

PRODUCTIVITY IN BRAZILIAN MANUFACTURING

ECONOMIC INDICATORS **CNI**

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Productivity shows recovery in the third quarter

2020 marks the third consecutive year of growth below 1%

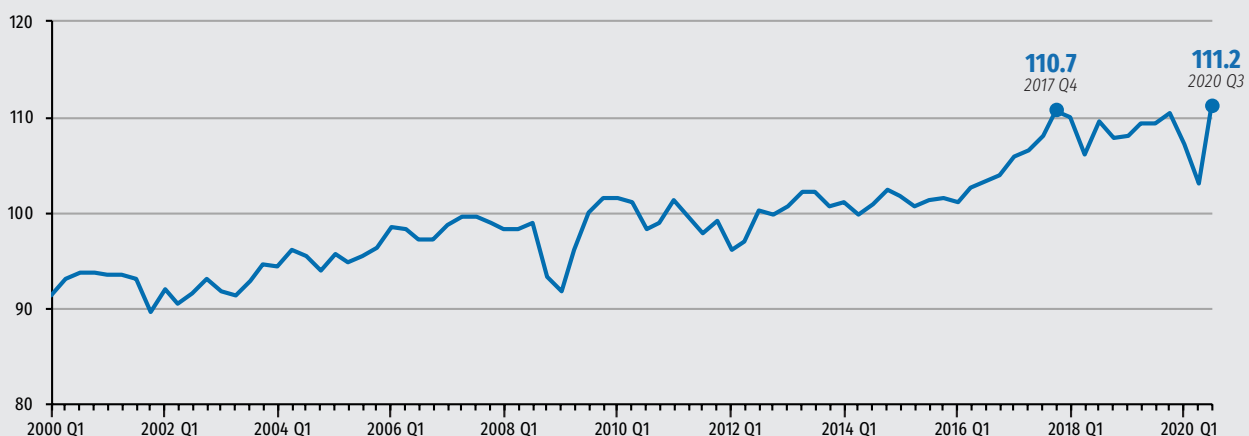
Labor productivity in the Brazilian manufacturing industry – measured as the volume produced divided by hours worked – grew by 8%, in the third quarter of 2020 in relation to the second quarter of the year, on a seasonally-adjusted basis. The volume produced experienced a 25.8% increase, while the hours worked in production increased by 16.4%, on the same basis of comparison.

The industry recovered quickly and strongly since May, after the worst moment of the crisis has passed. Along the quarter, the industry operated with increasing capacity utilization levels to rebuild the inventories and meet the quick recovery on demand.

The rapid labor productivity growth in the third quarter of 2020, as well as the sharp drop in the first half of the year, are cyclical movements. They reflect changes in the production rate established by the company and/or in the worker's effort and not changes in the worker's qualifications.

Quarterly labor productivity, Brazilian manufacturing industry

Output per hours worked - Seasonally adjusted - Index, base: 2010 average = 100



Source: Prepared by CNI, based on statistics from IBGE and CNI.

The labor productivity growth reflects the qualification of workers and the influence on labor of changes in capital stock (machinery modernization, for example), organizational changes (such as the adoption of lean production techniques), the influence of externalities¹, and economies of scale².

The higher qualification of workers, whether combined or not with the other changes above, can be considered structural changes in productivity, that is, they are lasting changes of a longer term and cannot explain the variations that were recorded in labor productivity this year, marked by the crisis caused by the pandemic.

Nevertheless, the labor productivity indicator reached, in the third quarter of 2020, the highest level ever recorded since the historical series started in 2000, more than compensating for the drop accumulated in the first two quarters of the year (-6.7% compared to the fourth quarter of 2019). This level is slightly higher than that recorded in the fourth quarter of 2017, the previous peak of the historical series.

For 2020, labor productivity in the Brazilian manufacturing industry is expected to be close to zero, continuing the trend from the last two years. Even if the growth rate observed

in the third quarter were maintained in the last quarter of 2020, the indicator would close the year with growth below 1% (0.9%). The year 2020 is expected to be the third consecutive year of labor productivity growth below 1%. Between 2017 and 2019, the accumulated growth was only 1.5%.

Annual labor productivity, Brazilian manufacturing industry

Output per hours worked

YEAR	ANNUAL CHANGE (%)
2009	0.7
2010	2.1
2011	-0.8
2012	-0.5
2013	2.6
2014	-0.3
2015	0.3
2016	1.8
2017	4.5
2018	0.8
2019	0.6

LAST DECADE	CUMULATIVE CHANGE (%)
2009-2014	3.2
2014-2019	8.2
2009-2019	11.6

Source: Prepared by CNI, based on statistics from IBGE and CNI.

¹ Externalities are situations in which the production or consumption of goods or services generates costs or benefits for third parties, which are not reflected in the prices paid for the goods or services (in order to compensate individuals or companies for the indirect effects caused). Pollution is an example of negative externalities, while the benefits to society resulting from a better education are examples of positive externalities.

² Economies of scale are the gains from the drop on average production costs due to the increased production scale.

Quarterly labor productivity, Brazilian manufacturing industry

Output per hours worked

QUARTER	INDEX, SEASONALLY ADJUSTED (BASE: 2010 AVERAGE = 100)	CHANGE FROM THE IMMEDIATELY PRECEDING QUARTER, SEASONALLY ADJUSTED (%)	CHANGE FROM THE SAME QUARTER IN THE PREVIOUS YEAR (%)	CHANGE ACCUMULATED IN FOUR QUARTERS (FROM THE SAME PERIOD IN THE PREVIOUS YEAR, %)
2018 - Q1	110.1	-0.5	3.1	4.3
2018 - Q2	106.2	-3.5	0.8	3.7
2018 - Q3	109.6	3.2	1.3	2.7
2018 - Q4	107.8	-1.6	-1.6	0.8
2019 - Q1	108.1	0.3	-1.5	-0.3
2019 - Q2	109.4	1.2	2.6	0.2
2019 - Q3	109.3	-0.1	0.0	-0.2
2019 - Q4	110.4	1.0	1.6	0.6
2020 - Q1	107.1	-3.0	0.3	1.1
2020 - Q2	103.0	-3.8	-4.9	-0.7
2020 - Q3	111.2	8.0	1.1	-0.5

Source: Prepared by CNI, based on statistics from IBGE and CNI.



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Document closed by November 23, 2020.

PRODUCTIVITY IN BRAZILIAN MANUFACTURING | English version of “Produtividade na Indústria, Julho/Setembro 2020” | Quarterly publication of the National Confederation of Industry - CNI | www.cni.com.br | Industrial Development Board - DDI | Economics Department - ECON | Executive manager: Renato da Fonseca | Economic Analysis Unit - GAE | Manager: Marcelo Souza Azevedo | Analysis: Samantha Cunha | Editing Unit - CDIV | Coordinator: Carla Gadêlha | Graphic Design: Simone Marcia Broch

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