
ECONOMIC OUTLOOK 2020 AND 2021

23 June 2020

German Council of Economic Experts
Statistisches Bundesamt
65180 Wiesbaden
Tel.: 0049 611 / 75 - 2390
Fax: 0049 611 / 75 - 2538
E-Mail: info@svr-wirtschaft.de
Internet: www.sachverstaendigenrat-wirtschaft.de

Published on 23 June 2020
Data considered up until: 18 June 2020, 12 a.m.

© German Council of Economic Experts

This is a translated version of the original German-language publication „Konjunkturprognose 2020 und 2021“, which is the sole authoritative text. Please cite the original German-language publication if any reference is made to this text.

ECONOMIC OUTLOOK FOR 2020 AND 2021

KEY MESSAGES

- The German Council of Economic Experts expects the economy in Germany and the euro area to decline significantly due to the coronavirus pandemic by 6.5 % and 8.5 % in 2020, respectively.
- The economic development in 2020 will be divided: After a severe slump in the first half of the year, a slow recovery is likely to set in from summer onwards, such that the German economy will grow by 4.9 % again in 2021.
- The global economy is more severely affected and the containment measures in Germany have lasted longer than the German Council of Economic Experts had anticipated in its scenario calculations in March.

The German Council of Economic Experts (GCEE) already published a special report on the coronavirus pandemic in March, in which the GCEE presented scenarios for the further economic development. Today, the GCEE is presenting its updated economic outlook, as the available economic data now allows a better assessment of the economic situation in 2020.

The development of the German economy is likely to be relatively close to the risk scenario described in the Special Report as a "pronounced V". However, the trough will likely be lower than expected therein. The GCEE forecasts the real gross domestic product (GDP) to decline by 6.5 % in 2020 (6.9 % calendar-adjusted). For 2021, it expects positive growth rates of 4.9 % (also 4.9 % calendar-adjusted). Consequently, GDP is unlikely to return to its pre-pandemic level before 2022. The unemployment rate will continue to rise in the coming months and will only start to decline in the course of 2021.

The weak external environment will put a significant burden on German exports this year. The global spread of the coronavirus has led to a deep recession of the world economy. For the euro area, the GCEE expects real GDP to decline by 8.5 % in 2020 and grow again by 6.2 % in 2021.

Worldwide, the pandemic has spread more strongly than initially expected and more extensive containment measures have been taken, some of which are still in place. However, the reduction in the number of new infections and the gradual easing of health policy interventions in Germany and of important trading partners will create the basis for a recovery later this year. In addition, the adopted stabilisation measures and economic policy stimuli are expected to have a positive effect.

The outlook for the further economic development remains subject to considerable uncertainty. In particular, the course of the pandemic is of major importance. A significantly longer phase of weak economic development is expected, if the number of new infections cannot be kept at low levels, for example by smart distancing, if the easing of public health interventions does not continue and if uncertainty of companies and households is not reduced.

I. INTRODUCTION

1. The global spread of the coronavirus (SARS-CoV-2) has tipped the global economy into a deep recession. **Global economic output fell sharply** in the first half of 2020. In Germany, the coronavirus pandemic is expected to trigger the biggest decline in economic activity in the history of the Federal Republic.
2. The GCEE already presented a **Special Report** on the coronavirus pandemic to the Federal Government on 22 March 2020, in which it analysed the development of the pandemic up to that point in time, the public health measures, the economic impact and different economic policy measures. In the absence of data on economic activity during the pandemic, the Special Report presented calculations for **three scenarios for the economic outlook** instead of the economic forecast the GCEE usually provides in March. The scenarios made different assumptions regarding the duration and intensity of the public health measures implemented to contain the virus. The calculations produced GDP growth rates for Germany in 2020 of –2.8 % in the baseline scenario, –4.5 % in the "long U" risk scenario and –5.4 % in the "pronounced V" risk scenario.
3. Data for the months of March and April are now available, allowing a point forecast to be made – albeit with a high degree of uncertainty – in the form of the usual economic update issued by the GCEE. For 2020, the **downturn in Germany**, estimated at –6.5 % of GDP, is likely to be **somewhat more severe** overall than assumed in the risk scenario “pronounced V” in the Special Report in March. This is particularly attributable to the fact that the pandemic has developed more dynamically and the containment measures introduced in Germany and many other countries are more extensive and longer-lasting than initially anticipated. Furthermore, poorer performance abroad compared to expectations at the start of the pandemic also has an adverse effect on demand for German exports.
4. Given the increasing success of efforts to contain the pandemic and the gradual easing of public health restrictions in Germany and in its important trade partners, the economy is likely to begin to recover in the third quarter, however. For 2021, the GCEE expects growth of 4.9 % in Germany. This corresponds to the value calculated under the "pronounced V" risk scenario in the Special Report. The **outlook** for the future economic development **is clouded in considerable uncertainty**, however. Much will hinge on the future course of the pandemic. If the number of new cases rose again significantly, this could create a renewed sense of insecurity among economic actors, particularly if the reintroduction of necessary restrictions curbed the economic recovery or even triggered a further decline in GDP.

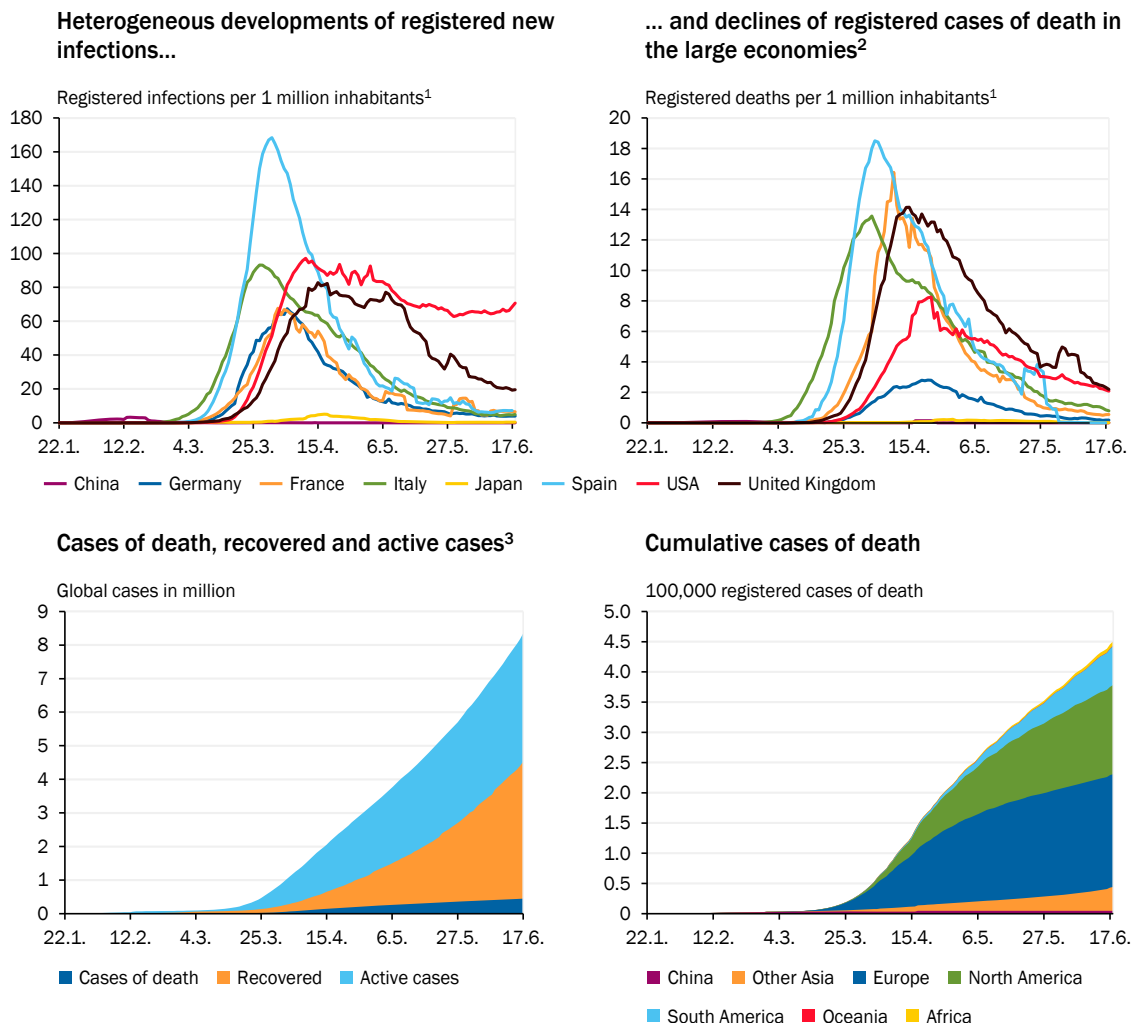
II. INTERNATIONAL ECONOMY

1. Coronavirus pandemic triggers global recession

5. So far, the **course of the pandemic** has been very dynamic and characterised by a considerable degree of **heterogeneity between individual countries**.
 ↳ CHART 1 TOP Following the first detected outbreak of the COVID-19 disease in the Chinese city of Wuhan in December 2019, the number of reported infections in China rose sharply in January. The Chinese government took massive **measures to contain the virus**, as a result of which the number of reported new cases fell significantly and has remained at a low level ever since. However, the recent outbreak in Beijing demonstrates that the pandemic is not yet fully under control in

↳ CHART 1

Course of the coronavirus pandemic in the large economies and worldwide



1 – Moving average of the past 7 days. 2 – No value is reported for Spain for 25 May. The calculations for the chart assume a value of zero for this day. 3 – Number of cases according to the Johns Hopkins University, which can deviate from the officially registered number of cases.

Sources: European Centre for Disease Prevention and Control, Johns Hopkins University, own calculations

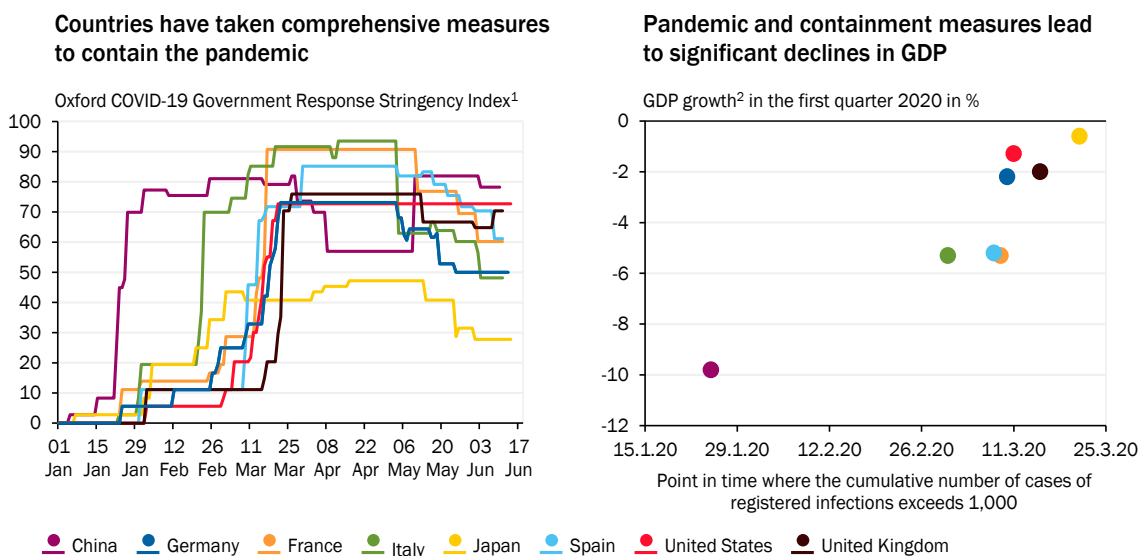
China either. Europe became the second centre of the pandemic, with the countries of Spain and Italy particularly badly hit at the start of March. By the end of March, the number of cases in the United Kingdom and the United States was rising sharply. At this stage, many emerging economies are also badly affected by the pandemic, which has since reached all the continents. [↘ CHART 1 BOTTOM](#)

Most recently, the number of confirmed coronavirus cases worldwide surpassed 8 million (WHO, 2020; data as of 17 June 2020). According to the WHO, the number of **deaths** in connection with the coronavirus amounts to over 440 thousand worldwide. With regard to data concerning the number of cases and deaths, it is important to note that **differences** regarding the **use of testing** or the definition of cases limit the ability to make comparisons across countries and over time. For example, if the rate of testing is low this can result in only a small number of cases being detected and reported. Potential differences in the number of unreported cases would need to be taken into consideration when interpreting the data.

- Countries around the world have taken numerous measures to **contain the pandemic** (GCEE Special Report 2020 items 22 ff.), where in some cases the extent of the measures and the approach taken vary greatly from country to country. In addition to compulsory mask-wearing and physical distancing, measures include bans on large events or gatherings in larger groups, border closures and the **closure** of schools, childcare facilities, public amenities, restaurants and some areas of retail. Some places temporarily experienced even stricter **restrictions** on the freedom of movement and more comprehensive closures of production facilities.

↘ CHART 2

Containment measures and economic development during the coronavirus pandemic



1 - The index records the number and stringency of government measures to contain the pandemic without evaluating their suitability. It can take on values between 0 and 100. Beside the closing of schools, production plants or public transport, the recorded measures contain the cancellation of public events and restrictions of the freedom of movement and assembly as well as of international travel. 2 - Price-, seasonally and calendar-adjusted.

Sources: European Centre for Disease Prevention and Control, national statistical offices, Oxford COVID-19 Government Response Tracker, Blavatnik School of Government

The spread of the pandemic over time is reflected in the containment measures. While these already began in China in January and have been eased since the end of March, other countries only introduced measures later on and, consequently, began relaxing restrictions at a later point in time. ↘ [CHART 2 LEFT](#) In Europe, the number of new cases has dropped significantly since around the end of March, with the result that countries in Europe began **easing restrictions** at the start of May. While the number of cases in the United States and the United Kingdom has dropped, it is still comparatively high relative to the size of the population when compared with the larger member states of the European Union (EU). In the United States, there has, however, been a shift in the regional concentration of new cases. Restrictions are being lifted in many areas.

Serious economic consequences of the pandemic

7. The pandemic and the measures implemented to contain it have serious economic **implications** (GCEE Special Report 2020 items 35 ff.), which **affect** both the **supply and demand side of the economy**. For example, aggregate supply is limited because workers are absent due to illness or quarantine, or because they need to take care of their children at home due to the closure of schools and child daycare facilities. Factory closures for health policy reasons and lack of input materials due to disruptions in upstream production chains also directly affect the supply side. The closure of restaurants and broad sections of retail limit opportunities for private consumption. On the demand side, fear of infection, increased uncertainty and lower income and income expectations are driving down demand for consumer and investment goods at home and abroad.



At this stage, a number of **studies are available with macroeconomic models** on the economic impact of the coronavirus pandemic. Some of the analyses – particularly those with more extensive models – capture the pandemic in the form of a combination of macroeconomic supply and demand shocks. Other **studies** link an epidemiological model, the SIR model (susceptible-infected-recovered), **to simple, macroeconomic equilibrium models** in order to examine the economic implications of the pandemic while taking into account the interaction between economic decisions and the spread of the virus.

In their model, Eichenbaum et al. (2020) demonstrate that the voluntary reduction of consumption and output due to the remaining risk of infection does not suffice to contain the pandemic at an early stage. Therefore, **state-imposed quarantine measures can have the effect of increasing welfare**. Building on this, Krueger et al. (2020) argue that households make endogenous shifts in their consumption behaviour to sectors that have a lower risk of infection. This is consistent with the empirical results of Farboodi et al. (2020) regarding the reduction of social contacts in the United States before the introduction of government quarantine measures.

Other studies examine how a **decline in output** due to quarantine measures **and reduced consumption** by private households due to lost income can be mutually reinforcing. Guerrieri et al. (2020) demonstrate that, in multi-sector models, the loss of income as a result of quarantine measures in one sector can lead to an aggregate drop in demand that exceeds the drop in supply. In a related model, Bodenstein et al. (2020) find that a deeper recession can occur if a sector that is of central importance for macroeconomic output is particularly hard hit by the pandemic. In a multi-country model, Sforza and Steininger (2020) analyse how

global trade and production networks can lead to the international transmission of the economic shocks caused by the pandemic. In their multi-country model, McKibbin and Fernando (2020) find that the dramatic costs to the economy for all the countries studied justify early investment in prevention measures.

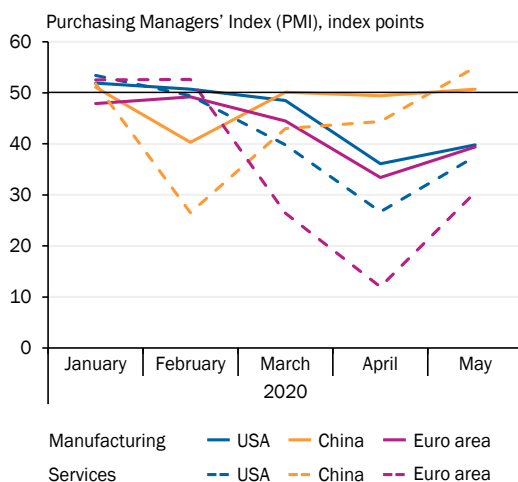
Apart from the direct effects of the coronavirus pandemic on demand, Bayer et al. (2020) highlight that **uncertainty regarding future loss of income** can lead to an increased tendency to save and therefore additionally drive down private consumption. Pfeiffer et al. (2020) demonstrate that the drop in supply and demand weigh on the gross value added of companies and impedes their access to credit. Due to **liquidity constraints**, affected companies will reduce investment, which in turn deepens and prolongs the recession. In this context, government liquidity assistance is likely to help stabilise the economy.

8. The estimates from the statistical offices now available indicate **sharp drops in the gross domestic product (GDP)** already **in the first quarter of 2020**. [↘ CHART 2 RIGHT](#) As China was hit by the pandemic earlier than other countries, GDP contraction in the first quarter compared to the previous quarter was particularly pronounced in China, at 9.8 %. With figures of over 5 %, first-quarter GDP contraction in France, Italy and Spain was also quite substantial, however, and GDP also shrank considerably in the United States and the United Kingdom. Of the major advanced economies, Japan's GDP contracted the least. However, its GDP had already declined markedly in the fourth quarter of 2019 following the increase in the sales tax.
9. The global development of the pandemic and the resulting recession are also reflected in business surveys. February saw a sharp **drop in purchasing manager indices** in China, for example. [↘ CHART 3 LEFT](#) This was particularly pro-

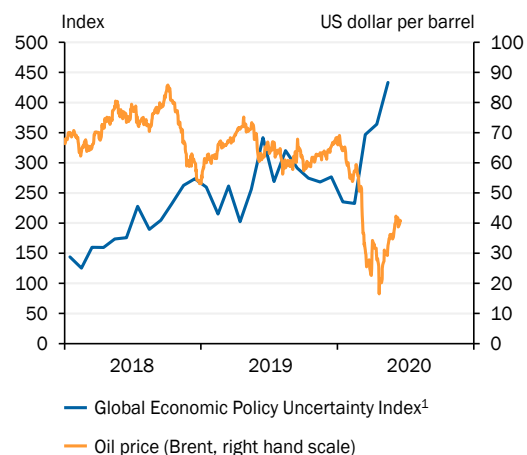
↘ CHART 3

Purchasing Managers' Indices, uncertainty and oil price

Purchasing Managers' Indices increase again after deep setback



High uncertainty, low oil price

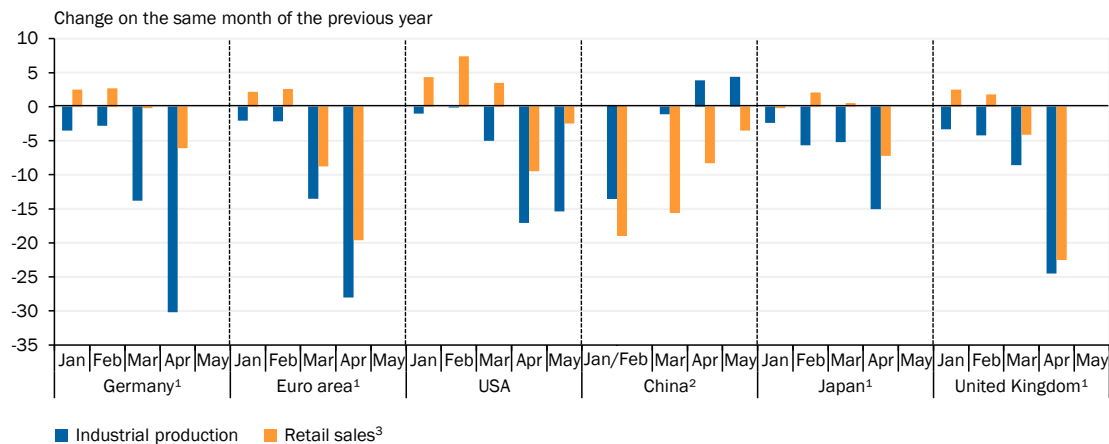


1 – Index for 21 countries weighed by the purchasing power adjusted GDP. Average of the years 1997 to 2015 = 100.

Sources: Economic Policy Uncertainty, IHS Markit, Refinitiv Datastream, own calculations

↘ CHART 4

Industrial production and retail sales in selected economies in 2020



1 – No data available yet for May. 2 – Data for January and February are published together in China. 3 – Except of motor vehicles and motorcycles.

Sources: Eurostat, national statistical offices, own calculations

© Sachverständigenrat | 20-222

nounced in the service sector, which is severely affected by the public health motivated restrictions. While the indices in China began to recover, they fell in the euro area and the United States in March, a drop which intensified significantly in April. In light of the easing of restrictions, the increases in the indices in May suggest that the interim trough has been reached. That said, the figures in the United States and the euro area are still below the growth threshold of 50 points. At the same time, **uncertainty remains very high**. ↘ CHART 3 RIGHT The price of oil recovered somewhat in May, having fallen considerably in March, in large part due to the drop in demand as a result of the pandemic and conflict between oil-producing countries regarding the volume of oil production.

2. First signs of recovery after a sharp downturn

10. The **future course of the pandemic, as well as efficient containment measures, methods of treatment and vaccines, will be of vital importance** in determining the development of the global economy. For the purpose of this forecast, the GCEE proceeds from the assumption that the efforts to halt the spread of new infections and to avoid a resurgence of the pandemic, which would come along with reimposing stricter measures, will become increasingly successful. If this is indeed the case, restrictions can continue to be eased and economic activity can increase again. In this scenario, the **risk of infection** would be kept as low as possible in a predictable manner by means of suitable measures and regulations, so that businesses and the public would quickly regain confidence. If the pandemic follows a different course, this could lead to significant deviations from the projected scenario for the global economy. ↘ ITEM 22 The extent to which future development is synchronised on a global scale is also likely to be crucial in determining the further course of the global economy. A lack of synchronisation could result in recovery in some economies being stymied by a lack of export demand. In the event of production restrictions, a shortage of **intermediate goods** could also impede production.

11. Given the unique historical event that we are experiencing, a considerable amount of **uncertainty** persists in relation to the **severity** of the economic **downturn** during the pandemic restrictions. The monthly values available to date for industrial production and retail sales indicate a sharp decline in the large advanced economies [↪ CHART 4](#) In China, there are already some indicators of a certain degree of recovery in economic activity. In the United States, both the increased retail sales in May compared to April and changes in unemployment figures indicate that the preliminary **low point** could already have been **reached in April**. For example, the unemployment rate in the United States dropped to 13.3 %, after previously rising by more than 10 percentage points to 14.7 % in April.
12. In the context of the most recent developments, the GCEE expects to see the start of a slow **economic recovery in the second half** of 2020. In China, recovery may have begun as early as the second quarter of the year. Based on the very low level of activity, the growth rates are likely to be quite high initially. However, it will take most economies some time to return to pre-pandemic levels, given the persistent risk of infection, continuing restrictions, and the income losses that have been suffered. In the services sector, which was particularly badly hit by the virus containment measures, a major catch-up – leading to increased economic activity – seems less likely to occur. On the other hand, **monetary and fiscal policies** are likely to provide **positive stimulus**. Many governments and central banks, not least the Federal Reserve in the United States and the European Central Bank (ECB), have adopted extensive measures (Cavallino and Fiore, 2020; IMF, 2020a).
13. While the Chinese economy may still achieve a positive growth rate of 0.3 % for the full year 2020 and is likely to show strong growth of 8.8 % in 2021, the large advanced economies can expect **GDP declines of historic proportions** in 2020 [↪ TABLE 1](#) The GCEE anticipates a decline in GDP of 6.1 % in the United States and 4.4 % in Japan. The slump is likely to be even more severe for the large economies in Europe. In 2021, all of the economies under consideration are likely to experience high positive rates of growth due to the effects of recovery. This development will be reflected in global trade. The GCEE expects the global volume of trade to fall by 9.6 % in 2020 and rise by 8.5 % in 2021, based on the data compiled by the Bureau for Economic Policy Analysis (CPB) in the Netherlands.

[↪ TABLE 1](#)**Growth of gross domestic product¹ of selected countries**

	USA	China	Japan	United Kingdom	Euro area				
					Total	including:			
						Germany ²	France	Italy	Spain
2019	2.3	6.1	0.7	1.4	1.3	0.6	1.5	0.3	2.0
2020 ³	- 6.1	0.3	- 4.4	- 8.8	- 8.5	- 6.9	-11.0	-11.8	-11.5
2021 ³	4.7	8.8	2.9	4.8	6.2	4.9	8.4	7.0	8.1

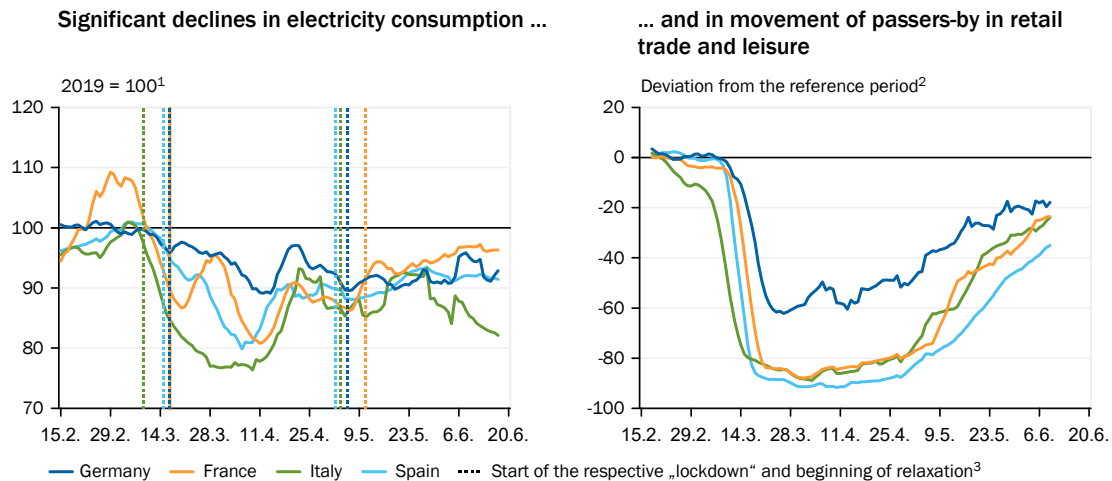
1 – Change on previous year in %. Price-adjusted. 2 – Due to the adjustment for calendar effects, the value for GDP growth in Germany in 2020 stated here differs from the unadjusted values stated elsewhere (see Table 4). 3 – Forecast by GCEE. Values are based on seasonal and calendar-adjusted quarterly figures.

Sources: Eurostat, national statistical offices, own calculations

© Sachverständigenrat | 20-151

↘ CHART 5

Real-time indicators in selected member states of the euro area during the pandemic 2020



1 – 7-day moving averages. Relative to the respective period in 2019. Seasonally and calendar adjusted. 2 – Deviation from the median of the respective weekday in the reference period from 3 January to 6 February. 3 – Dates are based on the introduction and relaxation of restrictions in production, retail and hospitality. Germany: closure of all non-essential shops from 17 March; possibility of reopening from 6 May. France: national curfew and closure of all non-essential shops from 17 March; lifting of curfew and possibility of reopening from 11 May. Italy: national curfew, closure of all non-essential shops and production from 10 March; lifting of curfew, resumption of production and out-of-home catering from 4 May. Spain: national curfew and closure of all non-essential shops from 15 March; lifting of curfew from 3 May, but large regional differences.

Sources: ENTSO-E, Google, own calculations

© Sachverständigenrat | 20-215

Severe impact on the euro area

14. Of the large economies in the euro area, France, Italy and Spain were particularly severely affected by the pandemic and its economic fallout. The gradual **easing** of restrictions beginning in May and the reopening of internal European borders in June will likely be accompanied by an increase in economic activity. The speed of easing differs between the member states. The degree to which cross-border tourism is possible and will actually take place, is likely to be of importance for the further development, in particular over the summer, as this sector is of major economic importance to some member states.
15. As most statistical data on economic activity only becomes available with a time lag after the reporting period, estimating the severity of the economic downturn and the extent of the incipient recovery presents a **considerable challenge**. **Real-time indicators** may be useful in predicting what will happen in the various sectors of the economy. These include electricity **consumption** and **mobility data** gathered from mobile phones (Felbermayr et al., 2020). In the middle of March, against the backdrop of increasing numbers of infections and the start of restrictions, electricity consumption plummeted in the larger member states in the euro area and has since remained below the levels recorded for the same months in 2019 ↘ CHART 5 LEFT While electricity consumption figures have shown signs of moving towards the previous year's levels since April, the gap is still considerable – indicating that industrial activity still remains significantly subdued.
16. Mobility data gathered from mobile phones may provide a point of reference for the effects of the pandemic on retail and the food service industry, for example.

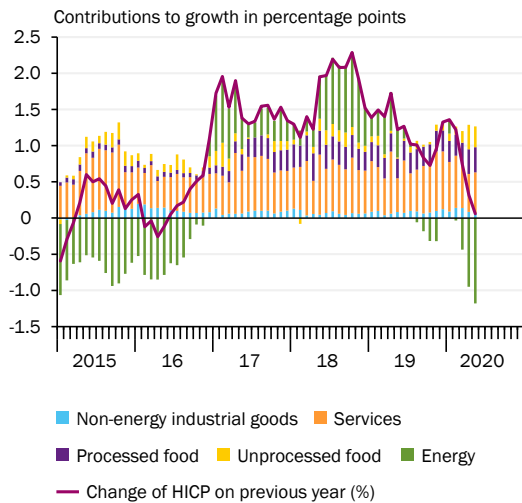
↘ **CHART 5 RIGHT** In the face of rising numbers of infections and the subsequent shut-down of these sectors, there was a clear **drop in mobility** in all of the countries under consideration compared with the reference period. According to this data, mobility dropped by more than 80 % in Italy, France and Spain as a result of the strict restrictions on outdoor activities in these member states. Since the beginning of May, mobility has been slowly increasing in tandem with the gradual reopening of retail outlets, food service businesses and cultural institutions. Analyses of credit card and online transactions paint a similar picture. The clear decline in turnover that occurred against the backdrop of the growing pandemic and the closure of a large number of physical retail outlets is indicative of a significant **drop in private consumption**. This was only attenuated to a small degree by the move to online retail (Carvalho et al., 2020; Federal Statistical Office, 2020a; Insee, 2020). For France and Germany, the latest data indicates that transactions in brick and mortar businesses are on the rise, while remaining stable in online retail.

17. Based on real-time indicators and on estimates obtained using Nowcast models ↘ **BOX 1 PAGE 21**, euro area member states can expect to experience **strong declines in GDP in the second quarter**. In Spain, Italy and France, GDP in the second quarter is likely to drop by more than 15 %. A significant portion of this reduction is attributable to the decline in economic activity in April. Moreover, growth in the reopened sectors of the economy is likely to gain momentum only slowly in May and June due to the **restrictions** that remain in place **and** the high degree of **uncertainty** that persists. The GCEE expects GDP for the euro area as a whole to fall by 8.5 % in 2020 (calendar-adjusted). Growth is likely to be positive in 2021, and is expected to achieve a rate of 6.2 %. Despite this increase, GDP at the end of 2021 is still likely to be below the level achieved before the coronavirus pandemic.
18. A perceptible **rise in unemployment** is to be expected in the euro area in the wake of the crisis. This means that the positive trend observed in the labour market over recent years is at an end for the time being. Changes in the unemployment rate are likely to differ widely between the individual member states due to the varying degrees to which their economies have been impacted and to the institutional differences that exist between them. For the euro area as a whole, the GCEE anticipates an annual average unemployment rate of 9.6 % in 2020 and 9.3 % in 2021. This figure was as low as 7.5 % in 2019.
19. While limited availability may lead to rising prices for individual products as a result of the pandemic, the lower levels of demand due to the crisis and the deterioration in the labour market situation could have an inflation reducing effect on prices. The temporary tumble in oil prices is simultaneously having a significant effect on the energy component of the Harmonised Index of Consumer Prices (HICP). ↘ **CHART 6 TOP LEFT** Against this backdrop, a clear **drop in consumer price inflation** is to be expected. The GCEE anticipates a HICP inflation rate of 0.4 % for 2020 and 1.0 % for 2021. Core inflation, by contrast, is unlikely to experience such a sharp decline. It is likely to reach 0.7 % in 2020 and 0.8 % in 2021. Based on year-on-year comparisons, the GDP deflator has recently shown somewhat

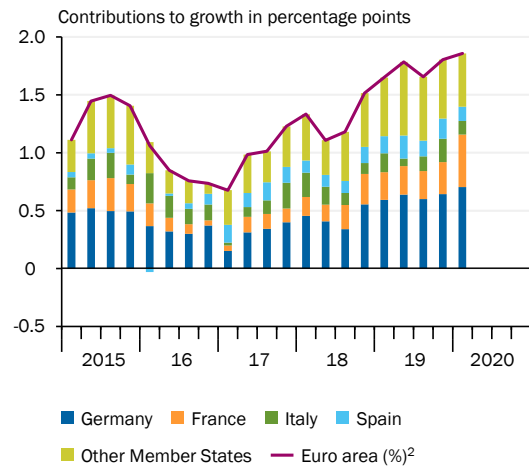
↘ CHART 6

Development of inflation, monetary aggregates and loans in the euro area

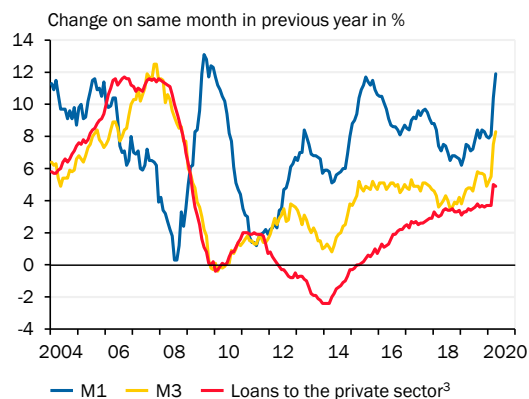
Consumer price inflation decreases due to the decline in oil prices



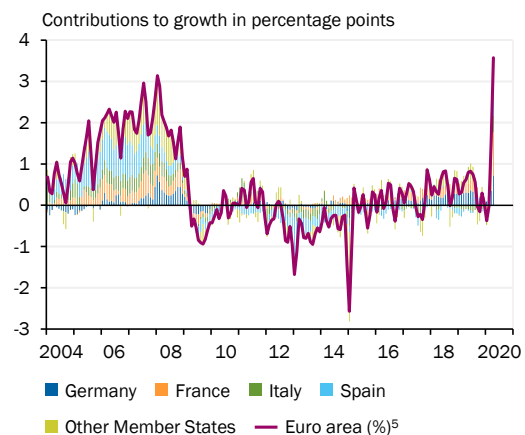
Stronger increases of the GDP deflator lately



Development of monetary aggregates and credit volume in the euro area



Liquidity needs lead to a strong increase in business loans⁴



1 – Harmonized Index of Consumer Prices. 2 – Change on previous year. 3 – Loans to non-financial corporations and households (including non-profit institutions serving households), seasonally and calendar adjusted. 4 – Loans to non financial corporations, seasonally and calendar adjusted. 5 – Change of the 2-month-moving averages.

Sources: ECB, Eurostat, own calculations

© Sachverständigenrat | 20-238

stronger growth ↘ [CHART 6 TOP RIGHT](#) Data on credit volumes in the euro area indicates a sharp rise in corporate loans in March and April. ↘ [CHART 6 BOTTOM](#) According to results from the Bank Lending Survey conducted by the ECB (2020a) for the first quarter of the year, the liquidity needs of businesses have experienced a particularly sharp rise as a result of the crisis. On the other hand, the demand for loans for investment has decreased considerably.

20. The **ECB** has followed up on the extensive measures it introduced in March in response to the coronavirus crisis (GCEE Special Report 2020 items 159 ff.) by implementing several monetary policy stimuli in the intervening period. In April, for example, it adopted a series of new non-targeted pandemic emergency longer-term refinancing operations (PELTROs). It simultaneously recalibrated the con-

ditions attached to the targeted longer-term refinancing operations it had previously announced (ECB, 2020b). At its meeting on 4 June, the Governing Council of the ECB also took the decision to **increase** the envelope of its **Pandemic Emergency Purchase Programme** (PEPP) by €600 billion to €1,350 billion (ECB, 2020c). In addition, the timescale for purchases under the PEPP was extended by a minimum of six months to at least the end of June 2021. The maturing principal payments from securities purchased under the PEPP are to be reinvested until at least the end of 2022. In the future, the phase out of the PEPP portfolio will be managed in such a way as to avoid interference with monetary policy direction.

21. In addition to the automatic stabilisers, far-reaching **fiscal policy** measures were taken in response to the crisis. At national level, these took the form of fiscal stimuli, payment deferrals, guarantees and liquidity supports. To enable the financing of these measures by taking on new debt, the European Commission applied the exemption regulations to the fiscal rules. At European level, the European Union (EU) initially responded to the crisis in March with a package of measures with a value of €37 billion (GCEE Special Report 2020 item 126). In April, the EU member states agreed on a credit programme totalling €540 billion. In addition to the SURE short-time work scheme and the granting of corporate loans through the European Investment Bank (EIB), the European Stability Mechanism (ESM) allows member states to draw on a support fund of up to €240 billion via loans. Various **proposals for a European reconstruction fund** are also being discussed. A Franco-German initiative proposes a fund for grants totalling €500 billion. Other member states are calling for a smaller fund that could be accessed via loans. The European Commission has proposed a fund of €750 billion, comprising both loans and grants, most of which would not be made available until after the end of the forecast period.

3. Risks and opportunities

22. The outlook for the future economic development is surrounded by considerable **uncertainty** and numerous risks exist, which, if they were to materialise, would trigger developments that differ from those outlined in the forecast. A **further spread of the pandemic** represents one such major threat. If, contrary to the assumption in the forecast, it is not possible to keep the number of new infections at a low level, to continue the easing of restrictions and to provide greater certainty, the slowdown can be expected to last much longer. Instead of the (elongated, asymmetrical) V-shaped path of the GDP assumed in the forecast, a U-shaped curve would then be the result. Furthermore, given the close interdependencies along the value chains, restarting production would be delayed in the event of renewed and more extensive production losses in specific areas or regions.

A further decline in economic activity would be likely if a strong second wave of infections were to strike, making new restrictions necessary. In these scenarios, economic output is likely to remain below the pre-crisis growth path for much

longer than assumed in the forecast (IMF, 2020b; OECD, 2020). A temporary reduction in potential growth may also occur if the pandemic leads to persistent changes in behaviour that trigger structural adjustments.

23. For example, if bankruptcies were to result in extensive defaults on loans, these could put a strain on the banking system and pose a threat to financial stability. The longer the crisis continues, the more difficult states will find it to bridge this challenging period through government borrowing and support measures. In particular, if a more virulent second wave of the pandemic strikes, risk assessments in relation to the financial markets could look increasingly pessimistic once again, resulting not least in a negative impact on the **financing conditions** for companies whose level of debt in some cases has already risen considerably in recent years (ECB, 2020d).
24. The large capital outflows from emerging markets that have been observed since the beginning of the year and the associated devaluation of their currencies (IMF, 2020b) have put many **emerging markets under economic pressure**. Exporters of raw materials are affected in particular, as they are vulnerable to the effects of lower prices for crude oil and other raw materials. In addition, the coronavirus continues to spread in many emerging markets and developing countries. A prolonged crisis could jeopardize the economic stability of these countries. At the same time, any intensification of the economic crisis in emerging markets could have **adverse effects on the recovery in the rest of the world** via the financial markets and scarce demand for goods. A virulent local outbreak of the virus is also likely to affect economic relations with any affected economies. It would also carry the risk of the virus returning to other regions at a later stage.
25. Other risks exist and if they were to materialise, would severely affect economies weakened by the pandemic. In addition to geopolitical risks, these risks include a renewed **intensification of trade conflicts**, particularly between the United States and China. With the economic downturn and political disputes surrounding the pandemic, the arrangements under the provisional agreement regarding import volumes between the two countries are likely to be difficult to fulfil. For an international economic recovery to take place, global value chains must be allowed to function. A withdrawal by the European Union or other economic areas from the global division of labour by implementing **protectionist measures** would hamper such a recovery.
26. In Europe, there is still a **risk of an unorderedly withdrawal by the United Kingdom** from the European single market at the end of the year (GCEE Special Report 2020 item 87). To date, there appears to have been no substantial progress in negotiations on a follow-up agreement. In the meantime, the British government has ruled out an extension of the transition period.

The economic crisis in the **euro area** poses a major challenge not least for the member states that were already heavily indebted before the pandemic. If the economic consequences of the pandemic cannot be kept in check, there is the risk of renewed doubts about the solvency of individual member states. Concerns about the stability and integrity of the monetary union could have a noticeable impact on the further development.

27. If the pandemic is suppressed more quickly than currently expected, for example with the early development of an effective vaccine, there are **opportunities for stronger growth** than expected in the forecast. Greater certainty and the possibility of resuming previously restricted activities could provide a significant stimulus to growth. Other opportunities may arise if the extensive monetary and fiscal policy measures put in place have a stronger impact than assumed in the forecast or if political agreements manage to reduce uncertainty in other areas of conflict. In addition, households that have so far not suffered serious income losses and that have accumulated higher savings in recent months, due to the prevailing uncertainty and limited options for consumption, could more swiftly draw on these savings and thus further boost consumption.

III. GERMAN ECONOMY

28. The outbreak of the corona pandemic, particularly the changes in behaviour it triggered and the national and international measures that were taken to contain it, led to a **massive slump in economic activity in spring**. In the second half of March, economic output seems to have fallen by around one sixth (Deutsche Bundesbank, 2020a; ifo Institute, 2020a). In the second quarter of 2020, seasonally adjusted GDP in Germany is likely to be almost 12 % lower than in the final quarter of 2019. Although **many restrictions** have been **gradually eased** in the meantime, economic output is likely to remain well below its potential. In addition to continuing restrictions and lower incomes from employment and property, this is not least due to increased uncertainty.

Until the corona pandemic ends, for example once an effective vaccine is found, economic recovery will depend, among other things, on how well **smart distancing will** succeed in allowing as much economic activity as possible without risking a second wave of infection or renewed restrictions (Abele-Brehm et al., 2020; Grimm et al., 2020). In addition to the automatic stabilisers, like unemployment insurance and short-time work, and the **support measures** that were taken early on, the **fiscal stimulus measures** adopted in early June should have a positive effect on recovery. These measures should help ensure that unemployment does not rise even further.

29. The GCEE expects **GDP in Germany to fall by 6.5 % in 2020 (6.9 % after adjusting for calendar effects)**. [↘ TABLE 2](#) This means that the economic prospects are worse than was predicted in the scenarios of the Special Report (GCEE Special Report 2020 items 54 ff.). There are essentially three reasons for the downgraded outlook. First, the indicators that have been published in the meantime and the official GDP figures for the first quarter suggest that economic activity has slumped more sharply than could be foreseen in March. Second, the easing took place later and more gradually than had been assumed in the baseline scenario of the Special Report, so that certain activities can still be expected to be partially or completely restricted in the summer. In retrospect, therefore, the duration and impact of the restrictions were closer to the assumptions of the risk scenario.

TABLE 2

Key economic indicators for Germany

	Unit	2017	2018	2019 ¹	2020 ¹
Gross domestic product ²	Growth in %	1.5	0.6	- 6.5	4.9
Final consumption expenditure	Growth in %	1.3	1.9	- 3.3	3.9
Private consumption ³	Growth in %	1.3	1.6	- 5.5	4.7
Government consumption	Growth in %	1.4	2.7	2.6	2.0
Gross fixed capital formation	Growth in %	3.5	2.6	- 5.2	3.5
Investment in machinery & equipment ⁴	Growth in %	4.4	0.6	- 19.3	8.1
Construction investment	Growth in %	2.5	3.8	1.8	1.5
Other products	Growth in %	4.3	2.7	0.5	2.6
Domestic demand	Growth in %	2.1	1.2	- 3.6	3.7
Net exports	Growth contribution in percentage points	- 0.4	- 0.6	- 3.1	1.3
Exports of goods and services	Growth in %	2.1	1.0	- 14.5	8.5
Imports of goods and services	Growth in %	3.6	2.5	- 8.9	5.9
Current account balance ⁵	%	7.4	7.1	4.7	5.2
Persons employed (domestic)	1,000	44,854	45,236	44,762	44,585
Persons employed, covered by social security	1,000	32,964	33,518	33,491	33,722
Registered unemployment, stocks	1,000	2,340	2,267	2,719	2,700
Unemployment rate ⁶	%	5.2	5.0	6.1	6.1
Consumer prices ⁷	Growth in %	1.8	1.4	0.6	1.6
General government budget balance ⁸	%	1.9	1.5	- 6.0	- 3.9
Gross domestic product per capita ^{9,10}	Growth in %	1.2	0.3	- 6.7	4.7
Gross domestic product, calendar-adjusted ¹⁰	Growth in %	1.5	0.6	- 6.9	4.9

1 – Forecast by the GCEE. 2 – Price-adjusted. Change on previous year. Also applies to all listed components of GDP. 3 – Including non-profit institutions serving households. 4 – Including military weapon systems. 5 – In relation to GDP. 6 – Registered unemployed in relation to civil labour force. 7 – Change on previous year. 8 – Regional authorities and social security according to national accounts; in relation to GDP. 9 – Population development according to medium-term projection of the GCEE calculations. 10 – Price-adjusted. Change on previous year.

Sources: Federal Employment Agency, Federal Statistical Office, own calculations

© Sachverständigenrat | 20-158

Third, the foreign-trade environment is much more negative than was assumed in March, and this is burdening companies' export prospects. [▶ ITEM 8](#) For the **coming year**, the GCEE expects **growth of 4.9 %** (no significant calendar effects). A return to **pre-pandemic GDP level is not to be expected before the year 2022**.

1. Historic slump in economic output

30. The **number of new infections** with the coronavirus in Germany has **fallen considerably** since mid-March; at the same time, the number of people who have recovered is increasing. According to data from the Robert Koch Institute (RKI), several hundred new cases per day have been reported, lately. The figures vary from region to region. For example, no new cases were registered in 145 administrative districts from 11 to 17 June, while elsewhere there were **isolated, localised outbreaks** with quite a large number of cases, e.g. at religious events

and private parties, in care homes, meat processing plants and logistics centres (RKI, 2020).

- 31. The **measures against the spread of the coronavirus adopted by the Federal Government and the Länder** from mid-March onwards had far-reaching consequences for economic activity. Many economic sectors had to cease their activities completely or could only continue to a limited extent. Particularly affected by the closures were the stationary retail trade (with exceptions for food shops, for example) and consumer-related service sectors such as catering, cultural and leisure facilities and tour operators. All educational institutions, such as schools and daycare centres, were also affected by the closures.
- 32. Since mid-April, the **containment measures** have been **gradually eased**.
 ↘ CHART 7 The Länder are largely responsible for deciding the details and pace of easing. The opening of facilities is in some cases subject to strict conditions, which continue to severely impair economic and social activity. For example, rules on

↘ CHART 7

Measures to contain the pandemics: Agreements between Bund and Länder



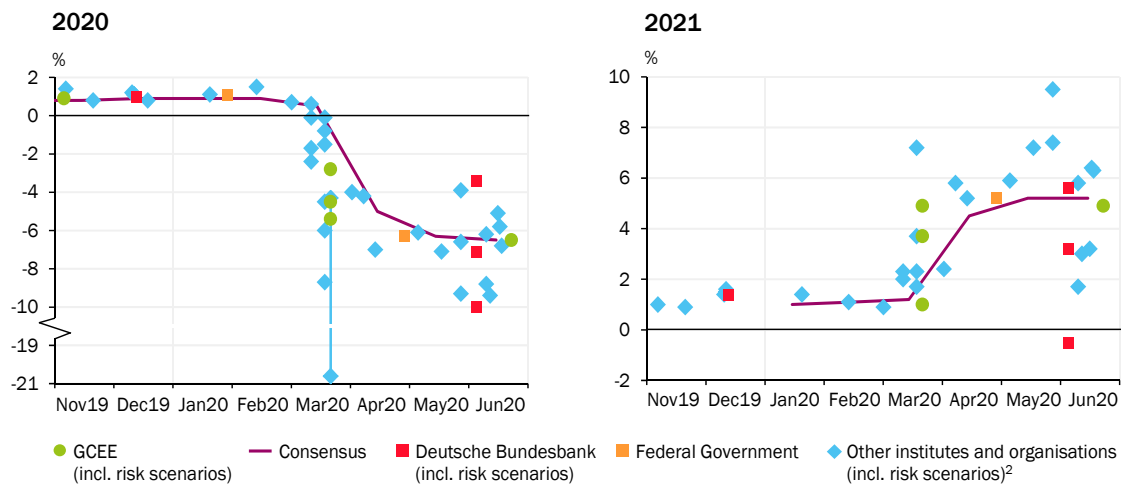
↘ The Länder take on responsibility for the larger part of further easing regulations the measures in coordination for the Bund (06.05.2020)

1 - Minimum distance of 1,5 meters. Staying in public places is only allowed alone, with a single other person not living in the same household or with members of the own household. Request to reduce private contacts to people outside the own household to a minimum as well. 2 - Systemically relevant retail is not closed. Service providers and handcraftspersons can still pursue their occupations. Services that require physical proximity are closed on 22 March. 3 - Opening of shops with less than 800 m² retail space and car dealers, bicycle dealers and book stores (starting from 6 May, opening of all shops). 4 - Closing of bars, clubs, discoteques, pubs and similar establishments. Cafeterias, restaurants, inns and hotels are allowed to remain open conditionally. No overnight stays for touristic purposes. 5 - Only delivery and pick up of takeaway food for consumption at home. 6 - Gradually opening based on hygiene and distance concepts (e.g. wearing a protective mask; reduced number of customers/guests) and dependent on the infection process. 7 - Exams and exam preparation of graduating classes of the current school year should be able take place again after appropriate preparations. 8 - Under the condition that the infection process is not worsening, the Länder seek to resume normal teaching at schools (with protection and hygiene concept) after the summer holidays at the latest. 9 - Major events, where it is not possible to pursue the contacts of participants and to maintain the hygiene regulations, are prohibited until the end of October 2020.

Sources: Agreements between Federal government and Länder, decisions of governments of the Länder, Kultusministerkonferenz own illustrations.

↪ CHART 8

GDP growth in Germany: Forecasts and calculations of scenarios at different forecast dates¹



1 - The time of the publications of the particular forecasts and scenarios are indicated on the x-axes. 2 - The 18 scenarios for 2020 of the ifo Institute from 22 March 2020 are illustrated as a bandwidth.

© Sachverständigenrat | 20-050

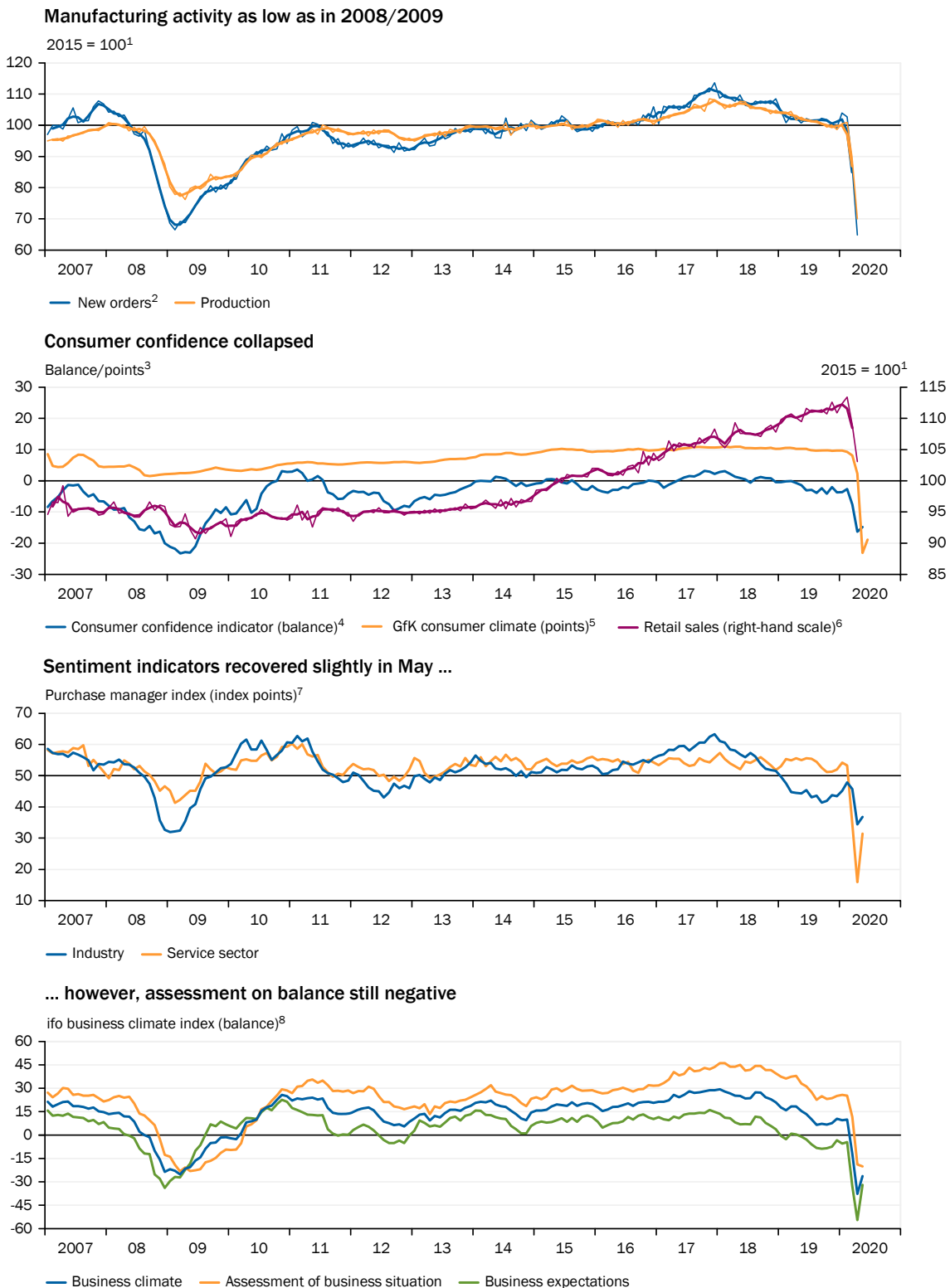
distancing and hygiene continue to apply to **retail, catering** and other **consumer-related services**. Since the end of May, **hotels, holiday apartments and holiday homes** have been gradually reopening for tourism purposes in view of the upcoming holiday season, albeit with restrictions. Here, the Länder decide on the permissible degree of utilisation and the hygiene regulations that must be observed.

There are still severe restrictions on **schools** and **kindergartens**. At the meeting between the Federal Government and the Länder in mid-June, however, it was decided to return to normal operations (subject to hygiene requirements) at child-care facilities in the near future and at schools by the end of the summer holidays, if the number of new infections does not increase again.

33. With continued application of restrictions and in view of the global spread of the coronavirus, the outlook for the German economy has deteriorated in recent weeks and months. This has been reflected in considerable **downward revisions of growth forecasts** and scenario calculations by various institutions **since early March**. ↪ CHART 8 LEFT The most recent forecasts for the current year have stabilised at around -7 %. However, the **range** for the coming year is **very wide**. ↪ CHART 8 RIGHT Although now more information is available on the scale of the economic slump in spring 2020, it is still difficult to estimate how quickly any recovery will set in and how strong it will be. ↪ ITEM 47
34. GDP fell by 2.2 % in the **first quarter of 2020**, making this the **most severe slump since the financial crisis** of 2008/2009. In the Special Report, the GCEE had assumed a growth rate of -1.5 % in its baseline scenario and -2.0 % in the risk scenario.

CHART 9

Selected indicators for the economic development

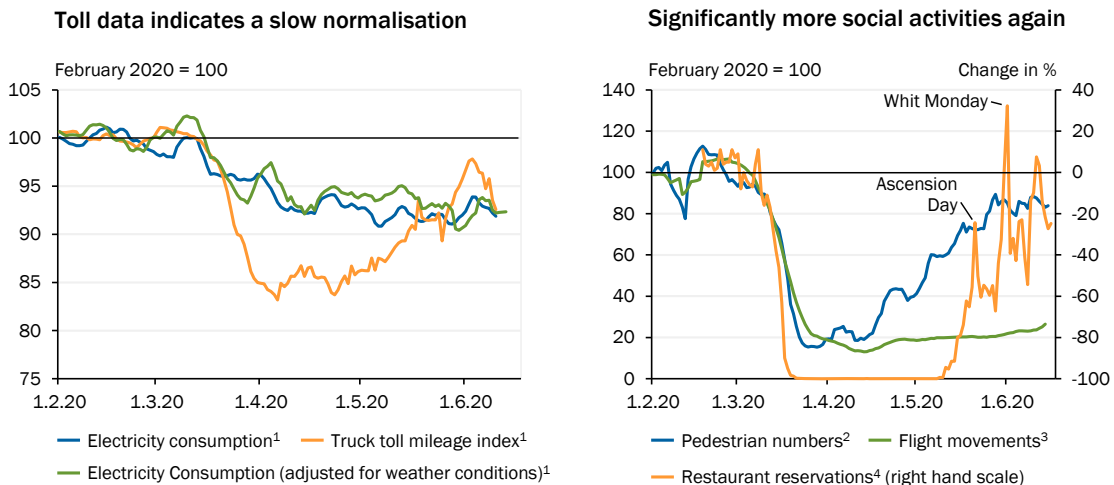


1 - Thin line: monthly values; bold line: 3-month moving averages. Seasonally and calendar adjusted values. 2 - Volume index. 3 - Seasonally adjusted values. 4 - The Consumer Confidence Indicator is based on selected questions asked of consumers in accordance with the Joint Harmonised EU Programme of Business and Consumer Surveys. 5 - Based on about 2,000 consumer interviews per month. 6 - Real index excluding the sale of motor vehicles. 7 - The purchasing managers' index is based on a monthly survey among purchasing managers and managing directors. 8 - Manufacturing sector, service sector, trade and construction industry.

Sources: European Commission, GfK, Federal Statistical Office, ifo, IHS Markit, own calculations

↪ CHART 10

Real-time indicators in Germany during the corona pandemic



1 – Seasonally and calendar-adjusted. 7-days moving average. 2 – Not adjusted. 7-days moving average of the mean for Germany consisting of Berlin, Dortmund, Düsseldorf, Frankfurt a.M., Hamburg, Hanover, Munich, Stuttgart, Wiesbaden. 3 – 7-days moving average of arrivals and departures at Frankfurt. Only flights that could be tracked by the system of the German aircraft noise service. 4 – Change on the same week day from the same calendar week of the previous year.

Sources: Deutsche Bundesbank, ENTSO-E, Federal Office for Freight Transport, Federal Statistical Office, German aircraft noise service, Hystreet, OpenTable Datacenter, own calculations

© Sachverständigenrat | 20-207

On the expenditure side, the decline stemmed from private consumption, investment in machinery and equipment, and foreign trade. In the case of **private consumption**, which fell by 3.2 % compared with the previous quarter, the restrictions in place since mid-March were probably the main factor. The **decline** was particularly marked in **machinery and equipment investment**, which fell by 6.9 %. On the other hand, construction investment expanded: Benefiting from the mild winter, it rose by 4.1 % in the first quarter. Exports of goods and services declined sharply by 3.1 %.

Because imports fell less sharply with a rate of -1.6 %, the result was a negative contribution to growth from external trade. Positive contributions to growth came from government consumption and changes in inventories.

35. The effects of the corona shock on the German economy are clearly visible. For example, industrial production fell by almost 30 % between February and April. ↪ [CHART 9 TOP Declines](#) of a similar magnitude were recorded in **new orders** and exports. Construction of vehicles and vehicle parts is particularly affected (Fries et al., 2020a). In April, production fell by around 83 % compared to February.
36. At the same time, the massive effects on the service sector are becoming apparent. **Consumer confidence** collapsed in March and April before **stabilising at a low level** in May. ↪ [CHART 9 CENTER TOP](#) Apart from the officially ordered closures of many shops, increased uncertainty with regard to the risk of infection, future incomes or the risk of unemployment are likely to have a strong negative impact on consumption. Between February and April, **retail** sales (excluding motor vehicle sales) fell by around 9 %, although the decline was lower than in other countries. ↪ [ITEM 11](#) However, there were large differences between individual branches. While the internet and mail-order business and the trade in food, beverages and

tobacco products grew in April, parts of the stationary retail trade experienced historically unprecedented declines. The same applies to the **hospitality industry**, where turnover was almost halved in March alone.

37. Although companies' **business expectations** brightened somewhat in May, **on balance** they remain **negative**. [↪ CHART 9 BOTTOM](#) The development of the purchasing managers' index was similar; it has recently **recovered somewhat from its historic lows** but still remains below the expansion threshold of 50 points. [↪ CHART 9 CENTER BOTTOM](#)
38. For the second quarter, the available short-term indicators point to a decline in economic output of around 10 %. [↪ BOX 1](#) The main reason for this is the slump in economic activity between mid-March and early May. Since then, many restrictions have been partially relaxed. In industries that have been particularly affected economically, such as vehicle construction, production has been slowly ramping up again since May. Real-time data also point to a gradual recovery. Electricity consumption at least indicates a bottoming out, while the truck-toll mileage index has risen again significantly since the middle/end of April. [↪ CHART 10 LEFT](#) Indicators for the services sector, such as figures for mobility on foot, or restaurant reservations, also indicate a **gradual normalisation**. [↪ CHART 10 RIGHT](#) Nevertheless, economic activity in June is likely to remain below pre-pandemic levels. In some sectors, such as aviation, economic activity remains at a fraction of the normal level. A slow recovery there is unlikely to set in until the summer months.

[↪ BOX 1](#)

Nowcasting of GDP in the corona crisis

A historic slump in economic output is expected in the first half of 2020 as a result of the corona pandemic. According to initial figures from the Federal Statistical Office, German GDP fell by 2.2 % in the first quarter. For the second quarter, some estimates put the decline at more than 10 % (Boysen-Hogrefe et al., 2020a; ifo Institute, 2020a; Michelsen et al., 2020). By comparison, the biggest quarterly decline since quarterly national accounts were first published in 1970 was 4.7 %. GDP fell by this amount between the fourth quarter of 2008 and the first quarter of 2009. While forecasts always involve uncertainty, this is especially true during the corona crisis. There are two main **challenges for nowcasting**.

First, **many important indicators are not yet available for the most recent past**. This applies in particular to industrial production, where monthly figures are not published until over five weeks after the end of the respective reporting month; they are therefore currently only available up until April. It is therefore uncertain to what extent the downturn in industry intensified further in May, or whether a recovery has already begun. The same applies to turnover in the retail and hospitality sectors. Labour-market indicators and survey data, on the other hand, are available somewhat earlier and show the current development at the latest at the end of each month. Furthermore, **real-time data on economic activity** are increasingly available, e.g. the truck-toll mileage index, which is constructed by the Federal Statistical Office in cooperation with the Federal Office for Goods Transport (Cox et al., 2018). Since this spring, this index has been published with a few days delay (Federal Statistical Office, 2020b). Other data, for example on electricity consumption published by the Bundesnetzagentur (2020), are available almost immediately. Further real-time indicators include internet searches, e.g. for the term 'short-time work', or flight movements. While the explanatory power of such indicators for GDP growth

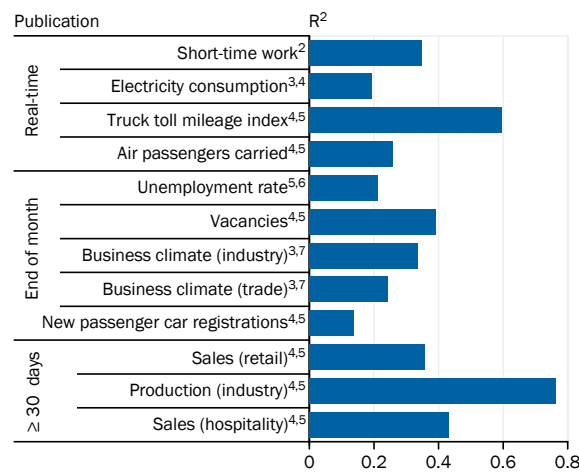
is usually much lower, at least compared to the industrial data normally used for GDP nowcasting (GCEE Annual Report 2019 box 3), [↘ CHART 11 LEFT](#) they do provide early pointers for current macroeconomic activity; they can also be used to supplement missing monthly figures for other indicators such as industrial production.

Second, the question arises as to **how reliable the current nowcast models are** (BMW, 2020). A fairly simple forecasting model is based on the historical relationship between changes in GDP and industrial production. Although industry only accounts for about a quarter of total gross value added, its forecasting quality for GDP growth is usually high. One reason for that is the high procyclicality of industrial production. Another reason is that the domestic economy is normally much less volatile and less sensitive to economic fluctuations. For example, production or incoming orders in industry have generally fallen sharply during recessions, while large parts of the retail sector have remained fairly robust (GCEE Annual Report 2019 items 89 f.). This is not the case with the **corona crisis**, however. In March, for example, turnover in the hospitality industry fell by almost half against the background of the restrictions that had been in place since the middle of the month. Activity is likely to have fallen sharply again in April. The retail sector experienced **declines in sales of well over 50 % in some cases**. Such collapses are unprecedented since the time series began in 1994 (Federal Statistical Office, 2020c, 2020d). Models based on earlier empirical contexts could therefore misjudge the extent of the current economic downturn.

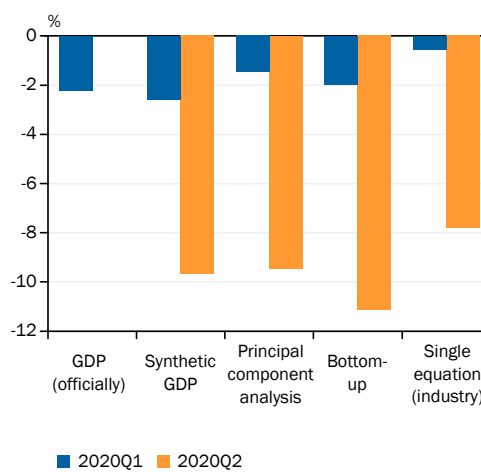
[↘ CHART 11](#)

Real-time indicators and GDP nowcasting

Many indicators with high explanatory value for GDP growth available late¹



Nowcast models show decline of up to 1.1 % in Q2⁸



1 – GDP growth regressed on constant, delayed GDP growth and indicator (contemporary). Estimated period: 2005Q1–2020Q1. Coefficient of determination (R²). 2 – Google search query for „short-time work“. 3 – Seasonally adjusted 4 – Change on previous quarter in %. 5 – Seasonally and calendar adjusted. 6 – Change on previous quarter in percentage points. 7 – Change on previous quarter (balance points). 8 – Estimate of quarterly GDP growth. Synthetic GDP: indicators standardised, weighted and adjusted to the mean and standard deviation of GDP growth. Principal component analysis: forecast based on the first factor of the indicators. Bottom-up: forecasts for industry, services and other sectors aggregated by their respective shares of gross value added. Single equation (industry): forecast based on industrial production growth.

Sources: Deutsche Bundesbank, DFS, ENTSO-E, Eurostat, Federal Statistical Office, Google, ifo, SMARD, own calculations

© Sachverständigenrat | 20-200

In this forecast, the German Council of Economic Experts therefore uses **various models** based on twelve indicators. [↘ CHART 11 LEFT](#) The aim is to adequately depict the effects of the corona shock on the macroeconomy. Missing monthly values are determined on the basis of other information, such as mobility data as an indicator of trends in retail trade. Time series that show a growth trend, such as turnover or production indices, are expressed as growth rates. One way of nowcasting lies in creating a kind of synthetic GDP. For this purpose, the time series of the indicators are mean-adjusted and their variance normalised to one. The synthetic GDP growth is then the weighted average of the normalised time series. The resulting series is finally adjusted to the mean and variance of the GDP growth series. The **weighting of the indicators** can

be based on the correlation with GDP growth or on other considerations. Alternatively, the weights can be determined based on a principal component analysis. Another model estimates GDP using a simple bottom-up approach. Here, the gross value added in the industry sector, the service sector as well as other sectors is forecast individually with the help of the various indicators. The forecasts are then weighted with the sectors' respective shares of total gross value added and aggregated to form a nowcast of GDP.

The forecasts determined in this way prove to be quite accurate in an ex-post analysis, although real-time problems or missing monthly figures are not taken into account here. The coefficient of determination for GDP growth – including lagged GDP growth – is above 0.8. In contrast to the simple forecast model, which is based only on industrial production, the models used can depict the extent of the decline in the first quarter. ↘ [CHART 11 RIGHT](#) For the **second quarter**, the models suggest a **decline of GDP of up to –11 %**. This would thus again be somewhat higher than the decline assumed in the risk scenario “pronounced V” of the March Special Report (GCEE Special Report 2020 item 62). The weekly activity index calculated by the Deutsche Bundesbank (2020b), which is also based on a large number of real-time indicators, most recently (15 June) showed a decline in GDP of 7.8 % over the previous 13 weeks.

2. Recovery after the economic slump

39. The good starting position on the labour market prior to the corona pandemic (GCEE Special Report 2020 items 111 ff.) and the possibility of short-time work have sustained the German **labour market**. However, the long-standing upward trend in employment has come to an abrupt end. In April 2020, there were about 218,000 fewer people in employment than in the same month of the previous year. The change in the number of hours worked was probably even greater. Based on its survey of companies, the ifo Institute (2020b) estimates that in May 2020 **one in five** employees subject to social security contributions (7.3 million people) could have been on **short-time work**. In May, the unemployment rate rose to 6.1 %, an increase of 1.2 percentage points compared to the same month of the previous year. About 577,000 additional people were registered as unemployed compared to May 2019.
40. The labour market is not expected to recover before the end of the year. The leading indicators of the Institute for Employment Research (IAB) and the ifo Institute indicate that the overall **demand for personnel** in the economy will continue to **decline** in the coming months. Not least the development of closures in the coming months will determine the extent to which current short-time work leads to unemployment. Although obligations to file for insolvency have been temporarily eased, which is likely to slow down the pace of insolvency in the short term, companies could increasingly use the economic slump for restructuring and, for example, conduct insolvency proceedings under their own management.

The **labour volume** and **employment** are likely to **decline significantly** in the current year. ↘ [TABLE 6 ANNEX](#) Due to the negative statistical overhang, employment is expected to decline in the total year 2021. It is likely to rise again slightly over the course of the year, though. Since GDP is falling more sharply than total hours in 2020, there will be a marked decline in labour productivity (per hour

TABLE 3

Estimated financing needs of selected measures of the stimulus package¹

Measure	Estimated financing needs in € billion			
	2020		2021	
	Federation	Länder/municipalities	Federation	Länder/municipalities
Reduction of value added tax ²	12.85	0.12	3.50	3.13
Stabilisation of social security contributions at not more than 40 % ³	5.30			
Stabilisation of the EEG surcharge ⁴			7.33	
Postponement of the due date for import value added tax ²			2.51	2.24
Expansion of tax-loss carryback ²	1.96	2.17	-0.84	-0.96
Increased degressive depreciation ²	0.06	0.13	0.83	1.81
Bringing forward planned public investment		10.00		
Support for the cultural sector	1.00			
Compensation for expected loss of trade tax revenues	5.90	5.90		
Expansion of day nurseries and all-day schools		3.00		
Support for public transport companies	2.50			
One-time child bonus ²	2.33	3.15	-0.39	-0.52
Expenditure on digitalization ⁵	11.21		3.91	
Expenditure on climate protection ⁶	12.34		7.34	
Expenditure on the health sector ⁷	4.75		3.00	

1 – According to the decision of the coalition committee of 3 June 2020 and the draft legislation of the Federal Government for the 2nd Corona Tax Assistance Act of 17 June 2020. Breakdown of the estimated total needs for the years 2020 and 2021 by the GCEE, as long as no information on the temporal breakdown has been provided. No account is taken of measures which merely involve shifts between local authorities.

2 – Breakdown of the total needs by the draft legislation of the Federal Government for the 2nd Corona Tax Assistance Act of 17 June 2020.

3 – Financing needs in 2021 especially depending on the need for federal subsidies to the social security. 4 – Breakdown of total needs on the basis of Wagner et al. (2020). 5 – Includes the measures 35h and 40-49 of the key-issues paper of the stimulus package. 6 – Includes the measures 34-35g and 35i-39 of the key-issues paper of the stimulus package. 7 – Includes the measures 50-54 of the key-issues paper of the stimulus package.

Sources: Federal Government, own calculations

© Sachverständigenrat | 20-227

worked). It is expected to recover in 2021, but overall it will still be below pre-pandemic levels. [TABLE 8 ANNEX](#)

41. The economic consequences of the corona pandemic will place considerable **burdens on public budgets**. For example, **in 2020**, public **revenues** will be **drastically lower** due to the economic slump. In addition, the fiscal policy measures taken in the wake of the corona pandemic are causing further revenue shortfalls. In **2021**, the expected economic recovery looks likely to lead to a **more favourable trend in revenues**. On the other hand, there will be revenue losses due to discretionary fiscal measures, e.g. the partial abolition of the solidarity surcharge.
42. There is **substantial additional public expenditure in 2020** as a result of government support measures in the form of transfer payments to companies and private households. These include direct aid for companies, self-employed and freelancers, as well as easier access to short-time work allowance. In addition to these direct support measures, considerable sums have been earmarked for loans, loan guarantees and equity investments. For example, under the Corona assistance programmes, the KfW approved loans of around €28 billion up to 31 May

2020 (KfW, 2020). However, these loans initially just increase the reported general-government debt without having an impact on the general-government budget balance. The latter would occur if receivables were to be lost, for example in the course of insolvencies. The **supplementary budget** for 2020 adopted by the Federal Government in March has a total volume of €156 billion and provides for additional expenditure of €122.5 billion.

43. Furthermore, at the beginning of June 2020, the government coalition adopted the key points of an **economic-stimulus and crisis-management package** which provides for additional expenditure and tax measures, particularly for 2020 and 2021. The package includes, among other things, an expansion of direct aid to small and medium-sized enterprises, as well as fiscal liquidity support for companies, for example by extending tax-loss carryback and degressive depreciation. Furthermore, a temporary cut in the regular and reduced VAT rates is planned for the second half of the year. Other measures include a child bonus and extensive investment and support programmes in the fields of mobility, digitalisation, climate protection and health. To support the local authorities, the Federal Government and the respective Länder will each bear half of the expected loss of trade tax revenue in 2020.

Most of the burdens on public budgets expected from the economic-stimulus and crisis-management package should focus on 2020. [↘ TABLE 3](#) However, the financial volume estimated by the coalition committee is **not the same as the fiscal impulse** that these measures are likely to generate. One reason for this is that the temporary support measures are to be financed by unused funds from the first supplementary budget. In addition, some of the planned measures will lead to a shift between the levels of government. For example, the additional burdens on the Federal Government resulting from the permanent increase in its share in the costs for accommodation and heating are offset by an equal reduction in the share of the municipalities. Last but not least, when planned investment is brought forward, it is unclear to what extent it can actually be realised in a timely manner. Estimates by various institutions, including the Deutsche Bundesbank (2020a), conclude that the decline in GDP this year is likely to be around 1 percentage point lower as a result of the measures of the economic-stimulus package.



According to current estimates, the stimulus package could lead to a GDP increase of between 0.8 % and 1.4 % in 2020 and between 0.4 % and 1.7 % in 2021 (Boysen-Hogrefe et al., 2020b; Deutsche Bundesbank, 2020a; IWH, 2020; Michelsen et al., 2020; Wolter et al., 2020). Two aspects are decisive when it comes to the economic impact of one of the largest individual items: the **temporary reduction in value added tax from July to December 2020**. First, the impact will depend on the extent to which the tax cut is passed on to consumers, thereby **raising their real income**. Administrative costs resulting from the price conversion and sector-specific competitive pressure are likely to lead to a partial and heterogeneously distributed shift across the sectors (Benedek et al., 2015; Benzarti and Carloni, 2019). Furthermore, Benzarti et al. (2020) show that reductions in VAT are passed on to consumers to a lesser extent than increases. If prices do not fall, there could nevertheless be a positive economic effect because corporate margins would increase.

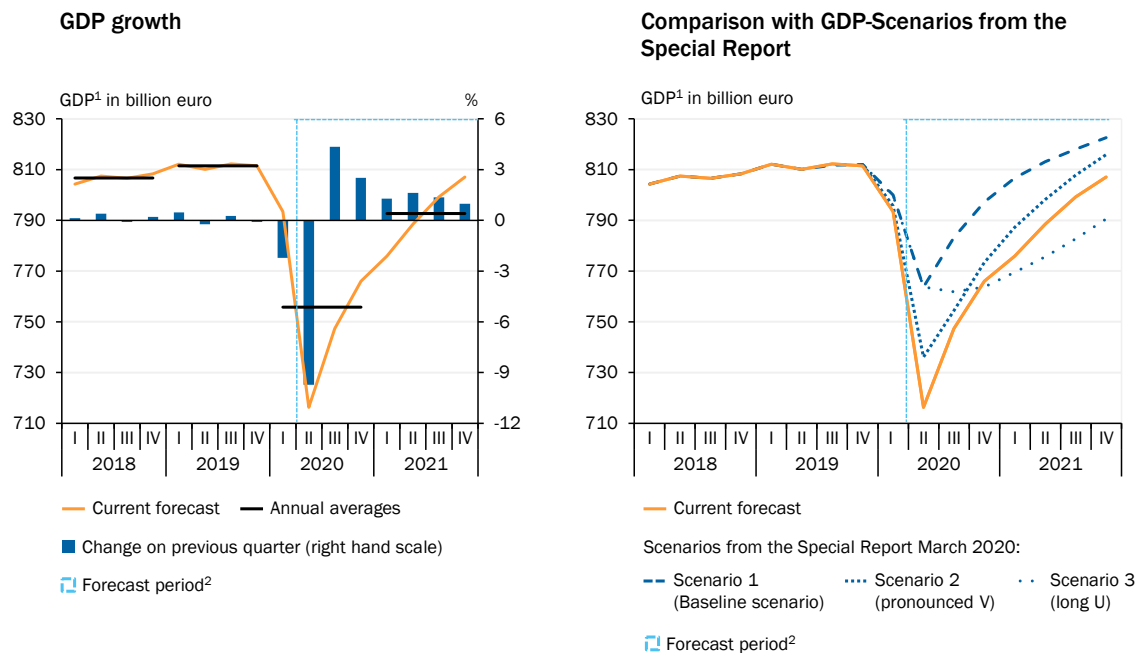
Secondly, a credible time limit on the measure is needed in order to generate a **substitution effect**. In view of the expected price increases next year, consumers may prefer to spend

their money now (Feldstein, 2002; Hall, 2011; Christofzik et al., 2020). In this case, a noticeable effect could be expected, particularly for consumer durables (D'Acunto et al., 2016, 2020; Büttner and Madzharova, 2019). This could counteract the decline in private consumption caused by the high level of uncertainty. Empirical evidence on the temporary cut in VAT in the United Kingdom between 2008 and 2009 suggests a short-term economic stimulus; however, this was followed by a sharp decline after the measure ended (Blundell, 2009; Chirakijja et al., 2009; Crossley et al., 2014).

44. The **rapid reaction of monetary and fiscal policy in the spring** helped to prevent self-reinforcing downward processes. The short-time-work allowance stabilises incomes and prevents a massive increase in unemployment. The provision of liquidity by the ECB ensures favourable financing conditions for companies, households and governments. Furthermore, credit guarantees, direct investments or, for example, regulations on tax-based loss compensation ensure that companies are better able to bridge the loss of revenue during the corona crisis. A **negative scenario** in which economic activity does not recover in autumn (GCEE Special Report 2020 items 65 f.) therefore seems **unlikely**.
45. Nevertheless, the **overall economic conditions** in Germany have **deteriorated compared to March**. This applies particularly to the international environment. [↘ ITEM 8](#) The economic slump in important sales markets such as the rest of the euro area or the United States is likely to be much more severe than had been expected in the baseline scenario of the Special Report in March (GCEE Special Report 2020 items 68 ff.). One reason for this is that the **spread of the virus** was quite dynamic in many places and could only be **contained slowly**. [↘ ITEM 5](#)
46. The GCEE expects an average annual **GDP growth of –6.5 % (–6.9 % calendar adjusted)** for **this year**, taking into account the recently announced economic-stimulus package. Economic development in the course of 2020 is divided into two parts. [↘ CHART 12 LEFT](#) Economic output is expected to slump by more than 10 % in the first half of the year. This would be double the figure assumed in the baseline scenario of the Special Report. In addition to a possibly higher fear of infection and the resulting changes in behaviour, the longer duration of the restrictions is a major reason for the more severe slump. To estimate the effects on private consumption, the Special Report assumed a shutdown of five weeks followed by a recovery of three weeks (GCEE Special Report 2020 items 50 ff.). However, the actual development since March has been more in line with the risk scenario “pronounced V”, which is based on seven weeks of shutdown and five weeks of recovery.
47. With the gradual easing of restrictions and the decline in infection rates, an economic recovery looks likely to begin in the summer. A **strong rebound effect** would significantly boost economic activity in the **third quarter**. The **recovery is shaped** by several partially **contrary effects**. Larger-scale macroeconomic catch-up effects are not to be expected (GCEE Special Report 2020 items 59 ff.). In the services sector in particular, capacity bottlenecks, not least due to **continuing restrictions**, are likely to prevent any making up for lost consumption. Although catch-up effects are more likely in the case of durable goods, these effects will probably be partly offset by the **increased uncertainty** and **income**

↘ CHART 12

Expected development in Germany



1 – Chained volumes (Reference year 2015), seasonally and calendar-adjusted. 2 – Forecast by the GCEE.

Sources: Federal Statistical Office, own calculations

© Sachverständigenrat | 20-155

losses. Nevertheless, private consumption is most likely to return to pre-corona-pandemic levels as many restrictions will be gradually lifted and the desire to shop could increase again. The prerequisite is that containment of the coronavirus continues to be successful.

48. In the forecast it is assumed that it will be possible to contain a potential second wave of infection without further widespread restrictions. The recovery is likely to be positively influenced by **behavioural adjustments in companies and households**, which, supported by innovations such as smart distancing, will make it possible to deal better with the pandemic. A timely reopening of schools and childcare facilities was announced in June, assuming that infection levels remain favourable. As long as schools and kindergartens remain partially closed, parents not entitled to emergency childcare would be able to reduce their working hours (Fries et al., 2020b; Fuchs-Schündeln et al., 2020). It is also likely that the combination of mobile working and the need to look after children reduces parents' productivity (Ernst, 2020; Fraunhofer FIT, 2020).
49. The **worsened external environment** will probably weigh much more heavily on German exports this year than was assumed in March. One reason is the high level of uncertainty, e.g. with regard to the duration of the corona crisis, which is likely to result in a **low propensity to invest** on the part of companies – after already being weak in the past two years (GCEE Annual Report 2019 items 8 f.). Consequently, **demand for machinery and vehicles** from Germany, for example, is likely to **remain subdued**. Although the risk premia for corporate bonds have fallen back from their high levels in mid-March, the loss of income in the last few months puts an additional burden on corporate equity capital or

makes it more difficult to increase it. In the coming months, companies in Germany and worldwide are likely to react to this with a certain reluctance to invest. In addition, delays in restarting international value chains could slow down the recovery of the highly interdependent German economy (Fries et al., 2020a).

50. Similar to the risk scenario “pronounced V” in the Special Report, a **return to pre-pandemic levels** is currently **not** expected **before the end of 2021**. [↘ CHART 12 RIGHT](#) For comparison: During the financial crisis, it took until the first quarter of 2011 before the economic level of activity of early 2008 was reached again. It is difficult to estimate when a complete return to (a new) normality will occur. Companies currently consider a normalisation of their business situation in just under nine months to be the most likely scenario, although there are significant differences between the economic sectors (ifo Institute, 2020a).

For **2021**, the GCEE expects an average annual **growth rate of 4.9 %** (no significant calendar effects). The year-on-year growth rate would be 5.3 % at the end of 2021. [↘ TABLE 4 APPENDIX](#) If an effective vaccine against the coronavirus were to become widely available quickly and immunity were achieved in a large percentage of the population, the final lifting of restrictions and reduced uncertainty could strengthen economic recovery and allow higher growth in the coming year.

51. Possible negative **effects** of the corona crisis **on the production potential** are **difficult to assess** at present. Based on the medium-term projection from last autumn (GCEE Annual Report 2019 items 130 ff.), the average output gap will be -7.5 % in 2020 and -4.0 % in 2021. However, this would imply that the crisis has no structural impact and therefore does not lead to adjustments in potential output. In view of rising unemployment figures, possible insolvencies and fundamental changes in some economic sectors, this is probably questionable. The Deutsche Bundesbank (2020a) expects a **strongly negative output gap** in the order of -6 % this year, which is expected to close only slightly next year.
52. On the **expenditure** side, **large declines are expected almost across the board this year**. In the case of private consumption, this decline is likely to be 5.5 % because of the slump in the first half of the year. The temporary cut in value-added tax is one of the main reasons to expect a strong increase in the second half of the year. A decline of 19.3 % is expected for investments in machinery and equipment. A double-digit slump must also be expected in exports this year. Since this is more negative than the growth in imports, at -14.5 %, contributions to growth from external trade are likely to be strongly negative this year. [↘ TABLE 5 ANNEX](#) Although investment in construction is expected to decline in the summer half-year, it is likely to increase by 1.8 % over the year as a whole due to the extraordinarily strong first quarter. Government consumption is expected to grow by 2.6 % this year.

All expenditure components of GDP are expected to increase in the coming year. The expiry of the cut in VAT will dampen private-consumption growth in the first quarter of 2021. A recovery can nevertheless be expected there soon. By contrast, at the end of the forecast period investment in machinery and equipment and exports are still likely to be some way below pre-corona-pandemic levels.

[↘ CHART 13 ANNEX](#)

53. The **decline in oil prices** in spring (GCEE Special Report 2020 item 78) is depressing the **inflation rate** of the consumer price index (CPI) in the course of 2020. In the second half of **2020**, furthermore, the temporary cut in VAT is likely to **dampen** inflationary pressures, before inflation is expected to pick up again next year. Another factor here in addition to the increase in VAT will be the introduction of a carbon pricing for the transport and heating sectors. According to estimates, the inflation rate could be 0.5 to 1 percentage point higher next year as a result (Nöh et al., 2020). The GCEE expects an inflation rate of 0.6 % this year and 1.6 % next year. The GDP deflator looks likely to grow by 2.2 % in 2020 and 1.6 % in 2021.

The GCEE expects the **unemployment rate** to **rise** further in the coming months before falling back slowly in the course of 2021. Average unemployment rates of 6.1 % each are expected for the years 2020 and 2021. The **general-government balance (in relation to GDP)** is likely to be **strongly negative** at –6.0 % in 2020 and –3.9 % next year. [↘ TABLE 7 ANNEX](#) The debt to GDP ratio is expected to be around 75.2 % of GDP in 2020 and to decline slightly to 73.3 % in 2021.

REFERENCES

- [Abele-Brehm, A. et al. \(2020\)](#), Die Bekämpfung der Coronavirus-Pandemie tragfähig gestalten, Empfehlungen für eine flexible, risikoadaptierte Strategie.
- [Bayer, C., B. Born, R. Luetticke and G. Müller \(2020\)](#), The Coronavirus Stimulus Package: How large is the transfer multiplier?, CEPR Discussion Paper DP14600, Centre for Economic Policy Research, London.
- [Benedek, D., R.A. de Mooij and P. Wingender \(2015\)](#), Estimating VAT pass through, IMF Working Paper 15/214, International Monetary Fund, Washington, DC.
- [Benzarti, Y. and D. Carloni \(2019\)](#), Who really benefits from consumption tax cuts? Evidence from a large VAT reform in France, *American Economic Journal: Economic Policy* 11 (1), 38–63.
- [Benzarti, Y., D. Carloni, J. Harju and T. Kosonen \(2020\)](#), What goes up may not come down: Asymmetric incidence of value-added taxes, *Journal of Political Economy*, forthcoming.
- [Blundell, R. \(2009\)](#), Assessing the temporary VAT cut policy in the UK, *Fiscal Studies* 30 (1), 31–38.
- [BMWi \(2020\)](#), BIP-Nowcast für das 2. Quartal 2020, Schlaglichter der Wirtschaftspolitik 05/2020, Federal Ministry for Economic Affairs and Energy, Berlin, p. 58.
- [Bodenstein, M., G. Corsetti and L. Guerrieri \(2020\)](#), Social distancing and supply disruptions in a pandemic, *Covid Economics – Vetted and Real-Time Papers* (19), 1–52.
- [Boysen-Hogrefe, J. et al. \(2020a\)](#), Weltwirtschaft und deutsche Konjunktur: Interimsprognose im Frühjahr 2020, Kiel Policy Brief, Spezial Corona-Update 3, Kiel Institute for the World Economy (IfW).
- [Boysen-Hogrefe, J., S. Fiedler, D. Groll, N. Jannsen, S. Kooths and S. Möhle \(2020b\)](#), Deutsche Wirtschaft vor mühsamer Erholung, *Kieler Konjunkturberichte Deutschland* 68 (2020 / Q2), Kiel Institute for the World Economy (IfW).
- [Bundesnetzagentur \(2020\)](#), SMARD – Strommarktdaten, Stromhandel und Stromerzeugung in Deutschland, <https://www.smard.de/home>, retrieved 9 June 2020.
- [Büttner, T. and B. Madzharova \(2019\)](#), Unit sales and price effects of pre-announced consumption tax reforms: Micro-level evidence from European VAT, Working Paper, Friedrich-Alexander-Universität Erlangen-Nuremberg.
- [Carvalho, V. et al. \(2020\)](#), Tracking the covid-19 crisis with high-resolution transaction data, CEPR Discussion Paper DP14642, Centre for Economic Policy Research, London.
- [Cavallino, P. and F.D. Fiore \(2020\)](#), Central banks' response to Covid-19 in advanced economies, BIS Bulletin 21, Bank for International Settlements, Basel.
- [Chirakijja, J., C. O'Dea, T.F. Crossley and M. Lührmann \(2009\)](#), The stimulus effect of the 2008 UK temporary vat cut, *Proceedings, 102nd Annual Conference on Taxation and Minutes of the Annual Meeting of the National Tax Association*, 15–21.
- [Christofzik, D.I., A. Fuest and R. Jessen \(2020\)](#), Macroeconomic effects of the anticipation and implementation of tax changes in Germany: Evidence from a narrative account, *Ruhr Economic Paper* 852, RWI - Leibniz Institute for Economic Research, Essen.
- [Cox, M., M. Berghausen, S. Linz, C. Fries and J. Völker \(2018\)](#), Digitale Prozessdaten aus der Lkw-Mauterhebung – neuer Baustein der amtlichen Konjunkturstatistiken, *WISTA – Wirtschaft und Statistik* 6/2018, 11–32.
- [Crossley, T.F., H.W. Low and C. Sleeman \(2014\)](#), Using a temporary indirect tax cut as a fiscal stimulus: Evidence from the UK, IFS Working Paper W14/16, Institute for Fiscal Studies, London.
- [D'Acunto, F., D. Hoang and M. Weber \(2020\)](#), Unconventional fiscal policy to exit the COVID-19 crisis, <https://voxeu.org/article/unconventional-fiscal-policy-exit-covid-19-crisis>, retrieved 8 June 2020.
- [D'Acunto, F., D. Hoang and M. Weber \(2016\)](#), The effect of unconventional fiscal policy on consumption expenditure, NBER Working Paper 22563, National Bureau of Economic Research, Cambridge, MA.
- [Deutsche Bundesbank \(2020a\)](#), Perspektiven der deutschen Wirtschaft für die Jahre 2020 bis 2022, Monatsbericht Juni 2020, Frankfurt am Main, 1–20.

[Deutsche Bundesbank \(2020b\)](https://www.bundesbank.de/de/aufgaben/themen/neuer-indikator-liefert-zeitnahes-bild-der-gesamtwirtschaftlichen-lage-833518), Neuer Indikator liefert zeitnahes Bild der gesamtwirtschaftlichen Lage, <https://www.bundesbank.de/de/aufgaben/themen/neuer-indikator-liefert-zeitnahes-bild-der-gesamtwirtschaftlichen-lage-833518>, retrieved 20 May 2020.

[ECB \(2020a\)](https://www.ecb.europa.eu/stats/ecb_surveys/bank_lending_survey/html/ecb.blssurvey2020q1~17a1b2b7d2.en.html), The euro area bank lending survey – First quarter of 2020, https://www.ecb.europa.eu/stats/ecb_surveys/bank_lending_survey/html/ecb.blssurvey2020q1~17a1b2b7d2.en.html, retrieved 28 April 2020.

[ECB \(2020b\)](#), Geldpolitische Beschlüsse, Press release, European Central Bank, Frankfurt am Main, 30 April.

[ECB \(2020c\)](#), Geldpolitische Beschlüsse, Press release, European Central Bank, Frankfurt am Main, 4 June.

[ECB \(2020d\)](https://www.ecb.europa.eu/pub/financial-stability/fsr/html/ecb.fsr202005~1b75555f66.en.html#toc2), Financial stability review – May 2020, European Central Bank, Frankfurt am Main, <https://www.ecb.europa.eu/pub/financial-stability/fsr/html/ecb.fsr202005~1b75555f66.en.html#toc2>, retrieved 26 May 2020.

[Eichenbaum, M.S., S. Rebelo and M. Trabandt \(2020\)](#), The macroeconomics of epidemics, NBER Working Paper 26882, National Bureau of Economic Research, Cambridge, MA.

[Ernst, C. \(2020\)](#), Homeoffice im Kontext der Corona-Pandemie, Ad-hoc Study, Technische Hochschule Cologne.

[Farboodi, M., G. Jarosch and R. Shimer \(2020\)](#), Internal and external effects of social distancing in a pandemic, NBER Working Paper 27059, National Bureau of Economic Research, Cambridge, MA.

[Federal Statistical Office \(2020a\)](https://www.destatis.de/DE/Service/EXDAT/Datensaetze/kredite-onlinetransaktionen.html), Kreditvergaben in der Kreditwirtschaft und Auskünfte für Online-Transaktionen, <https://www.destatis.de/DE/Service/EXDAT/Datensaetze/kredite-onlinetransaktionen.html>, retrieved 18 June 2020.

[Federal Statistical Office \(2020b\)](#), Lkw-Maut-Fahrleistungsindex wird vorübergehend täglich aktualisiert, Press release 129, Wiesbaden, 9 April.

[Federal Statistical Office \(2020c\)](#), Gastgewerbeumsatz im März 2020 um fast die Hälfte eingebrochen, Press release 175, Wiesbaden, 20 May.

[Federal Statistical Office \(2020d\)](#), Einzelhandelsumsatz im April 2020 real 6,5 % niedriger als im April 2019, Press release 192, Wiesbaden, 29 May.

[Felbermayr, G., J. Hinz and H. Mahlkow \(2020\)](#), Deutschlands Wirtschaft seit dem Corona Lockdown, Kiel Policy Brief, Spezial Corona-Update 1, Kiel Institute for the World Economy (IfW).

[Feldstein, M. \(2002\)](#), The role for discretionary fiscal policy in a low interest rate environment, NBER Working Paper 9203, National Bureau of Economic Research, Cambridge, MA.

[Fraunhofer FIT \(2020\)](#), Fraunhofer-Umfrage »Homeoffice«: Erste Ergebnisse, Press release, Fraunhofer Institute for Applied Information Technology, Sankt Augustin, 7 May.

[Fries, J.L., N. Garnadt, V. Grimm and L. Nöh \(2020a\)](#), Europa in der Corona-Krise: Europäische Lieferketten müssen europäisch wiederbelebt werden, *Wirtschaftsdienst* 100 (6), 410–415.

[Fries, J.L. et al. \(2020b\)](#), Nachfrage- und angebotsseitige Einschränkungen der wirtschaftlichen Aktivität in Deutschland infolge der Corona-Pandemie, Working Paper 02/2020, German Council of Economic Experts, Wiesbaden.

[Fuchs-Schündeln, N., M. Kuhn and M. Tertilt \(2020\)](https://voxeu.org/article/short-run-implications-school-closures), The short-run macro implications of school and childcare closures, <https://voxeu.org/article/short-run-implications-school-closures>, retrieved 30 May 2020.

[Grimm, V., F. Mengel and M. Schmidt \(2020\)](https://doi.org/10.1101/2020.04.24.20078113), Extensions of the SEIR model for the analysis of tailored social distancing and tracing approaches to cope with COVID-19, medRxiv, <https://doi.org/10.1101/2020.04.24.20078113>.

[Guerrieri, V., G. Lorenzoni, L. Straub and I. Werning \(2020\)](#), Macroeconomic implications of COVID-19: Can negative supply shocks cause demand shortages?, NBER Working Paper 26918, National Bureau of Economic Research, Cambridge, MA.

[Hall, R.E. \(2011\)](#), The long slump, *American Economic Review* 101 (2), 431–469.

[ifo Institute \(2020a\)](http://www.ifo.de/ifo-konjunkturprognose/20200528), ifo Konjunkturprognose Frühjahr 2020 Update: Schrumpfen der Wirtschaft um 6,6 Prozent am wahrscheinlichsten, <http://www.ifo.de/ifo-konjunkturprognose/20200528>, retrieved 28 May 2020.

- ifo Institute** (2020b), Im Mai waren 7,3 Millionen Beschäftigte in Kurzarbeit, Press release, Munich, 2 June.
- IMF** (2020a), Policy responses to COVID19, International Monetary Fund, Washington, DC, <https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19>, retrieved 8 June 2020.
- IMF** (2020b), World economic outlook, April 2020: The great lockdown, International Monetary Fund, Washington, DC.
- Insee** (2020), Household consumption, Point de conjuncture – French economic outlook (27 May 2020), Institut national de la statistique et des études économiques, Montrouge, 10–13.
- IWH** (2020), Konjunktur aktuell: Wirtschaft stellt sich auf Leben mit dem Virus ein, IWH Konjunktur aktuell 8 (2), Halle Institute for Economic Research, 26–62.
- KfW** (2020), Zusagen in den Corona-Programmen (Bundesländer/Landkreise), Stichtag 31. Mai 2020, KfW Group, Frankfurt am Main.
- Krueger**, D., H. Uhlig and T. Xie (2020), Macroeconomic dynamics and reallocation in an epidemic, NBER Working Paper 27047, National Bureau of Economic Research, Cambridge, MA.
- McKibbin**, W.J. and R. Fernando (2020), The global macroeconomic impacts of COVID-19: Seven scenarios, CAMA Working Paper 19/2020, Centre for Applied Macroeconomic Analysis, Crawford School of Public Policy, The Australian National University, Canberra.
- Michelsen**, C. et al. (2020), Deutsche Wirtschaft: Schleppende Erholung nach tiefem Fall: Grundlinien der Wirtschaftsentwicklung im Sommer 2020, DIW Wochenbericht 87 (24), German Institute for Economic Research, Berlin, 420–436.
- Nöh**, L., F. Rutkowski and M. Schwarz (2020), Auswirkungen einer CO2-Bepreisung auf die Verbraucherpreis-inflation, Working Paper 03/2020, German Council of Economic Experts, Wiesbaden.
- OECD** (2020), Economic outlook: Volume 2020 Issue 1 – Preliminary version, OECD Publishing, Organisation for Economic Co-operation and Development, Paris.
- Pfeiffer**, P., W. Roeger and J. in 't Veld (2020), The COVID19-pandemic in the EU: Macroeconomic transmission and economic policy response, ECFIN Discussion Paper, European Commission, Brussels, in press.
- RKI** (2020), Aktueller Lage-/Situationsbericht des RKI zu COVID-19, Robert Koch Institute, https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Situationsberichte/Gesamt.html, retrieved 18 June 2020.
- Sforza**, A. and M. Steininger (2020), Globalization in the time of COVID-19, Covid Economics – Vetted and Real-Time Papers (19), 159–210.
- Wagner**, J., F. Arnold and S. Jeddi (2020), Einfluss der Covid-19-Pandemie auf den Großhandelsstrompreis und die EEG-Umlage, EWI- Short analysis on behalf of E.ON SE, Institute of Energy Economics at the University of Cologne.
- WHO** (2020), Coronavirus disease (COVID-19) situation report 149, World Health Organization, Geneva.
- Wolter**, M.I., R. Helmrich, C. Schneemann, E. Weber and G. Zika (2020), Auswirkungen des Corona-Konjunkturprogramms auf Wirtschaft und Erwerbstätigkeit, IAB Discussion Paper 18/2020, Institute for Employment Research, Nuremberg.

ANNEX

TABLE 4

Components of the forecast for GDP growth¹ (in %)

	2014	2015	2016	2017	2018	2019 ²	2020 ²
Statistical overhang at the end of the previous year ³	0.9	0.7	0.5	1.1	0.2	0.0	1.4
Growth rate over the course of the year ⁴	1.3	1.9	3.4	0.6	0.4	- 5.6	5.3
Annual rate of change of GDP, calendar adjusted	1.5	2.1	2.8	1.5	0.6	- 6.9	4.9
Calendar effect (in percentage points)	0.2	0.1	- 0.3	0.0	0.0	0.4	0.0
Annual rate of change of GDP ⁵	1.7	2.2	2.5	1.5	0.6	- 6.5	4.9

1 – Price adjusted. 2 – Forecast by the GCEE. 3 – Percentage difference between the level of GDP in the last quarter of year t and the average level of quarterly GDP in the total year t (Annual Report 2005 Box 5). 4 – Percentage change of the fourth quarter on the fourth quarter of the previous year. 5 – Deviations in sums due to rounding.

Sources: Federal Statistical Office, own calculations

© Sachverständigenrat | 20-159

TABLE 5

Contributions to growth of gross domestic product by expenditure components¹

Percentage points

	2014	2015	2016	2017	2018	2019 ²	2020 ²
Domestic demand	1.5	2.8	2.2	2.0	1.1	- 3.4	3.6
Final consumption expenditure	1.6	2.0	1.2	1.0	1.4	- 2.4	2.9
Private consumption ³	1.0	1.2	0.7	0.7	0.8	- 2.9	2.4
Government consumption	0.5	0.8	0.5	0.3	0.5	0.5	0.5
Gross fixed capital formation	0.4	0.8	0.5	0.7	0.5	- 1.1	0.8
Investment in machinery & equipment ⁴	0.3	0.2	0.3	0.3	0.0	- 1.4	0.5
Construction investment	- 0.1	0.4	0.1	0.3	0.4	0.2	0.2
Other products	0.2	0.2	0.2	0.2	0.1	0.0	0.1
Changes in inventories	- 0.4	0.1	0.5	0.3	- 0.8	0.1	- 0.1
Net exports	0.2	- 0.6	0.3	- 0.4	- 0.6	- 3.1	1.3
Exports of goods and services	2.5	1.1	2.3	1.0	0.5	- 6.8	3.6
Imports of goods and services	- 2.3	- 1.7	- 2.0	- 1.5	- 1.0	3.7	- 2.2
Gross domestic product (%)	1.7	2.2	2.5	1.5	0.6	- 6.5	4.9

1 – Contributions to growth of price-adjusted GDP. Deviations in sums due to rounding. 2 – Forecast by the GCEE. 3 – Including non-profit institutions serving households. 4 – Including military weapon systems.

Sources: Federal Statistical Office, own calculations

© Sachverständigenrat | 20-160

TABLE 6

Labour market in Germany

1,000 persons

	2018	2019	2020 ¹	2021 ¹	2020 ¹	2021 ¹
	Yearly averages				Change on previous year in %	
Labour force ²	46,177	46,459	46,528	46,321	0.1	- 0.4
Unemployed persons ³	1,468	1,374	1,862	1,857	35.5	- 0.3
Commuter balance ⁴	145	151	96	121	- 36.3	25.7
Employed persons ⁵	44,854	45,236	44,762	44,585	- 1.0	- 0.4
Self employed persons	4,223	4,149	3,978	3,819	- 4.1	- 4.0
Employees	40,631	41,087	40,784	40,766	- 0.7	0.0
Employees subject to social security contributions	32,964	33,518	33,491	33,722	- 0.1	0.7
Marginally employed persons (ILO concept) ⁶	5,277	5,181	5,072	4,963	- 2.1	- 2.2
Marginally employed persons (FEA concept) ⁷	7,498	7,526	7,287	7,121	- 3.2	- 2.3
Exclusively marginally employed	4,671	4,579	4,375	4,200	- 4.5	- 4.0
Marginally employed in second job	2,826	2,947	2,912	2,921	- 1.2	0.3
Registered unemployed persons	2,340	2,267	2,719	2,700	20.0	- 0.7
Underemployment excluding short-time work ⁸	3,285	3,200	3,838	3,809	20.0	- 0.8
Short-time workers (Employment equivalence)	43	47	1,512	295	3116.4	- 80.5
Labour volume (million hours) ⁹	62,344	62,706	60,042	61,778	- 4.2	2.9
Unemployment rate (FEA) ^{10,11}	5.2	5.0	6.1	6.1	1.1	0.0
Unemployment rate (ILO) ^{11,12}	3.4	3.2	4.3	4.3	1.1	0.0

1 - Forecast by the GCEE. 2 - Persons in their working age with residence in Germany (national concept); as defined by the national accounts systems. 3 - ILO concept. 4 - Difference of employed workers commuting from foreign countries to Germany and those commuting from Germany to foreign countries. 5 - Employed persons in Germany independent of their residence (domestic concept). 6 - Employees not fully subject to social security contributions but who are employed according to the ILO labour force concept, especially exclusively marginally employed workers and persons with employment opportunities („1-Euro-Jobs“). 7 - Employed workers with a wage up to 450 Euro (§ 8 Absatz 1 Nr. 1 SGB IV). 8 - According to the concept of underemployment by the FEA. 9 - Working hours of employed persons working in Germany. 10 - Registered unemployed persons in relation to civilian labour force. 11 - Yearly averages in %; change on previous year in percentage points. 12 - Unemployed persons in relation to the labour force, in each case persons in private households aged from 15 to 74 years.

Sources: Eurostat, Federal Employment Agency (FEA), Federal Statistical Office, Institute for Employment Research (IAB), own calculations

© Sachverständigenrat | 20-209

TABLE 7

General government revenues and expenditures and selected fiscal indicators¹

	2019	2020 ²	2021 ²	2020 ²	2021 ²
	Billion euro			Change on previous year in %	
Total revenues	1,608.5	1,533.2	1,601.0	- 4.7	4.4
Taxes	826.6	750.6	801.7	- 9.2	6.8
Social contributions	597.6	595.8	606.9	- 0.3	1.9
Other revenues ³	184.3	186.9	192.5	1.4	3.0
Total expenditures	1,558.1	1,728.7	1,737.5	10.9	0.5
Intermediate consumption	178.9	192.8	201.5	7.8	4.5
Compensation of employees	271.4	281.8	289.2	3.8	2.6
Property income (including interest) payable	27.6	25.5	24.6	- 7.4	- 3.6
Subsidies payable	30.9	91.5	54.4	195.8	- 40.5
Social benefits other than social transfers in kind	545.7	594.9	598.2	9.0	0.6
Social benefits in kind	299.9	310.8	327.6	3.6	5.4
Gross capital formation	85.5	91.5	97.4	6.9	6.5
Other expenditures ⁴	118.0	139.9	144.6	18.5	3.3
Net borrowing/net lending	50.4	- 195.4	- 136.5	x	x
Fiscal indices (%)⁵					
Public spending ratio ⁶	45.4	52.7	49.7	x	x
Government consumption ratio	20.3	22.4	21.9	x	x
Social contributions ratio ⁷	16.2	16.9	16.1	x	x
Tax ratio ⁸	24.4	23.2	23.3	x	x
Tax and contribution ratio ⁹	40.6	40.1	39.4	x	x
Net lending/net borrowing	1.5	- 6.0	- 3.9	x	x
Debt-to-GDP ratio ¹⁰	59.8	75.2	73.3	x	x
Interest-to-tax ratio ¹¹	3.3	3.4	3.0	x	x

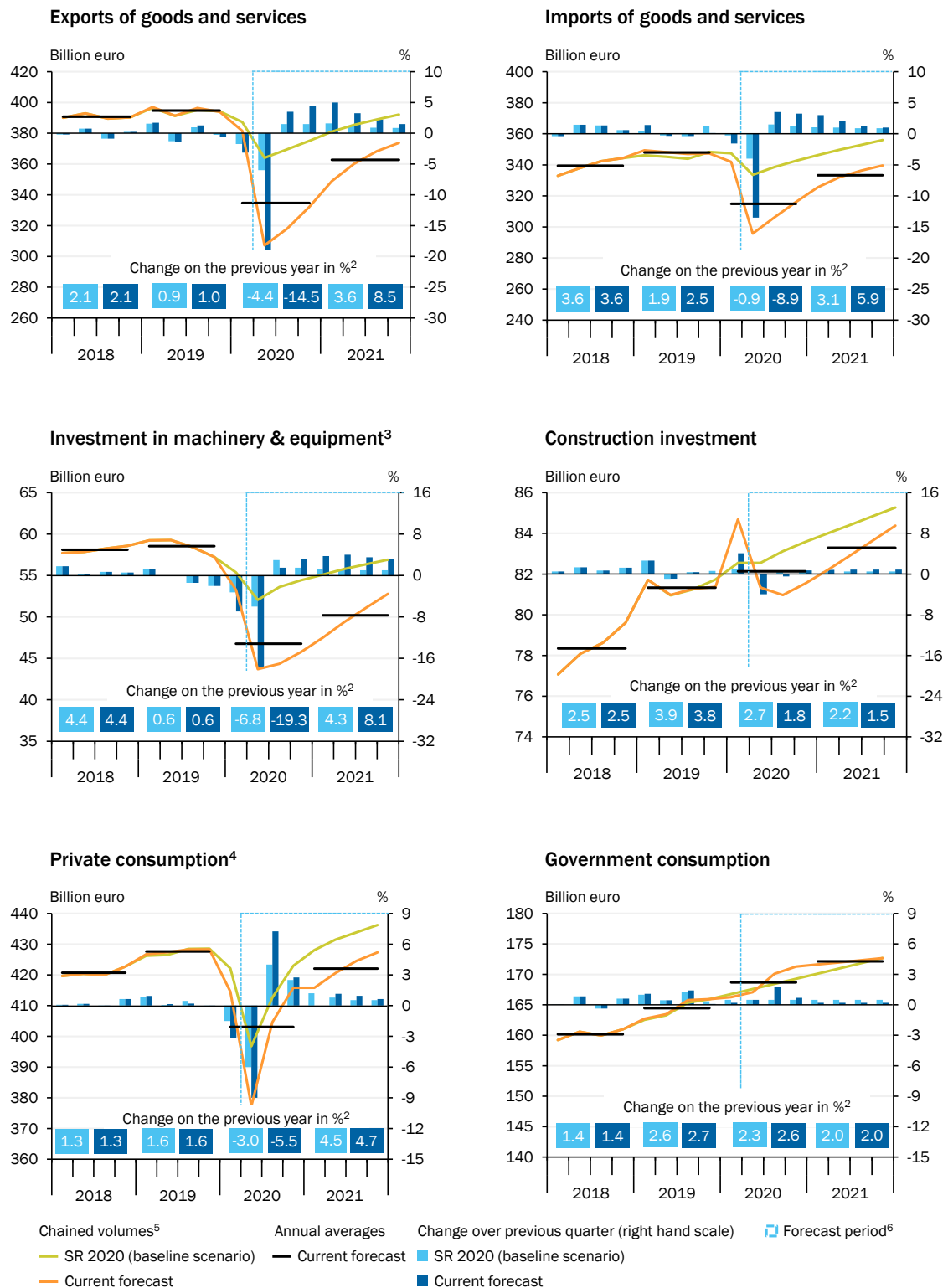
1 – National accounts (nominal values). 2 – Forecast by the GCEE. 3 – Sales, other subsidies on production, property income, other current transfers, capital transfers. 4 – Other current transfers, capital transfers, other taxes on production, and net acquisition of non-financial non-produced assets. 5 – In relation to GDP. 6 – Total expenditures. 7 – Social contributions without imputed social contributions. 8 – Taxes including inheritance tax and taxes to the EU. 9 – Taxes including inheritance tax and taxes to the EU, and actual social contributions. 10 – Forecast by the GCEE for the general government gross debt as defined in the Maastricht Treaty. 11 – Interest payable in relation to taxes including inheritance tax.

Sources: Deutsche Bundesbank, Federal Statistical Office, own calculations

© Sachverständigenrat | 20-182

CHART 13

Components of the German GDP¹



1 – All components of GDP reported price-adjusted. 2 – Not seasonally and calendar adjusted. 3 – Including military weapon systems. 4 – Including non-profit institutions serving households. 5 – Seasonally and calendar-adjusted. 6 – Forecasts by the GCEE.

Sources: Federal Statistical Office, own calculations

TABLE 8

Key figures of the national accounts

Absolute values

	Unit	2019	2020 ¹	2021 ¹	2020 ¹		2021 ¹	
					1. half-year	2. half-year	1. half-year	2. half-year
Use of domestic product								
at current prices								
Final consumption expenditure	billion euro	2,494.3	2,440.3	2,578.6	1,179.0	1,261.3	1,251.3	1,327.4
Private consumption ²	billion euro	1,795.4	1,706.6	1,811.9	825.9	880.7	878.4	933.5
Government consumption	billion euro	698.9	733.7	766.8	353.1	380.7	372.9	393.9
Gross fixed capital formation	billion euro	746.5	720.2	759.4	351.7	368.5	358.8	400.7
Investment in machinery & equipment ³	billion euro	239.8	195.3	213.0	96.1	99.2	97.6	115.4
Construction investment	billion euro	372.9	388.5	404.8	190.5	198.0	193.9	210.9
Other products	billion euro	133.7	136.4	141.6	65.1	71.3	67.3	74.3
Domestic demand	billion euro	3,234.7	3,162.9	3,338.1	1,536.9	1,626.0	1,615.0	1,723.1
Exports of goods and services	billion euro	1,613.5	1,371.2	1,492.9	705.6	665.7	723.5	769.4
Imports of goods and services	billion euro	1,412.9	1,251.9	1,333.3	627.4	624.5	640.9	692.4
Gross domestic product	billion euro	3,435.2	3,282.2	3,497.7	1,615.0	1,667.2	1,697.6	1,800.2
Chained volumes								
Final consumption expenditure	billion euro	2,366.8	2,289.7	2,379.2	1,112.5	1,177.2	1,165.5	1,213.7
Private consumption ²	billion euro	1,708.8	1,614.5	1,690.5	780.7	833.8	823.6	867.0
Government consumption	billion euro	657.9	674.8	688.6	331.6	343.2	341.8	346.8
Gross fixed capital formation	billion euro	683.6	647.8	670.7	316.5	331.3	317.8	352.9
Investment in machinery & equipment ³	billion euro	232.9	187.8	203.1	92.4	95.4	93.0	110.1
Construction investment	billion euro	324.0	329.8	334.9	161.7	168.1	161.2	173.7
Other products	billion euro	126.5	127.2	130.5	61.0	66.2	62.2	68.2
Domestic demand	billion euro	3,054.1	2,945.3	3,055.3	1,435.4	1,509.9	1,488.2	1,567.1
Exports of goods and services	billion euro	1,572.6	1,344.8	1,459.2	689.4	655.4	710.9	748.3
Imports of goods and services	billion euro	1,387.7	1,264.3	1,338.7	629.0	635.3	648.2	690.5
Gross domestic product	billion euro	3,240.7	3,029.7	3,178.3	1,497.1	1,532.6	1,551.8	1,626.6
Price Development (deflators)								
Final consumption expenditure	2015=100	105.4	106.6	108.4	106.0	107.2	107.4	109.4
Private consumption ²	2015=100	105.1	105.7	107.2	105.8	105.6	106.7	107.7
Government consumption	2015=100	106.2	108.7	111.4	106.5	110.9	109.1	113.6
Gross fixed capital formation	2015=100	109.2	111.2	113.2	111.1	111.2	112.9	113.6
Investment in machinery & equipment ³	2015=100	103.0	104.0	104.9	104.1	103.9	105.0	104.9
Construction investment	2015=100	115.1	117.8	120.9	117.8	117.8	120.3	121.4
Other products	2015=100	105.7	107.2	108.5	106.8	107.7	108.1	109.0
Domestic demand	2015=100	105.9	107.4	109.3	107.1	107.7	108.5	110.0
Terms of Trade	2015=100	100.8	103.0	102.7	102.6	103.3	102.9	102.5
Exports of goods and services	2015=100	102.6	102.0	102.3	102.3	101.6	101.8	102.8
Imports of goods and services	2015=100	101.8	99.0	99.6	99.8	98.3	98.9	100.3
Gross domestic product	2015=100	106.0	108.3	110.1	107.9	108.8	109.4	110.7
Production of domestic product								
Employed persons (domestic)	1,000	45,236	44,762	44,585	44,884	44,640	44,395	44,775
Labour volume	million hours	62,706	60,042	61,778	29,546	30,496	30,167	31,611
Labour productivity (per hour)	2015=100	103.0	100.6	102.5	101.0	100.2	102.5	102.6
Distribution of net national income								
Net national income	billion euro	2,560.2	2,463.3	2,566.8	1,204.8	1,258.5	1,230.8	1,336.1
Compensation of employees	billion euro	1,848.4	1,818.6	1,881.6	877.9	940.7	901.2	980.4
Gross wages and salaries	billion euro	1,522.2	1,494.2	1,551.5	716.4	777.7	741.7	809.7
among them: net wages and salaries ⁴	billion euro	1,021.2	1,007.5	1,051.7	478.4	529.1	498.4	553.3
property and entrepreneurial income	billion euro	711.8	644.7	685.2	326.9	317.8	329.5	355.7
Disposable income of private households ²	billion euro	1,954.3	1,961.8	1,995.9	974.8	987.0	988.1	1,007.9
Savings rate of private households ^{2,5}	%	10.9	15.6	12.0	17.8	13.5	13.7	10.2
For information purposes:								
Nominal unit labour costs ⁶	2015=100	108.4	114.7	113.8	112.5	117.0	112.3	115.3
Real unit labour costs ⁷	2015=100	102.3	105.9	103.4	104.3	107.5	102.7	104.1
Consumer prices	2015=100	105.3	105.9	107.5	106.1	105.5	107.1	107.8

1 – Forecast by the GCEE. 2 – Including non-profit institutions serving households. 3 – Including military weapon systems. 4 – Compensation of employees minus social contributions of employers and employees and income tax of employees. 5 – Savings relative to disposable income.

6 – Compensation of employees per working hour (employee concept) in relation to real GDP per working hour (employed person concept).

7 – Compensation of employees per working hour (employee concept) in relation to GDP per working hour (employed person concept).

Sources: Federal Employment Agency, Federal Statistical Office, own calculations

Key figures of the national accounts

Change on the previous year in %

2019	2020 ¹	2021 ¹	2020 ¹		2021 ¹		
			1. half-year	2. half-year	1. half-year	2. half-year	
							Use of domestic product
							at current prices
3.5	- 2.2	5.7	- 3.1	- 1.3	6.1	5.2	Final consumption expenditure
3.0	- 4.9	6.2	- 5.9	- 4.0	6.4	6.0	Private consumption ²
5.0	5.0	4.5	4.5	5.5	5.6	3.5	Government consumption
5.5	- 3.5	5.5	- 2.2	- 4.8	2.0	8.7	Gross fixed capital formation
1.9	- 18.6	9.1	- 17.0	- 20.0	1.5	16.4	Investment in machinery & equipment ³
8.3	4.2	4.2	5.5	2.9	1.8	6.5	Construction investment
4.4	2.0	3.9	2.8	1.2	3.4	4.3	Other products
3.1	- 2.2	5.5	- 3.1	- 1.4	5.1	6.0	Domestic demand
1.7	- 15.0	8.9	- 12.2	- 17.8	2.5	15.6	Exports of goods and services
2.4	- 11.4	6.5	- 10.5	- 12.3	2.2	10.9	Imports of goods and services
2.7	- 4.5	6.6	- 4.4	- 4.5	5.1	8.0	Gross domestic product
							Chained volumes
1.9	- 3.3	3.9	- 4.5	- 2.1	4.8	3.1	Final consumption expenditure
1.6	- 5.5	4.7	- 7.1	- 4.0	5.5	4.0	Private consumption ²
2.7	2.6	2.0	2.2	2.9	3.1	1.1	Government consumption
2.6	- 5.2	3.5	- 4.3	- 6.1	0.4	6.5	Gross fixed capital formation
0.6	- 19.3	8.1	- 18.0	- 20.6	0.7	15.3	Investment in machinery & equipment ³
3.8	1.8	1.5	2.5	1.2	- 0.3	3.3	Construction investment
2.7	0.5	2.6	1.2	- 0.2	2.1	3.1	Other products
1.2	- 3.6	3.7	- 4.7	- 2.5	3.7	3.8	Domestic demand
1.0	- 14.5	8.5	- 12.2	- 16.7	3.1	14.2	Exports of goods and services
2.5	- 8.9	5.9	- 8.4	- 9.4	3.0	8.7	Imports of goods and services
0.6	- 6.5	4.9	- 6.7	- 6.3	3.7	6.1	Gross domestic product
							Price Development (deflators)
1.6	1.1	1.7	1.5	0.8	- 0.2	2.1	Final consumption expenditure
1.3	0.6	1.4	1.2	0.0	0.8	1.9	Private consumption ²
2.3	2.4	2.4	2.2	2.5	2.5	2.4	Government consumption
2.9	1.8	1.9	2.3	1.4	1.6	2.1	Gross fixed capital formation
1.3	1.0	0.9	1.3	0.7	0.8	0.9	Investment in machinery & equipment ³
4.4	2.3	2.6	3.0	1.7	2.1	3.1	Construction investment
1.6	1.5	1.2	1.6	1.4	1.2	1.2	Other products
1.8	1.4	1.7	1.7	1.1	1.4	2.1	Domestic demand
0.9	2.2	- 0.2	2.3	2.0	0.3	- 0.8	Terms of Trade
0.8	- 0.6	0.3	0.0	- 1.3	- 0.5	1.2	Exports of goods and services
- 0.1	- 2.7	0.6	- 2.3	- 3.2	- 0.9	2.0	Imports of goods and services
2.1	2.2	1.6	2.5	1.9	1.4	1.7	Gross domestic product
							Production of domestic product
0.9	- 1.0	- 0.4	- 0.4	- 1.7	- 1.1	0.3	Employed persons (domestic)
0.6	- 4.2	2.9	- 4.1	- 4.4	2.1	3.7	Labour volume
0.0	- 2.4	2.0	- 2.9	- 2.0	1.5	2.4	Labour productivity (per hour)
							Distribution of net national income
2.3	- 3.8	4.2	- 3.0	- 4.5	2.2	6.2	Net national income
4.4	- 1.6	3.5	- 0.8	- 2.3	2.7	4.2	Compensation of employees
4.2	- 1.8	3.8	- 1.5	- 2.2	3.5	4.1	Gross wages and salaries
4.7	- 1.3	4.4	- 1.0	- 1.7	4.2	4.6	among them: net wages and salaries ⁴
- 2.7	- 9.4	6.3	- 8.5	- 10.4	0.8	11.9	property and entrepreneurial income
2.9	0.4	1.7	0.2	0.5	1.4	2.1	Disposable income of private households ²
.	Savings rate of private households ^{2,5}
							For information purposes:
3.3	5.8	- 0.8	7.2	4.6	- 0.1	- 1.5	Nominal unit labour costs ⁶
1.2	3.6	- 2.3	4.6	2.7	- 1.5	- 3.1	Real unit labour costs ⁷
1.4	0.6	1.6	1.4	- 0.3	0.9	2.2	Consumer prices

1 – Forecast by the GCEE. 2 – Including non-profit institutions serving households. 3 – Including military weapon systems. 4 – Compensation of employees minus social contributions of employers and employees and income tax of employees. 5 – Savings relative to disposable income. 6 – Compensation of employees per working hour (employee concept) in relation to real GDP per working hour (employed person concept). 7 – Compensation of employees per working hour (employee concept) in relation to GDP per working hour (employed person concept).