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## AT A GLANCE

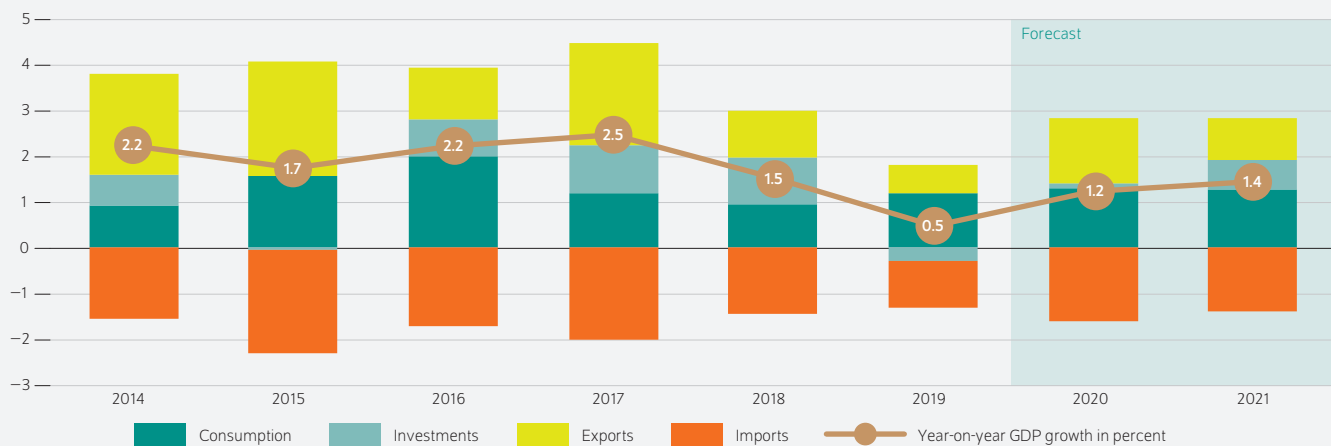
# Strengthen the foundation of the German economy

By Claus Michelsen et al.

- German economy remains stuck in a weak phase
- DIW Berlin projects growth of 0.5 percent for 2019, 1.2 percent for 2020, and 1.4 percent for 2021
- Industry is struggling to overcome the crisis; private household consumption is supporting economic development
- Long-term investment programs needed to make Germany a more attractive business location, counter the consequences of demographic change
- Scenario calculations show a medium-term increase in growth potential and higher revenues from taxes and social security contributions due to additional investments

### Private household consumption is supporting the economy; exports will pick up again in 2020

Contribution to growth of individual components of GDP in percentage points



Source: Authors' own surveys and calculations.

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## FROM THE AUTHORS

*"Currently, domestic companies are ordering significantly less machinery and fewer vehicles. In uncertain times, companies are being cautious. Therefore, it is more necessary than ever to stimulate private investment through public investment. Additional investments would also increase the growth potential of the German economy, which would otherwise soon decrease due to an aging population."* — Claus Michelsen —

## MEDIA



**Audio Interview** with Claus Michelsen (in German)  
[www.diw.de/mediathek](http://www.diw.de/mediathek)

# Strengthen the foundation of the German economy

**By Claus Michelsen, Guido Baldi, Marius Clemens, Geraldine Dany-Knedlik, Hella Engerer, Marcel Fratzscher, Stefan Gebauer, Max Hanisch, Simon Junker, Laura Pagenhardt, Malte Rieth, and Thore Schlaak**

The German economy remains in a weak phase. After a sharp downtrend of almost one and a half years, industrial production capacities have become underutilized. Initially, this was caused by weak exports—the German economy's specialization in capital goods has become its Achilles' heel due to the current global political environment—but the weakening of the private investment cycle was also a factor. In the meantime, it is domestic orders from Germany in particular that are developing sluggishly.

Countries around the world adjusted their economic policies in response to the slowdown, particularly in the manufacturing sector. As a result, most central banks are operating more expansively. Fiscal policy, too, has responded by increasing expenditure and/or by reducing taxes. As a result, the economic outlook is beginning to brighten. In Germany, the decisions of the Grand Coalition have primarily supported demand from private households and have so far prevented a slide into recession; the stimulus is just under half a percent of GDP. Therefore, DIW Berlin still projects positive growth, albeit at a rather sluggish rate, of 0.5 percent for 2019.

Over the next two years, additional public expenditure will again increase by about half of one percent of GDP. In addition, it is becoming apparent that foreign business will become somewhat more buoyant again, provided the current risks do not worsen further. DIW Berlin expects GDP to grow by 1.2 percent in 2020 and by 1.4 percent in 2021, roughly in line with the growth trend.

Capital goods demand is currently being dampened by the fragile international environment; as a result, the German economy remains in a precarious state. The risks remain that the trade conflicts could escalate or a hard Brexit could occur. So far, this has only affected industry and

related sectors, with private households remaining largely untouched. However, the longer the uncertainty persists, the more likely it is that the labor market will begin to show clearer signs of weakening and that domestic demand will weaken significantly.

However, the fragile international environment is not the only issue. Germany is also being confronted with structural problems; the automotive industry in particular appears to be facing major upheavals. In addition to the technological change, many manufacturers must also tackle the issue of location competitiveness. In the past, above-average wage costs were offset by high productivity and solid infrastructure. However, it is questionable if it will remain this way: over the past few years, some countries have decreased business taxes, thereby increasing the pressure to keep locations competitive. At the same time, location quality has suffered considerably. In addition to a lack of public investment, future needs, for example in digital, social, or transport infrastructure, have been inadequately addressed. These issues are aggravated by the imminent demographic change: a shrinking work force must provide the income for a growing elderly population. Thus, potential growth is set to slow down, from currently 1.5 percent to less than one percent from 2023 onward. This can be countered by expanding and modernizing the capital stock and promoting education and innovation.

In response, budget plans increased investment expenditures substantially. Until 2021, an additional 18 billion euros will be invested in infrastructure, the education system, and decarbonizing the economy. Over the next two years, this investment will cover the additional needs identified; nevertheless, it will not be able to compensate for the lack of investments in the past. Although policy has set the right

course in the short term, there is no long-term plan due to the lack of a nominal increase in the budgetary funds from 2021 onwards. However, such an increase is necessary to encourage companies to invest in expanding their capital stock, which would also benefit economic development in the short term.

A corresponding continuous increase in public investment funds would increase potential growth by an annual average of just under 0.3 percentage points. The government's expenditures will not only increase the public capital stock, but will also stimulate private investment. Moreover, investing in expanding and running all-day schools and daycares could also increase the average amount of hours parents can work. Funds should be invested in material and, above all, human resources, and not in more fee exemptions. Solutions also need to be found for budgets at the local level, as the municipalities are the largest public investors in Germany and their needs are particularly serious.

However, a permanent increase in funds of this magnitude must be financed. The federal budget surplus will be exhausted by 2021. Further additional expenditure

would therefore have to be financed either by reallocating resources in the budget or by planning for higher net borrowing. Currently, the Federal Ministry of Finance is planning on a balanced budget, referred to as a "black zero" (*schwarze Null*). However, this policy is difficult to justify in the current environment. While the Federal Government can borrow at negative interest rates in the long term and the debt brake allows limited borrowing, it seems sensible to discuss further changes in light of the current challenges. It is often suggested that extra budget funds should be utilized to provide higher loan financing, as these would not be a factor in the debt brake. However, this would curtail the Parliament's control over the budget. Reforming the current debt rules, or at the very least adjusting the debt brake to the European stability rules, therefore seems at least worthy of discussion. It would at least be a more transparent approach to overcome the challenges and strengthen the foundations of the German economy in the medium term.

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# Global Economy Continues to Suffer Weak Growth Momentum

By Claus Michelsen, Guido Baldi, Geraldine Dany-Knedlik, Hella Engerer, Stefan Gebauer, and Malte Rieth

## ABSTRACT

Favorable labor market conditions and the resulting increase in private consumption are still sustaining the global economy. Trade disputes and political uncertainties, however, continue to slow investment activity, with the result that economic growth will only be moderate particularly in advanced economies. By contrast, growth is accelerating in emerging markets, especially in India. Global economic growth is likely to remain moderate over the next two years. Consumption, in particular, will continue to prop up the economy, with investment activity expected to remain sluggish in the near term, despite favorable financing conditions. Towards the end of the forecast period, investment is expected to pick up again and trade to recover, replacing private consumption as the main drivers of growth. Worldwide, the economy is expected to grow by 3.6 percent this year and by 3.7 percent in each of the two subsequent years. Even though tariff disputes between the US and China have eased somewhat, downward risks remain high. Additional US tariffs and Brexit uncertainties threaten to weaken the economy.

The global economy picked up slightly in the third quarter of 2019 compared with the first half of the year (see Figure). In both advanced economies and emerging markets, the primary growth driver was increasing private consumption, sustained by continued favorable conditions on labor markets. Meanwhile, investment activity remained subdued.

The pace of expansion in advanced economies, however, remained virtually unchanged; with manufacturing in the US and the euro area showing similar development to the previous quarter. The UK economy, in contrast, rebounded after contracting in the second quarter, while Japanese economic performance lost considerable momentum.

In emerging economies, growth continued to accelerate slightly. In some of these economies production expanded markedly, for example in India. By contrast, the rate of expansion in China remained nearly unchanged.

For the forecast period, sluggish global production is expected to continue, although the global economic sentiment has brightened somewhat. In particular, trade policy uncertainties have receded recently, with the US and Japan concluding a trade agreement in fall, for example, and the trade dispute between the US and China beginning to ease. In addition, Chinese foreign trade stabilized in the third quarter after a significant decline in the first half of the year.

However, recent increases in tariffs on aluminum and steel as well as the US government's threat to impose additional tariffs on European products suggest there is no fundamental turnaround in US trade policy. For instance, simmering trade disputes are likely to continue to weigh on investment activity in most economies, albeit to a slightly lesser extent than seen recently. At the end of the forecast period, these burdens are likely to ease provided trade policy conditions remain the same and, thus, global trade should regain some momentum in 2021.

But for the time being, weak growth in industrial manufacturing is not likely to change. Despite the recent positive development of key economic indicators for the manufacturing sector in most advanced economies, the majority

Table

**Real GDP, consumer price inflation, and unemployment rate in the world economy**

In percent

	GDP				Consumer prices				Unemployment rate in percent			
	Change over previous year in percent											
	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021
Euro area	1.9	1.2	1.1	1.4	1.7	1.2	1.2	1.4	8.2	7.5	7.4	7.2
without German	2.0	1.5	1.2	1.3	1.7	1.1	1.0	1.3	10.3	9.6	9.3	9.1
France	1.7	1.3	1.3	1.4	1.9	1.2	1.3	1.3	9.1	8.5	8.2	8.1
Italy	0.7	0.2	0.5	0.8	1.2	0.8	1.0	1.1	10.6	10.0	9.9	9.7
Spain	2.4	2.0	1.7	1.6	1.7	0.9	1.2	1.5	15.3	14.1	13.7	13.4
Netherlands	2.5	1.7	1.5	1.6	1.6	2.6	1.4	1.5	3.9	3.5	3.6	3.7
United Kingdom	1.4	1.3	1.2	1.6	2.4	1.9	2.1	2.2	4.2	4.0	4.1	4.2
USA	2.9	2.3	1.9	1.7	2.4	1.8	2.1	1.9	3.9	3.7	3.5	3.5
Japan	0.8	0.9	0.6	0.8	0.8	0.6	0.9	1.1	2.5	2.4	2.3	2.3
South Korea	2.7	1.8	2.2	2.0	1.6	0.6	1.2	1.4	3.8	3.8	3.7	3.6
East-central Europ	4.5	4.1	3.6	3.5	2.2	2.7	2.8	2.8	3.8	3.4	3.2	3.2
Turkey	2.9	0.3	2.5	2.6	16.4	14.9	11.1	9.8	11.0	13.9	13.7	13.5
Russia	2.0	1.2	1.8	1.9	2.9	4.5	3.7	4.1	4.8	4.6	4.5	4.4
China	6.5	6.2	6.1	6.0	2.5	3.3	3.6	3.6	4.1	4.1	4.1	4.1
India	7.3	5.7	6.2	6.1	3.9	3.5	3.7	3.5				
Brazil	1.1	0.7	1.0	1.3	3.8	3.7	3.9	4.2	12.3	12.1	11.4	10.9
Mexico	2.0	0.1	1.1	1.1	4.9	3.5	3.3	3.2	3.4	3.6	3.6	3.5
Advanced econo	2.3	1.8	1.5	1.5	2.0	1.4	1.7	1.7	4.8	4.5	4.4	4.3
Emerging markets	5.5	4.7	5.0	5.0	3.6	4.0	4.0	4.0	5.1	5.2	5.2	5.1
World	4.2	3.6	3.7	3.7	3.0	3.0	3.1	3.1	5.0	4.9	4.8	4.8

Sources: National statistical offices; DIW winter projections 2019.

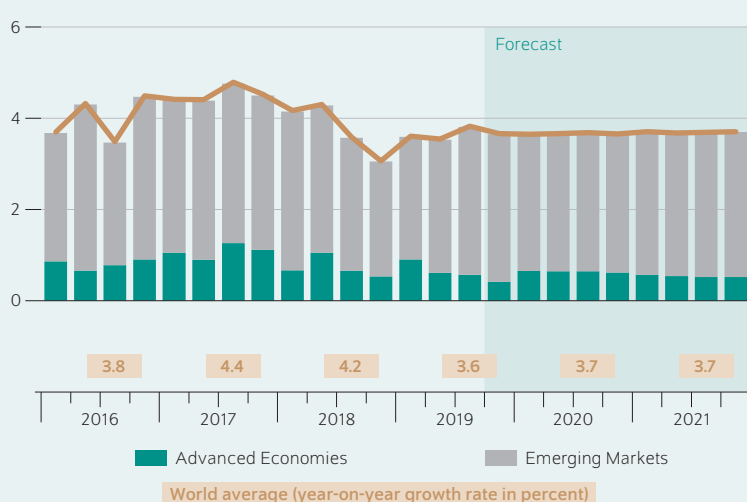
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is still below the expansion threshold. Services sector sentiment is slowly clouding but remains positive overall. The recent waning employment growth mirrors the general economic slowdown and, even more so, the continuing manufacturing slump. Overall, sufficiently tightened labor market conditions will continue to generate upward wage pressure. Along with persistently low energy prices and inflation rates, this should bolster real disposable income and consumption.

Further impetus for the global economy may also come from improved financing conditions. Monetary policy in the US and the euro zone, as well as in many emerging markets, is more expansionary than it was in the first half of the year. While the US and euro area central banks remain unlikely to further ease their monetary policy, the stimuli already generated as well as future cuts in key interest rates in some emerging markets should help ease financial conditions further. Fiscal policy also remains globally expansive. Additional expenditure is planned in some European countries, China, and other emerging economies, such as India.

All in all, the global economy is likely to experience just moderate growth, burdened by persistently sluggish investment activity. This means that consumption will, in all likelihood, remain the primary driver of growth in the global economy. The global economy is expected to grow by 3.6 percent this year and by 3.7 percent in each of the two subsequent years (see Table). DIW Berlin has thus revised its forecast upward since the fall.

Figure

**World real GDP growth**  
Quarter-on-quarter, in percent

Sources: National statistical offices; DIW winter projections 2019.

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The economy is not gaining momentum

The downside risks have decreased slightly over the fall forecast, with the trade dispute between the United States and China easing somewhat in the third quarter, for example. The increases in tariffs on Chinese products planned for October were initially postponed and negotiations between the two countries have now resumed. Overall, however, the risk of global trade disputes escalating remains high, with

the Hong Kong conflict also contributing to the situation. Furthermore, the United Kingdom is still facing the risk of a disorderly exit from the European Union, despite the Brexit deadline having been postponed. Tariff disputes in particular, but also a hard Brexit, are likely to weaken the robust consumption seen in the advanced economies to date and send the global economy into a new slump.

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# German economy: Industry struggles to shake of the crisis

By Claus Michelsen, Marius Clemens, Max Hanisch, Simon Junker, Laura Pagenhardt, and Thore Schlaak

## ABSTRACT

The German economy remains weak as of the fourth quarter of 2019. However, although industrial production is continuing its downward trend, there are signs of a slow recovery. The manufacturing sector is likely to expand production gradually beginning in 2020; therefore, it is less likely the recession in the industry will affect the service sector and construction industry. These sectors are profiting from strong demand from private households, which is supported by the strong labor market and fiscal stimuli. Thus, after growing by 0.5 percent this year, GDP is likely to increase more strongly in 2020 and 2021, by 1.2 and 1.4 percent, respectively.

GDP is projected to shrink by 0.1 percent in the final quarter of 2019 (Figure). Industrial value added will slump once more before picking up speed gradually in 2020 due to solid foreign business (Table 1). As a result, the German economy will experience stronger growth again (Table 2). Overall, however, capacity utilization is declining and will roughly correspond to the long-term average over the forecast period.

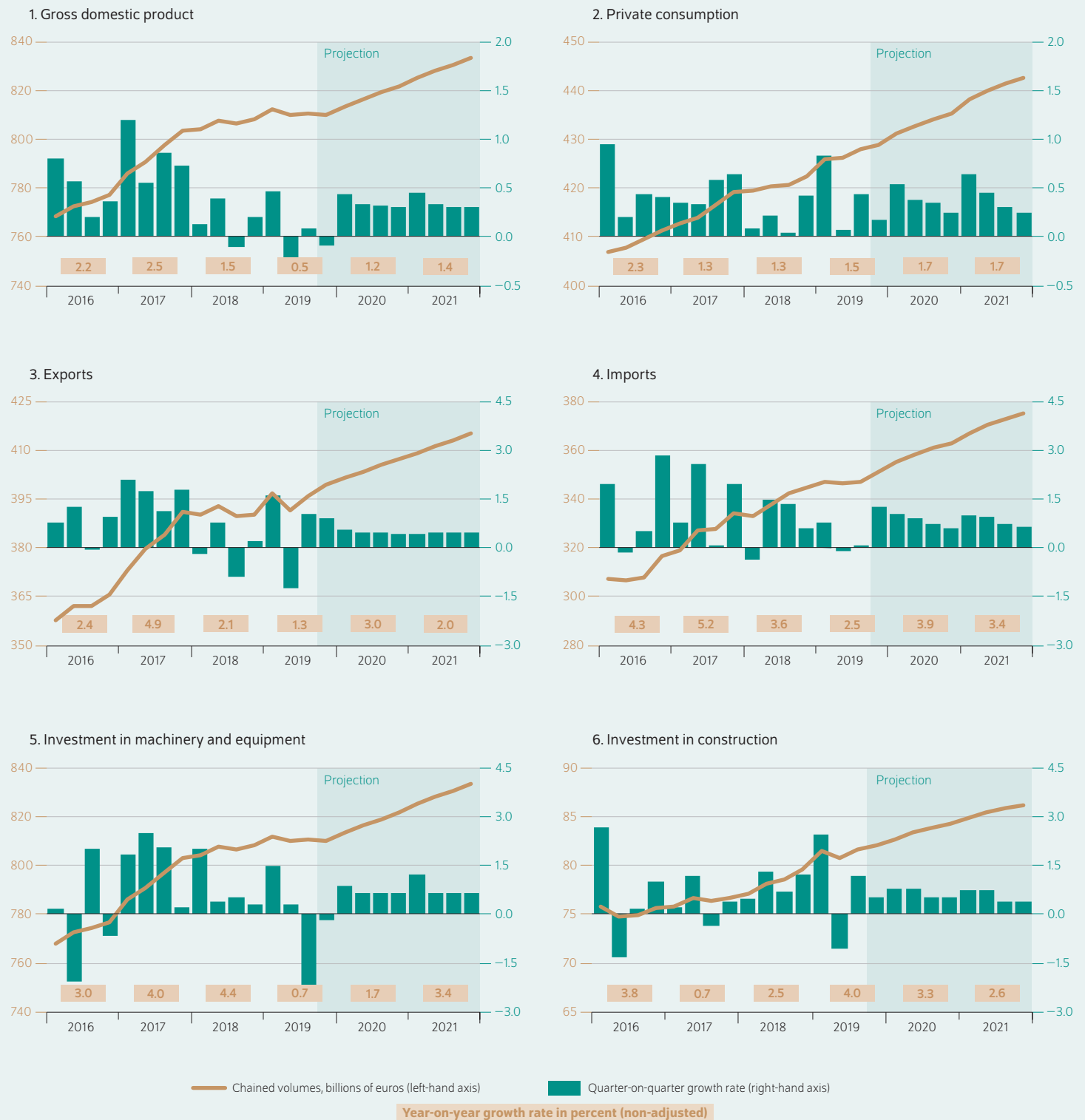
For a while, the slowdown in the global economy was burdening the German export industry. However, exports have already picked up again recently; full inventories were likely to have been used to meet a large part of demand. Industrial production has declined significantly to date, especially for two important drivers of the German economy's development, automobile manufacturers and mechanical engineers. However, industrial production is likely to be stimulated by foreign demand as it continues its moderate growth trend throughout the forecast period. Growth rates of exports, nevertheless, are projected to be only half of the growth experienced during the previous upswing. Due to trade conflicts, a cyclical slowdown in demand for capital goods, and structural factors, such as a slowdown in the Chinese economy, international trade is likely to grow at a markedly lower pace. The risks caused by the trade conflicts are still present but have decreased slightly; this has arguably contributed to a brightening of business sentiment recently. The order inflow, too, has stabilized.

Over the course of the slump in the manufacturing sector, employment in industry and in some industry-related service sectors declined. In early 2020, the number of employees in these sectors is likely to decline further, albeit only somewhat, before reverting to an uptrend in the later course of the year. However, the overall increase in employment over the next two years, averaging 160,000 per year, will be much weaker compared to the upturn of recent years. In 2021, unemployment will nevertheless sink to under five percent. Qualified workers remain scarce and wage growth correspondingly high.

Rising wage incomes are boosting consumption and thus consumer-related service providers, which continue to contribute significantly to the growth of the German economy.

Figure

# Gross domestic product and use of GDP Seasonally and working day adjusted



Sources: Federal Statistical Office; computations by DIW Berlin, forecast from 2019q4 onward.

Table 1

### Use of gross domestic product, quarter-on-quarter growth rates

Price, seasonally and working-day adjusted, in percent

	2019				2020				2021			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
Private consumption	0.8	0.1	0.4	0.2	0.5	0.4	0.4	0.3	0.6	0.5	0.3	0.3
Public consumption	0.6	0.6	0.8	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gross fixed capital formation	1.6	-0.3	-0.1	0.3	0.9	0.8	0.6	0.6	1.0	0.7	0.5	0.5
Investment in machinery and equipment	2.5	-1.1	1.2	0.5	0.8	0.8	0.5	0.5	0.7	0.7	0.4	0.4
Construction investment	1.5	0.3	-2.6	-0.2	0.9	0.6	0.6	0.6	1.2	0.6	0.6	0.6
Other investment	-0.6	0.9	1.0	0.9	1.3	0.9	0.8	0.8	1.3	0.7	0.7	0.7
Change in inventories <sup>1</sup>	-0.9	0.2	-0.7	-0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Domestic uses	0.0	0.0	0.0	0.9	-0.1	0.5	0.4	0.4	0.7	0.5	0.4	0.4
Net Exports <sup>1</sup>	0.4	-0.6	0.5	-0.1	-0.2	-0.1	-0.1	0.0	-0.2	-0.2	-0.1	0.0
Exports	1.6	-1.3	1.0	0.9	0.6	0.5	0.5	0.4	0.4	0.5	0.5	0.5
Imports	0.8	-0.1	0.1	1.3	1.0	0.9	0.8	0.6	1.0	1.0	0.7	0.7
Gross Domestic Product	0.5	-0.2	0.1	-0.1	0.4	0.3	0.3	0.3	0.5	0.3	0.3	0.3
Gross Value Added	0.4	-0.3	-0.1	-0.1	0.4	0.3	0.3	0.3	0.5	0.3	0.3	0.3
Manufacturing	-1.1	-1.3	-1.1	-1.4	0.7	0.5	0.5	0.5	0.6	0.5	0.5	0.5
Construction	1.1	-0.8	2.0	-0.7	1.0	0.8	0.5	0.5	0.8	0.7	0.4	0.4
Trade, Accommodation, Transport	2.5	-0.6	-0.1	0.3	0.6	0.5	0.5	0.4	1.0	0.5	0.4	0.4
Business and production services	0.6	-0.1	-0.2	-0.1	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4
Public Admin., Community and social serv.	-0.1	0.5	0.4	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1

<sup>1</sup> contribution to gdp growth in percentage points.

Source: Federal Statistical Office; DIW Berlin, forecast from 2019q4 onward.

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Table 2

### Main Economic Indicators for the German Economy

	2016	2017	2018	2019	2020	2021
Real GDP <sup>1</sup> (percent change over previous year)	2.2	2.5	1.5	0.5	1.2	1.4
Domestic employment (1000 persons)	43,655	44,248	44,854	45,252	45,408	45,584
Unemployed (ILO concept)	1,775	1,621	1,469	1,356	1,338	1,285
Unemployed (BA concept)	2,691	2,533	2,340	2,266	2,278	2,226
Unemployment rate <sup>2</sup> (ILO concept)	4.1	3.8	3.4	3.2	3.2	3.0
Unemployment rate <sup>2</sup> (BA concept)	6.1	5.7	5.2	5.0	5.0	4.8
Consumer prices	0.5	1.5	1.8	1.4	1.5	1.6
Unit labor costs <sup>3</sup>	1.2	1.2	2.5	3.4	1.6	1.5
Government budget balance <sup>4</sup>						
in billion EUR	37.1	40.3	62.4	51.7	24.6	6.3
in percent of GDP	1.2	1.2	1.9	1.5	0.7	0.2
Current account balance, in percent of GDP	8.5	8.1	7.4	7.6	7.4	6.8

<sup>1</sup> Price-adjusted, chain-linked.

<sup>2</sup> as a share of domestic labor force (ILO), resp. Civilian labor force (BA).

<sup>3</sup> compensation of employees (national concept) per hour worked over real GDP.

<sup>4</sup> according to ESA 2010.

Sources: National and international institutions; computations by DIW Berlin; 2019 to 2021 forecast.

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As in 2019, fiscal policy will stimulate private household income: in both years, pensions will rise significantly, tax relief will be implemented, and in 2021, in particular, the far-reaching reduction in the solidarity tax will increase disposable incomes. In addition, moderate inflation, with rates of roughly one and a half percent, is only moderately affecting purchasing power.

Housing construction will also continue to benefit from dynamic income growth and favorable financing conditions. Investments in equipment and machinery are likely to remain weak for the time being and, in light of the current continuing uncertainty, will only gain momentum gradually later on.

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## The Main National Accounts Data for the Federal Republic of Germany

Forecast for 2019 to 2021

	2018	2019	2020	2021	2019		2020		2021	
					1. half year	2. half year	1. half year	2. half year	1. half year	2. half year
1. Origin of GDP										
Percentage change over previous year										
Domestic employment	1.4	0.9	0.3	0.4	1.1	0.7	0.4	0.3	0.4	0.4
Hours worked, per working day	0.2	-0.3	-1.0	0.0	0.4	-0.9	-0.3	-1.6	0.0	-0.1
Working days	-0.3	0.0	1.5	0.1	-0.8	0.8	0.5	2.4	0.0	0.2
Labour volume, calendar-monthly	1.3	0.6	0.9	0.5	0.7	0.6	0.5	1.2	0.4	0.6
Labour productivity¹	0.2	-0.1	0.4	1.0	-0.2	0.0	0.1	0.6	1.0	0.9
Gross domestic product, price adjusted	1.5	0.5	1.2	1.4	0.4	0.5	0.7	1.8	1.5	1.4
2. Disposition of GDP in Current Prices										
a) Billion EUR										
Final consumption expenditure	2,409.3	2,487.5	2,573.2	2,659.8	1,213.4	1,274.1	1,256.1	1,317.1	1,296.7	1,363.0
Private consumption expenditure²	1,743.7	1,793.7	1,848.7	1,906.6	876.3	917.3	903.7	945.0	930.2	976.4
Government consumption expenditure	665.6	693.8	724.5	753.2	337.0	356.8	352.4	372.1	366.5	386.6
Gross fixed capital formation (GFCF)	707.7	747.6	786.2	826.6	359.1	388.5	373.8	412.4	394.0	432.6
Construction	344.3	374.4	399.5	422.7	180.0	194.3	191.1	208.4	202.9	219.7
Machinery and equipment	235.3	239.5	245.5	255.3	115.7	123.8	115.7	129.8	120.5	134.8
GFCF in other products	128.1	133.7	141.3	148.6	63.3	70.3	67.0	74.2	70.6	78.1
Change in Stocks³	21.3	-15.0	-40.0	-42.1	7.6	-22.7	-15.1	-25.0	-15.8	-26.4
Domestic uses	3,138.3	3,220.0	3,319.4	3,444.2	1,580.1	1,639.9	1,614.9	1,704.5	1,674.9	1,769.3
Balance of exports and imports	206.1	204.7	209.2	193.8	106.7	98.0	114.2	95.0	107.9	86.0
Exports	1,585.8	1,616.6	1,671.0	1,711.9	803.7	812.9	826.0	845.0	846.1	865.8
Imports	1,379.7	1,411.9	1,461.8	1,518.1	697.0	714.9	711.8	750.0	738.3	779.9
Gross domestic product	3,344.4	3,424.7	3,528.6	3,638.0	1,686.8	1,737.9	1,729.1	1,799.5	1,782.8	1,855.2
b) Percentage change over previous year										
Final consumption expenditure	2.9	3.2	3.4	3.4	3.1	3.4	3.5	3.4	3.2	3.5
Private consumption expenditure²	2.8	2.9	3.1	3.1	2.6	3.1	3.1	3.0	2.9	3.3
Government consumption expenditure	3.3	4.2	4.4	4.0	4.1	4.3	4.6	4.3	4.0	3.9
Gross fixed capital formation (GFCF)	6.3	5.6	5.2	5.1	6.4	5.0	4.1	6.2	5.4	4.9
Construction	7.3	8.7	6.7	5.8	9.3	8.2	6.2	7.2	6.2	5.4
Machinery and equipment	4.9	1.8	2.5	4.0	3.1	0.7	0.0	4.8	4.1	3.9
GFCF in other products	5.9	4.3	5.7	5.2	4.5	4.1	5.8	5.5	5.2	5.2
Domestic uses	4.1	2.6	3.1	3.8	3.7	1.6	2.2	3.9	3.7	3.8
Exports	3.1	1.9	3.4	2.5	1.4	2.5	2.8	3.9	2.4	2.5
Imports	5.5	2.3	3.5	3.9	4.0	0.7	2.1	4.9	3.7	4.0
Gross domestic product	3.1	2.4	3.0	3.1	2.4	2.4	2.5	3.5	3.1	3.1
3. Disposition of GDP, adjusted for prices										
a) Chain-linked estimated in Billion EUR										
Final consumption expenditure	2,322.5	2,360.9	2,403.3	2,445.3	1,162.2	1,198.8	1,183.3	1,220.0	1,203.0	1,242.3
Private consumption expenditure²	1,681.7	1,707.0	1,735.3	1,764.1	838.4	868.6	852.1	883.2	865.1	899.0
Government consumption expenditure	640.8	653.9	667.9	681.1	323.7	330.2	331.2	336.8	337.8	343.3
Gross fixed capital formation (GFCF)	666.6	684.5	704.6	725.9	330.4	354.0	336.5	368.1	347.4	378.5
Construction	312.2	324.7	335.5	344.2	157.4	167.3	161.7	173.8	166.4	177.7
Machinery and equipment	231.4	233.1	237.1	245.2	112.6	120.5	111.6	125.5	115.6	129.6
GFCF in other products	123.2	126.5	131.6	136.4	60.3	66.2	62.8	68.8	65.1	71.3
Domestic uses	3,017.7	3,047.0	3,092.5	3,155.3	1,502.6	1,544.4	1,514.4	1,578.1	1,545.1	1,610.2
Exports	1,557.2	1,577.1	1,624.7	1,656.6	785.3	791.8	804.7	820.1	820.5	836.1
Imports	1,353.6	1,387.8	1,441.9	1,490.3	683.1	704.7	703.5	738.3	726.6	763.7
Gross domestic product	3,222.5	3,237.7	3,277.3	3,324.6	1,605.4	1,632.3	1,616.1	1,661.2	1,639.9	1,684.8
b) Percentage change over previous year										
Final consumption expenditure	1.3	1.7	1.8	1.7	1.4	1.9	1.8	1.8	1.7	1.8
Private consumption expenditure²	1.3	1.5	1.7	1.7	1.3	1.7	1.6	1.7	1.5	1.8
Government consumption expenditure	1.4	2.1	2.1	2.0	1.8	2.3	2.3	2.0	2.0	1.9
Gross fixed capital formation (GFCF)	3.5	2.7	2.9	3.0	3.2	2.2	1.8	4.0	3.2	2.8
Construction	2.5	4.0	3.3	2.6	4.2	3.8	2.7	3.9	2.9	2.3
Machinery and equipment	4.4	0.7	1.7	3.4	2.0	-0.4	-0.9	4.2	3.5	3.2
GFCF in other products	4.3	2.7	4.1	3.6	2.9	2.5	4.2	3.9	3.7	3.6
Domestic uses	2.1	1.0	1.5	2.0	1.7	0.3	0.8	2.2	2.0	2.0
Exports	2.1	1.3	3.0	2.0	0.2	2.3	2.5	3.6	2.0	2.0
Imports	3.6	2.5	3.9	3.4	3.1	2.0	3.0	4.8	3.3	3.4
Gross domestic product	1.5	0.5	1.2	1.4	0.4	0.5	0.7	1.8	1.5	1.4



## APPENDIX: NATIONAL ACCOUNTS DATA

**Continued: The Main National Accounts Data for the Federal Republic of Germany**  
Forecast for 2019 to 2021

	2018	2019	2020	2021	2019		2020		2021	
					1. half year	2. half year	1. half year	2. half year	1. half year	2. half year
4. Price Level of National Expenditure (2015 = 100)										
Percentage change over previous year										
Private consumption expenditure <sup>2</sup>	1.5	1.4	1.4	1.5	1.4	1.3	1.5	1.3	1.4	1.5
Government consumption expenditure	1.9	2.1	2.2	1.9	2.3	1.9	2.2	2.3	2.0	1.9
Gross fixed capital formation (GFCF)	2.7	2.9	2.2	2.1	3.0	2.7	2.2	2.1	2.1	2.0
Construction	4.7	4.5	3.3	3.1	4.9	4.2	3.3	3.2	3.2	3.1
Machinery and equipment	0.6	1.1	0.7	0.6	1.0	1.1	0.9	0.6	0.6	0.6
Exports	0.9	0.7	0.3	0.5	1.1	0.2	0.3	0.4	0.5	0.5
Imports	1.8	-0.2	-0.4	0.5	0.9	-1.2	-0.9	0.1	0.4	0.5
Gross domestic product	1.5	1.9	1.8	1.6	2.0	1.8	1.8	1.7	1.6	1.7
5. Distribution of Income										
a) Billion EUR										
Primary income of private households <sup>2</sup>	2,338.7	2,403.8	2,468.5	2,537.1	1,188.3	1,215.5	1,222.3	1,246.3	1,251.8	1,285.3
Employers' social contributions	310.4	325.5	334.4	342.1	157.8	167.6	162.0	172.4	166.0	176.1
Gross wages and salaries	1,460.9	1,522.1	1,571.9	1,625.5	726.4	795.7	753.0	819.0	777.7	847.7
Other primary income of private households <sup>4</sup>	567.4	556.2	562.2	569.5	304.0	252.2	307.3	254.9	308.1	261.4
Primary income of other institutional sectors	490.5	483.4	502.9	523.2	220.2	263.2	218.1	284.8	231.7	291.5
Net national income (primary income)	2,829.2	2,887.1	2,971.4	3,060.3	1,408.5	1,478.7	1,440.4	1,531.0	1,483.5	1,576.8
Consumption of fixed capital	608.7	636.7	659.6	683.1	315.9	320.8	327.3	332.3	339.0	344.2
Gross national income	3,437.9	3,523.9	3,630.9	3,743.5	1,724.4	1,799.5	1,767.6	1,863.3	1,822.5	1,921.0
Memorandum item:										
Net national income (factor costs)	2,503.1	2,551.4	2,626.0	2,703.7	1,240.0	1,311.4	1,267.3	1,358.7	1,304.8	1,399.0
Property and entrepreneurial income	731.8	703.8	719.6	736.1	355.8	348.1	352.3	367.4	361.1	375.1
Compensation of employees	1,771.3	1,847.5	1,906.3	1,967.6	884.2	963.3	915.0	991.3	943.7	1,023.9
b) Percentage change over previous year										
Primary income of private households <sup>2</sup>	3.9	2.8	2.7	2.8	2.8	2.8	2.9	2.5	2.4	3.1
Employers' social contributions	3.2	4.9	2.7	2.3	5.3	4.5	2.6	2.8	2.5	2.2
Gross wages and salaries	4.8	4.2	3.3	3.4	4.4	4.0	3.7	2.9	3.3	3.5
Other primary income of private households <sup>4</sup>	1.9	-2.0	1.1	1.3	-2.0	-2.0	1.1	1.1	0.3	2.6
Primary income of other institutional sectors	-1.2	-1.4	4.0	4.0	-1.0	-1.8	-1.0	8.2	6.2	2.4
Net national income (primary income)	3.0	2.0	2.9	3.0	2.2	1.9	2.3	3.5	3.0	3.0
Consumption of fixed capital	4.9	4.6	3.6	3.6	4.4	4.8	3.6	3.6	3.6	3.6
Gross national income	3.3	2.5	3.0	3.1	2.6	2.4	2.5	3.5	3.1	3.1
Memorandum item:										
Net national income (factor costs)	3.0	1.9	2.9	3.0	2.0	1.8	2.2	3.6	3.0	3.0
Property and entrepreneurial income	-0.5	-3.8	2.2	2.3	-3.7	-3.9	-1.0	5.5	2.5	2.1
Compensation of employees	4.5	4.3	3.2	3.2	4.5	4.1	3.5	2.9	3.1	3.3
6. Income and Expenditure of Private Households										
a) Billion EUR										
Mass income	1,427.3	1,491.7	1,548.3	1,610.9	716.1	775.7	745.4	802.9	777.6	833.3
Net wages and salaries	975.5	1,020.7	1,056.7	1,100.7	482.4	538.3	502.4	554.3	522.5	578.2
Social benefits	579.4	605.0	630.5	654.3	300.6	304.4	312.3	318.2	326.9	327.4
less levies on social benefits	127.5	134.0	138.9	144.1	66.9	67.1	69.3	69.6	71.8	72.2
Other primary income <sup>4</sup>	567.4	556.2	562.2	569.5	304.0	252.2	307.3	254.9	308.1	261.4
Other transfers received (net) <sup>5</sup>	-96.3	-96.3	-97.4	-99.7	-49.1	-47.2	-49.5	-47.9	-50.6	-49.1
Disposable income	1,898.5	1,951.7	2,013.1	2,080.7	971.0	980.6	1,003.2	1,009.9	1,035.1	1,045.7
Memorandum item:										
Adjustment for the change in net equity of households in pension funds reserves	59.7	60.5	61.4	62.3	29.4	31.1	29.8	31.6	30.3	32.0
Private consumption expenditure	1,743.7	1,793.7	1,848.7	1,906.6	876.3	917.3	903.7	945.0	930.2	976.4
Saving	214.5	218.5	225.9	236.5	124.1	94.4	129.3	96.6	135.2	101.3
Saving ratio in percent <sup>6</sup>	11.0	10.9	10.9	11.0	12.4	9.3	12.5	9.3	12.7	9.4
b) Percentage change over previous year										
Mass income	3.9	4.5	3.8	4.0	4.5	4.5	4.1	3.5	4.3	3.8
Net wages and salaries	4.7	4.6	3.5	4.2	4.9	4.4	4.1	3.0	4.0	4.3
Social benefits	2.6	4.4	4.2	3.8	4.1	4.7	3.9	4.5	4.7	2.9
less levies on social benefits	3.5	5.1	3.7	3.7	5.8	4.4	3.6	3.7	3.7	3.8
Other primary income <sup>4</sup>	1.9	-2.0	1.1	1.3	-2.0	-2.0	1.1	1.1	0.3	2.6
Disposable income	3.5	2.8	3.1	3.4	2.7	2.9	3.3	3.0	3.2	3.5
Private consumption expenditure	2.8	2.9	3.1	3.1	2.6	3.1	3.1	3.0	2.9	3.3
Saving	8.6	1.9	3.4	4.7	2.6	1.0	4.2	2.3	4.5	4.9

## APPENDIX: NATIONAL ACCOUNTS DATA

**Continued: The Main National Accounts Data for the Federal Republic of Germany**  
Forecast for 2019 to 2021

	2018	2019	2020	2021	2019		2020		2021	
					1. half year	2. half year	1. half year	2. half year	1. half year	2. half year
7. Government Revenues and Expenditures <sup>8</sup>										
a) Billion EUR										
Revenues										
Taxes	800.9	822.8	843.0	863.9	415.6	407.2	424.8	418.2	435.0	429.0
direct taxes	445.2	456.0	465.5	474.2	232.8	223.2	236.9	228.6	241.0	233.2
indirect taxes	355.7	366.8	377.5	389.7	182.7	184.0	187.9	189.6	194.0	195.7
Net social contributions	572.5	596.3	617.4	637.2	289.7	306.6	300.5	316.9	310.1	327.1
Property income	21.3	21.0	20.7	20.5	13.2	7.8	13.0	7.6	13.0	7.6
Other transfers	24.8	24.1	23.7	24.2	11.3	12.8	11.5	12.2	11.7	12.5
Capital transfers	13.1	12.0	12.2	12.5	5.3	6.6	5.5	6.8	5.6	6.9
Sales	120.2	126.2	129.2	132.8	59.3	66.9	60.7	68.5	62.3	70.5
Other subsidies	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
Total revenues	1,552.9	1,602.6	1,646.3	1,691.4	794.5	808.1	816.0	830.3	837.7	853.7
Expenditures										
Intermediate consumption	169.4	178.2	186.6	194.4	81.7	96.5	85.8	100.8	89.5	104.9
Compensation of employees	259.3	269.3	279.3	288.7	129.3	140.0	134.2	145.1	138.8	149.9
Social benefits in kind	285.9	297.7	309.4	321.4	148.0	149.7	153.9	155.5	159.9	161.5
Property income (interests)	31.7	29.0	27.5	26.2	14.8	14.2	14.0	13.5	13.4	12.9
Subsidies	29.6	31.0	32.1	33.1	14.2	16.8	14.8	17.3	15.3	17.9
Social benefits	520.2	545.0	569.5	592.3	270.8	274.2	282.0	287.5	296.1	296.2
Other transfers	74.9	78.3	87.0	91.9	39.0	39.3	43.9	43.0	46.4	45.5
Gross capital formation	78.4	85.5	91.4	96.8	37.8	47.8	40.4	51.0	42.7	54.1
Capital transfers	42.2	37.9	40.1	41.2	13.3	24.6	14.2	25.9	14.7	26.5
Acquisitions less disposals of non-financial non-produced assets	-1.3	-1.3	-1.3	-1.3	-0.5	-0.8	-0.5	-0.8	-0.5	-0.8
Other taxes on production	0.3	0.3	0.3	0.3	0.1	0.1	0.1	0.1	0.1	0.1
Total expenditures	1,490.5	1,550.9	1,621.7	1,685.0	748.4	802.5	782.8	838.9	816.3	868.7
Balance	62.4	51.7	24.6	6.3	46.1	5.6	33.2	-8.6	21.4	-15.1
b) Percentage change over previous year										
Revenues										
Taxes	4.5	2.7	2.5	2.5	2.8	2.7	2.2	2.7	2.4	2.6
direct taxes	5.6	2.4	2.1	1.9	2.5	2.4	1.7	2.4	1.7	2.0
indirect taxes	3.1	3.1	2.9	3.2	3.2	3.0	2.8	3.0	3.2	3.2
Net social contributions	4.2	4.2	3.5	3.2	4.6	3.8	3.7	3.4	3.2	3.2
Property income	13.1	-1.2	-1.7	-0.7	1.5	-5.4	-1.3	-2.3	-0.5	-1.0
Other transfers	13.2	-2.8	-1.5	2.1	-2.4	-3.1	2.1	-4.6	2.2	2.1
Capital transfers	26.5	-8.5	2.2	2.2	-4.3	-11.7	2.3	2.1	2.4	2.1
Sales	5.0	5.1	2.3	2.8	6.8	3.5	2.3	2.3	2.6	3.0
Other subsidies	-10.1	-9.5	0.0	0.0	-24.4	3.1	0.0	0.0	0.0	0.0
Total revenues	4.8	3.2	2.7	2.7	3.6	2.8	2.7	2.8	2.7	2.8
Expenditures										
Intermediate consumption	4.0	5.2	4.7	4.2	5.6	4.8	5.0	4.4	4.3	4.1
Compensation of employees	3.7	3.9	3.7	3.4	4.0	3.7	3.8	3.6	3.4	3.4
Social benefits in kind	2.7	4.1	3.9	3.8	4.2	4.1	4.0	3.9	3.9	3.8
Property income (interests)	-7.4	-8.5	-5.3	-4.4	-8.7	-8.3	-5.5	-5.2	-4.5	-4.3
Subsidies	6.0	4.8	3.5	3.3	2.4	7.0	3.7	3.2	3.2	3.3
Social benefits	2.7	4.8	4.5	4.0	4.4	5.1	4.1	4.8	5.0	3.0
Other transfers <sup>7</sup>	7.9	3.4	8.7	4.9	2.4	1.0	5.0	3.7	2.5	2.5
Gross capital formation	9.0	9.2	6.8	5.9	13.4	6.0	7.0	6.7	5.6	6.1
Capital transfers <sup>7</sup>	-1.7	-4.4	2.2	1.1	2.6	-16.1	6.7	5.3	3.8	2.3
Acquisitions less disposals of non-financial non-produced assets <sup>7</sup>	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other taxes on production <sup>7</sup>	0.0	0.0	0.0	0.0	16.8	3.8	0.0	0.0	0.0	0.0
Total expenditures	3.4	4.1	4.6	3.9	4.6	3.5	4.6	4.5	4.3	3.6

- 1 Gross domestic product (price-adjusted) per man-hour.  
2 Including private organizations without pecuniary reward.  
3 Including net increase in valuables.

- 4 Entrepreneurial income/operating surplus and received minus paid asset income.  
5 Transfers, received minus paid.  
6 Current saving as percentage of disposable income.

- 7 Absolute change over previous year in billion EUR.  
8 All administrative units including social security.

Sources: Federal Statistical Office (Fachserie 18: Volkswirtschaftliche Gesamtrechnungen); Forecast by DIW Berlin.