



# The Geography of Firm Dynamics

## Measuring Business Demography for Regional Development

### Policy highlights



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## Notes

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# Firm dynamics are essential for regional economic development

The creation of new firms is vital for economic development and prosperity. New firms are an essential source of innovation, economic growth and employment creation, generating on average more than 3% of jobs in regions annually. In recognition of this economic potential, policy makers around the world increasingly try to promote policies that foster local entrepreneurship and more innovation-based industries. Understanding the scale, heterogeneity and, more generally, the determinants of business dynamics is therefore conducive to designing entrepreneurship-enhancing policies.

Firm dynamics work to boost innovation and make enterprises more efficient while also generating new employment in regions. The creation and closure of firms can be part of an efficient reallocation of resources.

This publication offers new insights into subnational firm dynamics. Despite the significant role these subtleties play for local economic development, no systematic assessment has previously studied their magnitude, impact and determinants at the subnational level in the OECD area.

The *Geography of Firm Dynamics* fills this void.

It provides a first comprehensive description of regional business dynamics and of the factors explaining recent trends. It also includes a newly created database of reliable and comparable business demography indicators in OECD regions that help policy makers understand how to promote job creation.

Across the OECD, the birth, death and survival of firms is of a highly localised and contextual nature. While differences in business dynamics across regions are inevitable, the right policies can encourage and stimulate new business creations and employment.

Through *The Geography of Firm Dynamics*, the OECD provides an overview and a starting point for national and local policy makers to design strategies that are tailored to the specific characteristics of each region and thus raise prosperity.



# Regional differences in firm dynamics

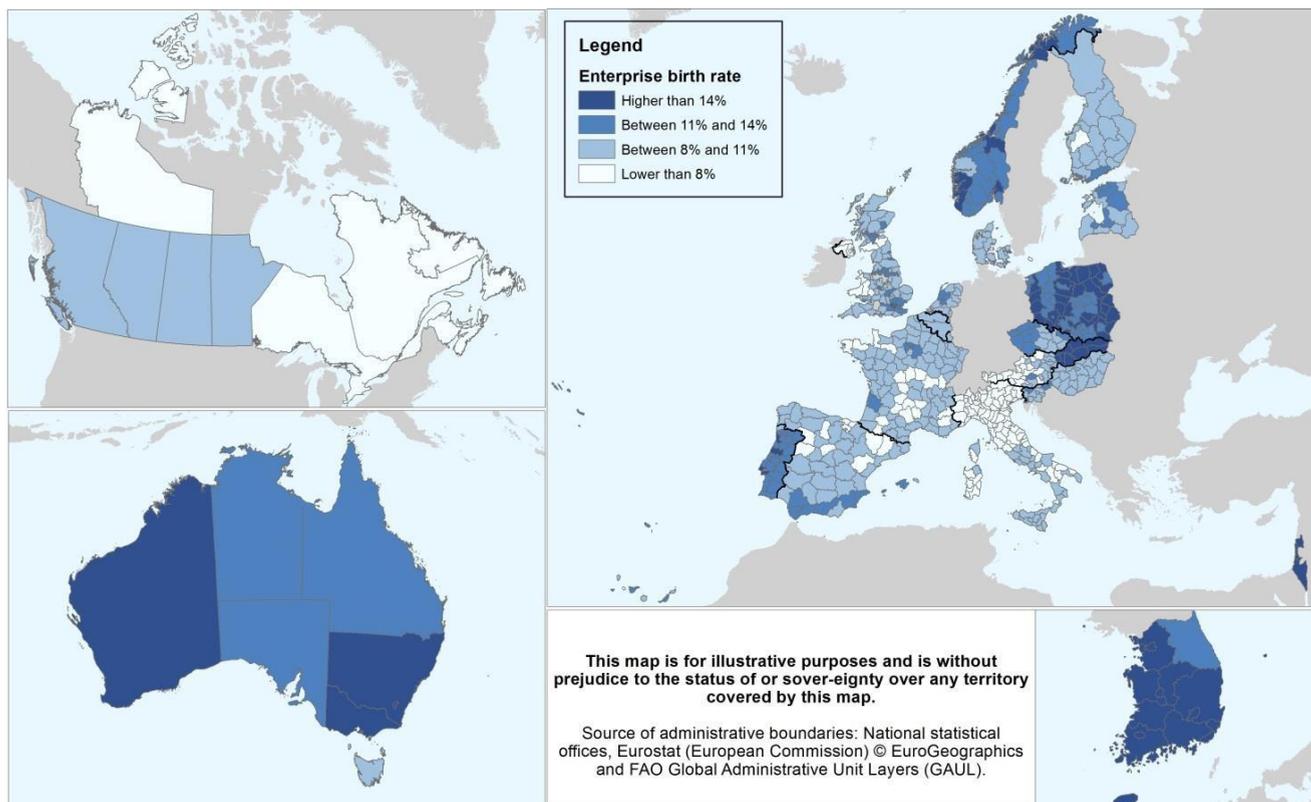
Business birth rates differ substantially within countries. While on average the proportion of newly created businesses as a share of active firms is around 10%, some regions display much higher or lower rates (Figure 1). This reflects that entrepreneurial activity is very unevenly distributed within countries. In London, for example, business birth rates are more than twice as high as those in the East of Northern Ireland.

Regions with high firm creation rates also experience more business closures, which exceed 10% per year in many regions. This implies that the within-country distribution of business closures has a strong regional component.

A high level of business closures – if accompanied by a high level of business creations – is not necessarily negative. It can contribute to reallocating resources efficiently among firms, thereby increasing economic productivity and wages.

Capital regions tend to be at the forefront when it comes to business creation and destruction: this is the case of Brussels, London, Copenhagen, Vienna and Helsinki. For example, firm birth rates are around 15% in both Copenhagen and London, clearly above the respective country averages. This evidence speaks to the higher dynamism often associated with capital regions, where dynamics of specialisation and creative destruction may be leading the developments of the regional market.

Figure 1. Firm creation rates across OECD regions



**Notes:** The figure presents business births as a proportion of total active firms in each region in the year 2014 (or last available year). All firms, including self-employed entrepreneurs, are included (total across sectors and size classes). Data are for TL2 regions in Austria, Belgium, Canada, Israel and the Netherlands; and for TL3 regions in all other countries.

**Source:** OECD (2017a), Regional Business Demography (database), <http://dx.doi.org/10.1787/region-data-en>

# Which regions have the highest business dynamics?

The large majority of new firms are born in cities. About 50% of all active firms have headquarters in urban regions, with 52% of new firm registrations taking place here (Figure 2A). While the concentration of population and services render urban areas attractive for entrepreneurs, the number of firm creations is disproportionately high in cities. As a consequence, urban regions have higher firm birth rates, i.e. higher shares of new firms among all firms, than rural or intermediate regions (Figure 2B).



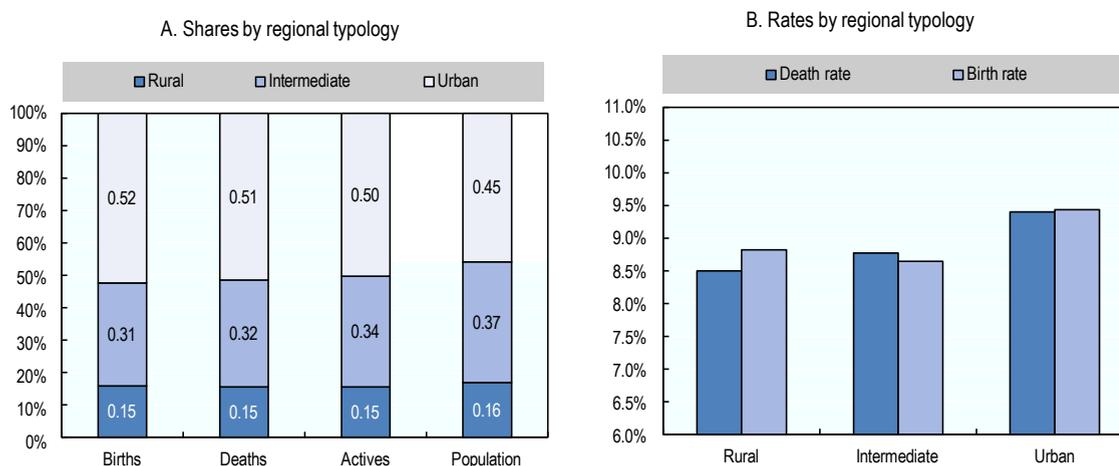
“Frontier regions”, i.e. the most productive regions in each country, account for a disproportionately large share of business births. New firms with more than 10 employees are concentrated in frontier regions. They host 40% more births of such firms than would be predicted given their share of active firms in the same size class.

The business environment in cities is more dynamic, as indicated by higher birth and death rates of firms (9.5% compared to roughly 8.5% in both rural and intermediate areas, Figure 2B). However, rural regions stand out by having the largest net creation rate of firms, as firm creations outnumber firm closures.

Across the OECD, regions with smaller firms recorded the largest firm creation rates. In those regions, the newly created firms were smaller (in terms of employment) than firms in the regions with larger existing firms and lower birth rates.

Declining regions face a vicious circle. Survival rates of young firms are consistently lower in regions where income and productivity have declined over time. This can reinforce such decline as productivity growth is partly driven by new firms.

Figure 2. Business births and deaths by urban, rural, and intermediate regions



**Notes:** The left-hand panel displays the share of births and deaths in predominantly urban/rural/intermediate regions as a proportion of total births in a country/year. The right-hand panel displays the birth and death rates (births as a proportion of active firms in a region in the same year). Austria, Denmark, Estonia, Finland, France, Hungary, Italy, Korea, the Netherlands, Poland, Portugal, the Slovak Republic, Spain and the United Kingdom are included. Average across all firms.

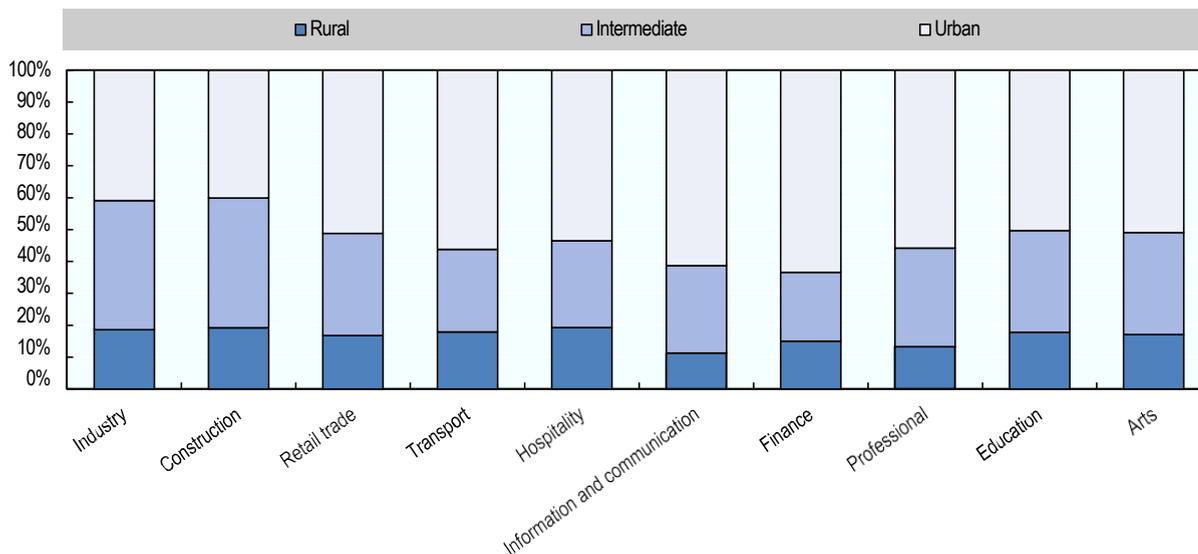
**Source:** OECD (2017), Regional Business Demography (database), <http://dx.doi.org/10.1787/region-data-en>.

# Which sectors fuel the creation of new firms?



- The differences in firm dynamics between rural, urban and intermediate areas reflect in part the size and sector composition of new firms.
- More than 60% of new businesses in the financial sector as well as in information and communication are created in urban regions. More generally, urban regions account for particularly large shares of firm creation in services.
- Intermediate regions record about 40% of new firms in industry (including manufacturing) and in construction, sectors that have high physical space requirements. These sectors are sensitive to land costs, but also benefit from accessing large markets and transportation networks.
- Rural regions instead account for a relatively large share (up to 20%) of new firms operating in the hospitality sector, which is possibly a reflection of the relevance of tourism.

Figure 3. Firm birth shares by sector and type of region



**Notes:** The figure displays the composition of business birth and deaths rates by type of region and by sector of economic activity of the firm (share of births and deaths in a sector as a proportion of total births in a region). The figures by regional typology are computed as averages across countries: Austria, the Czech Republic, Denmark, Estonia, Finland, France, Hungary, Ireland, Italy, Korea, the Netherlands, Norway, Poland, Portugal and the Slovak Republic. 2014 or last available year. All size classes included.

**Source:** OECD (2017a), *Regional Business Demography* (database), <http://dx.doi.org/10.1787/region-data-en>.

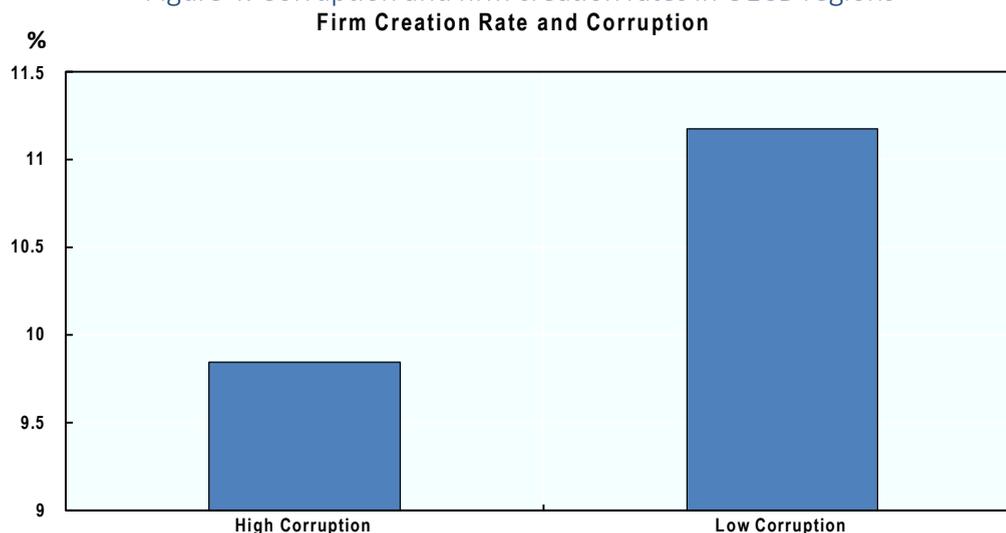
# What explains firm creations and closures?

Whether a region offers favourable conditions for setting up a business depends on multiple factors. Some of these factors can be targeted by policy makers with tailored, effective policies.

The following regional characteristics contribute to firm dynamics and thus economic growth:

<p><b>LOCAL GOVERNANCE:</b> Regions have significantly higher firm creation rates when they have business-friendly policies that make it easy to start a business.</p>	<p><b>BUSINESS REGULATION:</b> Higher product market regulation is associated with lower net business creation and reduced survival probability of new firms.</p>	<p><b>LOW CORRUPTION:</b> Corruption inhibits entrepreneurial activities. Regions with a high perceived level of corruption report firm creation rates that are 12% lower than in places with low corruption (Figure 4).</p>
<p><b>R&amp;D SPENDING:</b> Firm creation rates are significantly and positively correlated with Research &amp; Development by the higher education sector, highlighting the role of human capital and innovation.</p>	<p><b>EDUCATION:</b> The education of the regional labour force contributes to business creation. A 1% increase in the share of the regional workforce that is tertiary-educated is associated with an increase in the net firm creation rate by 0.5%.</p>	<p><b>ACCESS TO FINANCE:</b> Financing constraints of firms increase business deaths and reduce new business creation. In European regions, additional resources via EU Cohesion Funds can enhance regional firm dynamics and this effect is greater where there is a higher quality of governance.</p>

Figure 4. Corruption and firm creation rates in OECD regions



**Notes:** Correlation between average birth rates in employer firms by region between 2008 and 2015 (or last available year) and regional-level responses to the Gallup World Poll pooled across seven waves of the survey (2008-15). Regions are categorised as high (low) corruption if their perceived corruption measure is above (below) the regional median value. The Gallup World Poll question is: "Is corruption widespread within businesses located in (area), or not?" (yes=1, no=0).

**Sources:** OECD (2017a), *Regional Business Demography* (database), <http://dx.doi.org/10.1787/region-data-en>; Gallup World Poll (2008-15).

# How do firm dynamics contribute to regional job creation?

Newly founded firms make an important contribution to regional employment by directly creating jobs *and* enhancing job creation in older firms.



- Across the OECD, the share of employment created in new firms accounted for 3.3% of overall regional employment in firms in 2015.
- Employment creation by new firms varies considerably by country as well as across regions within the same country. Regions in Spain or Hungary gained on average 5% and 6% of employment through new firms, respectively, whereas employment creation rates are below 2% for (almost) all regions in the Czech Republic and Norway. Employment creation can reach up to 8% in some regions and in several countries the top-performing region records multiple times larger job creation than the respective bottom region.
- The employment impact of new firms goes beyond number of employees, which captures only the direct effects of firm creations. Firm dynamics also have indirect effects through higher competition for existing firms and more efficient allocation of resources.
- Being located in a competitive and innovative business environment can stimulate growth. For instance, European firms that received Cohesion Policy co-funding grew to a larger extent if they were located in a region with high firm creation or churn rates than funded firms located in less dynamic regions. Greater competition through new and more efficient firms appears to augment the overall employment impact.



# Headquarter locations – The dominance of capital cities

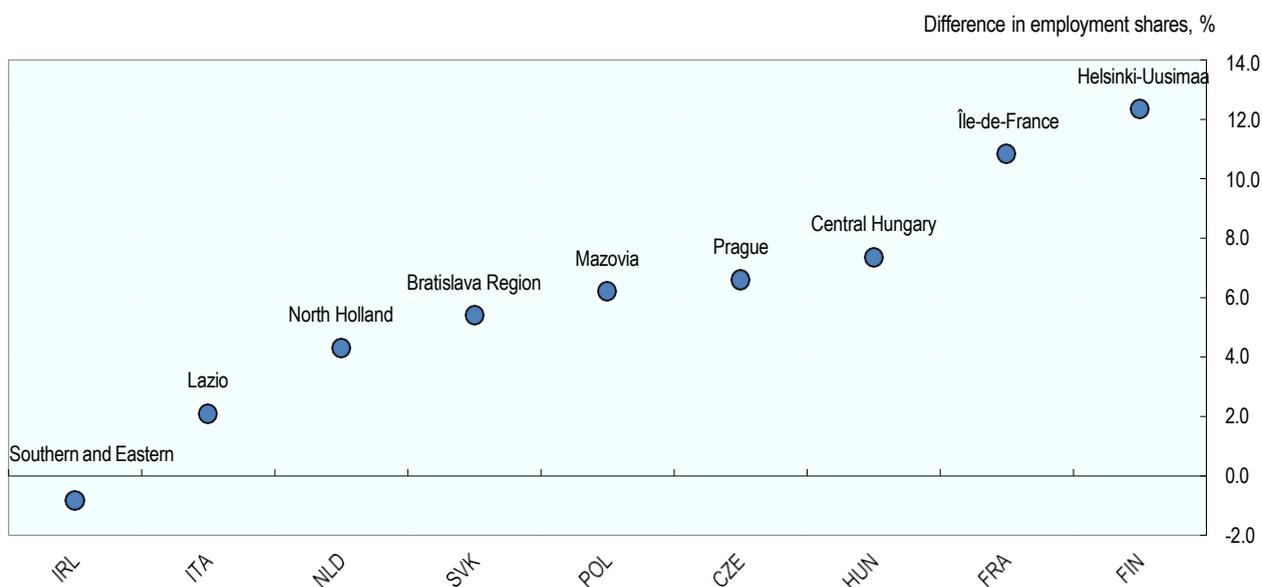
The headquarters of large firms tend to be concentrated in large cities. This creates a difference between the national share of employment that is located in a region and the share that is controlled by firms with headquarters in those regions.

Capital regions control 7% more jobs than those physically located in their region. In Finland and France, this additional control over jobs rises to 11% and 12% in the capital regions of Ile-de-France and Helsinki, respectively. The difference in the capital region's national employment share and the share controlled by its firms is also substantial in the Czech Republic, Hungary, Poland and the Slovak Republic where it surpasses 5%.



Economic shocks in capital cities can easily spill over to non-urban areas. As a significant part of local jobs are controlled by firms located in capitals, shocks to companies with headquarters in capital regions can proliferate to other regions and affect the local economies.

Figure 5. Difference between employment located in and controlled by firms in capital regions



**Notes:** Difference in capital regions' national share of employment in enterprises to their national share of employment in establishments. Positive numbers indicate a relatively stronger bias in employment statistics based on enterprise data. The statistics are computed for TL2 regions. The figures are based on all business sectors, excluding education and arts (sectors B to N).

**Sources:** OECD (2017a), Regional Business Demography (database), <http://dx.doi.org/10.1787/region-data-en>.

# Key findings and policy recommendations

## How to improve the measurement of regional business dynamics?

Increase international harmonisation of data collection:

Business demography indicators and the method to monitor them should be harmonised. Not all firms create jobs, but differences in tax rules and legal systems give rise to different creation rates of such non-employer firms. In order to ensure a meaningful comparison, business demography data should distinguish between employer and non-employer firms.

Provide data at a detailed geographic level that goes beyond large regions or states:

Public policies to promote entrepreneurship can be designed more effectively if precise geographic information is provided. Firm dynamics are highly context-dependent and localised. Data at an aggregate level of large regions or federal states are likely to mask vital spatial nuances.

Build on established methodologies:

To maximise international harmonisation, indicators should provide precise information of the location of firms' headquarters. This is the most commonly used approach and promises the greatest consistency and coverage.



## How to promote regional entrepreneurship?

Strengthen firms' regional access to finance:

A lack of access to finance tarnishes regional entrepreneurship and lowers the survival probability of new firms.

Design more business-friendly policies and market regulation:

Local governance can play an important role in enhancing entrepreneurship. Business-friendly policies, streamlined product market regulation and reliable, transparent governance raise entrepreneurial activities across regions.

Boost human capital and promote R&D

Having a skilled labour force is increasingly important and provides the basis for entrepreneurship. Tertiary education of the labour force is associated with much higher net firm creation rates in OECD regions. Similarly, higher R&D spending through local institutions of higher education can create innovation spill overs that increase regional firm creation.

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More information:

Contacts: [Paolo.Veneri@oecd.org](mailto:Paolo.Veneri@oecd.org) and [Lukas.Kleine-Rueschkamp@oecd.org](mailto:Lukas.Kleine-Rueschkamp@oecd.org)

Website: <http://www.oecd.org/regional/regional-policy/regional-business-demography.htm>

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