From hibernation to reallocation: loan guarantees and their implications for post-COVID-19 productivity

By Lilas Demmou and Guido Franco, OECD Economics Department

Many countries introduced or ramped-up guarantee schemes to bridge liquidity shortages as a key element of the policy response to the COVID-19 crisis. Governments raised the funding available for guarantee programmes (i.e. guaranteed loans more than doubled for the median OECD country), increased the level of the guarantee on credit, extended the coverage to a wider range of firms and simplified the administrative procedures to access the schemes.

Despite their relevance, empirical evidence on the role of loan guarantee programmes during the crisis in alleviating firm distress as well as their broader impact on productivity via reallocation is scarce. Our recent paper (Demmou and Franco, 2021) fills this gap by looking both at their potential short-term and medium-term effects.

Hibernation rather than zombification in the short-term, but reallocation may slow down in the medium-term

The crisis may have cleansing or scarring effects on productivity through the extensive margin. Depending on the type of firms “saved” over the productivity distribution, loan guarantees modify the market selection process and thereby aggregate productivity performance in the short-term. Based on i) a simulation model, ii) a large sample of SMEs located in 14 European countries, and iii) a detailed sector-specific shock to firms revenues, we show that loan guarantees played a critical role in bridging the large liquidity gaps associated
to the COVID-19 shock and investigate the (pre-crisis) productivity profile of illiquid firms compared to that of the other firms in the sample.

Our findings show that the COVID-19 crisis had the potential to seriously hamper the efficiency of market selection mechanism by pushing many high productivity firms out of the market. As shown in Figure 1, Panel A, COVID-19 substantially raised the probability of financial difficulties across the whole distribution of firm-level productivity – the red line (COVID-19 absent policy support scenario) is constantly above the blue line (normal times). However, the combination of standard policies and loan guarantee schemes counter-acted this process by hibernating the corporate sector and re-aligning the market selection mechanism closer to normal time standards (orange line), especially for medium and high productivity firms (top 75% of the productivity distribution).

This desirable outcome is achieved at the cost of slightly “over-reducing” the probability of illiquidity of low productivity firms (bottom 25% of the productivity distribution). Yet, back-of-the-envelope simulations hint that only a small share of the firms turning liquid owing to loan guarantees could be classified as zombies (between 4% to 8%) and thus that zombie lending has potentially been limited during the first year of the pandemic.

At the same time, however, large loan guarantee programmes do not come without risks for future productivity. Exploring the historical relationship between the size of loan guarantee programmes and dynamic allocative efficiency in 10 OECD countries, we show that these schemes may favour the build-up of misallocation in the medium-term, as sizeable programmes are correlated with a slowdown in the ability of most productive firms to attract more labour and grow faster (Figure 1, Panel B).[1] For instance, while our results do not imply causation, a large increase in the loan guarantees to GDP ratio of 1 p.p. appears associated with a decline in the
efficiency of labour reallocation of one tenth.

Noteworthy, this average relationship masks relevant heterogeneities. The effects of loan guarantees on reallocation were found to be more benign in intangible-intensive sectors and even positive for smaller scale programmes, underscoring their potential to ease financial constraints and raising the prospect that delimited guaranteed credit programmes may help foster the growth of productive firms.

Figure 1. Credit guarantees have contributed decisively to repair COVID-19-induced inefficiency in market selection, but large programmes may hamper allocative efficiency in the medium-term

Note: Panel A shows the predicted probability to turn illiquid at different productivity levels in four different scenarios: No-COVID (blue line); COVID-19 without policy intervention (red line); COVID-19 with job retention schemes, debt moratorium and tax moratorium (green line); COVID-19 with loan guarantees in addition to the other policies (orange line). The shaded areas around the lines represent 95% confidence intervals. Productivity is measured as the log of pre-crisis firm-level multi-factor productivity. Based on an analysis covering the 2007-2018 period, Panel B shows the impact of an increase of the guaranteed loans to GDP ratio on the correlation between productivity and employment growth.

Source: OECD calculations based on Orbis® and OECD data.
Policy implications

At a glance, the empirical analysis shows that the cost of withdrawing support may outweigh the benefits in the short-term, while the reverse may hold when the economy will turn back to its pre-crisis levels. We argue that an effective exit strategy could aim at preserving the benefits achieved through support packages while reducing their drawbacks.

To reduce concerns of a potential collapse of credit flows following a premature withdrawal, policy makers could consider a gradual and state-contingent approach to phasing out loan guarantee schemes and other pandemic-related support:

- Viable firms in hard-hit sectors and SMEs not directly benefitting from the international recovery may need continued liquidity support. Loan guarantee schemes could also be temporarily frozen once liquidity needs diminish, but specific arrangements to ease their reactivation could help to avoid cumbersome legislative processes or sunk operational costs if the scheme needs to be restarted later on.
- Yet, to ensure that the additional support does not induce a material misallocation of resources over the medium-to-longer run, loan guarantee schemes may need to be fine-tuned and further targeted. For instance, redesigning the main covenants of the loans (e.g., portion of the loan backed by the government guarantee; fee to access the programmes) would diminish the risk of moral hazard and adverse selection.

The shock could still translate into a wave of corporate insolvencies and the reliance on credit guarantees could have increased firms indebtedness, leading to debt overhang. To countervail these risks, it is important to:

- Privilege grants and quasi-equity type of instruments to support the corporate sector, e.g. linking loans
repayment to businesses’ returns or converting government loans into grants (up to a ceiling and for specific operational costs).

- Establish the conditions to promote early debt restructuring, e.g. through a reinforced network of consultations involving stakeholders or incentives for banks to restructure.

Finally, as pandemic-related support is phased-out, dynamism-enhancing structural reforms could be prioritised. In particular:

- Boosting firms’ entry is a major challenge for absorbing displaced workers from upcoming bankruptcies, as it would allow harnessing the benefits of the creative-destruction process while reducing its social costs.
- It is key to ensure the diffusion and uptake of digital technologies across all layers of the corporate sector, as digitalisation became a matter of survival for many firms in COVID-19 times, shaping not only productivity but also macroeconomic resilience.

Reference


[1] It is worth stressing again that the analysis focuses on the productivity impacts via reallocation. Large programmes may also be performance enhancing through channels other than reallocation which are not investigated in this study – for instance by spurring within firm productivity, if loan guarantees provide additional resources (not available otherwise) that foster firms’ investment.
Platforms killed the offline star? Online platforms and the productivity of incumbent firms

By Hélia Costa, Giuseppe Nicoletti, Mauro Pisu, Christina von Rueden

Over the past decade, online platforms have become ubiquitous. People and firms increasingly turn to online platforms to exchange goods and services (including accommodation, retail products, personal and professional services) (Figure 1A). The COVID-19 shock further increased online-platform use even as they allowed people and firms to keep working and producing while respecting physical distancing rules (Figure 1B).

However, the impact of online platforms on economies and societies is complex, uncertain and hotly debated. In some cases, as the COVID-19 shock attests, online platforms can positively contribute to economies’ resilience to shocks involving severe disruptions to physical economic activity. At the same time, their long-term impacts on jobs, competition, productivity dynamics, data privacy and security, and other
socio-economic dimensions are still poorly understood and likely to be mediated by policy responses.

Figure 1. Platform activity has accelerated, particularly during the COVID-19 crisis

Panel A: Platform activity has been on the rise

Panel B: Platform activity surged during the COVID-19 crisis
Against this backdrop, in two recent papers (Costa et al., 2021a and Costa et al., 2021b) we use novel data sources to document the diffusion of online platforms across OECD and G20 countries (with the exception of China and Colombia) over the past 10 years and investigate their impact on firm-level productivity growth. We focus on platforms allowing two or more distinct but interdependent sets of users (firms or individuals) to exchange goods or services via the Internet. Using web-scraping techniques, we create the most comprehensive list yet of online platforms active in each of the 43 countries covered in this study over 2013-2019. We classify platforms in nine areas of activity (e.g. accommodation, personal services, transportation). The final list covers about 1 300 platforms and includes not only large
and well-known platforms but also smaller and country-specific ones. We proxy online-platform use with online platforms’ website traffic data (i.e. the number of visits to online platforms’ websites).

**How do online platforms affect the productivity of incumbent firms?**

Online platforms could affect productivity through a variety of channels. First, platforms in direct competition with incumbent firms (such as Uber or Airbnb) can encourage innovation, raising incumbent firms’ productivity or force the exit of the less productive ones. Second, platforms that connect existing service providers with consumers (such as Booking.com or Thetfok) can contribute to incumbent firm productivity growth by enhancing market transparency – through for instance review systems and price comparisons – and providing improved services such as booking systems and logistics. At the same time, platforms could hinder aggregate productivity growth by weakening market selection, making it easier for small and less productive firms to enter the market and survive (Schwellnus et al., 2019).

Our results indicate that online platform activity is positively associated with labour productivity growth of incumbent firms. Point estimates suggest that doubling online-platform activity is on average associated with a 2.3 percentage point increase in firm-level labour productivity growth. These productivity gains are attributable to increases in value added and not reductions in employment. Access to services provided by online platforms, such as logistics, marketing, tailored advertising, dispute resolutions and others can make it easier for incumbent forms to reach new clients and improve service quality, boosting firms’ revenues and value added.

The productivity benefits generated by online platforms differ across firms. They are larger for SMEs – with a positive and
significant relationship evident for firms with up to 100 employees (Figure 2, Panel A) – and for mid-range productivity firms (Figure 2, Panel B).

**Figure 2.** Online-platform activity benefits mostly productivity of small firms and can help lower-productive firms to catch up to the technological frontier

Panel A: Change in firm-level labour productivity growth attributable to a one standard deviation in online-platform activity in the same sector, by firm size (number of employees)

Panel B: Change in firm-level labour productivity growth attributable to a one standard deviation increase in online platform activity in the same sector, by firm labour productivity level
Note: Bars’ colour and stars indicate statistical significance level: *** 1%, **5%, *10%. Bars measure marginal effects of increasing activity by one standard deviation in percentage points, by size category (Panel A: number of employees; Panel B: labour productivity classes). Platform activity is measured by the number of visits to a platform’s website. Panel B: Labour productivity classes are defined for each sector and year and labour productivity is lagged by two years to diminish the risk of endogeneity bias. Results using once-lagged productivity remain similar.

Source: Costa et al. (2021b).

The winner-take-all dynamics that characterise online platforms’ operations can lead to market dominance based also on the accumulation and exploitation of proprietary data on user behaviour (OECD, 2018). Our analysis indicates that higher persistence among the largest platforms (i.e., less reshuffling amongst largest platforms) weakens the positive association of platform activity with firm-level productivity growth. This is indicative that less contestable online-platform markets lower the productivity benefits of online platform activity for incumbent firms.

Overall, our analysis suggests that platform diffusion can contribute to firm-level productivity growth, helping SMEs overcome barriers hampering their growth and facilitating the catch up of laggard firms towards the productivity frontier. The results also point to the importance of keeping online-platform markets open and contestable for realising such productivity benefits.

References


Costa, H., Nicoletti, G., Pisu, M., and Von Rueden, C.
At the cross-roads of a low-carbon transition: what can we learn from the current energy crisis?

By Laurence Boone and Assia Elgouacem, OECD Economics Department

When it rains it pours. The energy crisis we face today is the result of a confluence of several forces at play: persistent
underinvestment in the energy sector and fragile market regulation coupled with unfavourable weather events and insufficient buffers (Figure 1A) (IEA, 2021b). Together with the strong COVID-related demand recovery, they created an unsettling mismatch in our global energy markets leading to skyrocketing energy prices, in particular in Europe (Figure 1B). The crisis has brought to bear the multiple sources of tension that could threaten the stability and reliability of our energy system. It has also triggered a multiplicity of emergency measures to contain costs for households and firms at a time when the energy transition is set to accelerate. As countries embark on what promises to be the most ambitious energy transformation of our times, the current events show how transition to a climate neutral world needs to minimise the risk of such disruptions while securing public support.

Note: Panel A shows the filling rate of European natural gas storage over 2020, 2021 and the 10 year average filling rate. Panel B uses the EEX EGIX THE Index (European Energy Exchange European Gas Index) as the reference price for natural gas for one month ahead contracts. It is based on exchange trades which are concluded in the respective current front month contracts (THE). The EGIX corresponds to the current market price for gas deliveries in the next month at any time.
Source: Panel A: Aggregated Gas Storage Inventory, AGSI+.
Between calls for greater energy security and energy affordability, particularly at a time when mounting inflation pressures are already raising concerns about people’s purchasing power (OECD, 2021c), this crisis is very much exposing difficulties governments will face to stay on course towards a climate neutral world. Countries representing around 70% of the world’s global carbon emissions have already announced climate neutrality targets by mid-century (IEA, 2021a), which necessitates a rapid and unprecedented transformation of the way we produce and consume our goods and services. Yet the steps to achieving this transformation remain unclear in many jurisdictions.

According to the recently published IEA World Energy Outlook, a net-zero emissions world requires accelerating clean electrification of many energy uses, improving energy efficiency, substantially reducing methane emissions and boosting innovation (IEA, 2021c). This requires a major shift in investment (Figure 2), R&D, regulation and carbon pricing.
Note: The scenarios are from the IEA World Energy Outlook 2021. The Announced Pledges Scenario maps out a path in which the net zero emissions pledges announced by governments so far are implemented in time and in full. The Net Zero Emissions Scenario sets out what needs to be done to move beyond these announced pledges towards a trajectory that would reach net zero emissions globally by mid-century, which is consistent with limiting global warming to 1.5 °C.
Source: (IEA, 2021c).
Reasons for the current shortages are multiple, but some of them reflect future challenges that could be linked to decarbonisation. The post-Covid demand surge is partly responsible for a global shortage of energy, but it coincides with an undersupply due to a lack of investment in clean energy at a time when investment in brown energy has been receding over the past decades (IEA, 2021b).

In short, the current situation should provide lessons to prepare better for the transition to a climate neutral world through strengthening our energy systems as our energy
infrastructure morphs into one that relies much more on variable renewable energy sources. Policy makers thus need not only steer incentives towards clean energy but they should also ensure that as energy systems become cleaner they remain reliable and affordable. This requires larger and more timely investment, a focus on electricity system flexibility, and better pricing systems. The IEA estimates that investment in clean energy projects and infrastructure needs to more than triple over the next decade to reach net-zero emissions (Figure 2).

Failure to better prepare our energy system would only exacerbate public finances pressure while weakening the price signals. Countries are currently scrambling to provide aid to their citizens to soften the blow from rising energy prices at the cost of higher emissions. Interventions range from means-tested transfers to low-income households, energy tax cuts, caps on energy prices, and excess profit taxes on energy companies (Table 1). While protecting vulnerable households is necessary, it is important that such measures remain time limited and not undermine incentives for clean energy.

The OECD has long since highlighted the importance of policy alignment and how a comprehensive, inclusive and cost-effective strategy to address climate change will require bringing in complementary policy areas and exploiting synergies among them (OECD, 2015e) (OECD, 2021a). The current episode highlights this further, especially since higher energy prices could render already contentious policies, such as carbon taxes, even less palatable and politically tenable (Politico, 2021). To this end, governments need to strengthen targeted social support to vulnerable populations, including through well-designed revenue-recycling schemes, and to bolster active labour market support to help workers and encourage a more efficient reallocation of labour (OECD,
They need to upgrade market regulation to ensure greater stability as well as competition, and to encourage investment in energy system flexibility. Reforming financial sector regulation is also key, such as requiring greater disclosure in financial markets to better account for climate risk and mobilise private funds (OECD, 2021b). Lastly, transparency, better communication and carefully assessing compensation packages would be necessary for garnering public support so as to not derail the energy transition.

References


Vona, F. (forthcoming), *Managing the Distributional Effects of Environmental and Climate Policies: The Narrow Path for a Triple Dividend*.

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**Long-run fiscal challenges dwarf COVID’s fiscal legacy**

By Yvan Guillemette, OECD Economics Department

The decline in economic activity associated with caution, lockdowns and other restrictions in response to the COVID-19
pandemic brought government revenue down substantially in 2020 across the OECD. Governments have appropriately responded with a range of temporary programmes to support workers and businesses, simultaneously raising expenditure. Consequently, fiscal positions have deteriorated sharply and gross government debt in the OECD is projected to be around 20-25 percentage points of GDP higher in 2022 than it would have been absent the pandemic.

The immediate fiscal challenge for governments is to continue to target fiscal support towards sectors hardest hit by the COVID-19 shock and, as the pandemic ebbs, to phase out temporary programmes gradually along with the restrictions that limit doing business in these sectors. In the longer run, however, the direct fiscal impact of the pandemic pales in comparison to additional fiscal pressures stemming from secular trends, such as population ageing and the rising relative price of services.

In the latest long-run projections from the OECD Economics Department, these fiscal pressures are assessed using stylised projections that take secular trends, such as demographics, into account. The idea is not to obtain precise forecasts, but rather rough orders of magnitude to size up the fiscal challenge ahead. Under a ‘business-as-usual’ hypothesis, in which no major reforms to government programmes are undertaken:

- Public health and long-term care expenditure is projected to increase by 2.2 percentage points of GDP in the median country between 2021 and 2060 (see figure). These projections are based on a pre-pandemic health and long-term care spending baseline, so any permanent increase in health spending in response to experience with COVID-19 (for instance to build more spare capacity in intensive care units or raise pay levels for workers in public care homes) would come in addition.
- Public pension expenditure is projected to increase by
2.8 percentage points of GDP in the median country between 2021 and 2060, but cross-country variability is much higher than in the case of health expenditure projections. Countries that have legislated increases in statutory retirement ages, and especially those that have linked future increases to gains in life expectancy – such as Estonia, the Netherlands and Portugal – tend to have lower projected increases in public pension expenditure, whereas countries with particularly unfavourable demographics – such as Japan, Korea and Poland – tend to have higher projected spending increases.

- Other primary expenditures are projected to rise by 1½ percentage points of GDP in the median country between 2021 and 2060. And this figure excludes important sources of expenditure pressure, such as climate change adaptation.

- In contrast to the fiscal pressures from the secular trends discussed above, the additional debt service on the increase in public debt due to the COVID-19 pandemic – here approximated by the increase in gross government debt between 2019 and 2022 – adds only about ½ percentage point of GDP to long-run fiscal pressure in the median country. Emergency fiscal transfers during the COVID period contribute little to long-run fiscal pressure because they are temporary. Their permanent component is the flow of interest payments on the associated stock of additional debt, assuming that it is permanently rolled over, which is the case here because of the assumption that the government debt-to-GDP ratio is stabilised at its 2022 level.

Potential future fiscal pressure to keep public debt ratio at current level in the baseline scenario

Change in fiscal pressure between 2021 and 2060, % pts of potential GDP
Note: The chart shows how the ratio of structural primary revenue to GDP must evolve between 2021 and 2060 to keep the gross debt-to-GDP ratio stable near its current value over the projection period (which also implies a stable net debt-to-GDP ratio given the assumption that government financial assets remain stable as a share of GDP). The underlying projected growth rates, interest rates, etc., are from the baseline long-term scenario presented in Guillemette and Turner (2021).

Expenditure on temporary support programmes related to the COVID-19 pandemic is assumed to taper off quickly. The necessary change in structural primary revenue is decomposed into specific spending categories. The component ‘Interest on COVID legacy debt” approximates the permanent increase in interest payments due to the COVID-related increase in public debt between 2019 and 2022. The component ‘Other factors’ captures anything that affects debt dynamics other than the explicit expenditure components (it mostly reflects the correction of any disequilibrium between the initial structural primary balance and the one that would stabilise the debt ratio).

Except in Greece, where a massive fiscal consolidation effort has already taken place since the Great Recession, all OECD governments would need to undertake fiscal consolidation in this scenario, which is premised on the idea that fiscal authorities would seek to stabilise public debt ratios at projected 2022 levels by adjusting structural primary revenue from 2023 onward. The median country would need to increase
structural primary revenue by nearly 8 percentage points of GDP between 2021 and 2060, but the effort would exceed 10 percentage points in 11 countries. These results do not imply that taxes will, or even should, rise in the future. The fiscal pressure indicator is simply a metric serving to quantify and illustrate the fiscal challenge facing OECD governments. Raising taxes is only one of many possible avenues to meet this challenge.

If financing conditions remain favourable, as assumed in the baseline scenario, countries with relatively low initial public debt ratios could finance some of the projected increases in expenditure with debt. With higher public debt would come risks, however. For this reasons, absorbing future fiscal pressure with additional borrowing is a strategy that could postpone, but probably not avoid, the need for policy reforms.

Another avenue would be reforming health and pension systems to increase efficiency and prevent expenditure from rising as much as projected in this stylised exercise. In addition, structural reforms that raise employment rates are associated with substantial fiscal dividends. In the context of slowing global population growth and even declining population in many countries, labour market reforms that would raise employment and encourage longer working lives appear particularly desirable. In addition to reducing fiscal pressure, such reforms align well with the goal of helping women and disadvantaged groups gain employment. As the report demonstrates, combining labour market policy reforms with increases in average effective retirement ages could halve the projected increase in fiscal pressure in the median OECD country through 2060 (of nearly 8 percentage points of GDP).

Reference

Intangible assets are at the heart of firms’ competitiveness, but their financing is complex for many firms. Typically, intangible assets have unique characteristics — uncertain returns, non-rivalry, large synergies, low redeployability — that tend to increase information asymmetries and render them difficult to collateralise. Using sector and firm level data, our recent strand of work (Demmou et al., 2019; Demmou et al., 2020; Demmou and Franco, 2021) points to the existence of a financing gap impeding the full potential of intangibles from being harnessed, with negative implications for aggregate productivity growth and resilience (see also the companion Ecoscope blog).

**Policies to close intangibles’ financing gap**

The financial system has been historically designed to ease the accumulation of tangible capital and thus the global shift of our economies toward ideas-based growth reduces the ability of the financial sector to serve firms’ needs, generating new challenges for policy makers.
Given differences in the structure of financial systems across countries as well as in the most appropriate financing source for the various types of intangibles, the best-suited answer is not a one-size-fits-all approach. Accordingly, our recent paper (Demmou and Franco, 2021) discusses policy-levers that authorities could exploit to make each source of external finance available to firms — government support, equity financing and bank credit — more supportive of intangible investment (Figure 1).

The following set of policy measures is particularly relevant:

- **Financial market framework policies.** Equity investors are more willing than banks to take risks even without strong collateral. Several actions could spur both the demand and supply of equity: progressing on the European Capital Market Union, reducing the preference to use debt over equity, easing access to IPOs, ensuring that the structure of equity markets is supportive of the provision of patient and engaged capital, and enhancing financial literacy.

- **Standard innovation policies that would benefit investment in intangibles.** The development of venture capital markets, which are an important source of finance for start-ups and intangible-intensive firms at early stages of their life-cycle, and a fine-tuning of government direct and indirect support of high growth SMEs could further ease the financing frictions faced by innovative firms.

- **Policies to widen financing options for investment in intangibles.** Ensuring efficient liquidation of intangibles and providing incentives to bank credit backed by intangibles could increase their collateral value and ease access to bank finance. Better tailoring financial reports and accounting standards to the specific features of intangibles would enable both banks and equity investors to make better informed decisions.
when allocating resources. Moreover, the expansion of well-designed R&D tax incentives and government funding to other types of intangibles might also be considered for assets displaying positive externalities (e.g., organisational capital and workers’ training).

- **Intangible-friendly COVID-19 related support.** The provision of loans and loan guarantees, the development of schemes featuring equity-type capital injections and the preservation of direct public support to innovative businesses could contribute to attenuate the disruptions caused by the COVID-19 outbreak and ease the even higher frictions that would hamper intangibles investment.

**Figure 1. Policy options to ease intangibles financing**

Source: OECD.

**References**


Mind the financing gap of intangible assets: hints on productivity and resilience

By Lilas Demmou and Guido Franco

Intangible assets are widely considered a major source of growth and resilience, also in view of their complementarity with digital technologies (Corrado et al., 2017). Yet, despite their aggregate rise in the past decades, productivity growth has been mediocre in most advanced economies. This raises questions about whether barriers to the financing of intangibles is preventing their growth potential from being fully exploited.

Typically, intangible assets have unique characteristics – uncertain returns, non-rivalry, large synergies, low redeployability – that tend to increase information asymmetries and render them difficult to collateralise. This makes their financing complex – particularly for young and small firms – and intangible investment often falls short of desired levels for a large portion of the corporate sector.

Our recent paper (Demmou and Franco, 2021) summarizes and extends recent OECD analyses exploring the extent to which financing barriers affect productivity and resilience outcomes in intangible-intensive sectors. It also proposes a cross-
cutting set of financial market reforms to unlock the potential of intangible assets, which we discuss in a companion blog.

### Intangible assets financing gap and productivity

Our results show that easing financing restrictions is particularly beneficial for productivity in sectors that rely more intensively on intangible assets (Demmou et al., 2019), indirectly confirming the existence of a “financing gap” due to financial frictions. This aggregate productivity impact operates via two channels:

- **The within firm channel** operates via the ability of firms to finance their innovative projects. We show that the productivity of firms in intangible-intensive sectors benefits relatively more from sound financial conditions (Demmou et al., 2020): financing frictions explain 14% of the variation in productivity across firms in intangible-intensive sectors, against “only” 11% in traditional ones (Figure 1, Panel A).

- **The between-firm channel** pertains to the reallocation of scarce resources to underpin the growth of productive firms. We provide evidence that the virtuous impact of financial development on labour reallocation across firms is larger in intangible-intensive sectors (Demmou and Franco, 2021): moving from a low to a high financial development level could increase the efficiency of labour reallocation – as proxied by the sensitivity of firm-level employment growth to lagged productivity – by 60% in intangible-intensive sectors and by 40% in traditional ones (Figure 1, Panel B).

**Figure 1: A financing gap hindering productivity in intangible-intensive sectors**
Note: Panel A shows the portion of the variation in productivity explained by moving from a high (75th percentile in the distribution of firms’ financial constraints) to a low (25th percentile) level of financial constraints. Panel B presents the marginal effect of productivity on employment growth at different levels of financial development in both high (dark blue line) and low (light blue line) intangible-intensive sectors.


**New challenges and opportunities related to the COVID-19 outbreak**

The COVID-19 outbreak generates new opportunities to harness intangible assets potential, but also increases the challenges related to their financing.

Using a simple accounting simulation model, we show that intangible-intensive firms tend to be more resilient to shocks like the COVID-19 (Figure 2). We conjecture two main reasons for this finding. First, consistent with the diverse ability to rely on innovative technologies, firms operating in intangible-intensive sectors may find it easier to adapt to the new social distancing norms that are likely to prevail in the short to medium term and facilitate the reorganisation of supply chains that have been disrupted by the crisis. Second, intangible-intensive firms tend to rely prevalently on internal funds to finance investment and thus to hold larger cash and equity buffers. As a result, they have a lower probability of becoming distressed during the COVID-19 crisis.
Yet, the same factors at the heart of this resilience could become a source of difficulties during the recovery, slowing down intangible-investment in the aftermath of the crisis. As intangible-intensive firms are using their cash reserves to cover operating expenses during the crisis and find it difficult to access external finance, they may have to reduce critical investments until they buffer again enough financial resources. This process might take time given the reduced profit streams and uncertainty around future sales. A number of theoretical and empirical studies corroborate this narrative. For instance, when faced with financial constraints, firms cut their investment in R&D to reduce liquidity risks (Aghion et al., 2010) and, more broadly, invest less in intangibles (Garcia-Macia, 2017), especially if they are young and small (Brown et al., 2009; Hall and Lerner, 2010).

**Figure 2: The impact of COVID-19 along the intangible intensity dimension**

Note: Based on the accounting framework developed in Demmou et al. (2021), the figure shows the predicted impact of the COVID-19 outbreak one year after the implementation of the first confinement measures on both high and low intangible-intensive sectors. Panel A reports the percentage of otherwise viable firms experiencing losses, while Panel B the percentage of otherwise viable distressed firms (i.e., firms whose book value of equity is predicted to turn negative). The “optimistic” and “pessimistic” scenarios foresee a sharp drop
in activity lasting two months, but then differ with respect to the speed of recovery in the post-confinement months.


References


Australia: Five takeaways from the new OECD Economic Survey

By Patrick Lenain, Christine Lewis and Ben Westmore, OECD Economics Department

In Australia, the recent outbreak of the COVID-19 Delta variant has prompted the government to adapt its public health response. Instead of attempting to suppress the virus (“zero tolerance”), efforts are now being made in New South Wales and Victoria to contain the virus together with a more active campaign to vaccinate the population. The current strict lockdowns in these states will result in GDP declining in the third quarter of 2021. In an environment of higher community transmission of COVID-19 and lingering uncertainty, the eventual recovery will remain gradual even when restrictions are eased. In the medium-term, the new Economic Survey says that Australia has the potential to return to sustained growth if complementary structural reforms are undertaken. Policy changes can also make growth work for all and put Australia on path toward achieving net zero greenhouse gas emissions. Five
takeaways from the report are summarised below.

**Figure 1. Confidence has fallen recently**

![Confidence Graph](image)

*Note: The measures are normalised over the period since 1997. Source: Refinitiv.*

**Institutional reforms would strengthen resilience.** Fiscal policy is now being conducted in an environment of higher public debt and will be called to play a more active role given the limited space for conventional monetary policy at the lower bound. At the same time, underlying inflation has undershot the target band of the Reserve Bank of Australia (RBA) for an extended period (Figure 2). When the economy fully recovers, the government should outline a medium-term fiscal strategy that is associated with specific timeframes or conditional on measurable economic outcomes. Future fiscal strategies should also be regularly evaluated and monitored by an independent fiscal institution, such as the Parliamentary Budget Office. As in other OECD countries, the RBA should conduct a monetary policy framework review that is broad in scope, transparent and involves consultation with a wide variety of relevant stakeholders.

**Figure 2. Underlying inflation has undershot the RBA target**
for a prolonged period

Note: The measure of underlying inflation is the arithmetic average of the Trimmed Mean and Weighted Median.
Source: RBA.

Regulatory reform will be key to business dynamism and higher productivity growth. Small and young Australian firms have contributed a large share of job creation and business investment over the past decade. However, the creation of new companies was trending down prior to the pandemic and the lockdowns have been particularly harmful to small young businesses. The regulatory landscape is ripe for reform, particularly the licensing and permit system (Figure 3). The government should continue to simplify its regulations and lower administrative barriers. For example, further reforms to the occupational licensing regime and land use regulations are needed.

Figure 3. The licensing system and regulatory complexity are ripe for reform

Product Market Regulation Indicators, subcategories 2018
Banks have provided financial buffers during the pandemic and will play an important role during the economic recovery. Australia’s banks are well capitalised and many firms have availed of loan deferrals through the pandemic. However, lending has become increasingly skewed towards the household sector (Figure 4) and a relatively high proportion of innovative firms are constrained by access to finance. The digital revolution in financial services can improve lenders’ ability to assess credit risk and provide new forms of competition to the banking sector. For example, open banking is expanding information available to lenders and should be extended to facilitate switching of providers, accompanied by appropriate protections. By facilitating intangible assets to be used as collateral, improvements to the existing Personal Property Securities Register can also support young innovative enterprises.

**Figure 4. Lending has become increasingly skewed towards households**

Credit by sector
More can be done to make the recovery work for all. Australian workers losing their jobs face larger income losses than any other OECD country (Figure 5) due to low unemployment benefits. As well as increasing the unemployment benefit rate, there should be continued attention to ensuring the network of private employment service providers are incentivised to facilitate training for those out of work. Improving financial literacy in some cohorts is also a priority, especially for Indigenous Australians who have lower levels of financial literacy than the general population.

Figure 5. Unemployment benefits remain very low by international standards

Unemployment benefit net replacement rate, 2020 or latest available year

Source: RBA.
Greenhouse gas emissions have been declining, but need to fall at a faster pace if net zero by 2050 is to be achieved. Australia is uniquely vulnerable to climate change, but it is also uniquely placed to benefit economically from the global move towards carbon neutrality due to a large (and windy) land mass, high solar radiation, plentiful ocean access and strong human capital to form the basis of innovation in carbon abatement technologies. A coherent and coordinated national strategy that defines clear goals and corresponding policy settings for the path to achieving net zero emissions “as soon as possible and preferably by 2050” is needed. The incentives for the invention and adoption of low emission technologies will be enhanced by increasing the pricing of carbon emissions from relatively low levels. This should be accompanied by policies that support the transition of workers out of fossil fuel generating industries.

Figure 5. Emissions will need to decline faster to achieve net zero emissions by 2050

Greenhouse gas emission projections and required trajectory to achieve net zero emissions at 2050
Note: The data for 2021-2030 correspond to government projections under the department’s baseline scenario as at December 2020. The measure includes land use, land use change and forestry.
Source: Department of Industry, Science and Energy Resources; OECD calculations.

References


For a more resilient and cohesive Europe

By Filippo Gori and Álvaro Pina, OECD Economics Department

The COVID-19 pandemic precipitated Europe into a recession of unprecedented nature and magnitude. Owing to a rapid and effective policy response to the crisis, the recovery in Europe is now firming up, but there is no room for complacency. To achieve stronger growth than before the pandemic and weather well future shocks, the EU needs to enhance both its economic resilience and its territorial
cohesion. To achieve this, the 2021 OECD Economic Surveys of the European Union and the Euro Area focus on two closely related aspects: (i) improving cyclical convergence among member states and (ii) spurring convergence in living standards across EU regions.

**Increasing cyclical convergence in the euro area**

In the aftermath of the global financial crisis, large differences in business cycles across euro area countries developed into diverging economic paths for hardest hit economies. Today, the COVID-19 pandemic is again affecting euro area economies differently and posing risks of diverging economic trajectories. Europe needs to ensure that no country is left behind during the recovery.

Cyclical divergence in the euro area has deep roots, including heterogeneous national economic structures that enhance the likelihood of asymmetric shocks. In the years following the introduction of the euro, the removal of trade and investment barriers led to spatial agglomeration of economic activities according to national or regional competitive advantages (Fontagné and Freudenberg, 1999; Mongelli et. al, 2016). Heightened competition and agglomeration economies favoured sectoral concentration, resulting in greater divergence in the productive structure of individual countries (Figure 1. B). Though industrial heterogeneity among euro area countries is still milder than across the United States (Figure 1.A), the dispersion in GDP growth among euro area members has tended to be higher than across US states, peaking during downturns (Figure 1. C).

This suggests that industrial polarisation alone cannot explain the relatively high cyclical divergence in the euro area. Much of this divergence is instead explained by policy and institutional frameworks.

**Figure 1. Differences in industrial structures among euro area**
members have been rising

1. The Krugman Specialisation Index (KSI) is a widely-used specialisation measure.
2. Gross value added by NACE activities, EA17.
3. Coefficient of variation for annual GDP growth across 50 US States and EA17 countries. EA17 include all other euro area members that are also part of the OECD.

Source: OECD (2020), OECD Economic Outlook: Statistics and Projections (database); Eurostat

To reduce cyclical divergence in the currency union, the 2021 OECD Economic Survey of the Euro Area suggests policy reforms in three directions:

- More resilient labour markets. In this regard, euro area countries should strengthen policies that preserve viable jobs during major downturns, such as job retention schemes (JRS), and ease workers’ transition to
new jobs through skilling and activation.

- A more effective single market for capital and stronger banks. In the current context, this requires supporting European banks to deal with a possible new wave of non-performing loans (NPLs) by designing better insolvency and loan foreclosure procedures, improving regulatory policies, and developing secondary markets for distressed assets. To strengthen European banks it is also necessary to complete the banking union, notably by setting up a common deposit insurance scheme.

- The introduction of common fiscal capacity: Fiscal integration remains one of the most important missing features of the euro area. The euro area should consider setting up a common fiscal stabilisation capacity through an unemployment re-insurance scheme.

Enhancing the convergence between regions

Over the decades, the European Union gained the reputation of a “convergence machine” (Gill and Raiser, 2012), helping its poorest member states narrow the gap to their richer partners. Since the turn of the century, however, the convergence machine has become less well oiled. Central and Eastern European countries have been converging, but Southern Europe has lost ground (Figure 2). In addition, within countries, remote rural regions have fallen further behind large cities, and especially capitals. Growing territorial inequalities threaten social cohesion and weaken growth potential in Europe as a whole.

Figure 2. Southern and Eastern European countries have had a contrasting growth performance
Why has convergence faltered? Part of the explanation lies in global trends, such as digitalisation, which has mainly benefitted large cities, and stronger competition from emerging economies, which has hurt some industrial regions. Indeed, a growing spatial concentration of manufacturing – Figure 1.B – has also taken place at regional level. But European-specific factors have also played against convergence. Incomplete financial integration and procyclical fiscal policies have led to the expansion of low-productivity non-tradable sectors, such as construction, in the run-up to the global financial crisis, and to abrupt adjustment and divergence in its aftermath. This cyclical divergence, discussed above, has particularly affected Southern Europe. Furthermore, growth and innovation in the EU as whole, including in many wealthy regions, has often been modest, limiting the ability to generate spillovers across the Union.

How can poor regions prosper? The above reforms to reduce cyclical divergence will help. In addition, the 2021 OECD Economic Survey of the European Union suggests policy recommendations in two main directions:

- Place-based policies, tailoring different sectoral policy interventions to region-specific circumstances, can help upgrading the productive specialisation of lagging regions. Cross-regional cooperation in
innovation and transport can play an essential role on this count, by for instance fostering capacity building in poorer regions and helping them gain better access to markets and a shorter travel time to thriving large cities.

- The European Union should also use more effectively Cohesion Policy and the Common Agricultural Policy (CAP) to support regional convergence. A stronger focus on innovation is needed: more cohesion funds should be devoted to R&D projects, and the CAP needs to promote generational renewal in agriculture. At the same time, these policies should not end up propping up inefficient firms or activities, which may happen, for instance, due to weak competition in public procurement.

References


COVID-19, Productivity and Reallocation: Hibernation, Not Zombification

By Dan Andrews, OECD Economics Department

The issue

The consequences of the pandemic for potential output will partly hinge on its impact on the reallocation of labour from low to high productivity firms. While Schumpeter proposed that recessions can accelerate this “cleansing” process, downturns can also distort reallocation dynamics if financial constraints result in the premature shakeout of productive but financially fragile firms. The pandemic could provide a further twist if job retention schemes delayed the restructuring of unproductive firms that would have otherwise contracted, thereby risking “zombification”. But timely evidence on this issue is scarce.

What we do

To fill this gap, two new OECD working papers explore how workforce adjustments (and exit) since early 2020 are connected to firm-level labour productivity, based on two high frequency firm-level datasets:

- **Xero** – a cloud-based accounting software platform for small businesses – which supplies: i) data for Australia, New Zealand and the United Kingdom; ii) novel variables (e.g. hours worked and usage of E-commerce and cashflow reporting and management apps); and iii) analysis of reallocation and productivity before and
after the onset of the pandemic.


**What we find**

*Reallocation remained productivity-enhancing*

Both papers show that while overall rate of job reallocation fell following the onset of the pandemic, a non-trivial share of firms were still adding or shedding workers, and this reallocation process remained connected to productivity. That is, the tendency for high productivity firms to expand and low productivity firms to contract – which propels medium-term productivity growth – remained intact.

Workforce adjustments remained connected to firm productivity, on both the heads and hours worked margins. This was especially the case in Australia, as reflected by a large gap in employment growth between firms in the top and bottom productivity quartiles (Figure).

![Chart showing employment change by productivity quartiles for Australia, New Zealand, and United Kingdom](image)

The most productive firms saw smaller job losses during the crisis and a faster recovery in jobs as the crisis receded

Change in employment from February

% (log difference) change from February to relevant month; productivity based on revenue per employee in 2019

- **Australia**
- **New Zealand**
- **United Kingdom**

Source: Andrews et al. (2021). Xero Small Business Insights
The pandemic also coincided with a temporary strengthening of the reallocation-productivity link in Australia and the United Kingdom over the first half of 2020, relative to 2019. But the reverse is true for New Zealand, which may partly reflect the earlier introduction of New Zealand’s job retention scheme, which also protected a greater share of workers than the JobKeeper scheme in Australia.

Firms that intensively used Apps to manage their business were more resilient, even after controlling for productivity. Thus, while policy partly thwarted creative destruction, the nature of the shock – i.e. one where being online and able to operate remotely were key – potentially favoured high productivity and tech-savvy firms, resulting in a reallocation of labour to such firms.

**Job retention schemes played a nuanced role**

That the reallocation-productivity link remained intact is surprising, given the large scale of Australia’s JobKeeper Scheme. JobKeeper provided broad-based crisis support from April to September 2020 (JobKeeper 1.0), but was then phased-out and firms had to re-apply for support (under JobKeeper 2.0).

Productivity-enhancing reallocation was actually *stronger* in those local labour markets that had a higher proportion of workforce in receipt of JobKeeper. This is consistent with the fact that JobKeeper 1.0 disproportionately shielded productive but financially fragile firms – a pivotal group who’s premature shakeout can impart scarring effects.

But the scheme grew more distortive over time, with JobKeeper 2.0 (from October 2020) more likely to support low productivity firms. In fact, there was virtually no productivity-enhancing labour reallocation in those local labour markets where the reach of JobKeeper 2.0 remained pervasive. By contrast, where a large amount of the workforce
exited the scheme, more labour flowed towards high productivity firms.

What this means

The use of timely data to investigate the allocative effects of the pandemic is significant, given that the seminal paper on reallocation during the Great Recession arrived six years after Lehman Brothers collapsed (Foster et al., 2014). Yet, the pandemic may also shape productivity via other channels – digitalization, global knowledge spillovers and human capital – that will only become clear over time.

This analysis suggests that job retention schemes can potentially protect workers from scarring without significantly distorting firm dynamics. While some initial concerns about zombification may have been overplayed, there is a fine line between such policies being supportive and distortive. This underscores the need for job retention schemes to be truly temporary and to evolve as economic conditions change.

References


Chasing the frontier: Digitalisation for stronger productivity in the Netherlands

By Martin Borowiecki, Jon Pareliussen and Daniela Glocker, OECD Economics Department

The COVID-19 crisis has accelerated the digital transformation of the Dutch economy. E-commerce and teleworking helped cushioning the immediate economic shock as many firms rapidly stepped up their digital capacities and adopted digital technologies to stay in business. What’s more, the digitalisation of products and services offered new opportunities to expand into new markets such e-health. Looking ahead, digitalisation has the potential to boost long-term productivity growth, which has been disappointing in the last decade leading up to the COVID-19 crisis. The 2021 OECD Economic Survey of the Netherlands puts the spotlight on digitalisation and productivity. It highlights that policy can support the digitalisation of the economy by boosting skills and removing barriers to the reallocation of talent and capital to most productive firms (OECD, 2021).

Supporting an inclusive and efficient digital transformation

Digitalisation is in general high in the Netherlands. A high share of households have a broadband connection, use e-government services and telework regularly. The country’s digital infrastructure is well developed, allowing most businesses to have fast broadband connections and purchase cloud services. The government is investing considerable
resources in frontier digital technologies, notably quantum computing and artificial intelligence, through its new National Growth Fund. However, the uptake of digital technologies has so far been concentrated among the largest firms with slow diffusion to the rest of the economy (Figure 1). Smaller firms lack the awareness, finance and skills to get the most out of the digital transformation.

**Figure 1. Small firms lag behind in adopting digital technologies**

![Graph showing adoption rates of digital technologies among different firm sizes](image)

Note: Firms with at least 10 employees. Small firms are those having 10-49 employees, medium-sized firms 50-249 employees, and large firms 250 employees or more.

Source: OECD (2021), ICT Access and Usage by Business (database).

New OECD research conducted for the Survey shows that stepping up the adoption of digital technologies and digital skills among laggard firms could translate into significant productivity gains in the Netherlands (Borowiecki et. al, 2021). In this regard, increasing support to small- and medium-sized enterprises, through targeted public-private programmes to facilitate the adoption of digital tools and to provide business advisory services, could raise awareness and help small firms overcome barriers to digital adoption. Furthermore, easing the strict employment regulations for the regular employed and improving access to capital for young
innovative firms, including credit and collateral registries and stronger competition in the FinTech sector, would support a more efficient reallocation of labour and capital to most productive firms.

**Boosting digital skills**

Shortages of ICT professionals constrain firms’ ability to increase productivity (Figure 2). Despite a well-developed vocational training system and high tertiary education attainment, educational outcomes could be better matched to labour market needs. The share of ICT graduates is low and a considerable share of students, especially those in vocational training, lack essential digital skills. The education system will need to ensure that all students are equipped with the right skills to prosper in the digital age. This entails giving digital skills more prominence in the national curriculum, raising funding for teachers’ digital training, and an expansion of part-time higher education pathways for ICT professionals. A stronger involvement of the private sector in the design of curricula for ICT programmes can help aligning curricula with labour market needs.

**Figure 2. Shortages of ICT specialists are pressing**

Share of enterprises with hard-to-fill vacancies for jobs requiring ICT skills
Note: Firms with at least 10 employees, excluding the financial sector. 2015 data for Germany refers to 2014. The EU25 aggregate includes 25 European OECD Member countries. Source: Eurostat (2021), Digital Economy and Society (database)

The COVID-19 crisis has created additional challenges for productivity. School closures reduced skill accumulation. Parts of the job losses may become permanent in some sectors due to accelerated automation, and skill mismatches are likely to increase going forward. A high share of own-account workers with lower skills and less access to training may be an additional drag on productivity. Hence, training efforts should be ramped up. To reduce the social costs of the digital transformation, a stronger focus on training jobseekers and workers with high up-skilling and re-skilling needs is necessary.

References
