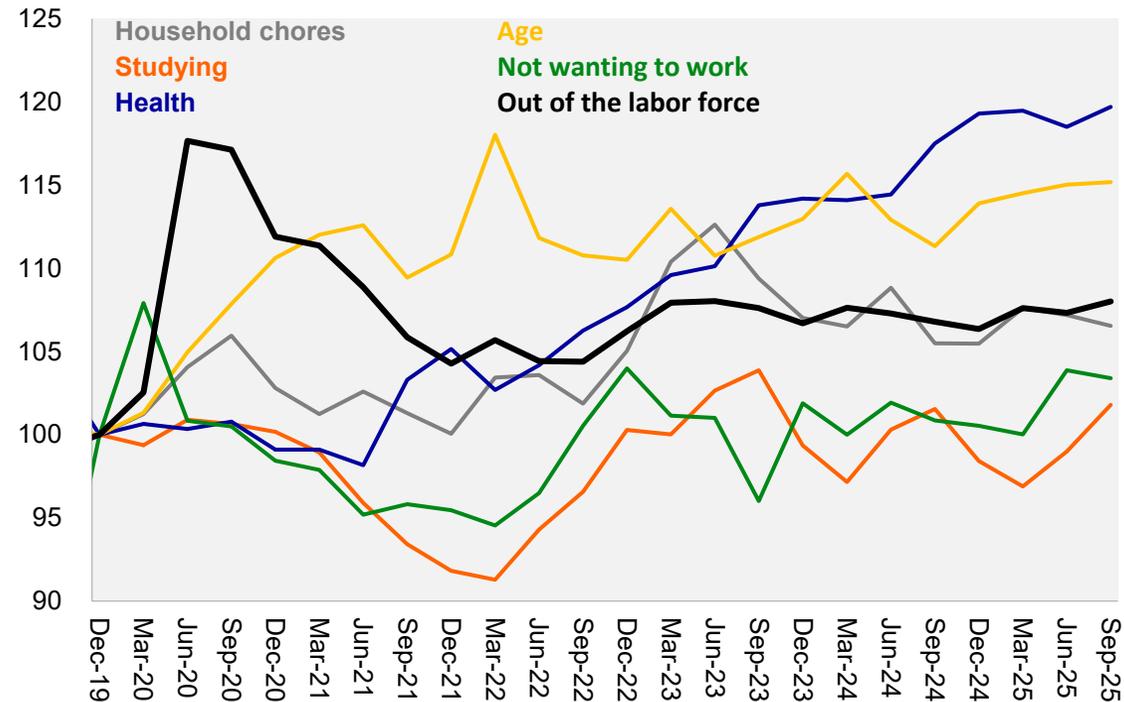
In 2022 and 2023, the contribution from beneficiaries was approximately -0.20 p.p. The share of beneficiaries outside the labor force increased from ~7.7% to 10.8%. However, non-beneficiaries also made an important contribution to the decline in the participation rate.

C3: The expansion of other programs (BPC, *Pé-de-Meia*) may also be contributing to the decline in the LFPR. “Health” has stood out as a reason for inactivity. “Studying” appears to have driven the recent movement.

Change in factors explaining inactivity (thousand people)



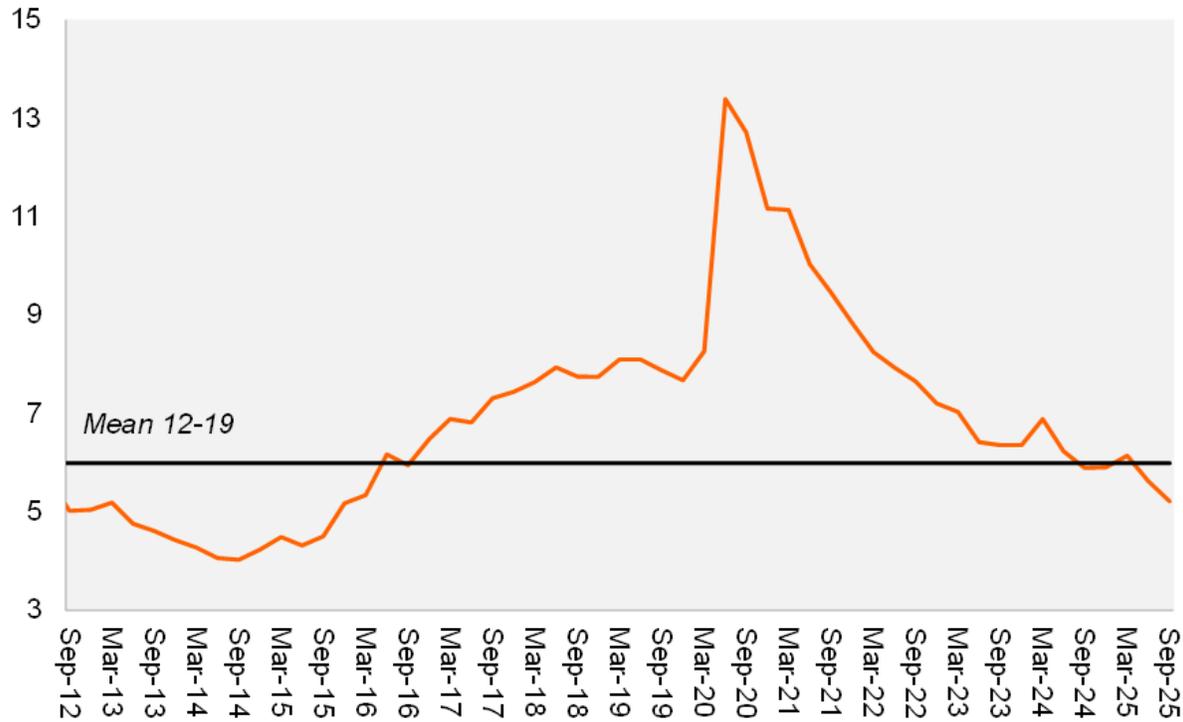
Explanatory factors of inactivity (Dec/19 = 100)



Source: IBGE and Itaú

Alternative Indicators Suggest No Short-Term Recovery in Participation. Even if the decline is mostly cyclical, a reversal may take longer to materialize

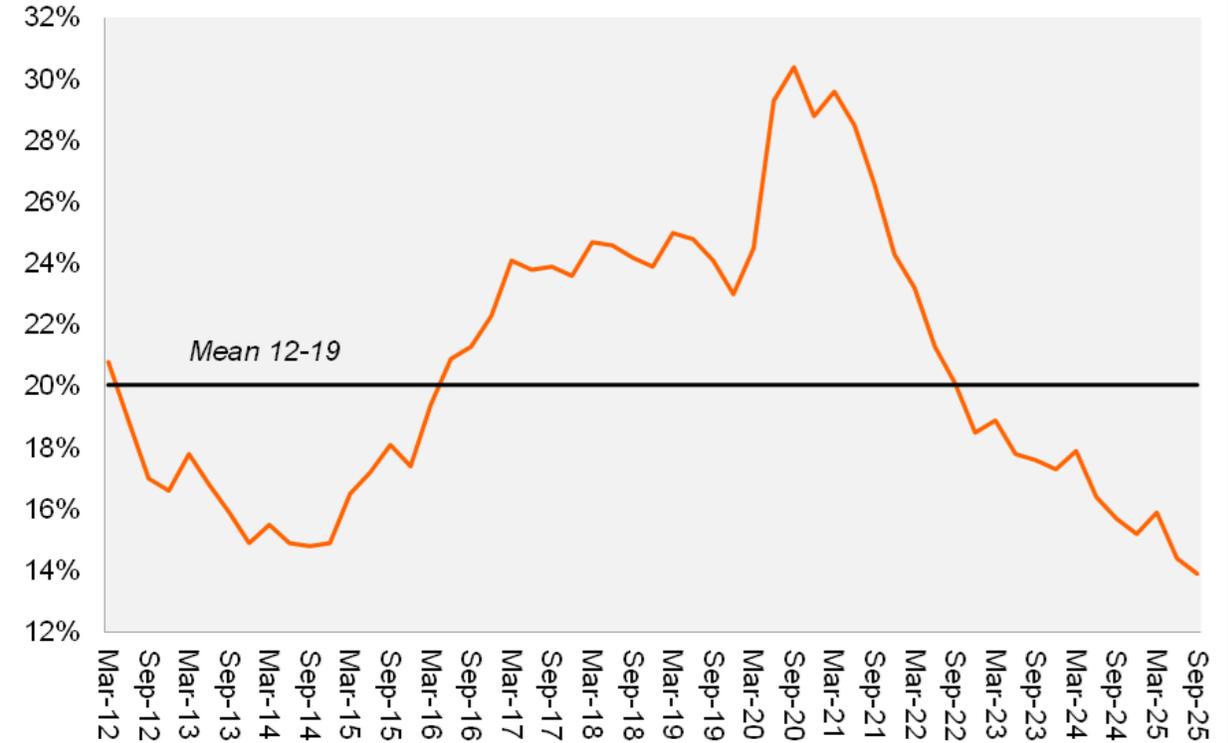
Number of people potentially willing to enter the labor market (millions)



Source: IBGE and Itaú

*Potential Participation Rate: Individuals who would like to work but have not taken steps to seek employment, plus those who searched for a job but were not available to start working

Labor underutilization rate



Source: IBGE and Itaú

Underutilization rate

Numerator: Underemployed due to insufficient hours + unemployed + potential labor force

Denominator: Expanded labor force

Cyclical and Structural Factors Behind Higher Employment and Lower Participation

		Impact on Employment	Impact on Participation Rate	Impact on Unemployment
Cyclical Factors	C.1) Growth above potential	↑	--	↓
	C.2) Post-pandemic recovery led by labor-intensive sectors	↑	--	↓
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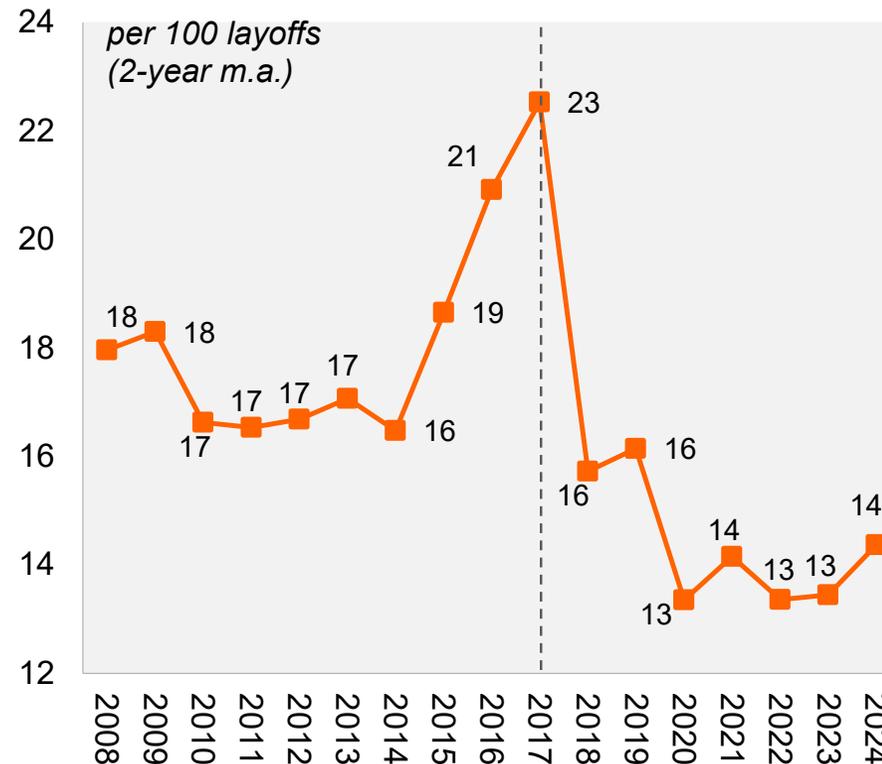
Source: Itaú

* BCB MPR (Sep/25) showed that the effect of the increase in employment offset the rise in the labor force participation rate leading to a decline in the unemployment rate.

E1: Labor reform lowered costs and uncertainty and increased formalization → estimated –1.7pp reduction in unemployment.

- Labor Courts, Job Search and Employment (Corbi, Narita, Ferreira and Souza): Evidence from a Labor Reform in Brazil (2022): simulations show that, by reducing the workers' incentives to litigate and the firms' expected cost with lawsuits, the unemployment rate decreases by 1.7 percentage points

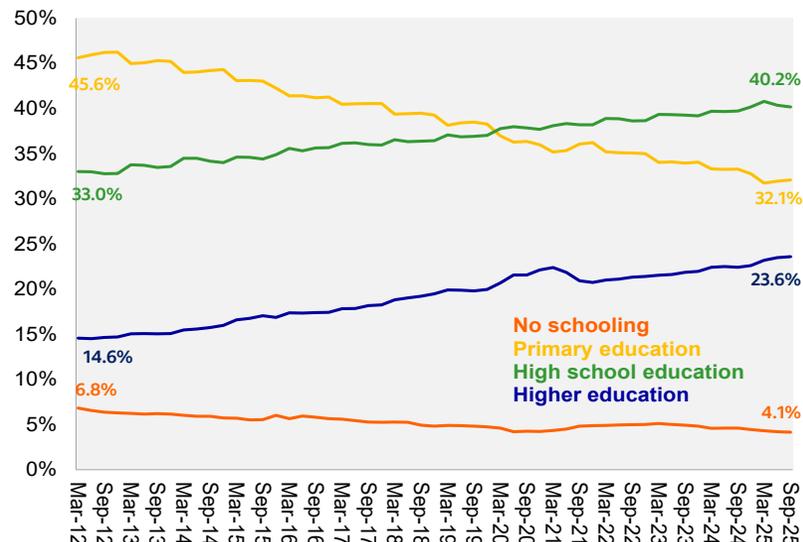
New labor lawsuits



Source: Tribunal Superior do Trabalho, IBGE and Itaú

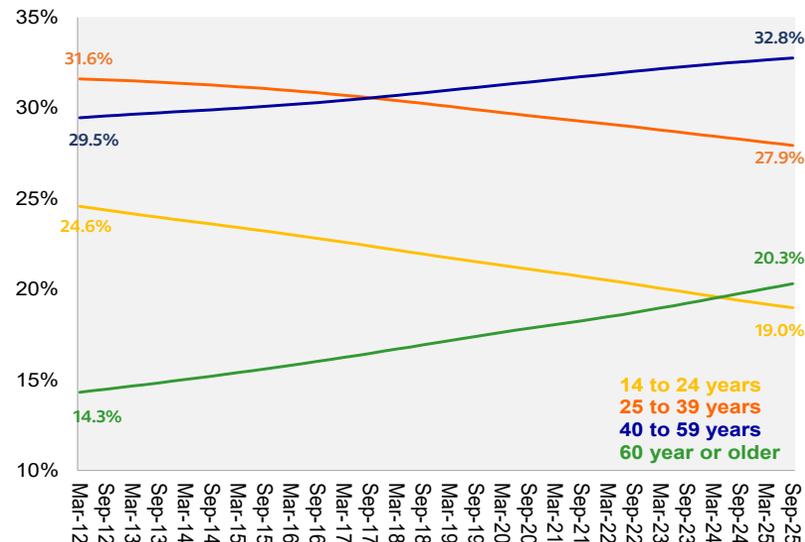
E2: Rising education levels and population aging contributed -0.35pp to lower unemployment post-pandemic, with a slight increase in the participation rate offset by the rise in the employment

Working-age population by education level



Source: IBGE and Itaú

Working-age population by age



Source: IBGE and Itaú

Figure 3 – Unemployment rate



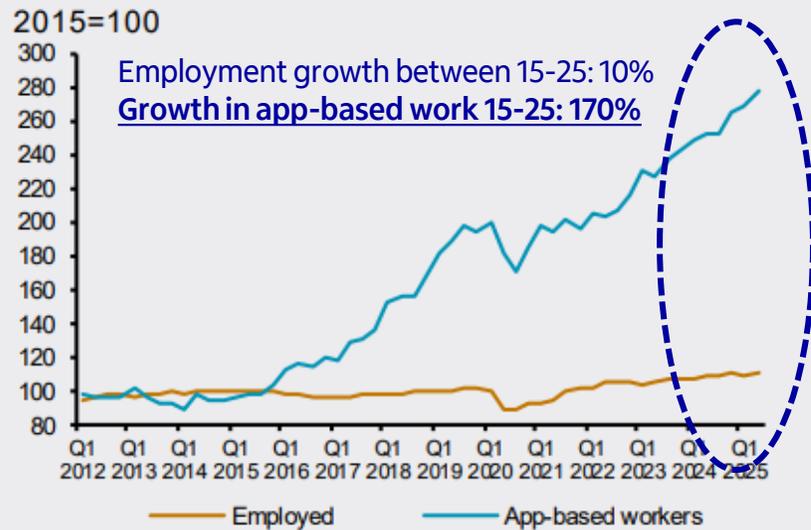
Sources: IBGE and BCB

- MPR September/25:
 - Keeping demographic structure fixed (sex-age-education) but allowing each group's participation and employment rates to evolve.
 - Participation Rate: -2.5p.p. and Employment -3.0p.p. = **Unemployment rate -0.7p.p. (since 2014)**
 - **UR -0.35p.p. post pandemic.**

E3: The rise of digital service platforms reduced unemployment by -0.3pp post-pandemic, with higher employment and participation rate

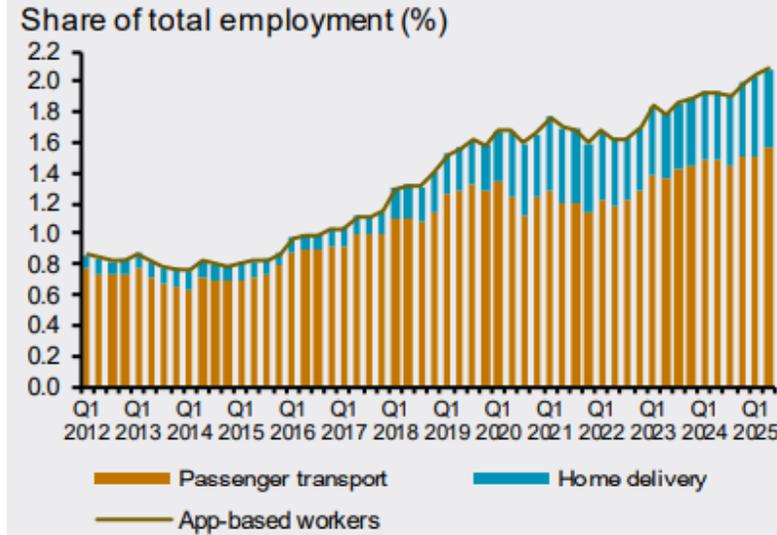
- MPR September/25:
 - Counterfactual: If platform-based jobs had grown at the same rate as non-platform employment since 2015 → Employment would be 0.8pp lower
 - Considering half of the Employment increase coming from unemployment and half from outside the labor force: LFPR -0.2pp → **Unemployment: -0.6pp since 2014**
 - **Unemployment -0.3pp post-pandemic**

Figure 1 – App-based workers



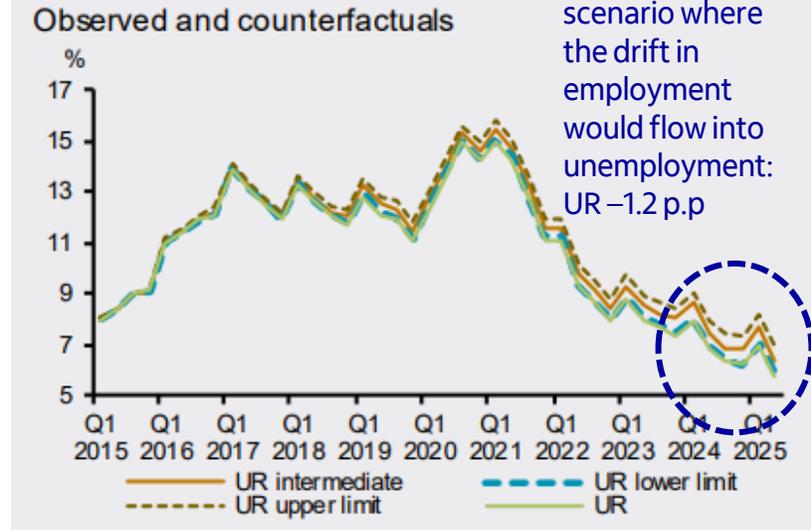
Sources: IBGE and BCB

Figure 2 – App-based workers



Sources: IBGE and BCB

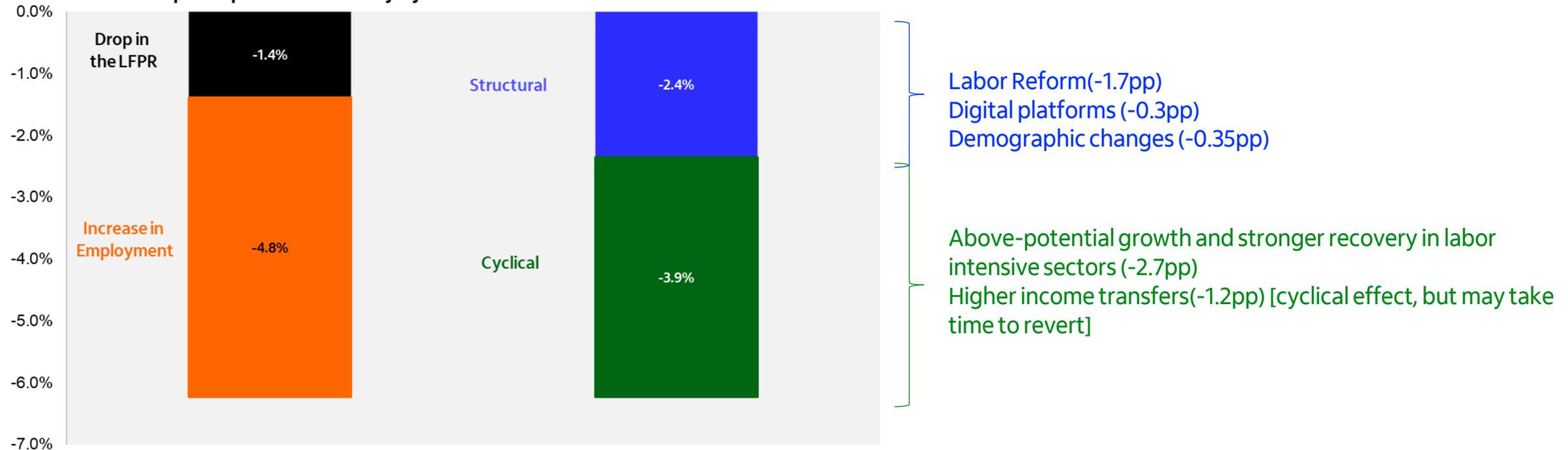
Figure 4 – Unemployment rate



Sources: IBGE and BCB

Cyclical and structural factors explain the decline in unemployment (through higher employment and lower participation)

Decomposition of the change in the UR between 19 and 25 by employment/
labor force participation rate and by cyclical/structural factors



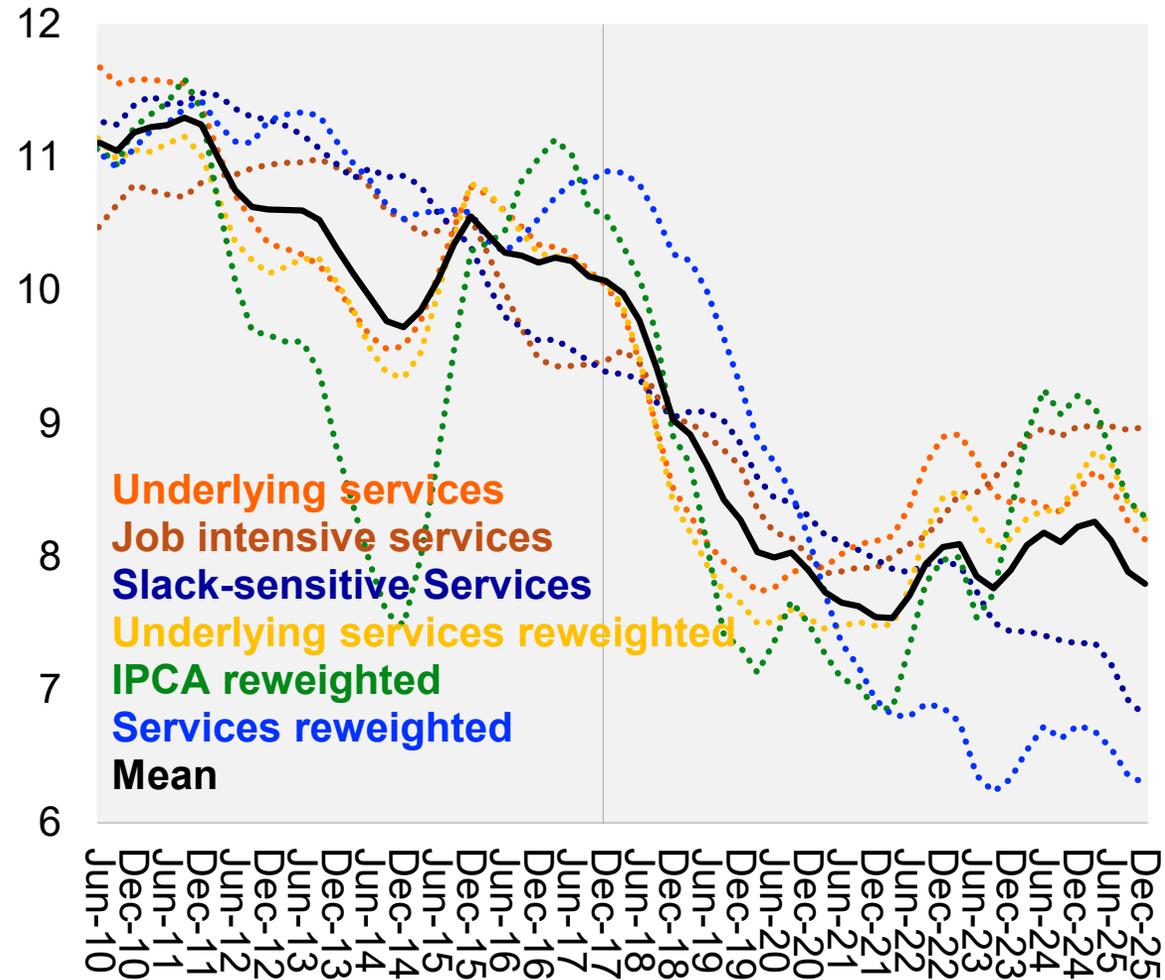
Source: Itaú

If the pre-pandemic NAIUR was around 10%, it may now be closer to 7.5%, considering structural changes.

→ Unemployment below 6% still signals a tight labor market.

The NAIRU estimated from the behavior of services inflation is consistent with a level of 7.5%–8%

NAIRU estimated from the service inflation

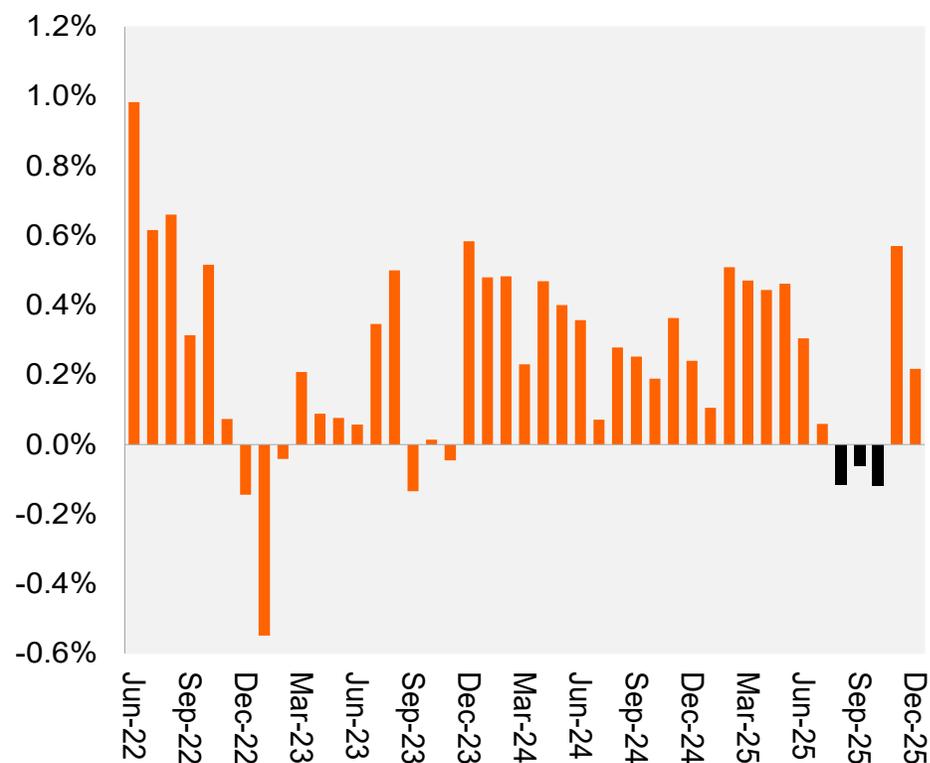


Source: IBGE and Itaú

Will Unemployment Remain at Historical Lows? Early Signs of Cooling

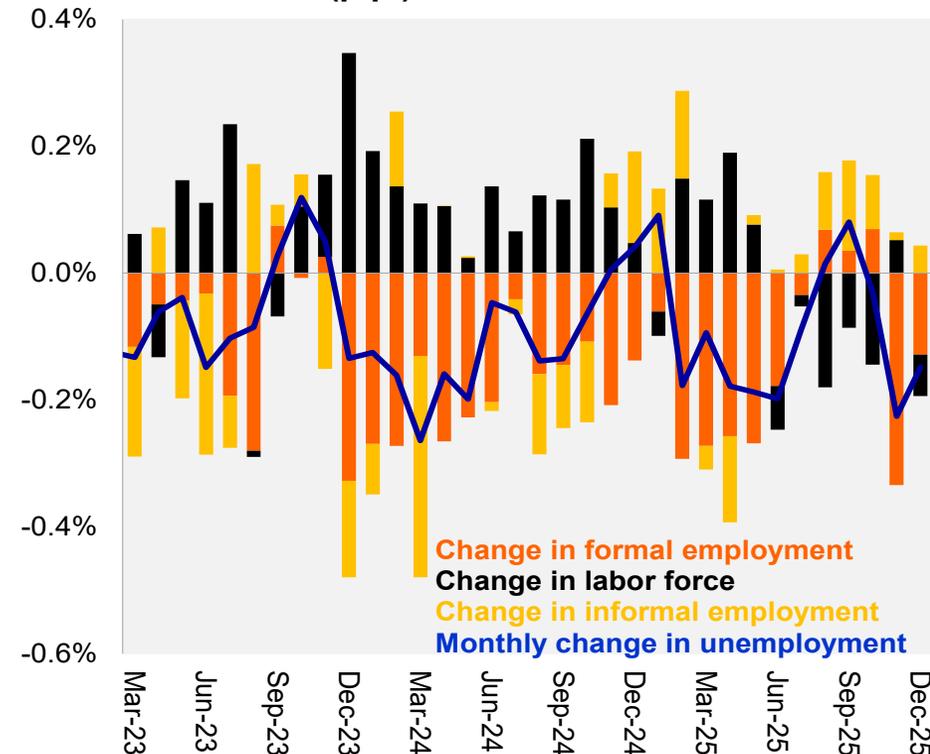
- Three consecutive declines in formal employment between Aug-Oct, but with a rebound in Nov/25
- A reduction in the labor force over the past six months helped keep the unemployment rate 0.4–0.5 pp lower.

Formal employment growth (%MoM)



Source: IBGE and Itaú

Monthly change in the unemployment rate (p.p.)

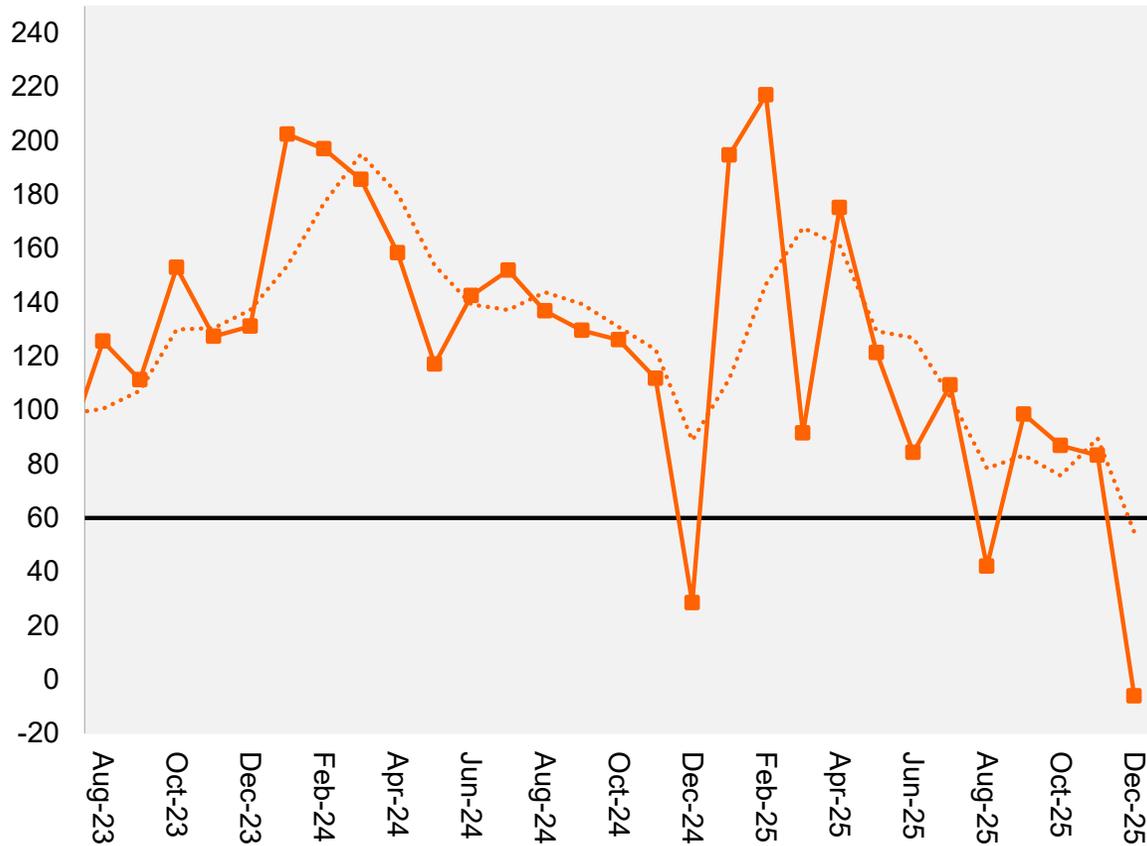


Source: IBGE and Itaú

Will Unemployment Remain at Historical Lows? Early Signs of Cooling

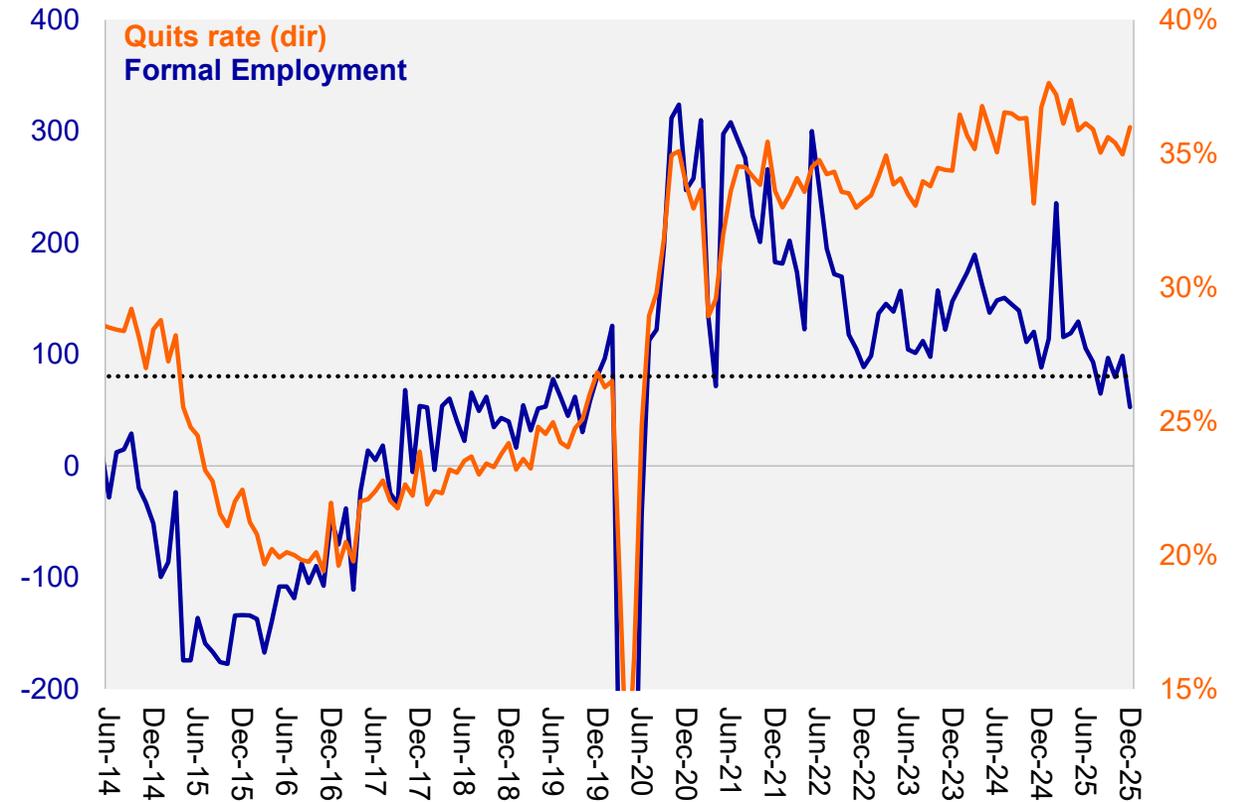
- CAGED balance (formal job creation) dropped from 160k in Q1/25 to 50k in Q4/25 (close to the “neutral*” ~60k)
- Quits rate is at a high level and has declined slowly

CAGED (thousand, SA)



Source: CAGED and Itaú

Formal Employment and Quits rate

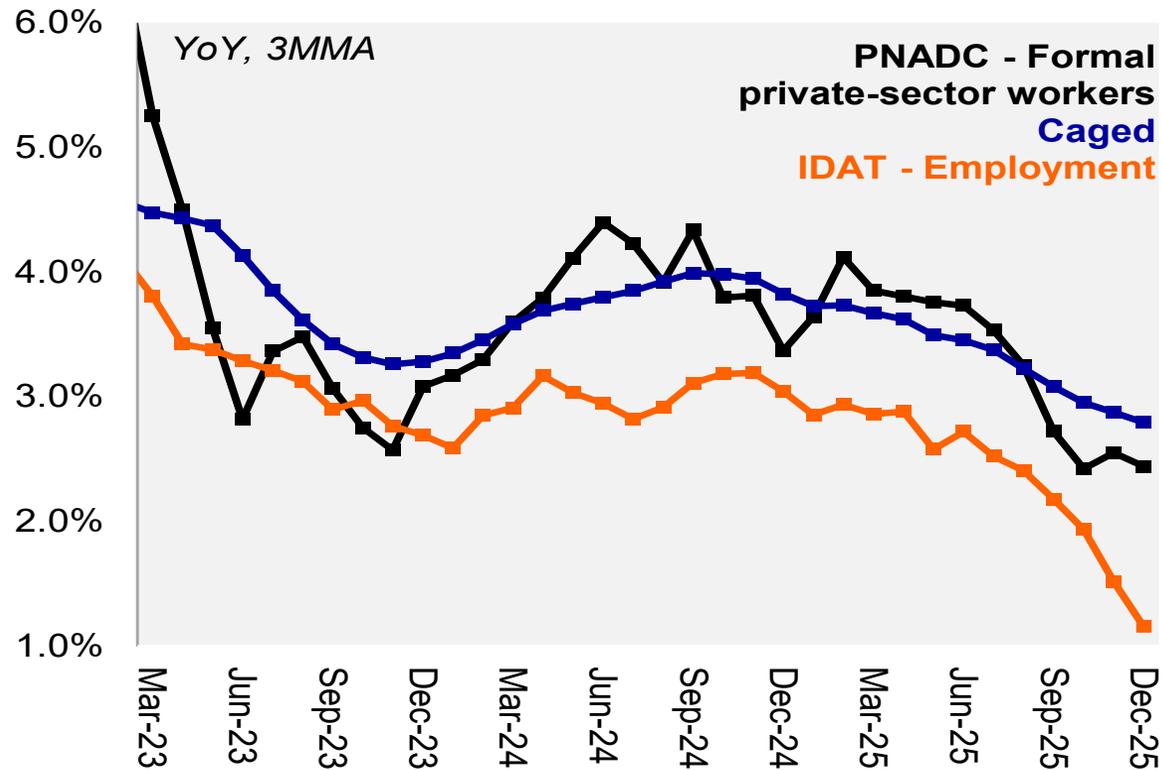


Source: CAGED and Itaú

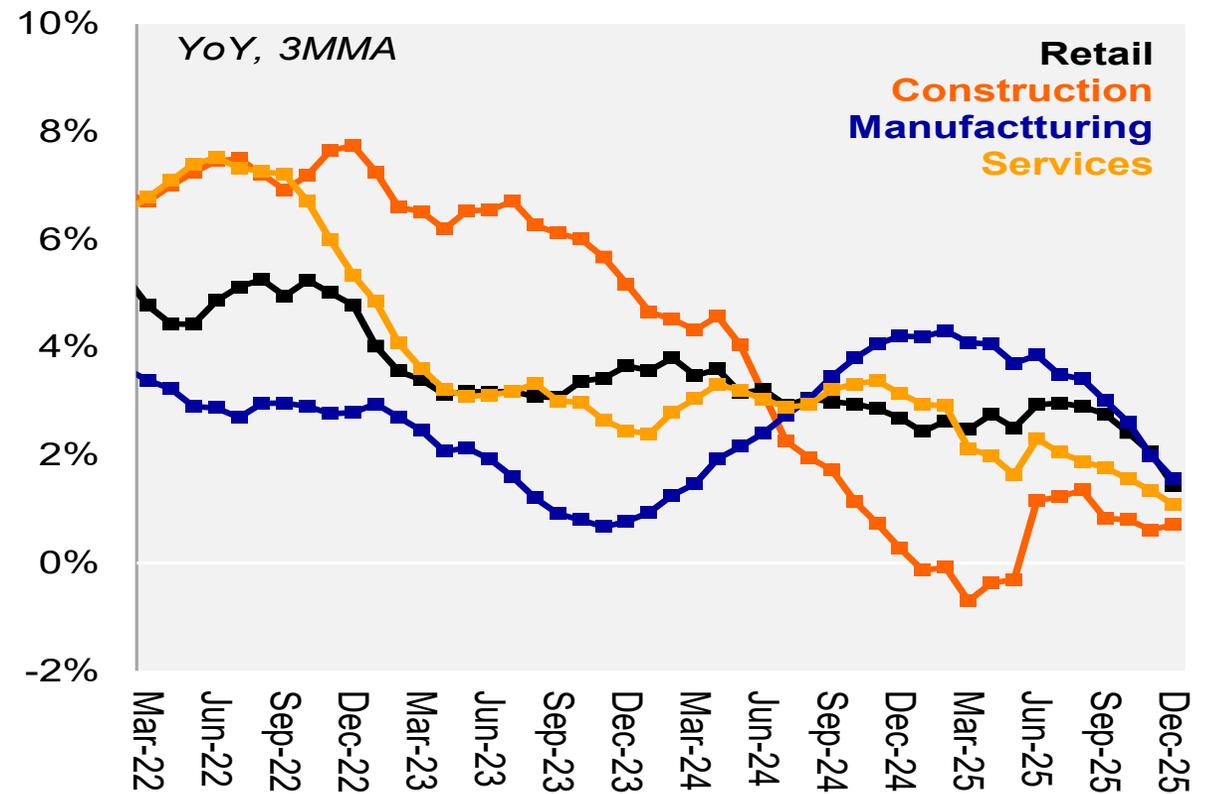
Will Unemployment Remain at Historical Lows? Early Signs of Cooling

- IDAT-MT shows further deceleration. Employment growth slowed to 1.2% YoY in Dec, from 1.5% YoY on a 3-month moving average basis.

IDAT-Employment YoY



IDAT – Sectoral Employment YoY



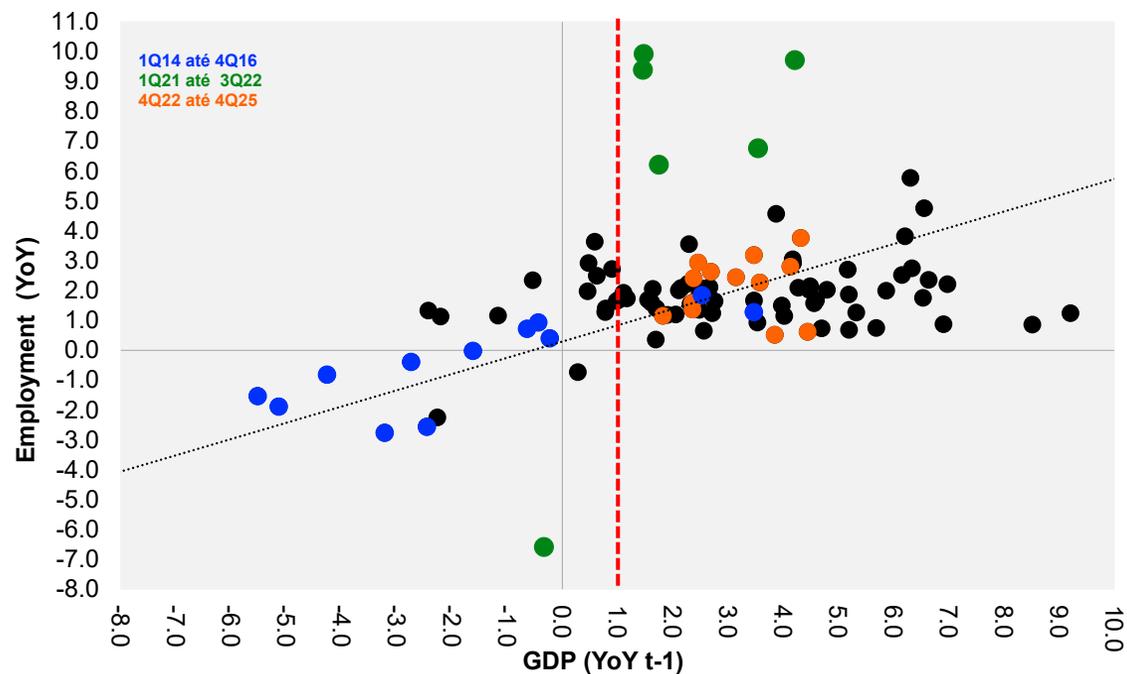
Source: FGV/IBRE, IBGE and Itaú

Source: Itaú

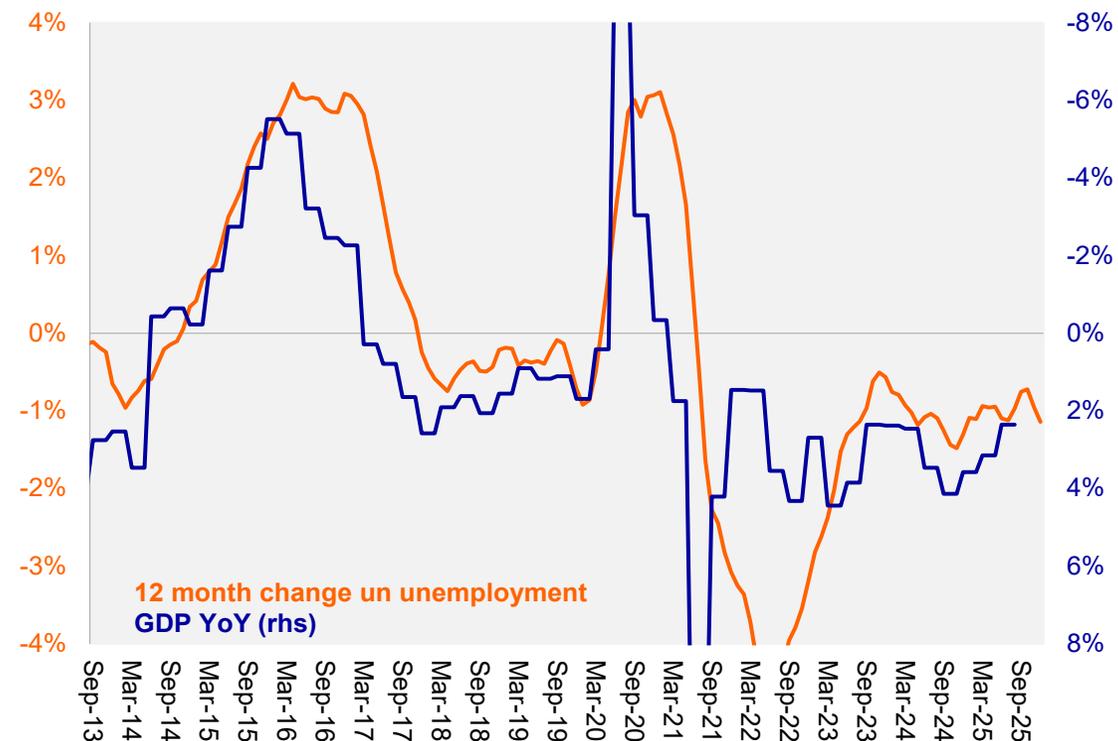
Employment Deceleration Aligns With Economic Activity Trends

- A more sustained rise in unemployment tends to occur when GDP falls below 1% YoY.
- The unemployment rate rose more consistently only in years of sharp GDP declines.

Okun's Law: deviation occurred only during the pandemic (3Q00 - 4Q25)



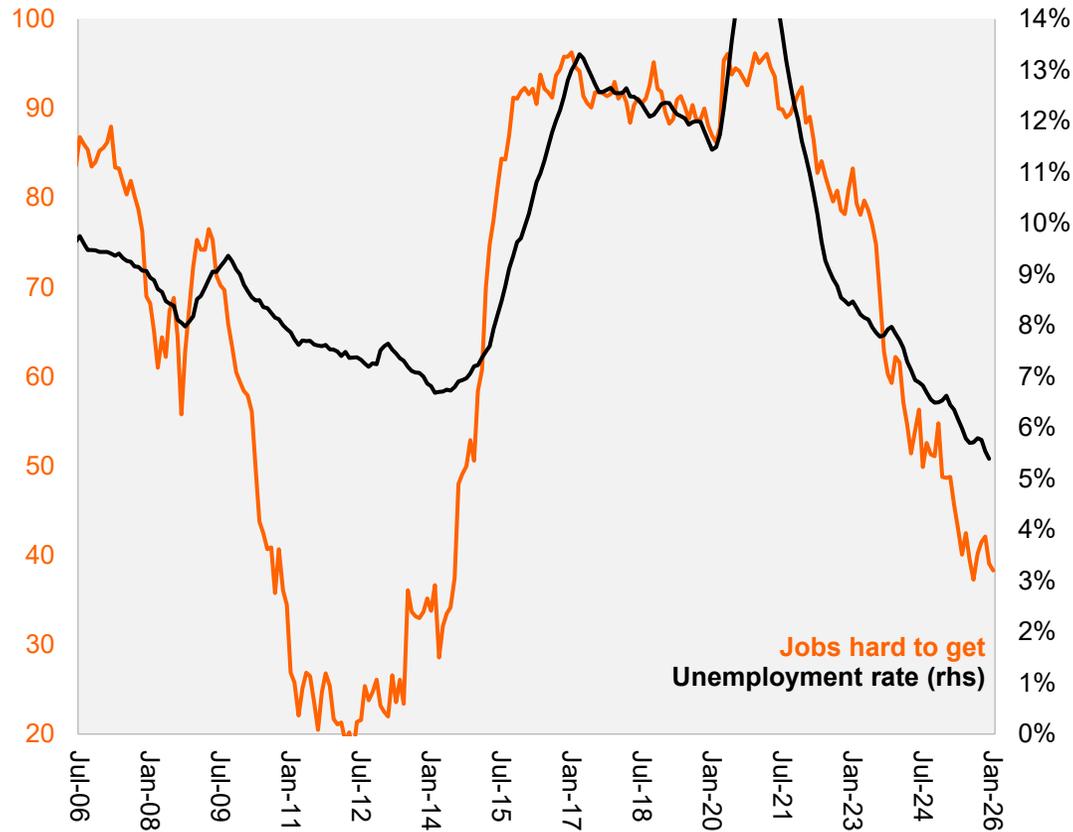
Change in unemployment vs. GDP YoY



Source: IBGE and Itaú

Employment growth is expected to continue decelerating as the economy loses momentum, but at a moderate pace

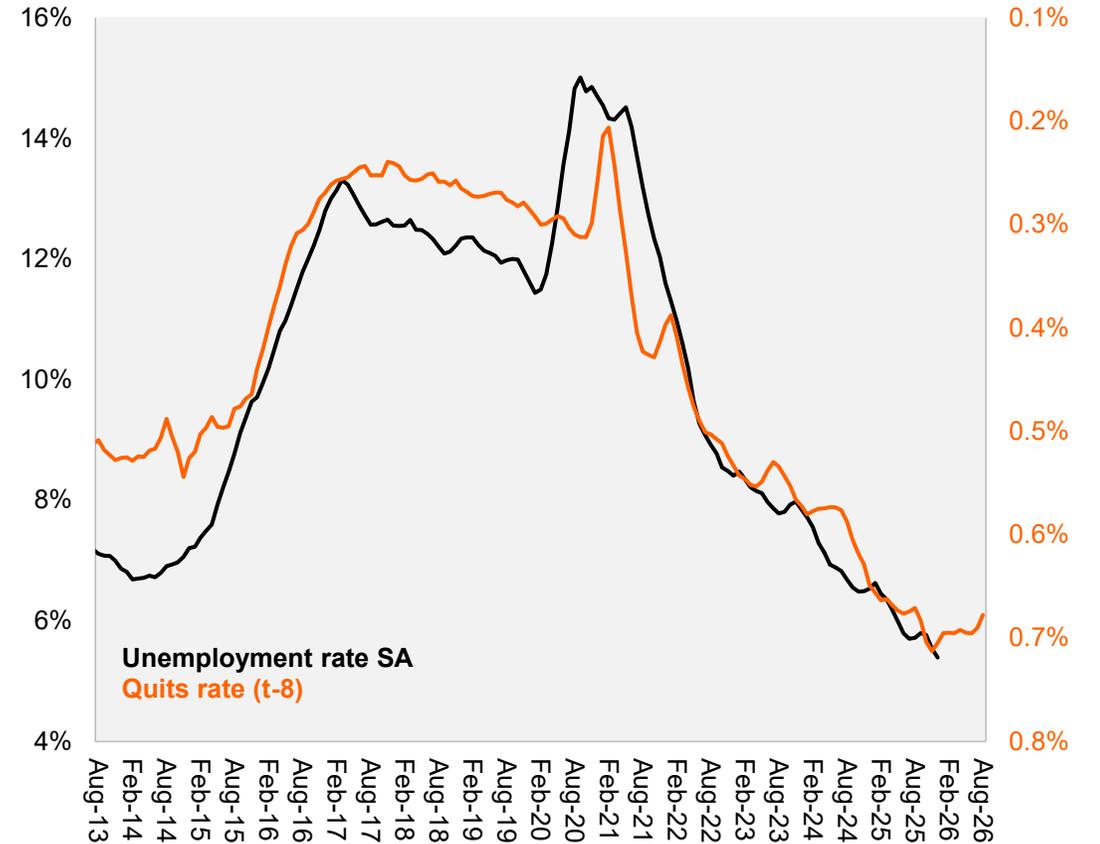
Unemployment rate vs "Jobs Hard to Get"



Source: FGV/IBRE, IBGE and Itaú

*FGV Consumer Survey: getting a job in your city is hard - getting a job in your city is easy

Unemployment and Quits rate

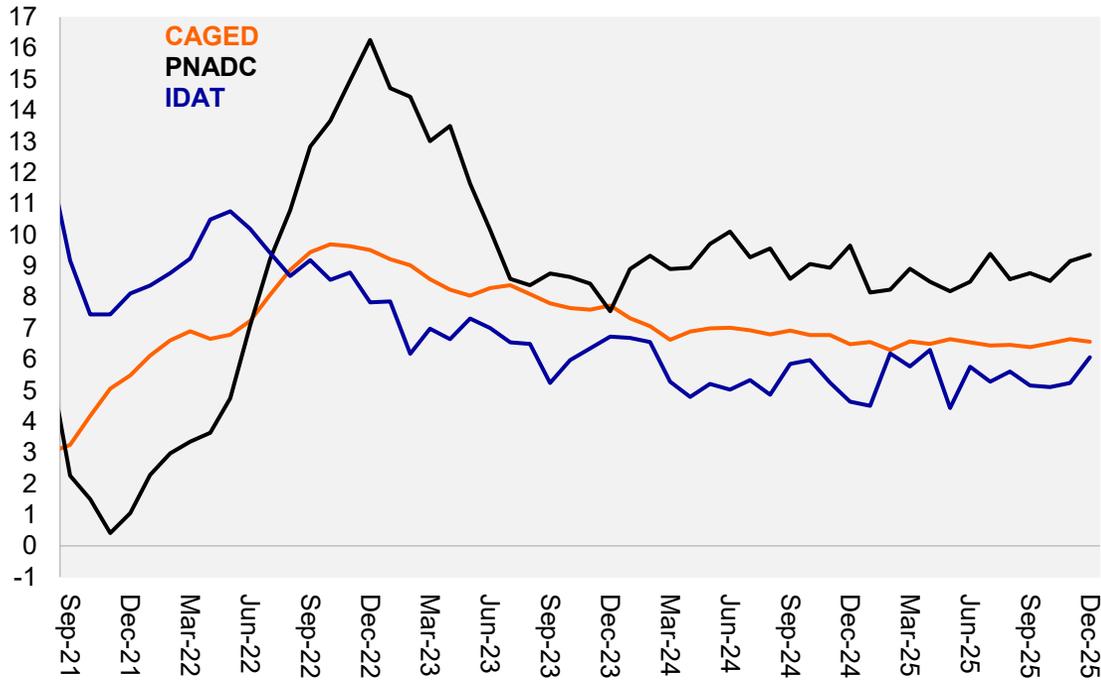


Source: CAGED, IBGE and Itaú

*Quits Rate (CAGED)/ total employed population (PNAD)

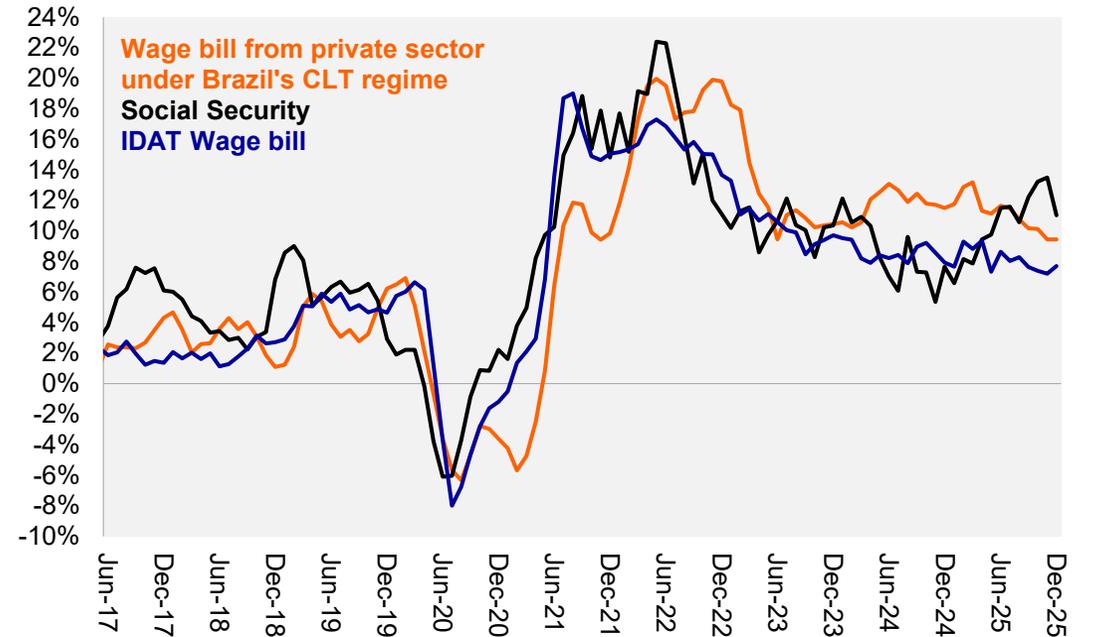
Different metrics show nominal wages growing between 6%-9%. Social security revenues suggest greater wage pressure

Nominal Wages (YoY% 3MMA)



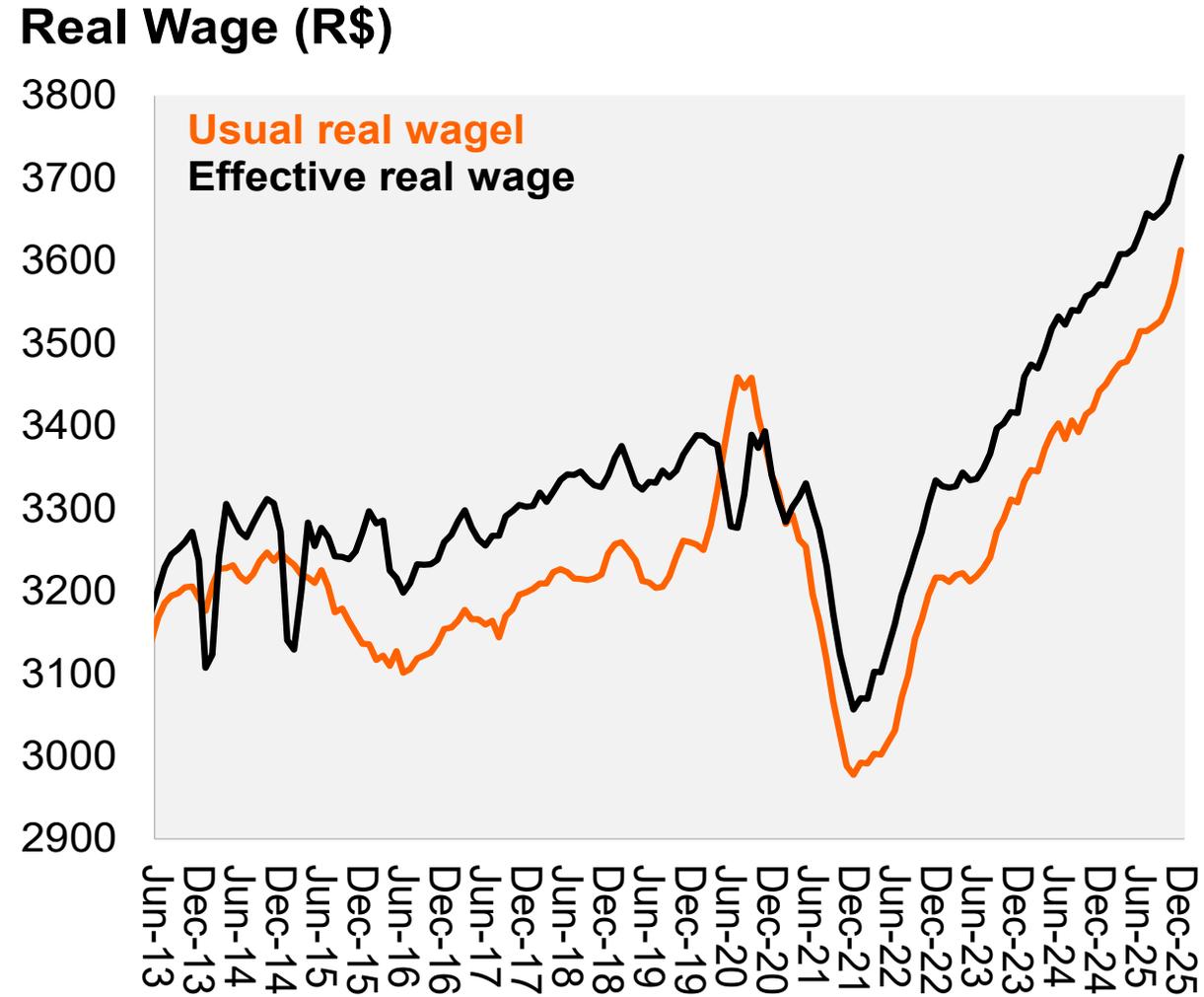
Source: CAGED, IBGE and Itaú

Social Security Revenue vs. Labor Market (yoy nominal, 3mma)



Source: National Treasury, IBGE and Itaú

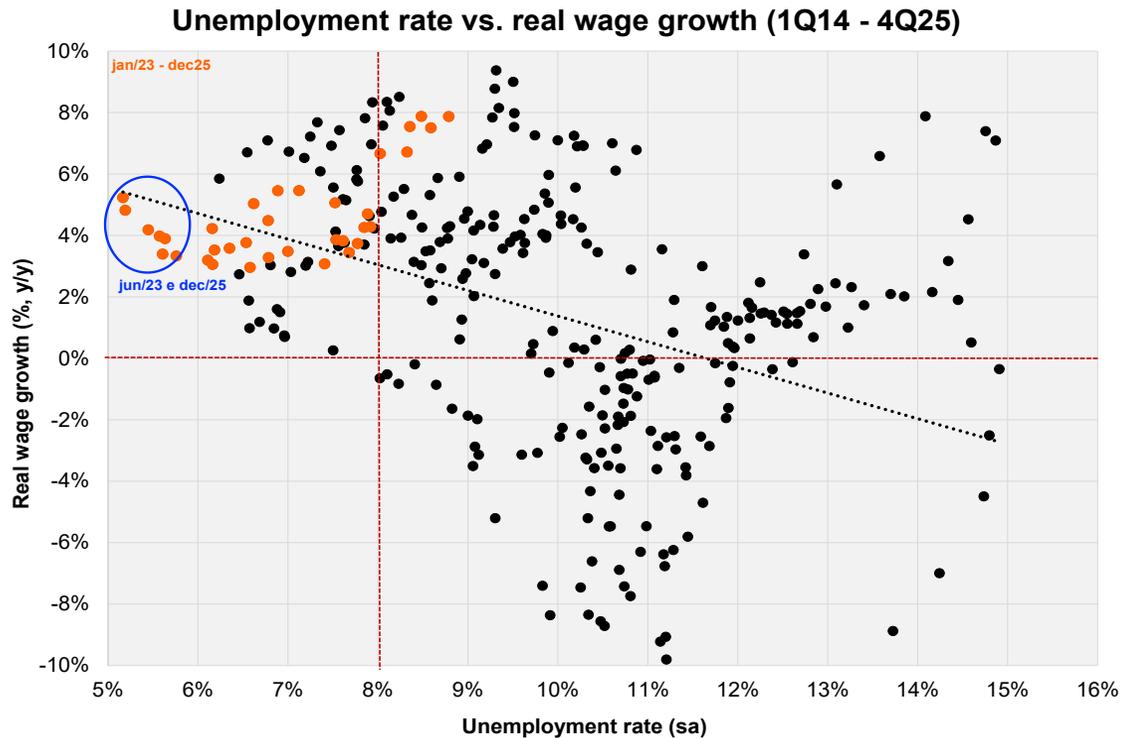
Real wages (PNAD) accelerated at the end of 2025



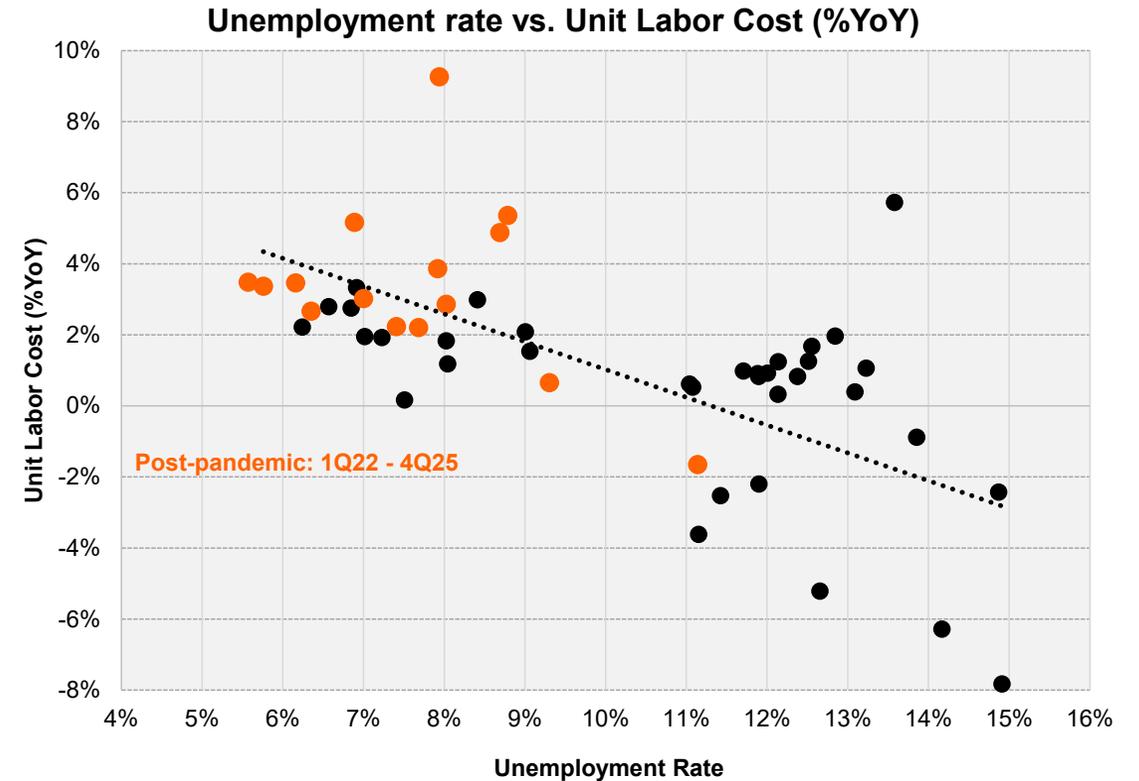
Source: IBGE and Itaú

Real wages rise when the unemployment rate is below 8% (indicating a NAIRU close to this level)

- Wages growing at a slower pace than the unemployment rate would suggest, which could indicate a larger decline in the NAIRU, but the behavior of unit labor costs (ULC) remains consistent with the unemployment rate.



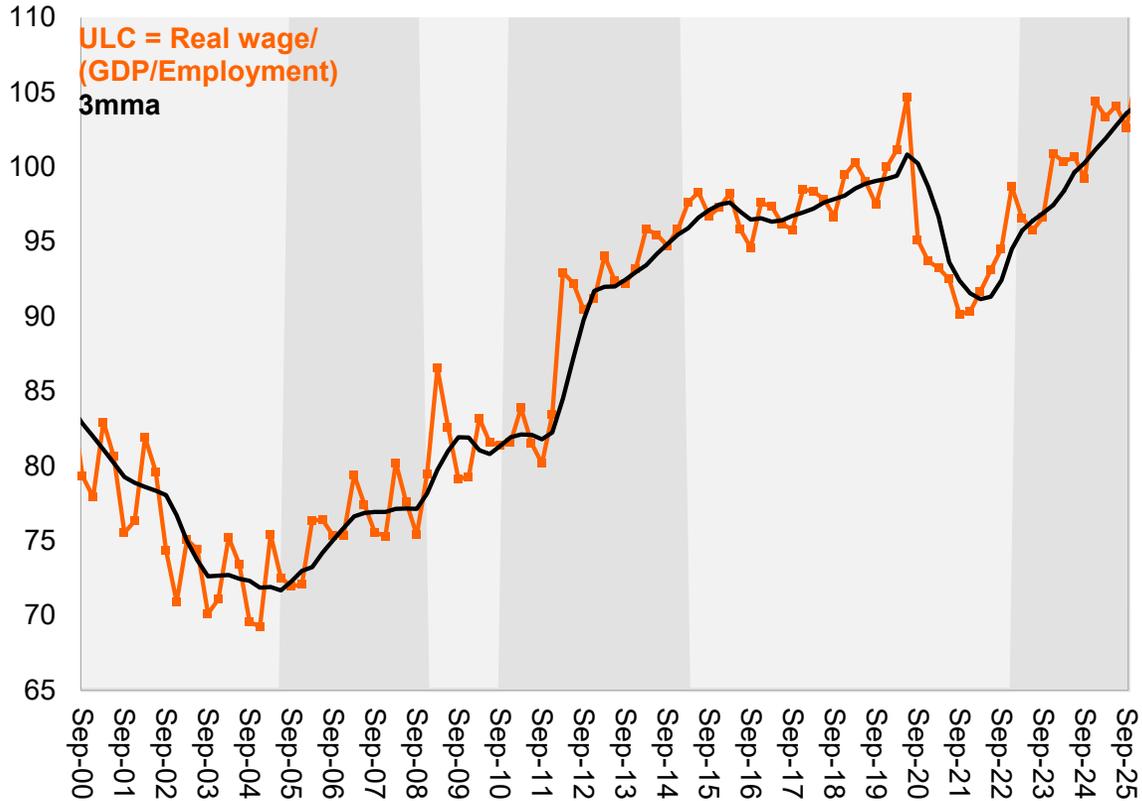
Source: IBGE and Itaú



Source: IBGE and Itaú

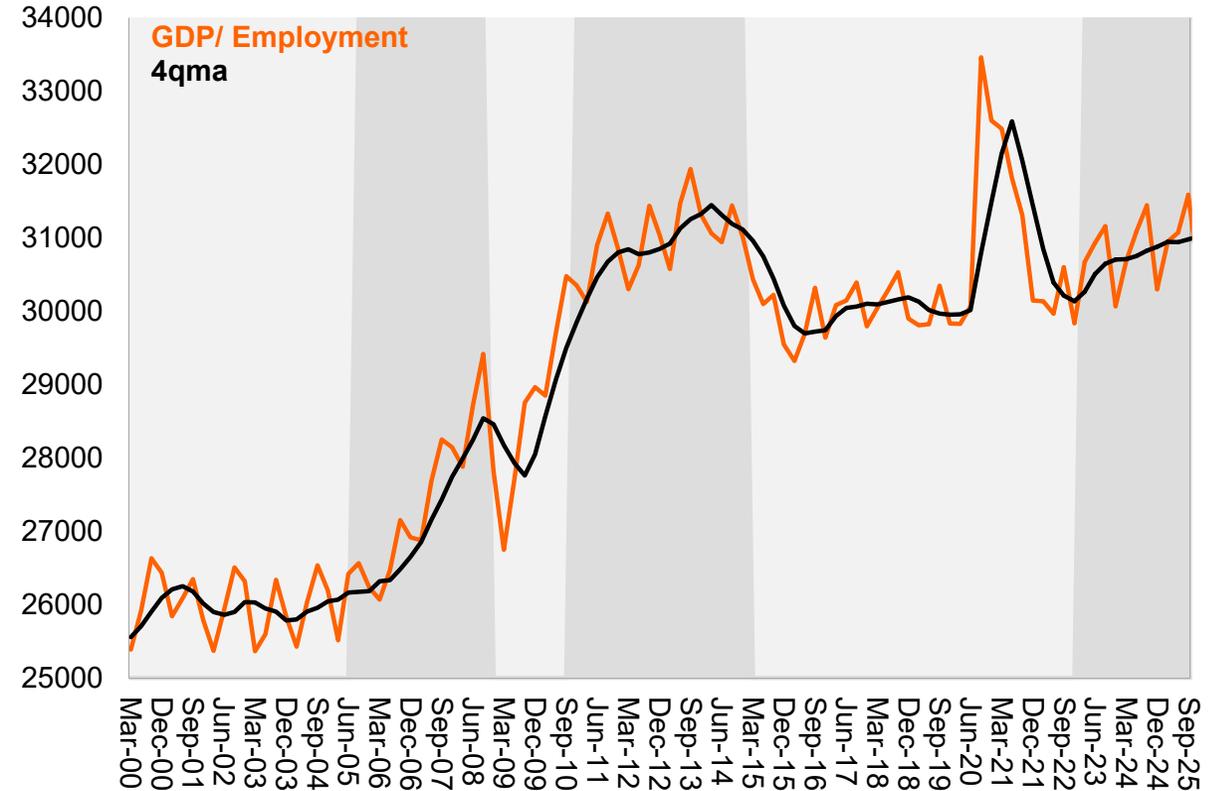
Unit labor costs (ULC) remain above pre-pandemic levels (wages rising faster than productivity)

Unit Labor Cost, 4Q19=100



Source: IBGE and Itaú

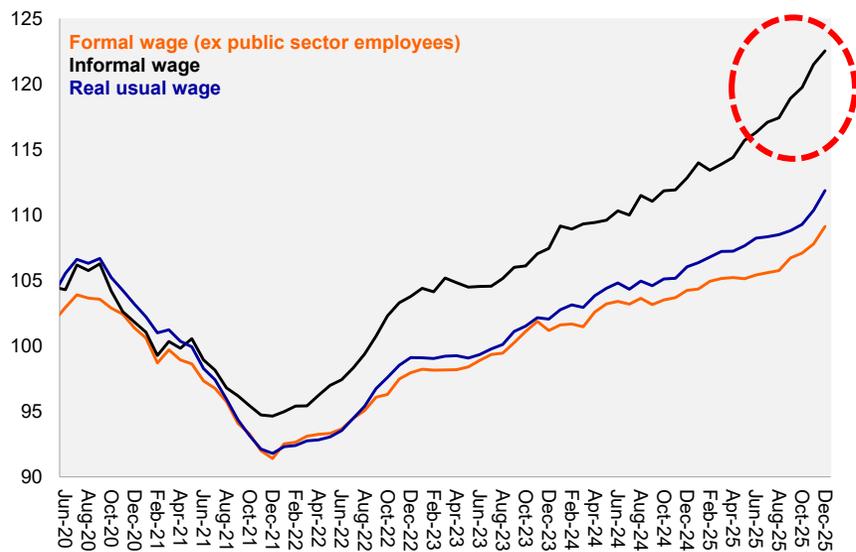
Productivity (R\$)



Source: IBGE and Itaú

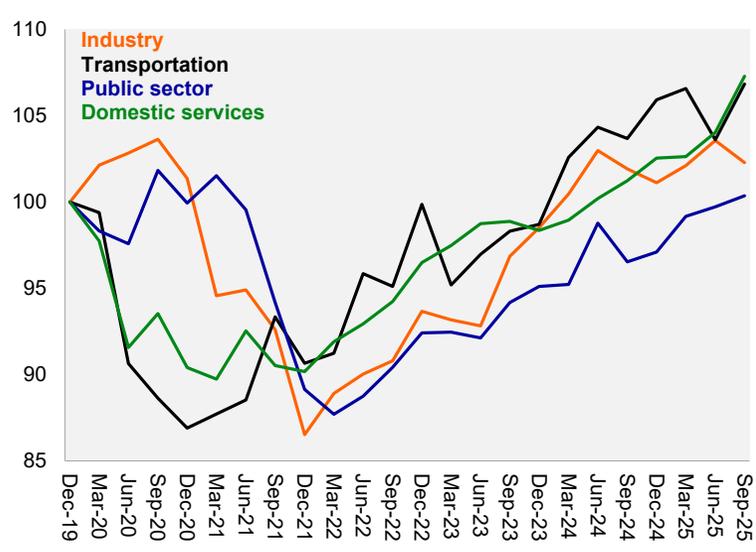
Stronger wage pressure in the informal sector. Services and Construction are the most pressured sectors

Real usual wage (Dec/19=100)



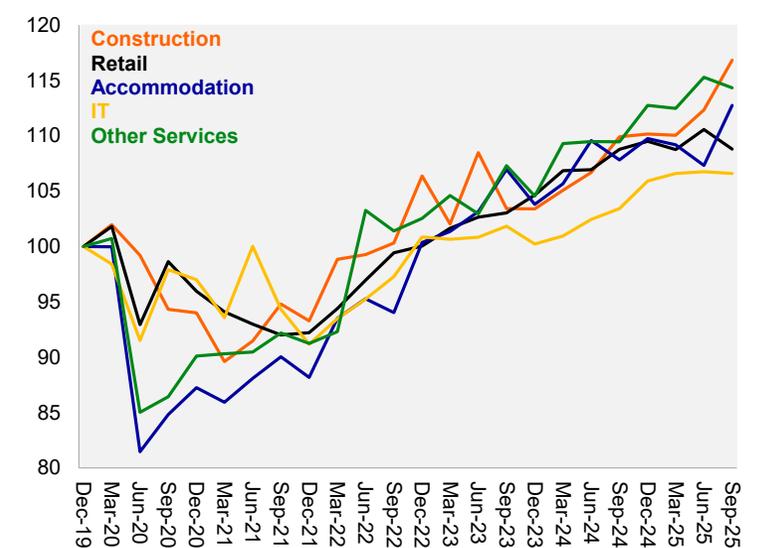
Source: IBGE and Itaú

Effective real wage (4Q19=100)



Source: IBGE and Itaú

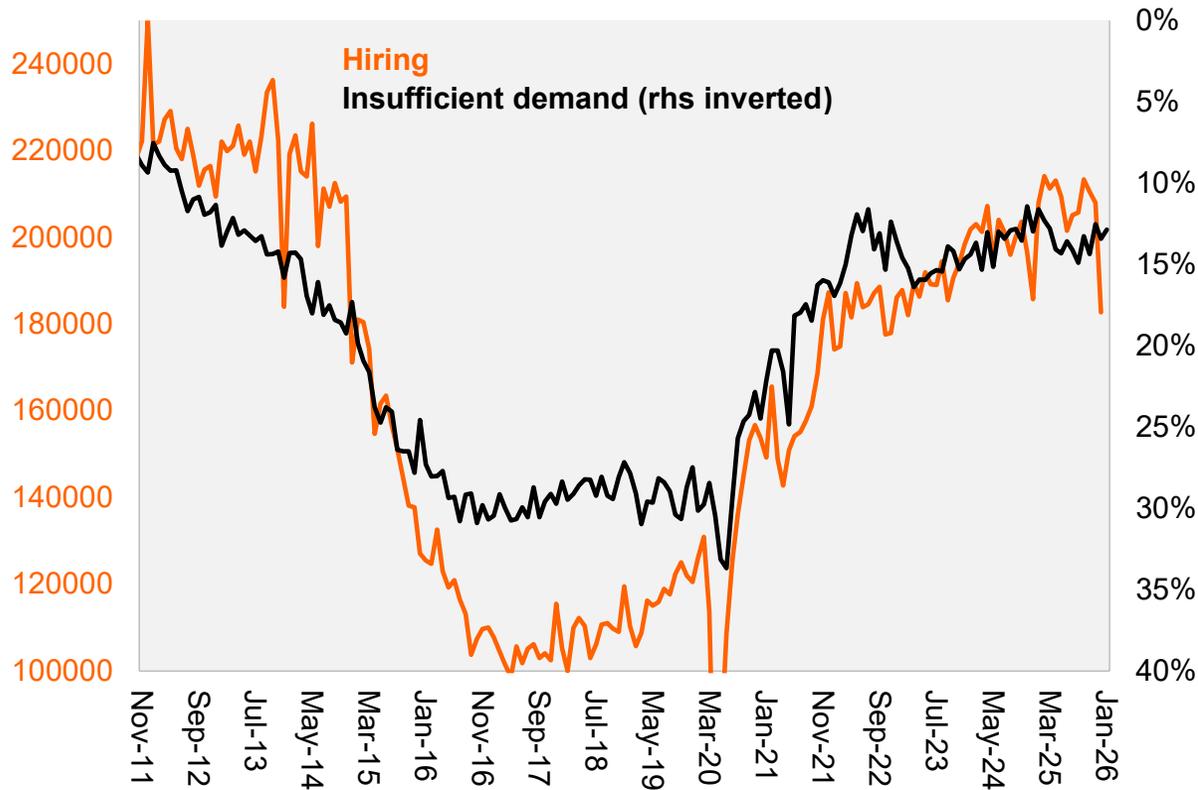
Effective real wage (4Q19=100)



Source: IBGE and Itaú

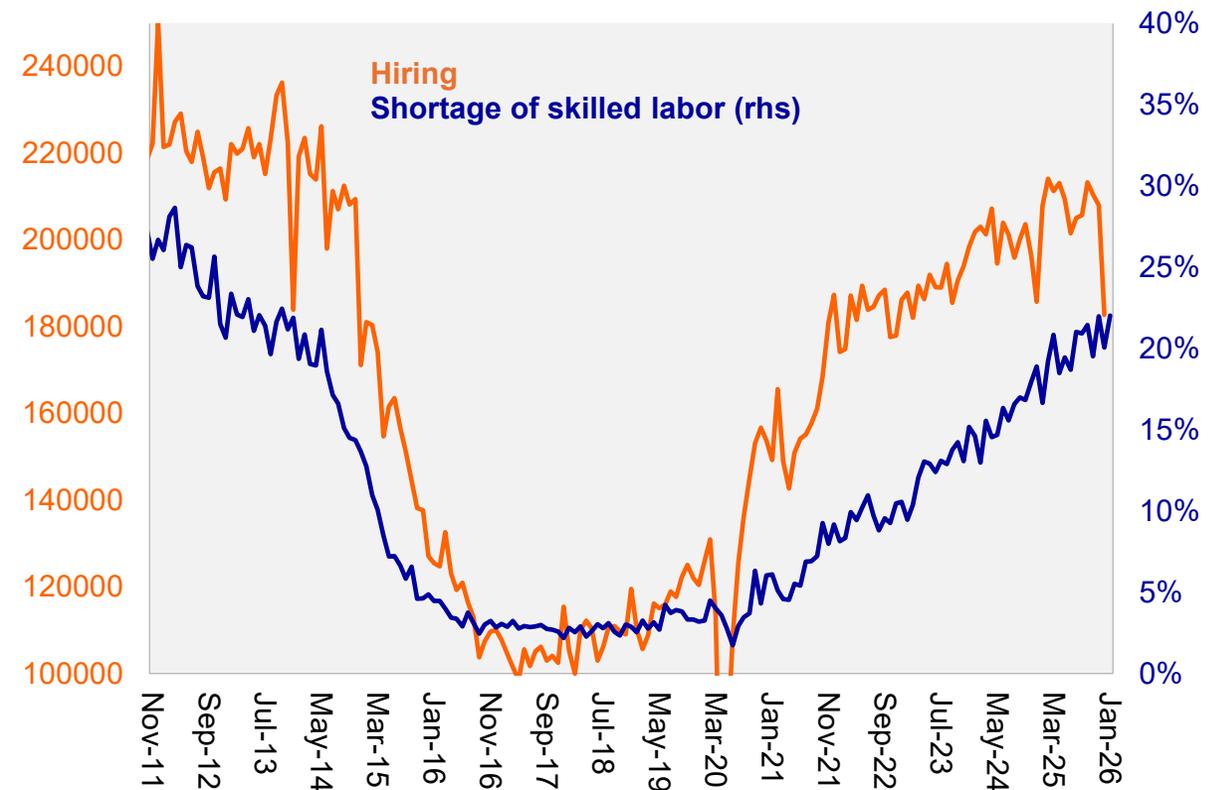
In construction, wage pressures appear to stem from shortages of available labor...

Hiring vs. insufficient demand in construction



Source: FGV/IBRE and Itaú

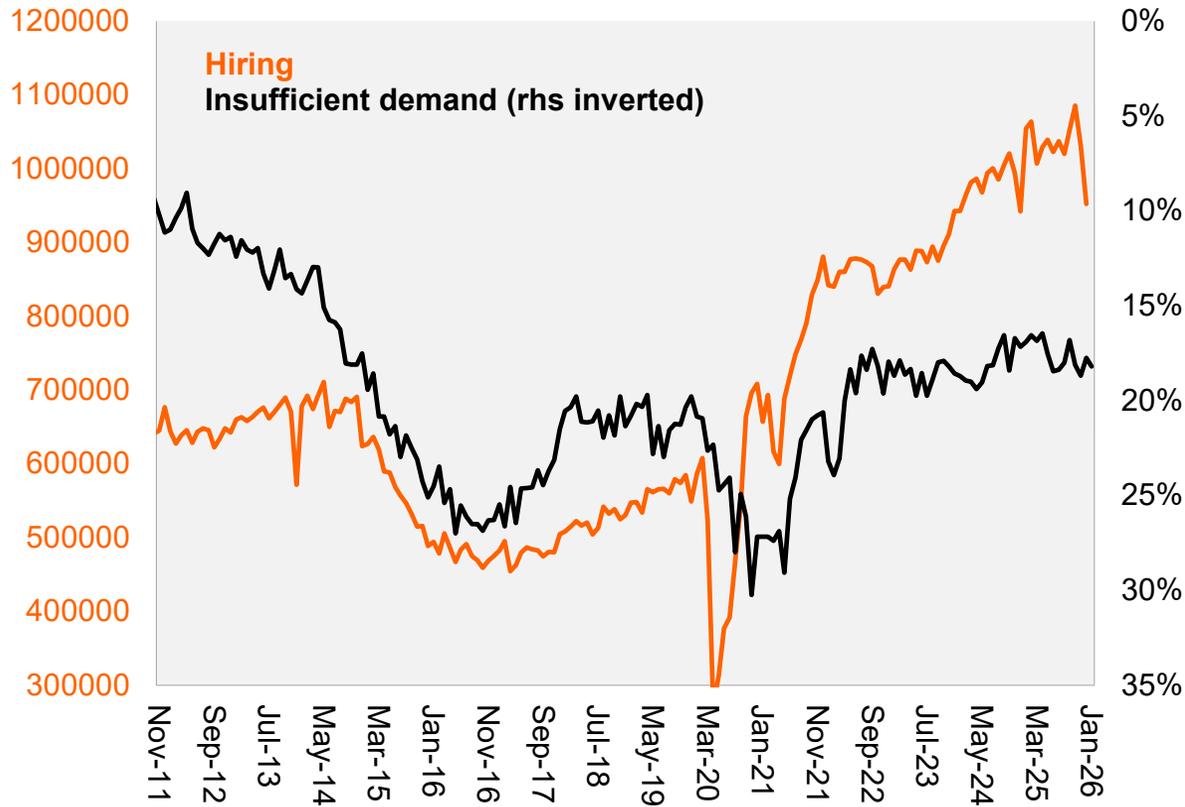
Hiring vs. labor shortages in construction



Source: FGV/IBRE and Itaú

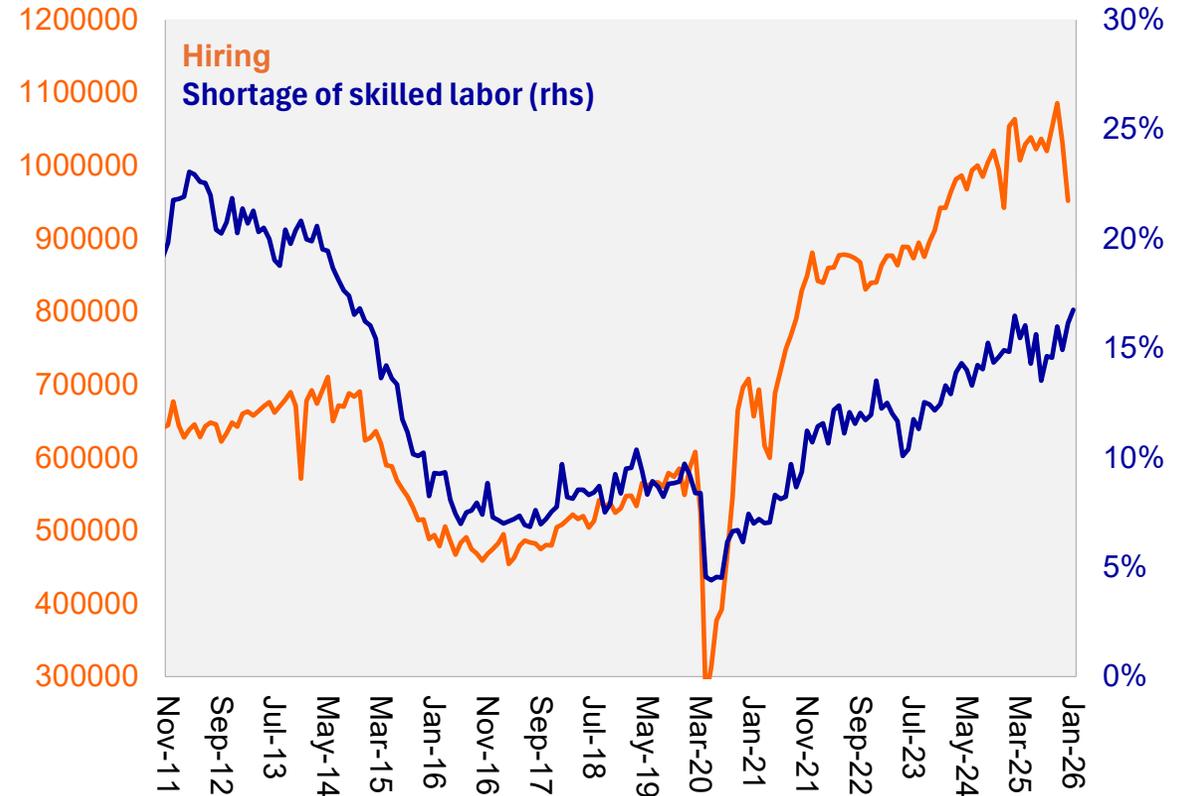
... But in services, labor shortages do not appear to be a particularly clear or binding constraint

Hiring vs. insufficient demand in services



Source: FGV/IBRE and Itaú

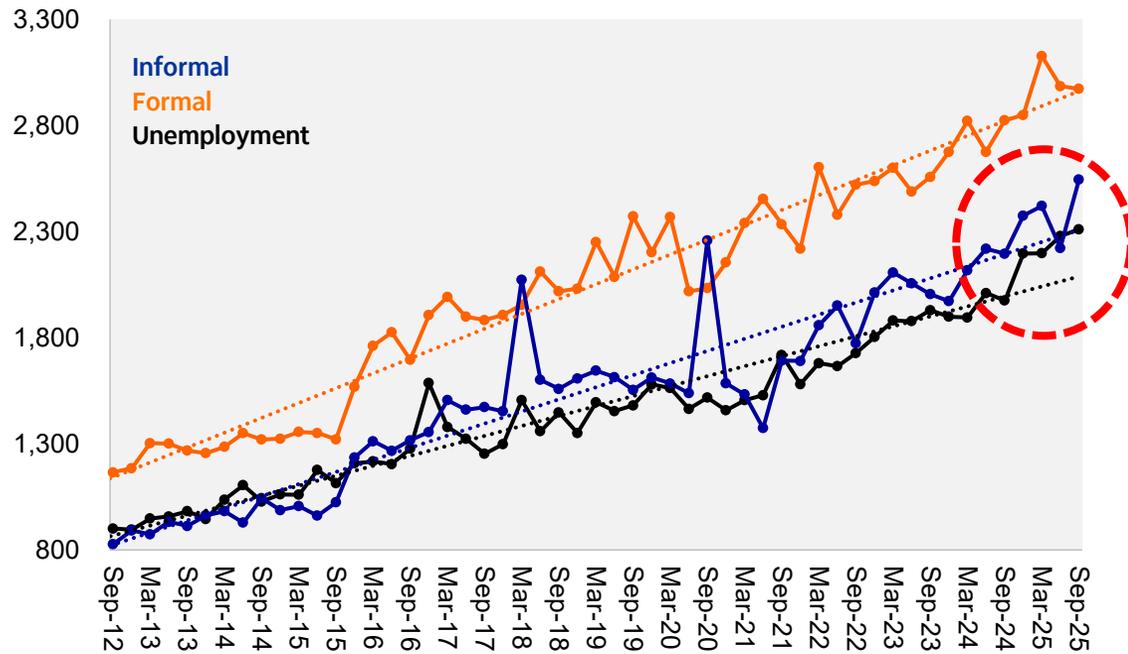
Hiring vs. labor shortages in services



Source: FGV/IBRE and Itaú

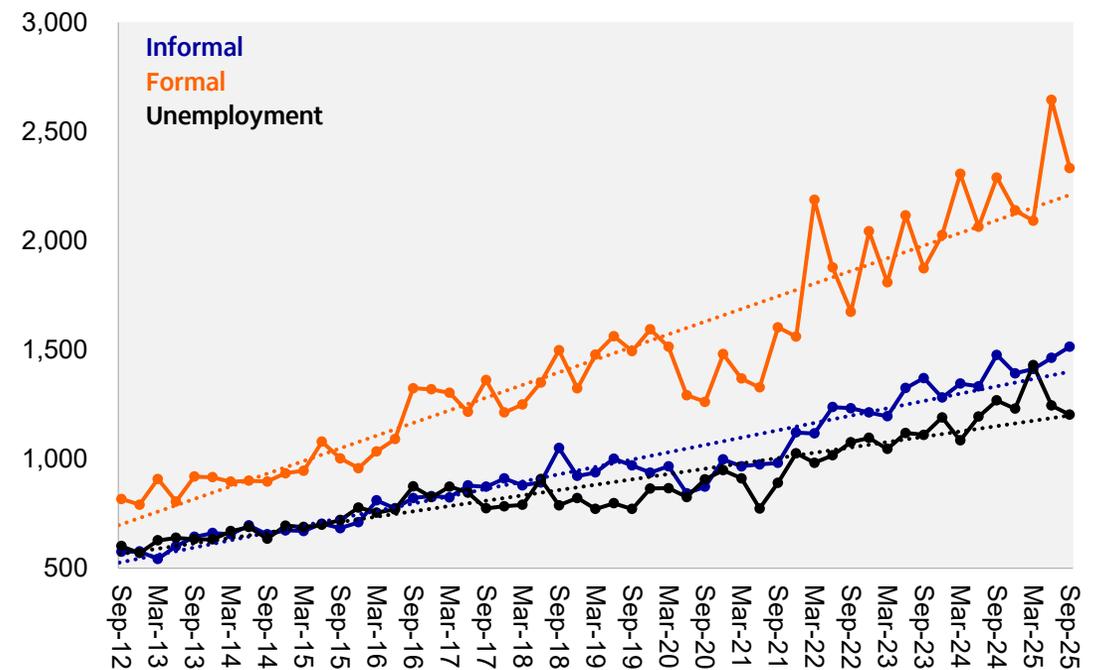
Informal wage pressures appear to be coming from formalization.

Wages of new formal hires, by origin



Source: IBGE and Itaú

Wages of new informal hires, by origin

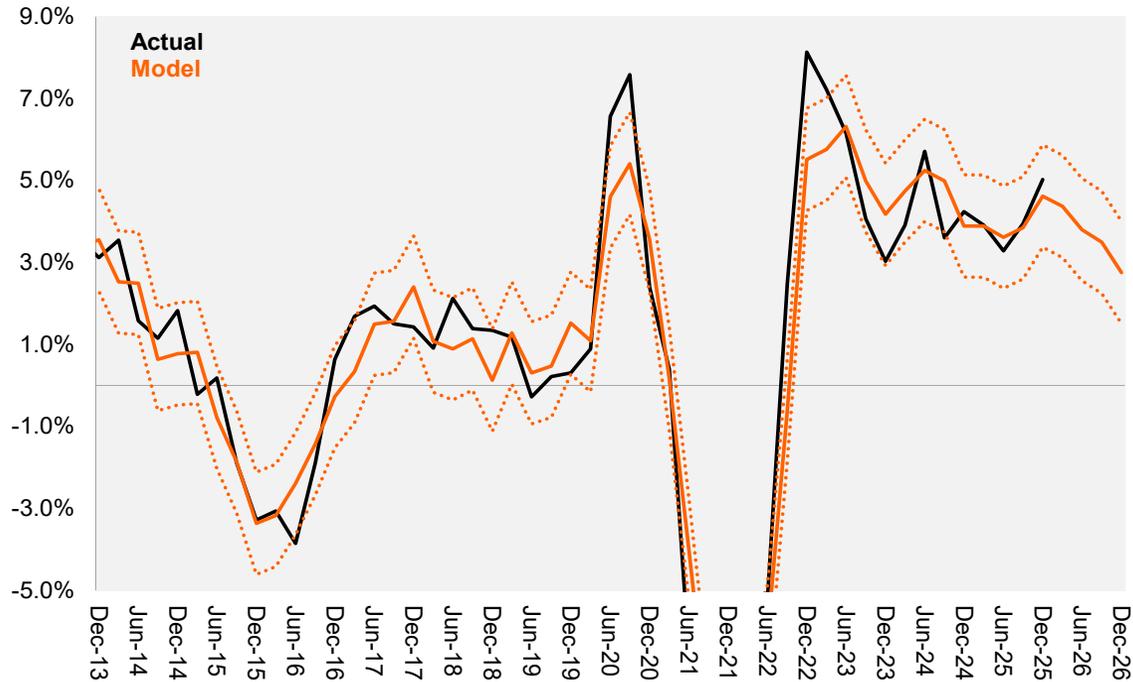


Source: IBGE and Itaú

With the labor market still tight, wages are expected to continue rising

We forecast a 3.6% increase in 2026, from 3.7% recorded in 2025

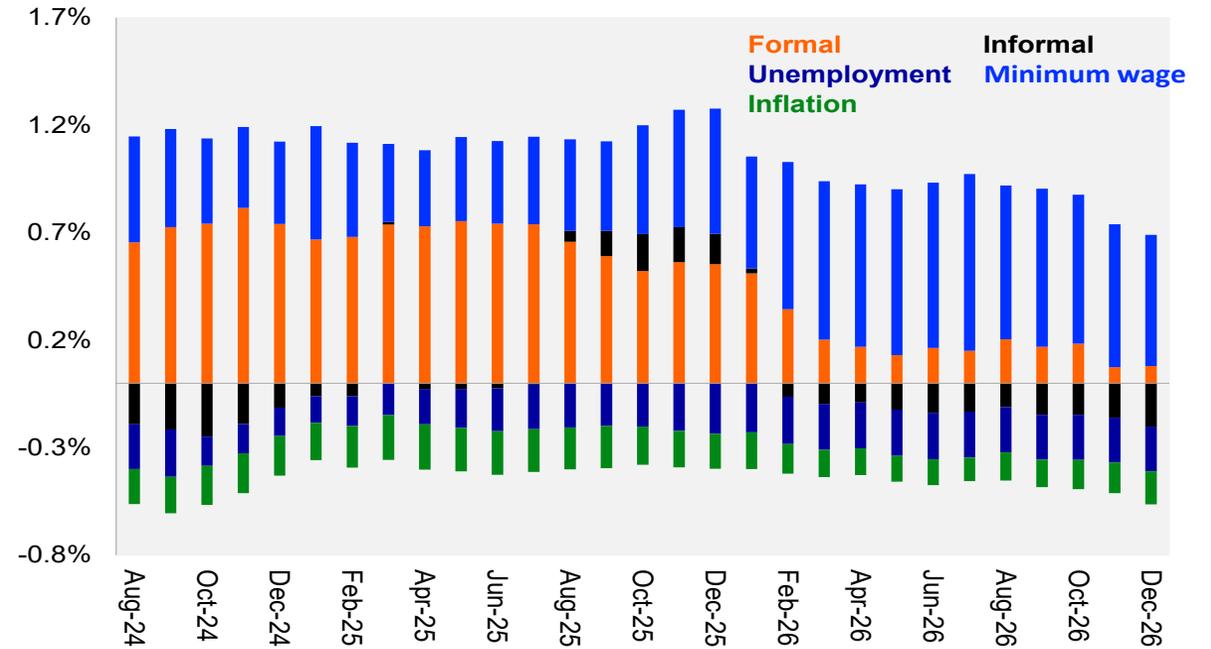
Usual real wage %YoY



Source: IBGE and Itaú

Model $W_{real} = F(c, \text{unemployment, inflation, productivity})$ or $F(c, \text{unemployment, formal and informal employment, inflation})$

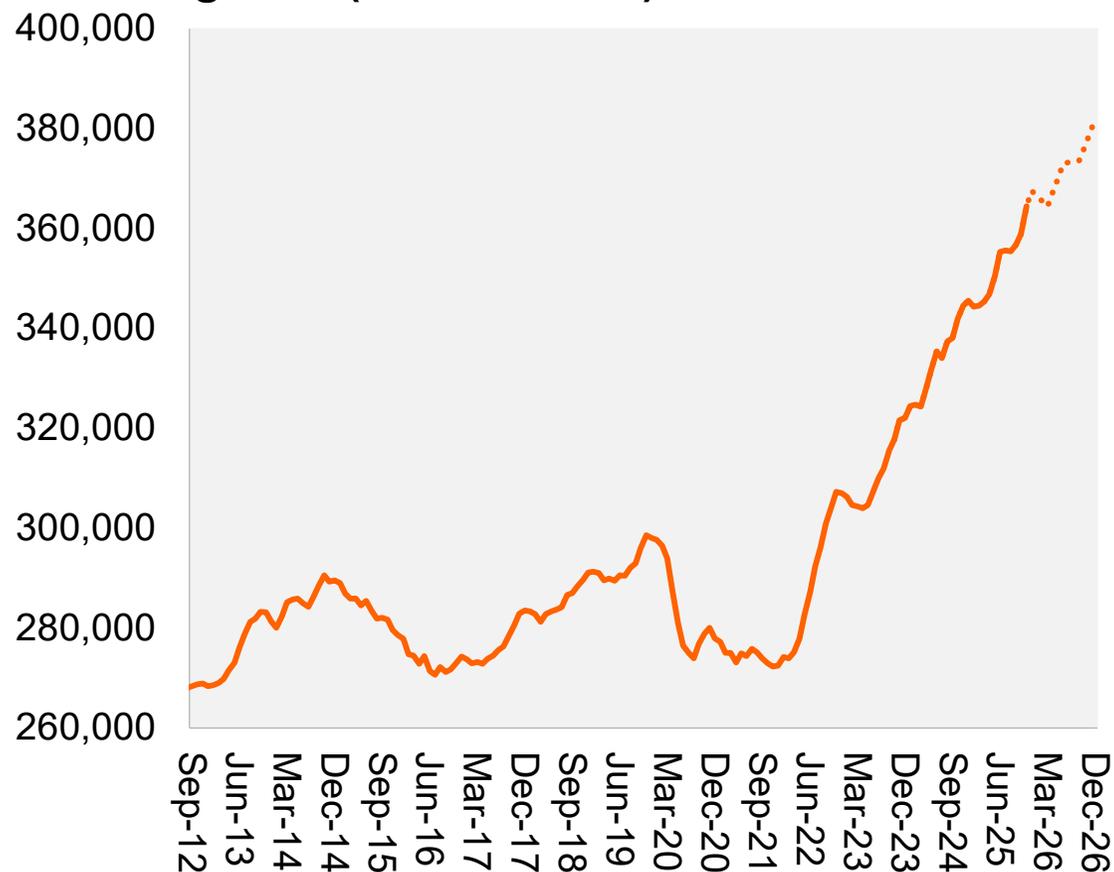
Wage Model Contribution



Source: IPEA, IBGE and Itaú

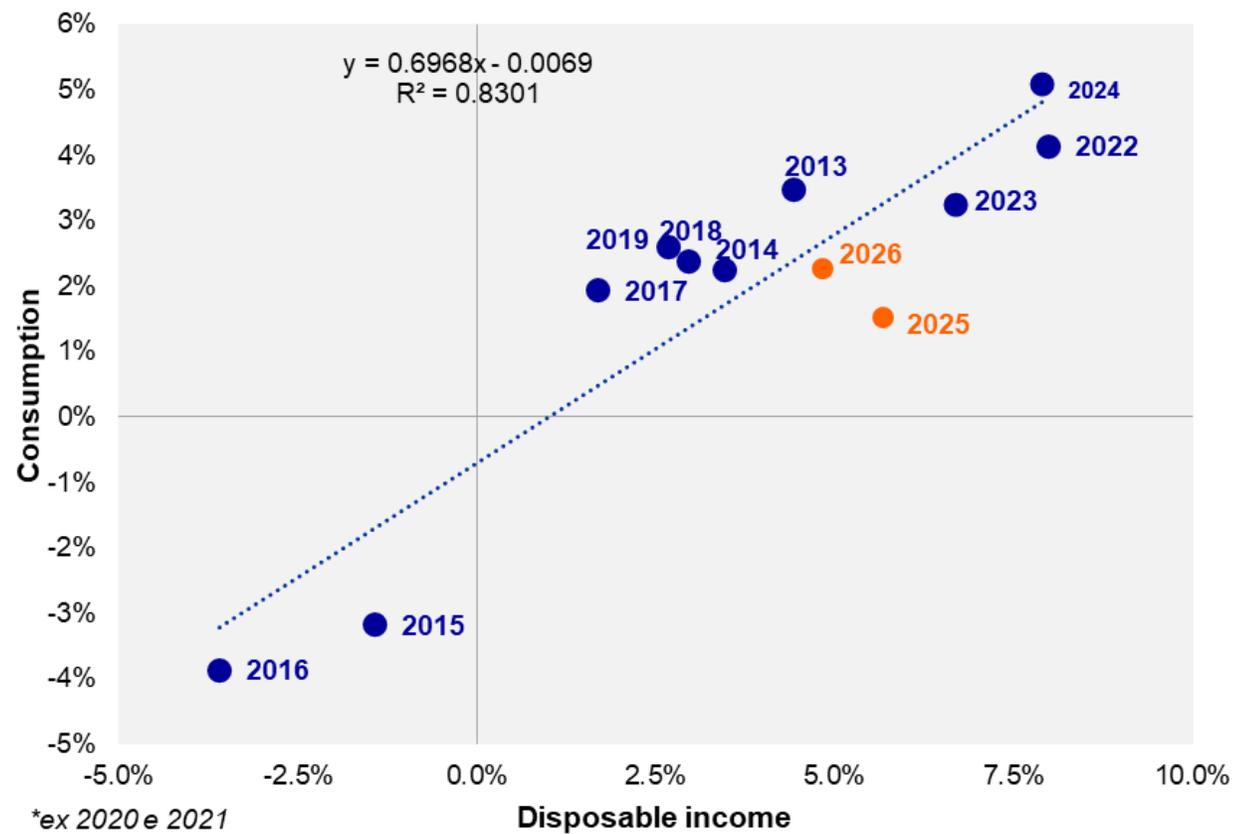
The wage bill should continue to boost consumption (income-tax exemptions and cash-transfer programs also provide additional support)

Real Wage Bill (R\$ thousand)



Source: IBGE and Itaú

Consumption vs Disposable Income (2013-2026*)



Source: IBGE and Itaú

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<https://www.itaubba-pt/macroeconomic-analysis>

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