

## ***Chapter 1.***

### **The case for regional business demography**

*This chapter provides the context and rationale for measuring business demography at the regional level. It explains why place is important to assess business dynamics and highlights the most important methodological and empirical challenges in building internationally comparable evidence on the dynamics of businesses and of its related employment across regions. Finally, it synthesises what the report offers and how it can be used by experts and policy makers.*

## Introduction: Why regional business demography

Over the course of the past three decades, most OECD countries have experienced a dramatic change in the sectoral composition of their economies. In many countries, industrial production is shifting further away from traditional manufacturing and towards more innovation-led businesses, a phenomenon in part linked to the emergence of global value chains (De Backer and Miroudot, 2013). As a result, policy makers concerned with sustaining economic development and employment growth are progressively relying less on large-scale industrial complexes and leaning more towards sustaining local entrepreneurship (Chatterji, Glaeser and Kerr, 2013). The policy attention reserved to small and medium enterprises (SMEs) in this context stems from the expectation that new enterprises will generate growth by fostering employment and productivity (Birch, 1979, 1981; Romer, 1986). Indeed, empirical evidence seems to indicate that young and small firms contribute substantially to employment growth (Neumark, Wall and Zhang, 2011; Haltiwanger, Jarmin and Miranda, 2013; Criscuolo, Gal and Menon, 2014).

However, national statistics on business demography often mask a substantial heterogeneity in the distribution of entrepreneurship within OECD countries. Some regions attract a disproportionate share of new businesses and of the related employment growth (OECD, 2014). Economic theory typically attributes the heterogeneous spatial distribution of entrepreneurial activity to differences in entry costs, input factors or talent across regions (Glaeser, Kerr and Ponzetto, 2010; Guiso and Schivardi, 2011; Lucas, 1978). Clusters may also emerge and prosper due to social and cultural factors with a strong local component (Marshall, 1922; Becattini, 1990). The uneven distribution of economic activity across space is enhanced by the agglomeration dynamics associated with productive clusters. The presence of incumbent firms acts as a catalyst for new entrepreneurs and is associated with higher rates of firm survival and with cross-industry positive spillovers (Delgado, Porter and Stern, 2010; 2014). This agglomeration tendency can be partially explained by the capacity of existing clusters to lower the entry costs, provide access to better intermediate inputs and enlarge the pool of workers with similar skills (Delgado, Porter and Stern, 2010, 2014; Overman and Puga, 2010).

Agglomeration tendencies may lead to the emergence of a core-periphery pattern between regions (Krugman, 1991), which acts in the opposite direction of inter-regional convergence. In particular, the effects of entrepreneurship on employment can be mediated by a substantial regional component since business quality can differ endogenously across regions and because of inter-regional spillovers (Fritsch and Mueller, 2004; Fritsch, 2008). Analysing entrepreneurial dynamics at the subnational level is therefore of paramount importance in order to help policy makers design policies that are tailored to local circumstances and better fits to sustain long-term growth.

## What this report offers

The contribution of this report is threefold. First, it provides data on business demography (active firms, births, deaths and survival rates) for a large set of OECD regions in a time span generally covering on average the years 2007-14. When available, employment indicators related to business demography (employment in active firms, in births, deaths and survivals) are also collected. Second, it provides a methodological discussion on how to overcome the major challenges emerging for measuring business demography at the subnational level and from an international perspective. The first and probably most important challenge is the distinction between employer and non-employer business

demography statistics. The possibility to distinguish employer firms (those with at least one employee) from the set of all firms allows a much stronger comparability of actual business dynamics, as it mitigates the bias emerging from institutional, taxation and regulatory differences across countries. Third, the report presents evidence on business dynamics and related employment dynamics across OECD regions, identifying facts and recent trends that can be useful for experts and policy makers to better understand how to improve regional development and foster the quality of the business environment.

This chapter describes the main steps and the results of the measurement of business demography across OECD regions. Such measurement led to the development of an *OECD Regional Business Demography Database*, a cross-country harmonised data source covering indicators of firm activity at the subnational level which spans across the regions of 27 OECD countries. This database is a relevant contribution to the OECD data collection. While business demography indicators are available at different levels of geographical detail for most OECD member countries, a cross-country harmonised database on business demography covering the OECD at the subnational level was missing.

A second contribution of this project is towards the development of a comparable methodology to measure business activity at the subnational level. Chapter 2 of this report starts by briefly recapping the methodological work commenced in 2006 by the OECD-Eurostat Entrepreneurship Indicators programme which resulted in the *Manual on Business Demography Statistics* (OECD/Eurostat, 2007), concerned with developing a benchmark for the measurement of business demography indicators at the national level. This manual now forms the methodological framework of reference for the collection of business demography indicators for OECD member countries.<sup>1</sup>

However, the harmonisation of business demography statistics at the subnational level poses an additional set of methodological issues. Chapter 2 discusses especially the distinction between indicators based on the location of the company's headquarters (firms) and indicators based on the physical location of production units (plants). The choice of how to assign productive units to regions is crucial, since it has the potential to drastically affect the interpretation of indicators, particularly in the context of regional statistics (Ahmad, 2008).

Given the conceptual and practical distinction between enterprise and establishment indicators, this project has collected both sets of statistics. This report presents an analysis of both enterprise- and establishment-based indicators, as well as a comparison between the two. An enterprise approach enables a more sound measurement of real firm dynamics in the sense that it allows firm births and deaths to be correctly and consistently measured instead of being confounded with additional plants of already existing businesses. In addition, regional business demography statistics at the enterprise level have already reached a substantial level of international comparability. Therefore, future data collection to measure regional business demography will be more appropriate at the enterprise level, preferably allowing the distinction between employer and non-employer enterprises and at a sufficiently detailed geographical scale, such as that of OECD TL3 regions (*cf.* Box 3.3).

Chapter 3 describes indicators based on the enterprise approach, available for public use. This database has the widest coverage, including most OECD countries that collect statistics at the subnational level. It also offers rich spatial information as data on TL3 regions has been collected for the vast majority of countries. Furthermore, enterprise-level data benefits from a high degree of methodological consistency across countries thanks to the fact that firm-level regional statistics follow, in most cases, the guidelines outlined for national indicators.

Enterprise-level indicators are especially useful for measuring firm dynamics, such as business birth, death and survival rates. The analysis of enterprise indicators delineates some clear regional disparities within OECD countries, in particular with respect to the role of cities. Urban areas tend to host more business births, even in comparison to their population size and density. Furthermore, they host larger and more knowledge-intensive firms. Urban areas are dynamic environments, where businesses find conditions to exist, but also face more competition, especially in large or capital cities. Cities are subject to economies of agglomeration but also to forces of creative destruction.

Enterprise-level indicators are essential for measuring regional disparities in entrepreneurial opportunity. However, they can be a source of bias when used to assess the location of the employment generated by existing firms. Large, multi-plant firms (which tend to have headquarters in cities) may operate a substantial amount of plants (and employ workers) outside of the region where the headquarters are located. If all workers employed in multi-plant firms are attributed to the headquarters' regions (as is the case with enterprise-level indicators), the real geographical distribution of employment presents a "headquarter bias", which may in some cases be severe.

Therefore, Chapter 4 of this report, which discusses employment dynamics across OECD regions, also presents establishment-level indicators. These indicators focus on measuring the business life of local production units (plants). In establishment-level indicators, regions correspond to the actual physical location of the production unit, and of its workers, rather than the location of the firms' headquarters.

Establishment-level indicators are also based on the harmonisation of regional aggregated data developed by national statistical offices (NSOs) (see Annex 4.A3 in Chapter 4). However, since a majority of NSOs measure business demography only at the level of enterprises, these indicators are available only for a subset of OECD countries. Furthermore, establishment-level indicators are not harmonised across countries, since each NSO applies definitions of establishment-related demographic events, which are not consistent. Most of these inconsistencies are documented in Chapter 4. Besides the issue of cross-country comparability, establishment-level demography indicators will overstate the share of new firms and capture more than merely the impact of firm births, since a new establishment can be an expansion of an existing firm. Despite these limitations, establishment-level indicators offer a valuable perspective to look at the actual geographical distribution of production units across the territory.

Since employment generation is the *raison d'être* of many SME-oriented policies (industrial policy in general), indicators of employment creation through business dynamics prove crucial from the standpoint of regional development policy, as will be illustrated in this report. For this reason, Chapter 4 is largely dedicated to the analysis of employment creation as well as the comparison between enterprise- and establishment-level indicators. This comparison shows that enterprise-level indicators (presented in Chapter 3) show a higher spatial concentration of employment than establishment-level ones. This is because firms and plants are unequally distributed across regions, but firms tend to be much more concentrated than plants. Therefore, the real geographical distribution of workers across regions, while highly unequal in general, is often more homogenous than enterprise-level indicators would otherwise suggest.

One lesson emerging from Chapter 4 is that current regional indicators of business demography often overestimate the concentration of workers in cities, particularly capital cities. This finding has some interesting policy implications. The first is to suggest that firms created in cities can, and do, generate income and employment far from the city

itself, which helps reduce inter-regional disparities. On the other hand, these indicators stress another dimension of regional inequality, which has to do with economic control. Legal control (ownership) is concentrated in cities (capitals, in particular), with respect to the actual physical location of production and workers. Cities are the places hosting the organisation, management and control over a substantial fraction of the production factors and of workers in other regions. This phenomenon might, in fact, constitute a particular form of inter-regional inequality, along the lines of political economy. In several respects, this type of inter-regional relationship might be connected to the disparities in skills, tasks and working conditions existing across regions for the same firm, similarly to what proposed by De La Roca and Puga (2017).

Given the findings emerging from the comparison between establishment and enterprise indicators, future methodological work should focus on the development of a common method for the production and collection of business demography statistics at the enterprise level, along the lines of the OECD/Eurostat (2007) effort. Additionally, a consistent measurement across all countries of firm dynamics along the distinction of employer and non-employer firms would signify an important progress. This methodological framework might be useful also to encourage the NSOs that have yet to do so, to develop regional indicators of business demography at a sufficiently detailed geographical scale, which are better suited to analyse the place-based characteristics that can promote a stronger and healthier environment for all businesses.

Finally, this report also presents the results emerging from the Regional Dynemp Project, which was initially developed to compare the performance of businesses over time and their capacity to create employment across OECD countries at the national level (Criscuolo, Gal and Menon, 2015). Chapter 5 presents the results of the extensions of Dynemp at the regional and metropolitan level for a subset of OECD countries. The produced indicators make it possible to analyse employment growth, with detail on plant age, size and two-digit sector, although at the moment only covering a limited number of countries. The main methodological improvement of Regional Dynemp with respect to other indicators presented in this report is the possibility to follow plants' post-entry performance, thanks to a routine that aggregates business register data to produce transition matrixes that allow the performance of groups of plants to be followed over time. Contrary to Chapter 3 and to the main database presented in this report at the enterprise level, Chapter 5 considers plant entries and exits instead of births and deaths, a difference that will be explained in further detail in the following chapter as well as in the Annex 5.A1. Results from Chapter 5 highlight how small, young plants are the largest contributors to employment creation and growth, confirming the results emerging from the previous national analysis (Criscuolo, Gall and Menon, 2014), even though these figures are by definition higher than they would be for small, young firms. Furthermore, regional characteristics, such as the degree of productivity and agglomeration dynamics, have positive implications for entrepreneurial outcomes and post-entry employment growth.

The indicators and methodological considerations developed through this work will help address a set of policy-relevant questions that relate to entrepreneurship and to the distribution of employment opportunities. The promotion of SMEs is rapidly becoming a pillar of growth-friendly policies.

This work highlights relevant spatial disparities in the distribution of entrepreneurial activity and business performance. Regions differ in their capacity to attract and retain business and employment; in turn, the heterogeneous distribution of firms and workers has vital implications for the development of regions. Dynamics of agglomeration, of the

heterogeneous distribution of employment opportunities and innovation across space not only have implications for regional development, but for the long-term growth trajectory of countries. These inequalities matter for regional development, and a coherent policy-making trajectory for regions requires taking these disparities into account.

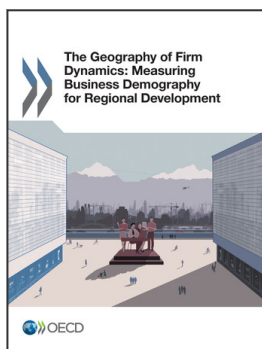
## Note

1. As a result of this work, national-level business demography statistics have been harmonised across OECD countries. The data resulting from this project are presented annually (since 2011) in the OECD publication *Entrepreneurship at a Glance*.

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