Box 1
From recovery to adjustment: recent dynamics of Colombia's productive sectors

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Following the macroeconomic shocks from the COVID-19 pandemic and the disruptions caused by the National Strike of 2021, the Colombian economy exhibited a notable recovery in 2022, with a real GDP increase of 7.3% and economic activity levels 10.4% above those recorded in 2019. This achievement mainly derived from the vigor of domestic demand, particularly household consumption, despite a backdrop of elevated inflation and interest rates, alongside an economic deceleration in key trading partners and constraining external conditions. This resilience occurred alongside persistent macroeconomic imbalances and a heterogeneous recovery across sectors.

Since 2023, the Colombian economy entered an adjustment phase marked by low growth (0.7% for the entire year), resulting in stagnation of economic activity levels (see Graph 3.7 of this *Report*), amid a restrictive monetary policy designed to facilitate the return of inflation toward the target. All of this implied the elimination of excess demand, projected since 2022, and, consequently, a closing of the output gap (Graph 2.19 of this *Report*). During 2024, economic activity exhibited increased dynamism, particularly in the latter half of the year, resulting in an overall rise of 1.7% for the year. Nonetheless, disparities in the performance of productive sectors continue to exist, with many activities still failing to regain pre-pandemic levels while others, conversely, exhibit a notable pace of growth.

This Box provides an assessment of post-pandemic economic activity behavior relative to the counterfactual trend observed during the pre-pandemic period from 2015 to 2019. The exercise is conducted for a group of supply-side indicators, which includes the real production of the manufacturing industry, real sales in retail, and real income in some service activities, applying monthly information provided by the DANE sectoral surveys.

1. Sectoral performance versus counterfactual trend

The counterfactual trend projection is established by applying a linear regression model to the interest series y_t, for the period 2015 to 2019, using the following model:

$$y_t = \beta_0 + \beta_1 t + \epsilon_t$$

Where t= 1, 2, ..., T are months, and T= December 2019. This variable allows for modeling the linear evolution of the counterfactual trend as a function of time and provides a result that reflects the expected path of the series in the absence of disruptions. Comparing this trend with the observed data allows us to quantify deviations and identify sectors exhibiting atypical behavior in recent years.

The evaluated indicators include the 39 industrial activities covered by the Monthly Territorial Manufacturing Survey (EMMET for its Spanish acronym), the 16 retail trade

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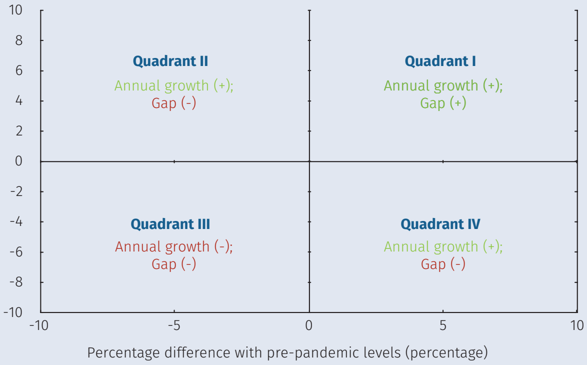
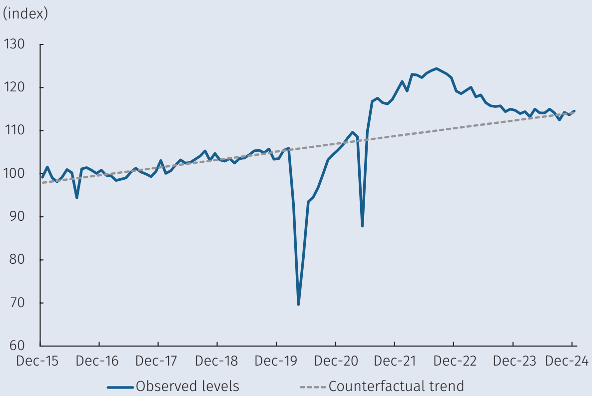
Graph B1.1
Classification of sectoral dynamics in the post-pandemic period



Source: Prepared by *Banco de la República*.

Graph B1.2
Observed levels versus counterfactual trend; real manufacturing production [a/]



a/ Seasonally adjusted and corrected for calendar effects
Source: DANE (EMMET), Calculations by *Banco de la República*.

Graph B1.3
Observed levels versus counterfactual trend; real manufacturing production without coking and oil refining [a/]

a/ Seasonally adjusted and corrected for calendar effects
Source: DANE (EMMET), Calculations by *Banco de la República*.

activities included in the Monthly Retail Trade Survey (EMC),[1] the 16 service activities included in the Monthly Services Survey (EMS) according to the old classification, as well as those of the Monthly Accommodation Survey (EMA). The real, seasonally adjusted and calendar adjusted indices for production, sales, and income indexes, respectively, are used. Nominal income from the EMS was deflated by using CPI items compatible with each of the services analyzed.

Based on a scattergram plot graphing the average annual growth of productive activity in each sector for the period 2023 to 2024 and the percentage difference in the levels of economic activity with respect to the counterfactual trend, it was possible to classify recent sectoral trends (Graph B1.1). The productive activities exhibiting positive annual growth with levels exceeding those of the pre-pandemic period were classified within the first quadrant as exhibiting strong momentum. The second quadrant includes those sectors that have shown recent annual growth but whose levels remain below their pre-pandemic period performance, suggesting a possible still-ongoing recovery process. The third quadrant features those sectors exhibiting annual contractions and levels below the counterfactual, which could reflect structural difficulties that affected their productive dynamics. Finally, the fourth quadrant includes sectors with negative annual growth, but with economic activity levels above their pre-pandemic trend, which would suggest a recent stabilization phase without significant growth momentum.

1.1 Manufacturing industry

After reaching relatively high levels of real production in 2022, with year-on-year growth of 10.5%, the manufacturing industry entered an adjustment process, contracting for two consecutive years (4.7% in 2023 and 2.4% in 2024). Although this implies a stagnation in the sector's production levels, they remain close to the path they would have followed if they had continued their pre-pandemic period trend (Graph B1.2). Moreover, if we were to exclude oil refining and coking, the levels would actually exceed the segment's pre-pandemic height (Graph B1.3).

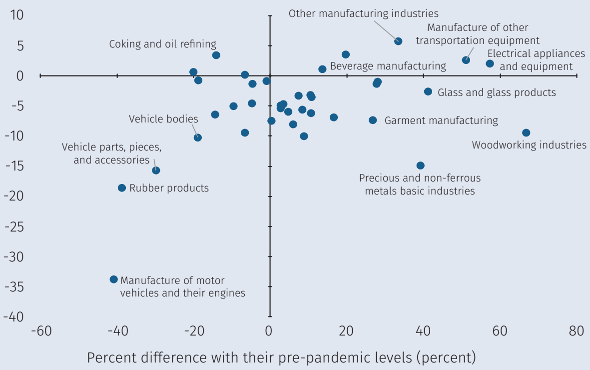
This behavior would suggest a convergence of the sector toward growth patterns more compatible with recent historical dynamics, although with heterogeneous behaviors and significant disparities among its component industries. Of the 39 manufacturing activities measured by the survey, only five maintained growth levels during the post-pandemic period that surpassed the counterfactual (Graph B1.4). This overachieving group includes the beverage production segment, attributed to factors such as the heat wave at the onset of 2024 and higher household consumption driven by an increase in cultural, entertainment, and sporting events. This positive momentum is also seen in the production of soaps and perfumes, the manufacturing of electrical appliances and equipment, the production of various transportation equipment, including motorcycles, and in other manufacturing industries.

Nearly 50% of manufacturing industries were categorized in the fourth quadrant, consistent with production levels that, despite recording average annual declines over the last two years, continue to surpass those projected by the counterfactual trend line. Among this grouping, we can highlight the behavior of the tex-

1 Spliced real retail sales indices, available since 2013, are used.

Graph B1.4
Post-pandemic behavior of manufacturing industries (average 2023-2024)

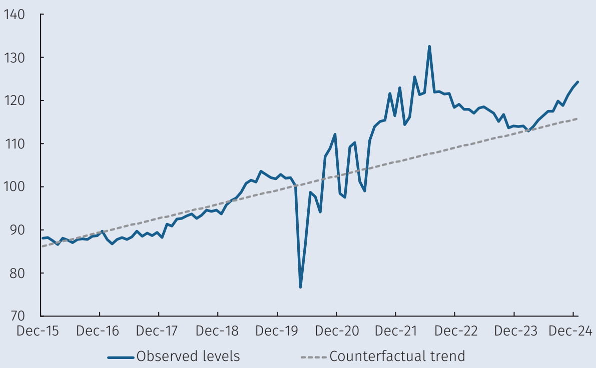
Average annual growth (percentage)



Source: DANE (EMMET), Calculations by *Banco de la República.*

Graph B1.5
Observed levels versus counterfactual trend; real retail sales without fuels or vehicles [a/]

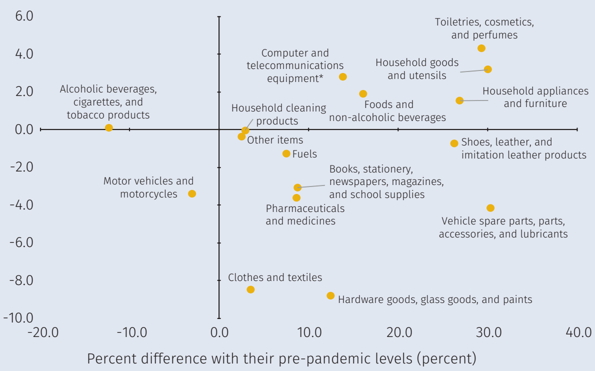
(index)



a/ Seasonally adjusted and corrected for calendar effects
Source: DANE (EMMET), Calculations by *Banco de la República.*

Graph B1.6
Post-pandemic behavior of retail sector (average 2023-2024)

Average annual growth (percentage)



* For household consumption.
Source: DANE (EMC), Calculations by *Banco de la República.*

tile, apparel, and footwear sector, whose production levels have been relatively high, although steady, partly due to lower external demand and increased imports from in-app purchases.

Among the activities that continue to exhibit a significant lag in their levels, despite the growth observed during 2024, coffee threshing stands out, as its production continued at low levels, particularly during 2023, due to climatic factors associated with the heavy cumulative rain levels experienced in previous years. Other underperformers include coking and oil refining, whose production has been affected by lower drilling operations and a decrease in foreign direct investment, amid an environment of great uncertainty for the sector. Another laggard is sugar and *panela* (unrefined cane sugar) processing.

Finally, eleven manufacturing industries were classified in the third quadrant. These did not recover their counterfactual levels nor show any adjustment in their slowdown. Among these is the manufacture of motor vehicles for household use and associated industries, such as the manufacture of parts and accessories for vehicles and bodywork. This deterioration was the result of the closure of operations of one of the most important auto assembly plants in the country: Colmotores (General Motors). Another industry exhibiting structural problems is dairy production stemming from factors associated with high inputs and raw materials prices, the effects of the *El Niño* phenomenon in 2024, and higher returns on the steer market.

1.2 Domestic trade

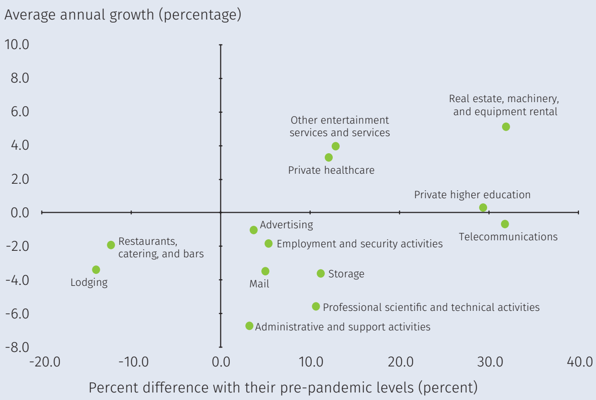
Retail sales, excluding fuel and vehicles, also reached historic real levels in after the resulting shocks of the COVID-19 pandemic and the 2021 strike. In 2022, sales in this segment recorded a year-on-year growth of 20.8%, reflecting the strong dynamism of private consumption and the positive impact of the temporary stimuli proposed by the National Government, such as the VAT-free days.

However, in 2023, the sector faced a significant adjustment, suffering an annual contraction of 4.0%, although still at levels well above those suggested by the counterfactual trend (Graph B1.5). This slower growth rate may have resulted from tighter monetary conditions, with higher real interest rates and inflation that, although decreasing, continued above target. Among others, these conditions limited the capacity of households to continue expansive consumption patterns.

During the first half of 2024, real sales levels registered relative stabilization, although gaining momentum in the second semester, with a growth of 1.2% throughout the year. This dynamic was mostly pressured by the positive performance of sustained demand seen in the five lines of retail activities (Graph B1.6), underscoring the notable sales behavior of durable goods, such as household appliances, furniture, computer and telecommunications equipment for household use, and in the sale of non-durable goods, such as alcoholic beverages, cigarettes and tobacco products.

As in the manufacturing industry, a large percentage of retail trade merchandise lines maintained positive momentum in the post-pandemic period, with levels well above the counterfactual trend but with a decreasing annual performance. These include sales of fuels, pharmaceuticals, clothing, textiles, and footwear, and those associated with spare parts, components, and vehicle

Graph B1.7
Post-pandemic behavior of services
(average 2023-2024)



Source: DANE (EMC), Calculations by *Banco de la República.*

accessories. Sales of motor vehicles and motorcycles for household use are also characterized by low dynamism, despite a recovery seen in the motorcycle segment at the end of 2024.

1.3 Services

Most service activities in Colombia have performed favorably following the challenges associated with the pandemic, with several categories remaining at levels above their counterfactual trend and still achieving significant real annual growth (Graph B1.7). Only two of the sixteen categories are located in the third quadrant, with lower levels than before the pandemic and decreased revenues.

The recent and persistent momentum seen in most services categories would be associated with greater domestic and international commercial activity, the generation of entertainment events, the upturn in the Colombian tourism sector, and the massification of the internet and digitalization. All of the above would have allowed services to increase their relevance in providing value added to the economy, increasing both local consumption and exports.

The services categorized in the first quadrant represent those categories of interest, grouping services whose dynamism has not only endured after their pandemic recovery but also continues to generate higher revenues year after year. Revenues from real estate services have been driven by increased demand for rental housing and machinery to equip and adapt facilities. Private higher education and human healthcare services have shown resilience, with real revenues remaining at relatively high levels. Notably, healthcare services have been driven by increased demand for medical services, especially emergency and hospitalization services. In addition, entertainment and gaming services have maintained their vigor due to events such as concerts and a greater supply of other entertainment services, including online gaming and sports betting.

Conversely, the services grouped in the fourth quadrant are those that continue at high levels, though these have fallen in recent years. Services such as telecommunications, computer systems development, and film and television production benefited from the momentum associated with digitization, increased demand for digital platforms and internet massification policies, greater available mobile and fixed internet connections, and access to audiovisual platforms and applications, which increased significantly during and after the pandemic. Storage services and activities associated with transportation have registered greater revenues, explained by the higher freight tons and gallons transported, the improvement in the number of trips made at the national level, and the greater in-port area traffic reported.[2] In turn, e-commerce and business reactivation have maintained sales of mail and courier services above trend. In contrast, sectors such as advertising, scientific and technical activities, and employment services have benefited from new investments and a more competitive environment.

2 Also due to the accounting effect of the unification of the reporting process, with an increase in the number of companies reporting to the National Registry of Road Freight Dispatches (RNDC for its Spanish acronym).

Finally, the two service categories located in the third quadrant stand out. The first includes services provided by restaurants, bars, and catering, which counter the overall segment's positive behavior after the pandemic. Although revenues for these services recovered after 2020, they remain at a level below their pre-pandemic trend and exhibit annual declines. This occurs in a context of still-above-target inflation, which affects demand for these services as household spending is prioritized, also attributable to a possible change in household consumption patterns. This is acerbated by higher costs not only of inputs, but also of leases, payroll, and public services, which, together with the lower demand for these services, would have further hindered the operations of these establishments, reflected in the number of restaurant closures in recent years.

The second relevant service category in the second quadrant corresponds to revenues from hotel services, which have also remained below their pre-pandemic trend. This was mainly the result of lower hotel occupancy due to the emergence of other lodging alternatives and growing informality in the sector, as well as the impact on prices with the re-establishment of the VAT on these services.