ISSN 2317-7039 • Year 11 • Issue 1 • January/March 2023

INDUSTRIAL COST INDICATOR

ECONOMIC INDICATORS CNI

CNI
Brazilian National Confederation of Industry
THE FUTURE OF INDUSTRY

Revised edition

Industrial Costs Declined in the First Quarter of 2023

The Industrial Cost Indicator (ICI) decreased by 2.5% when comparing the first quarter of 2023 to the fourth quarter of 2022. This decrease can be attributed to the reduction in two components of the ICI: production costs, which went down by 2.9%, and tax costs, which dropped by 4.1%. On the other hand, the cost of capital increased by 6.4% in the period, which was not enough to reverse the decline in the ICI.

The ongoing slowdown in both industry and services has played a role in the decrease of the subcomponents of production costs. The decline in personnel costs was influenced by the weakening of momentum in the labor market. The decrease in energy costs can be attributed to reduced pressure on energy prices. Additionally, the normalization of input and raw material supply, leading to decreased prices, played a significant role in explaining the fall in the cost of both domestic and imported intermediate goods.

During the same period, the cost of capital experienced an increase. This increase was impacted by the sustained elevation of the basic interest rate, Selic, as well as stricter credit concession criteria in banks due to heightened risks and increased bank provisions.

Conversely, the tax cost declined during the same comparative period. This reduction stemmed from a decrease in the collection of federal and state taxes relative to the industrial GDP in the analyzed timeframe. However, it's important to highlight that this movement is a result of the seasonal nature of tax collection.

Variation of the Industrial Cost Indicator and its Components

In (%)

	Q1 2023/ Q4 2022	Q1 2023/ Q1 2022	Four-quarter cumulative rate
Industrial Cost Indicator	-2.5%	-6.2%	3.6%
Production Cost	-2.9%	-1.3%	8.2%
Energy Cost	-2.3%	-9.7%	8.8%
Personnel Cost	-7.2%	8.1%	11.4%
Goods Cost	-1.9%	-2.7%	7.5%
Capital Cost	6.4%	8.3%	24.4%
Tax cost	-4.1%	-34.0%	-23.7%

PRODUCTION COST

The Cost of Production Declined in the First Quarter

In the first quarter of 2023, the cost of industrial production fell by 2.5% compared to the fourth quarter of 2022. All components of the cost of production contributed to some degree to the decrease in this indicator.

The item that most influenced this reduction was personnel costs, calculated using the average salary of the industry worker. Personnel costs decreased by 7.2% in the first quarter of 2023, reflecting the decline in both the wage bill and employment. Part of this decrease is attributable to a seasonal trend commonly observed in the first quarter of the year. However, another portion of the decrease is linked to the deceleration in labor market growth at the beginning of the year, following a period of robust recovery in 2021 and 2022.

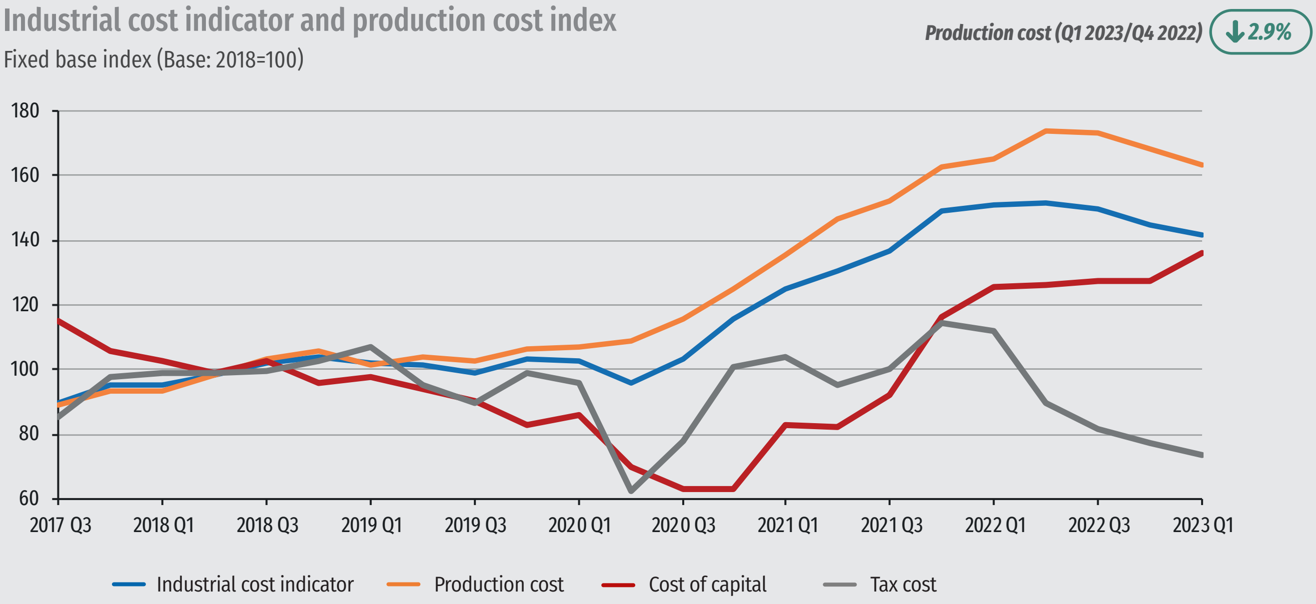
Another component of the production cost experienced a decline as well, albeit to a lesser extent. The cost of energy saw a 2.3% reduction when comparing the first quarter of 2023 with the fourth quarter of 2022. This shift can be attributed to the decline in global energy commodity prices, including natural gas and fuel oil. These are the primary components responsible for the reduction in energy costs, as electricity costs increased during this period.

During the quarter, there was a 1.9% decrease in the cost of intermediate goods, which further contributes to the understanding of the decline in production costs. The elements constituting the cost of intermediate goods encompass both domestic and imported intermediate goods. Both experienced a cost decline during the quarter, signaling the ongoing normalization in the supply of inputs and raw materials.

When contrasting the first quarter of 2023 with the corresponding period in 2022, it becomes evident that there was also an annual decrease in industrial production costs, with a decline of 1.3% in this index.

Industrial cost indicator and production cost index

Fixed base index (Base: 2018=100)



Source: CNI
Note: The historical series of the ICI exhibits structural breaks in 2016 and 2020. When comparing figures before these periods, it is crucial to consider these breaks. For more detailed information, please refer to the reformulated ICI methodology.

Energy costs fall as energy commodity prices drop

In the first quarter of 2023, energy costs experienced a 2.3% decrease when compared to the fourth quarter of 2022. During this period, the index measuring the cost of natural gas saw a significant decline of 8.6%. Similarly, the cost of fuel oil witnessed a drop of 5.4%. On the other hand, the energy cost electricity increased by 4.8%.

The cost of petroleum products, including fuel oil and natural gas, was strongly influenced by price hikes for oil and its derivatives in 2022, which were a result of the conflict between Russia and Ukraine that commenced in the first half of the previous year. Since the second half of 2022, this cost has been decreasing. Consequently, when comparing the final quarter of 2022 to the initial quarter of 2023, there was a reduction in the cost of these components, contributing to the decrease in energy costs in the first quarter of this year.

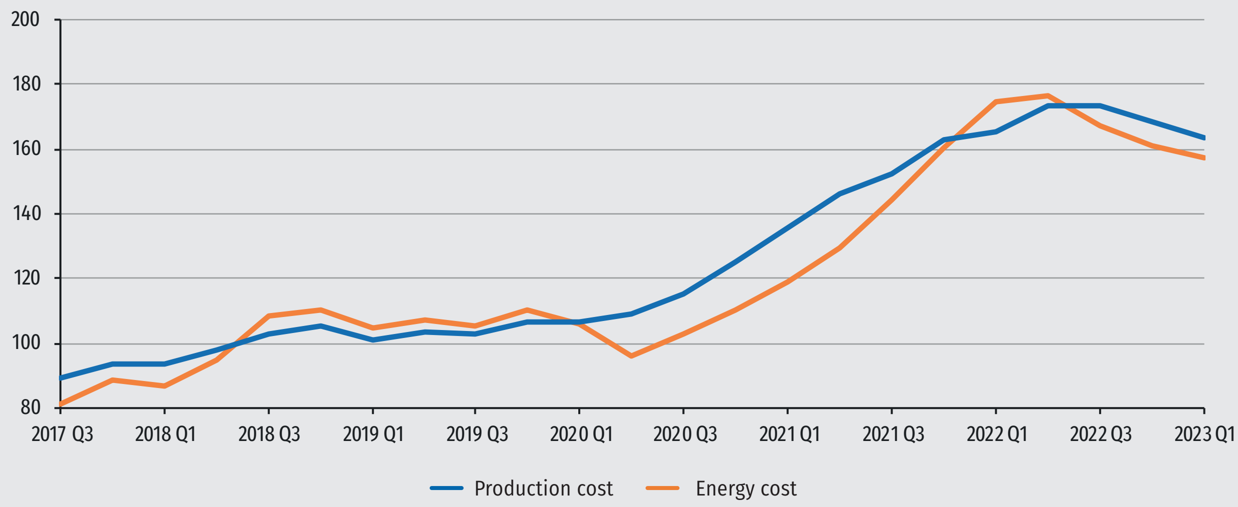
On the contrary, the cost of electricity increased by 4.8% using the same basis of comparison. This increase primarily results from the elevation in electricity tariffs.

In a comparison between the first quarter of 2023 and the same period in 2022, when the conflict between Russia and Ukraine was unfolding, and energy prices began their substantial rise, there was a notable 9.7% reduction in energy costs.

Production cost indicator and energy cost index

Fixed base index (Base: 2018=100)

Energy costs (Q1 2023/Q4 2022) ↓ 2.3%



Source: CNI, based on ANP and ANEEL data.

Personnel costs experienced a decrease

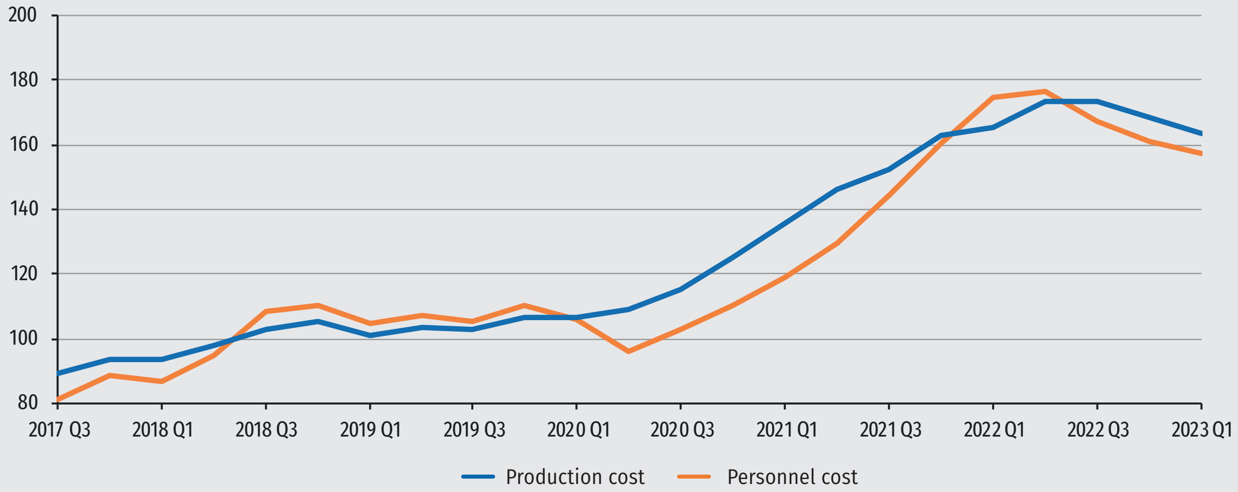
Measured by the average nominal income of industry workers, personnel costs declined in the comparison between the first quarter of 2023 and the fourth quarter of 2022, registering a decrease of 7.2%.

This outcome is the result of a combination of relatively stable employment numbers, which saw a marginal variation of -0.3%, and a reduction in the nominal wage bill by 7.5% when comparing the first quarter of 2023 to the fourth quarter of 2022. It's worth noting that this trend aligns with the seasonal pattern typically observed in the first quarter of the year.

Considering the comparison between the first quarter of 2023 and the same period in 2022, there was an increase in personnel costs by 8.1%. This growth rate was lower than the increase recorded in the final quarter of 2022 compared to the final quarter of 2021, which stood at 11.8%. This suggests a decrease in the growth rate of the average nominal income of industry workers.

Production cost indicator and personnel cost index
Fixed base index (Base: 2018=100)

Personnel cost (Q1 2023/Q4 2022) ↓ 7.2%



Source: CNI.
Note: The historical series of the ICI exhibits structural breaks in 2016 and 2020. When comparing figures before these periods, it is crucial to consider these breaks. For more detailed information, please refer to the reformulated ICI methodology.

The decline in the cost of intermediate goods suggests a less pressing situation for industrial inputs

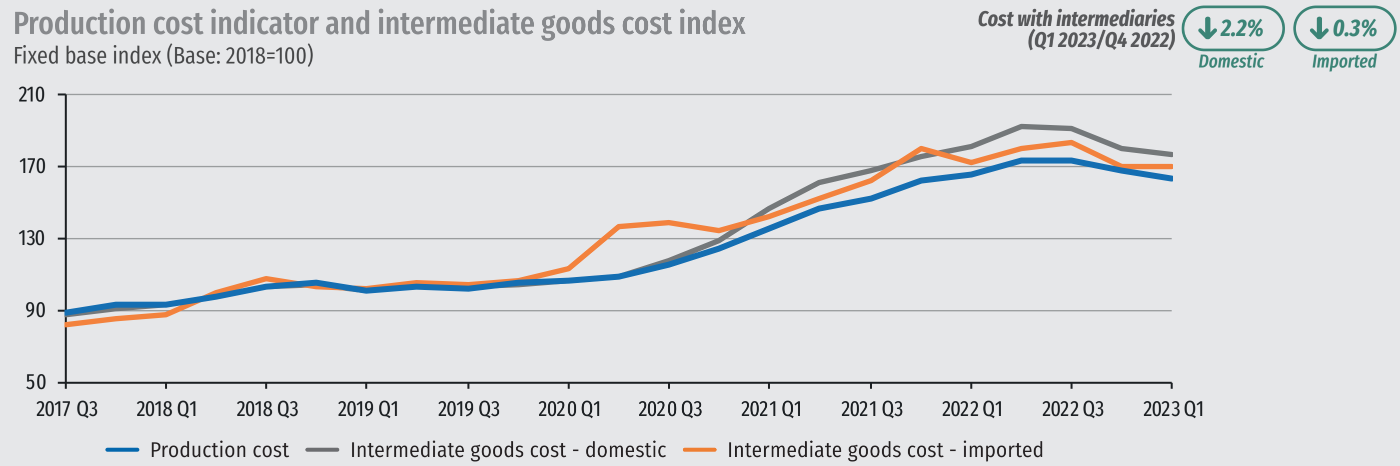
Comparing the first quarter of 2023 with the preceding quarter, the cost of intermediate goods decreased by 1.9%, influenced by both a decrease in domestic intermediate goods costs (-2.2%) and a slight drop in imported intermediate goods (-0.3%).

In the years following the onset of the COVID-19 pandemic, the industry keenly felt the effects of input shortages and high costs. By 2022, industry entrepreneurs indicated a less critical input situation and a progressing normalization process. Based on the March 2023 Industrial Survey by CNI, this concern has diminished in significance and no longer ranks among the top three challenges faced by the industry.

Comparing the first quarters of 2023 and 2022, the cost of domestic intermediate products is 2.9% lower, and the cost of imported ones has decreased by 1.6%, resulting in a total decrease of 2.7% in intermediate product costs.

Production cost indicator and intermediate goods cost index

Fixed base index (Base: 2018=100)



Source: CNI, based on data from the Brazilian Central Bank, IBGE, and MDIC.

COST OF CAPITAL

Capital Costs Rise in the Quarter

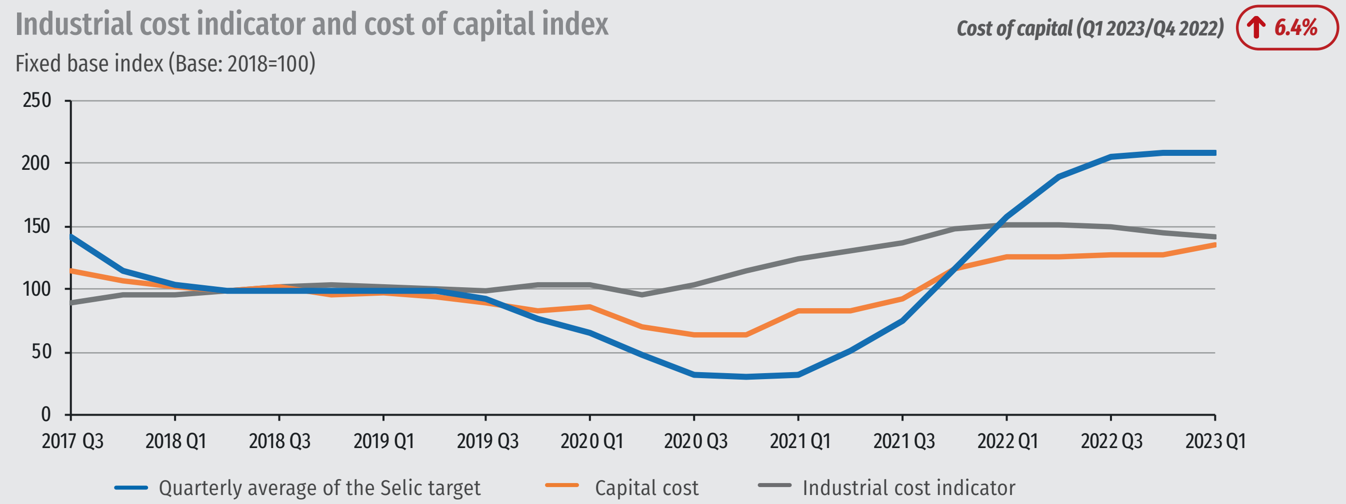
In the first quarter of 2023, many issues contributed to higher working capital costs. Among the main factors, we highlight the maintenance of high-interest rates, which contributed to the increase in the cost of capital. This issue has been listed by industrial entrepreneurs and is among the three main problems faced by the industry, according to CNI's Industrial Survey.

In addition to the high-interest rate, the first quarter saw an increase in corporate and consumer defaults, as well as an increase in banks' provisions, due to adverse events with Brazilian retail companies.

This set of factors contributed to an increase in the cost of capital, measured by the interest rate for working capital (+6.4%) when comparing the first quarter of 2023 with the last quarter of 2022. This percentage increases further when comparing the first quarter of 2023 to the same quarter of 2022 (+8.3%).

Industrial cost indicator and cost of capital index

Fixed base index (Base: 2018=100)



Source: CNI, based on data from the Central Bank of Brazil.
Note: The historical series of the ICI exhibits structural breaks in 2016 and 2020. When comparing figures before these periods, it is crucial to consider these breaks. For more detailed information, please refer to the reformulated ICI methodology.

TAX COST

Tax Costs For The Industry Decrease in the First Quarter of 2023

The tax cost, calculated as the sum of federal and state taxes paid by the industry divided by industrial GDP, saw a decline of 4.1% when comparing the first quarter of 2023 to the fourth quarter of 2022. This decrease is attributed to the reduction in federal taxes (-8.9%) and state taxes (-8.8%), which exceeded the decline in industrial GDP in current values (-4.9%). Part of this decline can be attributed to the seasonal pattern of tax collection, which tends to be lower at the beginning of the year.

When comparing the first quarter of 2023 with the same period in 2022, a significant decline of 34.0% in tax costs relative to industrial GDP was observed. While industrial GDP experienced a nominal growth of 28.5% between the first quarters of 2022 and 2023, federal and state taxes paid recorded a 15.2% decrease, also in nominal terms.

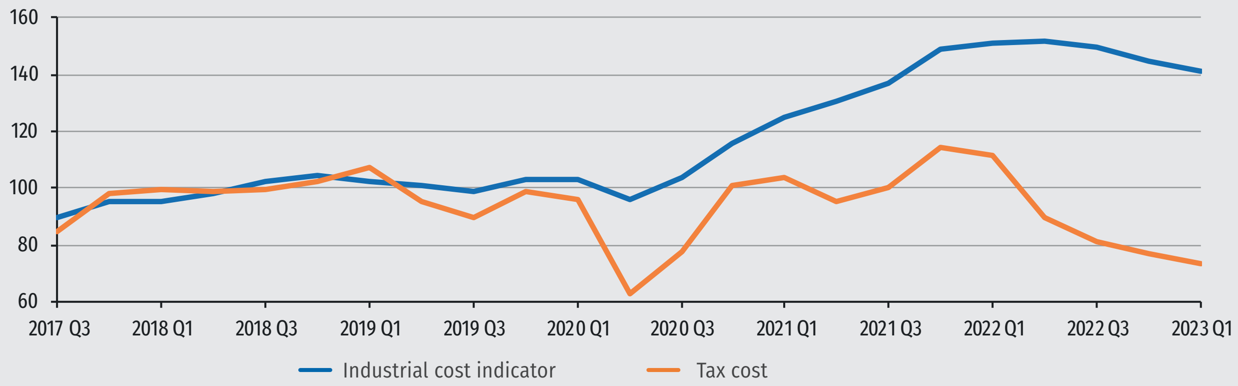
It's worth noting that the substantial decrease in tax collection when comparing the first quarter of 2023 to the same quarter in 2022 can be attributed to federal and state tax exemptions mandated by Complementary Law 192/22. This legislation led to the elimination of PIS and Cofins collection on fuels, alongside Complementary Law 194/22, which imposed limitations on ICMS rates for fuels, telecommunications, transport, and electricity.

Furthermore, in 2022, there was a reduction in IPI rates on certain products. The mentioned exemptions effect on federal revenue began to be noticeable in the second quarter of 2022. Hence, when comparing the tax collection in the first quarter of 2023 (already accounting for the mentioned exemptions) with the first quarter of 2022 (without the influence of exemptions), a substantial decrease is evident.

Industrial cost indicator and tax cost index

Fixed base index (Base: 2018=100)

Tax cost (Q1 2023/Q4 2022) ↓4.1%



Source: CNI, based on data from the Federal Revenue Service, Confaz, and IBGE.
Note: The historical series of the ICI exhibits structural breaks in 2016 and 2020. When comparing figures before these periods, it is crucial to consider these breaks. For more detailed information, please refer to the reformulated ICI methodology.

INDUSTRIAL COSTS AND COMPETITIVENESS

Industry Shows Increased Domestic and International Competitiveness, Accompanied by an Upswing in Profitability

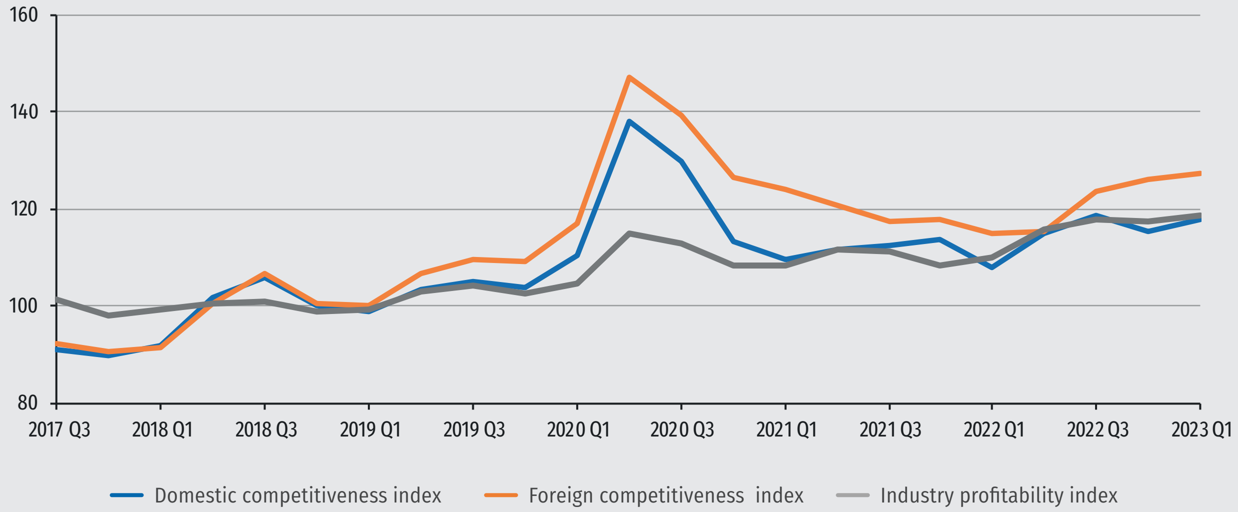
In the comparison between the first quarter of 2023 and the fourth quarter of 2022, the Brazilian industry demonstrated a 0.7% increase in cost competitiveness within the international market. During this period, even though the cost of industrial products in the United States experienced a 1.8% decline, there was a more significant decrease in the costs of the Brazilian industry, amounting to 2.5%.

Likewise, the Brazilian industry's cost competitiveness increased within the domestic market. The domestic competitiveness index, calculated as the ratio of the price index of imported manufacturing products to the cost index of the Brazilian industry, rose by 2.1%. This was due to imported goods experiencing a smaller price decrease (0.4%) in comparison to the notable drop in the costs of the Brazilian industry (2.5%) during this period.

Regarding industry profitability, the profitability index displayed a 1.0% increase in the first quarter of 2023. This was an outcome of the reduction in prices of goods sold by the Manufacturing Industry (a decrease of 1.5%), which was less pronounced than the decline in industrial costs (2.5%).

The industry's profitability index and price competitiveness index in both foreign and domestic markets were important metrics to evaluate industry performance

Fixed base index (Base: 2018=100)



Source: CNI.
Note: The industry profitability index is calculated by dividing the national manufacturing industry price index (IPA-IPP Manufacturing Industry) by the Industrial Cost Indicator - ICI. The price competitiveness indexes of the industry in the foreign and domestic markets, on the other hand, are the result of dividing the price index of manufactured goods in the USA, in Reais, and the price index of imported manufacturing products, in Reais, respectively, by the ICI.

Learn More

For further information on previous issues, methodology, and historical series, please visit:
www.cni.com.br/e_ici

Document completed in July 26, 2023.

INDUSTRIAL COST INDICATOR | English version of "Indicador de Custos Industriais Janeiro/Março 2023" Published quarterly by CNI – National Confederation of Industry | www.cni.com.br | Board of Industrial Development and Economy - DDIE | Director: Lytha Battiston Spindola | Economics Office – ECON | Executive Officer: Mário Sérgio Carraro Telles | Economic Analysis – GAE | Manager: Marcelo Souza Azevedo | Analysis: Paula Verlangeiro Vieira | Statistics Management - GEST | Manager: Edson Velloso | Dissemination Coordination - CDIV | Coordinator: Carla Gadêlha | Graphic Design: Simone Marcia Broch

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