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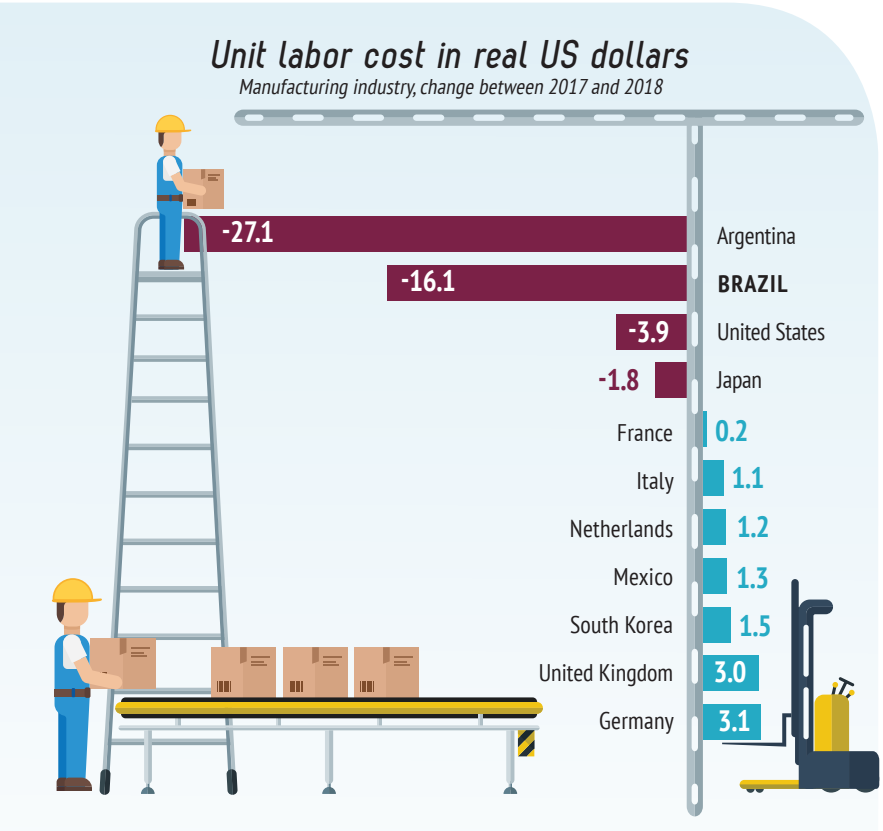
CNI
Brazilian National Confederation of Industry
THE FUTURE OF INDUSTRY

Brazil gains competitiveness as industrial costs fall

In 2018, unit labor costs (ULC) in Brazilian industry fell by 9.5% as compared to the average ULC in the country's main trading partners, according to the indicator of effective unit labor costs (effective ULC), measured in real US dollars.

The decline in the indicator in 2018 more than offset the loss of Brazil's competitiveness in the 2015-2017 period, during which effective ULC recorded growth of 9.0%.



Among the country's top 10 trading partners, only Argentina outperformed Brazil. In Argentina, unit labor costs edged down by 27.1%, while the indicator experienced a 16.1% decline in Brazil.

In Brazil, the three ULC components contributed toward the increase in competitiveness, that is, toward a decline in the indicator. Special mention should be made of the decrease in real wages in industry (-6.6%) and the depreciation of the Brazilian currency (10.5%). Labor productivity contributed to a lesser extent, as it edged up by 0.8%.

While Argentina outperformed Brazil, it experienced a decline in productivity (-3.6%). In the neighboring country, the decline in ULC was driven by a fall in real wages (-6.9%) and mainly by the depreciation of the Argentine peso (32.5%).

Over the last 10 years, effective ULC dropped by 5.1%, even though Brazil registered the third largest increase in real average wages in the period (37.5%) – a growth rate higher than that of productivity (11.7%). Compared to the average for its partners, Brazil posted growth of 14.3% in real effective average wages.

The negative effect of wages on competitiveness was offset by the depreciation of the Brazilian currency: down by 14.4% against the basket of currencies of its main trading partners. Thus, the 3.0% increase in labor productivity played a decisive role in the decline in effective ULC, i.e. in the increase in the competitiveness of Brazilian Industry.

Unit labor costs in Brazil are not only down in relation to Argentina

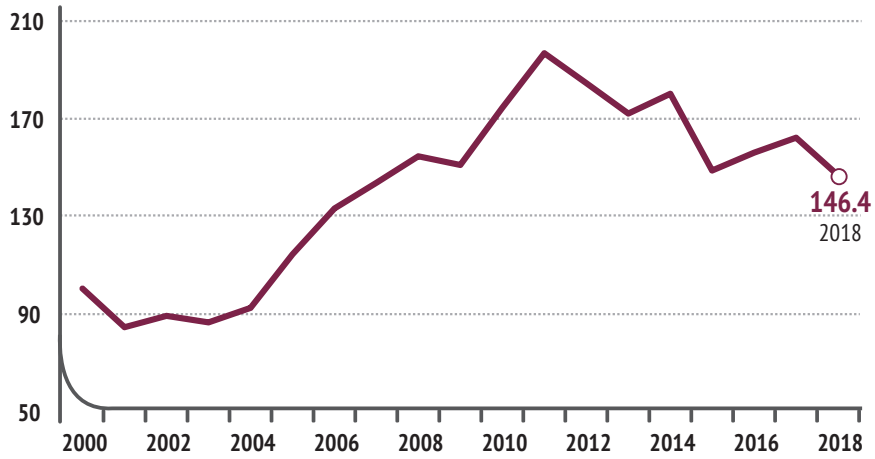
In 2018, effective unit labor costs in real US dollars (effective ULC) in the Brazilian manufacturing industry fell by 9.5%. The indicator measures the evolution of ULC in Brazilian industry in relation to the average ULC in the industries of the country's main trading partners[1]. After rising for two consecutive years, effective ULC fell again. The decline more than offset the increase recorded in the 2015-2017 period: 9.0%.

Considering the evolution of ULC in Brazilian industry in relation to a particular trading partner – the so-called relative ULC – one can see that in 2018, the indicator for Brazil was only outperformed by that for Argentina. In the neighboring country, ULC in real US dollars edged down by 27.1%, while in Brazil it fell by 16.1%. As the Brazilian indicator fell at a lower rate, ULC in Brazil grew by 15.2% as compared to the Argentine indicator.

Also when comparing 2017 to 2018, ULC in real US dollars for all other partners either fell less than the Brazilian indicator (which dropped by 16.1%) or grew. As a result, ULC in Brazil is down in relation to any other partner (except for Argentina). The indicator dropped by at least 12.7%, which is the figure obtained when compared to the United States. The largest declines were registered in relation to Germany and the United Kingdom (down by 18.6% as compared to both countries).

Effective unit labor cost

Manufacturing industry
Index, 2000 = 100



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

The main determinant behind the evolution 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 real (as indicated by a decline in REER).

In 2018, the three effective ULC components contributed to the 9.5% decline, that is, to the increase in the country's competitiveness. Labor productivity had the least contribution. The indicator grew by only 0.8% as compared to 2017, but the figure is still above the one registered by most of Brazil's main trading partners.

1 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.

Brazil's performance was similar to that of Japan and Italy, which grew respectively by 0.7% and 0.6%. South Korea showed the highest productivity gain (3.4%). France, the Netherlands and the United States also outperformed Brazil. Compared to the average productivity for its partners, Brazil experienced a 1.1% increase in effective productivity.

Real effective average wages – which compares Brazil's performance to the average performance of its trading partners – dropped by 4.2% between 2017 and 2018. Brazil and Argentina recorded the largest declines in real average wages: down by 6.6% and 6.9% respectively. South Korea was the only partner to show an increase in real average wages during the period (4.5%). Real average wages fell across all other partners. The declines were less pronounced than those observed in Brazil and Argentina (ranging from -2.8% to -0.1%). As a result, real average wages in Brazil grew only in relation to those in Argentina (0.5%). The sharpest decline in the indicator was in relation to South Korea (-10.6%).

The Brazilian currency depreciated by 4.4% in real terms vis-à-vis the basket of currencies of the country's main trading partners, virtually the same contribution made by real average wages to the decline in effective ULC in real US dollars. Compared to its trading partners, the only currency against which the Brazilian real gained ground (loss of competitiveness) was the Argentine peso (20%). The Brazilian real depreciated most against the currencies of the United Kingdom (-12.4%), the Netherlands (-11.9%) and France (-11.8%).

Over the last 10 years (2008-2018), Brazilian industry has become more competitive, as illustrated by the 5.1% decline in effective ULC. Even though Brazil recorded an increase in ULC as compared to most of its trading partners, effective ULC in the country is down. The highest increases were recorded in relation to France (22.8%) and Italy (20.8%). ULC in Brazil fell only as compared to the indicators for South Korea (-25.1%), Argentina (-24.4%), the United States (-10.2%) and to a lesser extent Japan (-0.1%). The decline in effective ULC reflects the major role played by Argentina and the United States in the Brazilian trade flow (sum of

Effective ULC and its components, Manufacturing industry

Cumulative change (%)

Year	Real effective average wages	Effective labor productivity	Real effective exchange rate[1]	Effective ULC
2008	-3.0	-3.9	6.6	7.6
2009	1.8	4.3	0.1	-2.3
2010	-1.6	-4.2	12.5	15.5
2011	6.0	-4.7	1.4	12.8
2012	3.8	-0.1	-9.8	-6.3
2013	0.3	2.6	-4.6	-6.8
2014	4.6	-1.3	-1.1	4.7
2015	1.5	0.0	-18.7	-17.5
2016	-0.5	2.3	7.8	4.9
2017	2.1	3.2	5.0	3.9
2018	-4.3	1.1	-4.4	-9.5
CHANGE OVER THE LAST DECADE				
2008-2018	14.3	3.0	-14.4	-5.1
2008-2013	10.5	-2.3	-1.6	11.3
2013-2018	3.4	5.4	-13.0	-14.7

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

[1] 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.

exports and imports). The shares of each partner in the country's trade flow are used as weights to obtain effective ULC, which is the weighted average of bilateral unit labor costs between Brazil and its main trading partners.

Effective ULC in Brazil is down, meaning that the country has gained competitiveness during the last decade, despite registering the third largest increase in real average wages among its 10 main partners: 37.5%, above the increase in productivity (11.7%). Wage gains in Brazil were only exceeded by those observed in Argentina (53.6%) and South Korea (53.2%). Mexico was the only country to experience a decline in real average wages (-5.0%). As a result, real effective average wages – which compares real average wages in Brazilian industry to average wages in its trading partners' industries – edged up by 14.3%. The largest increases were observed in relation to Mexico (44.8%), the United Kingdom (28.1%), the United States (27.0%) and Japan (26.3%).

The negative effect of real average wages on the country's competitiveness was offset by the depreciation of the Brazilian currency. Between 2008 and 2018, the real depreciated by 14.4% in real terms against the basket of currencies of Brazil's main trading partners – the same growth rate observed for real effective average wages (14.3%). Thus, the 3.0% increase in effective labor productivity played a decisive role in the decline in effective ULC. The steepest increases in the Brazilian labor productivity were in relation to Japan (16.1%) and Mexico (11.9%).

In 2019, effective ULC will likely keep trending downward, which means that competitiveness will likely keep growing. Wages continue to edge down while the real exchange rate keeps depreciating. However, labor productivity has been losing ground and this is a cause of concern, as it is an important factor for the sustained growth of Brazilian economy.

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

Cumulative change (%)

PARENTS	2008-2018				2017-2018			
	Real relative average wages	Relative labor productivity	Real exchange rate[1]	Relative ULC	Real relative average wages	Relative labor productivity	Real exchange rate[1]	Relative ULC
Brazil-United States	27.0	4.0	-26.4	-10.2	-3.9	-0.4	-9.5	-12.7
Brazil-Argentina	-10.5	7.6	-9.0	-24.4	0.5	4.6	20.0	15.2
Brazil-Germany	17.5	-4.5	-4.8	17.1	-6.4	1.9	-11.4	-18.6
Brazil-Mexico	44.8	11.9	-12.9	12.6	-5.9	3.0	-9.3	-17.1
Brazil-Japan	26.3	16.1	-8.3	-0.1	-6.5	0.1	-8.6	-14.5
Brazil-France	7.3	-11.9	0.7	22.8	-6.5	-1.4	-11.8	-16.3
Brazil-Italy	18.5	-4.9	-3.0	20.8	-6.2	0.2	-11.3	-17.0
Brazil-South Korea	-10.2	-3.0	-19.1	-25.1	-10.5	-2.5	-9.9	-17.4
Brazil-The Netherlands	20.1	-3.6	-4.0	19.6	-6.3	-0.4	-11.9	-17.1
Brazil-United Kingdom	28.1	6.5	-3.2	16.5	-6.1	1.0	-12.4	-18.6

Source: Prepared by CNI based on statistics from the BLS; Banco Central de la República Argentina; BCB; DGEyC; FUNCEX; FGV/IBRE; IBGE; INDEC; INEGI; Kosis; Macrodados; Ministry of Economy, Trade and Industry; Ministry of Employment and Labor; Ministry of Health,Labor and Welfare; OECD; The Conference Board and CNI.
[1] 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[1]	Labor productivity (Output per hours worked)	Real ULC in domestic currency	Real exchange rate[2]	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
CHANGE OVER THE LAST DECADE					
2008-2018	37.5	11.7	23.1	35.9	-9.4
2008-2013	29.1	4.2	23.8	6.9	15.9
2013-2018	6.5	7.2	-0.6	27.2	-21.8

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

[1] 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.

[2] 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.

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