

### III. Economic activity and prices

#### 1. Output

#### d) Productivity and labour costs in industry \*

2015 = 100

seasonally adjusted

Period	Output				Wages and salaries <sup>1</sup>							
	Per employed person		Per man-hour worked		Per employed person		Per man-hour worked		Per unit of output		Per unit of turnover	
	monthly	quarterly	monthly	quarterly	monthly	quarterly	monthly	quarterly	monthly	quarterly	monthly	quarterly
2016 Mar.	99.9		100.6		101.3		102.1		101.5		102.9	
Apr.	100.6		100.2		102.1		101.7		101.4		103.7	
May	98.8	100.1	101.4	100.6	100.6	101.6	103.2	102.1	101.8	101.5	102.2	103.3
June	100.9		100.3		102.1		101.5		101.2		103.9	
July <sup>2</sup>	99.3		99.6		101.6		102.0		102.4		104.1	
Aug. <sup>2</sup>	100.9	100.3	101.7	101.0	102.2	102.0	102.9	102.8	101.3	101.8	102.9	103.3
Sep.	100.6		101.7		102.3		103.4		101.6		102.8	
Oct.	101.1		101.2		101.6		101.7		100.5		101.2	
Nov.	100.8	100.3	101.5	101.0	102.7	102.5	103.4	103.3	101.9	102.2	101.9	102.5
Dec.	98.9		100.4		103.1		104.7		104.2		104.4	
2017 Jan.	100.4		101.9		103.0		104.5		102.6		102.7	
Feb.	101.5	100.9	101.7	101.6	103.2	103.6	103.3	104.3	101.6	102.6	100.7	102.0
Mar.	100.8		101.3		104.5		105.0		103.7		102.5	
Apr.	101.7		102.4		104.6		105.4		102.9		101.4	
May	102.0	101.9	101.7	102.5	102.3	103.6	102.0	104.2	100.3	101.7	99.1	100.4
June	102.0		103.3		104.0		105.3		101.9		100.6	
July <sup>2</sup>	102.4		102.7		103.6		103.9		101.2		100.2	
Aug. <sup>2</sup>	104.4	103.3	104.0	103.5	104.1	103.8	103.7	104.0	99.7	100.5	98.6	99.2
Sep.	103.2		103.8		103.8		104.4		100.6		98.9	
Oct.	101.4		102.6		104.0		105.3		102.6		100.5	
Nov.	105.1	103.6	105.9	104.7	105.0	104.5	105.8	105.6	99.9	100.9	97.8	98.8
Dec.	104.4		105.5		104.5		105.7		100.2		98.2	
2018 Jan.	103.4		103.9		105.6		106.1		102.1		100.4	
Feb.	101.6	102.5	103.1	103.8	104.6	105.7	106.2	107.1	103.0	103.2	101.4	101.6
Mar.	102.4		104.3		107.0		109.0		104.5		102.9	
Apr.	101.6		103.1		107.6		109.1		105.9		103.6	
May	103.2	102.6	104.7	103.8	107.0	107.0	108.5	108.2	103.6	104.3	101.8	102.3
June	102.9		103.5		106.3		106.9		103.3		101.4	
July <sup>2</sup>	100.5		102.3		106.4		108.3		105.9		103.1	
Aug. <sup>2</sup>	100.5	100.4	101.3	101.5	106.8	106.3	107.7	107.5	106.3	105.9	103.3	103.3
Sep.	100.1		101.0		105.7		106.5		105.5		103.6	
Oct.	99.8		100.9		107.0		108.2		107.2		104.1	
Nov.	97.7	98.8	100.3	100.3	107.2	106.8	110.0	108.4	109.7	108.1	106.2	104.4
Dec.	98.8		99.7		106.1		107.0		107.3		102.8	
2019 Jan.	97.6		99.1		107.4		109.0		110.0		103.5	
Feb.	98.0	98.1	100.0	99.7	107.7	107.7	109.9	109.5	109.9	109.8	104.8	104.3
Mar.	98.7		100.0		108.0		109.5		109.4		104.6	
Apr.	96.0		98.9		108.0		111.2		112.5		105.4	
May	97.1	96.4	99.4	99.2	107.9	107.9	110.5	111.0	111.1	111.9	106.1	105.9
June	96.1		99.3		107.7		111.3		112.1		106.3	
July <sup>2</sup>	95.7		99.4		113.4		117.7		118.4		112.4	
Aug. <sup>2</sup>	96.2	95.7	98.0	98.5	108.5	110.0	110.6	113.2	112.8	114.9	106.8	108.7
Sep.	95.2		98.2		108.0		111.3		113.4		107.0	
Oct.	94.2		97.8		107.6		111.8		114.3		106.9	
Nov.	94.7	94.0	97.8	97.3	106.7	107.1	110.1	110.8	112.6	113.9	106.1	106.5
Dec.	93.2		96.4		106.9		110.6		114.7		106.5	
2020 Jan.	95.7		98.7		108.0		111.4		112.8		105.6	
Feb.	97.2	93.3	99.5	97.7	108.4	107.9	110.9	113.1	111.5	115.9	105.5	109.1
Mar.	87.0		94.8		107.4		117.1		123.5		116.2	
Apr.	68.1		84.0		95.7		118.0		140.6		136.6	
May	76.4	76.6	89.0	89.6	99.3	98.9	115.7	116.0	130.0	129.9	127.4	126.1
June	85.4		95.9		101.6		114.2		119.0		114.4	
July	87.3		96.2		106.0		116.8		121.4		113.1	
Aug.	87.5	88.2	94.8	95.8	105.3	105.9	114.0	115.1	120.3	120.1	112.0	111.9
Sep.	89.7		96.5		106.5		114.5		118.7		110.6	
Oct.	92.9		99.0		106.5		113.5		114.6		106.9	
Nov.	94.0	94.1	99.8	100.0	106.4	107.3	113.0	114.0	113.2	114.0	105.6	106.4
Dec.	95.4		101.1		108.9		115.5		114.2		106.6	
2021 Jan.	95.3		99.4		108.5		113.1		113.8		106.7	
Feb.	93.7	94.5	97.5	98.6	108.2	109.0	112.6	113.7	115.5	115.3	107.7	106.6
Mar.	94.6		98.8		110.4		115.3		116.7		105.4	
Apr.	r 94.4		r 97.6		105.0		108.6		r 111.2		102.1	
May	r 93.5	93.7	r 98.5	97.7	105.8	107.7	111.5	112.4	r 113.1	115.0	102.5	104.6
June	r 93.1		r 96.9		112.4		117.0		r 120.7		109.3	
July <sup>2</sup>	o 94.6		o 98.8		109.2		114.0		o 115.4		103.0	
Aug. <sup>2</sup>	o 90.9	91.7	o 97.5	97.3	110.9	109.9	118.9	116.6	o 122.0	119.9	109.8	107.1
Sep.	o,p 89.5		o,p 95.5		109.5		116.9		o,p 122.4		p 108.5	

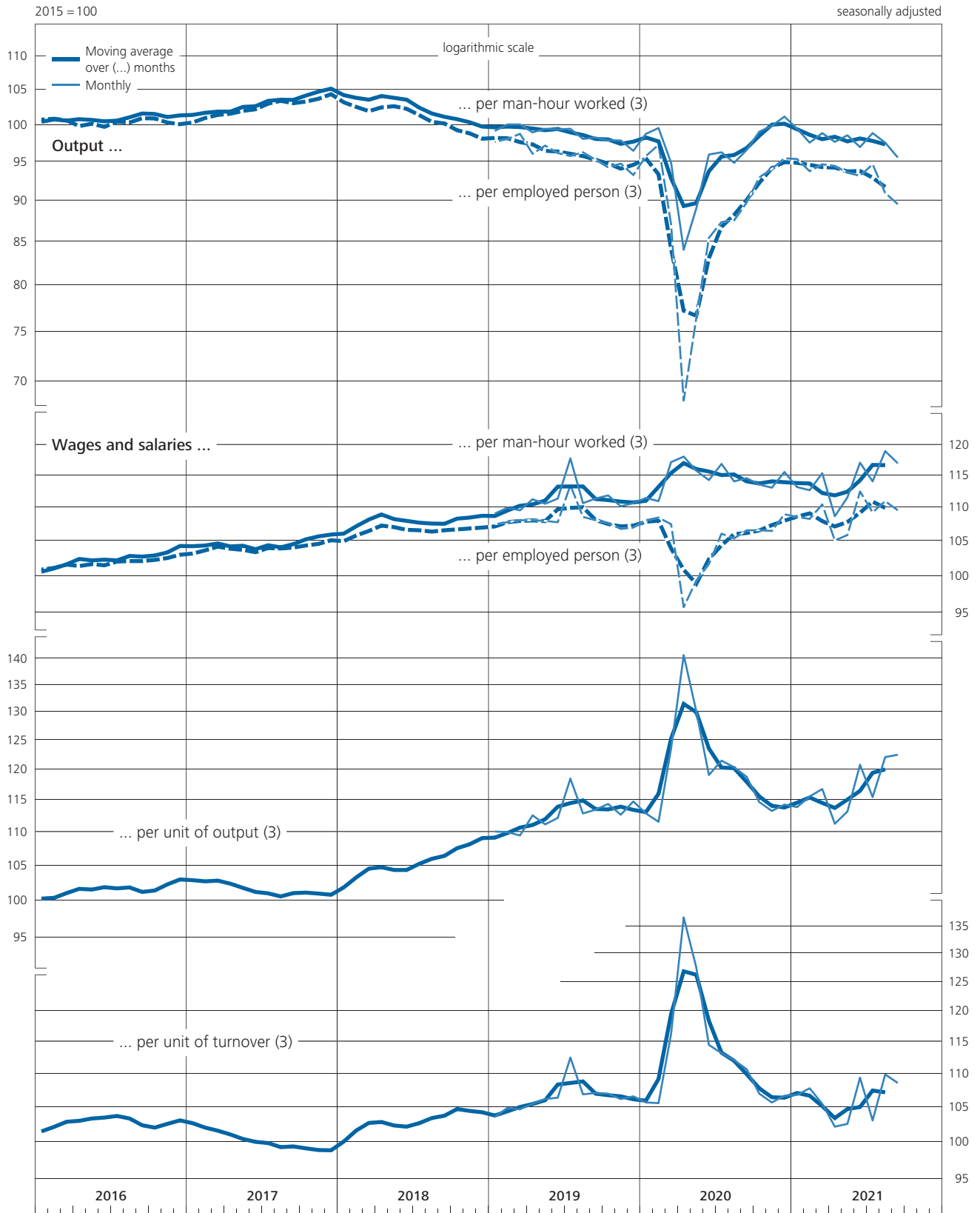
Source of the unadjusted figures: Bundesbank calculations based on data from the Federal Statistical Office. \* As well as mining of coal and lignite, extraction of crude petroleum and natural gas, manufacture of coke and refined petroleum products.

<sup>1</sup> Excluding employers' compulsory social security contributions. <sup>2</sup> Influenced by a change in holiday dates. o Preliminary; output pre-adjusted by the Federal Statistical Office on the basis of estimations to the results of the quarterly production statistics.

III. Economic activity and prices

1. Output

d) Productivity and labour costs in industry\*



\* As well as mining of coal and lignite, extraction of crude petroleum and natural gas, manufacture of coke and refined petroleum products.