KfW Research
Focus on Economics

For crisis-resilient growth and better global collaboration

No. 302, 19 October 2020

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The global response to contain the coronavirus pandemic has plunged Germany into an economic slump of historic proportions. The end of the pandemic is not yet in sight and there is much uncertainty and concern over its further course. Nevertheless, there is good reason to be confident, even on the economic front. This becomes clear when we compare it with the economic challenges posed by Germany's unification. At the time, the legacy of the socialist centrally planned economy of the former GDR led to a deep economic slump and the challenges, for which no one had a blueprint either, were formidable: There was a need to rebuild the infrastructure on a broad scale, reverse widespread environmental damage, develop private entrepreneurship and create comprehensive social supports. All of this required public funds on a scale unseen in Germany since World War II. The transformation profoundly affected people's lives and even in Germany's western states there emerged the need and willingness to embrace far-reaching changes and reforms, particularly to reduce the high levels of unemployment, strengthen growth and meet the demand for skilled labour in the face of demographic change. We need such an atmosphere of hope and renewal today as well so we can grow our prosperity further and prepare ourselves for future crises. In this paper we will explore where there are challenges for the economic future of Germany and Europe and what needs to be done to tackle them successfully once again.

During the lockdown imposed to contain the spread of the coronavirus, Germany's output collapsed by at least 20% and businesses reported short-time work for one quarter of their workforce. Broad sections of the economy including hospitality, retailers and transport companies, hotels, members of the cultural and creative industries are now worried about their livelihoods and their workers are in fear of losing their jobs. A vaccine or treatment that ends this period of disruption is yet to be developed. It is true that encouraging progress has been made but immunisation of wide sections of the population is unlikely to happen before next spring. Still, there are good reasons to stay optimistic.

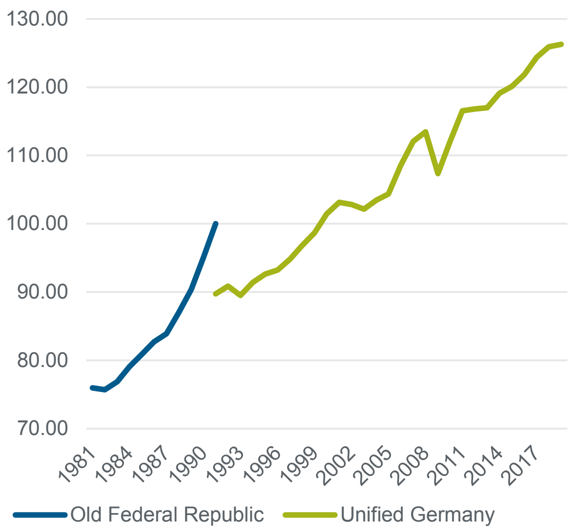
We have successfully rebuilt eastern Germany and we will also overcome the coronavirus crisis

The collapse of the economy of the GDR and the subsequent reconstruction of Germany's eastern states can be likened to tackling a deep economic crisis. After all, in 1991 unified Germany's GDP per capita was 10% lower than that of the old Federal Republic (Figure 1). And it took until the year 2000 for Germany's per capita GDP to exceed that of the old Federal Republic of Germany of 1991.

The question of which challenge posed a heavier burden on the economy cannot yet be answered conclusively. But the possible consequences of the coronavirus crisis can be identified and estimated to an extent that permits us to make a comparison and predict how the German economy is able to overcome its impact. Such a prediction must also take into account fundamental differences in the causes and response required between then and now.

Figure 1: The collapse of the economy of the former GDR triggered the hitherto deepest economic crisis of the post-war era

GDP per capita, real development (index: old Federal Republic 1991=100, unified Germany 1991=89.7)



Source: Destatis.

The first question concerns the magnitude of the economic collapse. We expect gross domestic product to contract by 6% this year and grow again by 5% next year. However, the crisis is not over and the outlook is extremely uncertain. In the event of a second, very severe wave of infections, a 10% decline in GDP in 2020 would also be possible. The drop per capita would then be roughly as steep as in 1991. Even in that case, Germany would likely overcome the crisis successfully, if with a sharper decline in prosperity than is apparent so far.

Germany has the capacity and the tools it needs to mitigate the worst effects of the crisis and climb out of the trough quickly

In the current crisis, one important aspect to be mindful of is that Germany and its trading partners have the ability to prevent the worst outcomes with financial support, legislation, such as rent deferrals and a moratorium on insolvency, and a smart pandemic management. The crisis-tested country of South Korea has demonstrated that protective measures and controls such as masks, quick tests, rules of behaviour, tracing of infection chains, warning apps and temperature checks allow the economy to function largely without disruption. This suggests that Germany and its trading partners can succeed in maintaining infections under control. They should hence be able to return to previous production levels quickly when the pandemic is over.

In contrast, after Germany's unification the eastern states required large amounts of investment and workforce retraining on a broad scale in order to catch up economically with the western states. That is why it took unified Germany nine years to return to the levels of per capita GDP of the former Federal Republic. Today, however, competitive production facilities and a modern infrastructure already exist. We believe a return of GDP to the pre-crisis level by the end of 2021 is a realistic prediction.

Even in the crisis, social benefits secure prosperity for all

The statutory pension, health and unemployment funds, short-time allowance and housing allowance work as automatic stabilisers. The efficiency of Germany's social system was also evident after unification. At the time, official and hidden unemployment rates temporarily exceeded 6 million and social security funds expanded their payments to all citizens of Germany's eastern states. Today many workers and self-employed persons have to deal with a loss of income and assets, unemployment and insolvency as a result of the lockdown and hygiene measures. But those affected are protected and supported by the social safety net. This also bolsters private consumption and residential construction, preventing an even deeper economic collapse.

The government support packages are financially sustainable

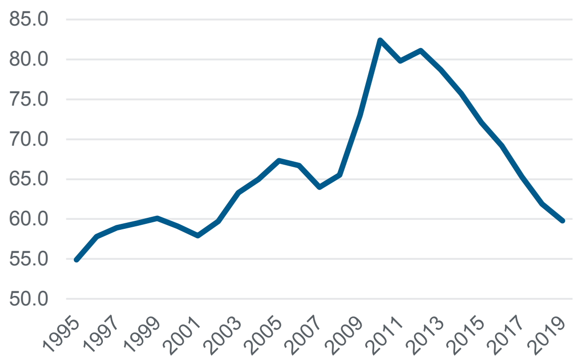
At least from the perspective of the national budget, the state is positioned well enough to be able to financially shoulder the extensive support packages and social benefits. The public budgets in Germany have succeeded in lowering the Maastricht debt level from its historic high of 82% of GDP in 2010 to just under 60% (Figure 2). Lenders' confidence is therefore very high.

Even if government support measures have to be expanded substantially, Germany can handle this thanks to its economic prowess and sound finances. A comparison with Germany's unification illustrates this. According to the calculations made by the German Council of Economic Experts at the time, Germany's eastern states received reconstruction support and social transfers from public budgets in a volume of 11 to 14% of Germany's GDP in each of the years 1991 to 1993 alone. That did not include promotional loans and sureties. For the three years combined, those government payments would amount to EUR 1.3 trillion in today's prices. Today we are nowhere near that order of magnitude if we leave out of the comparison support loans and sureties – such as the ones granted under the KfW Special Programme 2020 and the economic stabilisation fund – because most of them are either repaid later or not drawn on.[1]

So far, the Federal Government has passed two supplementary budgets providing for additional expenditure totalling EUR 146.5 billion. These funds will be used for measures aimed at combating the pandemic, to provide financial support for businesses and for the economic and sustainability package which was adopted in June. In addition, the Federal Government expects tax shortfalls in the sum of EUR 316 billion up to the year 2024. There will be additional expenditure from other budgets, for example to finance short-time allowance and increased unemployment. Furthermore, in the long term Germany will have to make a significant contribution to paying back the debt which is to be raised in the capital market to finance the EUR 750 billion for the European reconstruction plan.[2] But even if we take all of this into consideration, the financial burden of the coronavirus crisis on public budgets, to the extent foreseeable today, will remain well below the cost of rebuilding eastern Germany. In its economic forecast, which was updated in June, the Council of Economic Experts estimated that the total public debt to GDP ratio will rise to around 75% in 2020.[3] That puts it below the maximum reached during the financial crisis.

Figure 2: Germany entered the crisis with sound public finances

Germany's Maastricht debt level in relation to GDP



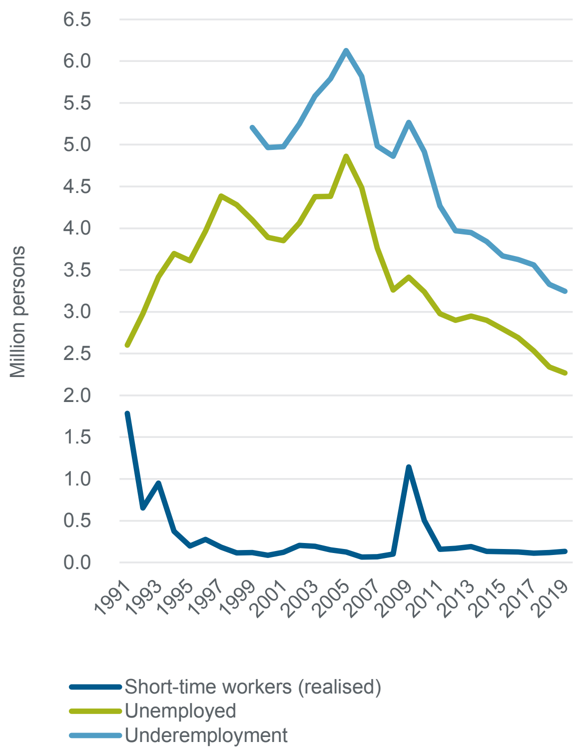
Source: Eurostat.

Federal and state governments have made a credible whatever-it-takes promise

The federal and state governments have set up a comprehensive protective shield composed of economic incentives under the supplementary budgets, expanded guarantee frameworks, the economic stabilisation fund, expanded short-time allowance and the programmes of its promotional banks such as the KfW Special Programme 2020. It supports not just a large portion of businesses in distress but millions of jobs as well. This becomes clear when we look at the US, where the number of people out of work skyrocketed by 34 million from mid-March to the beginning of May and the unemployment rate rose to an historic high of 15.5%.

In Germany, the short-time allowance has prevented such a massive surge in unemployment. In 1991 the number of workers on short-time arrangements was 1.8 million, an historic high before the coronavirus crisis hit (Figure 3). According to preliminary estimates by the Federal Employment Agency, in June 2020 cyclical short-time allowance was disbursed to 5.7 million workers. That was an alarmingly high figure. However, the number of short-time workers has dropped again considerably since April and it will decrease even more with the further reopening of the economy. Owing to the skills shortage and labour market reforms of the past decades, unemployed workers today have relatively good prospects of being hired again quickly. Rather, it is the structural challenges that pose a longer-term risk for the employment outlook and they have already become apparent with digitalisation and the transition to a carbon-neutral economy. It is to be expected that this will lead to shifts in workforce requirements.

Figure 3: Thanks to labour market reforms, the labour market was historically in the best position in 2019



Source: Federal Employment Agency.

The EU is helping Europe get out of the trough of the crisis soon and maintaining stability in the euro area

Having successfully overcome the financial crisis, the EU and the euro area were able to quickly deploy newly created and tried-and-tested crisis management tools. The first support package, which was launched early, comprises credit lines under the European Stability Mechanism, European short-time allowance and investment loans and liquidity assistance from the EIB. Furthermore, the European Central Bank is ensuring through its asset purchases and further interest rate and monetary policy measures that the supply of money and credit in the euro area works even during the crisis and no deflationary spiral begins. And finally, finance is being made available under the EU reconstruction fund to enable all member states to undertake extensive investments and innovations. In all this it will be important that the planned investments bring Europe forward, including with a view to the structural challenges and, thus, future economic growth.

However, there is no guarantee of a successful new beginning

Rebuilding the economy in Germany's eastern states took a long time and brought profound change, not just for the people living there. Not least, the sharp rise in unemployment was a key driver of the Agenda 2010 with the Hartz reforms, which played an important role in reducing entrenched unemployment.[4] The long road to new economic strength took place in an atmosphere of hope and renewal that made far-reaching reforms possible.

The coronavirus crisis poses a different sort of challenge. It does not require an all-encompassing economic transformation of entire federal states but instead affects the whole world and has brought great human suffering and existential threats for vast parts of the economy in all of Germany. For this reason the mood is different from the one that prevailed after unification. Whereas today uncertainty and fear is more widespread, back then the prospect of a new beginning full of newfound opportunities and freedoms shaped the emotions of many people. Yet the fact that the coronavirus crisis has made a profound impact in every respect also means an opportunity for major transformations to successfully tackle the challenges of the future.

After all, this crisis has also created a great deal of movement. It has accelerated a digitalisation drive with remote working solutions and nearly one in two small and medium-sized enterprises have already modified either their business model or their product assortment. Also, most people have experienced strong emotions of fear for a loved one or for their livelihood. This can trigger an impulse for transformations because such life-changing events and emotions cause people to question and reassess established views and approaches. In order to seize this opportunity for change towards more sustainable economic action after the crisis, five fields of action will be decisive: 1) making the economy more resilient to crises; 2) fostering the transition towards a carbon-neutral economy; 3) translating inventiveness and reduced mistrust in digitalisation into productivity increases; 4) continuing to use the advantages of international integration and avoiding a nationalisation of supply chains; 5) strengthening Europe.

Germany needs more than an economic stimulus programme

The federal and state governments have so far put together a comprehensive package of economic stimulus measures under supplementary budgets, an expanded guarantee framework, the economic stabilisation fund and special programmes of their promotional banks to preserve the productive forces of the German economy during the crisis. Now the focus is turning to the recovery phase. This is demonstrated by the Federal Government's economic and sustainability package which has elements aimed at creating stability as well as elements that kick-start growth and address the structural challenges.

The adopted stabilisation measures include reducing the value-added tax rate, bridging assistance for heavily affected SMEs in the form of grants and more favourable tax depreciation options. These measures are designed to stabilise businesses that have suffered heavy losses in turnover in the short term and strengthen consumption and investment demand. For as long as the crisis lasts, it may be appropriate to extend the measures, the duration of which is justifiably limited. In principle, however, all economic support measures should be provided only temporarily in order to avoid disrupting the cleansing effect of market competition and the necessary structural transformation.

The measures that strengthen sustainable growth and address the structural challenges include the funds earmarked for the transition to a carbon-neutral economy, for the mobilisation of innovation and the acceleration of digitalisation, and the financial relief and strengthening of municipalities. Over the long term, these measures promote environmentally, climate-friendly and regionally balanced growth in Germany.

Combined with the measures already adopted under the protective shield to manage the pandemic, the package makes a tangible contribution to stabilising the economy, which can be financed without any difficulty despite increasing public debt. This year alone, real gross domestic product could be around one per cent higher thanks to its contribution.

Furthermore, the consolidation efforts of the past years provide scope for growth-promoting investment at all federal levels. In addition, the largely sound financial position of enterprises and private households is a good starting point on which to build the structural transformation of the economy and society. In the key fields of action which we will address below, the aspect of crisis resilience must always be kept in mind. Enhanced crisis resilience is indispensable for a sustainable growth model.

Building crisis resilience to successfully get past future crises

Germany has weathered the coronavirus crisis relatively well so far. This is owed to the mostly prudent response of all public and private actors. But the crisis has laid bare the vulnerability of our economy and society. It has made the state, business community and private households more aware of how important crisis resilience is. Greater crisis resilience is an important pillar of sustainable development. Crisis prevention has always been a matter of course in the defence of the nation and the protection of internal security and so it should also be in other areas, especially where the protection of our health and our natural bases of life is concerned.

However, crisis prevention costs money. The large amounts spent on internal and external security make this clear. Comprehensive protection against all conceivable crisis situations will therefore not be possible. Resilience, growth and resource efficiency are not always in a state of balance. Policymakers have an obligation to set the conditions and incentives in such a manner that risks remain acceptable and that society can manage potential crises as effectively as possible.

Advancing carbon neutrality through efficient climate action

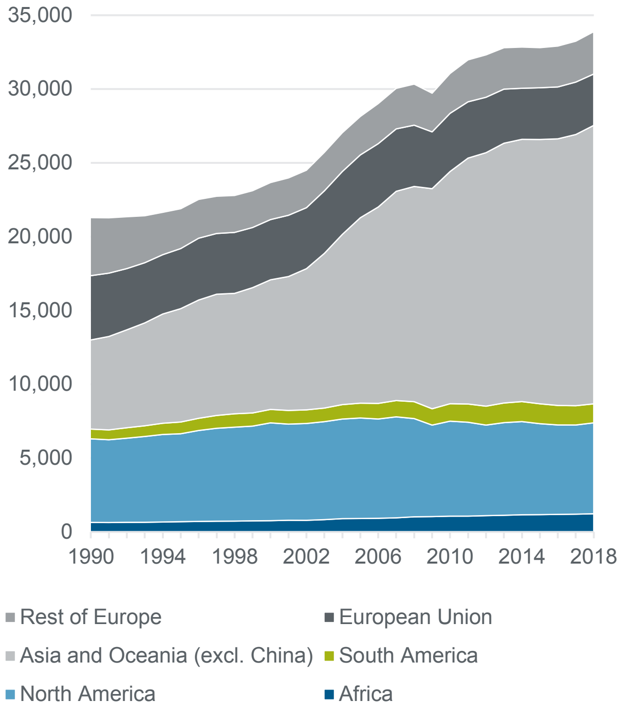
The coronavirus crisis provides an opportunity for society to reassess the urgency of an effective national and international strategy against the climate crisis. Leading climate scientists agree that the intensity and frequency of extreme weather events and resulting damage will increase many times if the global temperature continues to rise. The coronavirus crisis impressively demonstrates what an acute crisis situation that affects the whole world means. If climate change continues unchecked, probable scenarios show that the consequences will be much more severe. These include increasing droughts, wildfires, flooding, water shortages, crop failures and even famine, growing flows of refugees and a significantly higher number of fatalities than in the coronavirus pandemic.

Limiting the increase in global temperatures to well below 2°C requires much greater efforts than those undertaken so far. The growth and investment programmes planned by the federal and state governments as well as the EU should make a noticeable contribution. The Federation of German Industries estimates the necessary additional investment required to reduce greenhouse gas emissions in Germany by 95% by the year 2050 compared with the 1990 baseline to be more than EUR 2.3 trillion. Higher public investment and incentives for private investment are necessary in four main areas: 1) transport, 2) industry, 3) buildings and 4) renewable energy.

However, climate action will not be successful unless a sufficient number of countries lower their emissions. So far, that is not the case. Despite significant reductions achieved in Germany and the European Union, CO_2 emissions from energy use around the world increased up to 2018 (the most recent year in the statistic) (Figure 4). This is due to the rising emissions of the developing and emerging economies catching up. Today, China alone accounts for one quarter of global CO_2 emissions from energy use, the European Union only 10%. Therefore, a major challenge consists in encouraging developing and emerging countries to lower their greenhouse gas emissions as well – and by a significant margin. In order for this to succeed, zero-emission energy generation and energy saving technologies need to be developed that are efficient and economically attractive enough. This requires a mix of market incentives induced by the state and promotion of research and innovation.

Figure 4: Global CO_2 emissions from energy use continued to rise up to 2018

CO_2 emissions from energy use in megatonnes (Mt=1 million tonnes)



Source: Energy data from the Federal Ministry of Economics and Technology.

Translating inventiveness and digitalisation experience from the crisis into productivity increases

The crisis has inspired many businesses to be inventive and 43% of SMEs have already modified their range of offerings or business model. Many continued to operate during the lockdown by enabling their employees to work from home. This creativity and the use of modern technology need to be translated into productivity increases in future as well. It is the only way we can maintain our level of prosperity. After all, in light of the ongoing demographic change, productivity increases through digitalisation and innovation will have to be key sources of our future prosperity.

There is a great need for investment in digital infrastructure and digital training. Municipalities and federal states need to accelerate their investment in broadband and mobile telecommunications infrastructure (5G) in order to make fast internet broadly available. This is the precondition for the further expansion of efficient remote working capacities, networked cooperation and innovative future services such as autonomous driving. In order to advance the expansion of broadband Internet in rural regions, approval procedures and promotional conditions also need to be simplified. That will help to bring production costs in line with consumers' willingness to pay for high bandwidth. The supply of cost-effective broadband connectivity is particularly important for the start-up sector. It creates the conditions for strengthening technologies of the future and the necessary expertise, e.g. through high-tech or deep-tech start-ups. This is an important factor in preserving Germany's competitiveness as a business location.

German enterprises must become more innovative on a lasting basis. Additional financing offers are therefore needed to promote the development of new ideas, business models and digital solutions. Research and development is the basis for establishing fields of technology of the future in Germany. The efforts undertaken to achieve this in recent years must be ramped up, as they are still insufficient. This is clear from the persistent productivity weakness in Germany and the sharp drop in the share of innovative SMEs since the turn of the millennium. This needs to be viewed critically, also with a view to the digital innovation initiatives in the US and China and the growing skills shortage. Across the breadth of the economy, innovation and digitalisation barriers in the areas of infrastructure, finance, education and expertise need to be dismantled and new ideas promoted. The formation of technology-based start-ups is another particularly strong driver of the structural transformation towards new fields of technology. In these aspects, appropriate financing offers for businesses are key.

Further strengthening and harnessing international networking for crisis-resilient economic action

Despite the dependencies revealed by the coronavirus crisis, the international division of labour is of existential importance for Germany and other economies. Shortages in the supply of medicines and medical technology, as well as disruptions to production from a shortage of parts from suppliers abroad, have prompted calls for a nationalisation of supply chains. In addition, the export downturn – exemplified in Germany by a 31% drop in April 2020 below the previous month's level – has revealed the country's vulnerability to global shocks. However, withdrawing from an international division of labour and foreign trade would bring a sharp decline in prosperity, particularly for an economy that hardly has any natural resources. Therefore, instead of scaling back globalisation, what is required is to enhance crisis resilience by increasing the security of supply and making supply chains less vulnerable.

With a view to the pandemic, security of supply could be enhanced by building national strategic reserves for selected goods such as medicines and medical technology. The announced EU strategy for pharmaceutical products will address this as well. What would be desirable is to include country-specific crisis response measures in the strategy, for example when they refer to areas such as intra-European transport, in order to shape the intended security in an efficient manner. Advancing digitalisation also gives growing importance to strategic measures for ensuring data protection and expanding IT infrastructure. Directives and requirements for greater crisis resilience in data storage are becom-

Table: Countries with higher debt levels generally have to offer lenders a higher yield

	Rating Standard & Poors (01.09.20)	Government debt to GDP (2019)	Yields for 10-year government bonds Per cent (August 2020)
Netherlands	AAA	49	-0.35
Germany	AAA	60	-0.47
Finland	AA+	59	-0.26
Belgium	AA	99	-0.20
France	AA	98	-0.18
Spain	A	96	0.32
Italy	BBB	135	0.97
Portugal	BBB	118	0.34
Greece	BB-	177	1.08

Source: Börsenzeitung, Eurostat, Statista.

ing relevant for increasingly more enterprises and could be clarified and bundled in the future.

Businesses have to rely on fair international trade in order to be able to diversify their risks in value chains and sales markets. A reliable framework for trade in the EU internal market and with non-EU countries contributes to this. The further reduction of tariff and non-tariff trade barriers would make it easier to achieve greater diversification. The EU internal market could also be strengthened by further sup-porting labour mobility within the EU through the reduction of bureaucracy. The latter would also benefit cross-border services within the EU. Besides, advancing the harmonisation or mutual recognition of laws, directives and standards within EU member states would benefit businesses.

Smaller businesses in particular benefit from support that helps them tap into additional procurement or sales markets. The high cost of developing a market has so far caused most SMEs to focus on only a few markets, on which they then become heavily reliant. Having a higher number of suppliers and purchasers in multiple countries reduces the risk of disrupted supply chains or losses in turnover. Digital solutions such as platforms could be expanded here and supplement existing offerings. Improved financing options, especially for projects abroad with a lesser volume, could be helpful.

Strengthening and preparing Europe for future challenges

Providing support for a stable Europe is also in Germany's own interest. It is only in a strong European Union that Germany and its European partners can preserve their prosperity and jointly tackle global challenges. Reaching an agreement on a financial security network to overcome the crisis is a first success for Europe's stability. The EU has demonstrated its willingness to act. However, the tough struggles over financing instruments also make potential braking points clearly visible. Germany in particular, with its trade-based economic model and a value system based on democratic rule of law, has a great interest in opposing the nationalistic and authoritarian centrifugal forces in Europe. But this also applies to the other democracies in Europe that are fighting national populism, if only because political and economic cooperation between libertarian-democratic states is the best guarantor for peace.

In the current crisis it is also important to safeguard the debt sustainability of all euro states. In order to achieve this, the first priority is to maintain the general level of interest rates in the euro area low enough so that interest payments remain acceptable for all states. Furthermore, the reconstruction fund must be used to restart investment and innovation in the highly indebted EU member states that have been particularly affected by the pandemic, along with economic reforms that strengthen growth. Further addressing structural challenges in Germany as well remains just as indispensable. If this provides a way to leave high debt behind in the long term, it would be a key contribution to making the euro area crisis-resilient.

From a longer-term perspective, efforts should be undertaken to bring the very high debt in all EU states back down to within the limits agreed in the Stability and Growth Pact. After all, sound finances are of crucial importance for preserving the crisis resilience and response capability of the euro area and its member states. This becomes quite clear when we look at the correlation between government debt, the country rating and the interest paid on government bonds. Germany and the Netherlands have an AAA rating due to their relatively low government debt, economic stability and unequivocal reliability as debtors (table). It allows the Federal Republic to borrow on the best possible terms, reducing the interest burden on the national budget.

Thus, the yield on newly issued 10-year federal bonds (*Bundesschuldverschreibungen*) was -0.47% per annum in August. Obviously, all states are benefiting from the generally very low interest rate level. However, for Italy and its BBB rating this means interest of +0.97% on its 10-year government bonds. If Germany had to pay the same yield as Italy for the total new government debt of EUR 240 billion planned for this year (total government deficit of 7¼% according to the stability programme of April), this new debt alone would burden Germany's public budgets with an additional EUR 3.4 billion per year in additional interest costs.

The EU reconstruction fund provides an opportunity to use the crisis to focus on strategic fields of the future. The European Green Deal and Europe for the Digital Age are rightly among the priorities of the EU Commission and Germany's Presidency of the Council. The aim is to avoid falling behind in leading-edge technologies and to modernise the economy in a sustainable manner. However, in line with the compromise reached between the European heads of state and government, using the additional EU funds for investments in green technologies, digital infrastructure (e.g. mobile networks) and expertise (e.g. artificial intelligence) will largely fall under the responsibility of the member states. Governance for the European Reconstruction and Resilience Facility should be detailed in such a way that the EU can demand that the states meet their responsibility. The completion of the banking and capital market union will also play an important role because it will facilitate more crisis-resilient economic action and promote innovation through more private risk sharing, improved shock absorption and venture capital.

The crisis as a catalyst for more sustainable economic action

In summary, the measures already adopted in response to the crisis need to be developed into a consistent growth and investment programme together with measures yet to be adopted in the future. This programme must take into account the structural challenges of the German economy and bring to life a clear objective of sustainable economic action. From our point of view, the five fields of action described above – resilience, carbon neutrality, productivity growth through innovation and digitalisation, diversified international networking and a strengthened Europe – will be key. The programme will have to support private households, businesses, banks and local governments in shaping sustainable economic action. What will also be important is to think about how to continue enabling businesses and local governments that have experienced financial difficulties from the crisis to continue investing.

In order to continue developing and strengthening the German economy and the European Union in the manner outlined above, far-reaching changes, a willingness to adapt and targeted commitment from all economic and political actors will be necessary in the years ahead. It would therefore be desirable to generate the atmosphere of hope and renewal and to muster the courage to undertake fundamental reforms that enabled the Germans – with the support of their European partners – to successfully master the challenges of unification over the past decades.

[1] In the public debate, the coronavirus crisis is being assumed to cost a total of up to EUR 1 trillion and more. But the only way to arrive at this sum is by counting loans and sureties. If they were included in this calculation, however, the funds employed for the reconstruction of eastern Germany would also add up to a much higher total. Moreover, a comprehensive comparison would have to include the funds expended across the entire phase of rebuilding eastern Germany, not just for three years, and that would require great effort and could only be an estimate because of statistical gaps.

[2] The amounts mentioned here are gross payments of the state. If we look at the net payments we have to take into account that a considerable portion of state expenditure for the reconstruction of eastern Germany and the support provided during the coronavirus crisis have been or will be repaid to the state in the form of taxes, social security contributions and loan repayments and that a substantial amount of the EUR 750 billion of the EU reconstruction fund will be disbursed to Germany in the form of economic support.

[3] Cf. Council of Economic Experts, (2020): KONJUNKTURPROGNOSE 2020 UND 2021, 23. June 2020,

[4] Cf. Müller, M. (2018): **Is there no end to Germany's jobs boom? What we can do now to meet our skills needs in the future**, Focus on Economics No. 216, KfW Research.