

# COST-COMPETITIVENESS INDICATORS

ECONOMIC INDICATORS **CNI**



## The Unit Labor Cost fell against competitors

*The cost is expected to continue falling in 2020, but in a scenario of economic recession*

In 2019, the unit labor cost (ULC) in the Brazilian Industry fell by 3.6% compared to the average ULC in the country's main trading partners, according to the indicator of effective unit labor costs, measured in real US dollars.

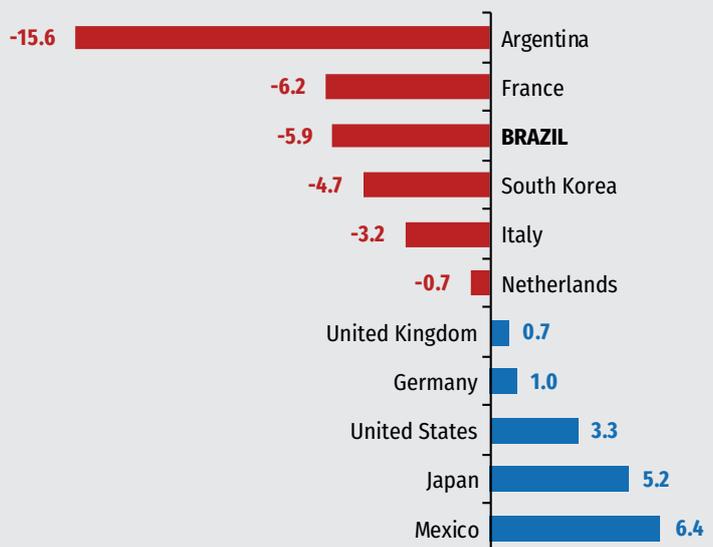
Among the 11 countries analyzed, Argentina experienced the largest decline in unit labor cost in 2019. Brazil experienced the third largest decline in ULC, behind France. The worst performance was experienced by Mexico, which recorded the largest growth in the indicator.

In Brazil, the decline in effective ULC was mainly driven by the increase in labor productivity. The Brazilian indicator grew only by 0.6% in 2019, but was still the second best performance, behind only South Korea, whose productivity increased by 1.4%. Thus, Brazil's productivity grew by 2.9% in relation to the average productivity of its main trading partners.

The real average wage also contributed towards the decline in ULC, but to a lesser extent, as it edged down 1.3% in relation to the average real wages of Brazilian trading partners. The exchange rate had

### Unit Labor Cost in real US dollars

Manufacturing industry, change between 2018 and 2019 (%)



a negative effect on competitiveness, albeit to a small extent: the Brazilian real appreciated 0.6% against a basket of currencies between 2018 and 2019.

The effective ULC has maintained a downward trend since 2012. Between 2011 and 2019, the accumulated decline in the indicator was 29%. The decline in the effective ULC was mainly driven by the depreciation of the exchange rate (the Brazilian real depreciated by 24.7% against a basket of currencies).

However, special mention should be made to productivity: the Brazilian indicator grew 12% in relation to the average indicator, thus maintaining an almost uninterrupted growth trajectory since 2012. The contribution of real wages was negative. In Brazil, the average real wage, in the Brazilian currency, grew 14.7%, a result above the productivity gains (10.1%). The effective average wage grew by 5.8%.

For 2020, the effective ULC is expected to fall, continuing the downward trend of the last two years. The year of 2020 will be marked by the economic recession caused by the covid-19 pandemic. The decline in ULC occurs in a scenario of falling GDP and employment, being driven mainly by the sharp depreciation of the Brazilian real as a result of capital flight from emerging countries such as Brazil. Productivity will have a small contribution, as it is expected to end the year with growth close to zero for the third year in a row, which is worrying.

## Effective ULC falls for the second consecutive year

In 2019, effective unit labor costs in real US dollars (effective ULC) in the Brazilian manufacturing industry fell by 3.6% compared to 2018. The indicator measures the evolution of the ULC in the Brazilian industry in relation to the average ULC in the industries of the country's main trading partners<sup>1</sup>.

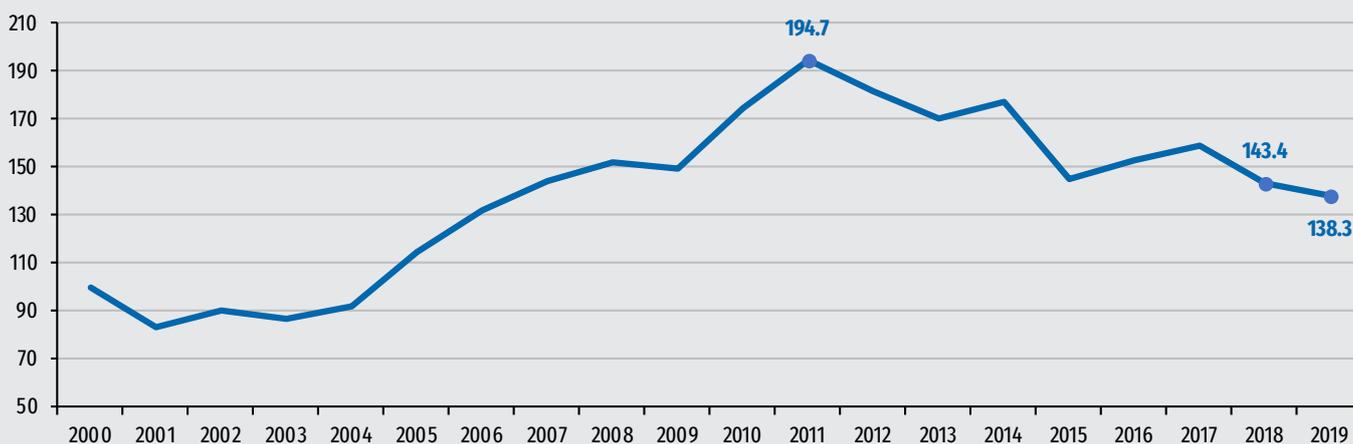
This is the second consecutive year with recorded decline in the ULC, accumulating

a 13% decline compared to 2017. The decline more than offset the loss of competitiveness recorded in the previous two years: between 2015 and 2017, the effective ULC accumulated a 10% increase.

Among the 11 countries analyzed, Argentina experienced the largest decline in unit labor costs: -15.6%. The Brazilian unit labor cost fell by 5.9%, close to the decline recorded by France (-6.2%). The other countries experienced a smaller decline or increase in the unit labor cost. Between 2018 and 2019, the largest increases in ULC were experienced by: Mexico (6.4%), Japan (5.2%), and the United States (3.3%).

### Effective unit labor cost

Manufacturing industry  
Index, 2000=100



Source: Prepared by CNI based on statistics from the BLS/United States; Banco Central de la República Argentina; BCB/Brazil; DGEyC/Argentina; FUNCEX/Brazil; FGV-IBRE/Brazil; IBGE/Brazil; INDEC/Argentina; INEGI/Mexico; KOSIS/South Korea; Macrodados; Ministry of Economy, Trade and Industry/Japan; Ministry of Employment and Labor/South Korea; Ministry of Health, Labor and Welfare/Japan; OECD; The Conference Board/United States and CNI.

<sup>1</sup> United States, Argentina, Germany, Mexico, Japan, France, Italy, South Korea, the Netherlands, and the United Kingdom. Due to lack of available data, China is not included in the analysis.

## Increased productivity was the main determinant behind the decline in effective ULC in 2019

The main determinant behind the decline of effective ULC can be verified by breaking it down into effective labor productivity, real effective average wages, and real effective exchange rate (REER). Effective ULC drops with an increase in effective labor productivity, with a decline in real effective average wages, and with a depreciation of the Brazilian real (as indicated by a decline in REER). Similarly, the effective ULC increases with a decline in productivity, with an increase in the real average wage, and with an appreciation of the exchange rate.

In 2019, the main determinant behind the decline in ULC was the effective labor productivity, which grew by 2.9% compared to 2018. In Brazil, worker productivity grew by 0.6% in the period. Despite the poor performance, Brazil only did not outperform South Korea, whose worker productivity grew by 1.4%.

Most of Brazil's trading partners experienced a drop in labor productivity. Besides Brazil and South Korea, only Mexico and the United States did

not experience a drop, with changes of 0.3% and 0.1%, respectively. The biggest drops in labor productivity were recorded by Argentina (-7.2%), followed by Germany (-3.6%).

The real effective average wage also contributed to the decline in effective ULC, but to a lesser extent, experiencing a 1.3% decline between 2018 and 2019. The real effective average wage compares the performance of Brazil with the average performance of its main trading partners.

The real average wage in Brazil only grew in relation to Argentina (10.2%), the country that recorded the biggest drop in real average wage (-11%) among the 11 countries. Compared to the other countries, the Brazilian indicator has recorded stability or decline. On the comparison with France, the Brazilian real average wage was practically stable (0.3%). The biggest drops were recorded in relation to wages in Mexico (-5.7%), South Korea (-5.2%), and the United States (-5.1%).

The real effective exchange rate contributed towards the loss of competitiveness, albeit to a lesser extent, due to 0.6% appreciation of the Brazilian real against the currencies of the country's main trading partners. The Brazilian real appreciated most against the Argentine peso (9.8%) and the South Korean won (3.4%). The Brazilian real depreciated against the currencies of Mexico (-5.9%), Japan (-4.8%) and the United States (-3.4%), maintaining some stability against the currencies of the United Kingdom and the Netherlands.



## The effective unit labor cost has maintained a downward trend since 2012

Between 2011 and 2019, the effective ULC accumulated a 29% decline, that is, the Brazilian industry gained competitiveness against the average of its main trading partners. The Brazilian ULC fell in comparison with all 10 partners analyzed. The biggest drops were recorded in relation to South Korea (-45.8%), the United States (-42.8%), and Mexico (32%).

The main determinant behind the decline in effective ULC in the period was the exchange rate depreciation. Between 2011 and 2019, the Brazilian real depreciated 24.7% against the basket of currencies of Brazil's main trading partners.

The Brazilian real experienced a drop (depreciation) in relation to the currencies of all countries analyzed. The Brazilian real depreciated most against the US dollar (-36%), the Mexican peso (-27.8%), the British pound (-23%), the South Korean won (-22.3%), and the euro (-21.1%) in Germany.

Despite not being the main determinant, productivity played a prominent role in the ULC decline. Between 2011 and 2019, the effective labor productivity, which compares the Brazilian indicator against the partners' average indicator, accumulated an increase of 12.1%. Since 2012, the indicator has maintained an almost uninterrupted growth trajectory (only in 2014 it recorded a decline of 0.6%).

Brazil's productivity only did not grow against the productivity of France (-2.2%), the Netherlands (-1.9%), and Italy (-1.3%). The highest increases were recorded against Argentina (26.1%) and Mexico (16.3%), which experienced a decline in productivity in the period.

The real average wage had a negative contribution to competitiveness in the period. Between 2011 and 2019, the Brazilian average real wage, in the Brazilian currency, grew 14.7%, a result above the productivity gains (10.1%).

Among the 11 countries analyzed, Brazil recorded the fourth highest increase, tied with France. Thus, the real effective average wage, which compares Brazil's performance with the partners' average, grew by 5.8%. The highest increases were recorded against Argentina (28.6%) and Mexico (9.6%).

## In 2020, the effective ULC is expected to drop further

The year of 2020 will be marked by the global economic recession caused by the covid-19 pandemic. Most countries will experience falling GDP and employment. The exchange rate, on the other hand, behaves differently among the countries analyzed. The lower risk appetite led to capital flight and the sharp depreciation of the currencies of emerging countries, such as the Brazilian real.

Meanwhile, the currencies of developed countries, such as the United States, Japan, and European countries, experienced appreciation.

Driven mainly by the exchange rate, the effective ULC, which compares Brazil's performance with the average of its trading partners, is expected to fall, continuing the downward trend of the last two years. Productivity will have a small contribution, as it is expected to end the year with growth close to zero for the third year in a row in Brazil, which is worrying.

## Effective ULC and its components, Manufacturing industry

Cumulative change (%)

YEAR	REAL EFFECTIVE AVERAGE WAGES	EFFECTIVE LABOR PRODUCTIVITY	REAL EFFECTIVE EXCHANGE RATE <sup>1</sup>	EFFECTIVE ULC
2009	1.9	3.8	0.1	-1.7
2010	-1.6	-5.5	12.5	17.1
2011	6.0	-3.3	1.4	11.1
2012	3.8	0.5	-9.8	-6.8
2013	0.2	1.8	-4.6	-6.1
2014	4.6	-0.6	-1.1	4.0
2015	1.6	0.8	-18.7	-18.0
2016	-0.4	1.9	7.8	5.3
2017	2.0	3.0	5.0	4.0
2018	-4.5	1.2	-4.4	-9.8
2019	-1.3	2.9	0.6	-3.6
CHANGE OVER THE LAST DECADE				
2009-2019	10.1	2.4	-14.0	-7.6
2009-2014	13.2	-7.0	-2.8	18.4
2014-2019	-2.7	10.2	-11.5	-21.9

Source: Prepared by CNI based on statistics from the BLS/United States; Banco Central de la República Argentina; BCB/Brazil; DGEyC/Argentina; FUNCEX/Brazil; FGV-IBRE/Brazil; IBGE/Brazil; INDEC/Argentina; INEGI/Mexico; KOSIS/South Korea; Macrodados; Ministry of Economy, Trade and Industry/Japan; Ministry of Employment and Labor/South Korea; Ministry of Health, Labor and Welfare/Japan; OECD; The Conference Board/United States and CNI.

<sup>1</sup> The real effective exchange rate is the ratio of a basket of 10 currencies to the Brazilian currency. An increase in the exchange rate index indicates currency appreciation.

## Relative ULC and its components, Brazil in relation to its main trading partners

Cumulative change (%)

PARENTS	2009-2019				2018-2019			
	Real relative average wages	Relative labor productivity	Real exchange rate <sup>1</sup>	Relative ULC	Real relative average wages	Relative labor productivity	Real exchange rate <sup>1</sup>	Relative ULC
Brazil-United States	17.2	6.5	-26.5	-19.2	-5.1	0.6	-3.4	-8.9
Brazil-Argentina	0.0	13.2	-2.2	-13.6	10.2	8.5	9.8	11.5
Brazil-Germany	8.7	-12.5	-4.0	19.2	-3.7	4.4	0.9	-6.8
Brazil-Mexico	22.6	10.3	-22.5	-13.8	-5.7	0.3	-5.9	-11.6
Brazil-Japan	14.0	0.4	-0.2	13.3	-3.8	2.4	-4.8	-10.6
Brazil-France	8.0	-9.3	-0.7	18.3	0.3	1.7	1.7	0.3
Brazil-Italy	13.1	-12.1	-3.8	23.8	-3.6	0.7	1.6	-2.8
Brazil-South Korea	-19.1	-2.0	-22.9	-36.3	-5.2	-0.7	3.4	-1.3
Brazil-The Netherlands	25.9	-10.3	-10.9	25.1	-1.8	2.8	-0.7	-5.2
Brazil-United Kingdom	15.1	4.1	-12.9	-3.6	-4.3	2.0	-0.4	-6.5

Source: Prepared by CNI based on statistics from the BLS/United States; Banco Central de la República Argentina; BCB/Brazil; DGEyC/Argentina; FUNCEX/Brazil; FGV-IBRE/Brazil; IBGE/Brazil; INDEC/Argentina; INEGI/Mexico; KOSIS/South Korea; Macrodados; Ministry of Economy, Trade and Industry/Japan; Ministry of Employment and Labor/South Korea; Ministry of Health, Labor and Welfare/Japan; OECD; The Conference Board/United States and CNI.

<sup>1</sup> The real exchange rate is the ratio of a country's local currency to the Brazilian currency. An increase in the exchange rate index indicates currency appreciation.

## ULC and its components, Brazilian manufacturing industry

Cumulative change (%)

YEAR	REAL AVERAGE WAGES <sup>1</sup>	LABOR PRODUCTIVITY (OUTPUT PER HOURS WORKED)	REAL ULC IN DOMESTIC CURRENCY	REAL EXCHANGE RATE <sup>2</sup>	REAL ULC IN US DOLLARS
2009	11.0	0.8	10.2	3.4	6.6
2010	-0.3	2.1	-2.3	-10.9	9.6
2011	6.1	-0.8	6.9	-2.4	9.5
2012	7.4	-0.5	8.0	13.6	-4.9
2013	2.3	2.7	-0.3	4.6	-4.7
2014	5.0	-0.3	5.3	3.7	1.5
2015	6.9	0.3	6.5	25.6	-15.2
2016	0.2	1.7	-1.5	-4.9	3.6
2017	1.4	4.5	-2.9	-7.0	4.4
2018	-6.6	0.8	-7.3	10.5	-16.1
2019	-2.0	0.6	-2.6	3.5	-5.9
<b>CHANGE OVER THE LAST DECADE</b>					
2009-2019	21.4	11.6	8.8	36.1	-20.1
2009-2014	22.0	3.1	18.3	7.2	10.4
2014-2019	-0.6	8.2	-8.1	26.9	-27.6

Source: Prepared by CNI based on statistics from the BLS/United States; BCB/Brazil; FGV-IBRE/Brazil; IBGE/Brazil and CNI.

<sup>1</sup> Average wages in Brazil are deflated by the Broad Producer Price Index - Domestic Supply (IPA-DI), which is a producer price index calculated by the Getúlio Vargas Foundation (FGV). In the cost-competitiveness approach, what matters for companies is how much wages vary relative to prices paid to domestic producers when they sell their production.

<sup>2</sup> The real exchange rate is the ratio of the Brazilian currency to the US dollar, deflated by the respective manufacturing producer prices (IPA-FGV and PPI-BLS). An increase in the exchange rate index indicates currency depreciation.



### Learn more

For more information, including data table, previous editions and Portuguese version, visit:

[www.cni.com.br/e\\_cost-competitiveness-indicators](http://www.cni.com.br/e_cost-competitiveness-indicators)

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