

Declining business dynamism

Cross-country evidence, drivers and the role of policy

Reallocation of resources across firms, entry of new businesses and efficient exit mechanisms are key to boosting aggregate productivity growth. New and young firms are the engine of job creation, and are crucial for the introduction of new business models and radical innovations. Yet, there is a growing concern that a “secular decline” in business dynamism – the process of firm entry, growth and exit, and the simultaneous creation and destruction of jobs – is affecting advanced economies. However, cross-country evidence so far has been scarce and there is still debate around what drives this decline.

A recent OECD study (Calvino, Criscuolo and Verlhac, 2020) analyses the trends in business dynamism using harmonised data across 18 countries and 22 industries over the period 2000-15. It shows that entry rates and job reallocation rates experienced a pervasive slowdown over this period, declining on average by three and five percentage points, respectively.

The quick read

Business dynamism, measured by entry rates and job reallocation rates, has steadily declined over the last two decades across a large number of countries and sectors. On average across countries and sectors, entry rates have declined by 3 percentage points and job reallocation rates by 5 points. This decline is driven by dynamics observed at a disaggregated level and is not simply due to changes in the sectoral composition of economies.

Several structural factors, related to digital technologies and intangibles, market structure, globalisation, and demography contribute to these trends. Market structure and firm heterogeneity (as reflected by industry concentration and productivity dispersion) seem to play the most prominent role, which is interlinked with the rising importance of intangibles and digital technologies. This suggests that winner-takes-most dynamics and barriers to technology diffusion, reinforced by the transition to a digital and knowledge economy, may be important drivers of the slowdown in business dynamism.

Reforms to the business environment have the potential to mitigate these declines and strengthen business dynamism. In particular, policies reducing regulatory barriers, improving judicial efficiency and bankruptcy regulations, facilitating access to finance, supporting innovation, and increasing human capital can positively affect business dynamism and bring double dividends for other economic outcomes, such as productivity growth.



At a time when business registrations have dropped significantly following the COVID-19 crisis, it is now more important than ever for policy makers to understand how to strengthen entry and reallocation. Indeed, the COVID-19 outbreak has increased the risk of economies facing a “missing generation” of firms; fewer businesses have been

created during the pandemic – especially in its early period – and there are limited signs of full recovery so far. Recent work (OECD, 2020) estimates that a 20% annual decline in the number of new firms (a shock similar to what could be observed in several countries by the end of 2020) would have long-lasting effects on employment, with a 0.5% decline in aggregate employment even 14 years after the shock. The current crisis therefore makes it even more urgent to understand the factors underlying the long-term decline in business dynamism and the potential for policy to mitigate or even reverse it.

In this context, the study sheds new light on the possible drivers of long-term declines in business dynamism observed over the period 2000-15, investigating factors related to digital technologies, intangible assets, market structure, sector maturity, trade, global value chain (GVC) integration and demography. Market structure (proxied by industry concentration and productivity dispersion) plays a prominent role, suggesting that winner-takes-most dynamics and barriers to technology diffusion, both reinforced by the transition to a digital and knowledge economy, may be key drivers of this slowdown.

Policy has the potential to mitigate these trends. Removing regulatory barriers, improving judicial efficiency and bankruptcy regulations, facilitating access to finance, supporting innovation, and increasing human capital can help strengthen business dynamism. Reforms in these areas may be beneficial not only for business dynamism, but can bring double dividends, raising productivity growth and promoting inclusiveness. Combined with policy interventions in response to short-term challenges, such reforms could also help limit the detrimental employment and innovation effects of a missing generation of new firms, and help accelerate recovery from the COVID-19 shock (OECD, 2020).

Declines in dynamism have been pervasive

Existing evidence on declining dynamism has so far mainly focused on the United States, with few additional country-specific studies that vary in scope, time and measures considered. This limits the potential for cross-country comparisons and systematic investigations of the drivers of declining dynamism.

Novel OECD evidence shows widespread and pervasive declines in business dynamism over the period 2000-15. The analysis is based on core measures of dynamism at the industry level: i) job reallocation rates – a measure of the simultaneous job creation and job destruction occurring within an industry; ii) entry and exit rates; and iii) the share of employment in young firms. These are sourced from harmonised data, computed from confidential firm-level information and collected in the framework of the OECD DynEmp project (see Box below). This allows for the first analysis of detailed trends in business dynamism across a large number of countries post-2000, complementing national studies for the United States (e.g. Decker et al. [2016], Akcigit and Ates [2019a; 2019b]), as well as other recent OECD analyses on trends in industry concentration (Bajgar et al., 2019) and the speed of catch-up of laggard firms (Berlingieri et al., 2020).

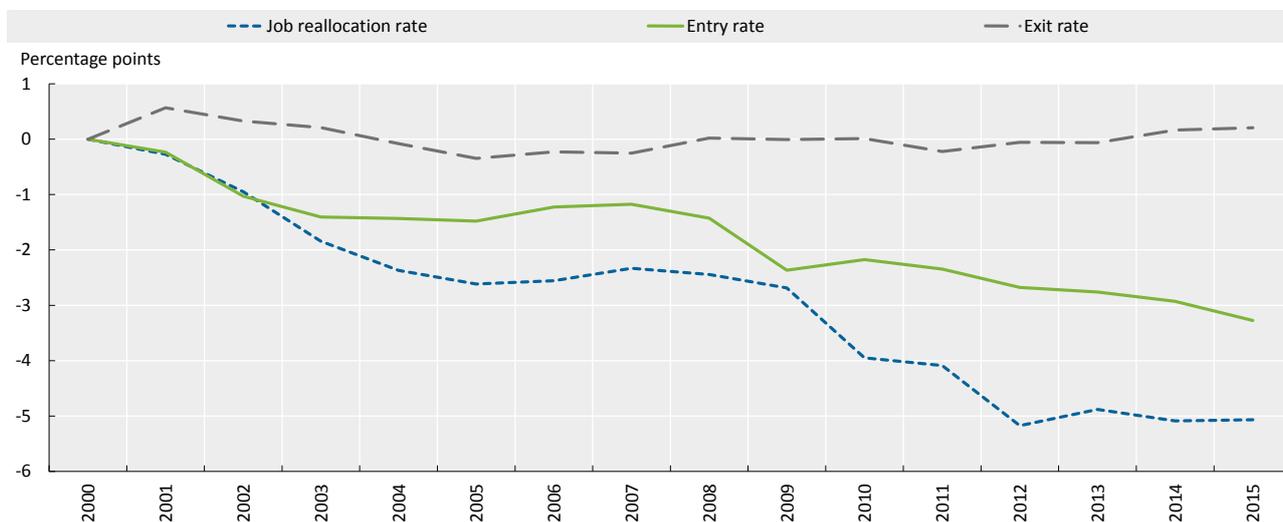
All countries display some signs of weakening business dynamism, as reflected in declining aggregate entry rates or job reallocation rates. Aggregate declines are, however, driven by dynamics occurring at a disaggregated sectoral level. In fact, changes in the sectoral composition of economies have contributed little to these changes, with resources generally shifting to sectors that were initially more dynamic. The core of the analysis focuses therefore on the evolution of business dynamism within detailed sectors.

Abstracting from these compositional effects, Figure 1 depicts a marked and steady decline in entry rates and job reallocation rates. On average entry rates and job reallocation rates have, respectively, declined by 0.2 and 0.35 percentage points every year within countries and sectors, cumulating to a decline of 3 and 5 percentage points between 2000 and 2015. On the contrary, exit rates have remained rather stable over the same period, pointing to declines in net entry rates. Calvino, Criscuolo and Verlhac (2020) also present evidence of significant declines in complementary indicators of business dynamism, such as the share of employment in young firms, which has declined by 8 percentage points on average between 2000 and 2015.

Country-specific estimates for entry rates are represented in Figure 2.a. This figure, together with complementary results on job reallocation rates, confirm that declines in business dynamism have been a pervasive phenomenon. However, Figure 2.a highlights a certain degree of heterogeneity in the extent to which dynamism has been declining over time in different countries. Figure 2.b further uncovers relevant differences across sectors, with telecommunications, information technology and scientific research and development (R&D) clearly showing the strongest declines, while pharmaceuticals, food and beverages, and textiles experiencing the mildest.

While changes in entry rates and job reallocation rates are also related to cyclical factors (such as crises, changes in economic growth or unemployment), these are not the main drivers of the observed trends, suggesting that structural and policy factors play a role in explaining differences across countries and sectors.

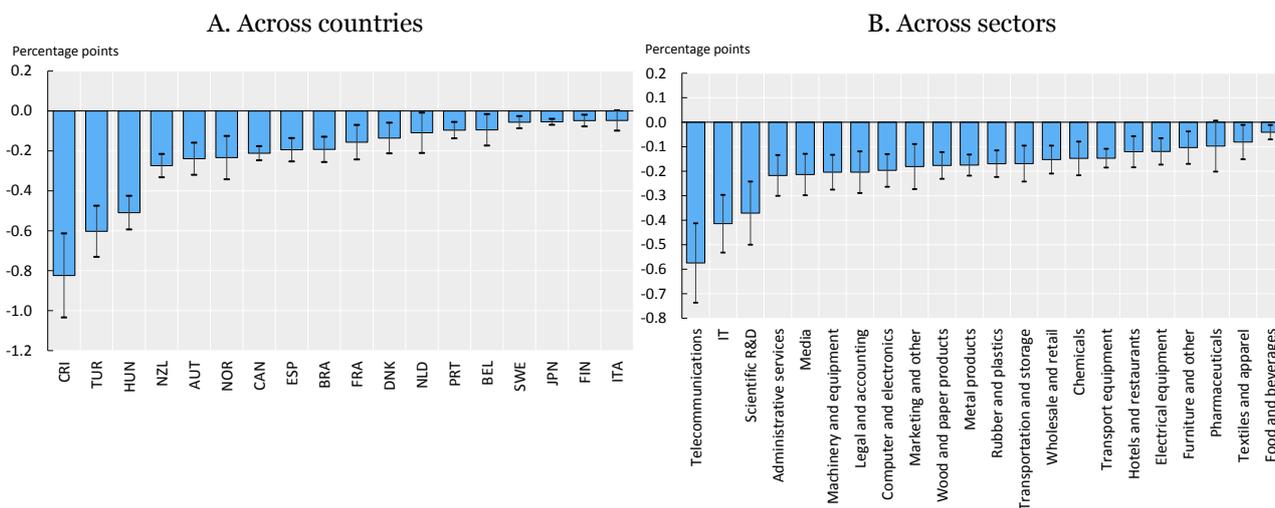
Figure 1. Entry rates and job reallocation rates have declined by 3 and 5 percentage points
Average within country-sector trends in job reallocation, entry and exit rates (2000-15)



Note: This figure reports average within-country-sector trends of job reallocation, entry and exit rates, based on the year coefficients of regressions within country-sector, for the period 2000-15, including 18 countries: AUT, BEL, BRA, CAN, CRI, DNK, ESP, FIN, FRA, HUN, ITA, JPN, NLD, NOR, NZL, PRT, SWE and TUR. Each point represents cumulative change in percentage points since 2000.

Source: Calvino, Criscuolo and Verhac (2020), "Declining business dynamism: Structural and policy determinants", <https://doi.org/10.1787/77b92072-en>, based on the OECD DynEmp3 database.

Figure 2. Declines in entry rates are more pronounced in some countries and sectors
Average declines in entry rates



Note: This figure reports, for each country (left panel) and industry (right panel), average yearly within-country-sector changes in job reallocation and entry rates, based on the trend coefficient of regressions within country-sector, for available years over the period 2000-15.

Source: Calvino, Criscuolo and Verhac (2020), "Declining business dynamism: Structural and policy determinants", <https://doi.org/10.1787/77b92072-en>, based on the OECD DynEmp3 database.

The DynEmp project

The evidence on trends in business dynamism presented in the paper is based on confidential, highly representative data sourced mainly from business registers across a large set of countries. These data are aggregated in a harmonised way at a detailed level in the context of the OECD DynEmp project, a distributed micro-data project led by the OECD Directorate for Science, Technology and Innovation with the essential contribution of country delegates and national experts from OECD countries and partner economies.

The distributed micro-data approach adopted in the DynEmp project is based on a common statistical code developed by the OECD. It is run in a decentralised manner by national experts from statistical agencies, academia, ministries or other institutions who have access to the national firm-level data.

The representativeness of the underlying data sources, the harmonisation of the indicators computed, and the broad country coverage are key features that make the dataset used unique and particularly suitable to providing novel evidence on trends in business dynamism and to investigating its structural and policy drivers.

The evidence presented in this progress report is based on 18 countries: Austria, Belgium, Brazil, Canada, Costa Rica, Denmark, Finland, France, Hungary, Italy, Japan, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden and Turkey. The dataset allows for examining trends in entry rates, job reallocation rates and other indicators of business dynamism at a disaggregated sectoral level – following the SNA A38 industry classification – and focusing on manufacturing and services over the period 2000-15.

Structural factors are related to declining dynamism

Building upon the most recent academic literature and the ongoing policy debate, the paper explores the link between the magnitude of declines in business dynamics and four groups of structural factors, measured at the country, sector or country-sector level.

1. Shifts to a digital and knowledge economy matter for business dynamism. Countries and sectors with higher intangible and digital intensity (measured through information and communications technology [ICT] equipment intensity, software and database intensity, R&D intensity, and skill intensity) have experienced faster declines in entry rates and job reallocation rates. These may also reflect, to some extent, consolidation dynamics common to the life cycle of many industries (Calvino and Criscuolo, 2019), as further discussed below.
2. Market structure and firm heterogeneity also play a key role. Countries and sectors with higher industry concentration and higher productivity dispersion between leaders and laggards have experienced stronger declines in dynamism, while more mature industries (i.e. those more advanced in their life cycle, such as food and beverages or transportation and storage) have generally experienced milder declines.
3. While trade integration seems to be associated with faster declines in dynamism, forward integration in GVCs at the country level mitigates declines in entry rates and job reallocation rates.
4. Changes in demographic factors, proxied by ageing and changes in labour force growth, seem to contribute to a lesser extent to the observed trends.

Analysing these groups of drivers simultaneously suggests that declines in business dynamism are more strongly associated with factors related to market structure and firm heterogeneity (Figure 3). Intangible and digital technologies also matter, but with more nuanced effects. Digital-intensive sectors tend to be more dynamic than others (Calvino and Criscuolo, 2019), but intangibles and digital technologies are also linked to downward trends in entry rates and job reallocation rates, possibly through their effects on firm heterogeneity and market structure.

To some extent, declines in entry rates and job reallocation rates may reflect a process of consolidation related to the industry life cycle of initially more dynamic industries, as argued in a previous analysis by Calvino and Criscuolo (2019) to explain more pronounced declines in digital industries. At the beginning of the industry life cycle, firm entry tends to be high, the number of producers grows, market shares change rapidly and significant product innovations occur (disproportionately from new entrants), with firms offering many competing versions of the industry product. Entry declines as the industry evolves, often accompanied by a reduction in the number of producers while output continues to grow and industry leadership stabilises. At the same time product innovation and the diversity of varieties decline, as firms devote increasing efforts to process innovation. Even after accounting for these effects, however, industry concentration and productivity dispersion between leaders and laggards continue to play a significant role in affecting the speed of decline in business dynamism.

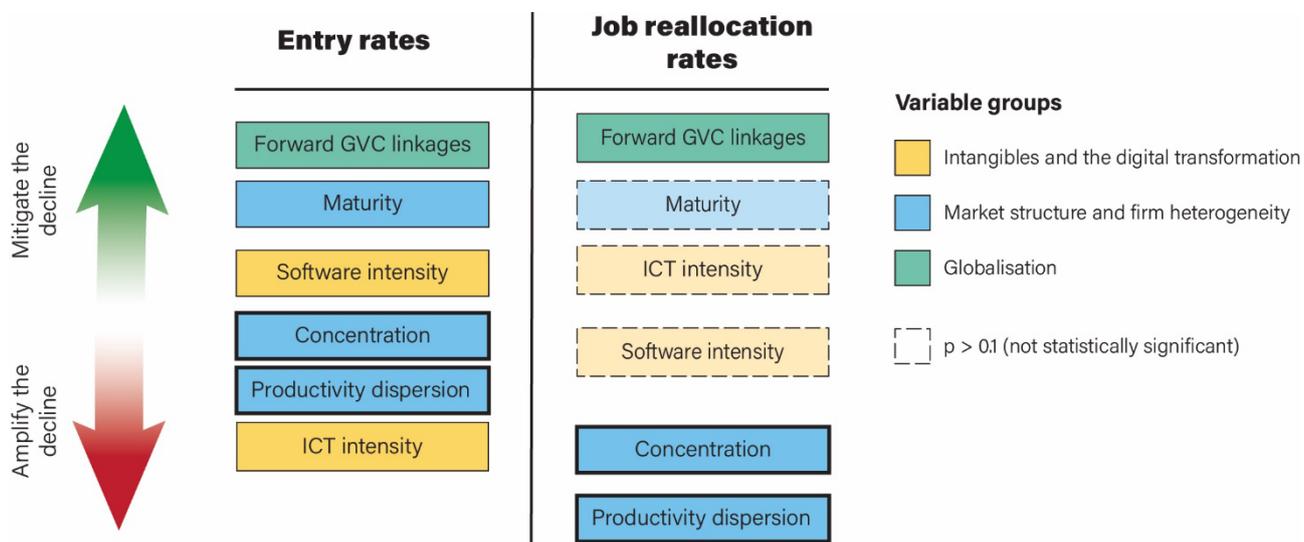
The knowledge gaps between best performers and the rest of firms within sectors, as reflected in high productivity dispersion, are indeed significantly related to changes in business dynamism after controlling for other potential factors. A large productivity gap between frontier firms and laggards at a given point in time may indicate considerable barriers to technology and knowledge diffusion. Young firms, in particular, may face significant challenges when competing with leaders, and this could reduce churning and discourage potential entrants. Such hurdles to diffusion of technology and knowledge may prevent potential entrants or laggard firms from taking advantage of existing knowledge or learning from the best, and may limit experimentation and reallocation, as well.

Market power, reflected in high levels of industry concentration, seems to be another key factor related to declining business dynamism. More concentrated sectors may also be characterised by discouragement effects, barriers to entry and more stable job flows possibly linked to lower levels of creative destruction and competition. Similar to the polarisation of the economy induced by slow diffusion, high market power may reduce the chances of firms to leapfrog the leaders, potentially reducing incentives for experimentation and innovation.

These dynamics related to slower knowledge diffusion and increased market power are possibly amplified by the digital transformation. This transformation has gone hand in hand with the rising importance of intangible assets such as the inputs and outputs of innovative activity (e.g. scientific R&D, patents), trademarks, software and databases, as well as economic competencies (e.g. brand capital, organisational capital).

Digital technologies and intangible assets require absorptive capacity – which takes time to develop – to be effectively adopted and used. Their adoption may also be hampered by factors such as the costs of investment in complementary assets and financial frictions, intellectual property barriers, or competition in attracting skilled workers. Furthermore, although intangibles are characterised by high sunk costs, they are also scalable at low cost and non-rival. This allows for economies of scale that, in combination with network effects associated with ICTs, may strengthen the advantage of established firms, reinforce the position of leaders and possibly unleash winner-takes-most dynamics, further reducing entry and reallocation beyond the effects associated with the industry life cycle.

Figure 3. Structural factors affecting trends in business dynamism



Note: This figure is based on the estimated link between structural factors and declines in entry rates and job reallocation rates, when the role of all these factors are evaluated at the same time. It shows the correlation between the strength of the decline and each factor, net of the effects of the other factors.

Source: Based on Calvino, Criscuolo and Verlhac (2020), “Declining business dynamism: Structural and policy determinants”, <https://doi.org/10.1787/77b92072-en>.

A multi-faceted policy framework to revive business dynamism

Beyond structural factors, policies and framework conditions are key for a dynamic business environment, as they influence the ease of entry and the strength of market selection and resource reallocation across firms. Framework conditions also shape firms’ incentives and capabilities to experiment, innovate and compete on the market. The paper finds that trends in business dynamism are significantly related to five policy areas that constitute the basis for a multi-pronged policy approach to strengthen business dynamism and partially offset past declines.

1. Low regulatory barriers and a level playing field are associated with milder declines in entry rates.

The entry of new firms, motivated by the prospect of future profit, is affected by the ability of entrepreneurs to register and operate new businesses and compete with incumbents, which is captured by the indicators of business regulation and barriers to entrepreneurship considered in the analysis. Burdensome and complex regulatory requirements, an elevated cost of tax compliance, high capital requirements or fees to start a business, licensing restrictions, and the protection of incumbents are likely to discourage entry and weaken market selection, thereby weakening firm churning.

2. Judicial efficiency and bankruptcy regulations are important levers of business dynamism, as efficient judicial and especially bankruptcy systems are associated with lower declines in entry rates.

The efficiency in the resolution of insolvency proceedings may affect entrepreneurship, employment and productivity growth through a credit supply effect. Reducing the time and cost of insolvency proceedings would increase the recovery rate and benefit creditors. This, in turn, can facilitate risky investments and contribute to reducing uncertainty associated with the entry and scale-up of projects. Allowing the restructuring of viable businesses and having efficient closures of failed businesses may also contribute to a timely reallocation of resources across firms, which is a key dimension of dynamism. Judicial efficiency also helps reduce ambiguity and improve the predictability of commercial relationships, making them less dependent on relational contracting that may penalise new firms.

3. Access to finance boosts business dynamism, as more financially developed countries and lower gaps in interest rates between firms of different size are associated with lower declines in entry rates.

The ability of the financial system to provide affordable credit to small and young firms, and to absorb economic shocks is key to entrepreneurship and firm growth. This is especially important in industries that require significant upfront investments, are more financially dependent or characterised by higher levels of risk. Through their ability to monitor and screen information, banks can also contribute to more efficient market selection and resource (re)allocation. However, heterogeneous financing opportunities between young firms and older incumbents, or between small- and medium-sized enterprises and large firms, may further contribute to lower dynamism. Differences in the access and cost of finance across firm types may, for instance, increase investment gaps in digital technologies and intangible assets, leading to a larger polarisation of markets, and thereby discouraging entry and experimentation. On the contrary, ensuring the availability of a diversified source of financing at all stages of a firm's life cycle may favour the process of creative destruction.

4. Innovation support contributes to a dynamic business environment. Policies boosting innovation through government-financed expenditures in R&D are indeed associated with a lower decline in entry rates, while innovation support for large businesses seems to be associated with possible increases in entry barriers.

Government expenditures in R&D may fund basic research or more risky projects, which can possibly uncover new business opportunities, increase firm capacities to adopt and effectively use new technologies, and boost the catch-up of innovative firms, ultimately favouring resource reallocation. However, large incumbents are generally more intensive in their R&D spending, and R&D tax incentives may indirectly favour large firms over small ones, pointing to the role of innovation policy design. This, in turn, could further increase barriers to entry, which may be reinforced by dominant players strategically using intellectual property rights to create patent thickets to prevent their innovations from being challenged.

5. Investments in education and human capital are essential to revive dynamism, especially as the need for a skilled work force is reinforced by structural changes and technological progress. Results suggest that countries with higher levels of human capital (as measured by the average number of years of schooling) and higher spending in education have experienced lower declines in dynamism.

Skills are becoming increasingly valuable in the digital era and the knowledge-based economy, and human capital is crucial for economies to adapt to this transition, including in maintaining high levels of dynamism. Education attainments and sustained levels of investment in human capital at the country level may help develop the capabilities of firms and workers to benefit from technological change, and reduce the competition for talent that may penalise young and small firms, thereby dampening the decline in dynamism. Higher levels of education are often associated with higher entrepreneurship propensity, as this may help potential entrepreneurs to identify and grasp business opportunities, while human capital is also key to improving managerial capabilities, which are a key determinant of a firm's success.

These results highlight the key elements of a dynamic business environment and the need to consider several policy aspects together (see also Calvino, Criscuolo and Menon, 2016). In addition, complementarities may arise among policies aimed at reducing barriers to entry and knowledge diffusion, at boosting experimentation and creative destruction, and at increasing absorptive capacity and the potential of firms to benefit from technological change.

Reforms in these areas may not only help offset declines in business dynamism, but are likely to bring double dividends, as well, including boosted productivity growth. They could also help reduce the performance gap between firms, thereby reducing wage inequalities and ensuring that the benefits of technological change are widespread across the economy.

Further reading

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OECD (2020), “Start-ups in the time of COVID-19: facing the challenges, seizing the opportunities”, OECD, Paris, www.oecd.org/coronavirus/policy-responses/start-ups-in-the-time-of-covid-19-facing-the-challenges-seizing-the-opportunities-87219267/.

Websites

OECD DynEmp: <https://www.oecd.org/fr/sti/dynemp.htm>

Productivity and business dynamism: <https://www.oecd.org/sti/ind/pbd/>

Directorate for Science, Technology and Innovation Policy Note

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