

Actual government spending and the resumption of growth in Brazil: 2023-24

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Abstract

The aim of the paper is to explain the resumption of growth and the increase in business investment share in Brazil during the period 2023-24, after of a period of stagnation. Output stagnation and the reduction in the domestic market of the Brazilian economy in 2015-2022 happened in a context of low (even negative) real interest rate and depreciated real exchange rate, and was mainly driven by contractionary fiscal policy. We argue that the recent growth of the economy has been mainly due to an expansionary fiscal policy, despite new restrictive fiscal rules for federal spending. Fiscal policy was in practice expansionary, due to peculiar conjunction of events, such as the suspension of the federal expenditure cap for the first year, and the exclusion of payments of judicial debts to households and federal spending for emergencies from the fiscal targets in the second year. Moreover, there was a substantial expansion of federal and state-owned enterprises investment and also of expenditures made by states and municipalities, which lie outside the limitations on federal expenditures. We argue that the expansionary effects of fiscal policy on aggregate demand was much stronger than the contractionary effects of a tighter monetary policy, and that this increase in domestic spending, together with a smaller but positive contribution to aggregate demand of the external sector in spite of an appreciation of the real exchange rate, led to the return of economic growth and to the recovery of business investment.

Keywords: Brazilian economy; Demand-led growth; Economic policy.

JEL Codes: E11, E60, O11.

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1) Introduction

Amidst headwinds from higher nominal interest rates in the US and a domestic tightening monetary policy, the Brazilian economy has emerged from a period of prolonged stagnation. The 3,3% average growth rate in the first two years of the third term of President Lula (2023-24) clearly constitutes a quite modest performance for a developing country with massive social needs. However, there are three reasons to celebrate it. First, because it marks a great improvement on the bleak performance of the previous 2015-2022 period. The latter, marked by fiscal austerity and neoliberal reforms, produced not only stagnant GDP growth (averaging 0,2% a year) but also a reduction in the absolute level of domestic demand¹. Second, because of rapid changes in the demographic dynamics in Brazil, the growth rate of GDP per capita in the first two years of President Lula's third term (2.9% a year) is nearly the same as the one obtained in the relatively prosperous previous Lula two terms from 2003 to 2010 (3.0% a year).² Third, because the internal market has actually began to increase again, after having been reduced from 2015-22, leading finally to a recovery of business investment. The latter increased faster than GDP in 2024.

The purpose of the paper is to examine the causes of the resumption of growth and increase in business investment share in Brazil during the period 2023-24, after of a period of stagnation, that occurred with a lower average inflation compared with the aftermath of the pandemic, despite higher growth rates and much lower unemployment rates. Growth resumed despite higher levels of the domestic interest rate (in a context of higher international interest rates) and a real exchange rate appreciation, under an unchanged trajectory of reduction of the inflation target (which has been gradually reduced since 2019). Moreover, growth happened despite quite restrictive fiscal targets as a result of the approval of a new fiscal framework law in 2023. The methodology used here follows the same analytical framework used in studies of the Brazilian economy for earlier periods (Serrano and Summa, 2012, 2015, Haluska et al 2025) in which aggregate output is seen as determined by effective demand, business investment is induced by the expected levels and growth of demand, inflation is interpreted as cost push and reflects distributive incompatibilities and interest rates are mainly determined by the Central Bank. We shall argue that apart from a positive contribution of the fast growth of exports (which increased faster despite the continuity in the process of 'primarization'), the bulk of Brazil's recent positive performance has been due to its expansionary fiscal policy. In spite of the federal government declarations exhorting fiscal probity, luckily fiscal policy was in practice

¹ This means that the size of the Brazilian internal market was actually smaller by the end of 2022 than it was by the end of 2014 (Haluska et al, 2025).

² The growth rate of population has lately been decreased sharply in Brazil, from an average of 1.0% during the first two Lula presidential terms (2003-2010) to 0.4% now.

quite expansionary. This however happened not entirely by design, but due to a peculiar conjunction of events, such as the suspension of the federal expenditure cap for the first year, and the exclusion of payments of judicial debts to households and federal spending for emergencies from the fiscal targets in the second year. Moreover, there was a substantial expansion of federal and state-owned enterprises investment and also of expenditures made by states and municipalities, which lie outside the mandated limits to federal expenditures. We argue that the impact of this fiscal expansion on demand was stronger than the contractionary effects of a tighter monetary policy, which did have negative (but limited) effects mainly on residential investment. Those negative effects of higher interest rates were probably more than compensated by the positive indirect effects of higher interest rate differentials on the real exchange rate appreciation, that contributed to higher real wages and increases induced consumption. The latter was also influenced by the policy of real minimum wage increases and lower unemployment rates.

. Our argument will proceed as follows. We begin by jointly analyzing the current account deficit, the short- and long-term capital flows, monetary policy and the nominal exchange rate (section 2). After that, we proceed to discuss cost-push inflation (section 3) and its impact on income distribution and on the real exchange rate (section 4). We then examine the evolution of the components of aggregate demand. We begin with the more exogenous components and then move to the more endogenous ones. We thus start with exports and government spending (section 5), then move to explain autonomous household consumption, residential investment and induced consumption and finally, business investment (section 6). Section 7 concludes with brief final remarks.

2) External financial conditions, interest rate and exchange rate dynamics

To understand how macroeconomic policies shaped the evolution of effective demand in the Brazilian economy, we first discuss the prevailing external financial conditions and then look at the important relation between the external accounts and exchange rate dynamics and domestic nominal interest rate setting by the Central Bank.

The context of rising U.S. nominal interest rates set by the FED since 2022 in principle could have made it more difficult for emerging economies to sustain expansionary policies and could have imposed a balance of payments constraint to growth (Serrano et al 2021). Brazil, however, has continued to face quite favorable external financial conditions during this recent period. Since the mid-2000s, Brazil, as many other emerging economies, has experienced a significant easing of balance of payments constraint with massive accumulation of reserves and attraction of substantial capital inflows, despite persistent current account deficits (Medeiros, Serrano and Freitas, 2016). The level of Brazil's foreign international reserves has remained quite stable for more than a decade and

currently amounts to around 340 billion US Dollars. In terms of short run external liquidity and reserve adequacy, the ratio of the country's short-term external debt over its foreign reserves declined sharply during the 2000s, and despite an increase in 2024, it remains below 30%. Considering total external debt over its foreign reserves, over the past decade, total external debt has averaged around 71% of reserve assets, meaning that the country's net external debt is negative, indicating that the country's overall external position has remained quite comfortable.

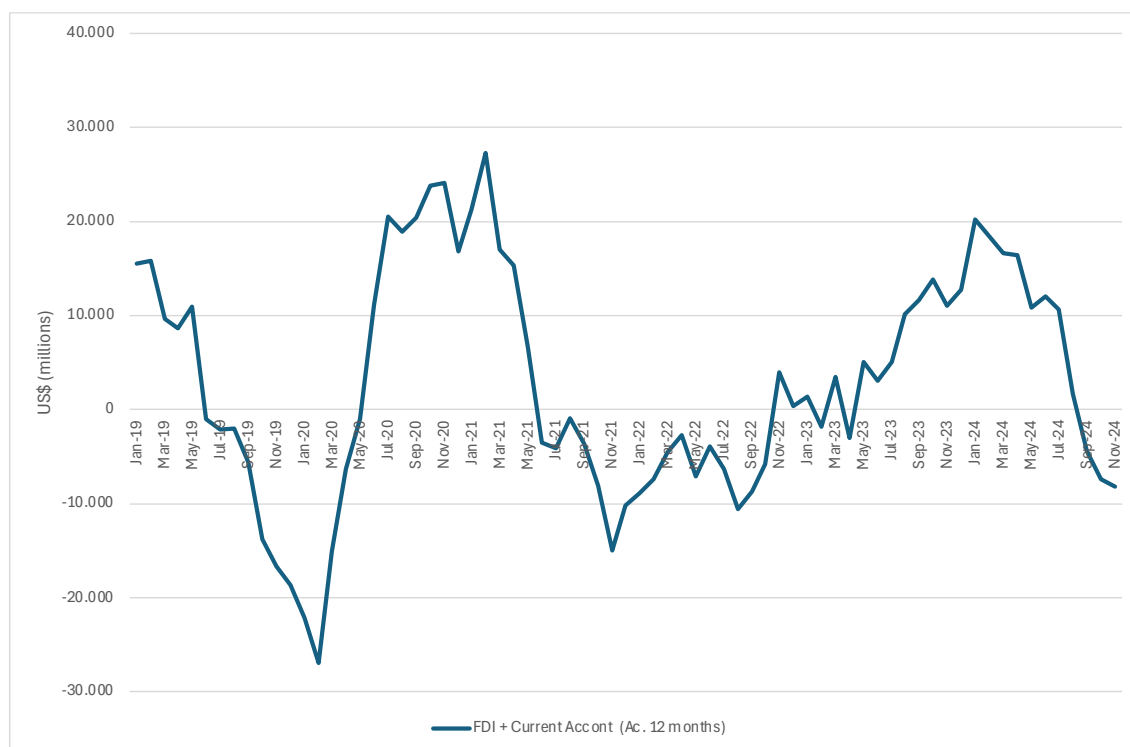
Related to that, there is another key aspect of improvement in the Brazilian external accounts over this period - the process of “de-dollarization” of its external liabilities. This means that now a large share of Brazilian external liabilities (such as public bonds and shares held by non-residents) are denominated in Brazil's own currency, making creditors bear the exchange rate risk and making the economy less vulnerable to large movements in the nominal exchange rate. In spite of rising U.S. interest rates, these facts have allowed Brazil to easily finance sizeable current account deficits in 2023-4 and faced no balance of payments constraint in the period, (Biancarelli and Rosa, 2024; Rosa and Biancarelli, 2024)³. These large current account deficits are due to net outflows of profits, dividends, and interest exceeding the trade surplus. In 2023, Brazil decreased its current account deficit, as a result of a higher surplus in the trade balance, both because of increased exports and of lower imports. In 2024, however, the current account deficit rose markedly⁴, largely due to a sharp increase in imports of goods and services, at a much higher growth rate than exports have risen, as we discuss below (in section 5). In balance of payments accounting, these deficits are offset by capital and financial inflows. Foreign direct investment (FDI) - a more stable source of external financing than short-term capital inflows - increased in 2023, and did not change very significantly during 2024. Figure 1 shows the sum of net foreign direct investment and Brazil's current account, where positive values indicate that the FDI net inflows are larger than the current account deficit. Since net foreign investment remained consistently positive during this period, any negative value implies that the current account deficit exceeded net foreign investment. Data from Figure 1 indicates that this balance improved and became positive in 2023, but then declined throughout 2024 until it became negative again⁵.

³ We thus think that Brazilian external vulnerability was indeed extremely **reduced**, and not just modified (‘redux’) as proposed by de Paula et al (2020) for emerging economies.

⁴ From 20.9 to 55.9 billion US\$ by December (accumulated in 12 months).

⁵ Moving from a surplus of US\$20 billion in January 2024 to a deficit of US\$9.2 billion in December 2024.

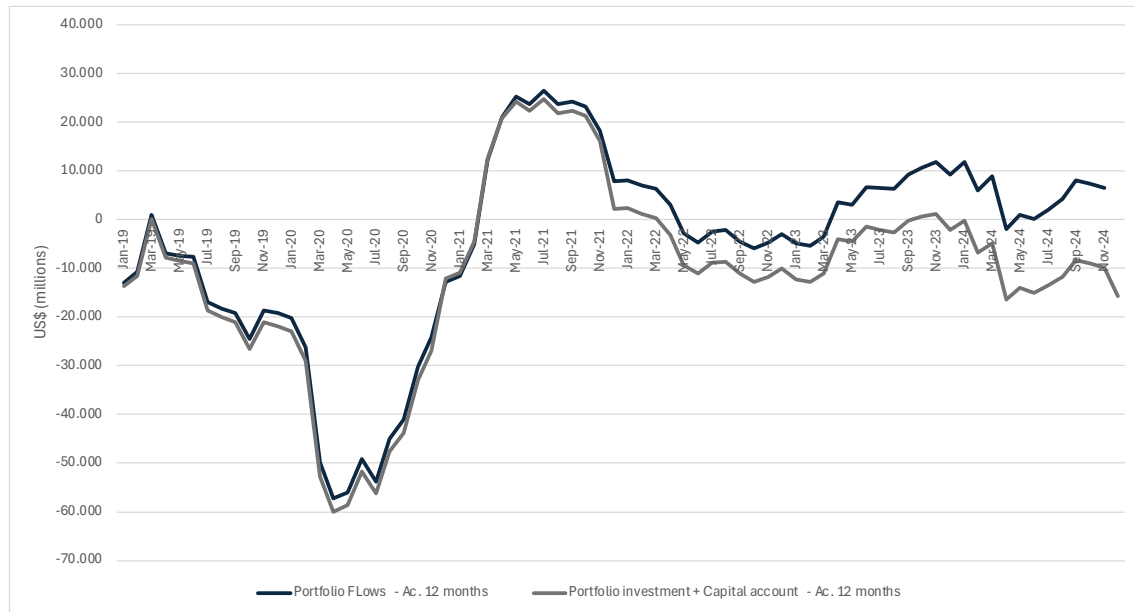
Figure 1: Balance between net foreign investment and current account



Source: Brazilian Central Bank

A common way to finance such deficits has generally been through portfolio inflows. In 2023 and 2024, net portfolio flows were still positive, with a slight decrease in 2024. By the end of 2024, however, the surplus of portfolio net flows was a little bit lower than the US\$9.2 billion deficit between net foreign investment and current account. In 2024, however, this relatively small gap between portfolio net flows, net foreign investment, and the current account was amplified by a new and significant source of capital outflows. These arose from rising outflows tied to cryptocurrency and other digital transactions—recorded in the capital account rather than the financial account—which have been growing since 2021. By December 2024, the capital account had accumulated a deficit of US\$20 billion. When the portfolio and capital accounts are combined, the total deficit reached US\$15.6 billion. While portfolio flows remain closely tied to interest rate differentials, outflows associated with cryptocurrencies and other digital operations, such as online betting, do not. Figure 2 shows portfolio and capital account net flows in Brazil.

Figure 2: Portfolio flows and capital account

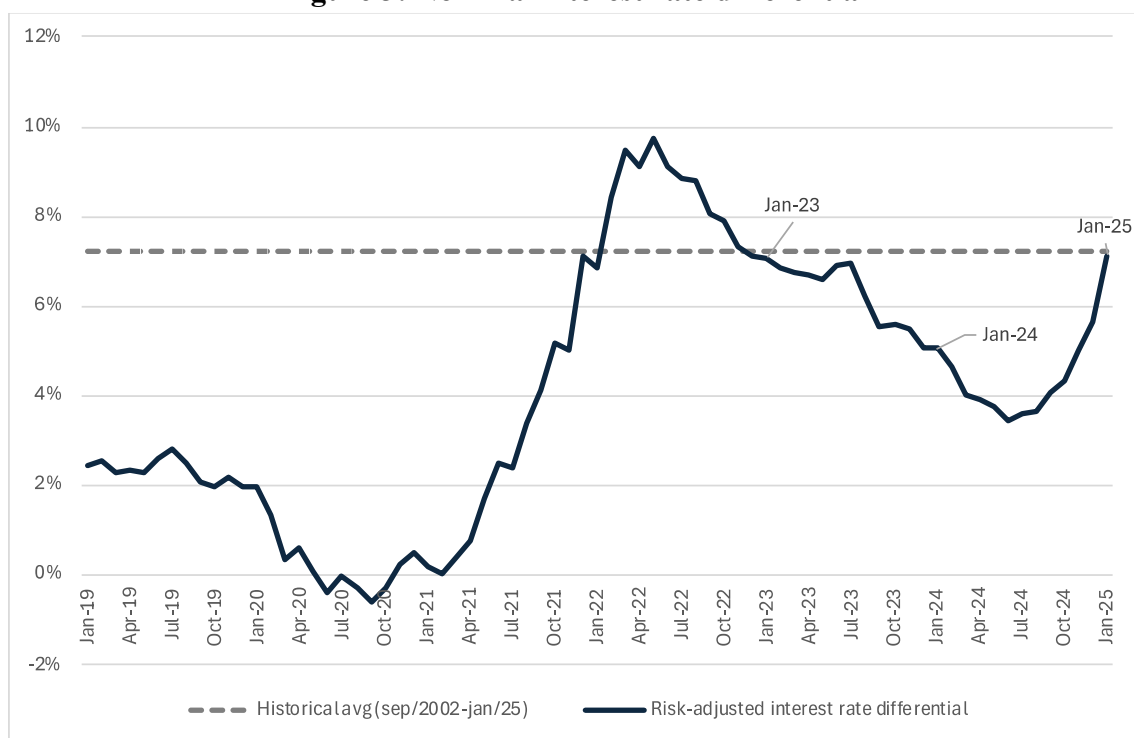


Source: Brazilian Central Bank

As a result, compensating for the increased deficit in these flows usually requires higher interest rate differentials. One common way to roughly estimate these differentials is by subtracting the U.S short-term rate (Federal Funds rate), adjusted by the CDS spread, from the domestic policy rate. Hence, both domestic and external policy decisions play a role in determining its value.

As shown in Figure 3, the nominal interest rate differential was quite high by the end of 2022 and beginning of 2023. This was a result of a sudden change after a misguided policy decision from the Central Bank to set the nominal domestic rate below the external rate throughout 2020, in the turbulent environment of the pandemic. As can be seen in Figure 2, these contributed to portfolio outflows in 2019-2020. The interest differential remained positive but was reduced during 2023 due to the Brazilian Central Bank's decision to reduce the domestic policy interest rate from the second half of 2023, even as the Fed Funds rate stayed relatively high.

Figure 3: Nominal interest rate differential



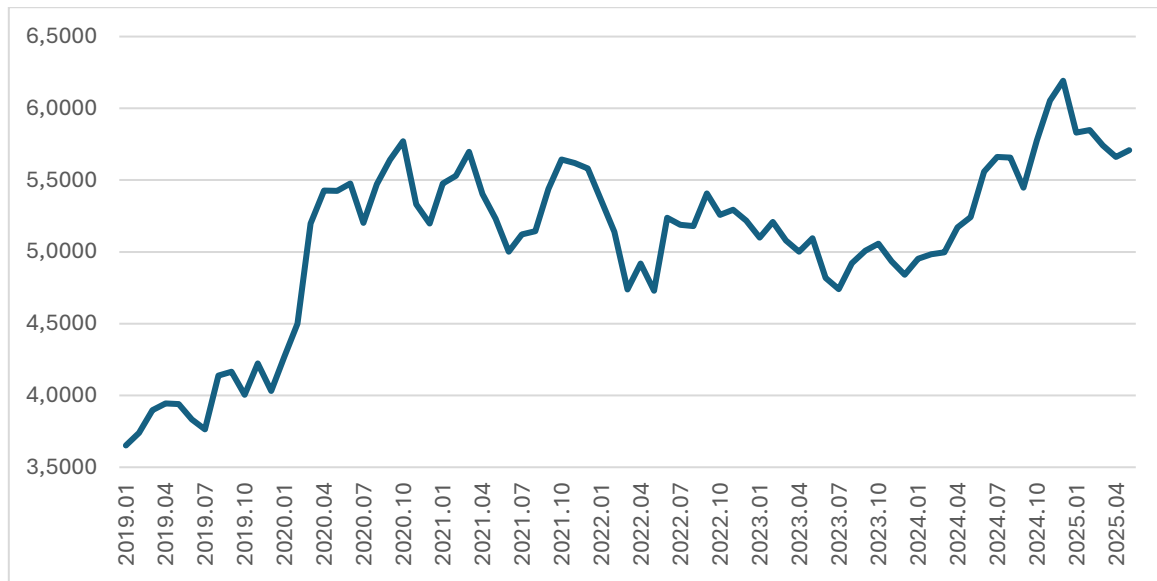
Source: Brazilian Central Bank, JP Morgan, Federal Reserve

In our view (Serrano et al (2021)) the dynamics of the nominal exchange rate depend both on the current account and more exogenous financial flows (such as FDI) and on the short-term financial flows sensitive to interest rate differentials.

The nominal exchange rate appreciated around 10% in 2023, but depreciated from January to September 2024 also by 10%, as can be seen in Figure 4. In the first period, we should mention as causes for appreciation the improvement in Brazilian current account and a higher interest rate differential. Both were reversed in 2024, with increased imports due to stronger economic growth and the recovery of business investment, and also with the reduction in interest rate differential, and were aggravated by a structural outflow due to cryptocurrencies. These factors help to explain the depreciation during 2024.⁶

⁶ The sharp depreciation of 35% in 2020 can be explained mainly by the negative interest rate differentials in the context of the pandemic.

Figure 4: Nominal exchange rate - R\$/US\$



Source: Brazilian Central Bank

It should be noticed that by the end of 2024, the nominal exchange rate was depreciated sharply by an additional 13%⁷. This was a result of (1) a seasonal high demand for dollars, as firms typically remit profits and dividends abroad in December; (2) a “flight to the dollar” driven by uncertainties surrounding the U.S. elections and their possible repercussions^{8,9}; (3) and by a lack of intervention in the foreign exchange market by the Brazilian Central Bank (Marins et al, 2025). This process was quickly reversed with a strong intervention by the Brazilian Central Bank, by selling dollars spot and substantially raising the base interest rate, and thus increasing the interest differential again (as shown in Figure 3).

3) The evolution of (Cost-push) inflation

We now turn to analyzing Brazilian inflation using our cost-push interpretation (Summa & Serrano, 2018). As a country that is a price taker in many international markets, the increase in nominal costs

⁷ This turbulent movement created a period of distress in the foreign exchange market to the extent that covered interest parity temporarily broke down (Garcia and Maia, 2024). When deviations from covered interest parity are correctly measured to include transaction costs, they imply potential risk-free profits—a situation that typically occurs only under severe financial stress and sort short-run liquidity shortages of hard currency (Cieplinski et al., 2018).

⁸ During periods of global turmoil—even those originating in the United States—investors often flight to the dollar as a safe haven (Serrano, 2008). This movement affected not only emerging-market currencies but also those of advanced economies (the DXY index fell by 8% in the same period) This means that the US\$ Dollar appreciated in relation to other important currencies. The U.S. Dollar Index (DXY) is an index (or measure) of the value of the United States dollar relative to a basket of foreign currencies of advanced economies: Euro, Japanese yen, Pound sterling, Canadian dollar, Swedish krona and Swiss franc.

⁹ In the case of Brazil, the outflows were primarily from residents transferring funds abroad, facilitated by recent deregulation in the foreign exchange market and the rise of fintech platforms that allow both firms and households to hold dollar deposits.

of production in Brazil is greatly influenced by the price of tradable goods in US\$ (final and intermediate goods that a country exports and imports) set in global markets and converted by the nominal exchange rate into local currency prices. Nominal exchange rate dynamics, together with the evolution of international prices in US\$ of tradable goods, are thus an important source of cost-push inflation. Additionally, there are some important government-regulated prices of goods and services¹⁰, which impact inflation. And finally, labor costs increase which result from nominal wage bargaining.

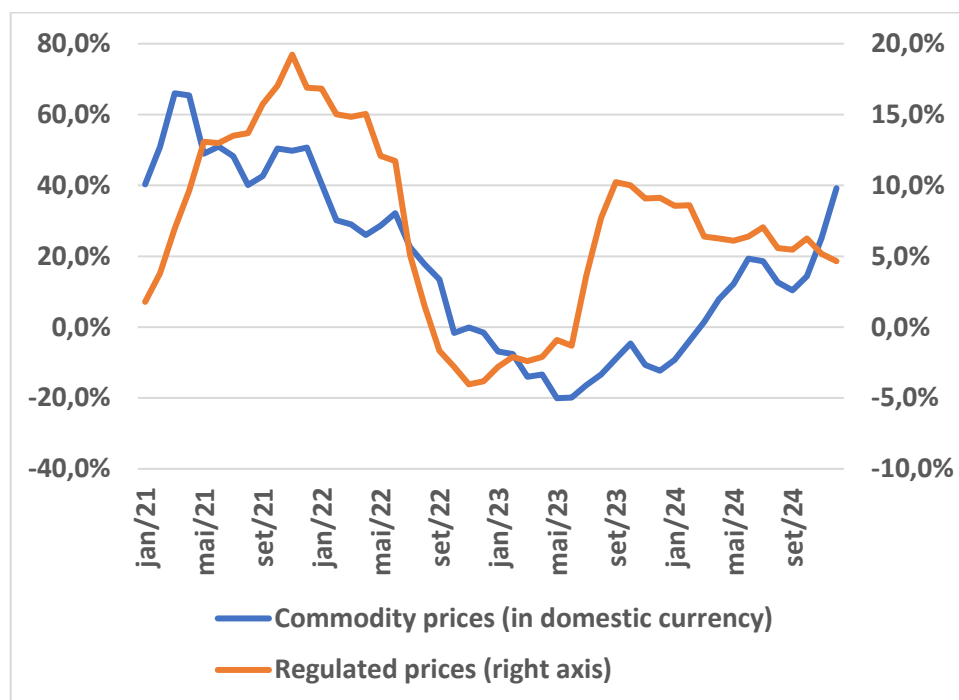
The latter is fundamentally a result of distributive conflict. Even in an economy that isn't anywhere near reaching anything like proper full employment, like the Brazilian economy which has abundant labor reserves and underemployed workers, persistently lower (or higher) unemployment rates can strengthen (or weaken) labor's bargaining power and lead to higher (or lower) money wage increases. The extent of this effect is, of course, subject to the broader political and institutional context — the labor laws, trade union organization and leadership, social insurance protections, etc., that influence the wage bargaining process. Therefore, wage inflation, due to a strengthening of worker's bargaining power, even when it is influenced by higher levels of activity and employment, in fact contributes to cost-push (or conflict) inflation, instead of reflecting a situation of excess aggregate demand and actual labor scarcity.

From the second semester of 2020 on, the international prices of commodities in US Dollars started to increase, especially the prices of energy-commodities, a process that continued until 2022. It was first caused by a disruption of some supply chains in the pandemic, then latter because of the Ukrainian war. The increase in international prices in US\$ happened together with the large nominal devaluation of the Brazilian currency, as discussed in section 2. It thus resulted in a large inflation of tradable goods and increasing production costs of the other sectors of the economy. By that time, the inflation of government-regulated prices also increased, mainly due to the increases in the prices of fuels¹¹. These can be seen in Figure 5.

¹⁰ Govern-regulated or monitored prices include public utility services whose taxes are administered and authorized by the government through its auditing agencies (telephony, energy, electricity, health insurance) and petroleum products that have Petrobras - a state-owned enterprise - as their pricing authority. For further details, see Alves et al (2013).

¹¹ At that time, Petrobras (Brazil's public oil company) pegged its prices in the domestic market to the international ones, because of a more neoliberal view from the rightwing Bolsonaro administration.

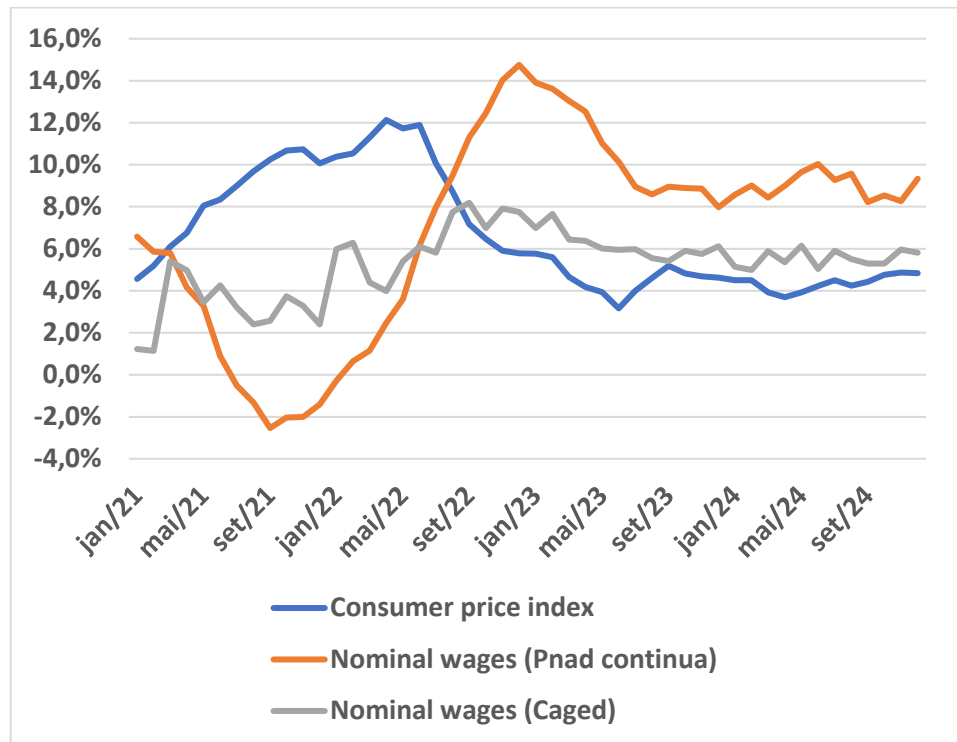
Figure 5: Rate of inflation of commodities and of government-regulated prices



Source: Brazilian Central Bank. Elaborated by the authors.

Brazil inflation reached 12% a year by the beginning of 2022 as a result of these cost-push factors. During this period, it should be noticed, workers were not able to pass through completely these increases in prices to their nominal wages. Inflation was considerably higher than the rate of change of nominal wages, resulting in a decreasing trend for real wages. Figure 6 shows inflation and the rate of change of nominal wages.

Figure 6: Inflation and rate of change of nominal wages^{12,13}



Source: IBGE, CAGED. Elaborated by the authors.

After the second semester of 2022, inflation started to decline for two reasons. First, both commodity prices in US\$ and the nominal exchange rate had reached their peak and started to decline. Second, the government reduced the prices of fuels for political reasons¹⁴. The latter turned inflation of government-regulated prices to become negative for several months between 2022 and 2023, as can be seen in Figure 5. This declining trend for inflation continued during the year of 2023, and inflation reached 4.6% by the end of that year.

In 2023, Brazil's inflation rate was once again within the target range, a result that seems to be much more related to changes in the cost-push elements than to factors regarding aggregate demand. Unemployment decreased in 2023 but inflation reduced as a result of the appreciation of the domestic currency (discussed in section 2) together with a decline in commodity prices in US\$. During 2024

¹² Pnad Contínua is a sampled household survey which captures the labor income, and includes all kind of labor, i.e., formal labor contracts, informal labor, self-employed workers and employers. Caged, by its turn, is a Census-based monthly data with the wages of all hired and laid off workers in the formal sector in each period. We considered here the average wage between hired and laid off workers.

¹³ The negative rate of change in nominal wages observed in 2021, according to data from the PNAD Contínua, deserves some comments. In 2020, following the outbreak of the pandemic, employment among less-skilled workers in the informal sector—who typically earn below-average wages—declined more sharply than employment in the formal sector, which is composed of more skilled workers with higher wages. As a result, the average wage increased that year not because wages within each sector were actually rising, but due to a compositional effect: a shift in employment toward higher-paying jobs. In 2021, as the economy began to recover from the pandemic, the opposite occurred: the number of lower-wage jobs increased, leading to a decline in the average wage.

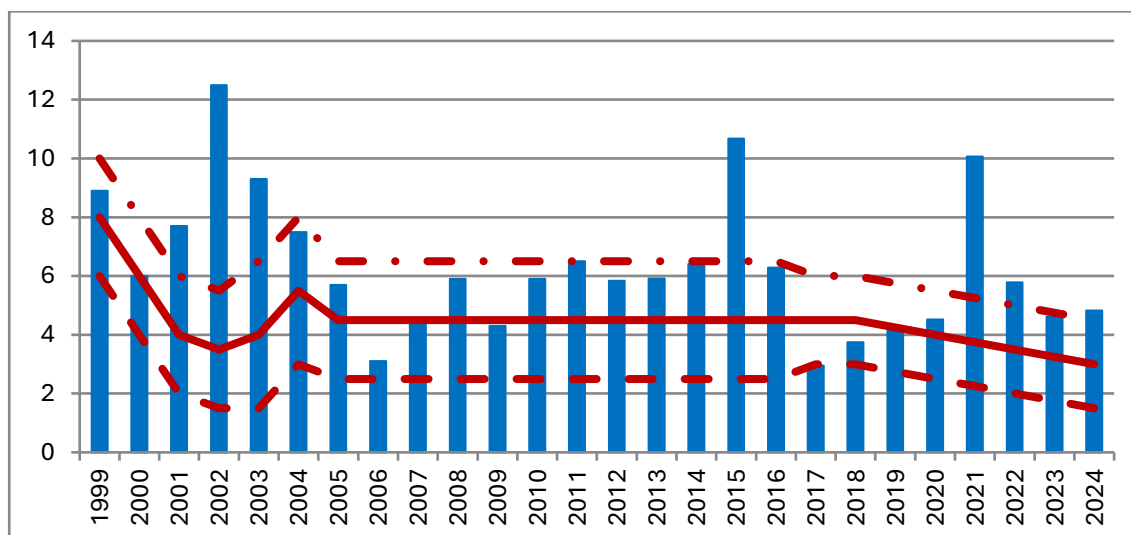
¹⁴ As the presidential elections came closer, and the incumbent president, Jair Bolsonaro, tried to reduce inflation to improve his popularity.

the Brazilian currency started to depreciate again and commodity prices in US Dollars also presented a modest increase.

From 2023, however, as a consequence of higher growth rates of GDP, lower unemployment rate and a policy of real minimum wage increase, labor costs start to increase again as shown in figure 6.¹⁵ As a consequence, inflation decreased in 2023, but increased slightly in 2024. Despite this large increase in the prices of commodities in the domestic currency in 2024, the official rate of inflation was 4.8% by the end of that year, almost the same as in the previous year.¹⁶

The inflation target, which was centered at 4.5% per year with an upper limit of 6% in 2018, was gradually reduced since then. In 2024, the target was reduced to 3% and its upper limit to 4.5%. Therefore, although inflation was practically the same in 2023 and in 2024, the inflation target was not met in the later year mainly because of the decrease in the target. This can be seen in figure 7. Figure 8 summarizes the average nominal increases of the main cost-push components of inflation.

Figure 7: Inflation and inflation target

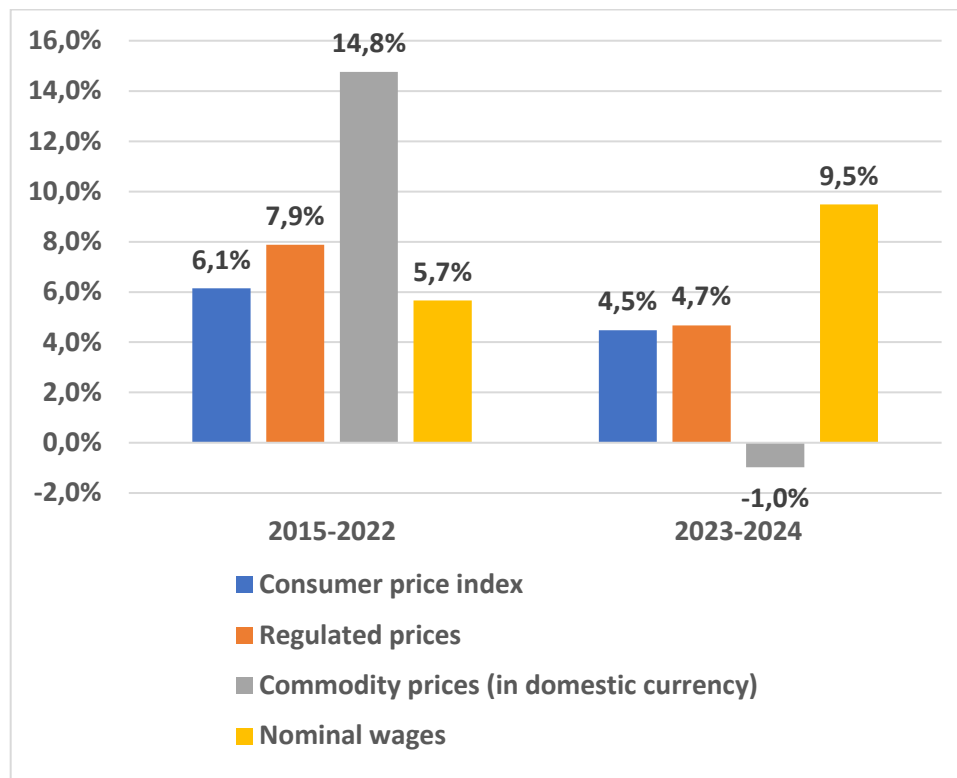


Source: IBGE, Brazilian Central Bank. Elaborated by the authors

¹⁵ The rate of change of nominal wages was, on average, 5.7% from 2015 to 2022, and increased to 9.5% in 2023 and 2024 (data from Pnad Continua).

¹⁶ In fact, most of the impact of the nominal exchange rate devaluation in the second semester of 2024 was only passed through to inflation in the first quarter of 2025.

Figure 8: Annual averages of inflation and its main determinants



Source: IBGE; Brazilian Central Bank. Elaborated by the authors. The rate of change of nominal wages considered in this Figure is from Pnad Continua.

4) Distributive outcomes

Taking together these paths followed by the nominal interest rate, nominal exchange rate, as well as wage and price inflation, we now look at the outcomes for some distributive variables: the real wage, the real interest rate and the real exchange rate.

As a result of interest setting by the Central Bank in a general context of higher interest rate set by the FED, and a more difficult external environment in 2024 to control the nominal exchange rate, the real interest rate was also quite high in the 2023-24 period, as can be seen in Figure 9. It can be seen that, besides the reduction of the real interest rate in 2024, the average was still much higher than in the previous periods of 2011-2014 and 2015-2022.

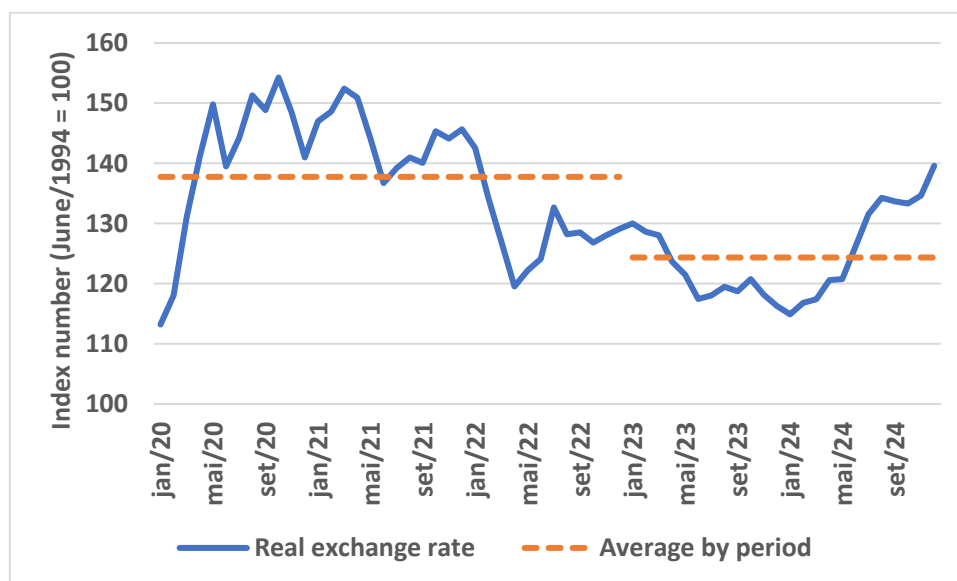
Figure 9: Real Interest rate (ex-post)



Source: IBGE, Brazilian Central Bank. Elaborated by the authors. Measured by nominal base rate – Selic - discounted by accumulated 12 months consumer price inflation - IPCA). Average in Red.

As a result of higher interest rates and the process of nominal exchange rate appreciation that occurred during 2022 and 2023, the real exchange rate also appreciated during these years. It depreciated in 2024, following the depreciation of the nominal exchange rate. Nevertheless, during 2023 and 2024, the average real exchange rate was 9.7% lower than the average during the period from 2020 to 2022 (Figure 10).

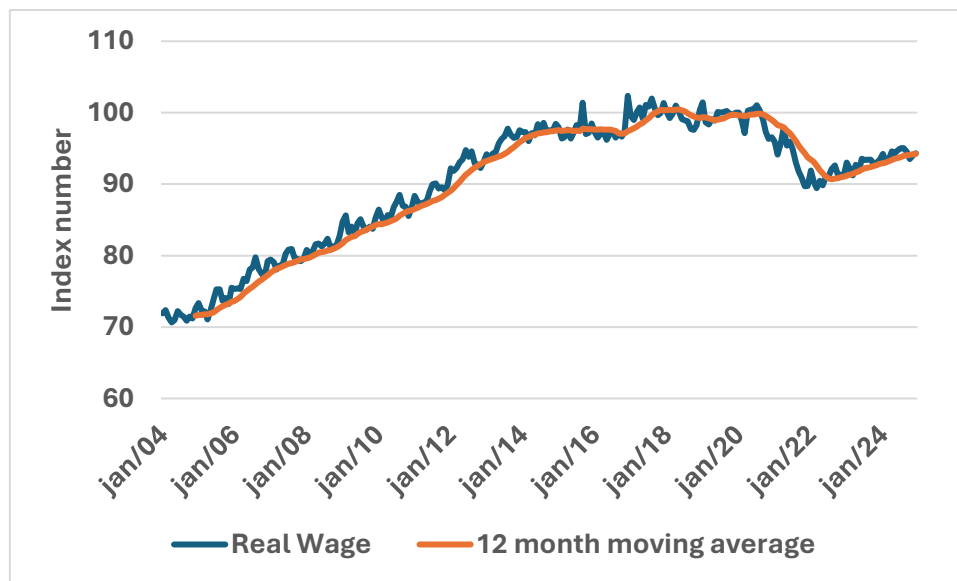
Figure 10: Real exchange rate



Source: Brazilian Central Bank. Elaborated by the authors.

In 2023-24, the average real wages (Figure 11) from formal jobs grew around 1.7% per year, reflecting lower levels of unemployment, increase in real minimum wage and the more appreciated real exchange rate.¹⁷ It is worth noticing that the level of real wages from formal jobs, despite increasing in the last two years, are still around 3% below what it was in 2014, before the beginning of period of stagnation of the Brazilian economy. We should also note that the period when the inflation targets started to be reduced was associated with stagnant and then decreasing real wages.

Figure 11: Real wage, index number.



Source: CAGED, IBGE. Elaborated by the authors

5) Aggregate demand and its components

5.1) The external sector

We can now move to the discussion of the components of aggregate demand. The external sector had a limited but positive contribution to aggregate demand and growth in these two years. Despite the fact that the real exchange rate was more appreciated during this period when compared with the previous years, the average real rate of growth of Brazilian exports for 2023-4 was 5.9%, a rate higher than both the rate of growth of world GDP (3.3%) and of the global trade of goods and services (1.9%). This seems to confirm the fact that the price-elasticity of Brazilian exports in general, and of

¹⁷ The real income of employees, which include not only formal but also informal workers, grew even more, 4.8% a year, probably because not only compensation increased but also the better growth performance contributed to increasing sales and the income of self-employed workers.

industrial exports is particular is quite low, as shown by Padron et al. (2015) and Pires de Souza (2025), respectively.¹⁸

In fact, in 2023 the growth of exports was particularly high (8.9%), as Brazil benefited from a very good harvest, and exports of oil rose quickly because of the substitution of Russian energy by many countries due to the Ukrainian war sanctions. Brazil, however, is a continental country and has a small share of exports in aggregate demand (about 18% of GDP in 2023-24). Therefore, the external sector is not capable of inducing high rates of growth of aggregate demand and GDP in the absence of increases in domestic components of demand (Freitas and Dweck, 2013; Haluska, 2023; Campana et al., 2024).

Imports grew on average 6.5% in real terms over the two years. It is interesting to notice that imports fell 1.2% in 2023, while the real exchange rate was appreciating; and increased 14.7% in 2024, when the real exchange rate was depreciating; which suggests that the behavior of imports is not much related to the real exchange rate (in fact, Dos Santos et al (2017) estimated that the price elasticity of imports in Brazil is also quite low). In reality, the evolution of imports in Brazil depends to a large extent on the evolution of the investment in machinery and equipment, which has a high imported content. Therefore, imports decreased in 2023 due to the fall in business investment, and recovered in 2024 following the strong increase in business investment.

If we look at the actual contributions to growth of both the external sector and of domestic demand, we can see that the external sector contributed, on average, 1.1 percentage points (pp) to the growth of GDP per year in 2023-2024, while the domestic sector contributed 2.2 pp.¹⁹ Thus, fully two thirds of recent GDP growth can be attributed to the expansion of domestic demand, to which we now turn.

5.2) Fiscal Policy

In terms of fiscal policy, the year of 2023 marked the abandonment of the cap on federal government spending imposed by the right-wing government of Michel Temer in 2016. In 2023, the congress authorized the government to spend more than the cap. For 2024, the government substituted the cap for another fiscal rule, which included a primary surplus-to-GDP target and a range for minimum and maximum rate of growth of federal government spending from 0,6% to 2,5%.²⁰ In fact, the actual

¹⁸ According to Pires de Souza (2025, p.43, table 2), even with a 33% decrease of *real* unit labor costs in 2015-2021 (in constant dollars) in the Brazilian manufacturing sector, there was no substantial expansion of exports.

¹⁹ This evidence is contrary to the claim by some authors (e.g. Marconi, 2022) that it is impossible for the Brazilian economy to grow by expanding domestic demand, because of large demand leakages through imports.

²⁰ The cap on federal spending approved in the Temer's government was included in the Brazilian Constitution and imposed a zero growth of real federal government expenditures. Nevertheless, in practice, although federal spending growth was considerably reduced, it did not actually fall to zero, as we showed in Haluska et al (2025). The new fiscal rule established in 2023 is statutory.

fiscal policy priority as explicitly stated is stabilizing the gross domestic public debt to GDP ratio²¹, as expressed in the new fiscal framework law which was approved in 2023.²² However, GDP growth resumed despite this quite restrictive fiscal target, in which securing GDP growth was not a priority. Moving from institutional arrangements and fiscal rules to practice, the federal government resumed in the beginning of 2023 the policy of increasing real minimum wage, after remaining frozen during Temer's and Bolsonaro's governments²³. As a consequence, the real minimum wage increased around 3% in real terms each year. This is important to fiscal policy because, for institutional reasons, many pensions and transfers to households are indexed by the minimum wage itself, or a multiple of it. Due to demographic changes, the number of elderly people in the country who is eligible to receive pensions has also been growing. Therefore, the combination of increases in the real minimum wage with the increase in the number of retired people resulted in a substantial increase in the transfers to households²⁴.

This by itself would not be sufficient to increase the overall federal government spending because of the cap of 2,5% on growth of federal spending. However, the cap on the federal expenditures was suspended (by the so-called 'PEC da Transição') for the first year, as a law was approved to guarantee extra federal government spending during the year of transition between the old and the new fiscal rule (DIEESE, 2023).

Additionally, the federal government paid an important amount of judicial debt to households just a few days before the end of 2023 – the so-called 'Precatórios' – which increased the transfers to households in that year but had effects on household consumption mainly in 2024. More payments of judicial debt to households were also made in 2024 by the federal government. Also in 2024, additional spending for emergencies was made, due to adverse climate events (such as floods in the state of Rio Grande do Sul and wildfires in various regions of the country). It should be noticed that both "Precatórios" and "Emergencies fiscal spending" were not included for the official fiscal target.

²¹ Note that, as the debt is denominated and is paid in domestic currency at interest rates largely under control of the Central Bank, the size of this gross public debt to GDP ratio creates no actual problem and there is no real economically meaningful limit for the size of such ratio. And even the size of the more adequately measured net public debt to GDP ratio creates no other actual problem apart from regressive transfers of income as interest payments to rich bondholders (Serrano & Braga, 2022).

²² Moreover, it appears that the federal government believes that potential output grows independently of aggregate demand, and at a very low rate (as low as 2,5%), as evidenced by the many statements claiming that the labor market is "overheated" just because the unemployment rate is low (in spite of massive underemployment and labor market informality) and real wages are growing.

²³ During the Temer administration, the rule for adjusting the minimum wage still allowed for real increases. By then, the minimum wage should be adjusted according to past inflation and the growth of GDP of two years before; and in cases when GDP has fallen, the minimum wage would be adjusted only by past inflation. However, since GDP fell both in 2015 and in 2016, during the two years of the Temer administration (2017-2018), the minimum wage was adjusted only for inflation, without real gains. It was only under Bolsonaro's administration when the rule for adjusting the minimum wage changed, establishing only adjustments according to inflation, without real increases.

²⁴ For more details about social transfers to households in Brazil and its importance to aggregate demand, see dos Santos (2025).

Finally, the increase in public expenditures was driven not only by the federal government, but also by the state and municipal governments, whose expenditures were boosted by the increase in tax revenues and by the municipal elections that occurred in 2024 (IPEA, 2025)²⁵. Additionally, there was an expansion of investments made by state-owned enterprises of 28.6% a year, which are also not included in the fiscal targets.

As a result, total government consumption grew on average 2.8% a year during 2023 and 2024; total public investment increased 9.0% a year and transfers to households grew 5.4% a year. Table 1 in the Appendix summarizes the average growth rates of the main components of demand.

Summing up, while monetary policy was contractionary as the policy real interest rate was higher in the period 2023-24 than in 2015-22, fiscal policy was much more expansionary in the period 2023-24 than in 2015-22.

6) Autonomous demand, induced consumption and business investment

Other important components of aggregate demand are household autonomous expenditures, induced consumption and induced business investment.²⁶ By household autonomous expenditures, we mean the sum of autonomous consumption and residential investment which are sensitive to interest rates and credit conditions, and consumption out of public transfers. As the latter was already discussed above, we focus here on consumption out of credit and residential investment.

First of all, as we saw in Figure 9, the base real interest rate was high regarding historical averages, but it was reduced marginally from the end of 2023 and beginning of 2024. Also, the number of formal jobs increased considerably (3.4% a year, on average, during 2023-2024), and the informality rate decreased from 49.8% to 48.5%²⁷. This is important because a formal worker has much better access to cheaper credit. Finally, the federal government launched a program for debt renegotiation in order to reduce household indebtedness, called “Desenrola Brasil” (Lavinas & Mader, 2024). As a consequence of all these factors, the consumption of durable goods grew in average 12,7% in 2023-24.

²⁵ As noticed by Borça Jr (2025), most public investment in Brazil nowadays is made by states and municipalities. They accounted for 90% of the increase in public investment from 2021 to 2024, while federal government accounted only for 10%.

²⁶ Induced consumption is the one financed by part of the contractual income (wages and salaries) generated by firms' decisions to undertake production while autonomous consumption is financed independently of the production decisions, mainly by creation of purchasing power out of credit or government spending, such as payment of wages to civil servants and transfers to households. Business investment is seen as induced because firms only want to invest to be able to produce output to meet their expected levels of effective (profitable) demand. For a theoretical discussion on the concept of autonomous demand and its relation with macroeconomic policies, see Serrano, Summa and Freitas (2023).

²⁷ According to data from “PNAD Contínua”.

Regarding residential investment, the federal government resumed the housing program launched in 2009 by Lula but extinguished in 2019 by Bolsonaro, the so-called “Minha Casa Minha Vida”, a program of subsidized housing finance for low- and medium-income families. This measure, however, was not sufficient to compensate for the very high real interest rates: residential investment decreased 1.8% on average in 2023-2024.

Households induced consumption grew because of the increase in real wages and income by informal employees, and by the increase in employment (the number of employed people increased 2.1% a year, while the number of people with formal jobs increased 3.4% a year).

Finally, we get to at the behavior of business (non-residential private) investment. After a fall in 2023, business investment did increase much more than the GDP in 2024 (7.1%). Business investment is made by firms to build capacity to meet expected aggregate demand. In 2023, expectations of growth were very low, but were slowly revised with the actual growth recovery.²⁸ Since it was becoming clearer that growth was more permanent, business investment increased more than GDP in 2024, as expected by the flexible accelerator mechanism (for empirical evidence for Brazil, see Braga 2020). Thus, despite high real interest rates in the period, because of the recovery of aggregate demand, private business investment increased rapidly in 2024.

7) Policy-constrained demand-led growth

The resumption of growth observed in 2023-2024 illustrates once again that the Brazilian economy only grows when there is some fiscal stimulus and that fiscal policy is much more important for growth than monetary policy. As explained in Haluska et al (2025), in the period from 2015 to 2022, the economy stagnated in a context where there was no stimulus from fiscal policy, despite the relatively low real rates of interest and a more depreciated real exchange rate observed during that period (see Figures 9 and 10 and Table 1). In 2023 and 2024, the opposite happened: the expansionary fiscal policy made the economy grow 3.3% a year, on average, even in a context of high real interest rates and a more appreciated real exchange rate. Moreover, growth in Brazil did not seem to have been limited by any type of supply constraint nor by a shortage of foreign currency. Instead, the country has clearly been in a regime of policy-constrained growth (see Serrano et al, 2023), with growth being restricted by a combination of fiscal rules and by a low inflation target, which reduces the room for increases in government spending and might force the Central Bank to halt a process of increase in real wages to keep inflation on target.

²⁸ Other part of the fall in investment in 2023 can be due to a temporary boost in investment in 2021-2022, when several companies anticipated their purchases of new trucks, because they must be produced with stricter rules about the emissions of pollutants, with higher production costs and prices, after 2023 (IPEA, 2024, Haluska et al, 2025).

Unfortunately, the expansionary fiscal policy adopted in 2023-2024 does not seem to have been consciously planned by the federal government as a strategy to expand the internal market and promote demand led economic growth (Serrano and Braga, 2022), but instead came as the end result of a number of specific factors, such as i) the suspension of the federal government expenditure cap for 2023, ii) exceptional expenditures that were not included in the fiscal targets (such as the payments of judicial debts to households and federal spending for emergencies related to natural disasters), iii) the expansion of investments by state-owned enterprises and iv) the expansion of expenditures made by states and municipalities.

Moreover, there seems to be some hesitation from the federal government to defend an expansionary fiscal policy and higher growth rates of GDP. The announced goals of the new fiscal rule seem to confirm that the central purpose of the fiscal policy is not to promote growth, but to stabilize the trajectory of the gross public debt to GDP ratio. This hesitation is clearly manifested in the introduction of a new cap for the increase of real minimum wage of 2,5%, implemented in 2025, and the inexplicable refusal, for a left of center government, to increase the benefits paid by the social program Bolsa-Familia, frozen in nominal terms since 2022.²⁹ In addition to that, sources from the ministry of finance have recently argued that Brazilian growth can continue with less fiscal impulse.³⁰ Moreover, when the Central Bank recently increased the base rate of interest, it also blamed expansionary fiscal policy for a presumed overheating of the Brazilian economy in its official communications. Given the importance of expansionary fiscal policy for aggregate demand and growth in Brazil, if the current efforts to slowdown the increase in government expenditures are successful in the aggregate (i.e., at federal, subnational and state-owned enterprise levels), economic growth will certainly be reduced.

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²⁹ The last important nominal increase in the main benefit paid by Bolsa Familia was made by the right-wing government of Bolsonaro, although in 2023 an additional benefit was included in Bolsa-familia to pay an extra amount for each 0 to 6 years old children in the family. Note that the Bolsa-Familia benefit is paid to more than 20 million poor households in Brazil.

³⁰ This idea that government spending must be controlled to make space for faster growth led by the private sector, while being extremely popular among Brazilian economists of all persuasions, has been shown to be not only based on flawed theoretical foundations, but also have in fact led to a marked slowdown in the rate of growth of the Brazilian economy since 2011 (Serrano and Summa, 2015), and then to stagnation after 2015 (Haluska et al, 2025).

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Appendix

Table 1: Rate of growth of the GDP and of components of aggregate demand; averages by period

Demand component	2003-2014	2015-2022	2023	2024	2023-2024 (Average)
GDP	3,5%	0,2%	3,2%	3,4%	3,3%
Household consumption	4,2%	0,2%	3,2%	4,8%	4,0%
Household consumption of services and non-durable goods	4,0%	0,5%	3,4%	3,7%	3,5%
Household consumption of durable goods	7,6%	-3,5%	1,0%	25,6%	12,7%
Government consumption	2,6%	0,1%	3,8%	1,9%	2,8%
Gross fixed capital formation	5,0%	-1,2%	-3,0%	7,3%	2,0%
Government investment	5,4%	-0,3%	4,0%	14,3%	9,0%
State-owned enterprises' investment	4,6%	-7,2%	26,7%	30,5%	28,6%
Residential investment	3,8%	-2,3%	-0,1%	-3,5%	-1,8%
Private business investment	5,5%	-0,3%	-8,0%	7,1%	-0,8%
Exports	4,4%	2,7%	8,9%	2,9%	5,9%
Imports	8,9%	-0,9%	-1,2%	14,7%	6,5%
Transfers to households	4,8%	1,8%	8,8%	2,2%	5,4%

Source: IBGE; Brazilian Central Bank; National Treasury, Ministry of Management and Innovation in Public Services; Miguez (2016); Miguez and Freitas (2019); Ministry of Economy (2022). Elaborated by the authors.

**Data for 2024 were calculated based on the growth between January to November of 2024 compared to the same period of the previous year.*