# Intereconomics

Review of European Economic Policy

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Abstracted/Indexed in: SCOPUS, EconLit, Google Scholar, EBSCO, CSA, ProQuest, CAB International, ABS Academic Journal Quality Guide, Academic OneFile, Bibliography of Asian Studies, CAB Abstracts, CSA Environmental Sciences, ECONIS, European Sources Online (ESO), Gale, GeoRef, International Bibliography of Book Reviews (IBR), International Bibliography of Periodical Literature (IBZ), OCLC, Research Papers in Economics (RePEc), SCImago, Summon by ProQuest, World Affairs Online

DOI: 10.1007/s10272-020-0926-9

# The EU's Pandemic Response: Tackling COVID-19, Building the Future

Any misplaced complacency there may have been during the summer that the public health crisis was behind us has been shattered by the developments of the last few weeks. Europe is now experiencing a strong second wave of the coronavirus pandemic, with numbers rising dramatically across our continent. Many countries that escaped relatively lightly in the spring have recently seen an alarming rise in cases, hospitalisations and deaths. Health workers across Europe find themselves once again on the front lines of this struggle and deserve all our solidarity and admiration.

The pandemic is also causing human suffering through its economic implications. Despite a strong rebound of the European economy in the third quarter of 2020 after containment measures were eased, the resurgence of the pandemic has abruptly interrupted our recovery. The Commission's recent Autumn Economic Forecast projects a decline in EU GDP of -7.4% in 2020, before bouncing back by 4.1% next year. This is the deepest recession in EU history, surpassing by far the financial crisis of 2009, when the European economy shrank by 4.5%. Yet, the downturn would have been much worse without the support measures adopted at national and European levels – about €3.5 trillion between fiscal and liquidity support and guarantees. Importantly, the figure for the EU as a whole masks an immense divergence across member states, from a decline of "only" -3.9% in Denmark to -12.4% in Spain.

It was clear already in March that the symmetric shock of COVID-19 risked provoking a very asymmetric crisis. Many of the countries that were hardest hit in the first wave were also those with the least fiscal space, with the most exposed sectors, and with lingering legacies of the previous crises. Europe is therefore facing a common challenge, requiring a common response, but one that needs to target its support where it is most required.

Of the first package of three measures decided in the Eurogroup before Easter, the first to become operational is the Support to mitigate Unemployment Risks in an Emergency (SURE) instrument. Over the last few weeks, the Commission has carried out two tremendously successful issuances of SURE social bonds for a combined value of €31 billion, and SURE payments to a number of member states have already taken place. These sales have been oversubscribed about 13 times and represent a strong vote of confidence in the EU's broader recovery plan, Next Generation EU.

At the heart of this agreement, reached in the European Council in July, is the Recovery and Resilience Facility that will provide up to €672 billion in grants and loans. This funding will be available to member states based on the implementation of 'Recovery and Resilience Plans'. As I am keen to stress, these plans will not be drawn up by the Commission but by the individual member states who will be responsible for the reforms and investments in question. The Commission's role will be to closely assess each plan submitted in order to make sure that it corresponds to the goals of the facility, namely to respond to the country-specific recommendations; to foster growth, job creation and resilience; and to contribute to the green and digital transitions.

This last point is crucial. Some feared that the coronavirus pandemic would lead Europe to retreat from its ambitious climate and sustainability commitments. The opposite is true. Not only have we remained committed to the European Green Deal as our growth strategy, but we have

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also strengthened our resolve and seized the opportunity offered by the recovery plan to put sustainability at the heart of our economic policy.

To begin with, the Commission has proposed to increase to 55% the reduction in emissions to be achieved in the European Union by 2030. Moreover, we have specified that of the financing to be made available to each member state through the Recovery and Resilience Facility, 37% should contribute to the green transition, with a further 20% for the digital transition. Furthermore, we have committed that 30% of the issuance that will fund Next Generation EU will be in green bonds. This comes on top of the total €100 billion of the issuance planned for SURE that will be through social bonds.

Next Generation EU can be one of the largest stimulus packages anywhere in the world, unleashing transformative investment and reforms in a host of key areas, from renewables and grid infrastructure to energy-efficient buildings and sustainable transport; from 5G and artificial intelligence to public and private sector digitalisation. Nevertheless, programmes for continuous learning, training and re-skilling will be equally important. The transition will need to be just, or it will just not happen.

As we turn to the implementation phase of Next Generation EU over the coming months, a key challenge for member states will be to absorb the immense sums made available fully and effectively. It will be crucial for each country to put a governance structure in place that ensures a strong central steering and coordination between the national and local level. The Commission will work in close partnership with our member states on this front, because this will be a test case for the Union as a whole. If we make a success of it, we will have laid the groundwork and provided a blueprint for how to tackle downturns in the future.

As the shadow of the pandemic lengthens once more over Europe, governments are once again having to make some difficult decisions. Shuttering restaurants, cafés, museums and theatres, restricting social contacts and physical movements – these measures are unfortunately necessary to flatten the curve of COVID-19 infections, even if we know they are likely to significantly slow economic activity in the fourth quarter of 2020.

There are two key policy implications from the latest developments: First, the co-legislators must redouble their efforts to close the deal on the Recovery and Resilience Facility without further delay. The sooner that happens, the sooner the ratification process can get underway, and the sooner Next Generation EU can begin to be implemented.

Second, we need to support the economy for as long as is needed. I believe that we have learned our lessons from the past crisis. Our general escape clause will remain in place throughout 2021 and as long as necessary. The discussion about how and when to normalise fiscal policy is one that I believe cannot be held in isolation from the discussion on how to improve our economic governance framework.

Next year, once Next Generation EU is up and running, the Commission will present its proposals in this area. Several interesting ideas have already been put forward, e.g. by the European Fiscal Board, such as the creation of a permanent fiscal capacity; mechanisms to facilitate investment, especially for the climate transition; and how to adapt our policies to reflect the reality of the much higher debt levels in a large number of member states after the pandemic.

This year, the EU's institutions and member states have collectively demonstrated a strong determination to act decisively together in very challenging circumstances. Through the long and difficult winter that lies ahead of us, we must maintain that determination. If we can do that, I am confident that the European Union can emerge strengthened from these challenging times.

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DOI: 10.1007/s10272-020-0927-8

# COVID-19: From Lockdown to Recovery

**Europe is currently in the midst of a second wave of the resurgent coronavirus pandemic, which has interrupted the slight economic rebound of the third quarter and is threatening long-lasting consequences as shutdown measures are reinstated. In order to combat the systemic damages and limit the economic and social fallout, the EU has proposed the Next Generation EU recovery plan. In October 2020, Intereconomics and the Centre for European Policy Studies invited renowned academics, policymakers and regional experts to participate in our 10th annual joint conference entitled "COVID-19: From Lockdown to Recovery". In this Forum, conference participants consider the impact of another shutdown on employment, the environment and a potential lost generation.**


## Economic Recovery in the Age of COVID-19

**Robert Skidelsky**, Professor emeritus, University of Warwick, Coventry, UK.

## Boosting the Economic Recovery or Closing a Green Deal in Europe? Or Both?

**Natacha Valla**, Sciences Po School of Management and Innovation, Paris, France.

## COVID-19 and the Twin Transition: How the Recovery Can Boost Sustainable and Inclusive Growth

**Debora Revoltella**, European Investment Bank, Luxembourg.

## Youth 2020 – Preventing Another Lost Generation?

**Sue Maguire**, University of Bath, UK.

## Green Recovery: Europe and the World

**Robert Pollin**, University of Massachusetts Amherst, USA.

## The Climate Crisis Will Not Wait

**Matilda Gettins**, Fridays for Future Munich, Germany.

## Social Distancing Requirements and the Determinants of the COVID-19 Recession and Recovery in Europe

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## Individualism, Polarization and Recovery from the COVID-19 Crisis

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DOI: 10.1007/s10272-020-0929-6



Robert Skidelsky*

# Economic Recovery in the Age of COVID-19

The COVID-19 pandemic is an invitation to what the economist Joseph Schumpeter called creative destruction: a chance to liquidate obsolete investments and to create something new, better, and, in the jargon, more 'resilient' and 'sustainable'. Schumpeter understood that humankind does not progress in a balanced way, rather it lurches from one extreme to another, each extreme producing its own reaction.

In political economy, the subject of this contribution, the excesses of the Keynesian social democracy in the 1970s brought about the extreme reaction of neo-liberalism. The hubris of neo-liberalism – its failure to guard against the ever present possibility of collapse, its inattention to social justice, its reckless embrace of globalisation, its Faustian pact with consumerism – has in turn bred a reaction, but to what is as yet unclear. Populist forces of Right and Left, made up of fragments of old and new discontents, compete for the succession. The balance remains elusive.

We have both a short-term and long-term crisis on our hands. In the short term we run the risk of what some analysts are calling the Third Great World Depression. In the long run the risk is of the exhaustion of Nature's tolerance for our profligate habits. The prize is to enfold our pandemic recovery measures into a long-term strategy for a sustainable way of life – I will not say growth, for growth as we understand it may not be sustainable.

The short-term threat to jobs and livelihoods is clear enough. Much of Europe is on a life-support system. The world economy will have shrunk by about 5% in 2020, and hopes of a V-shaped recovery have been put on hold. This means that unemployment is set to go on rising through 2021. In the UK, we expect an unemployment rate of close to 10%. Everyone is waiting for the end of the coronavirus pandemic so that we can get back to 'normal'. But the virus is no longer the main problem: it is the scarring of the economy produced by a prolonged and continuous period of non-work which will damage the recovery.

And what about the further future? Suppose by a heroic effort we succeed in reopening economies much as they were before. Can anyone say they were in a healthy or sustainable situation before the pandemic struck? Debt-driven growth models which produced consumption and asset booms followed by financial busts: that *was* the pre-pandemic normal.

I am often asked, what would British economist John Maynard Keynes have said? I will try to give my answer, though I hasten to add that Keynes, from beyond the grave, has not authorised me to do so. Nor is Keynes the last word on the matters I will deal with.

## Then and now

My book *Keynes: The Return of the Master* (Skidelsky, 2009) was published in the autumn of 2009. It was published the year after the global banking collapse of 2008 and the massive rescue operations undertaken by governments all round the world – not just the bailout of a bankrupt banking system, but also large monetary and fiscal stimulus. This activism was in contrast to the 'do nothing' stance of governments following the Wall Street crash of 1929. I believe that it prevented another Great Depression: the fall in output following the 2008 collapse was limited to four quarters, whereas output went on falling for thirteen quarters after the collapse of 1929.

Long before recovery was secure, however, our own stimulus was terminated. Alarmed by the deficits they had incurred, governments started to slash public spending. The 'return of the master' proved brief. "I guess everyone is a Keynesian in a foxhole" said Robert Lucas, high priest of Chicago economics. Keynes was for emergencies only.

And we have the same reaction today. Compelled to close down a large fraction of their economies to stop the spread of the coronavirus contagion, governments have spent money freely to keep up the incomes of millions of people prevented from working. But they continue to hope that as the economy reopens, a V-shaped recovery will relieve them of their fiscal burden. The talk is of 'fiscal

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Open Access funding provided by ZBW – Leibniz Information Centre for Economics.

* This article is based on Robert Skidelsky's keynote speech at the Intereconomics/CEPS online conference "COVID-19: From Lockdown to Recovery", 27 October 2020.

**Robert Skidelsky**, Professor emeritus, University of Warwick, Coventry, UK.

sustainability', the need for consolidation and debt reduction even as the economy is set to shrink.

Many would see this as a reasonable position. Most economists view the market system as fundamentally healthy. It will get sick from time to time and therefore need medication, but it is basically self-healing, like the human body. So treatment should be limited in scope and duration. This is particularly the case given the unreliability of political medicine. Keynes rejected this analogy between the market system and the self-healing body and believed rather that a market system left unattended by the state could never be healthy.

## Keynes for beginners

Keynes's revolutionary insight was that capitalist market economies do not have an automatic tendency towards full employment. This assertion shocked the economists of Keynes's day, whose models taught them that persisting unemployment was impossible if wages were flexible. Keynes's Cambridge colleague Arthur Pigou expressed the typical belief of 1933: "With perfectly free competition...there will always be a strong tendency for wage-rates to be so related to demand that everyone is employed" (Pigou, 1933). Based on this argument, unemployed workers must be *choosing* not to work. Seeing the millions unemployed all around him during the Great Depression, Keynes thought: There is something wrong with your model! These people are not *choosing* not to work. They cannot *find* work at any wage.

Keynesian economics starts with this blinding shaft of common sense. People are unemployed when there is no *demand* for their services. Yet this insight never fully converted the economics profession, who went on cooking up all kinds of fancy reasons to demonstrate that what looked like unwanted unemployment was really a 'choice for leisure'. Today I would wager that most economists believe, deep down, that most unemployed people could find work if they really wanted to, or if state benefits did not provide them with an alternative income.

But why do economies not quickly bounce back from collapses? Surely, if an employer does not want to employ me at £500 a week, I can always lower my wage requirement till it becomes profitable for him to employ me. By insisting on unrealistic wages, workers are 'pricing themselves out of employment'. But Keynes gave two reasons why even flexible wages will not maintain or restore full employment.

### Wages and demand

Keynes's first argument was that every producer is also a consumer: my wages are your income, because my wages buy your goods. If my wages go down, your income goes down, too. The general principle is that cuts in production costs (whether by cutting wages or by laying off workers) deepen a slump by simultaneously cutting total demand or spending power. A fall of income in one part of the economy reduces production in another part, and so on, in a downward spiral as unemployment spreads rapidly throughout the economy. Eventually spending power is stabilised at a much lower level as people stop saving. But nothing has happened to stimulate consumption, and therefore to promote a recovery. The weird idea that the way to revive an economy is by getting everyone to stop spending comes only to a well-trained neo-classical economist.

### Confidence and money

Keynes's second argument against the V-shaped recovery model had to do with the behaviour of money. It is characteristic of a slump that instead of investing their money, businesses 'hoard' it, or 'add to their cash reserves'. The greater this 'liquidity preference' is, the higher the rate of interest that owners of money will charge to lend it out. But to stimulate production, borrowers need lower rates, not higher rates. So when confidence is low, the higher rates demanded by the banks for loans mean even less investment, less consumption and less employment.

In this way, flexibility of wages and stickiness of interest rates combine to deepen the slump. Contrary to Robert Lucas, without government 'stimulus' the economy will remain stuck in the foxhole.

But the mainstream economist has a comeback: depressions or deep recessions are very rare events, like Nassim Taleb's 'black swans' (2008). So it is absurd to organise economic life as if the next slump is just around the corner. Market economies have built-in stability so powerful that slumps will be very rare. This is exactly what Keynes denied: black swans can fly out of a clear blue sky at any time. We have just seen a large flock of them in 2020.

The reason, Keynes said, was that the theory of the 'self-equilibrating' market economy depends on the idea that everyone, and particularly investors, can accurately predict the future. If they can accurately calculate what assets they buy today will be worth in ten years time, they would never buy things at the wrong prices. As Keynes (1937) wrote: "The calculus of probability...was supposed to be capable of reducing uncertainty to the same calculable status as certainty itself". But this was a myth. "Actually...we have as a rule, only the vaguest idea of any but the most direct consequences of our acts" (Keynes, 1936). This was the second huge shaft of commonsense

to pierce the mathematical precision of forecasting models.

And a huge consequence followed. Because the future is uncertain, private investment – which depends on the expectation of future yield – will be unsteady. Prosperity will depend on peoples' 'animal spirits'. When they are feeling confident, they hire more workers; when they are pessimistic, they hire fewer.

## Stabilisation policy

Two conclusions follow from this account of market behaviour: 1) Collapses are always possible because the future is uncertain; and 2) When they happen, there are no 'automatic' market mechanisms to ensure a quick bounce back.

That is why governments are indispensable 'balancers' of market economies. They add and subtract spending power as and when needed.

This explains why there is no virtue in trying to balance the budget as such. Being Keynesian means having a theory of the economy that justifies the use of the state budget to balance economic activity at an optimal level of output and employment. This can mean either a budget surplus or a budget deficit or a balanced budget, depending on what is happening in the economy. It is the accounts of the economy that it needs to balance. Without this balancing act the economy will have a spontaneous tendency not to full employment but to underemployment.

To maintain economic life on a balanced, even keel, governments need to do two things.

First, they need to steady the rate of investment. They can do this through public investment programmes. Keynes (1936) wrote: "I expect to see the state, which is in a position to [take] long views...taking an ever greater responsibility for directly organising investment". This happened in the 25 years after World War II, but since the 1980s, the state's share in total investment has fallen drastically, increasing economic instability. Notice that a large state investment share is not just a policy for the foxhole but a permanent part of economic management.

Secondly, governments should pursue counter-cyclical policy to limit the effect of remaining fluctuations. This means injecting extra spending into the economy when private spending falls and curtailing it when it rises. It can be done on the tax side, or spending side, or both. The 'multiplier', based on what is called 'the marginal propensity to consume', tells governments what the multiplied effect of any spending they add to or subtract from the economy will be.

The answer to the failures of both old-fashioned Keynesianism and newfangled monetarism is not to abandon the balancing role of the state, but to make it as automatic as possible. The state should commit to two things: a rolling programme of public investment and a public sector job guarantee.

The first would reduce fluctuations in investment to much narrower limits; the second would provide a buffer stock of jobs, which would automatically expand in a downturn and deplete in an upturn.

Public investment does not require public ownership. Much of it could be done by quasi-state institutions like public investment banks or funds or state-holding companies. These would operate under a broad central government mandate or 'mission' to use Mariana Mazzucato's word, that reflects national purpose, but which insulates commercial decisions from political meddling.

The 'counter-cyclical' public sector job programme would be centrally financed, but with projects chosen and administered locally. The result of both policies pursued together would be to abolish unwanted unemployment for the first time since the Industrial Revolution.

These two balancing functions, public investment and counter-cyclical policy, are needed to ensure the full employment and stability of capitalist market economies. And the fuller the use of a country's human resources, the more prosperous the country will be, the greater the social contentment and the less the danger of political extremism. This – in a nutshell – is the message of Keynes for our day.

## Three objections

Now let us consider three neoclassical objections to Keynesian theory and policy.

First, as we have seen, economists believe the market economy to be much more naturally stable than Keynes supposed. Hence they view Keynesian demand management as inherently destabilising. History does not support them. The most stable period in modern times, with the fullest employment and fastest growth rate, has been the period from 1950 to1975, when Keynesian theory and policy was in control.

Second, anti-Keynesian economists teach that public investment 'crowds out' private investment. This is true if a

government adds to public spending when all the economy's resources are already fully employed. It is a cousin of the idea that public borrowing merely adds to the burdens of future generations. But whenever there is spare capacity, public investment can 'crowd in' private investment by increasing total demand for goods and services. Most governments drastically cut public investment after the 1970s. Growth was halved and unemployment rose. Some public investment is bound to be 'wasted', but this has to be compared with the waste of unemployment.

Third, monetarist economists – descendants of Milton Friedman – claim that Keynesian counter-cyclical policy is inherently inflationary. Vote-catching will lead Keynesian politicians to print too much money, resulting in creeping and eventually accelerating inflation.

Behind the monetarist argument is the belief that there is only one shock against which policy has to guard: government, which is governments 'monkeying around' with money. Instability in the price level can delude people into trading at false prices, disturbing the natural equilibrium of market transactions. If the key to economic stability is a low and constant rate of inflation, then control of the money supply (or equivalently) of interest rates needs to be taken out of the hands of politicians and vested in independent central banks.

History gives only qualified support to the monetarist thesis. Inflation was subdued throughout the 25 years of the Keynesian era and only started to rise at the end of the 1960s, for reasons much more connected with the Vietnam War than with Keynesian economics. As for the inherent stability of an economy with stable money: a decade of low inflation did not prevent the financial collapse of 2008-09.

Nor did quantitative easing – flooding the economy with central bank 'base money' or M0 in 2009-12 – bring about a robust recovery after the collapse. The aim of quantitative easing was to lower the cost of borrowing by forcing up the price of bonds. Its fallacy lay in the belief that the 'money supply' (which includes 'broad money' or bank credit) is directly under the control of the central bank. How much bank credit an expansion of base money brings about depends on Keynes's 'animal spirits'. A very high rate of interest can sometimes kill off a boom; but even a negative rate of interest might not produce recovery if expectations of profit from increased investment are zero.

Neoclassical economists are not the only critics of Keynesianism. Marxists would claim that such an updated Keynesian programme is just pie in the sky. A capitalist economy needs a 'reserve army of the unemployed' to keep up profits by keeping down wages. Only a fully socialised economy, they say, can abolish unemployment and maintain wage growth. The answer is that between 1950 and 1975, Keynesian-managed capitalist economies averaged unemployment rates of 2% to 3%, half of what they have been since; they had doubled the growth rates we have since had, with rising rather than stagnating wages; and at a cost in inflation only slightly higher than we have experienced under monetarist management.

No system of political economy is perfect. But it should be judged not by comparison with some ideal system, but with the realistic alternatives. Keynes set out to save democracy from the two challengers of his day – fascism and communism. He said that if we continued with laissez-faire in the face of massive unemployment, political freedom would not survive. "But it may be possible by a right analysis of the problem to cure the disease whilst preserving efficiency and freedom" (Keynes, 1936).

I would echo him today. I doubt if western populations will for much longer tolerate a political economy that delivers persisting underemployment, frequent crashes, stagnant wages, and extreme inequalities of wealth and income.

In thinking about our post-COVID-19 world, Keynes is an excellent start, but he did not solve all economic problems. Although he assumed that the desire to consume more would eventually be satiated by abundance, he had no inkling of long-run ecological constraints on growth. Keynes understood that inequality was both an economic and ethical problem, but his theoretical work was directed to overcoming unemployment, the big problem of the day, and he did not link it to the unequal distribution of wealth, which we are much more likely to do today.

## European context

Let me conclude by putting what I have just said into a European context. This is a serious question, because while the rules of the European Union prevent member states from pursuing Keynesian policies at the national level, there is no provision for European-wide Keynesianism.

The fundamental design flaw of the eurozone has often been pointed out; it created a monetary union without three crucial tools which are needed to stabilise economies: a budget big enough to act as a balancer, a fiscal transfer capacity to deal with asymmetric shocks and a lender of last resort for the banking system. These were not accidental omissions. The European Economic and

Monetary Union was built on the belief that they were unnecessary. The creators of the Union accepted the Friedman monetary doctrine that rule-governed market economies are naturally stable, which was consistent with the long-standing anti-inflationary views of the German Bundesbank. But it was worse than that: the eurozone treaty forbade the use of stabilising tools at the national level. What this meant is that the Union as a whole was badly equipped to deal with the kinds of shocks to which market capitalism is prone.

The conventional, or German, view of the financial crisis of 2008-09 was that it resulted from excessive public debts and fiscal profligacy of the Mediterranean countries. Had these countries balanced their budgets as the rules prescribed, the financial shock could have been avoided. The alternative, and I think correct, view, is that the Union provided no non-deflationary mechanism for adjusting current account imbalances between its members. Keynes's remark of 1941 applies very accurately to the EU: "The process of adjustment is compulsory for the debtor, and voluntary for the creditor: the debtor must borrow; the creditor is under no such compulsion." His Clearing Union set out to remedy this design flaw in the global system by providing for creditor adjustment, but no such mechanism was established in Europe. As result, Germany in particular was left free to pile up current account surpluses without limit. The system was maintained by an unstable system of creditor loans which dried up the moment debtors got into trouble.

With the fiscal policy of all member states constrained by balanced buget rules and public debt ceilings, monetary policy – the weaker stabilisation instrument – was the only macro policy available. Mario Draghi, European Central Bank (ECB) president, found a way of bending the rules of the ECB sufficiently to rescue the EU from collapse in 2015. But he recognised the limitations of a purely monetary stimulus. In an interview with *Financial Times*, Draghi (2019) said:

> I [have] talked about fiscal policy as a necessary complement to monetary policy since 2014. Now the need is more urgent than before. Monetary policy will continue to do its job but the negative side effects as you more forward are more and more visible. Monetary pumping worked, but more feebly that fiscal pumping would have.

Draghi proposed a budget for the eurozone large enough to be a stabilising tool: this has not been acted on.

The COVID-19 crisis has brought one promising institutional innovation. In July of this year, the European Commission proposed a €750 billion European Recovery Fund, dubbed Next Generatioan EU. This would authorise the Commission to borrow in the capital markets on the EU's behalf and disburse the loans raised as grants and loans, split half-and-half to its members.

However, it has two obvious limitations. The European Council called the fund 'an exceptional response to temporary but extreme circumstances'. In other words, it is not intended to become a permanent part of the EU's institutional structure, so it is limited in size, scope and duration.

And secondly, it still has to be agreed by all 27 member states. As a result of continuous wrangling, no budgetary allocations have yet been made. What seemed like an imaginative leap forward looks like a quagmire. As one analyst has remarked "a sword of Damocles therefore hangs over the whole plan".

Many member states are still betting on that V-shaped recovery. Germany and France are planning to cut their deficits next year (Germany from 6.35% to 4.25%) with the 'peak of the stimulus' seemingly past. The calls for consolidation are like those leading to self-induced double dip of 2011.

## Conclusion

With the world on the brink of yet another steep recession, and with ecological disaster looming, we can no longer afford the luxury of an economic policy which concentrates on the fight against inflation, leaves unemployment to emergency measures, distribution of wealth and income to the market, and ignores ecological challenges.

Overcoming the scourage of unemployment, connecting its treatment to issues of just distribution nationally and globally, and linking both to a Green New Deal: this tripartite task is the biggest politico-economic challenge facing us.

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DOI: 10.1007/s10272-020-0930-0

Natacha Valla

# Boosting the Economic Recovery or Closing a Green Deal in Europe? Or Both?

In 2020, the EU gave birth to the largest stimulus package it ever funded. Between the long-term budget of the EU and the temporary instrument to boost recovery (Next Generation EU), a global envelope of €1.8 trillion is being mobilised to help rebuild post-COVID-19 Europe. The agenda is simple: "a greener, more digital and more resilient Europe".[1]

## The specific economic profile of the COVID-19 crisis

From an economic perspective, the crisis that unfolded after the outburst of the COVID-19 pandemic has been particular in many ways. Its specificities dictate the way in which any recovery plan should be designed and implemented.

A key specificity of the 2020 crisis is the intensity with which the service sector has been affected. While the manufacturing and construction sectors have suffered the most from recent cyclical downturns, this time – particularly the lockdown of spring 2020 – they were more resilient than the service sector. During the first half of the year, the contribution of the service sector to the contraction of GDP was three times greater than that of the manufacturing sector in the euro area.

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1 As stated on the European Commission website, https://ec.europa.eu/info/strategy/recovery-plan-europe_en, on 10 November 2020, the European Parliament and the EU countries meeting in the Council reached agreement on the next long-term EU budget and Next Generation EU. This agreement will strengthen, with an envelope of €15 billion, specific programmes within the framework of the long-term budget for the period 2021-2027. But follow-up discussions by member states have evidenced political difficulties that could arise through veto positions.

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As a result, the heaviest burden today is borne by the lowest paying jobs in the service sector. This is true both in the United States and in Europe. In the United States, minorities and women are over-represented in this employment sector and will therefore pay the heaviest price. In Europe, too, job losses have disporportionately affected different socio-economic groups. Over the first half of 2020, the working population shrank by 7% for low qualifications, while it increased by more than 3% for the highest qualifications, as highlighted by the ECB.[2]

In general, economists consider that over a long period, technological progress is associated with an increase in total factor productivity. However, in the short term, it is difficult to confirm this observation. The jury is still out. And once the crisis has passed, we will have to find our way back closer to full employment.

A second specificity of this recession is the nature of the shock that hit the European economy. Many of the technological developments that the crisis dramatically accelerated were in the making. But our deliberate shutdown of the economy at a global scale produced a very unusual recession. Some may recall that: in the first few weeks of the pandemic, economists struggled to figure out whether it should be characterised as a supply shock or a demand shock. More than a rhetorical debate for specialists, this was a fundamental point because each calls for a very different economic policy reaction. For my part, with hindsight, I very much like the idea put forward by Guerrieri et al. (2020), that the shocks that followed the pandemic are 'Keynesian supply shocks'. The lockdowns are most certainly initially supply shocks due to the incompleteness of the markets. But then, recent (and future) layoffs and bankruptcies will amplify the consequences of initial shocks according to a Keynesian logic of declining demand.

2 See the keynote speech by Christine Lagarde, President of the ECB, at the ECB Forum on Central Banking, 11 November 2020 (European Central Bank, 2020). This section is based on an interview I gave to Atlantico on 16 November 2020 (see Valla, 2020).

## Common fiscal stimulus is indeed the best policy response

International institutions and central banks speak in unison: we must urgently pursue a coordinated policy mix and the role of fiscal policy must be maximised. Central bank monetary easing has been expanded everywhere. However, it does not mean that public money should be spent carelessly, on the contrary. The means that member states earmarked under the Next Generation EU flag should be allocated carefully. It tends to take longer to emerge from recessions that most intensely impact the service sector: We will not go to the hairdresser twice as much once the lockdown is over! In addition, since services are more employment-intensive than manufacturing, the eventual impact of the current crisis on employment should be expected to be particularly severe. Hence the need to target public support to the labour market in the short term.

As the ECB pointed out, five million Europeans lost their jobs in the euro area in the first half of 2020. Half of these jobs were in sectors that represented only 20% of GDP including retail, trade or transport. Cyclical measures to ease the contraction in demand and make it possible to hold out during difficult times are certainly needed. But they can also be accompanied without procrastination by a more structural approach to help certain sectors with reconversion.

In the short term, we obviously have to show solidarity and protect the most vulnerable populations – and not just workers. And day after day, we are discovering that economic vulnerabilities are compounded by serious social and psychological suffering. Public spending through social transfers is best suited to this situation. The pandemic has forced us to temporarily suspend an entire part of economic activity, which has interrupted the circularity of payment flows. It is therefore a targeted intervention that will be most effective. As Woodford (2020) aptly states, fiscal policy can, under similar circumstances, achieve the best results without monetary policy intervention necessarily being helpful.

But in the design of public intervention, one must also have the courage to look to the future. The most effective long-term measures are those that have been able to support the wide range of changes brought about, or hastened by the pandemic, such as the acceleration of the digitisation of human spheres of activity, and renewed attention to climate issues. Education, training and other measures supporting the employment of tomorrow are essential.

Stating Woodford's position more moderately, on the monetary policy side, it is important to note that central banks in the euro area and in the US are in line with this analysis and loyal to the post. Their role remains to support inflation dynamics by supporting demand, thereby preventing second-round deflationary effects from emerging on prices and wages. It is up to them to maintain favourable financing conditions, which they do.

## Bridging Next Generation EU and the Green Deal

To satisfy the generational aspiration for more sustainable and inclusive prosperity, Europe today has the strongest potential for renewal. As Baptiste Perrissin-Fabert and I argued recently,[3] the stars are aligned. First, with the recovery plan, Europe has acquired a new (revolutionary!) capacity for issuing common public debt. Moreover, the massive purchase of public debt by the Eurosystem has propelled central banks to the center of the handling the COVID-19 crisis with unprecedented power. Finally, with all due respect to the 'frugal' countries, the Maastricht budgetary rules have been suspended indefinitely, which saves time in the short term. We should be delighted that European leaders have succeeded in going beyond the limits of yesterday: This is the optimal time to build our collective resilience in the face of the climatic, health and social crises that threaten our societies.

To start with, Europe should not be lured by overly accessible liquidity. While the current environment makes new debt possible and seemingly harmless, that in itself is not good news. COVID-19 debt will be added to mountains of existing debt for which the conditions of sustainability will have to be secured over time. The debate amongst economists on the remedies to manage this debt is lively: cancellation, monetisation, rollover in perpetuity, exceptional taxes, forced investments, ten-year austerity.

## Good debt, bad debt and impact evaluation

It is too early to settle this debate, but Europeans should be aware that a decision will need to be made when the time comes. But let us set aside these theoretical options for the moment to focus on the more operational challenge of using this new European common debt. We believe, like former ECB President Mario Draghi, that there is "good" and "bad" debt. How do we avoid the déjà vu of wasted money, hastily recycled project funding, or wasted funds on infrastructure of questionable utility?

Times have changed. A new generation is rising, making a tangible impact in terms of environmental and social

3 OpEd in Les Echos, 24 November 2020, on which the sequel is based.

DOI: 10.1007/s10272-020-0931-z

sustainability. This generation claims "good" debt. More and more companies and investors are sincerely committed to putting impact at the heart of their business model. Europe must seize on these fundamental movements to make them a project of innovation for the best, of solidarity between its member countries, of economic sovereignty and of environmental power.

The recovery measures announced by Europe in parallel with the Green Deal are the perfect opportunity to step up the effort to measure the impact of public expenditure, both in the short and in the long term. To that aim, it is essential to quickly stabilise benchmarks to measure the financial and non-financial impact of investments in the European recovery plan. When choosing between the financing of road infrastructure, technological innovation in telecoms or the renovation of schools, it is no longer possible to put on blinders and focus solely on economic and financial profitability. Impact evaluation must take into account everything that today "does not count for accountants", in particular the extra-financial impacts that will, for example, make it possible to increase human capital (health, education), or even natural capital (avoided $CO_2$ emissions, services provided by biodiversity).

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Debora Revoltella

# COVID-19 and the Twin Transition: How the Recovery Can Boost Sustainable and Inclusive Growth

The COVID-19 pandemic struck the EU economy hard. Economic activity fell dramatically in the first half of the year in the EU. Optimism for a quick turnaround in the third quarter of 2020 was replaced by renewed fears about the spread of the virus, and new lockdown measures were gradually put in place in autumn. Still in the mist of uncertainty, the EU economy is expected to return to growth at a slow pace.

Uncertainty continues to impede forceful recovery. Uncertainty linked to the pandemic has three dimensions:

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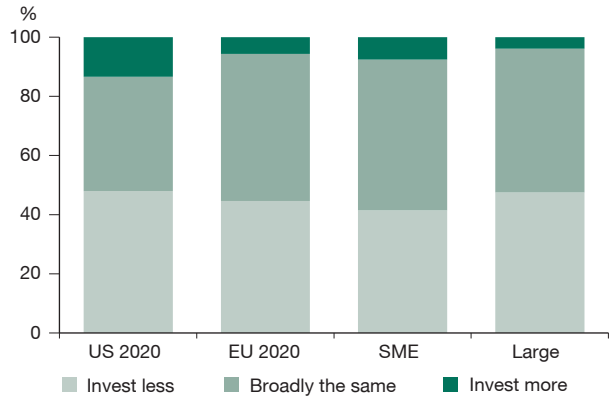
- medical – related to the timing for an effective vaccine development and deployment, successes in immunisation, etc.
- economic – second-round effects of the economic crisis, e.g. persistent shift in consumers' attitude towards precautionary savings, potential round of delayed corporate bankruptcies or unemployment
- long-term implications – linked to possible structural changes induced by COVID-19, for example, changes in preferences, rethinking of the global value chains, emergence of new business and organisational models, as well as stronger role of the state in economic terms.

High levels of uncertainty pose major concerns to firms, leading many to postpone or cancel investment. Findings based on the latest European Investment Bank investment survey (EIB, 2020) show that uncertainty remains a key impediment to investment, cited as a constraint by 81% of EU firms. The coronavirus pandemic has strongly

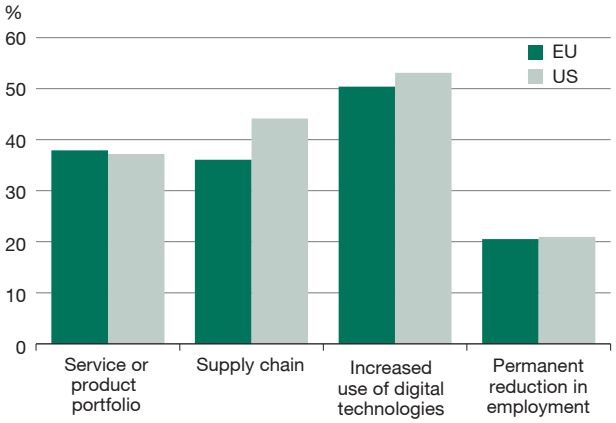
Figure 1
**COVID-19 impact on investment in the short term**
Share of firms




Note: Base: All firms who have invested in the last financial year (excluding do not know/refused responses). Q: What proportion of total investment was for (a) replacing existing buildings, machinery, equipment, IT; (b) expanding capacity for existing products/services; (c) developing or introducing new products, processes, services?

Source: IPSOS, 2020.

Figure 2
**COVID-19 long-term impact points to a 'new normal'**
Share of firms claiming COVID-19 will impact each factor




Note: Base: All firms who have invested in the last financial year (excluding do not know/refused responses). Q: What proportion of total investment was for (a) replacing existing buildings, machinery, equipment, IT; (b) expanding capacity for existing products/services; (c) developing or introducing new products, processes, services?

Source: IPSOS, 2020.

affected corporate investment across the EU. Almost half (45%) of firms intend to invest less in the current financial year due to the coronavirus (Figure 1). Among those that have investment plans in the current financial year, around one-third (35%) of firms say they will delay or abandon at least some of these plans due to COVID-19. Around one-fifth (18%) expect to continue with their investment plans on a reduced scale. Uncertainty about the economic environment, leading to a 'wait-and-see' approach, is compounded by a more challenging financial situation for corporations. Notwithstanding exceptional policy support, closures or reduced activity have given rise to cumulative revenue losses ranging from 2%-3.5% of assets for large corporations up to 6%-10% for SMEs in the last six months. To re-absorb those losses at least partially, firms will have to review their future plans. With internal finance strongly constrained, a trade-off emerges between an attempt to preserve, at least in part, investment and mounting corporate leverage.

## The 'new normal'

A short-term drop in investment collides with enhanced long-term needs in order to adapt to a COVID-19 induced 'new normal'. The EU economy will not revert to the 'old normal' in the aftermath of the pandemic. Digitalisation has received a boost over the last few months and is widely expected to shape the 'new normal' (Figure 2).

### Increasing digitisation

Firms across the EU need to step up the pace to maintain competitiveness in the post-pandemic environment shaped by increasing digitalisation. Almost four out of ten firms (37%) are still non-digital, i.e. have not adopted key digital technologies (EIB, 2019; EIB, 2020). Reasons for their slow adaptation include a lack of awareness about technologies available, their potential benefits and the urgency of the situation. Moreover, there are issues in firms' operating environments that slow technology diffusion. Some 16% of EU firms find the (lack of) digital infrastructure to be a major impediment to digitalisation, i.e. three times more than in the US (5%). Innovation and revisiting the structure of the global value chains are other areas of potential structural change post-COVID-19.

### Climate change is here to stay

The EU Commission and the EU Parliament have reconfirmed the ambitious EU decarbonisation targets, requiring a prompt transformation of the EU economy. The majority of EU firms (58%) report that they already feel it has an impact on their business. With two-thirds reporting that they already invest in climate change or plan to do so, EU firms show greater responsiveness to the climate challenge than US peers (46%). Uncertainty about regula-

tion and taxation, however, are key factors holding firms back to step up activities to tackle climate change and the risks related to it.

### Labour market impact

The digital and the green transition are going to impact on EU labour markets. The transition's effect will vary widely, depending on geography and labour market groups. Recent advances in digital technologies have tended to benefit high-skilled workers and those in less-routine occupations. At the same time, it has been associated with growing spatial disparities, with people and businesses increasingly clustering in favoured urban locations to live and work. The greening of EU economies needed to meet the EU's goal of neutral carbon emissions will require major industrial transformation. Carbon-intensive activities are more prone to job loss during the green transition with risks spatially concentrated. Change caused by structural transformation and the risks to employment that come with it will have to be dealt with against the backdrop of a less favourable labour market situation in the immediate aftermath of the pandemic. In a worst-case scenario, post-pandemic labour markets could see an increase in skill mismatches that coincide with higher unemployment.

Labour market risks from both forces of structural change coincide in some places. Where job loss caused by automation and greening coincide, alternate employment will be harder to find, all else being equal. Analysing twin transition risks, we find that high double exposures to both types of structural change cluster in Central and Eastern Europe.

Regions with high exposure to twin risks tend to be poorer, less densely populated and often have labour markets that include some structural difficulties. Comparing the regions with high exposure to both risks to the regions facing lower risks suggests that higher-risk regions are already facing more challenges. None of the regions with the highest twin transition risks are among the 30 most R&D-intensive regions in the EU. Accordingly, firms in regions with high twin transition risks tend to invest less in intangibles.

Divergences in regional performance will be more difficult to address in the coming years. European economies will continue to reel from the coronavirus crisis, and (structural) unemployment could remain an issue. This applies to regions that stand to be directly affected by transition risks and to individual countries. In this respect, parts of Southern Europe face a more challenging situation as local labour markets have not yet fully recovered from the financial and sovereign debt crisis and have experienced persistent structural difficulties.

Digitalisation and greening can be a source of job creation, with policies needed to provide a boost. Structural changes come with job destruction and job creation effects. Jobs to emerge from greening are expected for instance in renewable energy, recycling or construction. In the longer term, the green transition is forecast to be job neutral or even add to employment in the EU. For digitalisation, new technologies have not yet led to job destruction on balance. EIB investment survey results further corroborate employment creation effects for digital firms. Digital firms have been more likely to add jobs than their non-digital peers over the past three years. Gereben and Wruuck (2020) find job creation effects by digital firms across the EU and particularly in Southern Europe.

### Keys to the twin transition

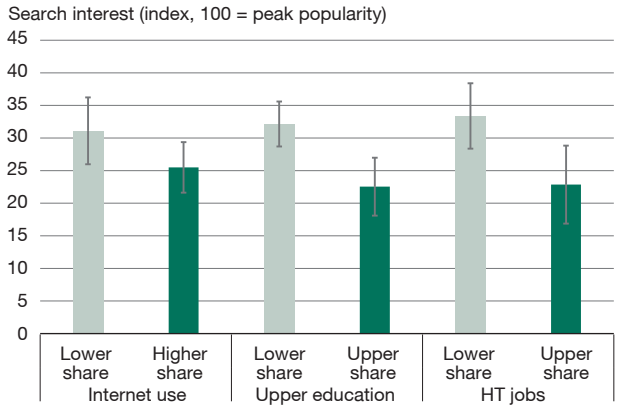
The twin transition requires skill sets to adapt. Jobs created are not the same as the ones lost, and structural shifts come with changes in the demanded skill sets. For example, shifts linked to digitalisation have become apparent in recent years, with high-skilled jobs increasing and firms, particularly innovative ones seeking more advanced or new skill sets, struggling to find the right people (see EIB, 2018, 2019). Similarly, the greening of the EU economy will change skills needed in a number of occupations, e.g. architects or engineers well versed in building renovations or green technologies will be increasingly sought after.

Learning is key to make structural transformations a success. Changes can raise the risk of skill mismatches and shortages if skill supplies react (too) slowly. Supporting learning in times of structural transformation, including reskilling and upskilling measures, is key to mitigate the risk of exclusion from the labour market, mitigate inequalities and allow people to seize opportunities related to changes.

Digital technologies and education helped create resilience to the COVID-19 shock. The crisis also underscored how education and digitalisation can be a source of resilience. Individuals' concerns about unemployment were lower in European regions where the use of digital technologies is more prevalent and where a smaller share of the population had lower levels of education (Figure 3).

Managing the fallout from the pandemic, while at the same time building a more digital and green economy, requires strong policy support. The rebound of the EU economy will take time but we have a chance to rebuild it for the better. Moving into the 'new normal', digitalisation

Figure 3
**Regional impact of the COVID-19 shock on unemployment concerns**




Notes: Predicted Google search intensity for the unemployment topic for an average region facing 1000 newly identified COVID-19 cases. Lower shares denotes 25th and upper shares denotes 75th percentiles of variable regional distributions. Internet use reflects share of population which use internet on daily basis, upper education corresponds to population share with education level 3 or above, and HT jobs denotes the employment share in science and technology sectors. Based on 306 EU regions, excluding capital regions. Daily observations between January and May 2020, starting from cumulative 100 cases in a country. The model controls for regions disposable income and population and includes fixed effects.

Source: EIB Econ calculations, 2020.

and the green transition can be a source of job creation. For this to happen, policymakers need to set the right incentives, provide support through investment and labour market policies to help preserve employment rather than specific jobs, and facilitate job transitions.

Climate action has the potential to boost employment in the short to medium term, and in turn, support a job-rich recovery. Employment opportunities linked to greening can be a source of local job growth, offering 'meaningful' transition opportunities, for example from mining to renewables. Moreover, these new jobs can help to sustain employment, support demand and strengthen the recovery from the coronavirus pandemic. For green jobs to materialise, Europe needs to invest, particularly in skills, and create the right mix of incentives.

A strong skill base can support job creation from digitalisation. Digitalisation can be more labour-saving or labour augmenting. Which technology firms adapt and the quality and the quantity of jobs they (expect to) create depend on industry structures and the business environment, including the short-term outlook and longer-term obstacles. Adopting more jobs suited to technologies is more likely where the availability of skill sets to support this is better. This includes expert digital skills but also more basic user skills, which support incentives for technology adoption, digital innovation and the creation of new business models. At the same time, diffusion of digital skill sets is crucial to avoid further polarisation on labour markets and deepening of digital divides in society.

## The long game

Europe has a window of opportunity to embark on a recovery that tilts towards digitalisation and a greener economy, and stands to generate sustainable benefits for its people. Failure to seize the opportunity to turn the European economy around will carry a high cost. Megatrends are here to stay, and new technologies are key to providing environmental and social sustainability. A failure to act now would mean a slower and less sustainable recovery for the next years. In the longer term, it would mean a less healthy planet, a further loss of competitiveness and economic significance for Europe in the decades to come, and a high risk of exacerbating existing inequalities while new ones emerge.

A mix of immediate and longer-term support is needed to avoid deepening inequalities and to facilitate adaptation to structural change in the current situation. For a job-rich recovery powered by digitalisation and greening, short-term actions need to align with long-term strategy. Moreover, efforts need to be well coordinated across Europe, and private and public sector incentives and actions need to align. This requires clarity in terms of targets and policy guidance, particularly for climate change. It also calls for stepping up action to fully realise the digital single market and support the broadening of digital skills. Finally, a strong focus on promoting skills can help people to transition to more promising areas of economic activity in the short to medium term, mitigating risks of scarring effects and long-term unemployment. In the longer term, reforms to adult education coupled with investment in education quality form the basis to boost innovation and advance the digital and green transition in a human-centric way. Investment in each of the three areas will complement the others and raise the economic and societal returns.

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DOI: 10.1007/s10272-020-0932-y

Sue Maguire

# Youth 2020 – Preventing Another Lost Generation?

Across the EU and internationally, as the second wave of COVID-19 takes hold, the economic impact emanating from the pandemic is evident. This includes widespread increases in unemployment and economic inactivity. As was the case in previous times of economic shock, such as in the 1980s, 1990s, and, in particular, in the economic recession following the 2008 financial crash, it is already evident that young people will be disproportionately affected. This has reignited fears that there will emerge a 'lost generation' of young people, who will be denied access to good quality and sustainable job opportunities as they transition into the labour market.

The potential scarring effects of long-term youth unemployment and social disengagement have for many years challenged policymakers to develop successful and sustainable interventions (Bell and Blanchflower, 2011). For example, in the UK, evidence from the Commission on Youth Unemployment showed that unemployed young people aged 16-24 years were more likely to spend longer periods out of work throughout their lives, be paid less when in work (Macmillan, 2012), have poorer mental and physical well-being and be involved in criminal activity (Bell and Blanchflower, 2011). At the same time, the costs to the public purse of managing the economic and social consequences of inactivity among young people cannot be ignored.

This article seeks to develop a better understanding of the effectiveness of a range of youth employment programmes, which have been tried and tested to address the needs of different groups of young people who face barriers to accessing the labour market. In addition, they are designed to reduce youth unemployment, as well as (in some cases) economic inactivity.

## Why are young people so vulnerable?

Young people's vulnerability to higher than average rates of unemployment or redundancy is often attributed to their disadvantaged or precarious position in the labour market. Firstly, in terms of a labour 'queue', young people's limited labour market experience and/or their perceived inadequate skill levels render them less likely to be recruited at times of high unemployment. Secondly, structural changes in the labour market, emanating from technological advances and sectoral shifts are adversely affecting young people's job opportunities. For example, a survey conducted in May 2020 about the impact of COVID-19 in the UK found that "one-third of 18-24-year old employees (excluding students) have lost their jobs or been furloughed, compared to one-in-six prime-age adults" (Gustafsson, 2020, 1).

Moreover, the industrial sectors that will be most affected by job cuts in 2020 and possibly beyond, notably, non-food retail, hospitality, travel, the arts and entertainment are those that employ a large number of non-graduates. Young people are further disadvantaged by being among any initial redundancies due to their comparatively shorter period of employment in a company than their co-workers (Henehan, 2020).

## Policies to address youth unemployment

There is clearly no one 'silver bullet' response to escalating levels of youth unemployment. According to O'Higgins (2001), when developing potential policies to address youth unemployment, key considerations to be taken into account are:

- the economic context
- an appraisal and understanding of the target group
- identifying parts of the economy that have potential for growth.

In most cases, some form of active labour market policy (ALMP) has been implemented to prevent and reduce unemployment, including for young people who are unemployed or not in education, employment or training (NEET). Different ALMPs are designed to reduce various types of unemployment, cyclical unemployment, structural unemployment, regional disparities – together with measures that support disadvantaged groups which may have additional barriers. As discussed in Duell (2012), they also vary substantially between 'work first' and 'train first' strategies, depending on whether the focus is on a rap-

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id reduction of unemployment (work first) and/or a more sustainable integration into the labour market (train first).

Eichhorst et al. (2016) differentiated ALMPs into five types:

- job-search assistance
- training programmes
- subsidised employment
- direct job creation and public employment programmes
- start-up subsidies, self-employment assistance and support.

### Job-search assistance

In the past, job-search assistance measures that focused on early intervention to encourage targeted and informed job searches were considered to be as effective as more expensive programmes such as job creation and job subsidies (OECD, 1993). More recent research has confirmed the efficacy of job-search assistance and monitoring programmes in terms of leading to accessing employment, as well as their cost-effectiveness and capability of working in different occupational settings (Caliendo and Schmidl, 2016). By being introduced as soon as an individual becomes unemployed, they reduce the risk of longer-term unemployment.

Concerns that have been raised about job-search assistance programmes are a) the possibility of some young people accepting any form of work, including precarious employment, because they fear that they will be sanctioned or b) the possibility that they will be discouraged from registering as unemployed and withdraw from the labour market. In addition, research identified a reduction in the subsequent earnings of participants in some countries, such as Canada (O'Higgins, 2001).

In substantive and successful programmes such as the European Youth Guarantee and the New Deal for Young People in the UK, a job-search assistance element has been included to accompany more general training and employment elements.

### Training programmes

Training programmes to support young people's transitions into the labour market have been introduced in many countries over a considerable period of time. Overall, however, their impact has been found to be insignificant, or even negative, notably when classroom-based training was provided (Caliendo and Schmidt, 2016, 17). As a response to mass unemployment, training programmes have been criticised for offering only a brief interlude of being 'warehoused', without enhancing qualification attainment or progression to the labour market (Keep, 1986).

Furthermore, evaluations of training programmes targeted at disadvantaged young people have tended to focus predominantly on 'hard' outcomes, such as numbers becoming employed, rather than taking into consideration 'soft' outcomes, such as 'distance travelled', and therefore indicate poor programme performance (Martin and Grubb, 2001). This leads to the recruitment of young people who are immediately employable, detracting attention from young people who require sustained and supported intervention before they can access employment.

While it has been evidenced that apprenticeship programmes can assist access to jobs in times of recession, even in countries with well-established apprenticeship systems, such as Germany, Austria, Switzerland and Luxembourg, employers can be reluctant to recruit young people, especially if they have no or low-level qualifications (Scarpetta et al., 2010). Such reluctance is likely to be exacerbated by the constraints of COVID-19, with social distancing restrictions making it more difficult to accommodate and train new recruits.

A more positive note was struck by Duell (2012), who suggested that a positive impact of pre-vocational programmes for low-skilled young people had been prevalent where well-developed dual training systems were in place. These programmes incorporated an individualised approach involving vocational guidance, basic skills training and work-related training. Furthermore, Duell (2012) concluded that such an individualised approach was a key prerequisite for these programmes to be effective.

### Subsidised employment

Subsidised employment may include wage subsidies or wage cost subsidies, both of which are found to have a positive impact on employment outcomes, especially if they are well targeted towards disadvantaged groups, including young people (Duell, 2012). They can also play an important role in helping maintain the attachment of young people to the labour market and offer employers training subsidies, as well as incentives to sustain their recruitment.

However, while evaluations of whole population studies have concluded that wage subsidies can have a positive impact in the short run, substantial deadweight and substitution effects – in terms of employers' behaviour – have been present (Martin and Grubb, 2001).

### Direct job creation and public employment programmes

Job creation and public employment programmes provide young people with a degree of attachment to the labour market, especially during a recession. When combined with vocational training, they become more expensive to implement. A macroeconomic study using analysis of a database with repeated observations for all EU member states for the 1998-2012 period concluded that older groups in the youth cohort aged 20-24 years were more likely than younger groups to benefit from job creation programmes (Speckesser et al., 2019). This was attributed to older groups having experienced prolonged detachment from the labour market, as well as from education and training intervention. Other studies have shown that public works can help more disadvantaged groups (including young people), as they provide participants with some form of income in the absence of little or no welfare support (Kuddo, 2012).

### Start-up subsidies, self-employment assistance and support

Policymakers in many countries favour the implementation of programmes that encourage young people to become self-employed, usually as a subsidiary component of an overall attempt to reduce youth unemployment. However, take-up rates tend to be low, due to young people's shortage of skills and experience, and a lack of funding and support (OECD/European Commission, 2020).

Typically, self-employment programmes may comprise one or several of the following elements (O'Higgins, 2001, 125):

- promoting and introducing the self-employment option
- training in skills development
- mentorship
- financial support
- access to workspace
- business expansion support
- networking.

More recent assessment, while pointing to the need for a combination of these components to be offered, questions whether the emphasis should be weighted in favour of financial support or the development of entrepreneurial skills. A caveat made here is that, in view of the substantial increase in the number of youth entrepreneurship programmes, more evidence is required (OECD/European Commission, 2020).

### Multi-element programmes

As well as introducing individual ALMPs, policymakers have devised multi-element programmes to form an integrated offer. This may include a combination of job search and counselling, education and training, wage incentives and job creation. The most recent and powerful evidence, which has assessed the extent to which labour market interventions have successfully improved young people's employment outcomes, concluded that programmes which integrate a number of interventions and services are more likely to be successful, in particular in low- and middle-income countries (Kluve et al., 2019). Crucially, being underpinned by effective and efficient profiling and follow-up systems was found to be pivotal to their success.

## The effectiveness of youth employment programmes

Echoing O'Higgins' (2001) identification of what needs to be taken into account when devising appropriate policies, it is necessary to consider:

*The state of the economy*. This means acknowledging that what works will vary, dependent on the prevailing economic conditions and existing infrastructure arrangements. For example, employment subsidies can be effective at times of recession, as they can move young people who are 'labour market ready' into employment very quickly and at volume. However, these programmes are prone to deadweight and substitution effects. Youth guarantees also have the capacity to ensure young people are given an offer of employment or training and can reduce the risk of young people being locked into long-term unemployment/economic inactivity.

*The target group of young people the policies are seeking to support*. To be successful, policies need to be tailored to meet the needs of the target group, rather than attempting to impose a rigid system encompassing all young people within a certain age group. This is particularly pertinent when the impact of COVID-19 means that the volume and characteristics of young people becoming unemployed may differ from those affected by economic recessions. It has been suggested that, during an economic recession, an emphasis on targeting could enhance the positive impact of an ALMP (Card et al., 2015; Kluve et al., 2019). Furthermore, by taking situational and economic conditions into consideration, ALMPs focusing on young people have a more positive impact (Caliendo and Schmidl, 2016, 17).

Shortcomings of ALMPs in relation to their impact on young people include:

- The propensity, particularly for training and subsidised employment programmes, to demonstrate large deadweight, substitution and displacement effects. In

making such calculations, it is important to differentiate between programmes that are designed to have an immediate impact on reducing levels of unemployment and those that seek to provide a more sustainable transition to the labour market through training (Duell, 2012);

- Their tendency to focus on 'work ready' young people, at the expense of 'harder to help' and 'harder to reach' groups;

- A lack of evidence about 'what works and at what cost', notably a 'short-sighted' emphasis on measuring job outcomes, rather than on the 'distance travelled' by individuals and the impact which training and/or work experience may have on their attachment to the labour market (Caliendo and Schmidl, 2016);

- The costs of programmes often being vague, inconsistent and incomplete.

Overall, ALMPs are unlikely to work for the most disadvantaged groups unless accompanied by re-engagement strategies.

Characteristics of programmes which have been found to be effective include:

- being closely targeted rather than generic
- outreach services that extend and encourage engagement and participation
- the provision of intensive support for young people furthest away from the labour market
- having pre-vocational programmes for low-skilled young people
- multi-element programmes forming an integrated offer, which may include a one-stop-shop to provide benefit payments, career guidance and counselling, assistance with job search and placements, referral to further training and other welfare services
- having effective and efficient profiling and follow-up systems.

## Conclusions

The economic impact of the COVID-19 pandemic will result in mass or increased youth unemployment in many countries. In recent decades, there have been many programmes and interventions to help prevent and stem the flow of high incidences of youth unemployment and inactivity. However, it is crucial that their performance is assessed before lurching into immediate policy responses. Research evidence tells us that introducing 'knee-jerk' policies without understanding the needs of young people and the labour market can be both costly and damaging.

Programme evaluation has highlighted the importance of targeting. Achieving this objective is dependent upon having tracking systems in place that can produce robust, reliable and efficient data on young people's intended and actual destinations, alongside accurate labour market information, which is sensitive to the needs of regional and local labour markets.

It is also vitally important that programmes and interventions are designed to recognise and meet the needs of all groups of young people, including the hardest to help/reach and young people who are defined as economically inactive, due to their caring responsibilities or ill health.

Establishing or maintaining services that facilitate early identification and early intervention are critical components that improve the effectiveness of ALMPs. This process is enhanced by offering young people who require support an individualised and person-centred approach. Moreover, on-programme support and follow-up once young people enter the labour market are also likely to improve sustainability impacts.

The evidence suggests that a one-size-fits-all approach simply will not work and that a range of interventions, while costly, will be needed to meet the needs of a diverse population and prevent the risk of a 'lost generation'. Moreover, while there will be assertions that the cost of delivering such ambitions may be prohibitive, a counter argument must be that the cost of failing successive generations of young people remains unacceptable.

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Robert Pollin

# Green Recovery: Europe and the World

The October 2018 report of the Intergovernmental Panel on Climate Change (IPCC), the most authoritative global organization advancing climate change research, presented an unequivocal case for urgent action. The report emphasized the necessity of limiting the increase in global mean temperatures to 1.5 degrees Celsius (1.50C) above pre-industrial levels as of 2100. This will substantially reduce the risks of heat extremes, heavy precipitation, droughts, sea level rise, biodiversity losses and corresponding impacts on health, livelihoods, food security, water supply and human security. The IPCC concludes that to achieve the 1.50C maximum global mean temperature increase target by 2100, global net carbon dioxide ($CO_2$) emissions will have to fall by about 45% as of 2030 and reach net zero emissions by 2050 (IPCC, 2018).

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Open Access funding provided by ZBW – Leibniz Information Centre for Economics.

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## Basics of a global and European Green New Deal

In my view, the core of the global Green New Deal is to advance a global project to hit these IPCC targets, and to accomplish this in a way that also expands decent job opportunities and raises mass living standards for working people and the poor throughout the world. The overall project must also include just transition policies for workers and communities whose livelihoods now depend on the fossil fuel industries, and will therefore experience job losses and economic disruptions as these industries necessarily contract.

These features of a global Green New Deal are in full alignment with the basic premises of the European Green Deal – what European Commission (EC) documents have called its "man on the moon" project. As described in the EC program for a "Climate Neutral Europe by 2050," the stated objectives of the European Green Deal include achieving a 55% reduction in all greenhouse gas emissions by 2030 and to reach net zero emissions by 2050. The European Green Deal also emphasizes just transition measures for workers and communities that are currently dependent on the fossil fuel industry. The EC program describes its project as follows:

> The strategy shows how Europe can lead the way to climate neutrality by investing into realistic techno-

logical solutions, empowering citizens, and aligning action in key areas such as industrial policy, finance, or research – while ensuring social fairness for a just transition (European Commission, 2019a).

In fact, as a purely analytic proposition – independent of the myriad of political and economic forces arrayed around these matters – it is entirely realistic to allow that global $CO_2$ emissions can be driven to net zero by 2050. By my higher-end estimate, it will require an average level of investment spending throughout the global economy of about 2.5% of global GDP per year, focused in two areas: 1) dramatically improving energy efficiency standards in the stock of buildings, automobiles and public transportation systems, and industrial production processes; and 2) equally dramatically expanding the supply of clean renewable energy sources – primarily solar and wind power – to deliver electricity at competitive prices relative to fossil fuels and nuclear power to all sectors and in all regions of the globe. Clean energy investments will also need to be complemented in other areas, the most important of which is to stop deforestation and support afforestation.[1]

Focusing on the clean energy transformation, the level of necessary investments would amount to about $2.5 trillion in the first year of the program, which we assume here would be 2021. Spending would then average about $4.5 trillion per year between 2021 and 2050. Total global clean energy investment spending for the full-scale 30-year investment cycle 2021-2050 would amount to about $120 trillion.

These figures are for overall investment spending, including from both the public and private sectors. Establishing the right mix between public and private investment will be a major consideration within the industrial and financing policies framework. On a global scale, it is reasonable to assume that clean energy investments should be divided roughly equally – i.e. 50% public and 50% private investment respectively.

For Europe, it is likely that the public sector share of overall investment could be lower, at perhaps 25%. This is because private clean energy investment activity is already relatively well advanced in Europe, including investments in small-scale cooperative clean energy enterprises (Pollin, 2015, 92-109). Still, in Europe and elsewhere, a major part of the policy challenge will be to determine how to leverage the public interventions most effectively to create strong incentives for private investors, large and small, while also maintaining tight regulations over their activities. These efforts would operationalize the perspective articulated in September 2020 by Isabel Schnabel, a member of the European Central Bank Executive Board, that "Collective action, by governments, firms, investors, households, and central banks, including the European Central Bank, is required to accelerate the transition towards a carbon-neutral economy" (Arnold, 2020).

In Europe, and elsewhere, it is critical to recognize that this clean energy investment project will pay for itself in full over time in strictly financial terms – i.e. in addition to its obvious ecological benefits. More specifically, it will deliver lower energy costs for energy consumers in all regions of the world. This results because raising energy efficiency standards means that, by definition, consumers will spend less for a given amount of energy services through, for example, installing high-efficiency heat pumps in buildings to replace low-efficiency conventional heating, ventilation and cooling equipment. Moreover, the costs of supplying energy through solar and wind power, as well as geothermal and hydro sources, are now, on average, roughly equal to or lower than those for fossil fuels and nuclear energy. Specifically, as of 2019, the average global cost of electricity from utility-scale renewable energy sources was 6.6 cents (in US dollars) for solar, 5.3 cents for onshore wind, 4.2 cents for hydro and 7.3 cents for geothermal. The range for fossil fuel sources of electricity was between 5.0 and 17.7 cents (International Renewable Energy Agency, 2019). As a result, the initial upfront investment outlays in high efficiency and renewables can be repaid over time through the cost savings that will be forthcoming.

The consumption of oil, coal and natural gas will need to fall to zero or near-zero over this same 30-year period. The rate of decline can begin at a relatively modest 3.5% in the initial years of the transition program, but will then increase every year in percentage terms, as the base level of fossil fuel supply contracts annually through 2050. Of course, both the privately owned fossil fuel companies, such as Exxon-Mobil and Chevron, and equally, the publicly owned companies such as Saudi Aramco and Gazprom in Russia, have massive self-interests at stake in preventing reductions in fossil fuel consumption as well as enormous political power. These powerful vested interests will simply have to be defeated.

It is, finally, critical to recognize that these clean energy investments will be a major source of job creation. In fact, investing money in *anything* creates jobs. The relevant questions for assessing the job impacts of the clean energy program are therefore: 1) *How many* jobs will get

1 Discussions on these points are in Chomsky and Pollin (2020) and more fully Pollin (2020).

created over time through building a green economy and, correspondingly, how many jobs will be lost through the phase-out of the fossil fuel industry?; and 2) *How quickly* can jobs be generated under a clean energy investment program? If jobs can be created quickly, then the clean energy investment program can serve as a major engine of short-term recovery from the COVID-19 recession as well as a long-term framework for supporting both rising mass living standards and ecological sustainability.

## Job creation in Europe through clean energy investments

Table 1 reports estimates that I have generated with co-authors on job creation in Germany, Spain and Greece.[2] These figures are derived on the basis of the national input-output tables for these three countries. Row 1 reports on employment/output ratios for the respective economies for clean energy investments – i.e. total jobs created per €1 billion in investment spending in energy efficiency and renewable energy. As we see, the figure for Germany is roughly 11,000 jobs per €1 billion in expenditures. In Spain and Greece, the figures are much higher, and nearly identical, at 23,000 jobs per €1 billion in spending in Spain and 22,000 jobs per €1 billion in Greece. The figures for Spain and Greece are roughly double that for Germany because average wages in the relevant sectors in Spain and Greece are roughly half those in Germany.

Rows 2 and 3 report on the level of job creation when each country invests 2.5% of GDP in clean energy (using 2019 GDP figures), and how much that represents as a share of the country's overall labor force. As we see, in Germany, about 1.4 million jobs would be generated, equal to about 2.2% of the country's 2019 total workforce. For Spain, the job expansion would be almost 700,000 jobs, amounting to about 3.0% of the 2019 labor force. In Greece, the level of job creation, at about 100,000 jobs, represents an increase, similar to Germany, of about 2.2% of its 2019 labor force.

On its own, this level of job creation would not be sufficient to produce a full recovery from the COVID-19 recession in any of the three countries. As we see in row 4 of the table, according to the most recent figures, unemployment stands as of this writing at 6.3% for Germany. Thus, for Germany, all else equal, clean energy investments at 2.5% of GDP would be able to reduce unemployment to 4.1%. For Spain and Greece, current unemployment rates are much higher, at 16.2% and 17.3%

Table 1
**Job creation in Germany, Spain and Greece through energy efficiency and clean renewable energy investments**

| | Germany | Spain | Greece |
|---|---|---|---|
| 1) Job creation per €1 billion investments (rounded) | 11,000 | 23,000 | 22,000 |
| 2) Job creation by investments at 2.5% of GDP (rounded) | 1.4 million | 690,000 | 100,000 |
| 3) Job creation as share of 2019 labor force | 2.2% | 3.0% | 2.2% |
| 4) Most recent official unemployment figures | 6.3% | 16.2% | 17.3% |

Notes: Investments at 2.5% of 2019 GDP; Figures include direct, indirect and induced jobs.

Sources: Row 1 figures are from Pollin et al. (2015a) for Germany, Pollin et al. (2015b) for Spain, and Pollin (2019) for Greece. Rows 2-4 figures are from the Federal Reserve Bank of St. Louis FRED database.

respectively. The roughly 2%-3% reduction in the unemployment rate generated by clean energy investments at 2.5% of GDP will certainly be beneficial. But for both countries, this level of job expansion will need to be one component of a larger set of initiatives to achieve a robust short-term recovery.[3]

Part of the solution should be to increase the amounts of clean energy investments beyond the average annual figure of 2.5% of GDP that will be needed over a 30-year period. This increased investment level is justifiable both in terms of its short-run impact on jobs, but equally with respect to the climate stabilization project itself. This is because, to achieve the IPCC's intermediate target of a 45% emissions reduction by 2030, or the EC's more ambitious 2030 target of a 55% emissions reduction, it will be necessary for clean energy investments between now and 2030 to be greater than the overall 2021-2050 average of 2.5% of GDP. This follows from the fact that there remain only nine years, until 2030, to bring emissions down by roughly 50% from current levels, while there would still be 20 additional years – from 2031 to 2050, i.e. twice as much time – to reduce emissions from the 2030 level to net zero.

Another important factor in assessing job impacts of a clean energy transition is that Germany, Greece and Spain are all net fossil fuel importing countries, as are

2 See Pollin et al. (2015a) for Germany, (2015b) for Spain and Pollin (2019) for Greece.

3 Unemployment figures for all three countries are the most recent unadjusted rates reported at the Federal Reserve Bank of St. Louis FRED website as of 11 November 2020.

most Western European economies.[4] As such, their fossil fuel production activities, along with their refining and marketing sectors, are small in comparison with a clean energy investment project at 2.5% or more of GDP. As such, on a net basis, these economies will be able to reduce their energy import bills as their domestic clean energy sectors become capable of providing an increasing share of their economy's overall energy supply. Correspondingly, this import substitution effect will become an increasing source of job creation in all three countries, along with all other net fossil fuel importing economies. For the case of Greece, the annual net energy import bill averaged 2.8% of GDP between 2002 and 2018. Thus, to be able to eliminate that extent of import dependency over time will produce a level of job expansion roughly equivalent to the injection of 2.5% of GDP per year through clean energy investments – i.e. roughly 100,000 jobs per year (Pollin, 2019).

## Bringing the European Green Deal to scale

The level of spending that is being budgeted to date for the European Green Deal is well below what will be required for the European Union to achieve its stated emission reduction targets. To date, according to its main official documents, the EC estimates a budget of €1 trillion over 2021-2030 for everything, including clean energy investments as well as just transition programs (European Commission, 2020). This includes funding from all public and private sources, with about half of the money coming from the EU budget, and the other half provided by a combination of national governments and private investments. This level of funding amounts to an average of about €100 billion per year in total spending over 2021-2030, being equal to only about 0.7% of total EU GDP per year.[5]

To date, the EU is more advanced than the rest of the world in moving onto a clean energy investment growth path. We could therefore allow that the EU countries could achieve their 2030 and 2050 emission reduction targets with investment levels below the 2.5% of GDP global average, at perhaps 2% of GDP per year. But even this lower target would still imply clean energy investments within the EU at roughly €300 billion per year between 2021 and 2030, i.e. three times what the EC is proposing as their total Green Deal spending commitment. Indeed, other official EC documents state that the budgetary requirements for meeting its 2030 emission reduction goals would have to be closer to 1.5% of GDP, i.e. more than €200 billion per year (European Commission, 2019b). This lack of clarity within the EC itself underscores the need for European policymakers and the public to focus on the scale of the project required to achieve its climate stabilization goals.

Nevertheless, it still remains a major initial breakthrough that the European Union has committed itself, at least on paper, to achieving, and even exceeding, the IPCC's emission reduction targets. It is now crucial for European policymakers and, more so, the European public to recognize that: 1) Europe will not have to sacrifice jobs and living standards to hit what are now both the EU's and IPCC's emission reduction targets; 2) Building a clean energy infrastructure will save consumers money over time; and 3) The clean energy investment project can serve both as an effective short-term economic recovery program as well as a long-term sustainable growth path.

4 https://ec.europa.eu/eurostat/statistics-explained/index.php/Energy_production_and_imports.

5 This assumes that EU GDP grows at an average rate of about 1.5% per year, the average rate at which the region grew between 1999 and 2019.

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DOI: 10.1007/s10272-020-0934-9

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# The Climate Crisis Will Not Wait

COVID-19 has defined the year 2020. The pandemic has dominated headlines, created an economic shutdown and became political priority number one. Due to the intense focus on the pandemic, there has been less bandwith left over for the greatest existential threat of our time: the climate crisis.

Despite the best attempts to argue that the coronavirus crisis has been advantageous for addressing climate issues, this is not the case. As media coverage shifted from the climate crisis to the pandemic, public scrutiny waned and governments reduced their already minimal efforts at climate policy. Economic stimulus packages were drafted and implemented – with more money flowing into fossil fuels than into renewable energies. The economic downturn, though reducing emissions temporarily, had strong adverse effects. Firms and investors are not keen to invest in times of crisis and those with plans to increase their sustainability were prevented by financial constraints. And the public, consumed with health, employment and educational worries among others, had little attention span for yet another disaster.

## The coronavirus taught us the urgency of a crisis

The COVID-19 pandemic had disastrous effects around the entire world. However, the relative success or failure of various governments in their pandemic responses illustrates the crucial importance of taking early action in a crisis. On average, those countries that implemented preventative measures by reducing the risk of rapid exponential growth of COVID-19 infections in order to spare their health care systems from collapse fared better in terms of mortality as well as economic impact.

### Tipping points of no return

This bears a strong resemblance to the climate crisis. Our climate system contains similar tipping points that, once triggered, are irreversible and worsen the effect of the climate crisis beyond the control of human impact. The melting of ice sheets in Greenland, causing a reduction of the albedo effect and hence increasing the rate of melting, is but one of many examples (Umweltbundesamt, 2008). To ensure that we do not reach the exponential domino effect caused by these tipping points – which would, amongst many disastrous consequences, increase the geographic range of malaria and other vector-borne diseases – we need to avoid reaching more than 1.5 degrees Celsius warming at all costs (IPCC, 2018). To do this, it is necessary to act now.

We need to start by changing the rules. Many firms and countries continue to emit greenhouse gases at little or no cost. This market failure is disastrous in its consequences and should have been balanced out through public intervention long ago. In fact, the effects of not solving the greenhouse gas externality are detrimental in two additional aspects.

Firstly, firms that emit greenhouse gases lack economic incentives to transition to clean energies while remaining profitable. If they do transition, it is usually out of corporate or executive values or public pressure. However, they find that this often leads to an economic disadvantage, essentially punishing them for making the responsible decision. In addition, those firms that cannot afford these additional costs are wholly unable to transition to clean energies.

Secondly, the same theory applies to individuals. If there are no additional costs connected with to flying or to eating meat, there is little incentive to resist temptation and change behaviour. The prices of goods should reflect their environmental costs. Furthermore, there should be environmentally friendly alternatives that are also affordable to the general public so that anyone who would like to live in a more climate-compatible manner, can afford to do so and live in line with their values.

### Crisis communication

Climate communication is an essential step towards changing the rules. Policies with a large-scale impact on the economy and individuals, such as a high carbon tax, must be justified in terms of their proportionality. Regarding the severity of the climate crisis, the scientific community is effectively in agreement that this would be a proportional measure.[1] However, it is the role of government not only to draft and implement measures to mitigate the crisis, but also to communicate them.

During the coronavirus pandemic, this crisis communication was done a lot better than it has been in climate politics for the last decades. Politicians used live address to reach the

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Open Access funding provided by ZBW – Leibniz Information Centre for Economics.

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1 See for example Carbon Tax Center (2015).

public, created expert panels and provided educational content for children. This process of communication was supported by the media who constantly updated the public and provided the necessary background information based on the latest scientific research and reporting. As a result, there was a general understanding of the degree of vulnerability to the crisis and an acceptance of drastic interventions, such as national lockdowns.

### Fighting the climate crisis

Just as with surmounting the COVID-19 crisis, fighting the climate crisis is an immense task.

The EU needs to reform agriculture to net-zero carbon emissions. Energy sources must be made entirely renewable. We have to implement a sustainable transport revolution. The list goes on and on.

While these goals may be "ambitious", they are nonetheless necessary. And they are possible. The Wuppertal Institute (2020) shows, for example, the transition pathway Germany could take to fulfill its commitment to the Paris Agreement.

However, just because a green transition is possible does not mean that it will happen. In order to avoid a climate emergency, we must not give up. Instead, when drafting policies for the pathway to recovery after COVID-19, we need to include measures to fight the climate crisis as well. We need to use synergic effects such as investments in mobility or renewable energies.

While there is no denying that COVID-19 has defined 2020, we cannot let it lead us directly into the heart of an inevitable disaster: we must tackle the climate crisis head on.

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# Social Distancing Requirements and the Determinants of the COVID-19 Recession and Recovery in Europe

The COVID-19 pandemic led to an unprecedented decline in economic activity. Starting in February 2020, policymakers around the globe introduced emergency measures to slow down the spread of the virus, such as social distancing and the cancellation of events, limitations to mobility and travel, and the shutdown of large parts of the economy, including firms, workplaces and schools.

Many restrictions introduced in March were gradually lifted as the number of new infections decreased. Starting in early summer, however, infections were on the rise again, partially driven by gatherings at local virus hotspots and the summer holidays. The rise is particularly striking in Spain, where the number of new infections exceed the

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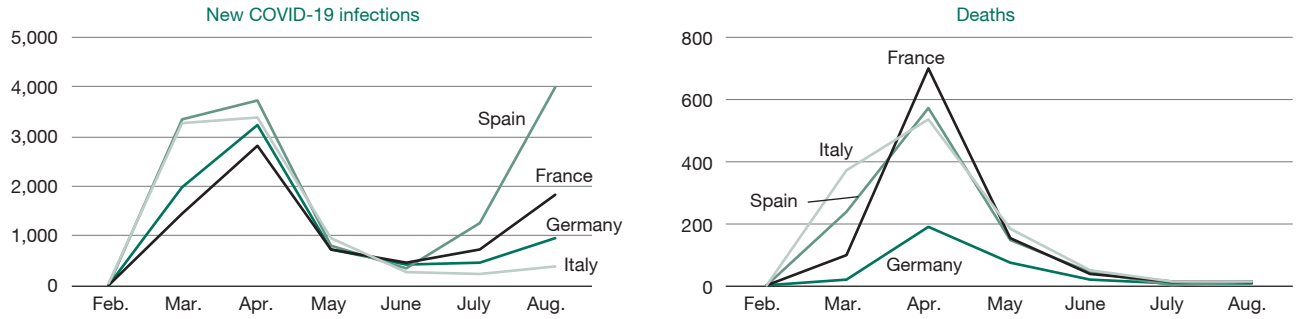
Open Access funding provided by ZBW – Leibniz Information Centre for Economics.

* This research has received funding from the European Union's Horizon 2020 research and innovation program "PERISCOPE: Pan European Response to the ImpactS of COvid-19 and future Pandemics and Epidemics", under the grant agreement No. 101016233, H2020-SC1-PHE_CORONAVIRUS-2020-2-RTD.

Figure 1
**Number of new COVID-19 infections and deaths in large EU countries, 2020**




Source: John Hopkins Coronavirus Resource Center, Johns Hopkins University, Baltimore.

previous peak from April. Despite the increase of new infections, the number of deaths has remained relatively low (Figure 1 shows data for the four largest EU countries).

A key issue at this point is what effect the resurgence of infections will have on the economy. The need to 'flatten the curve' justified the harsh restrictions ('lockdown') imposed in March/April of 2020 (Baldwin and Weder di Mauro (2020a, b). The situation is different in the autumn of 2020, with far fewer fatalities as shown in Figure 1. The question at this point is how to disentangle the impact of different factors on the economy, such as infections, deaths, mobility and social distancing restrictions.

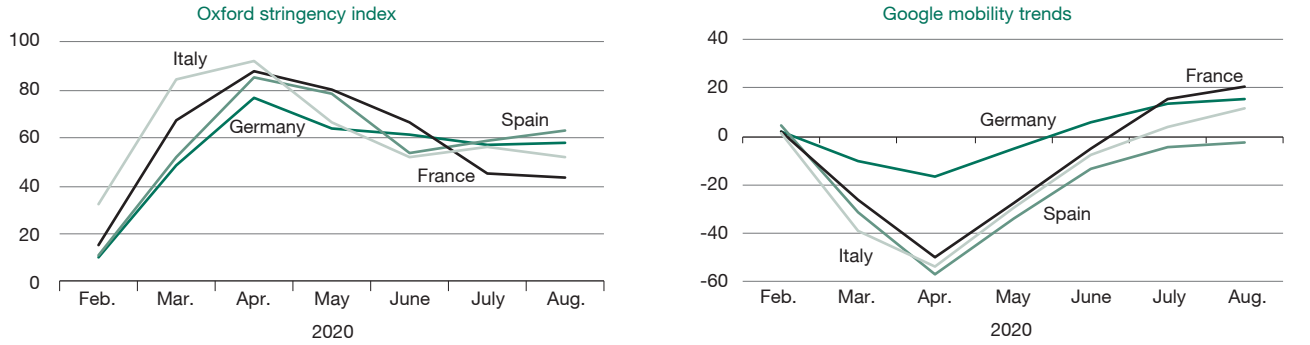
The appropriate design of policies is critical, as massive losses can be involved. However, empirical evidence on the impact of the respective measures is scarce. Several studies discuss the impact of non-pharmaceutical interventions on the state of the pandemic, such as the growth of infections in OECD member states (Pozo et al., 2020) or the mean decline in reproduction rates in a cross section of 41 countries (Brauner et al., 2020). A general result is that many different types of interventions are found to be successful in reducing the spread of the virus (Flaxman et al., 2020). However, there are important differences: While restrictions on gatherings, mask-wearing, school and workplace closures and testing ratios (tests per 1,000 citizens) appear to be effective to control for the transmission of the coronavirus, stay-at-home policies are less relevant.

The key challenge for policymakers is managing the trade-off between the severity of the lockdown measures and their effects on the diffusion of the virus (Eichenbaum et al., 2020). A few studies have examined the impact of restrictions on the economy, although from different angles. Bodenstein et al. (2020) stressed that the absence of social distancing policies may amplify the economic costs over longer time intervals. To lower the costs in economic terms, social distancing should be skewed to non-essential industries and professions that can be performed from home. Due to input-output linkages, however, even non-targeted industries could be affected. Getachev (2020) has argued that voluntary social distancing is important for both flattening the infection curve and minimising damage to the economy. According to Laeven (2020), producers of intermediates tend to be more affected by the crisis if they sell their output to industrial sectors restricted by social distancing. Following Barro et al. (2020), the losses in output and consumption attributed to the coronavirus are more pronounced than in the Spanish flu, even if further outbreaks of the virus are avoided.

A problem with all of these studies is that none of them utilise actual economic data for the pandemic period, as the information is available only with a delay. In contrast to previous studies, this paper explores the relation between non-pharmaceutical interventions and the economy using actual data. We propose this first analysis using actual economic data as a starting point for further research, which could take into account other factors, e.g. policy spillovers and the impact of the global cycle, in a more systematic way. The correlations we uncover are, however, suggestive of a pattern that should be of interest to policymakers.

The proceeding section of this paper presents two measures of social distancing, the Oxford stringency index and the Google mobility indicator. This is followed by a discussion of economic indicators. Besides industrial production, the economic sentiment indicator proposed by the European Commission serves as a proxy for contemporaneous GDP.

Figure 2
**Indicators of social distancing and the lockdown**




Note: The Oxford stringency index summarises information from different lockdown components. The Google mobility indicator is based on aggregated movements for different places.

Sources: Oxford COVID-19 Government Response Tracker, 2020; Google COVID-19 Community Mobility Reports, 2020.

Many previous studies have looked at cross sections of countries and did not control for unobserved heterogeneity. In contrast, our estimation is based on panel models with country fixed effects.[1] Specific policy measures are also distinguished. A main finding is that stay-at-home regulations show the strongest relation with the fall in GDP and industrial production. As medical studies have concluded that stay-at-home restrictions are less important for the spread of the virus, potential future interventions should focus primarily on other components of social distancing, such as restrictions on public events and public gathering.

## Measuring social distancing

Social distancing refers to the many changes of human behaviour due to the coronavirus outbreak. It has a negative impact on economic activity both on the supply and demand side. Firms might have to restrict production and consumers might not be able to go out for shopping, or they may be afraid to travel. To approximate the extent of social distancing, two measures have been proposed.

The Oxford stringency index is rank scaled and built on different components, such as the closing of schools and workplaces, the cancellation of public events, restrictions on gatherings and public transport, stay-at-home regulations and limitations on domestic and international travel activities (Hale et al., 2020). The composite measure is obtained as the arithmetic average of eight individual indicators, rescaled to vary from 0 to 100. Increasing values of the index imply stricter regulations.[2]

The Google mobility reports (Google LLC, 2020) are based on the number of searches across different types of destinations such as retail and recreation, public transport, parks, supermarkets and pharmacies, workplaces and residential areas. Higher values indicate increasing search activities. The series in these reports are created with aggregated, anonymised sets of data from Google users who have turned on the Location History setting, which is off by default. It should be noted that the number of searches is not an indicator of past mobility patterns. Instead, it can be viewed as an indicator for the interest in movement. In this sense, it has leading properties for the impact of the crisis. Not surprisingly, with a coefficient of -0.25, the correlation between the series is not overwhelmingly high.[3]

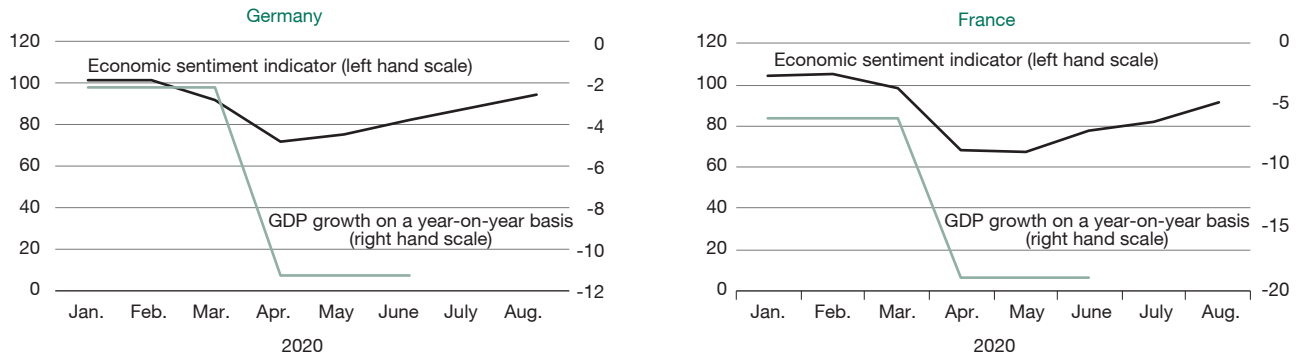
The two indices reflect public and private reactions to the crisis (Gros et al., 2020). The Oxford indicator is broader as it reflects actual social distancing restrictions of all kinds, not only related to movement. Both indicators are reported at the daily frequency. To investigate their potential impact on the economy, monthly averages are considered (Figure 2, with data for the four largest EU countries). The strength of restrictions declined from its peak in April, but as of August, a high level of interventions is still in place.

1 Due to strong collinearities between the regressors in short time series, fixed time effects are not included. The pandemic led to rapid adoptions of policy interventions across heterogeneous countries that can be explained by a leader-follower approach, at least partially. The stringency indicators reflect the co-movements of government actions, also driven by uncertainty among policymakers (Sebhatu et al., 2020).

2 It may be argued that the Oxford stringency index does not exploit the information from certain policies in an optimal way. Using principal components instead of simple averages shows that some measures should be less weighted than others, depending on the country considered. For instance, international travel restrictions receive a lower weight in France and Italy, but not in Germany and Spain.

3 As an alternative to the Google index, Apple reports on mobility trends: https://covid19.apple.com/mobility. They are less complete than from Google, as they only show the category of transportation, where driving, walking and transit are distinguished.

Figure 3
**Economic sentiment indicator and GDP growth (y-o-y) in Germany and France**




Source: European Commission, 2020.

Except for Spain, the Google index is currently higher than before the crisis, probably driven by catch-up effects in the last few months. This might reflect that some components like retail and recreation and parks exhibit a strong seasonal pattern. While the indices may be low in winter, they are expected to rise in summer, independent of the state of outbreak of the virus. Therefore, the upward trend at the end of the sample could be exaggerated.

## Monthly indicators for economic activity

One critical aspect for policymakers is the ability of the indicators to trace the economic downturn. While data on infections and restrictions are available on a daily basis, actual macroeconomic data (as opposed to the many real time partial indicators, such as freight volumes, cinema attendance, etc.) are available at much lower frequencies. For example, GDP is reported per quarter for EU countries. Thus, it cannot show the fast-moving impact of the pandemic and the recovery (Figure 3).

The information for the second quarter (April to June) hides the nascent recovery, which set in already in May and even more in June. In fact, the growth rate of production, measured on a monthly basis, changed its sign during this quarter. A similar observation applies to the first quarter, where the reduction is mainly due to a very steep fall in March. Thus, the switch to the monthly frequency is highly recommended. Unemployment is reported monthly, but compared to output, the labour market is more persistent in Europe and widespread recourse to short-time working measures throughout the EU limited the impact of the recession on the labour market.

To measure economic activity on a monthly basis, two indicators are selected. Industrial production growth shows actual production but covers only the manufacturing sector (including energy). Services, the largest part of GDP, are not taken into account by this indicator. This is a major drawback, as policies of social distancing are often targeted at services, such as limitations to travel and restaurants. As a rule, industrial production reacts rather fast to a changing macroeconomic environment. The variable is an important tool to predict GDP at many institutions, including central banks.

The economic sentiment index (ESI) taken from the EU Commission (2020) serves as a proxy for the change in contemporaneous GDP, compared to the previous year. Unlike GDP, the ESI is available at the monthly frequency.[4] It is based on regular harmonised surveys for different economic sectors in EU countries. Figure 3 shows, as an example, the additional information that the monthly ESI can deliver compared to quarterly GDP for France and Germany.

Answers to the questionnaire are measured on an ordinal scale. The surveys are carried out at the national level by certain institutions, including ministries, statistical offices, central banks, research institutes or private companies. They are conducted according to a common methodology, which consists essentially of harmonised questionnaires. Sectors included in the ESI are industry (40%), services (30%), consumers (20%), retail (5%) and construction (5%). Based on quarterly data and a longer time

4 The purchasing managers index (PMI) is also available at the monthly frequency. However, it is highly correlated with the ESI and yields little additional information.

horizon (1999.1-2020.2) the correlation between the ESI and contemporaneous GDP growth is about 0.9 on the EU average (European Commission, 2017). It should be noted that the two measures of economic activity are growth rates and stationary. They do exhibit deterministic or stochastic trends during the sample period. Hence, the risk that the results are driven by spurious correlations can be neglected.[5] Since the short-run fluctuations of economic activity are taken as endogenous variables, fundamental models to explain their trends are not required.

As an alternative, the IMF (2020) used daily and weekly indicators of economic activity, namely the Google index and the number of job postings published on the website Indeed. However, it is an open question whether mobility or job advertisements can really be taken as proxies of economic activity.

## Results of the empirical analysis

Panel models with country fixed effects are estimated for 27 EU countries and the period of the pandemic, February to August 2020. Overall, 27 x 7 = 189 potential data points are available, implying a sufficiently high number of degrees of freedom. Due to gaps in the data for several small economies like Cyprus, Malta and Croatia, the actual number of observations is slightly lower. The two indicators of economic activity are explained by the Oxford and Google indicators. The fixed effects control for different national structures, different fiscal policy measures and any other variables that are fairly constant in the short run. In principle, the explanatory power should be higher for the ESI, as services are mostly targeted by the restrictions.

The results are in line with expectations (Table 1). The most important variable seems to be the Oxford stringency index. The point estimate is negative in all specifications and significant at the 0.1% level. Higher restrictions are correlated negative with output growth. This result is not surprising, as the indicator is based on the actual lockdown measures.

The results are mixed for the Google indicator. In the regression for industrial production we find the expected positive sign. However, for ESI we find a negative sign. This would mean that higher movement is correlated with less growth. We relate this – at first sight – counter-intuitive finding to our observation that the Google indicator does not measure movement, but searches. People might search more if they are forced to stay close to home. At any rate, there are indications that this is a spurious result. The coefficient of determination is slightly lower in the extended specification (0.708 instead of 0.733), and standard error is higher. This suggests to us that the Google indicator does not constitute a good proxy for economic activity.

Table 1
**Panel regressions explaining the recession and recovery**

| | | | |
|---|---|---|---|
| Dependent: Economic sentiment indicator (ESI) | | | |
| OXFORD | -0.421 (0.021)*** | | -0.508 (0.034)*** |
| GOOGLE | | -0.227 (0.056)*** | -0.141 (0.043)*** |
| FE | 103.9 (5.0) | 83.7 (3.8) | 107.7 (4.7) |
| R2 | 0.733 | 0.286 | 0.708 |
| SER | 8.053 | 13.127 | 8.233 |
| Dependent: Growth in industrial production (GIP) | | | |
| OXFORD | -0.291 (0.023)*** | | -0.245 (0.033)*** |
| GOOGLE | | 0.452 (0.048)*** | 0.243 (0.048)*** |
| FE | 2.3 (4.6) | -8.6 (4.5) | 2.1 (4.2) |
| R2 | 0.657 | 0.622 | 0.751 |
| SER | 8.036 | 8.141 | 7.219 |

Note: Panel regression with 25 (ESI) and 22 countries (GIP), 2020.2-2020.8 (leading to 154 and 175 observations respectively), country fixed effects (FE). Entries in FE indicate average fixed effect, standard deviation of fixed effects in parentheses. R2=Coefficient of determination, SER standard error of regression. Numbers denote regression coefficients, standard errors in parentheses.

Source: Authors' estimation.

In the political debate, it is often argued that a worsening of the coronavirus outbreak (higher new infections or fatalities) might impact the recovery because people would become more cautious, reducing some activities. However, an independent effect of the human losses on economic activities is not confirmed in our analysis. In Europe, the recovery continued despite a rise in infections during the summer.[6] It is possible, however, that the reported fatalities could have an independent impact on the willingness of people to move or to consume. The number of fatalities is significant at the 0.05 level in three out of the four specifications, and it is significant at the 0.1 level in the fourth

5 Deb et al. (2020) employed daily global data on real-time containment measures and indicators of economic activity such as Nitrogen Dioxide (NO2) emissions, flights, energy consumption, maritime trade and mobility indices. Here again, the problem is that the correlation between these real-time indicators and broader economic outcome remains untested.

6 Including the number of infections (per 1000 inhabitants) as an explanatory variable besides the Oxford index yielded a positive sign (more infections, better economic performance) but the effect is usually not significant. Results are available from the authors upon request.

Table 2
**Extensions of panel regressions by human losses**

| Dependent: Economic sentiment indicator (ESI) | | | |
|---|---|---|---|
| OXF | -0.514 (0.035)*** | -0.504 (0.034)*** | -0.518 (0.034)*** |
| GOO | -0.138 (0.043)** | -0.162 (0.045)*** | -0.176 (0.044)*** |
| COI | 0.001 (0.001) | | 0.004 (0.002) |
| COD | | -0.015 (0.010) | -0.032 (0.012)** |
| FE | 107.6 (4.6) | 107.8 (4.9) | 107.7 (4.5) |
| R2 | 0.710 | 0.713 | 0.723 |
| SER | 8.243 | 8.200 | 8.082 |
| Dependent: Growth in industrial production (GIP) | | | |
| OXF | -0.233 (0.032)*** | -0.237 (0.031)*** | -0.238 (0.032)*** |
| GOO | 0.201 (0.050)*** | 0.169 (0.050)*** | 0.169 (0.050)*** |
| COI | -0.003 (0.001)*** | | 0.001 (0.002) |
| COD | | -0.030 (0.008)*** | -0.034 (0.013)** |
| FE | 2.3 (3.9) | 2.2 (4.0) | 2.2 (4.1) |
| R2 | 0.765 | 0.779 | 0.779 |
| SER | 7.038 | 6.833 | 6.861 |

Note: Panel regression with 25 (ESI) and 22 countries (GIP), 2020.2-2020.8 (leading to 154 and 175 observations respectively), country fixed effects (FE). Entries in FE indicate average fixed effect, standard deviation of fixed effects in parentheses. OXF=Oxford stringency index, GOO=Google mobility indicator, COI=Number of new infections, COD=Deaths related to the coronavirus. R2=Coefficient of determination, SER standard error of regression. Numbers are regression coefficients with standard errors in parentheses, *** and ** denote significance at the 0.01 and 0.05 level of significance.

Source: Authors' estimation.

regression (Table 2). However, its inclusion contributes only little to the overall performance of the equation.

Overall, these results confirm the general rule that the severity of the outbreak itself should not be considered as a good predictor of the output loss given the 'paradox of prevention': A country that implements stringent social distancing measures early and thus prevents any spread of the disease might experience an initial sharp decline in economic activity. However, the hypothesis that news about the number of infections has an impact on consumer confidence and demand in addition to the impact of social distancing restrictions, cannot be broadly confirmed.

A natural extension is to analyse separately the individual elements of the composite Oxford stringency index. All of the individual components display a significant negative correlation to economic activity. The t-values often exceed 10 in absolute value, especially in the ESI regressions (Table 3). Since all these sub-indicators are measured on a scale from 0 to 100, one can use the point estimate of the coefficient to measure the impact of specific types of restrictions on the economy. We find the highest coefficient for 'stay-at-home regulations', i.e. the limitations to leave houses, apart from pre-defined exceptions for work and grocery shopping.[7] Other elements of social distancing policies appear to be slightly less costly in economic terms, suggesting that they should be favoured by policymakers if new restrictions are actually required.

Table 3
**Impact of different non-pharmaceutical measures on economic activity**

| Type of measure | ESI | GIP |
|---|---|---|
| School closing | -0.303 (0.031)*** | -0.148 (0.027)*** |
| Workplace closing | -0.316 (0.034)*** | -0.181 (0.027)*** |
| Cancel public events | -0.247 (0.026)*** | -0.134 (0.020)*** |
| Restrictions on gathering | -0.294 (0.024)*** | -0.148 (0.021)*** |
| Close public transport | -0.343 (0.049)*** | -0.161 (0.039)*** |
| Stay-at-home regulations | -0.392 (0.057)*** | -0.236 (0.044)*** |
| Domestic travel | -0.214 (0.033)*** | -0.101 (0.027)*** |
| International travel | -0.332 (0.032)*** | -0.158 (0.025)*** |

Note: See notes to Table 2. Entries denote coefficients of particular measures in regressions using either ESI or GIP as dependent variable. Standard errors in parentheses, country fixed effects. Google mobility indicator and the number of fatalities serve as controls.

Source: Authors' estimation.

## Conclusions

Any analysis of the economic impact of the COVID-19 pandemic can only be undertaken in a 'sea of endogeneity'. The initial imposition of social distancing measures might be considered exogenous. However, their time path might have been influenced by the actual fall in output that followed. Fiscal policy also reacted strongly in most countries to the expected fall in output, possibly mitigating some of the economic losses. Given all these potential confounding factors, our results need to be interpreted with caution. Strictly speaking, the correlations we uncover represent correlations, not causality.

An interesting pattern emerges nevertheless. Social distancing restrictions, as measured by the Oxford stringency indicator, constitute the one variable that is most tightly correlated with the recession and recovery across EU member states. In contrast, the state of the outbreak

7 Deb et al. (2020) arrive at a similar conclusion that workplace closures and stay-at-home orders are associated with the largest economic costs.

of the coronavirus represents only a marginal factor: The number of new infections is not significant, and the number of fatalities is only weakly related to the state of the economy.

All the individual components embedded in the composite Oxford indicator are highly negatively correlated with economic activity. But the introduction of stay-at-home regulations stands out as having the strongest effect. Many medical studies concluded that stay-at-home restrictions are less important for the spread of the virus. This would imply that this type of measure has a low benefit/cost ratio and should be avoided. Governments might do better focusing on other components of social distancing, such as restrictions on public events and public gatherings.

Our results also suggest, subject to the caveats mentioned above, that a rise in infections should not per se endanger the recovery unless it leads governments to tighten social distancing requirements. Increases in the number of fatalities seem to be only weakly correlated with the state of the economy, least compared with the degree of social distance restrictions imposed by governments.

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Barry Eichengreen

# Individualism, Polarization and Recovery from the COVID-19 Crisis

As Intereconomics and CEPS hold their annual conference, the United States and Europe are experiencing another wave of COVID-19 cases. When analyzing the causes and consequences, it is important to be aware that the situation is continuing to change – that one is aiming at a moving target. Moreover, every national case has its distinctive characteristics, though I will argue that one can still discern some regularities, albeit with exceptions that, as they say, prove the rule.

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Open Access funding provided by ZBW – Leibniz Information Centre for Economics.

## Containment and recovery

A first regularity is that success at containing the spread of the virus and economic recovery go together. In a National Bureau of Economic Research working paper issued in October, Fernánde-Villaverde and Jones (2020) analyze data through the second quarter of the year. They situate different countries and US states in a two-by-two matrix, with COVID-19 deaths (high or low) on one axis and GDP loss (high or low) on the other. They show that most countries fall along the diagonal – high for both or low for both. This illustrates the well-known point that without successful containment of the virus, there can be no sustained economic recovery. Without containment, consumers will be reluctant to go shopping. Families will be reluctant to eat out. Businesses will be reluctant to invest given this subdued consumer spending and virus-related uncertainty.

There are exceptions, to be sure. Compared to other countries and US states, California has relatively low COVID-19 deaths but high GDP losses. This may reflect the idiosyncratic preferences of California's leaders and their constituents, Californians being notoriously idiosyncratic. More seriously, California is the bluest of blue, or Democratic-leaning, states and blue states approach the problem differently from red, or Republican-leaning, states (more on partisanship below). Or it may be that California's real-estate and high-tech heavy economy has been disproportionately affected by the pandemic.

Another exception is that the US economy recovered well in the second and third quarters of 2020 despite the country's poor performance on the public-health front. My suspicion is that this anomaly will resolve itself through weaker consumer spending going forward. The US hit a fiscal cliff in the third quarter, with the expiry of significant portions of the Coronavirus Aid, Relief, and Economic Security (CARES) Act. Substantial parts of the country that had avoided the virus have now become COVID-19 hotspots. There is a considerable likelihood of the US consumer now catching up to reality.

## The African exception

Sub-Saharan Africa, on the other hand, fits the usual pattern but in a surprising way. Many observers feared that COVID-19 would be a public-health calamity and economic disaster for the region, given its limited economic and financial resources and long-standing institutional weaknesses. Instead, COVID-19 cases and especially deaths have been relatively modest by international standards (Musa et al., 2020). In addition, the International Monetary Fund's October 2020 World Economic Outlook forecasts a 3% decline in real GDP in 2020, just half that of the advanced countries, and a full recovery in 2021 (IMF, 2020).

Why the region has done better than expected on both dimensions is not clear. Its youthful age structure helps with virus control, given what we know about the susceptibility of different age groups. Less certain is whether past experience with epidemics also helps. Public health services have experience dealing with other viruses, from which they and the public can learn. At the same time, my own research (Askoy et al., 2020a) shows that past epidemic exposure reduces trust in government, especially among individuals in their impressionable years (ages 18 to 25) when exposed to an epidemic, and that this decline in trust is very persistent, essentially permanent. The implications are not encouraging. When trust in the authorities is lacking, their advice is less likely to be taken. In particular, trust problems are apt to negatively affect compliance with lockdowns, mask mandates and vaccination. We document the point for vaccination in Askoy et al. (2020b).

## Individualism versus communitarianism

No single factor can account for why containment efforts have been more successful in some places than others, of course. Every unhappy pandemic-stricken country is unhappy in its own way. But my perspective, informed by the experience of the United States, points to two factors as deserving more attention: first, the distinction between individualism and communitarianism; and, second, the extent of political polarization. Individualists insist that the decision of whether to wear a mask or receive a vaccination, for example, belongs to the individual and that there is no role for government mandates. As the Idaho Freedom Foundation (Hoffman, 2020) put it in a post on 19 July, "The decision to wear a mask should be yours alone." A mandate, this author goes on, "denies me my right to make my own decisions based on conditions and desires unique to my situation."

Communitarians, in contrast, recognize that collective welfare depends on the behavior of all members of society. One person's decision to wear a mask or not may have first order implications for the health of others and for the community as a whole, given the contagious nature of the disease. The decision of whether or not to wear a mask should be taken collectively, or mandated by the appropriate officials, with the welfare of the entire community in mind.

It might seem obvious that the second view should prevail in the presence of a highly contagious life-threaten-

ing virus, but it is not obvious to many Americans. The country has a tradition of rugged individualism, passed down through the generations by Hollywood Westerns and authors like Frederick Jackson Turner (1894). Bazzi et al. (2020) show that residents of US counties with more frontier experience (counties on the outer reaches of the country for a larger number of years) show more individualistic attitudes and greater opposition to redistribution even today. More generally, the country's history of slavery and racial division makes it more difficult for Americans to think of themselves as a single community; in turn, this helps to explain why the US provides fewer collective goods and services than other countries (Alesina et al., 1999). It is because Americans think of themselves as individuals rather than members of a community.

Other traditions lean more in the direction of communitarianism in that they attach more value to social solidarity and political virtue rather than privileging the individual. Whether Asian countries tend to be more communitarian because of the influence of classical Confucian thought is disputed (see Fox, 1977). Be that as it may, casual empiricism suggests that more communitarian societies were more successful initially at controlling the spread of COVID-19 and that this translated into relatively good economic performance. But there are exceptions: New Zealand and Canada have done relatively well at flattening the curve while at the same time ranking relatively high in terms of individualism, except in comparison with the United States. Perhaps their success reflects other factors that swamp the negative impact of individualism. New Zealand is an island. It is led by a woman. This question deserves more systematic study.

## Polarization and partisanship

A second point is that the extent of political polarization also mediates the success, or otherwise, of COVID-19 containment measures, in turn shaping economic outcomes. This argument is similarly informed by the experience of my country, where political polarization as measured by Poole and Rosenthal (2007) and updated by inter alia Bonica et al. (2015) has been rising for years. Political polarization, meaning sharp differences in the political ideologies and preferences of the partisans of different parties, implies that members of one party are more likely to dismiss the policies and recommendations of spokesmen and appointees of the other party on the grounds that those policies and recommendations are informed by value systems inimical to their own. In the US, this means that when spokesmen for one party endorse masks, members of the other party reject them instinctively and automatically. One party becomes the party of draconian measures, the other the party of lax measures, leaving little room for compromise on middle-of-the-road policies.

Thus, Makridis and Rothwell (2020) have analyzed the responses of some 45,000 Americans to COVID-19 related questions. They find that views of the threat posed by the virus and of the advisability of non-pharmaceutical interventions are driven more by party affiliation than by the demographic profile of the individual (age for example), number of infections in the local area, and actual statewide policies. The article shows that insofar as these partisan affiliations translate into actual policies, they are associated with very real consequences for public-health and economic outcomes. Allcott et al. (2020) similarly document differences between members of the two US political parties, with Republicans engaging in less social distancing, expressing less concern about personal COVID-19 risk, and showing a greater tendency to downplay the future severity of the pandemic.

Just why political polarization has been increasing in the United States over time, to an even greater extent than in other countries, is another disputed question. My own view would emphasize the rise of gerrymandering in Congressional elections and the decline of party discipline in the Congress. Gerrymandering – the redrawing of Congressional borders to create "safe districts" for incumbents – reduces the incentive to appeal to the median voter in general elections. Rather, candidates of the favored party square off in primary elections, where the only relevant constituency are party members and the incentive is to adopt a more extreme position so as to appeal to that base (Mann, 2006). The explanation citing declining party discipline (Canen et al., 2020) suggests that the declining ability of party leaders to control their members has effectively limited scope for compromise. In contrast, the other commonly cited factor, namely the proliferation of specialised cable news channels and Internet-based publications, which create an echo effect, reinforcing more extreme preconceived positions (Prior, 2007), is common to the United States and other countries, and therefore cannot obviously explain the unusually sharp rise in polarization here.

## Conclusion

In thinking about economic recovery from the COVID-19 crisis, I have argued that recovery starts with controlling the virus. And virus control in turn starts with the politics. For better or worse, the personal and social attitudes informing those politics are deeply embedded in history. Past experience with epidemics – and also with recessions (Malmandier and Nadler, 2011; Giuliano and

Spillimbergo, 2014) – shape those attitudes and outlooks. In the US case, so too does the country's historic racial divide and its history as a frontier nation. History is not destiny, of course. Attitudes and outlooks, along with the politics they inform, can be altered by events, most powerfully by searing events that rise to the level of crises. We are about to see whether the COVID-19 crisis has such effects and whether the consequences are positive or negative.

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DOI: 10.1007/s10272-020-0937-6



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# Manoeuvring Through the Crisis: Labour Market and Social Policies During the COVID-19 Pandemic

**The unprecedented COVID-19 pandemic has a severe impact on societies, economies and labour markets. However, not all countries, socio-economic groups and sectors are equally affected. Part of this disparity can be related to the different role and extent of short-time work, which is now being used more widely than during the Great Recession. Furthermore, unemployment benefits have been made more generous in many countries. While it is still too early to assess the relative success of national strategies to cope with the pandemic and to revitalise the labour market as well as to evaluate the medium-term fiscal viability of different support measures, a few policy directions become apparent. These include the use of digital tools to increase resilience against economic shocks, the longer-term perspective of short-time workers in the current crisis, social protection for self-employed workers that is robust to economic crises and resilient models for school-to-work transitions of younger workers.**

Economic and social disruptions caused by the coronavirus pandemic may have lasting effects on employment, income and working conditions. At the same time, there are significant cross-country differences in the labour market and social policy responses that are deployed to help mitigate the direct effects of the crisis. This article is based on the ongoing Institute for the Study of Labor (IZA) Crisis Response Monitoring covering a sample of European countries and the US.[1] It summarises major changes in labour markets and provides an assessment of crisis-related interventions. It also points to policy issues that are likely to emerge in the near future.

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Open Access funding provided by ZBW – Leibniz Information Centre for Economics.

* The authors wish to thank Patrick Arni, René Böheim, Thomas Leoni, Pierre Cahuc, Tommaso Colussi, Rui Costa, Stephen Machin, Priscila Ferreira, João Cerejeira, Miguel Portela, Lena Hensvik, Oskar Nordström Skans, Susan Houseman, Egbert Jongen, Paul Verstraten, Martin Kahanec, Monika Martišková and Raul Ramos for their invaluable effort and contributions to the IZA Crisis Response Monitoring in these strange and challenging times.

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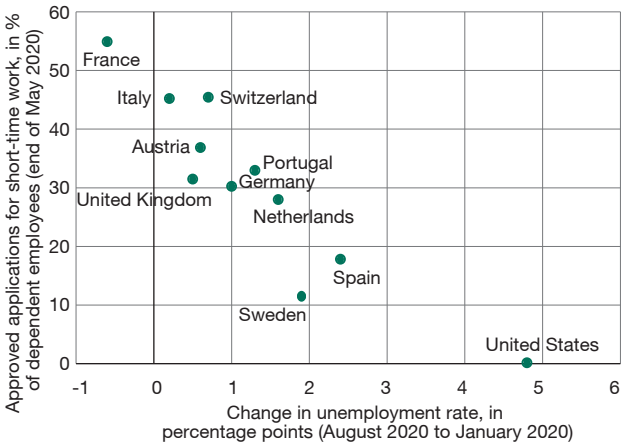
## Unequal labour market impacts of COVID-19

Early forecasts about the economic impact of COVID-19 were clearly too optimistic. Over the past months, there has been a progressive deterioration of forecasts and of the actual economic situation. The latest forecasts by the OECD Interim Economic Outlook from September (OECD, 2020a) expect strong declines of GDP between 4% and 8% in 2020. Quite negative scenarios of about -10% apply to countries with severe and protracted lockdown phases such as Italy or France, but also to the UK. However, the labour market impact is likely to also differ depending on the specific institutional arrangements, employment structures and crisis response measures.

Looking at the development of unemployment over the course of 2020, there has been a massive increase in countries like Spain and Sweden. This increase has been even larger in the US, while other countries saw a rather moderate reaction of unemployment, e.g. France, the UK or Italy. While this might be due to some delays in data re-

1 More specifically, the IZA Crisis Response Monitoring (https://covid-19.iza.org/crisis-monitor) includes the following sample of countries: Austria, France, Germany, Italy, the Netherlands, Portugal, Slovakia, Spain, Sweden, Switzerland, the UK and the US.

Figure 1
**Unemployment and short-time work, 2020**




Notes: Regarding short-time work, some countries only provide notifications that are not necessarily identical with the number of individuals actually taking up short-time work at a later stage. Switzerland and UK: data for unemployment rates are based on national databases; end point for UK is July 2020.

Sources: OECD.Stat, Monthly Unemployment Rates; OECD Employment Outlook 2020, Figure 1.8; amstat.ch; ons.gov.uk.

porting, institutional explanations arguably matter more. Some countries have seen a massive decline in working hours in general, and in particular a massive increase in notifications for and take-up of short-time work (although there is a lack of precise data). Hence, countries can be mapped along the following two dimensions: the increase in unemployment and the extent to which short-time work is used, based on broadly comparable data available.

Figure 1 provides the general picture, which points towards an inverse relationship between the expansion of short-time work and changes in unemployment. The US is the most prominent case of a steep unemployment increase. To date, many other countries see a relatively stable development of unemployment (and employment). This is partly caused by declining labour force participation (e.g. Italy), but mostly by a steep increase in short-time work in the first half of 2020. Germany, for example, which successfully used short-time work during the Great Recession (Brenke et al., 2013), shows a current take-up that is significantly higher than during the 2008-09 crisis. In the second quarter of 2020, a peak of about six million short-time workers (about 20% of dependent employees) was reached. The number fell to less than four million in September (ifo, 2020).

While the current crisis affects virtually all sectors to some extent, albeit in different ways, its impact is highly unequal across socio-economic groups. Even in countries with moderate overall unemployment reactions, not all sectors use external flexibility (dismissals, termination of fixed-term contracts, reduction of temporary agency work) and internal flexibility (short-time work, work sharing) to the same extent. This strongly depends on the willingness of employers to "hoard" certain types of skilled labour that is hard to replace, as well as on employment protection legislation.

When studying individual country experiences more closely, employment losses tend to be concentrated in sectors that were directly affected by lockdown measures, disrupted value chains or general economic uncertainty. In fact, the sectoral composition of jobs destroyed appears quite similar across countries. Most affected by declines in working hours and employment were the hospitality sector, leisure and tourism, cultural activities and events, local retail trade and logistics. Employment in manufacturing declined in some countries only. At the same time, temporary peaks in demand could be observed in the health sector, supermarkets, online retail trade and delivery services.

Furthermore, particular difficulties are clearly visible for low-skilled workers (and migrants), given the sectoral composition of their jobs and their limited ability to work from home. The latter has critically contributed to the continuation of work in many white collar jobs. At the same time, many young labour market entrants, and jobseekers in general, suffer from a massive decline in vacancies and hiring rates. In Continental Europe, the crisis has so far reduced hiring rates more than it increased dismissal rates. Against this background, job transitions for school leavers and apprentices will be hampered.

The unequal labour market impacts of COVID-19 become particularly apparent for persons with temporary or variable contracts. For example, fixed-term employment is declining more strongly than permanent contracts in countries where this divide is particularly relevant, such as Spain, Portugal or France. Temporary agency workers face a larger risk of being made redundant (e.g. in the Netherlands or Slovakia). The same holds true for marginal part-time workers, on-call workers and independent contractors in sectors that are heavily affected, despite some efforts to incorporate them better into social protection and short-time work schemes (e.g. in Switzerland or the Netherlands).

The actual effect of the crisis on specific categories of workers, however, also depends on the institutional setting in the respective country and on the sectoral or occupational composition of non-standard work. In many cases, those affected by labour market disruptions have no or only very limited access to social insurance, and thus heavily depend on means-tested income support and ad hoc relief measures.

Two interrelated areas aiming at stabilising jobs and income are of particular importance in the early phase of countries' crisis responses: support to small firms and self-employment workers and as well as short-time work and unemployment benefits.

### Supporting self-employed individuals and small firms

The situation of small businesses has been a particular concern for policymakers in many countries. Several countries, e.g. Austria, France and Germany, have set up funds from which lump-sum payments to small businesses are financed. Sometimes tax reductions (e.g. in Sweden) or specific loans (e.g. in the US, Italy and Sweden) were reserved for small companies.

A second, larger concern has been the social security of self-employed individuals with no or few employees, who are usually poorly integrated in unemployment insurance. Already over the past decade, a debate has emerged about whether European employment models depend excessively on low-paid and precarious forms of self-employment (Eichhorst et al., 2013; Boeri et al., 2020). The pressure to act, resulting from a larger number of unprotected jobless individuals who were previously self-employed, forced many countries to adjust their social security systems in the current crisis. The general trend is to provide benefits roughly at the level of social assistance, but with more lenient access and behavioural requirements. The variety of measures can be illustrated with some examples.

The Netherlands created a temporary benefit scheme for three months on the municipal level that provides benefits (at the level of social assistance) for the self-employed without strict means-testing (called *Tozo*). Until May 2020, *Tozo* was claimed by almost a quarter of all self-employed workers in the Netherlands. The scheme was recently extended until mid-2021, but now includes a partner's income test. Italy temporarily pays a monthly allowance of €600 to self-employed and other non-insured types of workers. In the UK, the new Coronavirus Self-Employed Income Support Scheme provides taxable grants corresponding to 80% of the average monthly trading profits of the self-employed individual (up to a total of £7,500). By mid-June 2020, already 2.6 million people had applied for these grants. A similar temporary scheme providing partial income replacement for self-employed and small firms was introduced in Sweden during the first months of the coronavirus pandemic (until July).

In most countries, the measures taken to protect the self-employed were implemented ad hoc and adopted temporarily. From this perspective, it is quite remarkable that Spain used the crisis as an opportunity to permanently modernise its social assistance, which previously differed across municipalities. Since June 2020, there is a unified system (*Ingreso Minimo Vital*) that pays up to €1,000 to families and €460 to one-person households who fall in the definition of severe poverty (below 40% of median income). This will make the social security net much more consistent. In addition to this new system, Spain also provides a temporary subsidy to the self-employed.

In sum, there is a variety of measures to support the liquidity of small companies and to stabilise the income of the self-employed. Many of the schemes were rather improvised, and it is not clear to date whether the implementation has been sufficient to provide rapid assistance. In Italy, for instance, the Central Guarantee Fund provides loans up to €2,500 to small and medium-sized enterprises (SMEs) that are fully guaranteed by the Italian state. According to preliminary research, only a minority of eligible firms have applied, presumably because of bureaucratic application procedures. In Switzerland, it has been noted that there is a gap between guaranteed loans that have been approved and that have actually been taken up by firms. A reason could be that SMEs try to avoid indebtedness. This is also related to the question of what happens if the crisis lasts longer and SMEs face difficulties repaying their state-provided or guaranteed loans. Another implementation issue has arisen in Germany with lump-sum payments to the self-employed and small businesses. During the improvised roll-out, miscommunication initially led to the widespread impression that the money may be used to cover personal expenses, whereas it actually is reserved to cover business-related expenses. The self-employed can only rely on social assistance for income replacement. It is currently unclear if and to what extent the state will reclaim misallocated payments. Also in the UK, surveys show that at least in the initial period of the Coronavirus Self-Employed Income Support Scheme, there was widespread confusion about eligibility criteria. Problems such as these illustrate that most countries have much less experience in setting up and actually implementing measures to protect self-employed compared to dependent workers.

### Short-time work and unemployment benefits

Initial crisis responses have shown some remarkable similarities across countries. Most countries have tried to use some kind of short-time work scheme to keep workers in their jobs and to maintain low unemployment. This appears reasonable because it had been expected (at least initially) that the COVID-19 crisis would follow a V-shaped pattern, also when compared to other and more common types of economic shocks. In such a situation, i.e. a sharp demand slump followed by rather quick economic recovery, short-time work schemes have their strongest justification (Cahuc, 2019).

Several countries already had such schemes in place at the beginning of the crisis. In almost all cases, additional measures were taken to expand existing schemes. The goal was usually to make them more inclusive and to lower the residual costs for employers. Austria introduced, for instance, a temporary COVID-19 short-time work scheme that is more generous than the pre-existing version, and Sweden started a completely new short-time work scheme. In Spain, France and Italy, additional sectors were included in the scheme and/or the requirements for eligibility were relaxed. Germany eased eligibility requirements for firms, raised replacement rates and opened up the possibility for temporary agency workers to benefit from the scheme. The idea to include vulnerable types of workers was pursued even more decidedly in Switzerland, where workers on fixed-term contracts, apprentices, temporary workers, on-call workers and even family members helping in small firms are also entitled, at least temporarily. In the UK, the Coronavirus Job Retention Scheme allows companies to send employees on leave, while 80% of the salary is compensated by the state. Compared to short-time work schemes in most other countries, this programme now also allows workers to take up part-time jobs in other companies (furloughing). This is an interesting institutional feature that could be considered in other countries. The Netherlands, Slovakia and Sweden have set up schemes in the crisis that closely resemble the typical parameters in other countries.

In most countries, applications for short-time work have soared in the crisis. It certainly is a feature at the core of the European crisis response. Besides the replacement rate, important institutional differences relate to the extent to which employers can reduce labour costs. This includes the remaining wage share that has to be covered and the question of whether social security contributions are waived. Some countries, such as France and Germany, allow short-time work without any costs to employers, but that is not the standard in Europe. At the other end of the spectrum is Portugal: In its temporary layoff scheme, employers still have to cover 30% of the wage, which makes the scheme considerably less generous.

Recently, however, there has been a widespread movement towards a gradual phasing out. Since 1 June 2020, for example, France has again imposed costs on employers for the use of *activité partielle* in sectors where economic activity has gradually resumed. While workers still receive 70% of their normal gross wage for unpaid hours, companies now pay 15% of this amount. As a result, the cost of employees' reduced working hours for a company has risen to 10% of the usual full-time labour cost. Sectors that are still subject to restrictions (e.g. tourism, hospitality or culture) are excluded. *Activité partielle* has become even less generous to both companies and employees since October 2020. The gross wage replacement rate for unworked hours has fallen from 70% to 60%, and companies have to pay for 40% of this, bringing the cost of an employee's unworked hours for a company to 24% of the usual full-time labour costs. At the same time, however, a new instrument has been created for companies in more protracted difficulties. Beginning on 1 July 2020, companies with longer-term difficulties will be able to apply for the *activité réduite de maintien dans l'emploi*, which is limited until 2022. The scheme provides compensation for a maximum reduction in working hours of 40% (50% in exceptional cases) and ensures that employees receive 70% of their normal gross wage for hours not worked. Employers must pay 15% of the payments that workers receive for entitlements that begin before 1 October 2020 and 20% for entitlements that begin after that date. Claims can only be made if there is an agreement between employees and employers, and the agreement may explicitly prohibit any layoffs.

The Netherlands started to reduce the generosity of the *Tijdelijke Noodmaatregel Overbrugging voor Werkbehoud* (NOW) scheme. When extending this scheme to mid-2021 recently, the subsidy was lowered from 90% to 60% while additional resources are simultaneously provided for retraining and mobility support to encourage returning to longer (usual) working hours or job-to-job changes.

In Austria, too, short-time work enters into a new phase this autumn. The Austrian 'Corona short-time work' (phase 1), which was initially limited to six months, was extended by one month to the end of September (phase 2), while the new short-time work model (phase 3) began in October and companies can apply for six months. With that switch, the minimum working time was raised from 10% to 30 %; however, it may be reduced below this minimum in special cases when social partners agree. The maximum working time is 80% now (previously it was at least 10% and the maximum was 90%). Employees have to be available for further training during the short-time work if this is offered by the company. In small companies, new offers for further training are to be created in cooperation with the Austrian public employment service.

In Sweden, the regular system of short-time work, which was only introduced at the beginning of 2020 in a more generous way than originally planned, was extended until the end of 2020. Furthermore, Swedish employers were allowed to reduce their employees' working hours by up to 80% for three months from 1 May 2020 (instead of 60% for a maximum of six months before that date), with the state bearing the bulk of the costs. In conjunction with the employers' reduced social security contributions, employer costs were reduced by up to 86% from May to July.

A less generous model will apply until the end of 2020, however, and an even more frugal regular system will apply starting in 2021.

Although the unemployment insurance system was not the primary focus of crisis responses and adjustments of European policymakers, many countries have extended eligibility or eased access. This was particularly relevant in Sweden, where the income ceiling for calculating benefits is rather low and a Ghent system with limited coverage through unemployment insurance funds applies. The government reacted, inter alia, with shortening the membership duration in funds that is necessary for eligibility to insurance benefits and with raising the benefit ceiling. Spain went into a similar direction by temporarily suspending the minimum contribution periods for unemployment insurance. Complementing the focus on keeping workers in their jobs during the crisis, some countries have temporarily changed dismissal regulation. Layoffs were banned or restricted in Italy, Portugal and Spain, to name just a few countries.

### Blind spots

Younger workers and immigrant workers may be particularly hit by the current crisis. In contrast to previous recessions, in the current situation, many sectors that offer entry-level jobs (e.g. retail, hotels and restaurants) are also affected. In some countries, it is even the case that precisely those sectors that used to absorb part of the downward pressure on employment in previous recessions are now the most affected. This considerably worsens the outlook for new labour market entrants – and also for groups such as refugee immigrants – for whom labour market conditions upon entry may have lasting negative effects (Aslund and Rooth, 2007).

The situation for younger workers may be particularly challenging in countries that heavily rely on the dual apprenticeship system as it depends on firms' demand for apprentices. This could imply that younger workers in these countries do not only face deteriorating employment prospects after their graduation, but also that a larger part of the usual vocational training system leading to degrees and certificates may come to a halt. However, as the majority of apprenticeships only started in late summer of 2020, it seems too early to judge how this situation will evolve. In any case, demand and supply on the vocational training market should be closely monitored – especially in countries with a strong dual apprenticeship system.

Other countries, mainly in Southern Europe, may also face enormous challenges with respect to new labour market entrants. Although these countries do not rely on dual apprenticeship systems, they have to deal with notoriously high youth unemployment rates. With regards to school-to-work transitions, a rational approach in the current situation appears to be a longer stay in education. However, this implies increased competition after the crisis. It may also imply the need for additional funding on an emergency basis aimed at both students and educators.

Various policy responses to best support labour market entrants are currently being considered – albeit with remarkable heterogeneity across countries. While there is an intensive policy discussion and also rather concrete initiatives in some countries, the situation of new labour market entrants has not yet received much attention in others. The latter seems to be the case in Southern Europe, but also in Switzerland and the US. In countries with rather concrete initiatives, these measures appear to strongly depend on institutional context. For example, a joint federal support initiative to make apprenticeship capacities more resilient in times of crisis came into effect in Germany. The programme includes bonus payments to SMEs that provide apprenticeships, bonus payments to firms taking over a current apprentice from a firm that has gone bankrupt during the crisis, support to avoid short-time work among apprentices and incentives for training in facilities outside individual firms. Hiring subsidies targeted at younger workers and subsidies for apprentices have been introduced in France, and further labour cost reductions to hire young people are to be implemented in Sweden.

### Necessary reforms beyond the coronavirus crisis

In many countries, one can currently observe governmental interventions at an unprecedented speed and breadth. The short-term objectives of various policy responses are predominantly income and employment stabilisation. In some countries, these responses rely to a larger extent on automatic stabilisers, while the amount of discretionary measures is generally large and often unprecedented. Yet, the degree of policy innovation appears more incremental than revolutionary – possibly with the exception of short-time work schemes. This instrument has been expanded or newly introduced in a number of countries.

It is a common perception that the current crisis accelerates structural change and digitalisation. Firms may increasingly view digital tools as a means to increase their resilience against external economic shocks. In this respect, the crisis is also an endurance test of firms' (and countries') past digital achievements. Past omissions become very visible. Other pre-crisis trends – often sector-specific – may be amplified by the crisis. For example, it appears likely that the long-term decline of local retail

and smaller shops will accelerate, while all forms of online retail will experience an extra boost. In addition, the ongoing transformation of manufacturing, in particular of car manufacturers and their suppliers, may proceed even more rapidly than previously expected.

The crisis highlights old and new types of inequalities that are related to structural weaknesses in the labour market and welfare states. These inequalities call for further redesign so that institutions are in a better position to support workers and firms on the road to recovery. A few points are of particular relevance:

First, the crisis has highlighted the usefulness of digital tools in communication as well as in private and public service provision. To avoid long-term scarring and deepened inequalities, blended learning at schools and universities is essential to stabilise human capital formation not only when personal contact is restricted. Furthermore, digital tools should help restart active labour market policies and individual activation, such as job search support, placement and training. This is especially important in a situation of high unemployment (after the phasing out of short-time work) and if structural changes make a return to existing job profiles unlikely.

Second, the longer firms and workers rely heavily on (generous) short-time work schemes, the less likely becomes a full return to the 'old normal' because markets and business models change. Rather, the main challenge is to prepare for either changing job requirements when firms undergo internal restructuring or for a move to other employers, sectors or occupations if external labour market mobility is the only viable option. This makes retraining essential, ideally combined with work experience in firms, sectors or occupations with better employment prospects. It might make sense to stipulate that advice on future job options, related training and real-world work experience (e.g. via internships, posting or qualified secondary education) are mandatory elements of extended public short-time work support. In a way, this would imply a partial detachment of long-term short-time workers from their employer even when the employment relationship continues to exist. Current policies in most countries do not effectively move in that direction and neglect the training and mobility component in short-time work. Providing mostly 'passive' short-time work support for a longer period, as in Germany, is not a sustainable solution.

Third, the peculiar situation of self-employed workers has triggered the creation of ad hoc support schemes that are hardly integrated into the regular unemployment insurance system. In some cases, access to means-tested income support was facilitated by lifting requirements. However, the creation of a more long-lasting system of social protection for self-employed workers is a pending issue. One option would be to integrate people who are engaged to a substantial extent in self-employment into public unemployment insurance (and old-age insurance), at least after an initial start-up phase. By doing so, it would be possible to establish a clear link between benefits and contributions comparable to dependent workers.

Fourth, for young people leaving school or university, building bridges that establish early contacts to employers and provide work experiences remains of utmost importance. Vocational training as a joint responsibility of public actors, employers and trade unions has been one key element of resilient youth labour markets in the past. This model continues to provide relatively smooth transitions, also due to the continued commitment of stakeholders. Where it does not exist, governments and social partners should try to establish functionally equivalent programmes that help integrate young people into initial jobs along with the provision of relevant skills, after school or university. In the current situation, this will require digital tools. The idea of the European Youth Guarantee may be helpful, but calls for systematic implementation in countries and regions that are particularly affected, ensuring a sufficient quality of work and/or training offers.

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DOI: 10.1007/s10272-020-0938-5



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# Working from Home and COVID-19: The Chances and Risks for Gender Gaps

**As the COVID-19 pandemic causes a record number of people to work from home, this disruptive event will likely have a long-lasting impact on work arrangements. Given existing research on the effects of working from home on hours worked and wages, an increased availability of working from home may provide a chance for women to catch up with their male counterparts. Yet, the need to simultaneously care for children during the COVID-19 lockdown may also revive traditional gender roles, potentially counteracting such gains. We discuss the likely effects of the COVID-19 pandemic on gender gaps in the labour market and at home in light of recent empirical findings and novel statistics on the heterogeneous structure of work arrangements among couples. We construct a novel teleworkability index that differentiates between fully teleworkable, partly teleworkable and on-site jobs and find that in about a third of households the COVID-19 shock is likely to induce shifts in the intra-household allocation of tasks from mothers to fathers.**

The COVID-19 pandemic has disrupted the way many people work. It has notably increased the share of people working from home, creating an unexpected shock to the number of people working remotely instead of on-site. In 2018, the share of employees working at least regularly from home was around 12% in Germany, above 30% in the Netherlands, Finland, Iceland, Luxembourg and Denmark, and around or below 5% in Greece, Italy, Bulgaria and Romania (Eurostat, 2020). These numbers have increased dramatically during the COVID-19 lockdown, although differently across demographic groups. Indeed, since the start of the social distancing measures, many firms have made it possible for their employees to work from home in order to slow down the spread of the coronavirus.[1] Working from home (WFH) has long been considered a means of improving work-life balance, especially for parents. However, during the lockdown, many parents have to combine paid work and full-time childcare, which is likely to reduce their productivity and the expected benefits of WFH. Nevertheless, parents, and especially mothers, could benefit from the increased availability of WFH arrangements thanks to changes in technology and firm culture in the post-COVID-19 era (Alon et al., 2020a).

We contribute to recent evidence on the unequal effect of the COVID-19 crisis across gender and parenthood status in several ways. First, to evaluate the labour market effects of the crisis, we construct a novel index that estimates working-from-home feasibility at a detailed occupational level using representative data on tasks and working conditions in Germany. We exploit information on i) the share of employees in an occupation who report that WFH is not possible and ii) the types of tasks performed on the job. This new teleworkability index is the first to differentiate between fully teleworkable, partly teleworkable and on-site jobs. We find that about 31% of jobs in Germany could be almost entirely performed from home while a substantial amount of tasks can be performed from home in 12% of jobs. Women, parents and employees with a university degree are more likely to be employed in occupations with teleworkable tasks. There is evidence that, in April 2020,

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Open Access funding provided by ZBW – Leibniz Information Centre for Economics.

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1 Fadinger and Schymik (2020) show that higher share of teleworkable jobs is associated with fewer infections and fatalities at the regional level.

26% of German workers were entirely working from home and 35% were combining WFH and on-site work (Grabka et al., 2020; Möhring et al., 2020), just slightly below the WFH potential predicted by our index. This represents a dramatic increase in full-time WFH compared to 2018 when less than 4% of employed individuals worked from home only, and about 12% did so frequently.

Second, we show that WFH preferences are higher among women and parents. About 25% of mothers with children under 13 years of age reported in 2018 that they would like to work from home but were not able to. This share was 20% on average and 21% for women without small children. Based on the gap between preferred and actual WFH take-up, we argue that the rise in remote working will last even after the COVID-19 distancing rules are lifted.

Third, we explore the likely consequences of a rise in WFH arrangements for gender gaps at home and in the labour market in the short and medium run. In the short run, if the rise in WFH is combined with school and day care closures, remote working will likely be a challenging experience for parents. For Germany, we estimate that among 30% of couples with young children, the father has gained more flexibility at work than the mother. In these households, the reallocation of tasks at home, such as childcare and housework, may improve mothers' ability to invest in their careers even in the post-COVID-19 period. Among other households, however, the division of care and housekeeping is likely to remain unequal. Traditional gender roles may even be reinforced as women work fewer hours than their partner on average and have more flexibility in working arrangements in about 28% of households. Still, the increased feasibility of WFH in the future, through current technology adoption and changes in mentality, can benefit women with children as WFH take-up allows them to increase their contractual working hours and monthly earnings.

## How many jobs can be done from home?

Recent studies provide estimates of the share of jobs that could be performed from home during the pandemic. For the US, Dingel and Nieman (2020) estimate that slightly more than 30% of jobs may be carried out from home using the O*Net description of tasks performed on the job for each occupation. Using a similar method, Boeri et al. (2020) estimate this share to be above 30% for the UK and Sweden, around 28% for Germany and France, and just below 24% in Italy. To estimate the share of jobs that can be performed remotely, we employ survey data similarly to Cetrulo et al. (2020), but we exploit information on employees' self-assessment and on the task composition of jobs in Germany.

We describe the data and adopted methodology to compute the *teleworkability index*, i.e. the share of workers who can perform their job from home, by occupations. We draw on the BIBB/BAuA 2018 Employment Survey, a representative survey of about 20,000 adult individuals in paid employment in Germany.[2] First, we calculate the share of individuals reporting that their job cannot be done from home for each 3-digit occupation (German Classification of Occupations, KldB 1992). This information is particularly relevant to identify jobs that can be performed on-site only, what we call the *WFH extensive margin*.[3] Working from home is not possible in the manufacturing and construction sectors, particularly low-qualification jobs such as brick layers, in the transport sector (e.g. drivers), or in the health sector (e.g. nurses). Conversely, the lowest share of employees who report that WFH is not possible is mostly found among high-skill jobs in IT, marketing or consultancy sectors.

Second, we make use of detailed information about the tasks performed on the job to calculate the share of tasks that can be done from home at the occupational level. Specifically, we divide 18 tasks into those that can be done from home (teleworkable tasks) and those that cannot (non-teleworkable tasks) as shown in Table 1. For each individual, we first calculate the share of teleworkable tasks, and then aggregate this individual share to the occupational level. This task-based indicator is informative about the intensity of WFH, i.e. about the share of working time that workers can perform from home, the *WFH intensive margin*. Among the occupations with the lowest share of teleworkable tasks there are either jobs in the manufacturing sector that require special machineries, or service jobs with frequent contact to clients, such as waiters. On the contrary, the occupations with the largest share of teleworkable tasks are office jobs with computer use, such as bookkeepers, office clerks, consultants, architects and lawyers. The final teleworkability index combines both the WFH extensive and intensive margin to distinguish jobs that are i) fully teleworkable, ii) partially teleworkable and iii) non-teleworkable. More precisely, an occupation is defined as teleworkable if more than two-thirds of the tasks can be done from home and less than 20% of individuals in the occupation report that WFH is not possible. An occupation is non-teleworkable if more than one-third of individuals report that WFH is not possible in the job or if more than half of the tasks are non-teleworkable. In the other occupations, WFH is feasible for part of the job, but on-site work is also necessary.

2 The survey was conducted by the Federal Institute for Vocational Education and Training (BIBB) in cooperation with the Federal Institute for Occupational Safety and Health (BAuA).

3 This information has been employed by Alipour et al. (2020), who directly use the share of workers reporting WFH is not possible to infer the share of jobs that are teleworkable.

Table 1
**List of tasks by teleworkability**

| Non-teleworkable tasks | Other, potentially teleworkable, tasks |
|---|---|
| Manufacturing, producing goods and commodities | Providing advice and information |
| Measuring, testing, quality control | Advertising, marketing, public relations, PR |
| Monitoring, control of machines, plants, technical processes | Organising, planning and preparing work processes |
| Repairing, renovating | Developing, researching, constructing |
| Transporting, storing, shipping | Gathering information, researching, documenting |
| Entertaining, accommodating, preparing food | Working with computers |
| Nursing, caring, healing | Use of the Internet or email processing |
| Protecting, guarding, monitoring, regulating traffic | Purchasing, procuring, selling |
| Cleaning, waste disposal, recycling | |

Notes: The group of tasks "Training, instructing, teaching, education" is excluded from the list, since it may be partly but not fully teleworkable.

Source: Authors' elaboration.

Table 2
**Potential working arrangement and actual employment status in 2018**

| | Share of… | | | | | | |
|---|---|---|---|---|---|---|---|
| | Employment | Working time at home | Contractually agreed WFH | Women | Parents with children < 13 | University graduates | Public sector |
| Fully teleworkable | 30.9 | 9.0 | 22.8 | 38.2 | 26.2 | 48.7 | 27.5 |
| Partially teleworkable | 12.0 | 13.8 | 15.7 | 36.4 | 24.1 | 55.4 | 42.1 |
| On-site only | 57.1 | 1.2 | 3.2 | 32.4 | 22.4 | 8.4 | 19.7 |

Notes: All numbers are percentages. BiBB/BAuA 2018 Employment Survey with sampling weights. Employees aged 16-65. The three categories in the left column are based on the teleworkability index described above.

Source: Authors' calculation.

Based on the computed teleworkability index, we find that about 31% of jobs in Germany could be performed from home (Table 2). For another 12% of jobs, a substantial amount of tasks can be performed from home. These jobs could allow, for instance, individuals to work from home 1-2 days per week or to divide the work between on-site and home during a standard workday. Still, more than half of jobs need to be completely carried out on-site. For the education sector, for instance, kindergarten teachers belong to the on-site occupations, school teachers to the occupations that are partially teleworkable and teachers in higher education or adult education are fully teleworkable. The resulting distribution of jobs along the teleworkability dimension varies across demographic groups. Women and parents are slightly overrepresented in jobs that can be (almost) fully done at home. Moreover, employees in fully or partially teleworkable jobs are much more likely to hold a university degree and to work in the public sector.

Table 2 also reports the actual share of working time carried out at home by dividing weekly WFH hours by weekly contracted hours. As expected, workers in on-site occupations spend a very low share of their working time at home (1%), while workers in teleworkable jobs work much longer from home. Interestingly, the average share of time in WFH was higher among the jobs allowing some WFH (14%) than among those allowing full WFH (9%). This is because some of the occupations with the highest share of hours at home are only partially teleworkable, such as school teachers, musicians and religious workers. However, the untapped potential of WFH is largest for the group of fully teleworkable jobs, especially standard office jobs (Grunau et al., 2020).

## Long-lasting changes in working practices

While a certain share of jobs might be theoretically suited for WFH given the main tasks that are performed on the job, it is unclear whether employees and employers actually use this opportunity, or whether they continue working on-site, reduce hours or terminate work contracts. To some extent, these choices are influenced by the need to care for one's children. Before the pandemic, less than 4% of people in paid employment always worked from home, while about 11.5% worked from home at least frequently (Table 3 for 2018). Women, and especially mothers of children under the age of 13, were more likely to use WFH arrangements as almost 5% of them always worked from home, and more than 15% did it at least frequently. The use of WFH has increased substantially during the lockdown. Using the SOEP-CoV survey for Germany, Grabka et al. (2020) report that, among employed individuals in 2019, about 35% were working from home fully or as a complement to on-site work in early April 2020. The share of previously employed individuals who were fully working from home in the same period was 26% according to a German online survey (Möhring et al., 2020). Women were more likely to be (temporarily) out of work,

Table 3
**WFH arrangements and preferences for WFH**

| | | WFH | | | | Not WFH | | |
|---|---|---|---|---|---|---|---|---|
| | | Always | Frequently | Sometimes | Rarely | Would WFH | Would not WFH | WFH not possible |
| Without children under 13 | Women | 4.3 | 7.1 | 8.0 | 6.9 | 21.2 | 12.0 | 40.3 |
| | Men | 2.6 | 6.9 | 7.8 | 8.5 | 17.3 | 7.7 | 49.0 |
| With children under 13 | Women | 4.9 | 10.3 | 8.8 | 7.0 | 25.1 | 8.9 | 34.9 |
| | Men | 3.3 | 9.3 | 11.5 | 9.3 | 18.6 | 6.6 | 41.4 |
| Average | | 3.6 | 7.7 | 8.5 | 7.8 | 19.7 | 9.2 | 43.4 |

Notes: All numbers are percentages. BiBB/BAuA 2018 Employment Survey with sampling weights. Employees aged 16-65.

Source: Authors' calculation.

but also more likely to fully work from home compared to men. Parents were also more likely to work from home as almost 30% of them were working exclusively at home early April. This represents a dramatic increase in full-time WFH compared to 2018. For the US, Brynjolfsson et al. (2020) find from an online survey that about 34% of workers have switched to working from home because of the pandemic, while 4.6% have continued to do so. Moreover, von Gaudecker et al. (2020) find that hours worked from home in the Netherlands increased from 12% to 74% of total hours between the pre-COVID-19 period and May 2020. The exposure to WFH has thus been huge.

About 20% of employed people had reported in 2018 that they would like to work from home. As more firms and employees are now exposed to new ways of working, we expect that the availability of and attitudes towards remote working will improve. In 2018, 43% of employees in Germany reported that WFH was not possible in their job (Table 3). Women and parents with young children were less likely to report that it was not possible. This pattern is consistent with the demographics of teleworkable jobs (Table 2) and might reflect that parents had opted for WFH-friendly occupations or firms. In the post-COVID-19 era, it is likely that WFH will gain acceptance and that fewer employees will report WFH as unfeasible because firms have been forced to make necessary adjustments and investments to enable their employees to work from home.

As for preferences, in 2018, women and parents with young children were more likely to express the wish to work from home. These preferences might evolve depending on their experience during the lockdown. Bloom et al. (2015) study the effects of an experiment that randomly allocated call centre employees to the home or the office. At the end of the experiment, employees were given the choice over where to work, and those who were more productive at home switched to WFH. This highlights the benefits of learning and selection effects when being exposed to new ways of working. It is thus likely that people for whom WFH worked well will adopt WFH on a more regular basis even after the lockdown. As daycare centres and schools are closed, households with and without young children are likely to differ in their WFH experience.

### Working from home and childcare during the lockdown

The closure of schools and daycare centres represents a big challenge for parents who not only have to care for their children, but also need to ensure a minimum level of home-schooling. In 2018, about 22% of households in Germany had at least one child (Eurostat, 2020). This proportion was higher in all other EU member states, the highest being recorded in Ireland (39%), Cyprus, Poland, Slovakia and Romania (above 35%). Fuchs-Schündeln et al. (2020) estimate that the closure of schools and childcare centres affect 11% of workers and 8% of all working hours in Germany. These shares are larger in most other European countries. The ability to be productive at home will depend on the employment situation of both partners and on the number and age of the children. Mothers might encounter more difficulties to work effectively from home given that they usually provide the larger share of childcare at home. In 2018, German couples with at least one child below 13 years had a very unequal division of tasks within the household. Even if both parents were in paid employment (full- or part-time), mothers devoted almost three times as many hours on childcare during a weekday as their male counterparts (5.5 hours vs. two hours on average).[4] Moreover, mothers spent more than one additional hour, or almost twice as long as fathers, on housework during a weekday.

4 Data from the 2014 wave of the SOEP for couples with at least one child under 16 years.

Table 4
**List of tasks by teleworkability**

| | | Father's employment status | | | | | Single mother | Total |
|---|---|---|---|---|---|---|---|---|
| | | Essential job | Work on-site only | Some WFH possible | Fully WFH possible | Not in paid work | | |
| Mother's employment status | Essential | 11.25 | 10.12 | 3.29 | 10.36 | 1.68 | 3.42 | 40.12 |
| | On-site | 2.31 | 2.87 | 0.40 | 0.91 | 0.06 | 2.14 | 8.68 |
| | Some WFH | 1.70 | 1.68 | 0.66 | 0.69 | 0.65 | 0.45 | 5.83 |
| | Fully WFH | 4.29 | 5.71 | 1.41 | 8.01 | 1.20 | 2.85 | 23.47 |
| | Not in paid work | 2.84 | 8.23 | 2.22 | 1.76 | 1.49 | 3.73 | 20.27 |
| Single father | | 0.72 | 0.33 | 0.08 | 0.47 | 0.01 | | 1.63 |
| Total | | 23.12 | 28.93 | 8.06 | 22.20 | 5.11 | 12.59 | 100 100 |

Notes: All numbers are percentages. The German Socio-economic Panel (SOEP) 2018 gives the employment composition within households. The list of essential jobs provided by the state of Berlin is matched to the individual data using 3-digit occupation and 2-digit industry codes. WFH possibility is defined using the description of tasks and the share of employees reporting that their job cannot be done from home in 3-digit occupations from the BiBB/BAuA 2018 Employment Survey. Bold figures indicate cases where the mother has less work flexibility than the father. We do not report statistics for same sex couples with children as they are very rare. Code available upon request.

Source: Authors' calculation.

Is the division of tasks within the household likely to be affected during the pandemic? The answer depends on whether fathers are more likely than mothers to reduce their working hours and spend more time at home because of the lockdown. In fact, when the father works from home at least once a week but the mother works on-site only, the time spent on childcare is less unequal and housekeeping is balanced between the two partners. In order to get some ideas about the likely impact of the lockdown on the intra-household division of tasks, we document the mix of parents' employment status in Germany as has been done for the US by Alon et al. (2020a).

Table 4 shows that, in households with children under 13 years, mothers are more likely to be out of paid employment (almost 20%) compared to fathers (5%); these figures include workers in sectors that had to close for several weeks because of the lockdown.[5] Hence, for 28% of households the mother has more flexibility and is likely to spend even more time on household tasks. About 24% of parents live together and have a similar employment status. In these households, women are likely to keep providing more time at home than their partner as 85% of mothers work fewer contractual hours than fathers and more than 60% earn lower hourly wages (SOEP, 2018). In fact, a recent survey among German employees suggests that the pandemic tends to revive traditional role models (Kohlrausch and Zucco, 2020). Compared to pre-COVID-19, on average, it is mainly mothers who have reduced working hours and increased the time spent on childcare while corresponding adjustments among fathers turn out to be much smaller.

However, mothers are also more likely to hold an essential job (40%) than fathers (23%), which reverts the traditional role models.[6] In more than 25% of households, the mother works in a sector that has to continue operating while the father does not. In another 4% of households, the mother has less flexibility than the father (on-site vs. WFH; work on-site or at home vs. out of work). Hence, in about 30% of households the COVID-19 shock is likely to induce shifts in the intra-household allocation of tasks from mothers to fathers.[7]

## What will be the medium-term consequences of the increase in remote working?

Given the recent exposure to WFH and preferences for this work arrangement, it is likely that the share of people working remotely remains high even after social distancing rules are alleviated and schools open again. Both theory and empirics suggest that the possibility to work from home increases labour supply at the intensive margin, especially among mothers (see Arntz et al., 2019, for a review and

5 These include shops not essential to secure basic supplies, restaurants and cafés, hotels and pensions, services in body care, sports and leisure facilities, bars and clubs, (trade) fairs, music schools, driving schools, theatres, concert halls and opera houses.

6 For the classification of essential occupations we follow the list published by the state of Berlin as of 22 April 2020.

7 Summing up all cases where the mother has less work flexibility than the father; figures in bold in the table.

new results for Germany). In addition, experiments at the firm level show that WFH may increase worker productivity (Bloom et al., 2015; Angelici and Profeta, 2020). In fact, the need to organise remote work on a grand scale during the coronavirus pandemic is likely to establish new and highly productive forms of remote work that may even substitute for certain on-site activities or business meetings. The costs and benefits of WFH are likely to be re-evaluated in light of the current experiences. In this case, pre-COVID-19 findings on the effects of WFH on hourly wages may change. So far, the evidence shows that WFH comes with a wage premium only if it increases contractual hours, as has been shown for fathers in Arntz et al. (2019). For mothers, until now, similar benefits are restricted to those who simultaneously change employer. Conversely, WFH may even bring a penalty if it is used to do overtime only, despite potential signalling and productivity effects. With new work organisations and a broader adoption of digital technologies, productivity at home is likely to increase. Thus, overtime done from home is more likely to be associated with positive wage compensation in the future.

Even if workers, especially women with young children, value flexible work arrangements (Mas and Pallais, 2017; Angelici and Profeta, 2020), WFH may generate new sources of conflict and stress at home (Song and Gao, 2019). Arntz et al. (2019) find that, in Germany, employees without children under the age of 16 who start WFH do an extra hour per week of unpaid overtime and still report higher job satisfaction. On the other hand, parents with young children increase their contracted working hours and report no significant change in job and life satisfaction.

## Conclusion

Overall, the effects of WFH arrangements depend a lot on the presence of dependent children, and the current situation is likely to exacerbate these differences. For parents, WFH during the lockdown may result in a negative experience with a potential increase in conflicts between work and family needs. However, as childcare facilities and school open again, parents could fully benefit from a higher availability of WFH arrangements as the required technology has been adopted and firm culture has changed.

Based on the findings of Arntz et al. (2019) for Germany, more WFH opportunities could help reduce gender gaps in hours worked and wages in the labour market. These gains might even be larger after the lockdown for two reasons. First, WFH is likely to be seen less as a means to accommodate private needs, and more as a means to organise certain types of tasks efficiently in a way that is beneficial to the firm. Second, the intra-household reallocation of tasks during the lockdown may have long-lasting effects that will benefit women in households where the father has increased the time spent on childcare and housework (Alon et al., 2020b). However, for a substantial share of households, the lockdown may strengthen or even revive traditional gender roles, hence potentially inducing negative effects for women's future career prospects. Digging deeper into the heterogeneous impact of COVID-19 on female and male labour market outcomes will thus be an important path for future research.

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DOI: 10.1007/s10272-020-0939-4



Thomas Mayer and Gunther Schnabl

# Post-COVID-19 EMU: Economic Distancing by Parallel Currencies

**The coronavirus crisis has caused new distress in the European Economic and Monetary Union (EMU), as the southern part of the EMU has been hit stronger than the northern part. The common currency prevents nominal exchange rate adjustment in response to the asymmetric shock. Policymakers have therefore taken recourse to large-scale financial transfers. Based on the lessons from the German monetary union, this article proposes instead the introduction of parallel currencies to facilitate relative price changes. Parallel currencies in the south would allow an increase in competitiveness of the south via real depreciation. The introduction of a parallel currency in Germany would lead to capital inflows and a real appreciation of the *new German mark*. The pre-EMU pressure for structural adjustments and productivity gains would be restored.**

The coronavirus crisis has caused new distress in the European Economic and Monetary Union (EMU). Italy and other southern European countries accuse northern European countries, in particular Germany, of not doing enough to help in economic crises. The €750 billion Next Generation EU plan, which was announced as "a magnificent signal of solidarity and willingness to reform" (European Commission, 2020a) may bring temporary relief, but it will not address the main problem of the euro area: real economic divergence. This has been further aggravated by other coronavirus countermeasures, including border closures that have interrupted tourist flows to southern European countries for a prolonged and indefinite period of time.

In the short term, asymmetric shocks in a monetary union can be softened by targeted credit from the European Central Bank (ECB) or other unconventional monetary policy operations (Sonnenberg and Schnabl, 2019). Yet, in the longer run, the growing real divergence in the European monetary union cannot be countered by financial means. Transfers and cheap central bank credit (with softened collateral conditions) will facilitate the postponement of necessary reforms and the restructuring of enterprises (Acharya et al., 2012). Increasing real divergence is likely to increase dissatisfaction about the EMU in southern European countries and may induce voters to elect populist politicians promising a remedy through an EMU exit.

As a result, the EMU could break apart. However, a sudden break-up of the monetary union would cause major turbulences in financial markets and have far-reaching political consequences at the European and global level. In our view, it would be preferable to safeguard against such a cataclysmic event by introducing parallel currencies as a safety valve. Parallel currencies can increase the flexibility of the EMU where needed and allow for the release of pressure that could otherwise blow it up.

Parallel currencies are a widely observed phenomenon in developing countries (Agénor, 1990; Xaiyavong and Toyoda, 1990). The emergence of parallel currencies has been associated with the demand for foreign currency to purchase illegal imports (Boulding, 1947) and the strong rise of the domestic money stock relative to foreign money stock (Bleyer, 1978). More recently, the future of Bitcoin and Libra as parallel currencies has also been discussed (Mayer et al., 2019). Against this, we explore the potential for parallel currencies to introduce more flexibility into the EMU set-up with a view to softening real economic divergence. For this purpose, we build upon the experience of the German monetary union.

## Lessons from the German monetary union for the EMU

The Germans have their experience with a heterogenous monetary union (Sinn, 1992). On 18 May 1990, the West and East German finance ministers signed a treaty establishing the German Economic, Monetary and Social Union (GEMSU), which entered into force on 1 July 1990 and established the

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Open Access funding provided by ZBW – Leibniz Information Centre for Economics.

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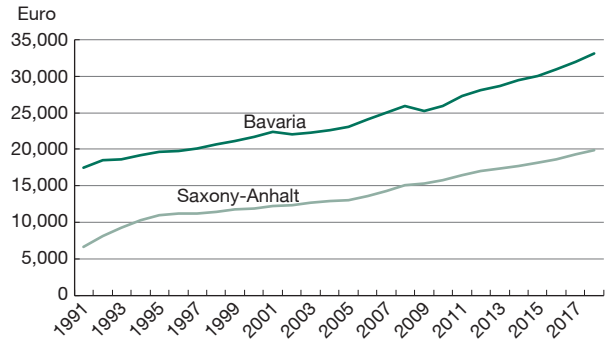
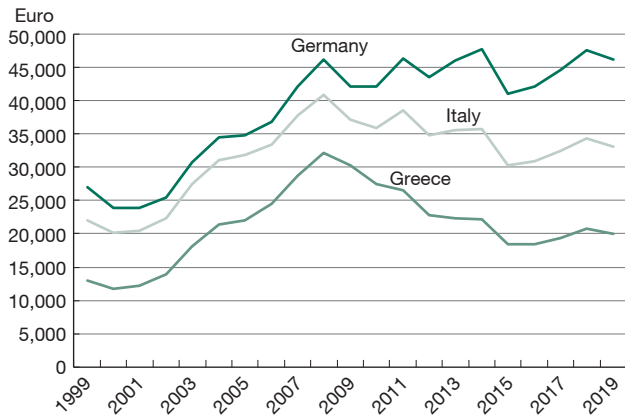
Figure 1
**Primary income per capita in Bavaria and Saxony-Anhalt**



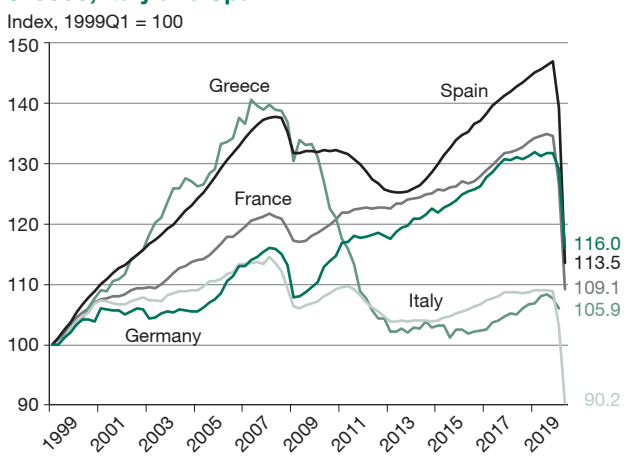

Source: Statistisches Bundesamt, 2020.

Figure 2
**Nominal GDP per capita of Germany, Italy and Greece**




Source: Thompson Reuters Datastream, 2020

Figure 3
**Real gross domestic product of France, Germany, Greece, Italy and Spain**




Source: Macrobond, 2020.

Deutsche Mark as official legal tender in the German Democratic Republic. The experience with GEMSU provides important insights for the future of the European Monetary Union.

In 1990, the East German economy was expected to adjust rapidly and to catch up quickly with its West German counterpart. Chancellor Helmut Kohl promised "blooming landscapes" within four years. This proved to be wishful thinking. Uncompetitive and unable to devalue its exchange rate, the East German economy tanked and unemployment spiked. Until today, productivity, income and wealth levels have not caught up by far. Tax revenues in Eastern Germany lag far behind the level of the Western part of the country (Schnabl and Sepp, 2020).

Figure 1 shows the primary income (before taxes and transfers) per capita for Bavaria, the federal state with the highest level in the Western part of Germany, and for Saxony-Anhalt, the state with the lowest level in the Eastern part of Germany. The per capita primary income gap was €10,928 in 1991. By 2018, it had widened to €13,239.

Only nine years after the GEMSU, eleven European countries with different economic structures entered the EMU, with rapid economic convergence again expected. As before, this proved to be wishful thinking. After a consumption boom in the southern EMU from 2001 to 2007, which for a while suggested economic convergence (Belke et al., 2005), the southern European economies fell behind. Among them, Italy and Greece in particular have been suffering from a persistent lack of competitiveness since 2008 (Schnabl, 2019). While income per capita of Italy and Greece were about €4,600 and €13,000, respectively, lower than in Germany in 1999, the gaps increased to roughly €13,000 and €20,000, respectively, by 2019 (see Figure 2).

Now, the pandemic further aggravates the problem. As the southern European economies rely more heavily on tourism and have a larger share of small and medium-sized enterprises than their northern neighbours, they are hit harder, with their competitiveness declining even further. While the German economy was 16% bigger in mid-2020 in real terms than at the beginning of 1999, when the EMU was launched, the Italian economy was almost 10% smaller. Thus, the gap in real GDP between the two countries has increased substantially since the beginning of the EMU (Figure 3). The divergence is likely to increase further in the future. The European Commission's (2020b) gloomy 2020 growth forecasts are substantially brighter for Germany (-6.3%) than for Italy (-11.2%), Spain (-10.9%), Greece (-9.0%) and Portugal (-9.8%).

When instead of blooming landscapes an economic desert emerged in eastern Germany, the government applied huge volumes of fertilizer. To prop up the economy and people's in-

comes, they transferred approximately €1.5 billion of taxpayer money over the course of 23 years after unification to the East. This amounted to more than 12 times the GDP of the Eastern German economy in 1991. Nevertheless, unemployment in Eastern Germany kept rising, reaching a peak of 20.6% in 2005. Until today, 1.5 million mostly young and educated people, equivalent to 10% of the total population, have left the territory of the former German Democratic Republic. This has eventually reduced unemployment, but it has left the economy in Eastern Germany emaciated.

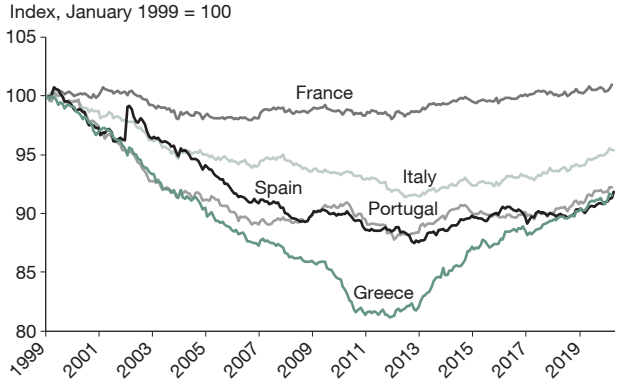
Similarly, since the euro crisis, southern European economies were propped up with large credits from newly created euro rescue funds and have received continuous funding support from the ECB via extensive asset purchases and long-term credit financing with softened requirements for the quality of collateral. But they have failed to grow. Many young people have left southern Europe and will continue to do so. In response to the coronavirus crisis, European politicians have designed a new €750 billion economic recovery package. But as the experience of eastern Germany over the last 30 years and that of southern Europe over the last decade shows, this will most likely fail to induce growth, create employment or save the euro.

## Relative price changes needed

Income support alone will not restore economic growth when economic structures are not adapted to new circumstances. What is required in the face of asymmetric shocks are relative price changes, either via nominal exchange rate adjustments or adjustments of wages and prices (Mundell, 1961). For the EMU to persist, the southern euro area economies need a reduction of their relative prices, which would require wage repression in the south and/or wage increases in north.[1]

Since the introduction of the euro, the relative prices of the southern euro area countries (except France) have increased against Germany instead of decreased (Figure 4). After the outbreak of the European financial and debt crisis, this process was – despite hardships as in the case of Greece – only partially reversed. As a result, the southern euro area countries suffered from a loss of competitiveness. This will most likely be aggravated by the fall-out from the coronavirus crisis, which leaves countries with large service sectors and many small companies at a disadvantage to countries with larger manufacturing and information and communications technology sectors and bigger companies.

Figure 4
**Relative prices of France, Italy, Portugal, Spain and Greece versus Germany**




Note: Falling lines indicate prices increasing relative to Germany.

Source: IMF and down calculations based on consumer prices.

The resulting external deficits could be easily financed with large debt capital inflows or credit provided by the ECB. Even more credit and transfers in the wake of the coronavirus crisis may indeed soften the financial pain in the short run, but they will only postpone the necessary real economic adjustment and further increase the need for it. Dissolution of the EMU would quickly adjust relative prices by depreciating the southern European currencies. But an outright exit of the southern European countries from the EMU would cause substantial turmoil in financial markets and political crises. Hence, unconventional measures to avoid the breakup of the euro are needed.

## Parallel currencies in the south

The relative prices could be reduced by launching parallel currencies in the southern euro area countries, which could take the form of non-redeemable government bonds without interest and in small denominations. In Italy, such instruments have been proposed and dubbed 'mini-BOTs' (derived from *Buoni del Tresoro*, the name for Italian government bonds; Mayer, 2019a). When the government funds part of its expenditures by issuing these mini-BOTs and accepts them as payment for a part of tax liabilities – based on the share they have in taxpayers' incomes – these instruments could become a parallel currency for domestic use. Mini-BOTs could be issued electronically, like other government bonds (*Buoni del Tesoro Poliennale* or BTPs) or they could be issued as paper money.

Since the parallel currency would most likely be deemed a less attractive store of value, the mini-BOTs would depreciate against the euro, inducing a decline in euro prices and a reduction of Italy's relative prices vis-à-vis its euro area trading partners. To follow this argument, assume that the govern-

1 Kenen (1969; 2003) suggested that a common fiscal policy could compensate for the imperfect fit of a one-size-fits-all monetary policy in a currency union as far as stabilisation policy is concerned. But historical experience from Germany and Italy suggests that fiscal policy cannot compensate for lasting structural differences.

ment pays a part of social transfers and salaries in mini-BOTs. As sellers of goods and services to these groups would now receive part of their sales revenue in mini-BOTs as well, they would also pay part of the wages to their employees and of the costs of their inputs in this currency. Profit margins for recipients of euros from sales abroad could increase when costs for domestic inputs have declined, but many of them would probably opt for cutting their euro prices to raise their market share. Thus, a decline of the prices of Italian goods relative to those of its euro area trading partners would follow.

As long as there is slack in the economy, inflation of goods priced in the parallel currency for domestic use would remain low, allowing the nominal depreciation of the mini-BOTs to induce a real depreciation and to exert downward pressure on goods priced in euro for exports. Foreign demand for Italian goods would rise, in particular for services in the tourism sector, which constitutes a substantial share of economic activity in the Italian economy.

While economic growth and employment would benefit, the Italian government would receive less taxes in euros and may no longer be able to service its euro-denominated debt. Hence, the introduction of the parallel currency would need to go along with debt reduction. Restructuring would be painful. But a policy of debt reduction along the lines of the 1933 Chicago Plan with turning the euro into a digital central bank currency could achieve the same effect at much lower costs.[2]

A large part of euro area government debt could be taken out of the market by placing it permanently on the balance sheet of the ECB as a cover pool for existing paper money and a new central bank digital currency. Following the conversion of existing bank money into central bank money through purchases of outstanding government bonds by the ECB, the initial central bank money stock could be increased over time according to a fixed rule. Both the creation of the digital euro money stock and the rule for its increase could be enshrined in a smart contract embodied in the digital euro (Mayer, 2019b).

### Parallel currencies in the north

Alternatively, the German Bundesbank could begin to withdraw from the ECB's asset purchasing programmes. A ruling of the German Federal Constitutional Court (2020) on 5 May 2020 opened the path to gradual withdrawal. The Court found good reasons for a breach of mandate by the ECB's purchases of public sector bonds, and it gave the ECB three months to explain itself. Meanwhile the ECB explanation given to the German government and parliament was regarded as sufficient by both, but a new complaint is now before the German Constitutional Court.

2 See also Benes and Kumhof (2012).

The withdrawal of the Bundesbank from these programmes could lead to capital flight to Germany in anticipation of a break-up of the euro, which is likely to come along with a depreciation of southern and an appreciation of northern European currencies. To fend off a bank run from southern Europe into Germany, the Bundesbank would have to close the existing TARGET2 interbank payment system and accept euro payments from other member countries only if backed by gold or foreign exchange as collateral (Sinn and Wollmershäuer, 2012). If southern European central banks lack the collateral needed to make transfers, euro payments could no longer be made from southern Europe to Germany.

TARGET2 eliminates the restrictions set in the Exchange Rate Mechanism (ERM) of the European Monetary System (1979-1998), which preceded the EMU (Ungerer et al., 1990; Gros and Thygesen, 1998). In the ERM, currencies were tied together with fixed exchange rates, around which they could fluctuate within a limited band. Credit facilities[3] were strictly limited in size and time so that countries experiencing balance of payment deficits were eventually forced to devalue their currencies against the Deutsche Mark, which served as an anchor for the other currencies. The adjustment of the central parities was explicitly foreseen. TARGET2 now allows the unlimited funding of balance of payments deficits, presently at zero costs, since the interest rate on liabilities within the system is set at the marginal refinancing rate of the ECB, which is zero (Sinn and Wollmershäuser, 2012). With the outbreak of the current coronavirus crisis, the imbalances within the TARGET2 payment system have started to grow again strongly.

Balance of payment imbalances have already increased substantially since the euro crisis of 2010-12. Now, Italy's liabilities within the TARGET payment system have reached €536 billion (end of June 2020) and Germany's claims €1019 billion (end of July 2020). If Germany ties the funding of balance of payments imbalances in the future to collateral, which southern European countries do not have, payments can only continue via the foreign exchange market, where exchange rates are allowed to adjust freely. To this end (and to avoid the 'dollarisation' of European trade payments), Germany could introduce a new, freely floating currency. Let us call it the *new mark*. If Germany would remain in the EMU and use the new mark as a parallel currency, a financially disruptive and politically divisive breakup of the euro area could be avoided. Payments in euros could still be made between southern Europe and Germany.

3 The very short-term credit facility provided an unlimited method to support foreign exchange intervention. Repayment was due 45 days after the end of the month of intervention. Prolongation was possible for another three months. The short-term monetary support (14 billion ECU) was available in case of temporary balance of payment deficits. The medium-term financial assistance (11 billion ECU) was to assist in case of balance of payments deficits only if the stability of the common market was at risk.

If inflows would match outflows, there would be no additional demand for the new mark. The exchange rate between the euro and the new mark would remain unchanged. But if payment flows from southern Europe to Germany were larger than from Germany to southern Europe, the difference would have to be made by exchanging euros against new marks. The new mark would appreciate against the euro.[4]

Given persistent appreciation expectations, the new mark would probably replace the euro as a store of value in Germany, but payments within Germany and abroad could still be made in euros. The appreciation of the new mark would boost German demand for foreign products priced in euros, the competitiveness of southern Europe would increase and private payment flows from Germany to southern Europe would be generated. Southern European countries would have an incentive to increase the competitiveness of their economies to avoid too large of a loss of income. Thus, the pressure for structural adjustment, which existed before the EMU but was reduced by the ability to cheaply finance internal and external deficits, would be restored. If southern euro area countries managed to run balance of payments surpluses, they could even eliminate the need for new marks and allow Germany to run down its big TARGET2 surpluses.

As before, the entire group of EMU member countries could reduce their large government debt by placing part of their government bonds permanently on the ECB's balance sheet as a 100% cover for the euro. They could establish safeguards for a further monetisation of debt in order to support confidence in the euro.

## Outlook

If policymakers continue on their present course, more funds will be necessary to slow a further decline in incomes of southern European countries. This would put additional financial burdens on tax payers in the northern European countries, against which voters will probably rebel when economic recovery from the present recession remains sluggish or the next recession hits.

Despite more transfers, southern European economies most likely will shrink further, as a fundamental restructuring of government expenditure and of enterprises will continue to be postponed. This will further strengthen populist politicians and may eventually give them a mandate to take these countries out of the monetary union. The euro and, possibly, also the European Union, could be destroyed.

To avert this, politicians will need to think outside the box. Parallel currencies would provide an appropriate approach to adjust long-lasting differences in competitiveness within the EMU. It would restore competitive pressure through exchange rate appreciation in the north, which before the euro introduction incentivised northern European enterprises to increase productivity and allow countries with lower productivity growth to support employment through exchange rate depreciation.

4 A system of matching payments among European countries existed in 1950-1958 in the form of the so-called European Payments Union (Albers et al., 1980). When payment imbalances exceeded certain thresholds and the embedded credit system reached its limits, they had to be made in US dollars or in gold.

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DOI: 10.1007/s10272-020-0936-7

Oliver Read and Stefan Schäfer

# Libra Project: Regulators Act on Global Stablecoins

**Governments, regulatory authorities and standard-setting bodies started acting on global stablecoins triggered by the Libra announcement. Among the concerns expressed by the G7 and the G20 are risks to the stability of the financial system. The Financial Stability Board and the Financial Action Task Force have worked on regulatory issues and anti-money laundering ahead of the G20 summit in November 2020. Overall the Libra project has raised many questions on the regulatory front. Facebook had to revise the concept as Libra 2.0 and resubmit it for approval in April 2020. The European Commission announced a new regulation on Markets in Crypto-assets (MiCA) including stablecoins in September 2020 as part of a new Digital Finance Package. This opens the next chapter in a regulatory cat and mouse game.**

"Libra's mission is to enable a simple global currency and financial infrastructure that empowers billions of people" (Libra Association, 2019a, 1). On 18 June 2019, the Libra project, Facebook's new cryptocurrency structured as a 'stablecoin', was announced with an intended launch in early 2020 (Brühl, 2020, 54). The internet services provided by the Facebook group (including Facebook, Instagram, WhatsApp, Messenger) have a global reach of almost 3 billion users, alone 2.4 billion via Facebook. Not surprisingly, regulators and central banks at the international level have been concerned by the potential impact on investor protection, financial stability and market integrity (European Securities and Markets Authority, 2019, 33).

## Stablecoins

The term stablecoin, as used by market participants, denotes crypto-assets that are supposed to have a stable value over time (ECB Crypto-Assets Task Force, 2019, 14). The rise of stablecoins has been driven by the criticism on the significant volatility seen in the price of cryptocurrencies. Before 2019, stablecoins slowly started drawing the attention of researchers and regulators, especially in connection with central bank digital currencies, digital money and cross-border payments (Mancini-Griffoli et al., 2018).

Bullmann et al. (2019, 9) define stablecoins as "digital units of value that are not a form of any specific currency (or basket thereof) but rely on a set of stabilisation tools which are supposed to minimise fluctuations of their price in such currency". To categorise stablecoins, the authors use three criteria of crypto-assets: (i) existence of an issuer that is responsible for satisfying any attached claims, (ii) decentralisation or centralisation of responsibilities over the stablecoin initiative and (iii) what underpins the value of a stablecoin and its stability in the currency of reference. So far, the following types of stablecoins have been observed:

- Tokenised funds. An issuer holds funds and is committed to the redeemability of the stablecoins, the safekeeping of the funds by a custodian, centralised responsibilities, e.g. Tether.

- Off-chain collateralised stablecoins. This model is backed by traditional asset classes like securities or commodities, safekeeping of the assets by a custodian, centralised responsibilities.

- On-chain collateralised stablecoins. These are backed by other crypto-assets, with or without an issuer, and have decentralised responsibilities such as the Single Collateral DAI.

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Open Access funding provided by ZBW – Leibniz Information Centre for Economics.

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- Algorithmic stablecoins. These are backed by users' expectations about the future purchasing power of their holding; they do not have an issuer but do have decentralised responsibilities, for example NuBits (ECB Crypto-Assets Task Force, 2020, 7).

### Initial Libra concept

The Libra project is governed by the Libra Association under Swiss law. The project is described in a white paper by the Libra Association and in various technical papers. The Libra Association was established by 21 founding members in October 2019. However, eight (including Visa, Mastercard, PayPal and eBay) of the initial 29 partners withdrew due to concerns about meeting regulatory expectations (Brühl, 2020) The intended launch has been delayed as too many regulatory issues remained unanswered.

Libra was conceived as a cryptocurrency backed by a basket of low-volatility assets like bank deposits and short-term government bonds in established fiat currencies (Libra Association, 2019a, 7-8). Libra fits roughly into the category of tokenised funds. The value of the cryptocurrency can fluctuate over time as a consequence of foreign exchange rate movements. Details on the functioning of the Libra Reserve are specified in a technical paper by Calibra staff.[1] The reserve would be held in a geographically distributed network of custodians with an investment grade credit rating. Users of Libra would not interact with the reserve, instead only 'authorised resellers' (not further specified) would be able to transact large amounts of fiat currency and Libra with the reserve. The Libra Association would mint and destroy coins in response to demand from the authorised resellers. Coins are minted when they purchase Libra and destroyed when they sell Libra at a price depending on the value of the basket of assets. The Libra Association controlling the Libra Reserve would act as a buyer of last resort, but unlike a central bank, would not set any monetary policy (Catalini et al., 2019).

In July 2019, Zetzsche et al. performed a detailed analysis of the Libra project with regards to the business model, corporate governance and regulatory concerns. In particular, the authors criticised the white paper's silence on Libra Networks, a limited liability company under Swiss law already established in April 2019, which would likely be the company seeking regulatory approvals for financial services. It also seems contradictory that fees and dividend distributions would flow to the members of the association, a non-profit organisation.

For Adachi et al. (2020, 7), ECB staff, the Libra Reserve has the potential to become one of Europe's largest money market funds. The Libra Association disclosed that it would invest in a currency basket made of 50% USD, 18% EUR, 14% JPY, 11% GBP and 7% SGD. The share of the euro in the currency basket (18%) would be larger than the euro area's share of the total user base of Facebook (10%). This could result in inflows into euro area money markets (Adachi et al., 2020). The ECB Crypto-Assets Task Force differentiates three scenarios for the potential use of stablecoins: "crypto-assets accessory function" (considered as current state of the market), "new payment method" and "alterative store of value". An extensive use of a stablecoin in the scenario, where a stablecoin becomes an ordinary means of payment, could affect the exchange rate channel of monetary policy. In particular, a multi-currency stablecoin like Libra might make it difficult to control domestic developments (ECB Crypto-Assets Task Force, 2020, 17-21).

### Regulatory treatment of the initial Libra application under Swiss law

On 11 September 2019, the Libra Association (2019b) announced that it was seeking a payment system license under Swiss regulation. The Swiss Financial Market Supervisory Authority (FINMA) confirmed this request the same day (FINMA, 2019a). Simultaneously FINMA (2019b) issued a new supplement with criteria for the regulatory treatment of stablecoins under Swiss law. The stablecoin guidelines build upon the general guidelines for initial coin offerings from February 2018 which distinguished between payment, utility and asset function (FINMA, 2018). Libra would be seen as a hybrid token with both payment and asset function.

The stablecoin guidelines from September 2019 cover the regulatory treatment for various categories of stablecoins for indicative purposes, depending on the underlying asset that they are linked to (currencies, commodities, real estate, securities). Potential licensing requirements under the Banking Act or the Collective Investment Schemes Act may apply. The Anti-Money Laundering Act would be applicable for payment tokens and the Financial Market Infrastructure Act would also apply to payment systems of significant importance. Table 1 shows an indicative supervisory classification as a function of the underlying asset to which they are linked.

In the FINMA press release of 11 September 2019, the regulator touched upon requirements likely to be applica-

1 In May 2020, the Facebook group rebranded its subsidiary Calibra to Novi, as wallet provider for Libra. See Novi: Welcome to Novi, 26 May 2020, available at https://about.fb.com/news/2020/05/welcome-to-novi/.

Table 1
**Categories of stablecoins according to FINMA**

| Category | Stablecoin linked to | Indicative supervisory classification |
|---|---|---|
| 1 | Fiat currency / cryptocurrency with fixed redemption claim | Deposit under banking law |
| 2 | Basket of fiat currencies / cryptocurrencies with redemption claim dependent on price development | Management of the currency basket and risk-bearing: for the account of the issuer: deposit under banking law; for the account of the token holder: collective investment scheme |
| 3 | Commodity (incl. 'bank precious metals') with contractual claim | Bank precious metals: deposit under banking law; Commodity: security and possibly derivative |
| 4 | Basket of commodities (incl. 'bank precious metals') with redemption claim dependent on price development | Collective investment scheme |
| 5 | Commodities (incl. 'bank precious metals') with ownership rights | No prudential licensing requirement |
| 6 | Real estate with redemption claim dependent on price development | Collective investment scheme |
| 7 | Specific security with contractual claim | Security and possibly derivative |
| 8 | Basket of securities with redemption claim dependent on price development | Collective investment scheme |

Source: Appendix 2 in FINMA (2019b, 6).

ble to the Libra project. Due to the scope of the project, an internationally coordinated approach would be needed, particularly with regards to the management and governance of the Libra Reserve as well as money laundering issues (FINMA, 2019b).

### Libra 2.0 concept

On 15 April 2020, the Libra Association published an updated Libra concept with a white paper v2.0. The initiators highlight four major changes (Libra Association, 2020, 1-3):

1. "Offering single-currency stablecoins in addition to the multi-currency coin": The Libra network would start with single-currency stablecoins for USD, EUR, GBP and SGD. The multi-currency Libra Coin (LBR) is still planned, but would be made out of single-currency coins being defined in terms of fixed nominal weights (e.g. 50% USD, 18% EUR, 11% GBP, etc.) using a smart contract. Details were not disclosed.

2. "Enhancing the safety of the Libra payment system with a robust compliance framework": Participants would now be distinguished in the categories designated dealers, regulated virtual asset service providers (in a FATF member jurisdiction), certified virtual asset service providers approved by the Libra Association and unhosted wallets (i.e. all the others). The network would start with designated dealers and regulated virtual asset service providers while a certification process is developed.

3. "Forgoing the future transition to a permissionless system while maintaining its key economic properties."

4. "Building strong protections into the design of the Libra Reserve": The Reserve would invest at least 80% in short-term (up to three months remaining maturity) government securities issued by sovereigns that have very low credit risk (e.g. A+ rating from S&P and A1 from Moody's, or higher) and whose securities trade in highly liquid secondary markets. The remaining 20% would be held in cash, with overnight sweeps into money market funds. Also, the Libra Reserve will get a capital buffer to absorb potential losses from credit, market and operational risks.

On the same day, FINMA confirmed the receipt of an application for a payment system license under Swiss law on the basis of Libra 2.0. FINMA (2020) reiterated that an international approach is required, hence it is in contact with more than 20 supervisory authorities and central banks worldwide and also contributing to working groups and organisations on the development of international standards on global stablecoins.

### G7 act on stablecoins

The Libra announcement in June 2019 moved global stablecoins to the top of the agenda of the G7. The G7 Finance Ministers and Central Bank Governors concluded at a meeting in Chantilly, France, in July 2019, that stablecoins raised serious regulatory and systemic concerns. Stablecoin initiatives and their operators would have to meet the highest standards of financial regulation in order to go ahead without affecting the stability of the financial system. Facebook's project, the big elephant in the room, is not mentioned in the written announcement (G7 France, 2019a). The G7 presidency set up a new G7 Working Group on Stablecoins (G7 France, 2019b).

In September 2019, the French and German Finance Ministers issued a joint statement warning against the Libra project because the documentation failed to convince them that risks identified by the G7 would be properly addressed. Going even further, the ministers stated that no private entity should claim monetary power inherent to the sovereignty of nations (French Ministry of Economy and German Ministry of Finance, 2019).

At the G7 meeting in Washington in October 2019, G7 Finance Ministers and Central Bank Governors welcomed the report 'Investigating the impact of global stablecoins' by the G7 Working Group on Stablecoins (G7 France, 2019c). The report points out the following critical issues that need to be solved (G7 Working Group on Stablecoins, 2019):

- Stablecoin initiatives must ensure public trust by meeting the highest regulatory standards – including guidance from the international standard-setting bodies – and be subject to prudent supervision and oversight.
- Stablecoin initiatives should demonstrate a sound legal basis to ensure adequate protection and guarantees to all stakeholders and users.
- The governance and risk management framework should ensure operational and cyber resilience.
- The management of the assets underlying the arrangement must be safe, prudent, transparent and consistent with the nature of obligations to the coin holders.
- Stablecoins may raise broader issues for the international monetary system, in particular if they become a widespread substitute for cash and deposits in some economies.

The G7 Working Group on Stablecoins identified challenges and risks of stablecoins for public policy, oversight and regulation regardless of scale as well as inherent in potential global stablecoins (see Table 2). The G7 believes that no global stablecoin project should begin operation until the legal, regulatory and oversight challenges and risks are adequately addressed (G7 France, 2019c).

Table 2
**Challenges and risks of stablecoins according to the G7 Working Group on Stablecoins**

| | Challenges and risks |
|---|---|
| Challenges and risks of stablecoins regardless of scale | Legal certainty |
| | Sound governance |
| | Financial integrity (AML/CFT) |
| | Safety, efficiency and integrity of payment systems |
| | Cyber and other operational risk considerations |
| | Market integrity |
| | Data protection |
| | Consumer/investor protection |
| | Tax compliance |
| Challenges and risks inherent in potential global stablecoins | Fair competition in financial markets |
| | Financial stability implications |
| | Monetary policy transmission |

Source: Authors' own illustration based on G7 Working Group on Stablecoins (2019, 5-15).

### G20 and standard-setting bodies act on stablecoins

At their October 2019 meeting in Washington, G20 Finance Ministers and Central Bank Governors took the positions on stablecoins set by the G7. The G20 stated that global stablecoins and other similar arrangements with potential systemic footprints would give rise to serious public policy and regulatory risks (money laundering, illicit finance, and consumer and investor protection) to be evaluated and addressed before the launch (G20 Japan, 2019). In February 2020, the new G20 presidency of Saudi Arabia reiterated that view and asked the Financial Stability Board (FSB), the Committee on Payments and Market Infrastructures (CPMI) and other standard-setting bodies to develop a roadmap to enhance global cross-border payment arrangements by October 2020 (G20 Saudi Arabia, 2020). This is a priority of the upcoming G20 summit in Riyadh (Carstens, 2020, 19).

In October 2019, the FSB Chair, Randal K. Quarles, informed the G20 that the FSB is assessing how the existing regulatory framework applies to global stablecoins and whether any regulatory gaps need to be filled. The FSB formed its own working group on stablecoins (FSB, 2019a). A report on regulatory issues of stablecoins outlines the following steps (FSB, 2019b, 3-4): (i) take stock of existing supervisory and regulatory approaches to stablecoins, (ii) consider whether they are adequate and effective in addressing financial stability and systemic risk concerns, and (iii) advise on possible multilateral responses. In February 2020, the FSB Chair confirmed that the review of approaches in the FSB member jurisdictions was completed and that the FSB has been tasked with coordinating the development of a roadmap for improving cross-border payment systems (FSB, 2020a). To pre-

pare, the FSB issued a combined report and consultation document in April 2020 on regulatory, supervisory and oversight challenges raised by global stablecoin arrangements (FSB, 2020b). The paper contains a section on risks and vulnerabilities raised by global stablecoins, a summary of the stocktake undertaken in FSB jurisdictions, key standards from various international standard-setting bodies and last but not least ten high-level recommendations to authorities at the jurisdictional level, including the final version of the ten high-level recommendations (FSB, 2020c, 4). The final report was published in October 2020 (FSB, 2020c).

The Financial Action Task Force (FATF) is an international standard-setting body focused on Anti-Money Laundering and Countering the Financing of Terrorism (AML/CFT). In October 2019, the then FATF President Xiangmin Liu informed the G20 that both stablecoins and their service providers would be subject to the FATF standards either as Virtual Assets and Virtual Asset Service Providers or as traditional financial assets and their service providers. The FATF (2019a) intends to actively monitor stablecoins and will consider further clarifications on how the FATF standards apply to stablecoins and their service providers, as well as whether updates are necessary. The FATF issued a report in June 2020 on its analysis of AML/CFT risks associated with stablecoins. The preventive measures in the revised FATF Standards have worked to mitigate risks by so-called stablecoins, so no immediate amendment would be required. The FATF will review the implementation and impact of the revised Standards by June 2021 and consider whether updates are necessary (FATF, 2020).

The International Organization of Securities Commissions (IOSCO) is looking at stablecoins as well. The Chair of the IOSCO Board, Ashley Alder, warned in November 2019 that stablecoins can include features that are typical of regulated securities. Therefore, the IOSCO principles and standards may apply to stablecoins depending on how they are structured, including those related to disclosure, registration, reporting and liability for sponsors and distributors. The IOSCO agrees with the G20 that global stablecoins may give rise to a set of serious public policy and regulatory risks (IOSCO, 2019). In February 2020, the IOSCO published a report on the application of the IOSCO Principles to crypto-assets, without mentioning stablecoins (IOSCO, 2020a). A report on global stablecoin initiatives was issued a month later (IOSCO, 2020b). The paper defines a hypothetical case study which is reminiscent of Libra and explores how the existing IOSCO principles and standards apply. It also contains a preliminary analysis of the application of the CPMI-IOSCO Principles for Financial Markets Infrastructures (PFMI) to three high-level cases of stablecoin arrangements.

### European Union institutions act on stablecoins

In December 2019, the Council of the European Union and the European Commission issued a joint statement on stablecoins based on the strict positions already articulated by the G7 and the G20. The EU institutions would act in cooperation with the ECB and with national and European supervisory authorities. The Council and the Commission are willing to take all necessary measures to ensure appropriate standards of consumer protection and orderly monetary and financial conditions. No global stablecoin arrangement should begin operation in the EU until the legal, regulatory and oversight challenges and risks are adequately identified and addressed (Council of the European Union, 2019).

The European Commission also launched a consultation on crypto-assets in December 2019 which ran until March 2020. Eight of the 117 questions relate to stablecoins. The findings would be considered for new EU legislation on crypto-assets including stablecoins (European Commission, 2019, 5).

Concerning the current EU regulatory framework, a research note by ECB staff pointed out that a stablecoin arrangement could fall under a number of frameworks or none of them (in the latter case meaning a potential regulatory gap) (Adachi et al., 2020). Firstly, the stablecoin may qualify as e-money, hence the Second Electronic Money Directive would apply for the coin and its issuer. Secondly, the asset management function (e.g. Libra Reserve) may qualify as an investment fund, therefore the UCITS Directive, the AIFM Directive and the Money Market Fund Regulation (EU) may apply. Thirdly, the stablecoin may be regarded as equivalent to a deposit, so EU banking regulation may apply.

A detailed study by the University of Antwerp requested by the European Parliament's Committee on Economic and Monetary Affairs, published in April 2020, recommends rulemaking on crypto-assets including global stablecoins at the EU level to avoid regulatory arbitrage due to national initiatives that are not aligned (European Commission, 2019).

In September 2020 an early draft version of a proposal for a regulation on Markets in Crypto-assets (MiCA) by the European Commission was leaked on the journalistic website politico.eu. The MiCA acronym draws an analogy to the Markets in Financial Instruments Directive (MiFID II). Sven Giegold, Member of the European Parliament, confirmed the authenticity of the leak and informed that the ECON adopted a report proposing a regulation of crypto-assets (Giegold, 2020).

On 24 September 2020 the European Commission announced the adoption of a new Digital Finance Package which includes a Digital Finance Strategy, a Retail Payments Strategy, a legislative proposal on digital operational resilience, and a provisional version of the MiCA legislative proposal (leaked two weeks before). The press release states (European Commission, 2020a) that the MiCA regulation should protect investors from risks and provide legal clarity and certainty for crypto-asset issuers and providers. The MiCA proposal document itself (European Commission, 2020b) is accompanied by provisional versions of the annexes (European Commission, 2020c), an impact assessment (European Commission, 2020d) and an executive summary of the impact assessment (European Commission, 2020e).

The Commission stated that crypto-assets already subject to EU legislation would remain like that. For previously unregulated crypto-assets the Commission proposes a bespoke regime setting strict requirements for issuers of crypto-assets and crypto-asset service providers. Safeguards include capital requirements, custody of assets, a mandatory complaint holder procedure available to investors, and rights of the investor against the issuer. Issuers of global stablecoins would be subject to more stringent capital requirements, liquidity management and interoperability requirements.

On 2 October 2020 the ECB published a report prepared by the Eurosystem High-Level Task Force on central bank digital currency (CBDC) on the possible issuance of a digital euro. The task force, made of experts from the ECB and the 19 national central banks of the euro area, identified possible scenarios that would require the issuance of a digital euro. A public consultation would start on 12 October 2020 in parallel with experimentation, without prejudice to the final decision by the Governing Council of the ECB (ECB, 2020a). By mid-2021 a decision would be taken whether to launch a digital euro project (ECB, 2020b, 6). Although Libra itself is only mentioned in one footnote of the report, there is no doubt that the timing and the speed of the digital euro initiative is a reaction to the perceived threat posed by this global stablecoin project.

## Outlook

Politicians and regulators have no interest in allowing the rise of a global stablecoin to impact monetary policy and financial stability. It is unclear whether Libra 2.0 will actually launch successfully. This will depend on how high the regulators worldwide are willing to raise the bar. At European level a clear message against the Libra project has just been sent with the MiCA regulation proposal by the European Commission and the announcement of a digital euro initiative by the ECB.

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DOI: 10.1007/s10272-020-0940-y



# Another Slow Recovery from Economic Disaster

The lesson learned from the Great Recession was that the initial stimulus was far too small. The subsequent austerity during the recovery directly obstructed a return to full employment. There had been hopes that a Biden administration would quickly implement an aggressive stimulus. In addition to measures to control the pandemic, the hoped-for stimulus would also include a large clean energy component and major expenditures on childcare and health care.

Given the outcome of the elections, there seems little hope for the amount of stimulus the economy needs. The Republicans are likely to maintain control of the Senate, although two January run-offs still provide some hope for the Democrats. This means that Majority Leader Mitch McConnell, the same person who openly worked to thwart the Obama presidency, would be in control for at least the first two years of the Biden presidency. If Biden wants to get back quickly to something like full employment and make progress on an agenda to limit global warming and reduce inequality, he will have to find creative paths that work around the obstructions of Mitch McConnell. This will be difficult, but not impossible.

One way that Biden may *reduce unemployment* is through the promotion of worksharing. Many European countries used worksharing in both the last and current recession to keep the unemployment rate relatively low, even as growth faltered. Germany was the champion in this area, managing to actually lower its unemployment rate in 2009 and 2010, even as its GDP loss was greater than in the US. Worksharing has won support across the political spectrum in the United States. John Boehner, who was the Republican Speaker of the House in 2011, supported measures to promote worksharing and many of the leading Republican economists have publicly endorsed proposals for increasing the use of worksharing, which is already part of the unemployment insurance system in most states.

One advantage worksharing has over other ways to lower unemployment is that it does not require substantial expenditures. It essentially means that the money used to pay unemployment benefits instead supplements the pay of workers who are putting in reduced hours. There is no principle that says it is better to pay a worker to be completely unemployed – with unemployment benefits – than to be partially unemployed with a worksharing supplement.

In the absence of large-scale stimulus, worksharing can also help to address other important problems. The pandemic is likely to permanently reshape the structure of our cities, as many more people work remotely. This will mean fewer people commuting to work each day. This is a great development from the standpoint of reducing the resources wasted in commuting, and even more so from the standpoint of lowering greenhouse gas emissions. Still, it means that many of the jobs associated with servicing this commuting population will disappear. Millions of people formerly employed in restaurants that provided lunch or dinner to people commuting, and workers in barber shops, hair salons, gyms, and dry-cleaning services located in downtown business districts, will not see their jobs return even when the pandemic is under control. Worksharing can maximize employment in these sectors, even as the total demand may be far less than before the pandemic. Worksharing may also help to change norms about work in the United States. The average work year in the US has 20 to 25% more hours than in countries like Germany, France and Denmark. Worksharing can be a step toward getting our work habits more

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Open Access funding provided by ZBW – Leibniz Information Centre for Economics.

in line with these countries, allowing people more time to spend with their families or in leisure activities.

In the absence of a large stimulus package, aggressive action by the Federal Reserve Board to promote growth will be useful. The current chair, Jerome Powell, has indicated that he fully intends to keep interest rates near zero until the economy is back to something close to full employment. This is not a substitute for fiscal stimulus, but it will be a boost to the economy.

Reducing student loan debt is another mechanism through which President Biden can unilaterally provide a boost to the economy. He can eliminate a substantial sum for all debtors and then move aggressively through the courts to eliminate debt accrued from corrupt for-profit colleges.

Ideally, we would have large subsidies for *clean energy*, conservation, and electric cars, but that will be difficult to do with a Republican-controlled Senate. However, it may be possible to get some support in these areas as these industries are now large employers, and Biden may be able to leverage that fact by slipping in funding in necessary appropriations bills. This will mean money for companies in Republican states and congressional districts. There are also administrative steps that can be taken, such as limiting the use of coal in power plants and requiring stronger controls on methane emissions from fracking operations. These can help slow global warming, even if the scale is nowhere near as large as required.

With regards to *health care*, if the Supreme Court does not completely strike down the Affordable Care Act, the Biden administration's main goal will be to make the insurance it provides more affordable. The direct path is through larger subsidies, but this would require action by Congress. If that path is blocked, Biden can lower costs, first and foremost by extensive use of Section 1498 of the Commercial Code. This provision allows the government to override patents, although it requires some compensation to patent holders. There are enormous potential savings from bringing the price of drugs closer to the free market price. In the case of prescription drugs, the savings could be as much as $400 billion a year, or 1.8% of GDP. Savings on medical equipment could be close to one-third of this amount. It is not plausible that savings from Section 1498 could be anywhere near this large, but even 20% of these sums would go far toward making health care more affordable.

*Inequality* has been rising in the United States for 40 years as a result of deliberate policy. Its reversal is a major project, but one step that could go far would be to alter the dynamics of corporate governance. As it stands now, top management is largely able to run companies in their own interest. This is because the corporate boards, who ostensibly represent shareholders, owe their primary allegiance to top management. This is what allows CEOs to have salaries in the tens of millions of dollars, which bear little relationship to the returns they provide shareholders. A simple way to change this relationship would be to alter the triannual "Say on Pay" votes that go out to shareholders. These referendums, which became law as part of the 2010 Dodd-Frank financial reform act, give shareholders the opportunity to vote on the CEO's compensation package. Under the law, there is no consequence for a no vote, except perhaps some embarrassment for the corporate board. However, if the corporate boards were to lose their own pay if a Say on Pay vote was turned down, it would give them a serious incentive to think about paying CEOs less. And if we got our CEO's pay in line with where they were 40 to 50 years ago ($2 to $3 million, rather than $20 million), it would have a huge impact on pay structures throughout the economy. It may be difficult to get a Republican Senate to approve this change, but it will be hard for them to call a proposal 'socialist,' when it gives shareholders more control over the companies they own.

If the Democrats could reach a period of unified control, they could push a far more aggressive agenda to meet the needs of the country and world. But given the outcome of the elections, they will have to be less ambitious and more creative.