Reducing uncertainty to facilitate economic recovery

Elliot Aurissergues (Economist at the OFCE)

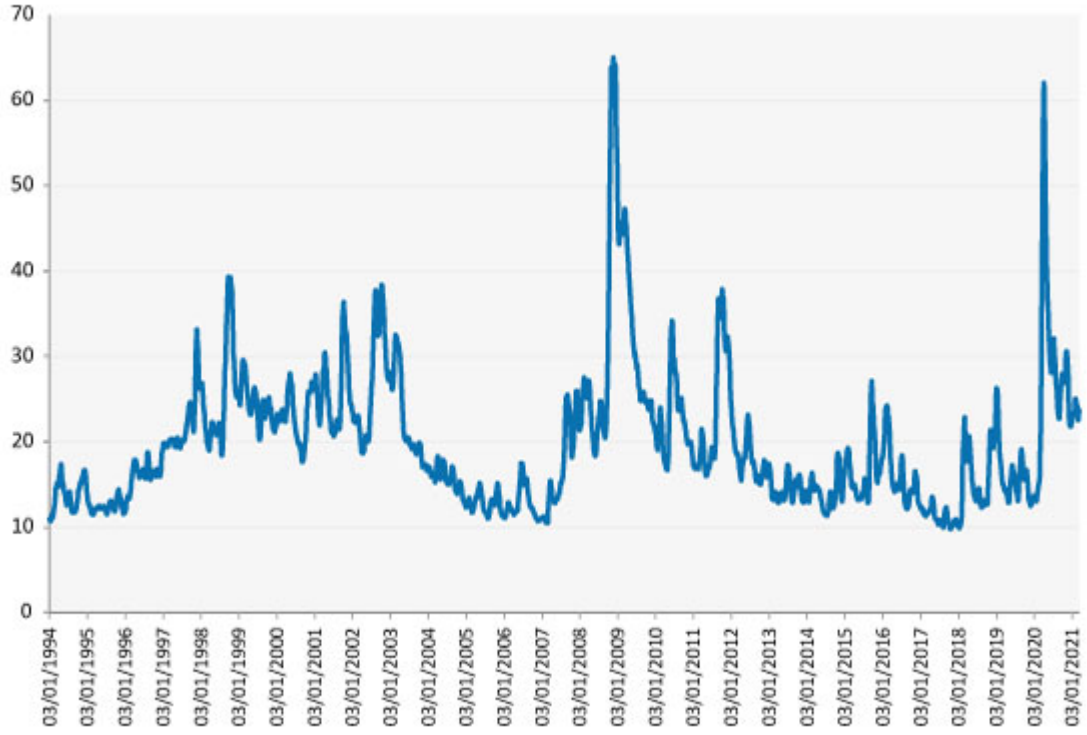
As the health constraints caused by the pandemic continue to weigh on the economy in 2021, the challenge is to get GDP and employment quickly back to their pre-crisis levels. However, companies' uncertainty about their levels of activity and profits in the coming years could slow the recovery. In order to cope with the possible long-term negative effects of the crisis, and weakened by their losses in 2020, companies may seek to restore or even increase their margins, which could result in numerous restructurings and job losses. Economic recovery could take place faster if business has real visibility beyond 2021. While it is difficult for the current government to make strong commitments, on the other hand mechanisms that in the long term are not very costly for the public purse could make it possible to take action.

Post-pandemic uncertainty will hold back a recovery

In economic terms, the pandemic represents an atypical crisis. It combines both goods and labour supply shocks and a fall – largely constrained – in consumption (Dauvin and Sampognaro,

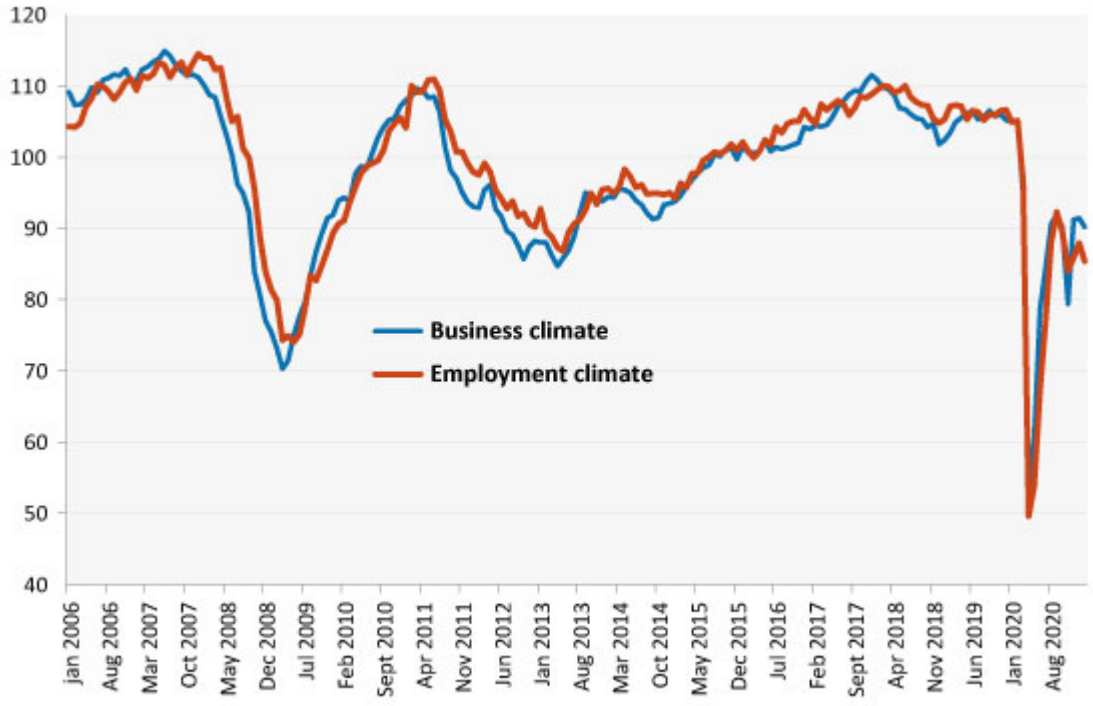
2021). There are not many recent episodes that can provide useful points of comparison for economic actors. Some elements do indicate a rapid return to normalcy, including the dynamism of some Asian economies, in particular the Chinese economy, and the resilience of the US economy and the Biden administration’s economic policy. On the other hand, there are other factors that may limit economic growth in the coming years. The heavy losses of some companies could lead to a wave of bankruptcies (Guerini *et al.*, 2020; Heyer, 2020), with possible negative effects on productivity or the employment of certain categories of workers. Some consumption patterns could be modified permanently, with a heavy impact on sectors like aeronautics and retailing. The trajectories of some of the emerging economies are another unknown, as they cannot afford the same level of fiscal support as do the US and Europe. Finally, the concentration of the shock on sectors that tend to employ low-skilled workers risks increasing inequalities within countries, and thus generating a further rise in global savings. Some indicators reflect this still high uncertainty. The VIX index, which captures market expectations for the volatility of US stock prices, remains twice as high as before the crisis and is comparable to the levels reached during the Dotcomcrisis (see Figure 1). In France, the business and jobs climate has rebounded strongly from its historical low in March-April 2020, but is still at the same level as during the low point of the eurozone crisis in 2012-2013 (see Figure 2).

Figure 1. Changes in the VIX index since 1994



Sources: Chicago Board Options Exchange, VIX smoothed over 20 days, OFCE calculations.

Figure 2. Business and jobs climate in France



Source: INSEE.

The literature shows that uncertainty about the medium-term path of the economy affects the way companies behave today. By identifying uncertainty with stock price volatility, Bloom (2009) suggests that it has had a significant negative impact on GDP and employment in the US. A number of other studies

have used different methodologies to confirm this idea [1]. Given the severity of the recession in 2020, uncertainty could have an even greater impact. Effects that are usually second-order may be enough to derail an economic recovery.

A proposal for giving visibility to businesses

The measures in France's current stimulus package basically focus on 2021 and 2022 and do not give any visibility to businesses about their activity or cash flow beyond 2022. It is true that it is difficult for the current government to commit to major expenditures that would have to be assumed by future governments. However, it is possible to envisage relatively strong measures that have limited budgetary costs over the next ten years (and therefore a limited impact on the fiscal manoeuvring room of future governments).

Proposal: Give companies the following **option**: a subsidy of 10% of their wage bill (wages under 3x the minimum wage – the SMIC) between 2022 and 2026 in exchange for an additional tax of 5% on their gross operating profits (EBITDA) over the period 2022-2030.

For firms applying for the scheme, this is **the fiscal equivalent of a temporary recapitalization**. They exchange a subsidy today for a fraction of their profits tomorrow. The implicit cost of capital would be particularly attractive. The scheme is calibrated so that its "interest rate" (given by the ratio between the sum of additional taxes over 2022-2030 and

the sum of subsidies over 2022-2026) is close to 0% for the “average” French company. This rate would be lower *a posteriori* for companies that will have performed less well than expected. Compared with other recapitalization methods such as direct public shareholdings or the conversion of loans into quasi-equity, there is no risk that the current shareholders will lose control of the company.

The advantage of the scheme is that it automatically targets the companies that face the greatest need. The businesses that anticipate possible economic difficulties over the next few years and that have employment-intensive activities will self-select, while others will have no interest in applying for the subsidy. As the subsidy is disbursed gradually, companies that maintain employment over the period will be favoured. Capital-intensive and high-growth companies would not be penalized, as the scheme would remain optional. The additional tax on EBITDA is temporary and should not have a negative impact on investment by those applying for it.

The cost in terms of public debt up to 2030 would be low: about 10 billion euros[2], or 0.4 percentage points of GDP, if all companies were to apply. The self-selection effect of the scheme would increase the

average cost per beneficiary company but would also decrease the number of beneficiaries, thereby having an ambiguous impact on the total cost. This does not take into account the beneficial impact of the scheme on the public finances in so far as it prevents job losses and the non-repayment of certain guaranteed loans. The fiscal impulse over 2022-2025 could on the other hand be quite strong, on the order of 1 to 1.5 GDP points per year (i.e. 4 to 6 GDP points over the four years) but would be counterbalanced by an automatic increase in revenue over 2025-2030[3].

Bibliography

Bachmann R., S. Elstner and E. Sims, 2013, "Uncertainty and Economic Activity: Evidence from Business Survey Data", *AEJ macroeconomics*, https://www.aeaweb.org/articles?id=10.1257/mac.5.2.217

Belianska A., A. Eyquem and C. Poilly, 2021, "The Transmission Channels of Government Spending Uncertainty", *working paper*, https://halshs.archives-ouvertes.fr/halshs-03160370

Bloom N., 2009, "The impact of uncertainty shocks", *Econometrica*, https://onlinelibrary.wiley.com/doi/abs/10.3982/ECTA6248

Dauvin M. and R. Sampognaro, 2021, "Behind the Scenes of Containment: Modelling Simultaneous Supply and Demand Shocks", *OFCE working papers*, https://www.ofce.sciences-po.fr/pdf/dtravail/OFCEWP2021-05.pdf

Fernandez-Villaverde J. and P. Guerron-Quintana, 2011, “Risk Matters: The Real Effects of Volatility Shocks”, *American Economic Review*, https://www.aeaweb.org/articles?id=10.1257/aer.101.6.2530

Fernandez-Villaverde J. and P. Guerron-Quintana, 2015, “Fiscal volatility shocks and economic activity”, *American Economic Review*, https://www.aeaweb.org/articles?id=10.1257/aer.20121236

Guerini M., L. Nesta, X. Ragot and S. Schiavo, 2020, “Firm liquidity and solvency under the Covid-19 lockdown in France”, *OFCE policy brief*, https://www.ofce.sciences-po.fr/pdf/pbrief/2020/OFCEpbrief76.pdf

Heyer E., 2020, “Défaillances d’entreprises et destructions d’emplois: une estimation de la relation sur données macro-sectorielles”, *Revue de l’OFCE*, https://www.ofce.sciences-po.fr/pdf/revue/7-168OFCE.pdf

---

[1] Fernandez-Villaverde, Guerron-Quintana, Rubio-Ramirez and Uribe (2011) show that increased interest rate volatility has destabilizing effects on Latin American economies. In a 2015 paper, the same authors suggest that increased uncertainty about future US fiscal policy leads firms to push up their margins, reducing economic activity. This result has been confirmed by Belianska, Eyquem and Poilly (2021) for the euro zone. Using consumer confidence surveys, Bachmann and Sims (2012) show that pessimistic consumers

reduce the effectiveness of fiscal policy during a recession. Finally,
uncertainty among CEOs has a negative impact on output, as shown by German data
analysed by Bachmann, Elstner and Sims (2013).

[2] The total of wages below 3 SMICs in 2019 was
on the order of 480 billion euros (the total of gross wages and salaries came
to 640 billion for non-financial companies, and the latest INSEE data suggest
that wages below 3 SMICs represent 75% of the wage bill, an amount that seems
consistent with the data on the cost of France's CICE tax scheme). The EBITDA
of non-financial companies was 420 billion euros. Based on these 2019 figures,
and if all companies were to apply for the scheme, the total subsidy would
amount to 0.1 x 480 x 4 or 196 billion euros. The EBITDA tax would under the
same assumptions yield 0.05 x 420 x 8 + 0.05 x 196 (5% of the subsidy will be
recovered viathe extra EBITDA) or 186 billion euros.

[3] This additional tax revenue should not penalize
activity over this period because (1) it will concern capital income for which
the marginal propensity to consume is rather low, and (2) the beneficiary
companies should be able to anticipate it correctly.

What factors drove the rise in euro zone public debt from 1999 to 2019?

by Pierre Aldama

Between 1999 and 2019, the eve of the Covid-19 pandemic, the public debts of the 11 oldest euro zone members had risen by an average of 20 percentage points of GDP. This increase in public debt is commonly attributed to structural budget deficits, particularly those in the pre-crisis period and in the "South". But how much of the stock of public debt in 2019 can be attributed to structural deficits, and how much to GDP growth, interest payments or cyclical deficits? In this post, we use the December 2020 edition of the OECD's Economic Outlook *to break down the changes in public debt into its main factors: structural and cyclical primary balances, the interest burden, nominal GDP growth and stock-flow adjustments. This shows that the structural deficits generally contributed less than is commonly assumed, and that the increase in public debt over the period was largely the result of the direct and indirect consequences of the double-dip recession in the euro zone.*

On the eve of the Covid-19 crisis, the 11 oldest euro zone countries had an average level of public debt (in the Maastricht sense) of 92% of GDP. Between 1999 and 2019, the public debt in these 11 countries increased by an average of 20 percentage points of GDP, although with considerable heterogeneity (Figure 1). On the one hand, a group of so-called virtuous countries – Germany, the Netherlands, Austria, Finland and Ireland – reduced their debt ratios to their 1999 level of 60% of GDP or even lower. In contrast to this were the countries whose public debt increased – France, Spain, Greece and Portugal – or remained at a high level – Belgium and Italy. Can we simply deduce from this that there are some countries that acted like the proverbial ant and others like the grasshopper? Probably not.

Indeed, not all countries entered the European Monetary Union (EMU) with the same level of debt: their starting point therefore biases observation insofar as it does not inform about the structural or cyclical factors or to the interest burden associated with the fiscal policy in place from 1999 to 2019. Is the rise in public debt in the "grasshopper" countries largely attributable to the accumulation of structural deficits, or on the contrary, to cyclical factors and the impact of the recessions in the euro zone (2008-2010 and 2011-2013)?

This post uses the December 2020 edition of the

OECD's *Economic Outlook* to break down the *changes* inpublic debt into the main components: structural and cyclical primary balances, the interest burden, nominal GDP growth and stock-flow adjustments. This shows that the contribution of structural deficits is generally lower than commonly assumed and that the increase in public debt over the period largely results from the direct and indirect consequences of the double-dip recession in the euro zone.

The accounting decomposition of public debt dynamics

The change in public debt (as a percentage of GDP) between year *t* and year *t-1* can be broken down into five main factors, using the following equation:

$$\Delta d_t = \frac{r_t}{1+y_t} d_{t-1} - \frac{y_t}{1+y_t} d_{t-1} + sp_t^{cyc} + sp_t^{struc} + afs_t$$

where $r_t / (1+y_t)\ d_{t-1}$ is the effect of the interest burden, $-y_t / (1+y_t) d_{t-1}$ is the effect of nominal GDP growth (and the sum of the two terms is the infamous snowball effect[1] of public debt), sp_t^{cyc} is the cyclical component of the primary budget balance (excluding the interest burden), sp_t^{struc} is the structural primary balance (adjusted for the output gap) and afs_t represents the stock-flow adjustments, i.e. transactions on the assets and liabilities of general government that are not accounted for in the primary

balance.

By aggregating each of these terms, we calculate the contributions to the total change in public debt between 1999 and 2019 (Figure 2) and year by year (Figure 3). Finally, Figures 4A and 4B present breakdowns of the public debt similar to Figure 2 but over two sub-periods: 1999-2008 and 2008-2019.

Figure 1. Public debt/GDP in the Maastricht sense from 1999 to 2019, in GDP points

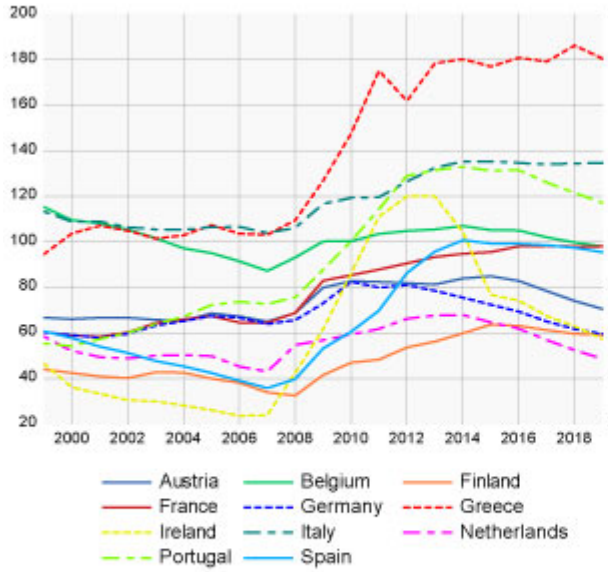
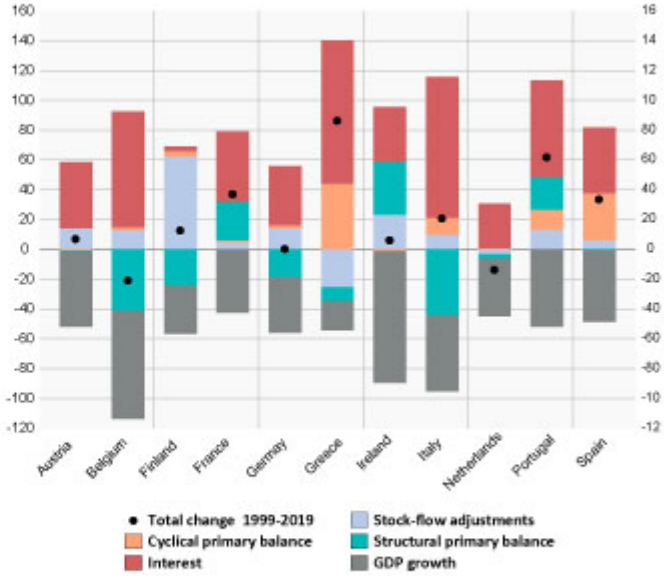


Figure 2. Breakdown in the change in public debt from 1999 to 2019, in GDP points



Notes: For each country, the total change from 1999 to 2019 in the public debt/GDP ratio is broken down between the effects of the interest burden, of GDP growth, of cyclical and structural primary surpluses (+) and deficits (-), and finally of stock-flow adjustments (i.e. of transactions on the assets and liabilities of general government that are not accounted for in the primary balance).

Source : OECD Economic Outlook 2020/2, author's calculations.

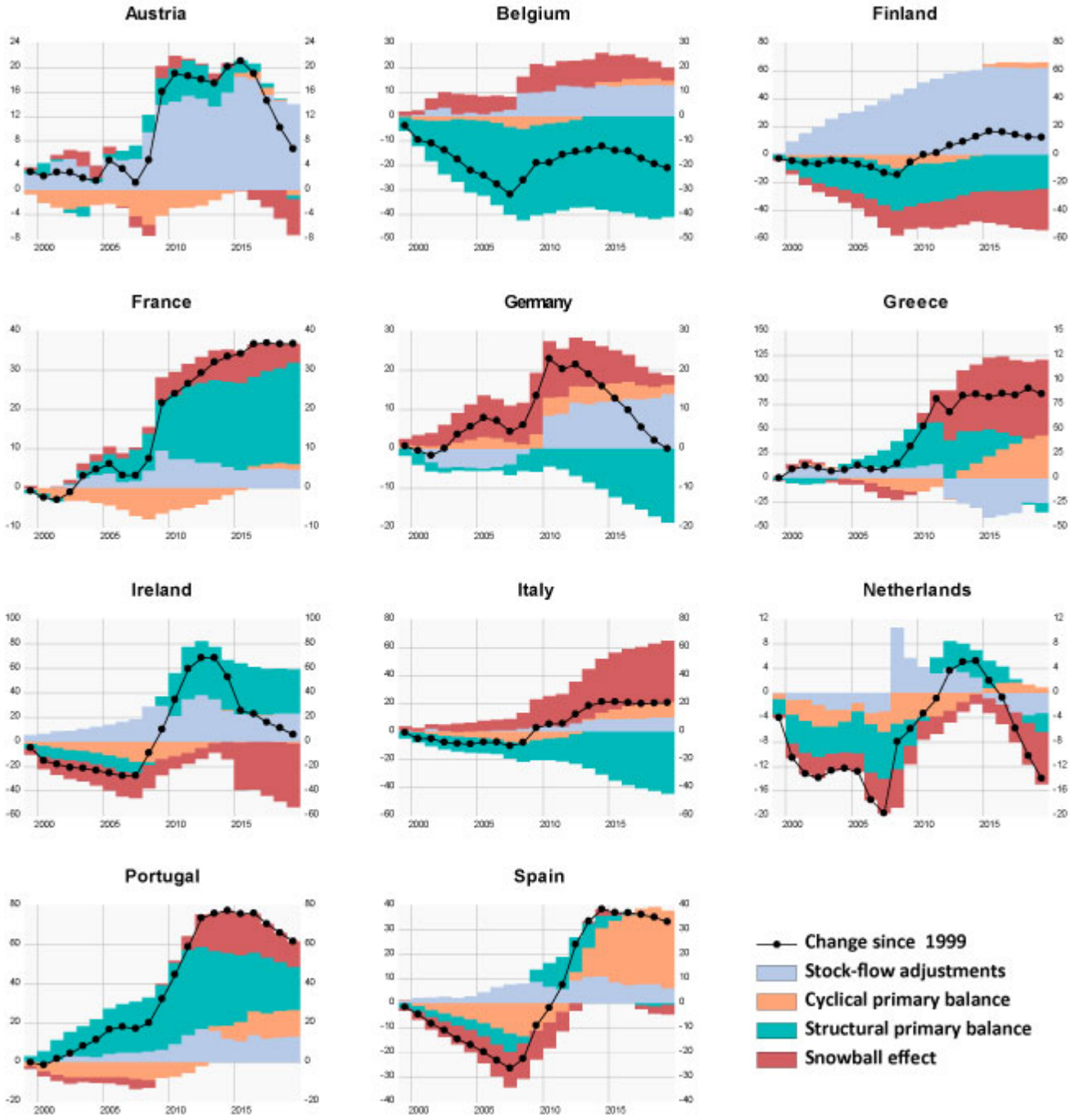
The scars of the double recession of 2008-2010 and 2011-2013 in the euro zone

The rise in public debt in the EMU is largely explained by the cyclical effects of the double recession of 2008-2010 and 2011-2013 (Figure 3). Between 2008 and 2019, in the three countries with the largest increases in public debt (Greece, Spain, Portugal), the rise in debt is due largely to cyclical primary deficits and the snowball effect. Greece is a

striking example: the snowball effect accounts for almost 3/5 of the increase in public debt between 1999 and 2019, and this is concentrated mainly between 2008 and 2019, with the collapse of the level of GDP. In contrast, the apparent Irish "miracle" is actually due to massive nominal growth in 2015, which in turn is explained by the relocation of existing intangible assets in Ireland by multinationals.

Moreover, any positive contribution of *structural* deficits to debt growth during the 2008-2010 crisis is in fact an optimal countercyclical response of fiscal policy during the recession, and cannot be interpreted as a lack of fiscal seriousness *per se*. This was the case, however, in fewer than half of the countries studied: Spain, the Netherlands, France, Austria, and Ireland, and for the other countries this largely reflects the pro-cyclical character of discretionary fiscal policies in the euro zone over the period (Aldama and Creel, 2020).

Figure 3. Change in the public debt/GDP ratios and cumulative contributions since 1999, in GDP points



Notes: For each country, the total change from 1999 to 2019 in the public debt/GDP ratio is broken down between the effects of the interest burden, of GDP growth, of cyclical and structural primary surpluses (+) and deficits (-), and finally of stock-flow adjustments (i.e. of transactions on the assets and liabilities of general government that are not accounted for in the primary balance).

Sources: OECD Economic Outlook 2020/2, author's calculations.

Finally, in general, the contribution of the stock-flow adjustments increases sharply after the 2008 crisis, mainly due to the banking sector rescue plan. In the case of Greece, the negative contribution of these adjustments largely corresponds to the 2012 default.

Northern surpluses *vs.* Southernstructural

deficits in the euro zone?

Over the period 1999-2019, it appears that only three countries (France, Ireland and Portugal) showed a positive contribution of structural primary deficits to the rise in public debt. Remarkably, both Greece and Italy stand out from these countries with a negative contribution due to their structural primary surpluses, as shall be seen later, due in particular to the structural fiscal adjustment carried out since 2010 in the case of Greece. Belgium, which was heavily indebted at the time of its entry into the EMU (114% of GDP), is also characterised by the strong negative contribution of its structural primary balance to debt growth.

Figure 4A. Breakdown in the change in the debt between 1999 and 2008, in GDP points

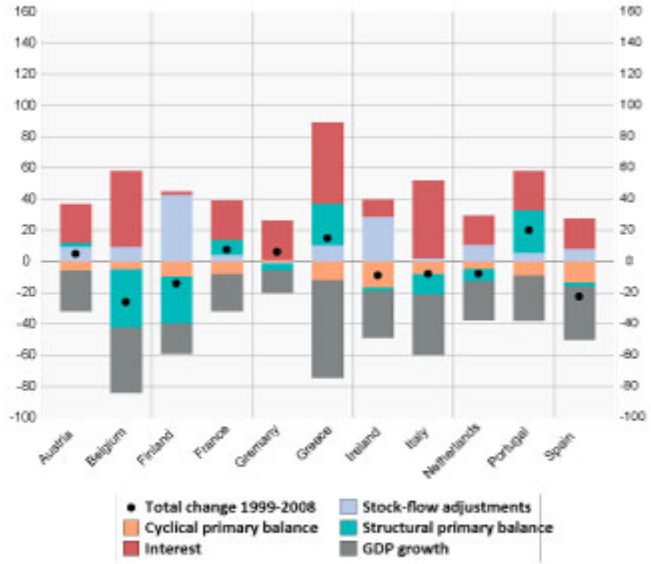
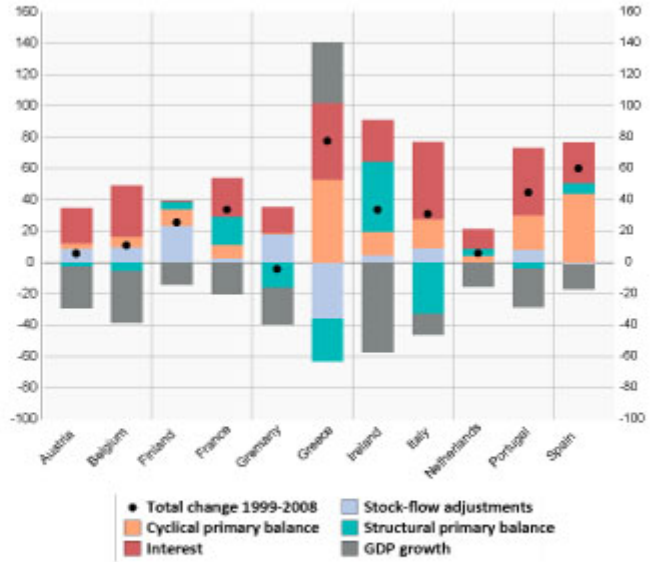


Figure 4B. Breakdown in the change in the debt between 2008 and 2019, in GDP points



Notes: For each country, the total change from 1999 to 2019 in the public debt/GDP ratio is broken down between the effects of the interest burden, of GDP growth, of cyclical and structural primary surpluses (+) and deficits (-), and finally of stock-flow adjustments (i.e. of transactions on the assets and liabilities of general government that are not accounted for in the primary balance).

Sources: OECD Economic Outlook 2020/2, author's calculations.

In the case of Greece, we observe in particular the sharp decline in the contribution of the structural primary balance, which even becomes negative in 2019: in other words, by 2010 Greece has

more than offset
the effect of its previous structural primary deficits. Even more remarkably,
Italy has pursued a very tight fiscal policy *over the entire period*, in so far as the (negative) contribution
of its structural primary surplus has steadily increased in absolute terms.
Portugal lies in between, and started to run structural primary surpluses,
without cancelling out the effect of its pre-2010 deficits. Ireland, sometimes
presented as the “good pupil” in the euro area following the 2010
crisis, did not have post-crisis structural surpluses that offset the
structural deficits run up during the crisis (the contribution to the change in
debt was stable).

Focusing on the pre-2008 period (Figure 4A) and the
so-called Southern countries, again only Greece and Portugal saw a positive
contribution of their structural deficits to debt growth, while the
contribution of the primary structural surpluses in Ireland, Italy and Spain was
negative.

On the Franco-German side, the divergence is clear.
German fiscal rigour appears almost extreme: even following the 2008-2010
crisis, the federal government’s primary structural balance did not contribute
positively to debt growth, reflecting a very weak countercyclical discretionary
policy (the German structural balance increased by 1 GDP point in 2010).

Conversely, in the case of France, a large part of the variation in public debt can be explained by the structural deficits recorded *both before and after* 2008 (Figures 4A and 4B), although this slowed down in the second half of the 2010s (Figure 3). Thus, of the 37 GDP points of public debt accumulated since 1999, almost 26 points came from structural deficits accumulated over the period.

Of course, the distinction between the structural balance and the cyclical balance is critically based on the estimation of the level of "potential" GDP, i.e. of full utilization of production factors, without inflationary pressures. This measure is subject to great uncertainty, and there have been many criticisms, such as that it is too sensitive to the macroeconomic cycle and to demand shocks (Coibion *et al.* 2018; Fatas and Summers 2018). Some studies suggest that the level of potential activity may be underestimated. This likely bias in potential GDP estimates points to the need for a note of caution about any definitive interpretation of the structural *vs.* cyclical nature of budget deficits or surpluses. [2]

***

While public debt has increased overall in the euro zone since 1999, a large part of this growth is explained by the direct and indirect consequences of the 2008 crisis, through cyclical deficits, the aggravation of the snowball effect and the *structural* weakness

of growth in certain Southern European countries.

On the contrary, most of the more indebted countries today ran high primary structural surpluses over the period, such as Italy and Belgium. Greece has even more than offset the positive contribution of its past structural deficits. This is the reason why a reading grid that is still overly used, that of the North versus the South, or of fiscal strictness versus fiscal leniency, cannot stand up to a simple accounting analysis of the dynamics of public debt.

---

[1] The snowball effect of public debt is the effect of the differential between the interest rate paid on the accumulated stock of debt and the economy's growth rate. If this differential is positive, then for a given primary budget balance public debt tends to increase mechanically; conversely, if it is negative, public debt tends to decrease mechanically.

2] However, using *the OECD Economic Outlook* has the advantage of providing a homogeneous approach across countries, and therefore a relatively uniform bias between them. Moreover, the measure of potential GDP used by the OECD is less cyclical than the measures used by the IMF and the European Commission.

Monetary Policy During the Pandemic: Fit for Purpose?

Christophe Blot, Caroline Bozou and Jérôme Creel

In a recent Monetary Dialogue Paper for the European Parliament, we review and assess the different policy measures introduced by the ECB since the inception of the COVID-19 crisis in Europe, mainly the extension of Asset Purchase Programme (APP) measures and the development of Pandemic Emergency Purchase Programme (PEPP) measures.

APP and PEPP have had *distinct* objectives in comparison with former policies. APP has been oriented towards price stability while PEPP has been oriented towards the mitigation of financial fragmentation.

To this end, we start by analysing the effects of APP announcements (including asset purchase flows) on inflation expectations via an event-study approach. We show that they have helped steer expectations upward.

Then, we analyse the impact of PEPP on sovereign spreads and show that PEPP has had heterogeneous effects that have alleviated fragmentation risk: PEPP has had an impact on the sovereign spreads of the most fragile economies during the pandemic (e.g. Italy) and no impact on the least fragile (e.g. the

Netherlands). However, sovereign spreads have not completely vanished, making monetary policy transmission not fully homogeneous across countries.

On a broader perspective, we also show that overall macroeconomic effects have been in line with expected outcomes since the mid-2000s: ECB monetary policy measures have had real effects on euro area unemployment rates, nominal effects on inflation rates and financial effects on banking stability. These results are in line with recent estimates at Banque de France (Lhuissier and Nguyen, 2021).

As a conclusion, an increase in the size of the PEPP program, as recently decided by the ECB, will be useful if financial risks re-emerge. Meanwhile, we argue that an ECB decision to cap the sovereign spreads during the COVID-19 crisis would alleviate the crisis burden on the most fragile economies in the euro area, where sovereign spreads remain the highest.

Spain: Beyond the economic and social crisis,

opportunities to be seized

by Christine Rifflart

Spain has been hit hard in 2020 by the Covid-19 health crisis, which the authorities are struggling to control, accompanied by an economic recession that is one of the most violent in the world (GDP fell by 11% over the year according to the INE)[1]. The country's unemployment rate reached 16.1% at the end of last year, a rise of 2.3 points over the year despite the implementation of short-time work measures. The public deficit could exceed 10% of GDP in 2020, and the public debt could approach 120% according to the Bank of Spain's January 2021 forecasts. Europe has enacted large-scale support programmes for affected countries, and as one of these Spain will be the country receiving the most EU-level aid. It will benefit from at least 140 billion euros, with 80 billion of that (i.e. 6.4% of 2019 GDP) taking the form of direct transfers through the *NextGenerationEU* programme.

This aid is arriving in a very particular political context, marked by the progressive aspirations of a coalition government (PSOE-Unidas / Podemos) that has governed for just over a year, and which still appears to be solid. The commitments made in December 2019 between the two

parties in a joint Pact entitled "*Coalicion Progresista – Un nuevo acuerdo para Espana*" [Progressive Coalition – A New Agenda for Spain] have now been included in the recovery plan sent to the EU Commission, and the first measures of the planned reforms have been included in the 2021 budget. In this difficult health and economic situation, the Spanish government could seize the opportunity provided by this crisis to carry out a thorough restructuring of the country with the help of European funds and push through some of the social reforms announced in the PSOE-UP Pact. The needs, it must be said, are great. In 2018, the poverty rate was 19.3% among young people and 10.2% among those over 65 (compared with 11.7% and 4.2% respectively in France). Even though annual growth averaged close to 3% over the period 2015-2019, Spain's unemployment rate has remained at a very high level (14.1% in 2019), and labour productivity is still almost 25% lower than in France. There are significant regional disparities and insufficient investment, particularly public investment. But Spain could turn the corner over the next few years. The measures announced are commensurate with the government's ambitious aspirations for growth, employment, and social equity. The greater risk is probably to the government's solidity and its political capacity to implement it.

The 2021 budget, the first since July 2018!

Spain has gone two years without a budget vote, as the 2018 budget was extended twice after being amended by government decrees. But the government has finally managed to provide itself with a 2021 budget while impeccably respecting the timetable it had set out. The budget was sent to Brussels on 10 October 2020, approved on 3 December by the Congress of Deputies (Spain's lower chamber), and on 22 December by the Senate, and so was adopted in less than three months. However, nothing can be taken for granted. The latest legislative elections in November 2019 (the fourth in four years) failed to give an absolute majority in Parliament to the socialist party PSOE, or even to the leading two parties combined (i.e. PSOE-UP, 155 deputies out of 350). So Pedro Sanchez's coalition government was compelled to seek the support of the small pro-independence and regionalist parties for the adoption of its budget. After three months of negotiations and several thousand amendments, a large majority was obtained. Of the 350 deputies in Congress, 188 from 11 different political formations voted in favour (155 from PSOE-UP, 13 from the ERC and 6 from the PNV). It must be said that a political failure would have been very unwelcome given the great needs and expectations and the favourable opportunities.

European funding to carry out the modernization of Spain's production infrastructure, as set out in the PSOE-UP Pact of December 2019

According to Spain's Finance Minister [2], the country is expected to receive 79.8 billion euros in European subsidies over the period 2021-2023 under the *NextGenerationEU* programme. This is over 10 billion more than the amount announced by the Commission in the spring of 2020 (69.4 billion, a revision of +14.9%), as the 2020 growth forecasts made last autumn were more pessimistic than those made six months earlier, and due to converting the initial funding from 2018 prices to current prices. The revision concerns the allocation of the Recovery and Resilience Facility (RRF), which has increased from 59.2 billion euros to 69.5 billion, with the grant under the REACT EUprogramme remaining at 10.3 billion. Spain is thus now the largest recipient of EU funds, ahead of Italy, which is to receive 79.6 billion (up from 76.1 billion initially announced), i.e. 4.4% of its 2019 GDP, 2 points less than Spain. Seventy percent of this allocation is guaranteed for 2021-2022 (46.6 billion) [3]. The balance over 2023 will have to be reassessed in June 2022, depending on the economic situation and the state of public finances in the light of the Stability and Growth Pact rules, which are likely to be restored by that date.

In order to benefit from European funds, Spain, like all its partners, has to present its National Plan for Recovery, Transformation and Resilience, which aims to stimulate short-term growth through investment and consumption [4], and to promote a "more sustainable, more resilient economy

that
is prepared for the challenges ahead”,in thewords
of the Commission. Ultimately, the government’s objective is to raise potential
growth by 0.4-0.5 percentage points to over 2% per year by 2030.

While Spain traditionally has a low rate of
absorption of European funds, this time the government wishes to speed up the
process greatly. So on 20 January (with a deadline set for 30 April), the
government submitted to Brussels the 30 files in its Recovery plan presenting
the investment projects and the guidelines for the reforms envisaged in the
areas of taxation, the labour market, and pensions, which are intended to
ensure the country’s transition. It even foresees anticipating the release of
the RRF funds (scheduled after the Commission examines the Recovery plan for two
months) by financing the investments with debt. It must be acknowledged that
the needs are immense in Spain’s production system, which is marked by the
importance of SMEs. At the end of 2019, 53.5% of businesses were made up of the
self-employed, 40% had between 1 and 9 employees, and 5.5% had between 10
and 49 employees, in total accounting for half of all jobs. According to the
government’s intentions:

- 37% of the funds are earmarked for the ecological transition
  (250,000 new vehicles purchased by 2023, installation of

100,000 charging
stations, transformation of the electrical system to 100% renewable energy
by 2050, and the renovation of more than 500,000 homes for improved energy
efficiency);

- 34% are for the digital transformation (with a coverage rate of 80%
of the population, including 75% by 5G; development of teleworking for
more than 150,000 public jobs; training for more than 2.5 million SMEs;
etc.);
- And 30% for Research and Development, education and training, and social
and territorial inclusion.

The broad outlines of the reforms have also been
drawn up. The new orientation of the tax reform aims at greater progressiveness
and more redistribution [5], and is already included in the 2021 budget (see
below). The reforms concerning the labour market, which is still very dual, and
pensions have not yet been discussed in Parliament or with the social partners,
so they are still at the stage of principles, which should, nevertheless,
satisfy Brussels. As regards labour market reform, the main measures presented
aim at generalizing the use of open-ended contracts and tightening up on the
use of fixed-term contracts; strengthening the use of flexible working time as
an alternative to fixed-term contracts and redundancies; the modification of active
employment policies; calling into question the 2012 reform on

collective bargaining; an employment programme targeted at young people (2021-2027); and modernizing the public employment service (SEPE). The pension reform is less advanced and is giving rise to greater tension between the partners. For example, in the plan sent to Brussels the government did not include its proposal to increase the contribution period for calculating pensions from 25 to 35 years.

Above all, however, Spain's National Plan for Recovery, Transformation and Resiliencepresented to the European Commission, which should lead to the disbursement of European funds, is fully in line with the *Coalicion Progresista – Un nuevo acuerdo para Espana* Pact signed in December 2019 between the two ruling coalition parties PSOE and UP-Podemos. The document's initial sections stress the importance of investing in the digital transformation, the ecological transition, and R&D and training to modernize Spain's economy and create quality jobs. The European grants provide the left-wing government with a giant opportunity to finance this project to transform Spain's productive infrastructure.

Higher taxation to finance the social measures included in the Pact

In addition to the investment projects included in the recovery plan and financed by European funds, in its 2021 budget the government launched the tax reform presented in the Pact,

which is intended to finance the social measures planned or already taken. As mentioned above, the absence of a majority in the Congress of Deputies and the Senate has opened the way for negotiations with the small pro-independence and regionalist parties, and thus for concessions to obtain support. Not all the measures were approved [6]. Ultimately, the reform should bring in 7.7 billion euros [7], 1.4 billion less than what was set out in the budget bill sent to Brussels. If we add the cost of maintaining VAT on surgical masks at 0%, the shortfall to meet the deficit commitment comes to 3 billion euros.

The 2021 tax reform mainly focuses on large corporations and high income earners. It includes:

- **Reducing the corporate tax exemption on dividends and capital gains received from foreign subsidiaries from 100% to 95%**. So now the 5% not exempted is taxed at the general rate of 25% (30% in the case of banks and oil companies). This measure excludes SMEs (companies with a turnover of less than 40 million) for three years (expected gain of 1,520 million euros). In addition, the State has introduced a minimum tax on listed real estate investment companies (SOCIMIs) of 15% (+25 million euros);
- **A 2-point increase in personal income tax (IRPP)** on income

over €300,000 and 3 points on savings income over €200,000 (raising the rate from 23% to 26%) (a total gain of €490 million). This measure affects the 36,200 individuals with the highest incomes (i.e. according to the Ministry, 0.07% of contributors) [8];

- A reduction from 8,000 to 2,000 euros in the IRPP exemption threshold for individual investments in **private pension funds** (+580 million) and an increase from 8,000 to 10,000 euros in the incentive threshold for companies;
- The tax on insurance premiums has been increased from 6% to 8% (+507 million);
- An increase in **VAT on sugary and sweetened drinks, excluding dairy products, from** 10 to 21% (expected gain of 360 million);
- The introduction of a 0.2% financial transaction tax for corporations with a capital of more than €1 billion (**Tobin tax)** anda 3% tax on the digital economy (**GAFA tax**). These taxes should bring in €850 million and €968 million respectively. Adopted in 2020, they came into force on 16 January;
- A **green tax is being introduced** with the creation of a tax on single-use plastics (+491 million) along with other measures (tax on waste, etc.) (+861 million);
- Lastly, **measures to combat tax fraud** are being taken, with an expected gain of 828 million.

This additional tax revenue is intended to cover social expenditure, in particular the **Minimum Living Income**

introduced
in June 2020 to reduce poverty and promote labour market integration. This will
affect around 850,000 families (2.3 million people, 17% of the population). The
amount of support ranges from 462 euros per month for a person living alone to
1,015 for a family. The pensions and salaries of civil servants will be increased
by 0.9%, non-contributory benefits by 1.8%, and the reference indicator used to
determine eligibility for many social benefits (IPREM) by 5% (it has been
frozen since 2017). The other flagship measure concerns **dependency support,** with anadditional
600 million, and **education**. On the other hand, the goal
of raising the minimum wage (SMI) to 60% of the average wage by the end of the
legislature (to between €1100 and €1200 per month in 2023) has been temporarily
suspended. After a 20% increase in 2020, the SMI therefore remains at €950 per
month for 14 months. The salaries of members of the executive have been frozen
this year.

After long years of political instability, it is to
be hoped that, despite the difficult context, the current coalition government
will be able to continue to find a basis for agreement within the different
Spanish political formations in order to take advantage of the favourable
opportunities and open up new and constructive perspectives.

---

[1] For a more detailed analysis of the crisis, please

refer to the *OFCE Policy Brief by Hervé Péléraux and Sabine Le Bayon: "Croissance mondiale confinée en 2020", no. 82 of 14 January 2021.*

[2] The information must be approved by the European Parliament in the coming weeks.

[3] The distribution of these new amounts over 2021 and 2022 is not available. We do know, however, that of the 69.437 billion initially planned for the period 2021-2023, the State was to receive 26.634 billion in 2021, including 2.436 billion from the REACT EUfund for the purchase of vaccines. Out of the 26.634 billion received, the State is to disburse 10.8 billion to the regions, which are also to receive 8 billion REACT EU funds to strengthen their health and education systems.

[4] On the basis of an average multiplier of 1.2, in the budget bill sent to Brussels the government estimated the impact of the recovery plan on growth at 2.5 points in 2021. Under less favourable hypotheses (the rather slow rate of absorption of past European funds, complexity in management at the regional level, etc.), in January 2021 the Bank of Spain estimated the impact at between 1 and 1.6 points.

[5] According to the OECD, in 2018, the ratio between the average income of the richest 20% and the poorest 20% was 5.9 in Spain, compared to 4.6 in France.

[6] Thus, the tax increase on private educational and health institutions was rejected before it was even presented to the Congress of Deputies, and the tax increase on diesel (+3.8 cents per litre to 34.5 cents, compared to 40.07 on petrol) had to be abandoned. These measures were expected to bring in 967 and 500 million euros respectively.

[7] Using the cash concept, the revenue changes from 6.847 billion to 5.635 billion in 2021 and from 2.323 billion to 2.135 billion in 2022.

[8] This measure reflects a fairly marked retreat from the Pact's commitments. Indeed, the IRPP was expected to increase by 2 points on income > €130,000, by 4 points on income > €300,000, and by 4 points on savings income > €140,000. An increase of 1 point in the wealth tax was included for assets over €10 million.

Innovation and R&D in Covid-19 recovery plans: The case of France, Germany and Italy

by A. Benramdane, S. Guillou, D. Harrich, and K. Yilmaz

Economies have been dramatically affected by the pandemic of Covid-19 in 2020 (OFCE, 2020). In response, several emergency measures have been undertaken by governments to support the people and the firms that were directly and strongly hit by the lockdowns. After the first shock in spring 2020, which had an international dimension, all economies experienced a decline in their production which jeopardizes their future and the wellbeing of their population. In the near future, bankruptcies and unemployment are expected to increase and the slowdown of private investment will minor both quantitatively and qualitatively the future capacities of production. Meanwhile, the huge rise in public debt will complicate the States' ability to invest and promote long term growth through public investment. To cope with this dismal future, in addition to emergency measures, many governments have implemented recovery plans to boost and support the economy and to sustain a return to previous levels of wealth. Some governments try, through the recovery measures, to orient their future growth toward specific objectives. In the EU, the Resilience Recovery Facility (RRF), which aims to finance part of EU members' plan, is adopting this stance by demanding that part of member's plan will include at least 20% of measures dedicated to digital improvement and 27% dedicated to green investment.

This post is focused on the technological dimension of recovery plans designed to face the downturn triggered by the Covid-19. By technological, we mean what is related to R&D, innovation and digital technology. Our concern is associated with the fact that R&D investment as well as technological enhancements are fundamental seeds of future growth. They are necessary to ensure sustained growth under the paradigm of globalized competition where education, technology, and intellectual property are the materials of future comparative

advantages (Haskel and Westlake, 2017).

Our interest in the technological dimension of EU recovery plans is also bound to the duality of the COVID-19 shock regarding technology. Indeed the COVID-19 entailed both a negative and a positive digital shock.

Negative because the economic crisis will lead firms to cut into their R&D spending which will affect negatively the nature and the amount of capital. There is indeed a risk that the smallest investors will cut into their R&D expenditure as well as their digital investment because of the lack of cash and the rise in debt. But meanwhile, the lockdowns fostered the use and adoption of digital tools to work, to organize, to produce and to sell. There are some digital firms which are benefiting a lot from the constraints imposed to the economy by the sanitary measures. The huge rise in share price of firms from tech and e-commerce sectors relative to more traditional sectors witnessed the division which is fracking economies. Given the leadership of those firms in world R&D investment, the latter are likely to be sustained by them, but traditional industries such as car, airplanes and smaller actors are likely to disinvest by lack of cash and rise in uncertainty. Moreover, letting the biggest ICT, digital and platform firms to drive the R&D will

accentuate their leadership and expansion and be detrimental to competition.

Crises always divide unevenly the population of firms between winners/leaders and the losers/followers by giving larger market shares to the leaders which usually enter crises with larger financial means and other organizational buffers. But the nature of this crisis exacerbates the effect and highlights the frontier between digital users and producers and the rest of the firms. The only way to balance the superpower of digital giants is to reinforce the digital dimension of the rest of the economy. In addition, numerous studies established the existence of a digital dividend which means that increasing the digital intensity of the economy is helping to push growth (see for instance, Sorbe *et al*., 2019).

The direct political benefit of a digital orientation is weak, and the returns of investment in technology are not immediate and will not push growth in the short term. Hence, although governments might not be enticed with such orientation of their plans, they are expected to tackle the future needs for mastering digital technology. Recovery plans should account for the need for future growth to self-sustain and it explains the position of the EU.

This post aims to explain and evaluate the technological dimension

of main members’ recovery plans within the EU framework of the RRF.

It shows that the 20% share recommended by the EU is not fully respected by Members’ plan. Germany is clearly the country which is allocating a higher weight to technology than other countries. Italy, while lagging behind in matter of R&D, productivity and digital indicators, is privileging emergencies expenses and France is mixing the two, pushing green technology.

The EU stance in favor of digital

In July 2020, the EU Council has agreed to create a €807 (or €750 in 2018 euros) billion Covid-19 recovery fund titled “Next Generation EU” in addition to the long-term budget of €1 211 billion.

The EU plan is mostly a framework with an amount of money to finance EU members’ plan after request. It is less of a Keynesian stimulus style than of a long-term structural reform plan. The final form of the EU plan was the result of the debates around the respective share of loans and subsidies and about the conditionalities to associate with the financing. Conditionality was hugely debated within the EU council.

The 2 pillars of the EU plan are digital and green orientations which should drive

the investment projected by countries' plan.

The digital pillar is associated with the long promotion of R&D and innovation throughout EU policies, goal which was clearly established in the Lisbon Agenda of 2000. The latter had the ambition to make the EU, by 2010, « the most competitive and dynamic knowledge-based economy in the world ». This ambition was associated with the objective of R&D spending reaching a 3% share of GDP. While the weight put specifically on the digital enhancement is new, it is inspired by the EU's long-held belief in the power of technology to increase potential growth.

Regarding R&D the objectives have been matched only by Germany; Italy and France did not. The ratio of R&D spending to GDP reached a mere 1.43% for Italy in 2018. France performed slightly better than Italy by keeping this ratio at 2.19% percent in 2018, still below the target of 3%. Despite the failure to reach the Lisbon's goals, the EU has always fostered R&D policies with a generous financing budget and a very flexible monitoring of State aids dedicated to encouraging research and innovation.

For the last 10 years, China joined the United States as a source of challenging competitors to EU companies. The EU is increasingly lagging behind concerning digital

activities from e-commerce, e-finance to cloud services. The need for digitalization to help the economy and the SMEs cope with the new digital turn of branches of the economy is motivating the EU digital policy. Regarding digital indicators (OECD digital indicators), Italy is lagging behind in ICT adoption, e-commerce or R&D intensity while France and Germany are very close to each other.

Green objectives came later in the EU policies but are more and more central and invade all areas up to R&D for which an increasing part has to be dedicated to the fight against climate change. The new EU commission (from May 2020 elections) presided by Ursula Von der Leyen has launched a green new deal and planned to achieve carbon neutrality by 2050.

The next multiannual long-term budget for 2021-2027 is divided into 2 parts: the long-term budget (or the multiannual financial framework) of €1 211 billion and the NGEU (Next Generation EU) of €807 billion (in current euros). The Resilience Recovery Fund is part of the EU budget for the next 6 years. The RRF is taken from the NGEU and amounts to €724 billion.[1]

To benefit from the RRF, EU countries have to present a recovery plan with respect to the economic recommendations made by the EU Commission in

the last semester.

Besides the RRF, the multiannual budget is distributed into 7 headings. In the previous multiannual budget, the Competitiveness heading (now named “Single market, Innovation and Digital, SID”) – which includes the R&D funding Horizon 2020 – had 20% of the budget. In the next multiannual budget, the share of the whole budget dedicated to the heading SID – which includes innovation and R&D – has increased. As of the end of 2020, the budget for SID is €143.4 billion (MMF plus €5 billion from NGEU) of which Horizon Europe is €84.9 billion and Digital Europe Program is 6.761 billion.

On the green side, the budget is not under a single heading. Members committed themselves to spend 30% of the next budget to the fight against climate change. To match the 30%, financings are affected to the green objective weighted conditionally on their objective. A weight of 1 is affected to measures 100% dedicated to climate concerns.

Technological orientations of main EU members’ plan

Germany has been of great influence in the greening of EU policies. Angela Merkel, dubbed the “climate chancellor”, definitely gave a green direction to

the German economy, abandoning nuclear energy and investing a lot in green
energies.

Meanwhile, the government was more recently concerned by technological challenges and Chinese competition which may threaten its leadership in manufacturing. Germany's Post-Covid Recovery Plan was set under the umbrella of the country's High-Tech Strategy 2025 (HTS 2025) which was decided in September 2018. The latter was aiming to increase the share of R&D spending to 3.5% of its GDP. The implementation of a research and development tax credit, imitating the French one, was an additional step in its alignment on other countries R&D support (see Guillou and Salies, 2020). In 2018, 3.13% of GDP, or €105 billion, was spent on R&D. COVID crisis aside, Germany has already committed to the ambitious goal of raising R&D Investment as a share of GDP to 3.5%, which will be an estimated €168 billion by 2025.[2]

The way Germany is hoping to achieve this goal is by revamping and overhauling its incentives on investment. Given that 70% of German R&D comes from private investments, the German state is trying to create a framework that provides private enterprises and individuals the freedom to innovate[3]. For example, the recently created Agency to Promote Break-Through Innovation will provide insurance to scientists and businesses who undertake cutting-edge disruptive innovation. Given the inherent risk to R&D, this insurance is meant to guarantee that individuals worry less about the risk and focus more on achieving breakthrough results[4]. Similarly, SMEs typically do not undertake R&D given the expenses associated and the difficulty in capturing the returns on investments. This is why the German government launched its Transfer Initiative Program, that will help SMEs turn the fruits of their research into tangible marketable products, while also providing businesses with less than 100 employees grants that cover up

to 50% of their incurred R&D costs.[5]

France has dedicated large sums to support its firms' R&D with the most generous support among OECD countries. France praises itself with maintaining a high level of public investment in R&D, notably when it comes to the energy sector. In 2019, spending dedicated to the energy sector (€1163M) progressed by 5% compared to 2018, mostly focusing on nuclear energy (€732M) and renewables (€324M). The share dedicated to fossil energy has now fallen to represent only 1% of total R&D financing. Among G7 countries, only Japan spends more as a percentage of GDP when it comes to public spending dedicated to R&D in the energy sector.

R&D spending in the green sector in France is also a priority of the *France Relance* recovery plan. Out of the €30 billion dedicated to ecology, approximately 6.5 billion euros are planned to be dedicated to R&D in green technologies and the decarbonation of multiple industries (see details in the attached table). The Fiscal Monitor of the IMF released in October showed that France was the country within G20 with the highest share relative to GDP of its plan dedicate to climate issues (IMF, 2020, page 24).

While

ecology is a major concern of the recovery plan, the energy transition towards renewable energy has been a goal since the Paris Accord. In 2019, the Parliament had adopted the law “Loi Energie-Climat” to aim at achieving carbon neutrality by 2050, in line with the European Union. Yet, the Commission for Economic Affairs announced on November 12, 2020 that the budget for 2021, including the recovery plan France Relance, will be insufficient to achieve this goal.

In Italy the recovery plan was decided in a tough political context and very narrow budgetary marge de manœuvre. The Italian Prime Minister Giuseppe Conte seized the EU funding as “an opportunity to build a better Italy” by promising the nation that no single cent will go in waste. This promise comes in the wake of a lingering economical recession as Italy was one of the most affected EU countries by the Great Recession of 2008 and the Sovereign Debt Crisis of 2011.

In a calculated move to add more seats to his coalition, the Prime Minister Conte has resigned on 26 January upon disputes with the opposition on the use of the EU funds to fight against the coronavirus crisis. His promise of “building a better Italy” in June 2020 is at stake upon this new decision that caused yet another political instability in the country.

Since

1995, the country maintained its government debt to GDP ratio over 100%, contrary to the 60% level set by the Maastricht criteria. Moreover, the country was strikingly hit by the Great Recession. Italy's GDP shrunk by 5.28% in 2009, and in fact the average annual real growth per capita between 1999-2016 was 0 percent. Moreover, unemployment soared to 1970-80 levels of 12.7% in 2014. Overall, these crises have aggravated the social, territorial, and gender inequalities, and also resulted in an outflow of skilled young workforce. Many of these weaknesses are tied to technological and educational gaps. For instance, Italy's R&D spending in 2017 stayed at 1.33% of the GDP compared to the EU average of 1.96 %, 2.22% for France and 2.93% for Germany (source OCDE). Italy's annual GDP growth of 0.343% in 2019 has also underperformed below the EU average of 1.554% in the same year. Antonin *et al.* (2019) underlined that Italy was trapped into a repetitive slowdown for structural reasons such as the North-South dualism, the small size of companies and a large share in low-tech sectors, which all affect negatively its productivity growth.

Digital dimension of Recovery plans

Most countries implemented measures to face the economic urgencies. Then, given how strong their economies were affected, they had to implement recovery measures

and submit plans to the EU in order to benefit from the RRF subsidies and loans.

In
Table 1, we list the amount of the total recovery plan per country and the part
that is dedicated to « technology, innovation and R&D »
investment (Tech. part). We list the « tech » characteristics of this
part which may differ by country and last, we give the period during which the
amount is expected to be spent. Green investment could also include R&D
investment. We tried to retrieve the R&D content of policies which primary
aim is not R&D.

Table. **Amount of the recovery plans and the technological part in billion euros**

Countries	Recovery plan	Technology amount and share	Period of spendings
EU	724	144.8 (20%)	5 years
France	100	14.4 (14.4%)	5 years
Germany	130	50 (38%)	5 years
Italy	454	51.2 (11.3%)	14 years

Source: Author's computation on the base of legal documents. The EU tech part is coming directly from the EU legal text (EU council, 2020).

Germany passed its Konjunkturpaket (known commonly as the « Wumms » Recovery Plan) on the night between June 3rd and June 4th.[6] The €130 billion project (or 3.8% of German GDP) covers three main sectors of the economy, and by and large is centered around the consumer.[7] Many elements of the Wumms plan are dedicated to increasing consumer confidence, boosting consumption, and raising aggregate demand. As such:

- €32.5 billion are going to directly benefits consumers and households in two main ways. Firstly, households will benefit from a child bonus (EUR300 per child),

totaling an estimated €5 billion. In addition, all German consumers will benefit from the €27.5 billion VAT cut that will lower VAT rates from 19% to 16%.[8] This measure will come into effect in the second half of 2020;

- €25 billion is earmarked for the worst impacted sectors – hotels, restaurants, bars, and clubs – that were forced to close from June to August. Moreover, these corporations are set to benefit from corporate tax relief valued at €13 billion;
- Finally, €50 billion is being spent on preparing Germany for the future, particularly taking the shape of incentives to increase R&D investments in cutting edge green components. Once again, the consumer is central as the plan includes grants to increase the affordability of Electrical Vehicles to the average German. The Deutsche Bahn will be given €5 billion in equity to allow for the modernization and electrification of its rail network, while the fleet of buses in Germany's public transportation grid will be upgraded to more sustainable models. Municipalities and public institutions are being given €10 billion to help fast-track the modernization of public transport infrastructure.[9]

The German government has specified a share of €50 billion towards R&D and Green transition efforts in their Wumms package. While the R&D-share of total recovery is high, it must be remembered that Germany already has a complementary R&D Strategy (High-Tech Strategy 2025) previously presented.

Called

“France Relance”, the French plan ambitions to revert back in 2022 to levels of growth and economic activity similar to those achieved prior to the crisis. It was initially announced by President Emmanuel Macron on July 14th, and later officially presented on September 3rd by prime minister Jean Castex. It is part of the total state budget, exposed in the “Projet Loi de Finance 2021” and amounts to 100 billion euros spread over 5 years, until 2025. The plan has three main targets, and the 100 billion euros are distributed accordingly:

- €30 billion for the environmental transition
- €35 billion for competitiveness and innovation
- €36 billion for social cohesion

The first and second items have R&D targets and the second has a specific objective of digitalization.

The digital share is coming from the sum of R&D-oriented & green measures included in all three parts of Plan France Relance, which is also included in the Program for Investments of the Future (Programme d’Investissements d’Avenir, PIA). Indeed, in parallel to the French “plan de relance”, France has announced a fourth Program for Investments of the Future (PIA) that will

serve to finance a major part of the digital and green innovation and research components of the plan France Relance.

Out of the 20 billion euros of the PIA, 11 billion euros are specifically dedicated to the France Relance plan over five years. This amount is divided into four categories of spending:

- Green technology and innovation: 3.4 billion euros dedicated to the development of green technologies and sectors, specifically when it comes to green hydrogen, recycling, biotechnologies, green transition of industries, and improving the resilience of cities to climate and health risks.
- Economic resilience and sovereignty: 2.6 billion euros dedicated to support the development of key digital industries (cybersecurity, cloud, digital health system, bioproduction of innovative therapies…)
- Support ecosystems of research, innovation, and higher education: 2.55 Billion euros
- Supporting businesses engaged in innovative industries: 1.95 billion euros dedicated to finance and cover the financial risks inherent to their R&D plans in order to support further bold innovative projects.

In addition to the PIA, complementary measures include: decarbonation of key industries (aeronautic,

automobile, railway…) (1.2 bn); the development of green hydrogen (2 bn);
preserving jobs in the R&D sectors (0.3 bn); Strengthening the resources of
the National Research Agency (ANR) (0.4 bn). The sum amounts to €14.4 billion. These
ambitious goals have to tackle companies' own trajectories which may be in
contradiction in the short run, such as the recent decision of Sanofi to
eliminate 364 positions

Italy
has presented the **National Recovery and Resilience Plan (*Piano nazionale di resilienza e rilancio*)** on
15 September to commit to the condition from the EU to submit a draft proposal
for the use of COVID-19 funds. The final draft is to be decided by January
2021.

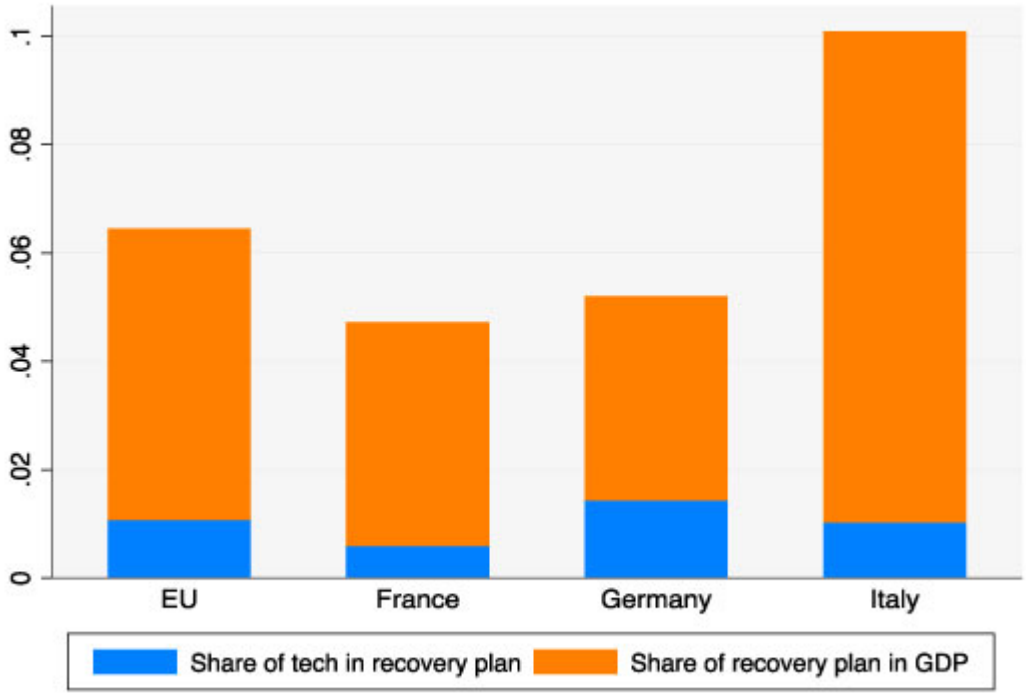
Three
strategic lines for recovery:

- Modernization of the country:
  efficient, digitized, and with less red-tape public administration that truly
  serves the people, creating an environment suitable for innovation, promote
  research, and increase productivity and quality of life;
- Ecological transition: decreasing
  greenhouse gas emissions in accordance with the EU Green Deal, increase the
  energy efficiency of production chains and transition to produce environmentally
  friendly materials, reforestation, and investment in sustainable agriculture;
- Social and territorial inclusion,

equality of gender: reducing inequalities, poverty, and gaps in access to
education and public services especially in the South, strengthening the health
system, improving the inclusion of women in all areas of workforce and
administration.

The
amount and specific measures are not yet been displayed with details. Regarding
Italy, of the €51.2 billion that the government has allocated for digital
investments, €2.5 bn are allocated for “Digital & Green Skills.” However,
the Italian plan has a separate “green” segment where 62.4 billion euros are
allocated.

Graph. Share in GDP of countries’ plan of which the technological part



Note: Computation by the authors. Data for Italy were normalized to match the 5 years of other plans.

Conclusion

The
R&D has long been a priority in the agenda of the EU, and the only
industrial policy that was unlimited. Obstacles in achieving the Lisbon Agenda,
dated from 2000, have been diluted into institutional and economic problems but
R&D and technology have relentlessly been flagship policies put forward by
the EU commission. More recently the green objectives and the carbon neutrality
have gained momentum and R&D financing is more and more in association with
environmental innovation. This is for instance the case in the battery project.
Nevertheless, the technological dimension of EU policies is oriented toward the
digital dividend in accordance with the new commissioner Thierry Breton in
charge of the “Single Market, Innovation and Digital” heading. Coherently the
EU is pushing members to invest in the digital dimension of their economy. But
we observed that the members are not as ambitious as the EU would expect in
this respect. Germany is one of the few members to commit to engage massive
investment in digitalization, but it is in coherence with pre-COVID commitments
the country took. The EU RRF orientations are yet insufficient to trigger
digital convergence.

References :

Antonin C., M. Guerini, M. Napoletano, and F. Vona (2019), “Italie, sortir du double piège de l’endettement élevé et de

la faible croissance", *Policy Brief OFCE*, No 55, 14 May. https://www.ofce.sciencespo.fr/pdf/pbrief/2019/OFCEpbrief55.pdfhttps:

European Commission (2020), Commission Staff Working Document, Guidance to Member States Recovery and Resilience Plans: https://ec.europa.eu/info/files/guidance-member-states-recovery-and-resilience-plans_en

European Council (2020), *Final conclusions*, July.

The Economist (2019), "Emmanuel Macron in His Own Words (English)." , The Economist Newspaper: https://www.economist.com/europe/2019/11/07/emmanuel-macron-in-his-own-words-english

Guillou, S. and E. Salies (2020), L'Allemagne prise dans l'engrenage du CIR, Juin, *Blog OFCE*.

"GDP
Growth (Annual %) – European Union, Italy." *Data*, data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=EU-IT&most_recent_year_desc=false.

Haskel and Westlake (2017), *Capitalism without capital*, Princeton University Press.

IMF (2020), *Fiscal Monitor, Policies for the recovery*, chapter 1, october.

"Italy
GDP Annual Growth Rate1961-2020 Data: 2021-2023 Forecast: Calendar." *Italy
GDP Annual Growth Rate | 1961-2020 Data | 2021-2023 Forecast | Calendar*, tradingeconomics.com/italy/gdp-growth-annual.

Sorbe
et al. (2019), "Digital dividend:
Policies to harness the productivity potential of digital

technologies”, *OECD working paper*.

Algebris Investments (2020) “The Italian National Recovery Plan: What Do We Know?” *Algebris Investments*, 25 Sept. 2020, www.algebris.com/policy-research-forum/the-italian-national-recovery-plan-what-do-we-know/.

---

[1] In turn the RRF is divided into subsidies (52%) and loans (48%). The RRF billions are to be spent between 2020 and 2023. Seventy percent of the RRF subsidies will be allowed to EU members before 2022 with respect to 2019 population, gross domestic income per head and unemployment rate. The thirty percent left will be allocated to EU members in 2023 conditional on the crisis impact on the member’s economy.

[2] https://www.bmwi.de/Redaktion/EN/Publikationen/Wirtschaft/2019-annual-economic-report.pdf?__blob=publicationFile&v=6

[3] https://www.bmwi.de/Redaktion/EN/Publikationen/staerkung-von-investitionen-in-deutschland-en.pdf?__blob=publicationFile&v=1

[4] https://www.bundesbericht-forschung-innovation.de/files/BMBF_BuFI-2020_Hauptband.pdf

[5] https://www.bundesbericht-forschung-innovation.de/files/BMBF_BuFI-2020_Hauptband.pdf

[6] See DAP, Perspectives économiques 2020-2021 d'octobre 2020, Part I.2, Revue de l'OFCE, 168, 2020.

[7]https://www.allianz.com/en/economic_research/publications/specials_fmo/2020_09_18_durationrisk1.html

[8] https://de.reuters.com/article/healthcoronavirus-germany-stimulus-idUKL8N2DG3XU

[9] https://www.lemoci.com/wp-content/uploads/2020/09/20200917_comparison-fr-de-stimulus_final.pdf

---

What more could the central banks do to deal with the crisis?

By Christophe Blot and Paul Hubert

The return of new lockdown measures in numerous countries is expected to slow the pace of economic recovery and even lead to another downturn in activity towards the end of the year. To address this risk, governments are announcing new support measures that in some cases supplement the stimulus plans enacted in the autumn. No additional monetary policy measures have yet been announced. But with rates close to or

at 0% and with a massive bond purchase policy, one wonders whether the central banks still have any manoeuvring room. In practice, they could continue QE programmes and increase the volume of asset purchases. But other options are also conceivable, such as monetizing the public debt.

With the Covid-19 crisis, the central banks – the Federal Reserve, the Bank of England and the ECB – have resumed or amplified their quantitative easing (QE) policy, to such an extent that some are viewing this as a de facto monetization of debt. In a recent *Policy Brief*, we argue that QE cannot strictly be considered as the monetization of public debt, in particular because the purchases of securities are not matched by the issuance of money but by the issuance of excess reserves. These are distinct from the currency in circulation in the economy, since they can be used only within the banking system and are subject to an interest rate (the deposit facility rate in the case of the euro zone), unlike currency in circulation.

Our analysis therefore makes it possible to look again at the characteristics of QE and to specify the conditions for monetizing debt. It should result in (1) a saving of interest paid by the government, (2) the creation of money, (3) being permanent (or sustainable), and (4) reflect an

implicit change in the objective of the central banks or their inflation target. The implementation of such a strategy is therefore an option available to central banks and would allow the financing of expansionary fiscal policies.

The government, in return for a package of fiscal measures – transfers to households or health care spending, support for businesses – would issue a zero-coupon perpetual bond, purchased by commercial banks, which would credit the account of the agents targeted by the support measures. The debt would have no repayment or interest payment obligations and would then be acquired by the central bank and retained on its balance sheet.

Monetization would probably be more effective than QE in stabilizing nominal growth. It would reduce the risk to financial stability caused by QE, whose effect depends on its transmission to asset prices, which could create asset-price bubbles or induce private agents to take on excessive debt.

Monetization has often been put off because of fears that it would lead to higher inflation. In the current environment, expansionary fiscal policy is needed to sustain activity and to prepare for recovery once the pandemic is under control. A pick-up in the pace of inflation would also satisfy the central banks, and insufficient demand should greatly reduce the risk of an out-of-control inflationary spiral. Monetization requires stronger coordination with fiscal

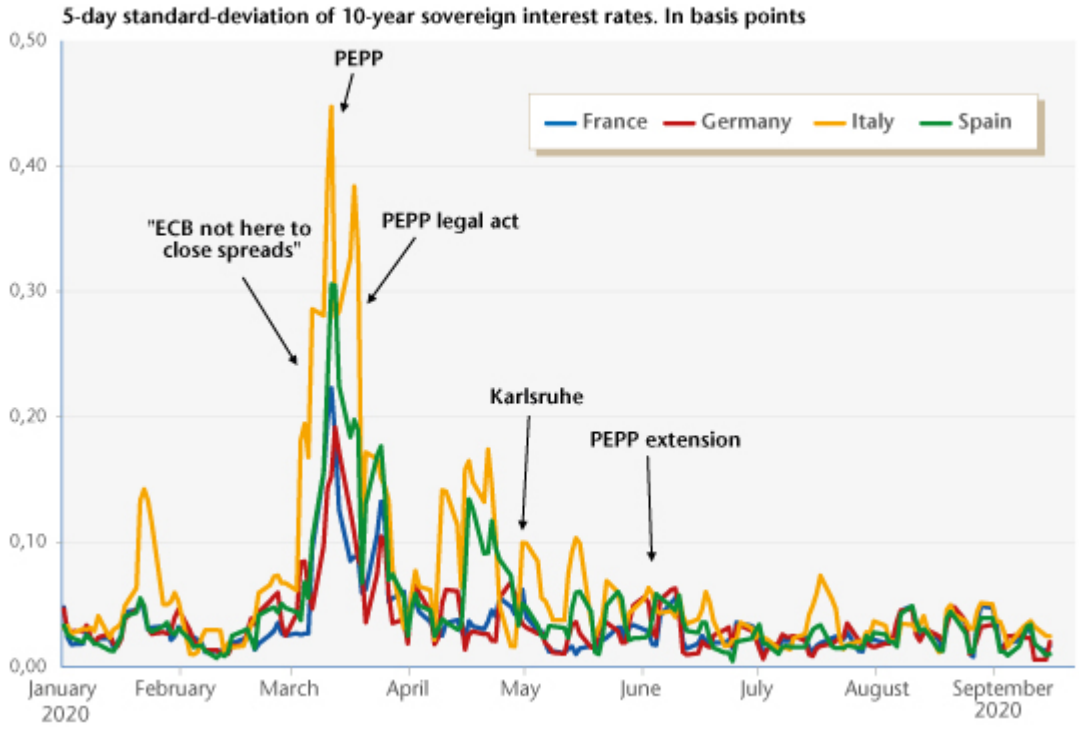
policy, which makes it more difficult to implement in the euro area.

Central bank asset purchases: Inflation targeting or spread targeting?

by Christophe Blot, Jérôme Creel, and Paul Hubert

Five years after the ECB launched its asset purchase programme (APP), the Covid-19 crisis has put the ECB again at the center of euro area attention, with a new extension of APP and with the creation of the Pandemic Emergency Purchase Programme (PEPP). The simultaneity between APP's extension and PEPP – they were decided within a two-week interval – could be interpreted as arising from the pursuit of the same objective. This interpretation may be misleading though and may bias the respective appraisal of these policies.

Figure 1. Sovereign interest rate volatility

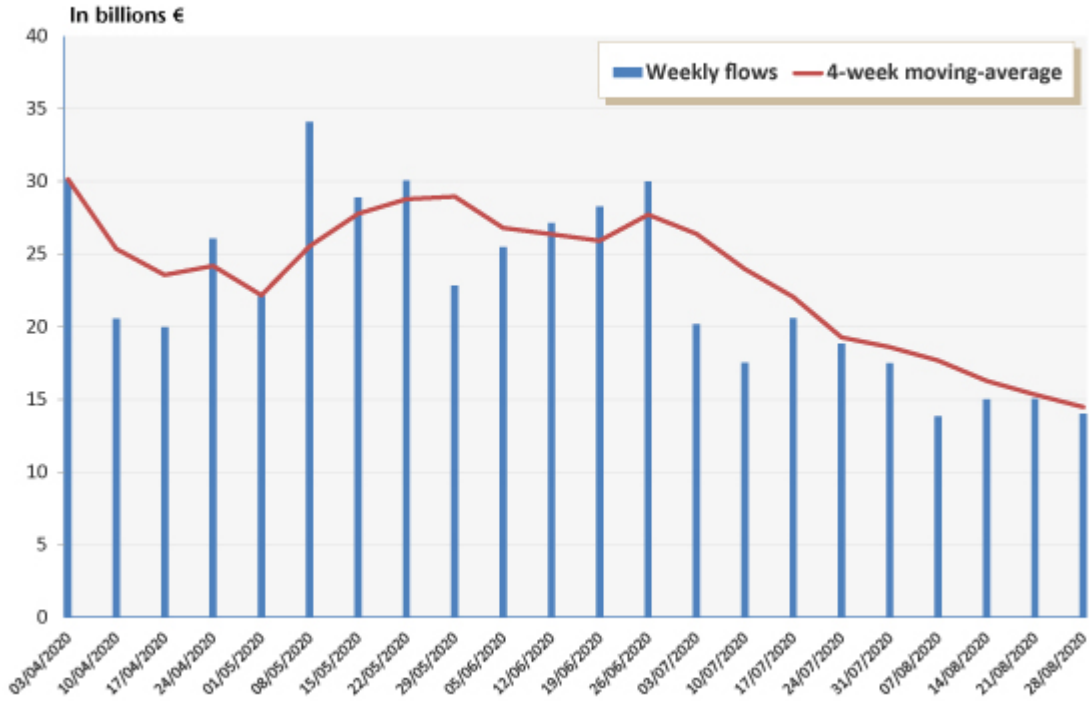


Source: Datastream.

The APP arrived at a moment when the euro area was facing strong deflationary risks whereas the PEPP was implemented when the inflation outlook was unclear (because the Covid-19 crisis is a mix of a supply, demand and uncertainty shocks) but fragmentation risks were on the upside. Sovereign risks and increasing spreads could impair the transmission of monetary policy across euro area countries. The declared will by ECB officials to tackle the fragmentation of the euro area and the (temporary) removal of the self-imposed limits on asset purchases suggest that the ECB sets a sort of a “spread targeting” objective to the PEPP. We develop this argument in a recent Monetary Dialogue Paper for the ECON committee of the European Parliament. From the point of view of this “spread targeting”

objective, the PEPP is successful with both the level and volatility of
sovereign spreads at low levels (figure 1).

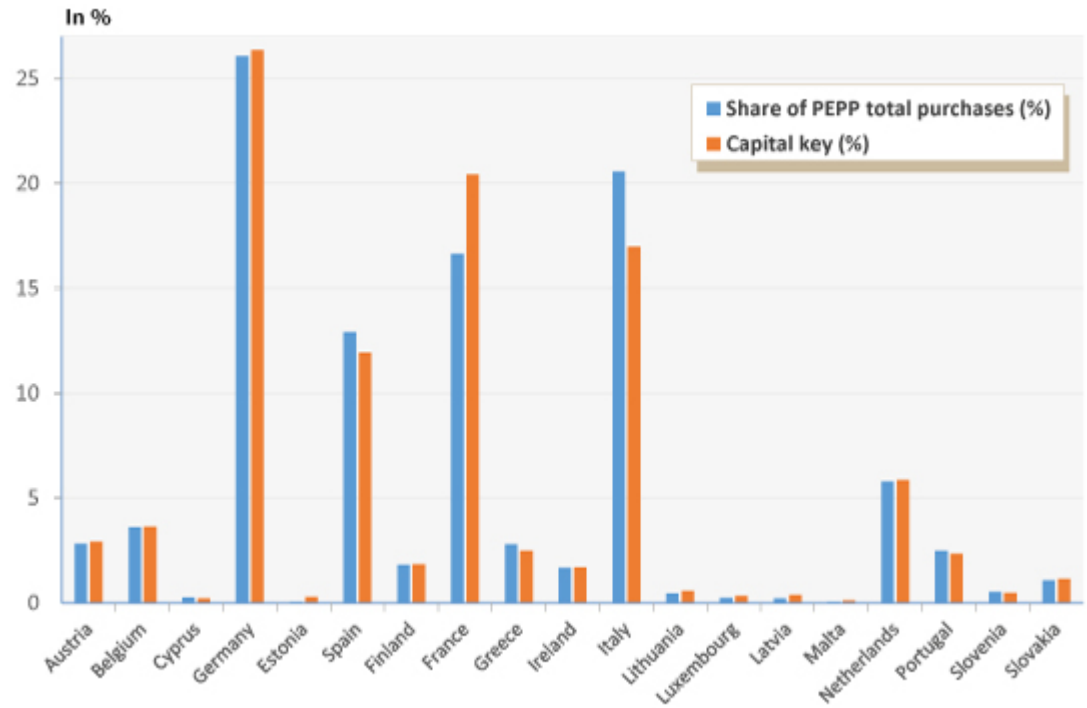
Figure 2. **Flows of PEPP asset purchases**



Source: ECB.

This outcome was
obtained without a full utilisation of the potential resources of the PEPP. The
weekly flow of purchases is even decreasing since July (figure 2). This
suggests that the signaling effect of the PEPP has been strong and credible in
taming sovereign stress. It also suggests that the ECB is not short of
ammunitions if the crisis persists or intensifies. The outcome of the PEPP was
also achieved without deviating much from the ECB capital key (figure 3),
except for France (for which the ECB capital share exceeds bond purchases) and
Italy (for which bond purchases exceed the share at the ECB capital exceeds).

Figure 3. **Share of cumulated PEPP purchases at the end of July 2020**



Note: Capital key are recomputed relative to Eurozone countries only, dropping the capital share of the ECB owned by national central banks outside the euro area.

Source: ECB.

The ruling of the German Federal Constitutional Court last May has revived discussions on the adequacy of asset purchases by the ECB.[1] Discussions have opposed those who think that the ECB has had "disproportionate" economic policy effects (on public debts, personal savings and the keeping afloat of economically unviable companies) and those who think that the distinction between the "monetary policy objective" and "the economic policy effects arising from the programme" is misleading. The reason is that this distinction seems to imply that achieving the objective of the ECB – inflation at the 2% target – can be achieved without interactions with other macroeconomic and financial variables, which is nonsense. Moreover, this distinction gives too

much weight to the price stability objective during a real economic crisis at the expense of all the secondary objectives that the Treaty on the Functioning of the EU imposes to the ECB.

Finally, the success or failure of a given policy must be assessed according to its objective(s). In that respect, the PEPP, under the assumption that it aimed at reducing sovereign spreads to avoid the fragmentation of the euro area, has been effective. Although it may depart from the ECB mandate that does not explicitly mention the reduction of sovereign spreads as a monetary policy objective, PEPP has improved the transmission of monetary policy. In a situation where the pandemic crisis requires a fiscal stimulus more than a fiscal consolidation and where a rise in inflation or in real GDP is very unlikely, the accommodative ECB monetary policy has been undeniably relevant to ensure public debt sustainability in Europe and to remove the risk of a break-up of the euro area.

---

[1] It also revived discussions on the ability of the Bundesbank to continue to be involved in unconventional monetary operations. At the end of June 2020, the Bundestag pronounced itself in favour of the ECB and PEPP which, in the short term, removes the threat of an early end to monetary easing. This

will however not prevent a further appeal by German plaintiffs against the ECB
and, in the longer term, a new judicial episode.

Europe’s recovery plan: Watch out for inconsistency!

by Jérôme Creel (OFCE & ESCP Business School) [1]

On 27 May, the European Commission proposed the creation of a new financial instrument, Next Generation EU, endowed with 750 billion euros. The plan rests on several pillars, and will notably be accompanied by a new scheme to promote the revival of activity in the countries hit hardest by the coronavirus crisis. It comes on top of the Pandemic Crisis Support adopted by the European Council in April 2020. A new programme called the Recovery and Resilience Facility will have firepower of 560 billion euros, roughly the same amount as the Pandemic Crisis Support. The Recovery and Resilience Facility stands out, however, for two reasons: first, by the fact that part of its budget will go to grants rather than loans; and second, by its much longer time horizon.

The Pandemic Crisis Support (and the complementary

tools adopted at that time, see Creel, Ragot & Saraceno, 2020) consists exclusively of loans, and the net gains that the Member States could draw from them are by definition low: European loans allow a reduction in interest charges for States subject to high interest rates on the markets. The gain for Italy, which was hurt badly by the coronavirus crisis, is in the range of 0.04 to 0.08% of its GDP (this is not a typo!).

Under the Recovery and Resilience Facility, the euro zone Member States would share 193 billion euros in loans and 241 billion euros in grants, or in total 78% of the amounts allocated (the rest will go to EU states that are not euro zone members). The loans will generate small net gains for Member States (savings on the infamous interest rate spreads), while the grants will lead to larger gains, since they will not be subject to repayment, other than via higher contributions between 2028 and 2058 to the European budget (if the EU's own funds have not been created or increased by then). In the short term, in any case, the grants received represent net gains for the beneficiaries: they will neither need to issue debt nor pay interest charges on such debt.

Expressed as a percentage of 2019 GDP, the net gains from grants are far from negligible (Table 1)[2]: 9 GDP points for Greece, 6 for Portugal, 5 for Spain and 3.5 for Italy. This will be even more significant given the expected fall in GDP in 2020. The determination of the Commission is

therefore clear.

Despite all this, these grants are not intended to be used in the short term. The European Commission purportedly wanted the allocated amounts to be spent as quickly as possible, in 2021, 2022 and in any case before 2024. This is what it calls “front-loading”: do not put off till the morrow what can be done today. Except that the key to the distribution of the grant expenditures over time is somewhat in contradiction with this principle (Table 2). The grant commitments would be concentrated in 2021 and 2022, but the actual disbursals are planned for later: less than a quarter by 2023, half in 2023 and 2024, and the remainder after that. This kind of gap is frequent: it takes a little time to design an investment project and to ensure that it complies with the European Commission’s digital ambitions and low-carbon economy.

As a result, the grants to the Member States will take a little time to actually be disbursed (Table 3), and the countries facing the greatest difficulties will have to be resilient before receiving the stimulus and… resilience funds. This seems contradictory. It will take until 2022 in Greece and Portugal and 2023 in Spain and Italy to actually collect around 1 GDP point apiece. This corresponds to 3 billion euros for Greece, 2 billion for Portugal, and 14 for Spain and Italy, respectively. By way of

comparison,
Germany, France and the Netherlands will by then receive 5, 7 and 1 billion
euros, respectively, i.e. between 0.2 and 0.3 percent of their GDPs.

One can imagine the cries of outrage from the representatives of the frugal countries (Austria, Denmark, the Netherlands, Sweden) that these immense outgoings reward countries that are not virtuous. They should be reassured: this is no boondoggle!

Table 1. **Net gains from various recent European programmes, expressed as a percent of 2019 GDP**

	Max gain from use of Pandemic Crisis Support, SURE and the BEI*	Max gain from use of the Recovery & Resilience Facility loans**	Max gain from use of Recovery & Resilence grants***
Belgium	0.02	0.00	1.02
Germany	0.00	0.00	0.63
Estonia	—	—	3.60
Ireland	0.02	0.00	0.35
Grece	0.08	0.16	9.45
Spain	0.05	0.04	4.96
France	0.02	0.00	1.33
Italy	0.08	0.06	3.57
Cypru	0.07	0.08	4.99
Latvia	—	—	7.14
Lithuania	—	—	5.75
Luxembourg	—	—	0.16
Malta	0.03	0.01	1.51
Netherlands	0.01	0.00	0.64
Austria	0.02	0.00	0.75
Portugal	0.04	0.06	6.12
Slovenia	0.04	0.03	3.53
Slovakia	0.03	0.04	6.46
Finland	0.01	0.00	0.91

Note: The order of the countries corresponds to that set by the European Commission.
**Source:* Creel, Ragot & Saraceno (2020).
** Calculation of the amount of loans per country by applying to the total amount of loans announced by the Recovery & Resilience Facility the distribution rule for transfers between countries as set out in the document COM(2020) 408 final/3 of 2 June 2020, page 2, then using spreads (the same as in Creel, Ragot & Saraceno, 2020) to deduce the net gain.
*** *Source:* COM(2020) 408 final/3 of 2 June 2020, page 2.

Table 2. **Temporal breakdown of loans and grants under the Recovery & Resilience Facility, expressed as a percent of their total respective amounts**

		2021	2022	2023	2024	2025	2026	2027	>2027
Loans	Signatures	49.5	50.5						
	Payments	14.8	27.5	25.0	22.5	10.1			
Grants	Commitments	39.3	40.1	10.2	10.4				
	Disbursal	5.9	15.8	23.4	26.0	17.7	7.7	3.1	0.5

Note: In 2021, 49.5% of loans will have been signed, versus 50.5% in 2022.
Source: COM(2020) 408 final 28 May 2020, Table p. 40.

Table 3. **Schedule of disbursal of grants per country, expressed relative to the 2019 GDP of each country**

	2021	2022	2023	2024	2025	2026	2027
Belgium	0.06	0.16	0.24	0.26	0.18	0.08	0.03
Germany	0.04	0.10	0.15	0.16	0.11	0.05	0.02
Estonia	0.21	0.57	0.84	0.94	0.64	0.28	0.11
Ireland	0.02	0.06	0.08	0.09	0.06	0.03	0.01
Grece	0.56	1.50	2.21	2.45	1.67	0.73	0.29
Spain	0.29	0.79	1.16	1.29	0.88	0.38	0.15
France	0.08	0.21	0.31	0.35	0.24	0.10	0.04
Italy	0.21	0.56	0.83	0.93	0.63	0.27	0.11
Cypru	0.29	0.79	1.16	1.30	0.88	0.38	0.15
Latvia	0.42	1.13	1.67	1.86	1.26	0.55	0.22
Lithuania	0.34	0.91	1.34	1.49	1.02	0.44	0.18
Luxembourg	0.01	0.03	0.04	0.04	0.03	0.01	0.00
Malta	0.09	0.24	0.35	0.39	0.27	0.12	0.05
Netherlands	0.04	0.10	0.15	0.17	0.11	0.05	0.02
Austria	0.04	0.12	0.18	0.20	0.13	0.06	0.02
Portugal	0.36	0.97	1.43	1.59	1.08	0.47	0.19
Slovenia	0.21	0.56	0.82	0.92	0.62	0.27	0.11
Slovakia	0.38	1.02	1.51	1.68	1.14	0.50	0.20
Finland	0.05	0.14	0.21	0.24	0.16	0.07	0.03

Note: The order of the countries corresponds to that set by the European Commission.
Sources: COM(2020) 408 final/3, 2 June 2020, p. 2; COM(2020) 408 final 28 May 2020, Table p. 40; author's calculations.

[1] This text appeared in the 23 May 2020 edition of Les Echos, without the tables.

[2] The rule for the distribution of transfers between countries appears in the document COM (2020) 408 final/3 of 2 June

2020. For each country it depends on the size of its population, on the inverse
of GDP per capita compared to the EU-27 average, and on the difference between its
5-year unemployment rate and the EU-27 average. In order to avoid an excessive
concentration of grants to a few countries, ad hoc limits are imposed based on
these three criteria. Germany will for example receive 7% of the transfers,
France 10%, and Spain and Italy 20%, respectively.

Sweden and Covid-19: No lockdown doesn't mean no recession

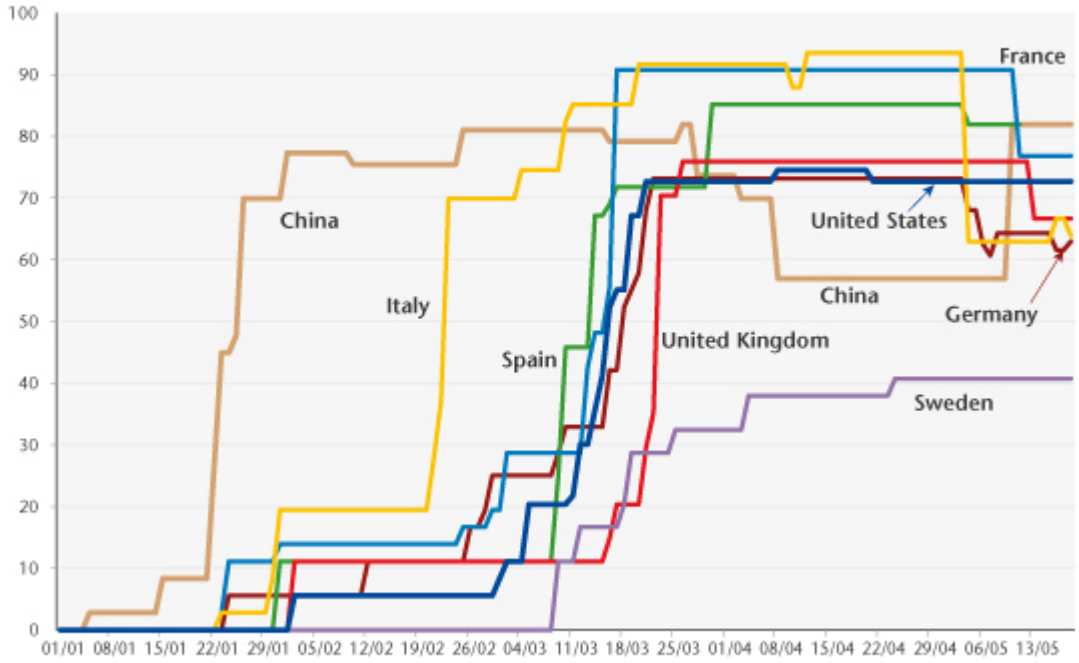
By Magali Dauvin and Raul Sampognaro, DAP OFCE

Since the Covid-19 pandemic's
arrival on the old continent, a number of countries have taken strict measures
to limit outbreaks of contamination. Italy, Spain, France and the United
Kingdom belatedly stood out with especially strict measures, including lockdowns
of the population not working in key sectors. Sweden, in contrast, has
distinguished itself by the absence of any lockdown. While public events have
been banned, as in the other major European countries, there were no

administrative orders to close shops or to impose legal constraints on domestic travel[1].

Given the multiplicity of measures and their qualitative nature, it is difficult to break down all the decisions taken, and in particular to express their intensity. Researchers at the University of Oxford and the Blavatnik School of Government have nevertheless built an indicator to measure the severity of government responses[2]. This indicator clearly shows Sweden's specific situation with respect to the rest of Europe (Figure 1).

Figure 1. Index of severity



Source: T.Hale, S.Webster, A.Petherick, T.Phillips and B.Kira (2020). *Oxford COVID-19 Government Response Tracker.*

The mobility data supplied by Apple Mobility provides a complementary picture of the severity of

containment measures across countries. At the time of the toughest lockdowns, automobile mobility was down by 89% in Spain, 87% in Italy, 85% in France and 76% in the United Kingdom. The decline was less severe in Germany and the United States (about 60% in both countries). Sweden ultimately saw its traffic reduced by "only" 23%. While these data should be taken with a grain of salt, they also give a clear signal about the timing and scale of the lockdowns in different countries, once again pointing to a Swedish exception.

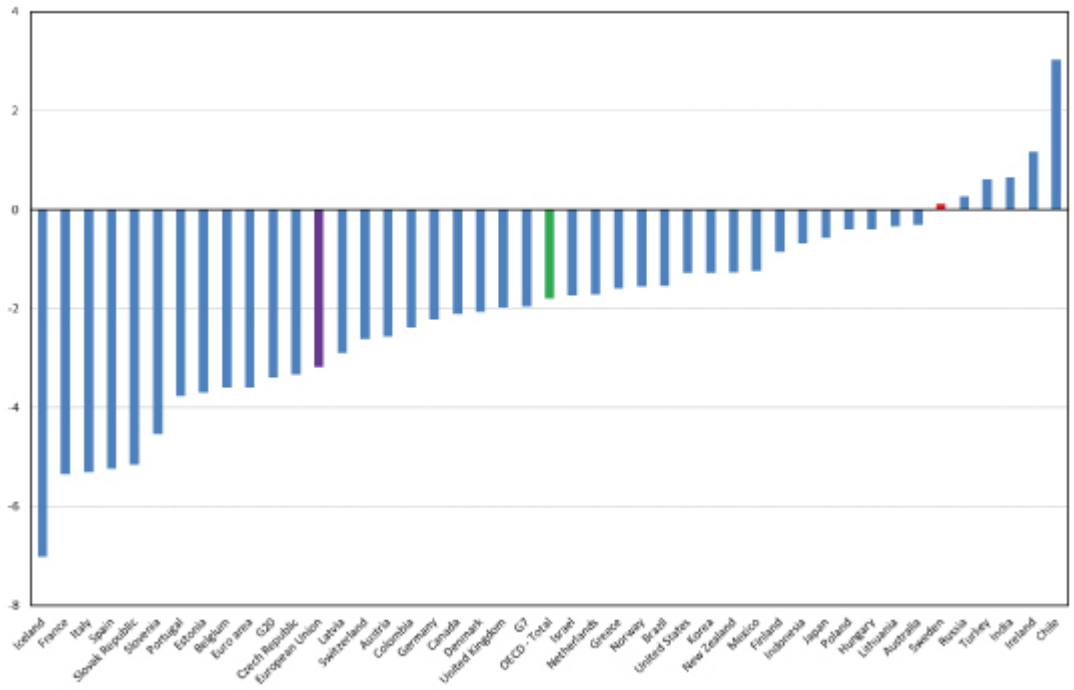
During the first half of May, the various European countries began to gradually ease the measures taken to combat the spread of the Covid-19 epidemic.

Sweden's GDP resists in Q1

In our assessment of the [impact of lockdowns on the global economy], we highlighted the correlation between the fall in GDP observed in the first quarter and the severity of the measures put in place to combat Covid-19. In this context, Sweden (in red in Figure 2) fares significantly better than the OECD member countries (green bar), and especially the rest of the European Union (purple bar). Although this is a first estimate, GDP has not only held up better than elsewhere, but has even stabilized (-0.1%). Only a few emerging economies, which were not affected by the pandemic at the

beginning of the year (Chile, India, Turkey and Russia), and Ireland, which
benefited from exceptional factors, performed better in the first quarter [3].

Figure 2. GDP Growth in Q1 2020



Source: OECD.

The relative
resilience of Sweden's GDP in the first quarter seems to suggest that the
country might have found a different trade-off between epidemiological and
economic objectives compared to other countries[4]. However, this aggregate figure masks important
developments that need to be kept in mind. In the first quarter,
the stabilisation of Swedish GDP was due to the positive contribution made by foreign
trade (up 1.7 GDP points) to a rise in exports (up 3.4% in volume terms),
particularly in January, before any health measures were taken.

In the first quarter,

Swedish domestic demand pulled activity downwards (by -0.8 GDP points due to household consumption and -0.2 GDP points due to investment), as in the rest of the EU. The shock to domestic demand was of course more moderate than in the euro area, where consumption contributed negatively to GDP by 2.5 points and investment by 0.9 points. Nevertheless, the physical distancing guidelines issued in Sweden must have had a significant impact during the first quarter.

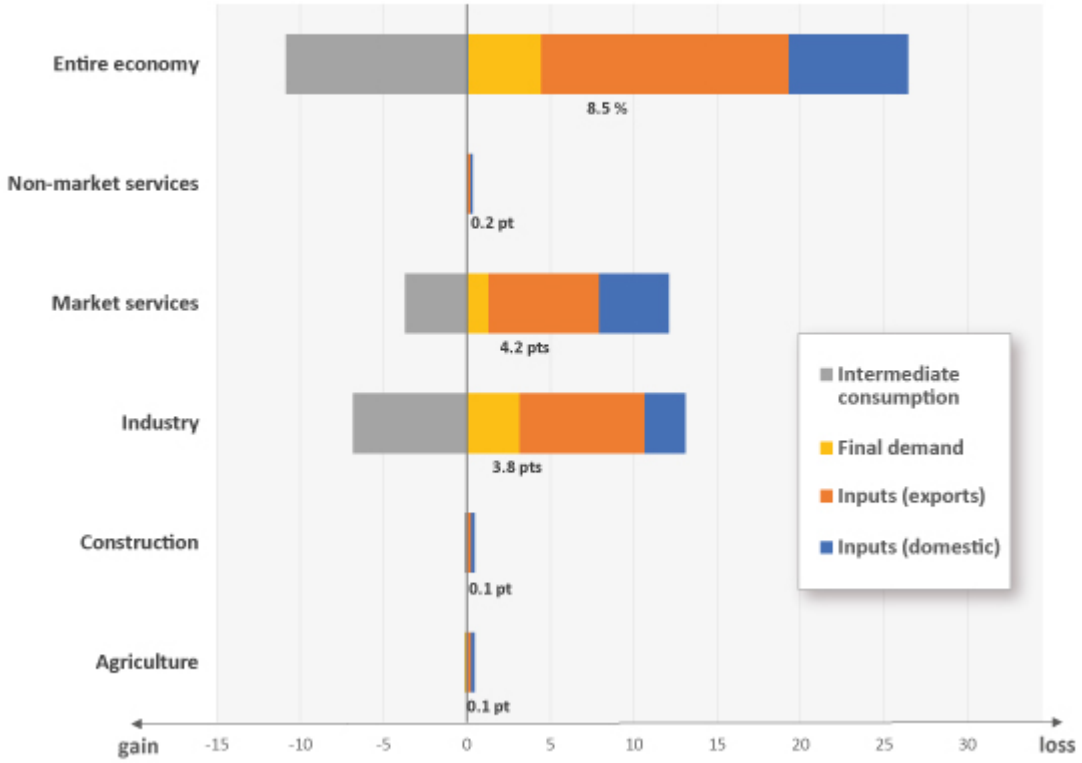
In a troubled global context, Sweden will not be able to escape a recession

If we assume that the avoidance of a lockdown and the relatively limited administrative closures (confined to public events) did not give rise to any significant shock to domestic demand – which seems optimistic in view of the first quarter data – Sweden will nevertheless be hit hard by the shock to international trade[5].

According to our calculations, based on the entry-exit tables from the World Input-Output Database (WIOD)[6] and our estimates related to the lockdown shocks in Policy Brief 69, value added is expected to fall by 8.5 points in Sweden in April due to the containment measures taken in the rest of the world. The shock will hit its industry especially hard, more or less in line with what we estimate globally (-19% and 21%,

respectively).
Unsurprisingly, the *refining industry* (-32%), the *manufacture of*
transport equipment (-30%) and *capital goods* (-20%), and the *other*
manufacturing industries sector (-20%) will be hit hardest by the collapse
of global activity. Since a significant share of output is intended for use by
foreign industry, the worldwide containment measures will lead to a reduction
of almost 15 points in Swedish output in April (Figure 3). The same holds for commercial
services: exposure to global production chains is hurting *transport* and *warehousing*
(-15%) and the *business services* sector (-11%). Ultimately, the containment
measures will have an impact mainly through their effect on intra-branch trade.

Figure 3. Contributions to the reduction in value added in April in Sweden



Source: WIOT, OFCE calculations.

The weakness of Swedish manufacturing, weighed down by international trade, seems to be confirmed by the first hard data available. According to the Swedish Statistical Office, exports fell by 17% year-on-year, a figure comparable to the decline in world trade as measured by the CPB for the same month (-16% by volume). Given this situation, manufacturing output will be 17% lower in April than a year earlier.

What could be said about domestic demand in Q2?

In a context of widespread uncertainty, domestic demand may continue to suffer. Indeed, Swedish households can legitimately question the consequences of the shock for jobs – mainly in industry – described above. On the other hand, fear of the epidemic could deter consumers from making certain purchases involving strong social interactions, even in the absence of legal constraints. What do Swedish data from the beginning of Q2 tell us about Swedish domestic demand?

In Sweden, consumer spending fell in March (-5% year-on-year). Note that the country's precautionary guidelines and physical distancing measures were introduced on 10 March. The fall steepened in April, after the measures had in force for a full month (-10% year-on-year). The measures in place hit purchases

of clothing (-37%), transport (-29%), hotels and catering (-29%) and leisure (-11%). While the data remain patchy, May's retail sales, an indicator that does not cover the entire consumer sector, suggest that sales were still in a dire state in clothing stores (-32%). In addition, new vehicle registrations continued to fall in May (-15% month-on-month and -50% year-on-year). Pending more recent data on activity in the rest of the economy, the volume of hours worked[7] in May remains very low in hotels and catering (-50%), and in household services and culture (-18%), suggesting that significant and long-lasting losses to business can be expected.

On the positive side, the data show a trend towards the normalization of household purchases in May for certain consumer items. As in other European countries, the recovery was particularly strong in household goods, where retail sales returned to their pre-Covid level, and in sporting goods, while food consumption remained buoyant.

Ultimately, the health precautions taken by Sweden since the onset of containment measures are akin to those implemented in the rest of Europe since the gradual easing of the lockdowns. While the shocks to the consumption of certain items are less severe than those observed in France, it is noticeable that, in the

context of the epidemic, some consumer goods could be severely affected even in the absence of administrative closures. In addition to the recessionary impact imported from the rest of the world, Sweden will also suffer due to domestic demand, which is expected to remain limited particularly in certain sectors. The Swedish case suggests that clothing, automobile, hotel and catering, and household services and culture could suffer a lasting shock even in the absence of compulsory measures.
According to data available in May, this shock could reduce household consumption by 8 percentage points, which represents 3 GDP points. How lasting the shock is will depend on the way the epidemic develops in Sweden and in the rest of the world.

---

[1] The Swedish institutional framework helps to explain in part this differentiated response, which focuses more on individual responsibility than on coercion (see https://voxeu.org/article/sweden-s-constitution-decides-its-exceptional-covid-19-policy). The country's low population density could also help explain the difference in behaviour vis-à-vis the rest of Europe but not in relation to its Scandinavian neighbours.

[2] This indicator attempts to synthesize the containment measures adopted according to two types of criteria: first, the severity of the restriction for each measure taken (closure of

schools and of businesses, limitation of gatherings, cancellation of public events, confinement to the home, closure of public transport, restrictions on domestic and international travel) and second, whether a country's measures are local or more generalized. For a discussion of the indicator see Policy brief 69.

[3] Booming exports in March 2020 (up 39% in value) driven by strong demand for pharmaceuticals and IT offset the fall in Ireland's domestic demand during the first quarter.

[4] This post on the OFCE blog does not focus on the effectiveness of Swedish measures with regard to containing the epidemic. Mortality from Covid-19 is higher in Sweden than in its neighbours (Norway, Finland, Denmark), suggesting that it has run more epidemiological risks. This is provoking a debate that goes well beyond the purpose of this post, but which does deserve to be raised.

[5] International trade may actually impact growth more than expected due to constraints on international tourism. In 2018, Sweden actually ran a negative tourism deficit of 0.6% of GDP (source: *OECD Tourism Statistics Database*), which could have an effect on domestic activity if travel remains limited, especially during the summer.

[6] Timmer, M. P., Dietzenbacher, E., Los, B., Stehrer, R. and de Vries, G. J. (2015), "An Illustrated User

Guide to the World
Input–Output Database: The Case of Global Automotive Production", *Review of International Economics*., 23: 575–605

[7] In May, the volume of hours worked was down 8% year-on-year (after -15%). The recovery in hours worked in May was due mainly to manufacturing and construction. The recovery was less pronounced or even non-existent in business services.

Effets contrastés des mesures de confinement au mois d'avril

Magali Dauvin et Paul Malliet

Dans les différents *Policy Brief* qui ont été publiés par l'OFCE depuis le déclenchement de la Covid-19[1], nous avons fait le choix méthodologique de fonder notre analyse à partir des tables *input-output* de la base de données entrées-sorties WIOD[2] publiée en 2016. Cette dernière permet de pouvoir évaluer l'impact sur la valeur ajoutée au niveau sectoriel (nomenclature NACE à 17 produits) du choc mondial de confinement que plusieurs observateurs ont qualifié *The Great*

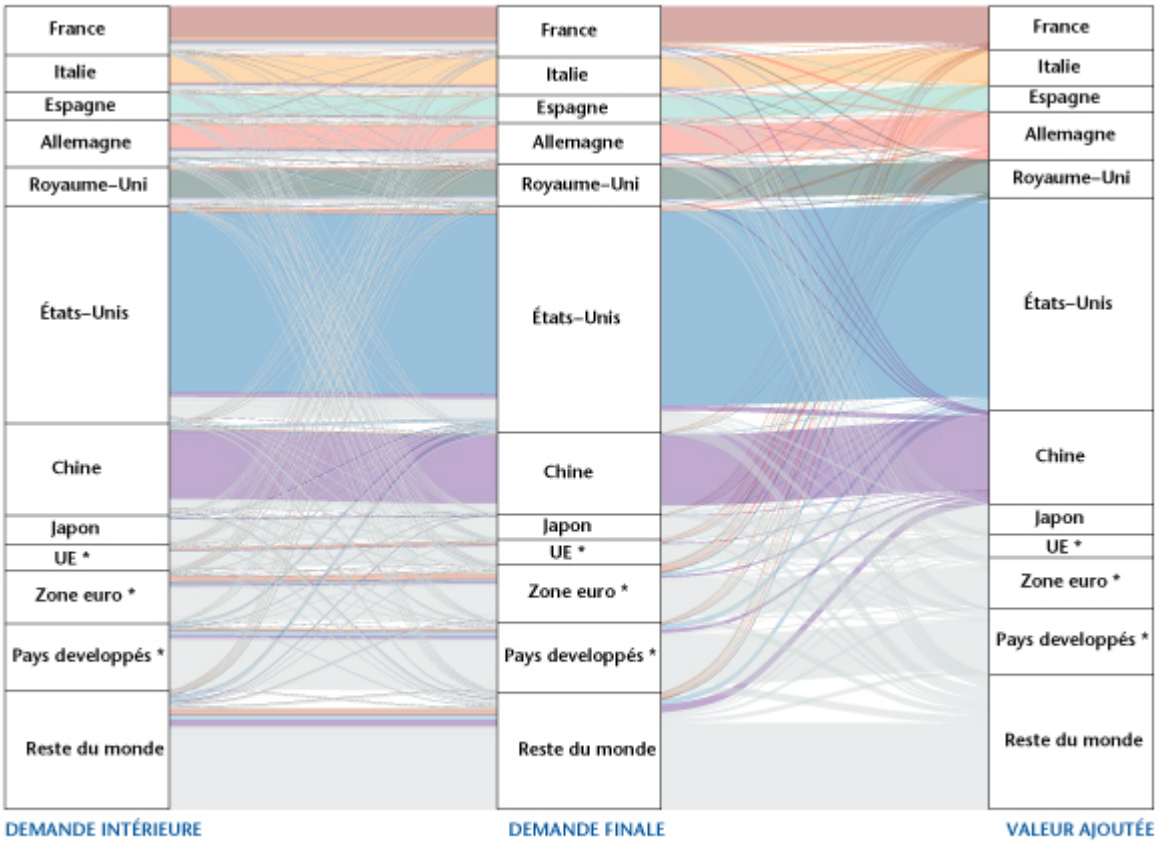
Lockdown.

Récemment, nous avons évalué
l'impact économique des mesures de confinement pour le mois d'avril et
estimions que l'ensemble des mesures de restrictions prises à l'échelle
mondiale entraînerait une baisse du PIB mondial de 19 %[3].
Outre les effets propres à chaque pays, directement liés à la sévérité des restrictions
imposées sur leur territoire, les échanges internationaux conduisent également à
la propagation de ces chocs nationaux au reste du monde et un effet de retour
sur les économies domestiques. Au final, les effets finaux dépendent à la fois
du degré d'ouverture de chaque pays mais également de leur spécialisation sectorielle
et de leur intégration à la chaîne de valeur globale.

Diffusion du choc de confinement au mois d'avril

Dans l'approche retenue, la baisse de la demande dans chacune des économies se diffuse à l'économie mondiale par un effet direct de la baisse de la demande en biens finals importés (voir graphique 1, lignes reliant la colonne « Demande intérieure » à la colonne « Demande finale ») et aussi par l'ajustement induit des consommations intermédiaires (lignes de la colonne « Demande finale » à « Valeur ajoutée »).

Graphique 1. **Diffusion du choc de confinement en avril à l'économie mondiale (en % du choc total)**



Lecture : Pour les États-Unis, la hauteur de l'aire (bleu) entre la première colonne (Demande intérieure) et la deuxième colonne (Demande finale) correspond au montant de demande de produits américains par les résidents américains. L'aire (violet)entre ces deux mêmes colonnes correspond aux importations américaines de biens et services chinois pour satisfaire la demande intérieure. Tout ce qui se trouve en dessous mais toujours au niveau des États-Unis, correspond aux importations américaines en provenance des autres pays. Ce graphique permet de retracer depuis la dernière colonne (Valeur ajoutée), l'origine de la valeur ajoutée.
Sources : WIOD, calculs OFCE.

À titre illustratif, le graphique 1 retrace l'origine de la valeur ajoutée et le mécanisme de diffusion du choc de confinement. Nous avons mis en évidence les pays que nous suivons particulièrement au sein du Département Analyse et Prévision, les autres apparaissent en gris clair. Prenons le cas de la Chine (en violet) puisque ces flux sont d'une importance telle qu'ils sont facilement remarquables. Le flux violet observé entre la première colonne et la deuxième colonne au niveau des États-Unis correspond aux importations de biens et services chinois une fois prises en compte les mesures de restrictions imposées aux États-Unis. Le flux observé liant les États-Unis dans la deuxième colonne à la Chine dans la troisième se lit comme le montant de valeur ajoutée liée aux exportations de biens et services américains (finaux et intermédiaires) vers la Chine.

Le commerce international joue en défaveur des pays qui

avaient imposé
des restrictions relativement moins sévères

Le Tableau 1
reprend la contribution de chaque zone géographique à la baisse de la valeur
ajoutée mondiale et par pays. La contribution des États-Unis à la perte de
production est la plus importante (- 5,4 points), cela est davantage dû à son
poids dans la valeur ajoutée mondiale que à la sévérité des restrictions
imposées au niveau domestique (23 % cf. tableau
1
du *Policy Brief* n° 69).
En effet, les mesures de confinement en vigueur dans le monde au mois d'avril
2020 génèrent une baisse de la valeur ajoutée américaine de près de 22% dont 20,1
points liés directement à la baisse de la demande américaine tandis que seuls 2
points sont imputables à la baisse de la demande intérieure dans le reste du
monde.

Tableau. **Contribution de chaque zone/pays à la baisse de la valeur ajoutée par zone**

Pays	FRA	ITA	ESP	DEU	RU	USA	CHN	JPN	ZE*	UE*	Pdev*	RdM	Total
France	-24,8	-0,5	-0,5	-0,7	-0,5	-0,5	-0,2	0,0	-0,9	-0,3	-0,3	-0,9	-30,2
Italie	-0,9	-26,6	-0,3	-0,6	-0,4	-0,6	-0,2	0,0	-0,8	-0,5	-0,3	-1,0	-32,3
Espagne	-1,1	-0,4	-30,4	-0,5	-0,4	-0,3	-0,1	0,0	-0,9	-0,3	-0,3	-1,0	-35,9
Allemagne	-1,2	-0,6	-0,4	-14,4	-0,7	-1,2	-0,4	-0,1	-1,9	-1,0	-0,7	-1,4	-24,0
Royaume-Uni	-0,5	-0,3	-0,2	-0,4	-20,1	-0,8	-0,2	0,0	-1,0	-0,2	-0,4	-0,9	-25,1
États-Unis	-0,1	-0,1	0,0	-0,1	-0,1	-20,1	-0,1	0,0	-0,3	-0,1	-0,5	-0,5	-22,1
Chine	-0,2	-0,1	-0,1	-0,2	-0,1	-0,9	-12,2	-0,1	-0,3	-0,1	-0,6	-1,3	-16,2
Japon	-0,1	0,0	0,0	-0,1	-0,1	-1,0	-0,3	-8,3	-0,2	-0,1	-0,6	-1,0	-11,9
ZE*	-1,1	-0,6	-0,3	-1,2	-0,8	-0,9	-0,2	-0,1	-18,1	-0,8	-0,6	-1,5	-26,2
UE*	-0,9	-0,7	-0,4	-1,7	-0,7	-0,6	-0,2	-0,1	-2,2	-20,5	-0,5	-1,4	-29,9
Pays développés*	-0,2	-0,1	-0,1	-0,2	-0,3	-2,0	-0,7	-0,2	-0,4	-0,2	-16,3	-1,3	-21,9
RdM	-0,3	-0,2	-0,2	-0,3	-0,2	-1,0	-0,5	-0,2	-0,5	-0,2	-0,6	-7,7	-12,0
Monde	-1,2	-0,9	-0,7	-1,0	-1,0	-5,4	-2,0	-0,6	-1,4	-0,6	-1,7	-2,8	-19,3

Notes : la mention * signifie qu'il s'agit des pays restant de la zone, eg. ZE* signifie zone euro hors France, Italie, Espagne et Allemagne.
Lecture du tableau : la valeur ajoutée française chuterait de 30 % au mois d'avril, dont 25 points sont dus aux mesures de confinement en France tandis que près de 5 points sont perdus en raison des mesures imposées dans les autres pays (30,2 – 24,8). Cela passe par une baisse des demandes finale et intermédiaire.
Sources : WIOT, calculs OFCE.

Le diagnostic est le même pour la
Chine, dont le choc est faible au regard de celui évalué chez ses homologues[4].
En revanche, la position de la Chine en amont des chaînes de production dans
l'industrie (les matériels de transports, la fabrication d'équipements
électriques et d'autres produits industriels) entraîne une contribution du choc
dans le reste du monde plus élevée (-16,2 – 12,2 = -4) qu'aux États-Unis. Le
constat est d'autant plus remarquable pour l'Allemagne puisque près de 40 % de
la perte de VA est due à une chute de la demande dans le reste du monde, soit
une contribution de – 10 points. La baisse des importations mondiales de biens
industriels allemands pour usages intermédiaires constitue la plus grosse
contribution.

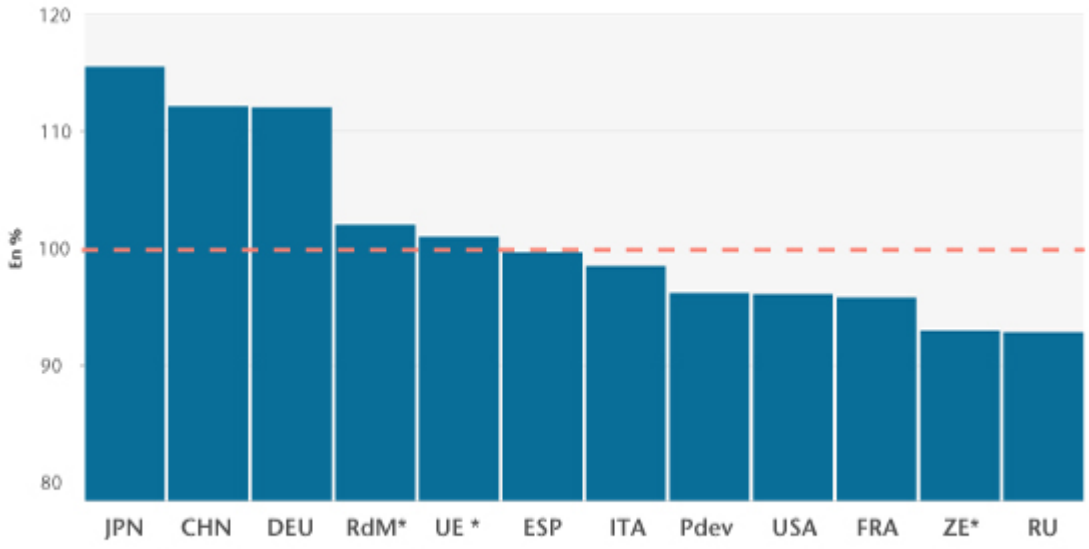
L'exposition des autres pays de
la zone euro et de l'Union européenne[5]

est similaire à celle de l'Allemagne en termes d'ampleur et des produits affectés par le choc de confinement. La France, L'Italie, l'Espagne et le Royaume-Uni sont quant à eux relativement moins soumis au reste du monde considérant une contribution de l'ordre de 15 % à la baisse de leur VA, soit près de 5 points. Cela tient à leur position davantage en aval dans les chaînes de production mondiale.

Ces résultats illustrent l'hétérogénéité des impacts du confinement mondial sur les différentes économies du globe, en fonction de leur exposition au commerce international, et qui conduit à avoir des pays pour lesquels l'impact sur l'activité est plus fort que le choc de demande initial tandis que pour d'autres cela est l'inverse. Le rapport entre ces deux variables (Demande intérieure/Valeur ajoutée) montre que les pays qui disposent structurellement d'une balance commerciale excédentaire (Allemagne, Chine, Japon) sont ceux qui perdent le plus (graphique 2).

Une meilleure prise en compte du tourisme pourrait modifier quelque peu ce résultat, en particulier pour les principales destinations touristiques mondiales (la France, l'Espagne ou l'Italie). Pour ceux-là, le ratio pourrait se dégrader et inversement, il pourrait s'améliorer pour ceux dont ces touristes étrangers sont originaires).

Graphique 2. **Ratio entre les variations de VA et de demande intérieure**



Notes : * signifie qu'il s'agit des pays restant de la zone, eg. Zone Euro* englobe les pays de la zone euro hors France, Italie, Espagne et Allemagne. La ligne verticale en pointillé coupe l'axe des abscisses à 100, situation où la zone géographique n'a pas vu une perte de valeur ajoutée amplifiée ni atténuée par le commerce extérieur et les chaînes de production.
Lecture : Pour une hausse de 100$ de la demande intérieure française, la valeur ajoutée de ses entreprises augmente de 90$.
Sources : WIOT, calculs OFCE.

En définitive, les pays
les plus impactés par les mesures de confinement prises en avril sont les pays
européens. En premier lieu pour ceux où le confinement a été le plus
strict, en particulier la France, l'Espagne et l'Italie mais également ceux
pour lesquels la contribution extérieure à la baisse de l'activité est plus
importante malgré des politiques de confinement moins sévères, l'Allemagne
étant particulièrement affectée par ce canal.

Cette évaluation a été réalisée et publiée dans le *Policy Brief* n°69
et reste circonscrite à la période de de confinement en avril. Elle ne constitue
donc pas une évaluation de l'impact total, lui-même dépendant de la vitesse à
laquelle les différentes restrictions seront levées à travers le monde.

[1] Les *OFCE Policy Brief* n°65, 66 et 69.

[2] Timmer M. P., Dietzenbacher E., Los B., Stehrer R. et de Vries G. J., 2015, « An Illustrated User Guide to the World Input–Output Database: The Case of Global Automotive Production », *Review of International Economics*., n° 23, pp. 575-605.

[3] Voir Département analyse et prévision de l'OFCE, 2020 : « Évaluation au 20 avril 2020 de l'impact économique de la pandémie de COVID-19 et des mesures de confinement sur l'économie mondiale en avril 2020. »

[4] Des mesures de confinement ont été mises en place entre le 23 janvier et le 25 mars 2020 en Chine. Dès la mi-mars, certaines commençaient à être levées.

[5] Ces groupes de pays sont notés ZE* et UE* dans le tableau 1.