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After the Great Economic Collapse: Germany's Stimulus Package to Recover the Economy in Times of Covid-19

ABSTRACT

At the beginning of June 2020, the German government launched a comprehensive economic stimulus package to promote economic recovery. With a volume of EUR 130 billion, this program far outstrips programs launched in the wake of the financial and economic crisis of 2008/09. We present the fiscal policy measures adopted, show how companies assess various policies and finally discuss the most important elements of the economic stimulus package. The temporary reduction in VAT is one of the less convincing elements. On the other hand, those policy measures which promote medium- to long-term investments in future technologies, infrastructure, and climate protection are to be evaluated positively. Policies to stimulate demand cannot solve the problem of limited productivity due to protective restrictions or the collapse of international value-added chains in times of Covid-19. In this respect, one should not expect great impact on economic growth. Nevertheless, it makes sense to use fiscal policy measures to support the economy in these critical times.

The corona pandemic has triggered a worldwide economic crisis that is likely to overshadow the global economic and financial crisis of 2008/09. Germany is threatened by the biggest collapse in gross domestic product (GDP) since the Second World War. Current forecasts predict that German GDP will shrink by between 6 percent to 9 percent in 2020.[1] A negative double-digit downturn is expected for some neighboring European countries.[2]

The global impact of the crisis and the measures taken to contain the virus are putting many companies in Germany in dire straits and jobs are at risk. The negative consequences run through all sectors and company sizes (Dorn et al. 2020a). Even if the SARS-CoV-2 virus is successfully contained in near future, the global spread of the pandemic will cause longer-lasting economic losses in many sectors of the economy. To cushion the negative consequences of the pandemic, economic policy measures must be taken to counteract this. It is important to take different phases of the crisis into account:

Phase 1: From March to May, the measures implemented by the Federal Government and the 16 German states concentrated on providing loans, guarantees and financial assistance to help companies, the self-employed and employees to enable their survival during the closure of parts of the economy and the loss of income. For example, the Federal Government provided an emergency aid of 50 billion euros to small enterprises and the self-employed for this purpose. In addition, the benefits of the short-time working allowance were extended and a series of tax relief measures (such as tax deferrals or the adjustment of tax advances) or state equity holdings and guarantees were intended to safeguard the liquidity of companies that have been affected by this crisis through no fault of their own.[3]

Phase 2: After the end of the nationwide shutdown in Germany at the end of April and a further gradual opening process, economic activity was resumed in many economic sectors in compliance with protective measures. The return to pre-pandemic conditions may take a long time and the

[1] In its June update, for example, the International Monetary Fund expects Germany's price-adjusted gross domestic product to fall by 7.8 percent in 2020 (IMF 2020). In its latest economic forecast, the ifo Institute assumes that economic output this year will probably be 6.7 percent lower than last year (Wollmershäuser et al. 2020). As early as March, the ifo Institute estimated the economic costs of the pandemic and a two-month shutdown for Germany at a total of 255 to 495 billion euros (Dorn et al. 2020b).

[2] Forecasts currently represent only one of many possible scenarios. The further course of economic development depends on a great deal of uncertainty regarding the further course and effects of the global pandemic, possible further waves of infection in Germany, and the effect of economic and financial policy stabilization and economic stimulus programs (IMF 2020; Dorn et al. 2020d).

[3] According to estimates by the Federal Ministry of Finance, the total volume of additional expenditure (including health protection measures) and tax relief affecting the budget amounts to over 350 billion euros (BMF 2020). In addition, in order to secure the liquidity of enterprises, the Federal Government provided a further EUR 600 billion for loan guarantees, capital measures and state guarantees. Including international equity participations, the funds for loans, guarantees and equity participations thus currently amount to more than EUR 800 billion.

economic impact of the corona pandemic may continue to be felt even after all restrictions have been lifted: demand in domestic and, above all, foreign markets will remain weak for a long time and many companies will have problems attracting new investors because of high levels of debt. Phase 2 is about stimulating economic activity and the economy. At the same time, the government can also stimulate the economy and promote sustainable growth during this phase through public investment. To this end, the German government launched a comprehensive economic stimulus package at the beginning of June 2020, which focuses on supporting economic recovery after the corona crisis. The core components are the temporary reduction in value added tax to stimulate consumption, support for families, assistance to local authorities to compensate for falling business tax (*Gewerbesteuer*) revenues, as well as public investment and programs to promote future technologies and climate protection. In addition, the program contains some elements that are still aimed at bridging the acute crisis period (cf. Phase 1), such as more generous regulations on tax loss carryback to secure the liquidity of affected companies. With a volume of EUR 130 billion, this package far outweighs the economic stimulus packages of the financial and economic crisis of 2008/09. At that time, the German government adopted two economic stimulus packages in November 2008 and January 2009 with a total volume of almost EUR 72 billion.

In the corona crisis, the state has to bear great financial burdens and take on more debt than ever before in the history of the Federal Republic of Germany in order to finance aid and economic stimulus measures. It is therefore particularly important to design such economic recovery measures that are as precisely targeted and cause oriented as possible, while keeping an eye on the sustainability and fiscal costs of individual measures. Ultimately, the effectiveness of the measures is limited because necessary protective measures only allow for limited productivity and further waves of infection cannot be ruled out. The ifo Institute presented a report in May 2020 that discussed and evaluated various economic policy measures designed to support the economy and secure jobs during different phases of the crisis (Dorn et al. 2020c). As part of the expert report, Bavarian companies were asked in a survey conducted in April to evaluate various economic policy measures introduced to cushion the consequences of the corona crisis with regard to their suitability. Many of these measures are now reflected in the June economic stimulus package of the Federal Government.

In the next section, we present an excerpt from the June 2020 economic stimulus package, followed by the assessment of economic policy measures from a company's perspective. Finally, the measures taken by the Federal Government are discussed.

THE 130 BILLION EUROS ECONOMIC STIMULUS PACKAGE OF THE FEDERAL GOVERNMENT IN GERMANY

In June 2020, the German government launched a package to secure prosperity and strengthen Germany's future viability. This economic stimulus and future package for the recovery and revitalization of the economy contains 57 individual measures including a reference to the plan to set up a fund for economic recovery at the European level. The core elements of the program are the temporary reduction in value added tax (VAT) to stimulate consumption, assistance to municipalities, subsidies for families, and the promotion of future technologies and climate protection. In this section, we present an extract of the measures adopted. We divide these into (A) fiscal measures and programs to provide liquidity and financial assistance; (B) funding programs and subsidies; and (C) public investment and assistance for municipalities.

(A) Tax measures as well as liquidity and financial assistance measures include:

– **Temporary reduction of VAT:** in order to stimulate consumption, the standard VAT rate will be reduced from 19 percent to 16 percent and the discounted rate will be reduced from 7 percent to 5 percent for the period from 1 July to 31 December 2020 (estimated fiscal costs: EUR 20 billion). Prior to this, the VAT rate for the gastronomy was already reduced to the discounted rate for the period from 1 July 2020 to 30 June 2021.
– **Reduced electricity costs:** the EEG[4] levy, which is used to finance subsidies for producers of renewable energies, will be reduced from 2021 through subsidies from the federal budget (EUR 11 billion). Without such an intervention, the EEG levy would rise sharply, and electricity costs would increase.
– **Limiting social security contributions:** due to the increased costs resulting from the pandemic, non-wage labor costs are also under pressure. With the 2021

[4] *Erneuerbare-Energien-Gesetz* (EEG).


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social guarantee, social security contributions will be capped at a maximum of 40 percent (EUR 5.3 billion) with the help of tax-financed subsidies. Both companies and employees will benefit from this measure.
- **Tax loss offset:** the tax-loss carryback in corporate taxation will be extended for the years 2020 and 2021 – up to a maximum of EUR 5 million, and EUR 10 million in the case of joint assessment (shift effect of EUR 2 billion with an effect on the government budget, of which EUR 1 billion is with the federal government).
- **Investment incentives and tax-based research allowance:** to provide incentives for firms' investment and R&D activities, more generous tax depreciation options and research allowances are offered for 2020 and 2021 (EUR 7 billion).
- **Support for families:** families receive a child bonus of 300 euros per child (EUR 4.3 billion). For single parents, the allowances are doubled (EUR 0.75 billion). This will support families and single parents particularly affected by the restrictive measures caused by the corona crisis.

(B) Funding programs and subsidies encompassing:

- **Purchase premium and bonus program for investments in new technologies:** the automotive industry will receive EUR 2 billion for investments in innovations and new drive technologies as part of a bonus program. Instead of the preferred general purchase premium for vehicles (including combustion engine), the existing purchase premium for electric cars will be increased (EUR 2.2 billion). However, the premium will also apply to hybrid vehicles, which generally consume as much CO_2 as vehicles with modern combustion engines and exhaust systems.
- **Fleet renewal support:** fleet renewal of buses, trucks, aircraft and ships will be supported to reduce the environmental damage caused by transport (EUR 3.2 billion). There are also smaller fleet exchange programs for social services and craftsmen.
- **Trainee bonus program:** SMEs maintaining the number of training places in 2020 will receive a bonus for each training contract concluded (EUR 0.5 billion).

(C) Public investment in infrastructure and future technologies, and support for municipal finances:

- **Public investment** already decided on for the **digitization** of public administration as well as the **security and armaments projects** with a high domestic value-added share will be brought forward (EUR 10 billion).
- **Investments in future technologies:** 7 billion euros are being invested in the development of hydrogen technology, and a further sum of EUR 6 billion in quantum technology, artificial intelligence (AI) and communication technology.
- **Investment in electro mobility:** research and development in the field of electro mobility, new charging points and battery cell production will be supported by EUR 2 billion.
- **Modernization of the railways:** the German Federal Railways will receive a 5-billion-euros capital increase from the federal government to invest in the expansion and electrification of the railway network.
- **Mobile communications and nationwide 5G network:** among other things, an additional EUR 5 billion will be invested to accelerate the rollout of a nationwide 5G network.
- For **energy-efficient building refurbishment** the federal government is providing EUR 2 billion.
- **Day-care centers, nurseries, all-day schools and all-day care** will be expanded in 2020 and 2021 at a cost of EUR 3 billion; this will also include conversion measures to improve the hygiene situation.
- **Municipalities** receive support to finance social expenditure (housing for the needy), to compensate for the collapse of revenues from trade tax ("Municipal Solidarity Pact"), and to strengthen public transport (a total of EUR 12.5 billion). Among other things, the financial support is intended to prevent local authorities from cutting back on investments during the crisis.

In addition, there are measures to expand the health system and aid for African countries to cushion the consequences of the corona pandemic there. Not included, on the other hand, are previously discussed measures such as the car purchase premium for cars with combustion engines (car scrappage schemes like the "*Cash-for-Clunkers*"), which was launched in response to the 2008/09 economic and financial crisis. Likewise, no taxes on profits and income have been reduced at present.

EVALUATION OF ECONOMIC POLICY MEASURES BY COMPANIES

To obtain an insight on the extent of the economic consequences of the corona pandemic for the economy, we conducted a business survey in cooperation with the Bavarian Chambers of Industry and Commerce (IHK) as early as April (Dorn et al. 2020c). Between 20 and 24 of April 2020, a total of 817 member-companies of the Bavarian Chambers of Industry and Commerce took part in an online survey, where they were asked to assess how helpful various economic policy measures would be in securing their existence and preserving jobs. We presented the companies with a list of nine measures and asked them to rate the suitability of each measure on a scale of

1 (not suitable) to 5 (very suitable). The list included those measures which had already been implemented by the time of the survey, such as the possibility of government loan guarantees and equity investments, as well as a number of other measures that were discussed as possible components of an economic stimulus package (some of them were actually included in the June economic stimulus package). The list of measures included in the business survey are:

(i). State loan guarantees
(ii). Increase in equity capital through (silent) state shareholdings
(iii). More generous structuring of tax-loss offsetting and loss carryback
(iv). Accelerated special tax depreciation for capital goods
(v). Increase in tax credit for research and development
(vi). Reduction of profit tax rates (corporate and business taxation, or income taxes)
(vii). Reduction of VAT rate
(viii). Investment grants
(ix). Expansion of support programs for digitization ("digital bonus")

The results of the evaluation of the measures by the companies are demonstrated in Figures 1 to 3. Figure 1 shows the results across all enterprises, Figure 2 by sector, and Figure 3 by enterprise size. In order to facilitate the presentation of the results, we have rescaled the answers into a continuous measure that can take values in the range from – 100 (lowest possible suitability) to + 100 (highest possible suitability).[5] The results make it clear that tax measures are regarded by companies as particularly suitable for supporting the economy. More precisely, a permanent reduction in profit taxation, investment grants, and a more generous design of the tax balance sheet were assessed by companies of all sectors and sizes to be strongly required for overcoming the crisis. In the following section, we describe the measures and results in detail.

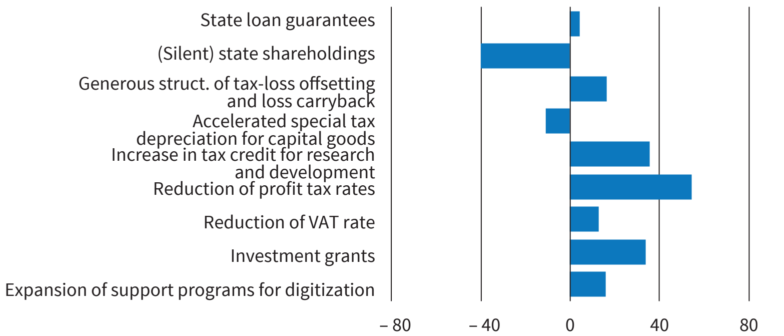
Liquidity and Financial Assistance (i)–(iv)

Measures (i) and (ii) serve primarily to secure liquidity. While the loan guarantees facilitate the supply of debt capital, the state participation targets the purpose of strengthening the equity base of companies. The main advantage of equity financing compared to debt financing is that the former reduces the risk of a debt overhang. Debt overhang implies that it is unattractive for new investors – both equity providers and new lenders – to provide a company with new capital for investment. This problem can arise when companies run up heavy debts as a result of the crisis, for example, because they have to secure their liquidity by taking out additional loans. From the perspective of the companies, one disadvantage of state investments is that a part of the income generated goes to the state. In addition, state participation could be made conditional on the possibility for the state to influence business decisions.

Assessment by companies: According to the assessment of the companies in the survey, an expan-

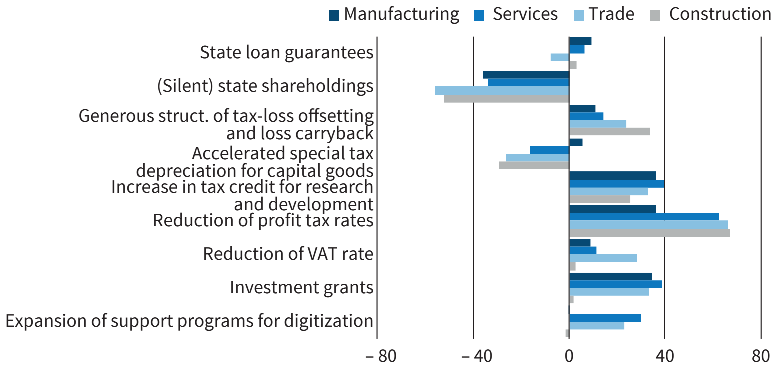
[5] To calculate this measure, we first centered the scale around zero so that the values of the underlying variable can assume values in the range from – 2 (not suitable) to + 2 (very suitable). We then multiplied the values by 50 and calculated averages.

Figure 1
Evaluation of Differnet Measures
All Sectors



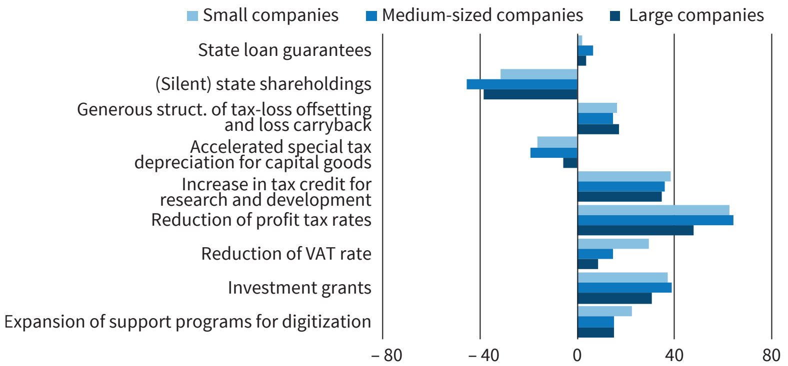
Source: ifo/IHK special survey. © ifo Institute

Figure 2
Evaluation of Different Measures
By Sector



Source: ifo/IHK special survey. © ifo Institute

Figure 3
Evaluation of Different Measures
By Size



Source: ifo/IHK special survey. © ifo Institute sion of the possibilities within the framework of tax loss offset is generally considered to be highly suitable for overcoming the consequences of the crisis. By contrast, the state participations meet with great skepticism among companies in all sectors and of all sizes.

Implementation: The possibilities of state loan guarantees and state participations were already implemented in the first package of measures adopted in March 2020. This action aimed to provide bridging facilities for those companies which were particularly affected by the crisis by making capital available. For example, the Federal Government established the Economic Stabilization Fund endowed with EUR 400 billion for guarantees, EUR 100 billion for capital measures, and a further EUR 100 billion to refinance KfW programs that had already been adopted. A prominent example of the state's involvement as new shareholder is the Federal Government's investment in Lufthansa of just under EUR 9 billion.

Measures (iii) and (iv) are tax instruments that can generate a significant liquidity effect. At the same time, the fiscal costs of the two measures are low because they are in principle merely a postponement of tax payments. A lower tax revenue in the present is therefore offset by correspondingly higher tax revenue in the future.[6] A "loss carryback" (*Verlustrücktrag*) enables companies to offset losses in 2020 against taxable income in 2019. As a result, companies suffering from losses in 2020 will receive a refund on income taxes paid for 2019. However, before the decisions of June 2020, the possibilities for offsetting losses were quite restrictive. For example, the loss carryback was allowed to an amount corresponding to a maximum of 15 percent of the income in 2019 and, at the same time, should not exceed an amount of EUR 1 million (EUR 2 million in the case of joint taxation). An extension of these maximum limits could lead to a significant increase in liquidity for companies that yielded profits in 2019 but are suffering losses in the current year due to the corona pandemic, since they could be reimbursed a larger portion of the income taxes paid in 2019. Combining the expansion of loss carryback opportunities with the introduction of accelerated tax depreciation for capital goods would further increase the liquidity effect.

Assessment by companies: In general, an expansion of the possibilities within the framework of tax loss offset is assessed by the companies as highly suitable for overcoming the consequences of the crisis. The introduction of the accelerated depreciation rule for capital goods is also generally considered to generate a positive effect. Accelerated depreciation is most strongly advocated by companies in the construction industry.

Implementation: In the most recent economic stimulus package of June 2020, the possibility of tax loss carryback was extended to a maximum of EUR 5 million (or EUR 10 million in the case of joint taxation) in corporate taxation for the years 2020 and 2021. A mechanism will be introduced to make this carryback usable in the 2019 tax return, e.g., through the creation of a tax "corona reserve" (*Corona-Rücklage*), thus achieving an immediate liquidity effect. An accelerated special tax depreciation for capital goods was also introduced. For the tax years 2020 and 2021, a geometric-degressive depreciation with a factor of 2.5 compared to the otherwise applicable tax depreciation rule and a maximum of 25 percent per annum for movable assets (equipment) will be introduced as an additional tax investment incentive.

Permanent Tax Relief (v)–(vii)

Unlike measures (iii) and (iv), *the measures (v) and (vi)* would provide a permanent tax relief to the companies and thus create a loss of tax revenue for the state. Moreover, the cyclical stabilizing effect of an increase in the tax credit for R&D and a reduction of profit tax rates would be limited, since companies currently incurring losses would not benefit from these measures at this moment. However, both measures could have a positive medium- to long-term effect on Germany's attractiveness as a location for business and innovation, and on the investment climate. Moreover, companies with a viable business model would be the main beneficiaries in the future.

Assessment by companies: The reduction of profit tax rates is considered by the companies, regardless of sector and size, as the most appropriate instrument to secure their existence and jobs. However, tax credits for R&D are an unsuitable instrument for coping with the crisis according to the companies in the survey. Only a larger share of firms in manufacturing industry still assume positive aspects, probably due to the fact that eligible expenditure on R&D has a greater role in manufacturing than in other sectors.

Implementation: In the most recent economic stimulus package, it was decided to grant the subsidy rate of the tax research allowance retroactively as of 1 January 2020 and limited to 31 December 2025 on an assessment basis of up to EUR 4 million per company. This is intended to create an incentive for companies to invest in R&D and thus in the future viability of their products despite the crisis. So far, tax relief in the area of profit taxation (income taxes, business and corporate income taxes) has not been granted. Only the corporate income tax law has been modernized by introducing an option model for corporate income tax.

[6] However, in certain cases, a permanent tax relief (and therefore a loss of tax revenue for the state) may arise if a company ceases its activities permanently soon or in the coming years due to persistent losses and tax losses would have been incurred without the possibility of loss carry-back. In this case, the loss of tax revenue today is no longer offset by future tax revenue.

A reduction in VAT (*measure (vii)*) could have a positive impact on domestic demand, provided that the reduction is passed on to consumers. If not, companies will benefit from the reduction through higher net prices.

Assessment by companies: According to the survey, a reduction in VAT would be particularly welcome by the companies in the trade sector. Moreover, this instrument is considered more effective by small businesses than by large companies.

Implementation: In the latest economic stimulus package, the German government decided to reduce the standard VAT rate from 19 percent to 16 percent and the discounted rate from 7 percent to 5 percent for a limited period from 1 July 2020 to 31 December 2020.

Funding Programs and Subsidies (viii)–(ix)

In addition to liquidity assistance and tax relief, the state can also support the economy via subsidies and funding programs. At present, investment grants (*measure (viii)*) are an instrument of regional policy, and consequently primarily benefit companies in structurally weak regions. It would also be possible to support only investments in certain branches or specific technologies considered particularly promising for the future. One example is subsidies for investment in digitization (*measures (ix)*).

Assessment by companies: The companies' assessment of investment grants depends on the sector. While companies in the manufacturing, services and trade sectors rate this instrument quite positively, the firms' assessment in the construction sector is rather neutral. An expansion of the subsidy programs for digitization is seen as a suitable instrument for overcoming the crisis by the companies in the trade and services sectors, but not by the companies in manufacturing and construction.

Implementation: Investment grants or funding programs for investments in digitization have been largely dispensed with to date. Only the automotive industry receives 2 billion euros for investments in innovations and new drive-technologies within the framework of a bonus program.

DISCUSSION OF THE GERMAN STIMLUS PACKAGE

Overall, the economic stimulus package is expected to provide a positive economic impulse, which will benefit companies and private households alike. Current simulations conclude that the program will increase German GDP by 0.9 percentage points in 2020 (Wollmershäuser et al. 2020), which corresponds to an increase of around 30 billion euros. It is assumed that the expenditure and tax relief will take effect of EUR 88 billion in 2020. The expected growth effect is therefore much smaller than the volume of the stimulus package. This is partly because a part of the additional demand is flowing into imported goods or pure deadweights (*Mitnahmeeffekte*). The overall effect of the economic stimulus package will depend heavily on the way how the measures are implemented in detail. An assessment of all 57 individual measures of the stimulus package would go beyond the scope of this paper. Nevertheless, in addition to the assessment of the companies, some core components are evaluated below.[7]

Several Convincing Elements in the Recovery Plan

The latest economic stimulus package contains several elements that can make a targeted contribution to the recovery of the German economy. Many measures are designed to promote medium to long-term investments in future technologies, infrastructure and climate protection. In the following section, we discuss some of the central measures of the program.

(1) Tax loss statements and accelerated depreciation for capital goods

The rules on accelerated depreciation for capital goods and the agreed extension of tax loss relief for companies are positive elements of the package. Many companies with a functioning business model have incurred losses through no fault of their own during this crisis year 2020, but had profits and paid taxes in 2019. Loss relief will allow them to partially recover taxes paid for 2019, which will provide them with liquidity to overcome the crisis. However, the tight limitation to a maximum of EUR 5 million (or EUR 10 million in the case of joint taxation) must be viewed critically. A higher limit would have been appropriate, especially with regard to larger companies. Accelerated depreciation of capital goods could also provide a stimulus, especially if extended loss compensation also allows companies with current losses to benefit from the additional depreciation. Fiscal costs are kept within limits because it is primarily a matter of shifting tax payments into the future.

(2) Strengthening of communities and families

Families and single parents are particularly worse off during the crisis due to the restrictions placed on schools, kindergartens and daycare centers. Parents not only have to deal with additional tasks such as home schooling and childcare, but often suffer from additional financial loss as a result. Supporting families financially and investing additionally in childcare facilities are understandable and welcome measures. It is also right to prevent local authorities from cutting back their investments because of collapsing business tax revenues (as major revenue source of German mu-

[7] The discussion of the components is largely based on the comments in Dorn et al. (2020c) and Fuest (2020).

nicipalities). Once again, the crisis shows that business taxes are not a good municipal tax because its revenue fluctuates too strongly. Municipalities need more steady revenues than those from the business tax. A reform of municipal finances is therefore urgently needed in Germany.

(3) Public investment

In the current economic situation, expanding investment in digitization, infrastructure, R&D, and environmental and climate protection sounds promising. It also makes sense for the state to bring forward those investments which were planned anyway, because their rapid realization can timely generate a positive effect on the economy. To secure tomorrow's economic prosperity, investments in new technologies can also be important for ensuring new economic growth and new jobs in the medium to long term. In this regard, it will be crucial to assure that the supported projects are of high quality. If a great deal of money is suddenly made available for investment, there is a risk that less useful projects will also be supported.

Controversial: The Temporary Reduction of the Value Added Tax (VAT)

While most companies are more in favor of a permanent reduction in VAT as shown above, the German government decided to introduce a temporary reduction from 1 July to 31 December 2020. A positive element of this tax measure is that it initially benefits all sectors of the economy during the crisis and thus has advantages against sector-specific subsidies. Yet the effect of the temporary VAT reduction is particularly controversial.

The VAT reduction could have a positive effect on domestic consumer demand if the reduction is passed through on to consumers. The extent to which this will happen is questionable, however. On the one hand, for many companies the temporary reduction involves a double effort and additional administrative costs. Especially when prices are low, many companies will think twice whether the price change is worth the effort.[8] Furthermore, enterprises could benefit from the reduction through higher net prices. It is therefore expected that the reduction in VAT will benefit consumers at best in part. If a tax cut does not lead to falling prices, this does not mean that it cannot have an economic effect. It may even be desirable in the crisis for the relief to benefit companies. However, it is precisely those companies that could benefit the most from this which are currently generating high turnover and are actually winners in the crisis, such as large supermarket chains like Lidl or Aldi and the currently booming online trade. The tax cut is likely to have a stimulating effect above all on demand for durable consumer goods such as cars or household appliances, as consumers will pay closer attention to whether the tax cut will have an impact on prices.[9] Many consumers may therefore prefer to opt for purchasing durable goods.

However, to be effective, consumers must be willing and able to demand more services. Since many consumers themselves are experiencing severe revenue shortfalls and access to credit for major expenditures is becoming more difficult due to the crisis, the actual demand effect is rather questionable. In addition, many consumers are worried about their future income and are therefore increase savings. In such a situation of high uncertainty they will react less strongly than usual to a marginal price reduction.

Irrespective of these fundamental objections, it is worth looking at the experiences other countries have had with temporary VAT reductions. Several studies examine (temporary) VAT changes in different European countries and have concluded that tax cuts are often not passed through on to consumers (Dorn et al. 2020c). There is rather a risk that a greater burden will arise for consumers in the medium term if the price increase due to the return to the original VAT rate is higher than the initial price reduction led by a temporary reduction (Benzarti et al. 2017; Benzarti and Carloni 2019). Crossley et al. (2014) examine the temporary VAT reduction in UK in response to the economic and financial crisis of 2008/09 and conclude that although the tax reduction was partly passed through on to net prices, there was merely a minor economic stimulus. The effect was extremely short-lived, only visible for consumer durables and, moreover, no longer discernible after the first few months. German experience with the VAT increase in 2007 (announced at the end of 2005) shows that effects similar to those in the UK can also be expected for Germany. According to D'Acunto et al. (2016), the announcement of the tax increase led to a growth in sales figures for consumer durables before the higher tax rate was implemented.

Wollmershäuser et al. (2020) have simulated the economic impact of the temporary VAT reduction for Germany. They conclude that the economic impact of the temporary VAT reduction is limited. Although the measure is offset by tax losses of around 20 billion euros in 2020, this simulation analysis shows an overall increase in the price-adjusted GDP in the same year of only 0.2 percentage points or around EUR 6.5 billion.[10] This is mainly because consumption is not growing to

[8] The gastronomy sector is particularly affected by this, as it also receives the reduced VAT rate for one year. As things stand at present, the VAT rate for the gastronomy will be reduced from 19 to 5 percent by December 31, 2020. Thereafter, the tax will increase to 7 percent until June 30, 2021, when it will rise again to 19 percent. Here, political demands are already being made to leave the VAT for the gastronomy at the reduced rate on a permanent basis.

[9] The temporary reduction is therefore also seen as a replacement for the absence of a car scrappage scheme for the automotive industry.

[10] Including the stimulating effects for subsequent years, the economic stimulus increases to a total of EUR 9 billion (Wollmershäuser et al. 2020).

the extent of the tax cut and moreover a part is flowing into the demand for imported goods. This does not necessarily mean that the VAT cut should be rejected as a measure of economic policy. It is certainly desirable to support companies and ease the burden on consumers in the current crisis, even if there is not a strong rise in consumer spending.

However, when the VAT reduction expires at the end of 2020, the economic situation could still be problematic. This is particularly likely to happen when a new major wave of Covid-19 infections in the autumn chokes off the economic upswing. The increase in VAT at the end of the year could further slowdown demand in 2021. At that time, claims can be expected to arise to keep tax rates low for a longer period or permanently. As we have shown above, most of the survey companies would tend to rate a permanent VAT reduction as positive. However, this could reflect the fact that companies hope to benefit from it because the tax cut will only be partially passed through on to the demand side. This does not take into account that at some point in time counter-financing will be required by the state through increases in other taxes or expenditure cuts.[11]

Not Included: Car Scrapping Schemes and Permanent Profit Tax Cuts

In the run-up to the economic stimulus package, there was also talk of the possibility of a purchase premium for cars (car scrapping scheme), which was demanded by the automotive industry. Moreover, there were also calls for a reduction in profit taxation, which would be a very welcome instrument in the view of the companies. In the discussion on the reduction of profit tax rates, for example, an early partial abolition of the solidarity surcharge (*Soli*)[12] or its complete abolition are discussed. Ultimately, these measures were not taken into account in the economic stimulus package of June 2020.

(1) Car scrapping scheme (scrappage bonus)

A purchase premium for new motor vehicles was discussed in the *Autoland* Germany in the run-up to the stimulus package. In 2009, as part of the second economic stimulus package (*Konjunkturpaket II*) to overcome the economic crisis at that time, Germany introduced a car purchase premium including car scrapping scheme. The bonus was paid if the purchase of a new car was combined with the scrapping of an old one. The obligation to scrap and thus destroy vehicles that are principle in function is critical from both an economic and ecological point of view. This should be avoided. Empirical studies on earlier car scrapping scheme programs also show that this policy first and foremost achieves shifting effects over time. A large share of the short-term increase in sales figures is attributable to the incentive to bring forward the decision to buy a new car by a few months (Mia and Sufi 2012; Li et al. 2013). It can therefore be assumed that the premium will generate positive sales effects in the car market immediately after it comes into force and thus contribute to an immediate stimulation of the economy. Thereafter, however, there will be a negative economic effect. Nevertheless, fleet renewal programs, an increase in the purchase premium for electric and hybrid vehicles and a bonus program for investments in new drive technologies were ultimately included in the latest economic stimulus package of June 2020 – all of which the car industry directly benefits from.

(2) Reduction of income and profit taxation (income tax, business and corporate income tax)

Proponents of a reduction of income and profit taxes hope that this will stimulate the economy. Positive effects of nationwide income and profit tax relief are assumed to lead to a strengthening of overall economic demand. Such tax cuts, however, are probably less suitable as a cyclically motivated instrument for stimulating demand in the short term. The instrument would benefit many taxpayers who have not been hit so hard by the crisis. Tax cuts would therefore not directly lead to increased consumption or investment demand in these groups. For higher income groups, for example, it is hardly expectable that a reduction in income taxes would lead to an immediate rise of expenditure. For companies that have been hit particularly hard by the crisis and expect to make losses in 2020, the reduction in profit taxation would also have no effect. Therefore, income tax cuts or reductions in corporate taxes are less suitable as targeted instruments for stimulating the economy in the short term. The medium-term consideration is more in favor of lowering corporate tax rates, for example for positioning Germany as an attractive location for innovation and business with lower corporate income taxes. There are also other arguments in favor of reforming income taxation, but these go beyond the discussion of economic recovery.

CONCLUSION

The corona pandemic has plunged the European and global economy into a deep economic crisis. It makes sense and it is necessary for the states to take extensive measures to support the economy by monetary and fiscal policy measures. These measures cannot eliminate the losses caused by (partial) shutdowns of economic activity. However, they can help to prevent a downward spiral towards a deeper crisis and depression. Because of the sharp rise in government debt,

[11] In their simulation study, Wollmershäuser et al. (2020) come to the conclusion that a permanent VAT reduction of the same order of magnitude would permanently increase the level of GDP by 0.6 percent.
[12] The “Soli” (*Solidaritätszuschlag*) is a special supplementary charge to income and corporate taxes in Germany.

however, it should be critically assessed when selecting economic policy measures whether the benefits of the expected economic stimulus justify the costs.

Whether the economic stimulus packages in Germany implemented to date are sufficient to stabilize the German economy depends on the further course of the epidemic and the political reactions. As export oriented country, Germany is particularly dependent on how the economy develops in the rest of the world. Therefore, the effect of national economic stimulus programs is naturally limited.

For fiscal policy programs to be effective in times of Covid-19, it is of central importance that a second, widespread wave of infections, which again would require nationwide shutdown measures, is prevented. Such a wave would probably lead to massive uncertainty among consumers and investors.

Ultimately, it is necessary to normalize the economic process as much as possible despite the existing threat from the coronavirus. To achieve this "new normal" situation, increased testing for infection and immunity is required in addition to precautions to protect against infection.

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