CNI Indicators
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TRADE OPENNESS INDICATORS

FUNCEX

CNI
National Confederation of Industry
Brazil
CNI. THE STRENGTH OF THE BRAZILIAN INDUSTRY

Share of imports in the domestic market increases again in 2017

In 2017, the export to output ratio in manufacturing interrupted the upward trend that had been in place since 2015, while the import penetration ratio grew again after falling for three consecutive years. The recovery of domestic demand – particularly the increase in household consumption – and the appreciation of the Brazilian currency (real) have contributed toward the shifting trend in the indicators.

The export to output ratio for manufacturing, which measures the share of foreign sales in the sector, remained virtually unchanged as it fell from 15.7% in 2016 to 15.6% in 2017 (at constant prices).

The recent appreciation of the real drives down competitiveness of exports and contributes to the slowdown observed in export volumes. The Brazilian currency experienced a real appreciation of 10.2% in 2016 and of 3.5% in 2017 when compared to a basket of currencies.

Despite a more favorable global demand, export volumes by industrial companies have risen at a slower pace, with the growth rate declining from 6.6% in 2016 to 2.3% in 2017.

The share of imports in the domestic market increased again, as shown by the import penetration ratio. The indicator grew from 16.4% in 2016 to 17% in 2017 (at constant prices). Between 2016 and 2017, import volumes posted a higher growth than real domestic consumption (8.2% against 4.5%).

Imports have also regained share in total industrial inputs used by industry. The imported input share reversed the downward trend started in 2014 after edging up from 22.5% in 2016 to 23.5% in 2017.

Trade openness indicators

Manufacturing
In %

INDICATORS	CURRENT PRICES			CONSTANT PRICES		
	2015	2016*	2017*	2015	2016*	2017*
Export to output ratio	18.5	18.8	18.1	13.8	15.7	15.6
Import penetration ratio	21.2	18.7	18.0	16.8	16.4	17.0
Imported input share[1]	28.0	24.2	23.8	23.8	22.5	23.5
Net export to output ratio	4.0	7.2	6.5	2.1	4.8	4.0

* Estimate. For more details, see methodology.
[1] Only inputs from Mining and quarrying and Manufacturing are considered.

With export revenues growing at a slower pace, the net export to output ratio for manufacturing declined from 7.2% in 2016 to 6.5% in 2017 (at current prices). The indicator measures the difference between export revenues and spending on imported industrial inputs (both measured as a share of production value).

Industry remains focused on domestic market

The apparent trend toward greater industrial focus on the foreign market was not sustained in 2017. The share of exports in Brazilian industry broke its upward trend started in 2015. As far as imports are concerned, import penetration in the domestic market – particularly the use of imported inputs – has grown again, giving continuity to the pattern of international industrial integration that has been built over the past 15 years: increased integration on the import side and lower integration on the export side.

The recovery of domestic demand – especially the increase in household consumption – and the appreciation of the real have contributed toward reversing the trend in the indicators. The increase in demand has an impact on imports and on production for the domestic market, thus increasing its relative importance for industry. The Brazilian currency appreciation encourages imports and discourages exports. In the 2015-2017 period, the real appreciated by 13.4% against a basket of currencies of its major trading partners.

EXPORT TO OUTPUT RATIO

Uptrend in share of exports in industrial production comes to an end

In 2017, the export to output ratio for manufacturing remained virtually unchanged as compared to 2016's levels, down from 15.7% to 15.6% (at constant prices). The indicator grew by 3.4 percentage points from 2014, when it reached its lowest points since the beginning of the historical series in 2003. Despite the increase, the indicator is still far short of its highest level in the series recorded in 2005 (19.7%).

The export to output ratio for manufacturing measures the share of foreign sales in the sector. In 2017, the manufacturing industry posted growth of 3.6% in production volume, accompanied by a smaller increase in export volumes (2.3%). As a result, the indicator dropped by 0.1 percentage point (corresponding to a 1.2% decline).

The recent appreciation of the real drives down competitiveness of exports and contributes to the slowdown in export volumes. Despite the greater stability of the real in 2017, the Brazilian currency experienced a real appreciation of 10.2% in 2016 and of 3.5% in 2017 against a basket of currencies.

The IMF estimates that volume of trade in goods and services grew by 4.7% in 2017, which is a significant result as compared to previous years' figures (growth of less than 3% in 2015 and 2016). Notwithstanding a more favorable global demand, exports by industrial companies have increased at a slower pace, with the growth rate falling from 6.6% in 2016 to 2.3% in 2017.

The export to output ratio ended 2017 on a down note in 9 of the 23 manufacturing sectors. The most pronounced declines were recorded for the Other transport equipment, Tobacco, and Leather and footwear sectors. In the Other transport equipment sector, physical production showed a decline (-10.1%), followed by an even steeper drop in export volumes (-29.6%). In the other sectors, production volumes increased while exports experienced a decline.

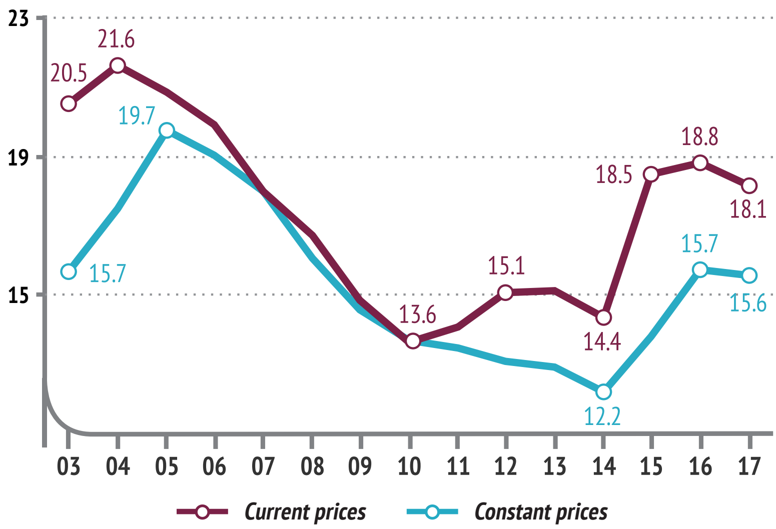
1 See CUNHA, S.; FONSECA, R. Mudança da orientação externa da indústria brasileira no período recente. **Revista Brasileira de Comércio Exterior**, FUNCEX No. 131, October-December 2004.

Wood products, Machinery and equipment, and Motor vehicles, trailers and semi-trailers recorded the highest increases in the export to output ratio in 2017. In these sectors, export volumes grew more than physical production.

Special mention should be made of the Machinery and equipment and Motor vehicles, trailers and semi-trailers sectors, whose production resumed growth in 2017. This result is different from the one calculated in 2016, when production edged down, which helped explain the increase in the export to output ratio. This suggests that foreign sales are leading the recovery of production in these sectors.

Export to output ratio

Manufacturing
In %



Export to output ratios at constant prices
Sectors with the highest variations

Variation between 2016 and 2017

SECTORS		INDICATORS 2016*	INDICATORS 2017*	VARIATION (percentage points)
Most significant increases	Wood products	28.0	30.8	2.8
	Machinery and equipment	16.1	18.0	1.9
	Motor vehicles, trailers and semi-trailers	14.3	15.7	1.4
	Pharmaceutical chemicals and pharmaceuticals	11.0	12.0	1.0
Most significant decreases	Other transport equipment	50.8	39.8	-11.0
	Tobacco products	52.4	42.6	-9.8
	Leather, travel goods and footwear	22.2	20.5	-1.7
	Basic metals	37.6	36.6	-1.0

* Estimate

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IMPORT PENETRATION RATIO

Share of imports in the domestic market increases again

The import penetration ratio for manufacturing increased from 16.4% in 2016 to 17% in 2017 (at constant prices). The indicator interrupted the downward trend observed since 2014 and returned to the level seen two years ago (16.8% in 2015).

The import penetration ratio measures the share of imported goods in apparent consumption (the sum of production value for the domestic market and imports). From 2016 to 2017, apparent consumption grew by 4.5% (at constant prices), while volumes of imported goods edged up by 8.2%, leading to a 0.6 percentage point increase in the indicator.

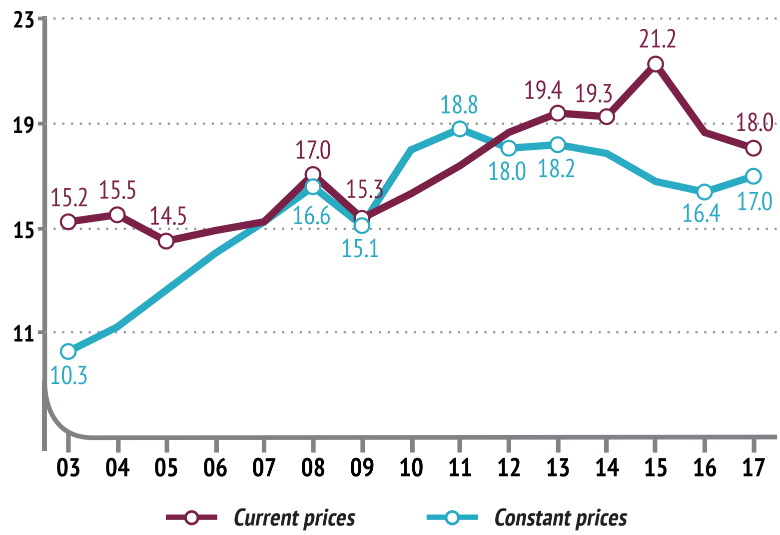
The result reflects both the economic recovery in 2017, particularly the increase in household consumption, and the real exchange rate decline (that is, the appreciation of the Brazilian currency against the US dollar).

At current prices, the import penetration ratio continued to trend downward, as it fell from 18.7% in 2016 to 18.0% in 2017. The rate of decline, however, is lower: on a year-over-year basis, the indicator fell by 2.5 percentage points in 2016 and by 0.7 percentage points in 2017. Imports in reals become cheaper with an appreciated Brazilian currency (effect on value), but at the same time import volumes also increase (effect on volume). Between 2016 and 2017, the two effects offset each other, while the value of imports held virtually steady (change of 0.8%).

Of the 23 manufacturing sectors, only seven (Other transportation equipment, Machinery and equipment, Tobacco, Motor vehicles, trailers and semi-trailers, Computer, electronic and optical products, Wood products, and Pulp and paper) experienced a decline in the import penetration ratio at constant prices in 2017 as compared to the year before. In the Motor vehicles, trailers and semi-trailers, Computer, electronic and optical products, and Pulp and paper sectors, import volumes increased, but at a slower pace than that recorded by apparent consumption, thereby leading to a decline in the indicator. The other sectors experienced a decline in import volumes, accompanied by a smaller decrease or increase in apparent consumption.

Import penetration ratio

Manufacturing
In %



The Coke, refined petroleum products and biofuel, Pharmaceutical chemicals and pharmaceuticals, Other manufacturing, Textiles, and Electrical equipment sectors deserve special mention for recording the most pronounced increases. In Pharmaceutical chemicals and pharmaceuticals and Electrical equipment, import volumes increased while apparent consumption declined, further pushing up the indicator. In the other sectors, import volumes increased at a faster pace than apparent consumption.

Import penetration ratios at constant prices
Sectors with the highest variations

Variation between 2016 and 2017

SECTORS		INDICATORS		VARIATION (percentage points)
		2016*	2017*	
Most significant increases	Coke, refined petroleum products and biofuel	23.0	29.9	6.9
	Pharmaceutical chemicals and pharmaceuticals	36.2	39.2	3.0
	Other manufacturing	27.3	29.7	2.4
	Textiles products	15.6	17.8	2.2
	Electrical equipment	23.3	25.5	2.2
Most significant decreases	Other transport equipment	36.5	20.6	-15.9
	Machinery and equipment	31.3	28.1	-3.2
	Tobacco products	2.5	1.7	-0.8
	Motor vehicles, trailers and semi-trailers	13.8	13.1	-0.7
	Computer, electronic and optical products	20.7	20.3	-0.4

* Estimate

IMPORTED INPUT SHARE

Increased use of imported industrial inputs

The downward trend in the imported input share observed since 2014 has also come to a halt. The indicator for manufacturing rose from 22.5% in 2016 to 23.5% in 2017 (at constant prices). With the increase, the indicator is now close to the level seen in 2015 (23.8%).

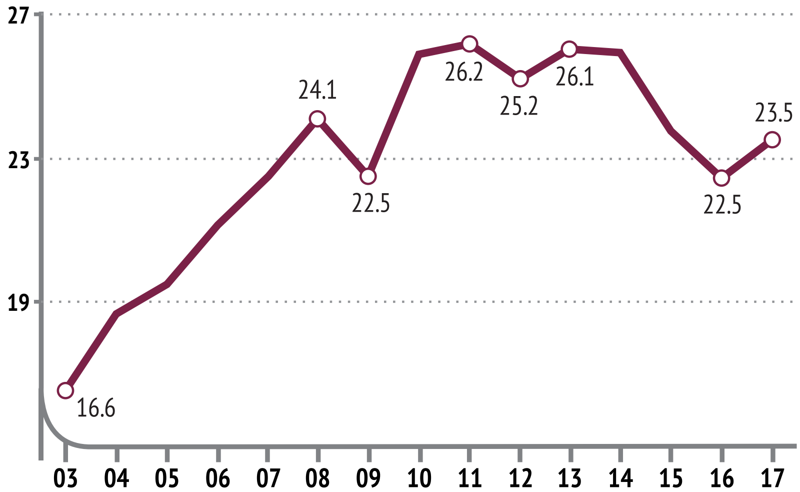
The imported input share measures the share of imported industrial inputs in total industrial inputs used by industry. Between 2016 and 2017, consumption of imported industrial inputs rose by 9.8% while consumption of domestic inputs edged up by 3.4% (at constant prices).

In sectoral terms, Other transport equipment, Coke, refined petroleum products and biofuel, and Motor vehicles, trailers and semi-trailers were the only sectors to reduce the use of imported industrial inputs relative to domestic inputs in 2017. In the Motor vehicles, trailers and semi-trailers sector, consumption of imported industrial inputs grew at a slower pace than consumption of domestic inputs. The other two sectors experienced a decline in the use of imported intermediate goods, followed by a smaller decline or an increase in consumption of intermediate domestic goods.

Basic metals, Chemicals, and Wearing apparel recorded the highest increases in the imported input share in 2017 as compared to 2016. In these sectors, the use of industrial inputs grew at a significantly higher rate than consumption of domestic inputs.

Imported input share at constant prices

Manufacturing
In %



Imported input share[1] at constant prices

Sectors with the highest variations

Variation between 2016 and 2017

SECTORS		INDICATORS 2016*	INDICATORS 2017*	VARIATION (percentage points)
Most significant increases	Basic metals	26.3	30.9	4.6
	Chemicals	36.0	40.1	4.1
	Wearing apparel	17.5	20.0	2.5
	Textiles products	27.7	30.0	2.3
	Non-metallic mineral products	14.8	17.0	2.2
Most significant declines	Other transport equipment	29.4	20.5	-8.9
	Coke, refined petroleum products and biofuel	20.7	17.1	-3.6
	Motor vehicles, trailers and semi-trailers	22.1	21.8	-0.3

* Estimate
[1] Only inputs from Mining and quarrying and Manufacturing are considered.

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NET EXPORT TO OUTPUT RATIO

Net export to output ratio closes the year at a lower level

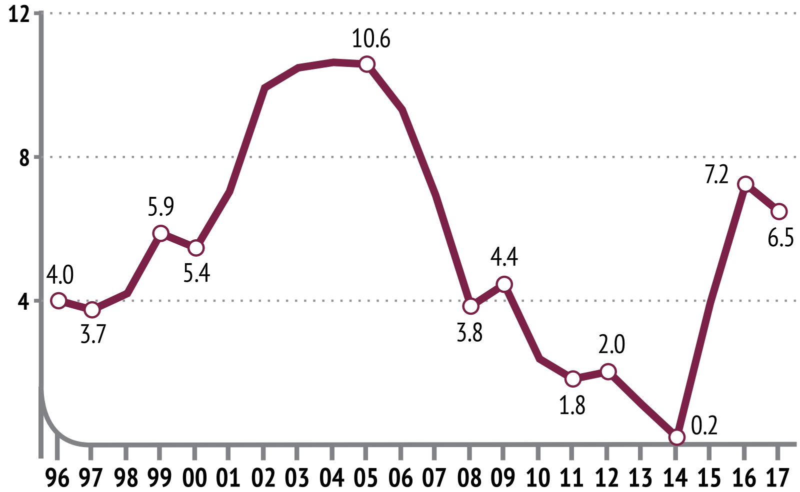
The net export to output ratio for manufacturing reversed the upward trend started in 2015, falling from 7.2% in 2016 to 6.5% in 2017 (at current prices). The indicator measures the difference in reals between export revenues and spending on imported industrial inputs (both measured relative to production value). Despite falling by 0.7 percentage points, the indicator for manufacturing remains on positive terrain.

In most industrial sectors, the net export to output ratio fell in 2017 on a year-over-year basis. The indicators for the Electrical equipment and Furniture and other manufacturing sectors are once again negative after showing positive figures in 2016. As a result, the number of sectors with positive indicators fell from 12 to 10 out of 19 sectors considered.

Motor vehicles, trailers and semi-trailers, Machinery and equipment, Coke, refined petroleum products and biofuels, and Wood products were the only sectors for which an increase in the indicator was recorded between 2016 and 2017. In the Machinery and equipment sector, the net export to output ratio rose for the fourth consecutive year, up from 4.6% in 2013 to 15.2% in 2017. In Motor vehicles, trailers and semi-trailers, the indicator has been trending upward since 2015, up from a negative value (-6.5%) in 2014 to 5.1% in 2017.

Net export to output ratio at current prices

Manufacturing
In %



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Net export to output ratio at current prices
Sectors with the highest variations

Variation between 2016 and 2017

SECTORS		INDICATORS (%) 2016*	INDICATORS (%) 2017*	VARIATION (percentage points)
Most significant increases	Motor vehicles, trailers and semi-trailers	1.9	5.1	3.2
	Machinery and equipment	13.0	15.2	2.2
	Coke, refined petroleum products and biofuel	-7.5	-5.8	1.7
Most significant declines	Other transport equipment	65.2	54.9	-10.3
	Leather, travel goods and footwear	20.1	16.8	-3.3
	Basic metals	24.0	20.7	-3.3
	Chemicals	-10.9	-13.3	-2.4

* Estimate

Learn more

For more information, including sectoral results, previous editions, methodology and historical series, visit: www.cni.org.br/e_cac

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