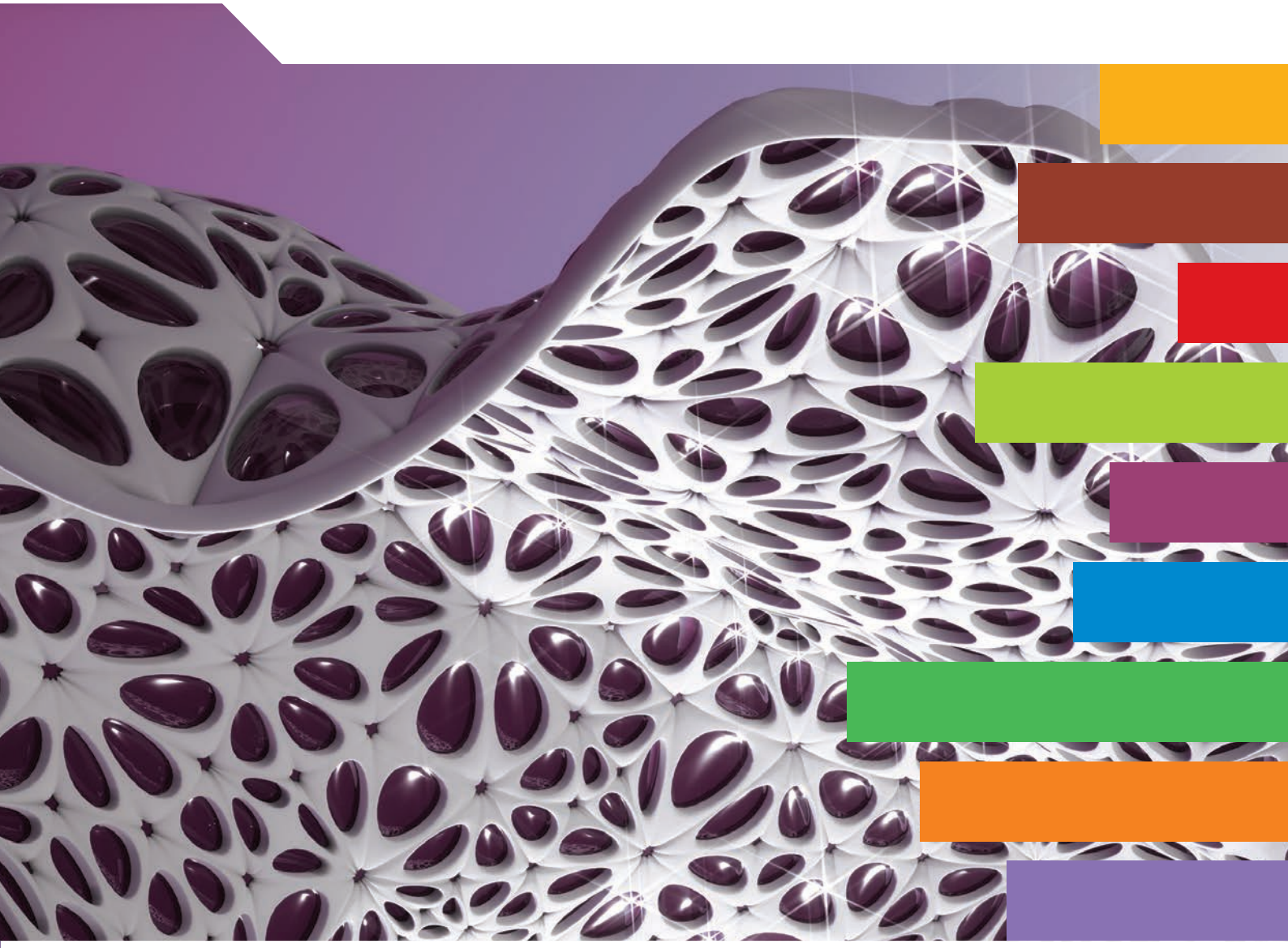
Entrepreneurship at a Glance 2017



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Entrepreneurship at a Glance 2017

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Foreword

The collection of entrepreneurship indicators presented in Entrepreneurship at a Glance *is the result of the OECD-Eurostat Entrepreneurship Indicators Programme (EIP). The programme, started in 2006, was the first attempt to compile and publish international data on entrepreneurship from official government statistical sources. From the outset a key feature in the development of these indicators has been to minimise compilation costs for national statistical offices, which is why the programme focuses attention on exploiting existing sources of data.*

Informing policy design through the development of policy-relevant indicators is at the core of the EIP programme, and much attention is paid to responding to information needs, including the need for timely information on the situation of small businesses. To that purpose, Entrepreneurship at a Glance *features an opening chapter on recent trends in entrepreneurship, discussing the evolution of enterprise creations, bankruptcies and self-employment.*

This edition was prepared in the Trade and Competitiveness Division of the OECD Statistics Directorate by Liliana Suchodolska, Gueram Sargsyan, Belén Zinni and Frédéric Parrot. Nadim Ahmad and Mariarosa Lunati provided overall guidance and edited the publication.

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Table of contents

Executive summary 7

Reader's guide 11

1. Recent developments in entrepreneurship 17

Enterprise creations are picking-up in most countries 18
Bankruptcies are back to pre-crisis levels 24
Self-employment has evolved differently across countries 26
Digitalisation has opened new pathways and markets for entrepreneurial growth 29

2. Structure and performance of the enterprise population 35

Enterprises by size 36
Employment by enterprise size 42
Value added by enterprise size 50
Turnover by enterprise size 54
Compensation of employees by enterprise size 56

3. Productivity by enterprise size 59

Productivity gaps across enterprises 60
Productivity growth by enterprise size 62
Productivity and wage gaps across firms 66

4. Business dynamics and job creation 71

Birth of enterprises 72
Death of enterprises 78
Churn rate 84
Young enterprises 86
High-growth enterprises rate 90

5. Smes and international trade 95

Trade concentration 96
Trade by enterprise size 100
SMEs and market proximity 104
Trade by enterprise ownership 106

6. Female entrepreneurship 109

Gender differences in self-employment rates 110
Earnings from self-employment 116
Entrepreneurial attitude 118

7. Venture capital 123

Venture capital investments 124
Venture capital investments by investee company 126
Venture capital investments by sector 130

Annex A. **Sources of data on timely indicators of entrepreneurship** 133

Annex B. **List of indicators of entrepreneurial determinants** 138

Annex C. **International comparability of venture capital data** 143

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Executive summary

In most OECD countries where data are available, numbers of new firm creations continue to recover, and in many countries are above pre-crisis highs, suggesting that any secular decline in enterprise creation rates may be abating.

Improvements in bankruptcy trends reinforce the signals of an upturn in the entrepreneurial environment. At the end of 2016 the number of bankruptcies was back to, or below, pre-crisis levels, in most countries. And even in countries where bankruptcy levels remained higher than in 2007, in particular Iceland, Italy and Spain, early 2017 trends are beginning to point to improvements.

Services have been an important driver of firm creation

In all OECD countries enterprise creation rates in services outpaced those for industrial firms, contributing around two-thirds of all jobs created by new firms in 2014. But in most economies new industrial firms contributed less than 15% of jobs created. Moreover, between 2008 and 2014 employment in manufacturing decreased in all but two OECD countries: Luxembourg and Germany.

Employment rates have also recovered in many countries, and, in most, SMEs, young and old, have been the main drivers of growth. Within manufacturing, employment growth in large enterprises in the euro area, which were less affected by the crisis than SMEs, has continued to outperform that for SMEs. In the United States the opposite has been the case, with large service sector enterprises driving post-crisis employment growth.

Productivity differences between larger and smaller firms vary considerably across countries and across sectors. In general however, productivity gaps are much smaller in the services sector than they are in manufacturing. Typically the larger the productivity gap the larger the wage gap - in Germany, for example, large firms paid a wage premium of over 50% of medium-size firms and over double that of smaller and micro enterprises – so growth in services sector activities may help to reduce the size of whole economy wage distributions.

A more entrepreneurial services sector may also help to continue to reduce gender inequalities, as women disproportionately engage in service sector start-ups. Over the last ten years the gap between male and female self-employment rates has closed in nearly all countries. But significant gender gaps remain: in OECD countries, one in ten employed women is self-employed, almost half the rate of self-employed men (17%).

Wage gaps in manufacturing are increasing in many countries

In many countries, post-crisis labour productivity growth in SMEs in the manufacturing sector lagged large enterprises, exacerbating existing productivity gaps, especially in Belgium, the Czech Republic, Germany, Latvia and the Slovak Republic. In turn, wage gaps

between larger and smaller manufacturing firms increased in all OECD Eastern European countries - except Poland-, the Baltic States, Norway and the United Kingdom between 2008 and 2014

Digital tools have provided new pathways and unlocked new markets for micro-entrepreneurs

The development of affordable digital tools and platforms has provided new opportunities for micro-enterprises to tap into foreign markets in a way that would previously have been unimaginable.

New data from the *Future of Business Survey*, a joint Facebook-OECD-World Bank monthly survey of SMEs with a digital presence, show that even "just me" entrepreneurs (i.e. self-employed with no employees) can engage in exports as a major activity for their business, by capitalising on digital tools, despite their small scale. Two in three exporting firms responded that more than half of their international sales depended on online tools and nearly half (45%) reported that more than 75% of their international sales were reliant on online tools.

The most recent data from the *Future of Business Survey* also confirm previous findings that businesses that trade internationally are more confident in the current state and future outlook of their businesses, and are also more likely to have positive prospects of job creation. This is also true for "just-me" entrepreneurs who are traders. That said, the survey also reveals that large firms generally have a more positive evaluation of the state of their business than smaller firms. This reflects important challenges faced by micro-enterprises in running and growing their business, such as compliance with regulations, securing financing, recruiting and retaining skilled employees, and finding business partners.

The emergence of "gig workers"

A generalised trend across most countries has been the growth in numbers of self-employed working only part-time. Part-time self-employment has increased considerably in the past decade, in part reflecting new opportunities presented by the emergence of the "gig economy", i.e. the rising phenomenon of flexible employment arrangements, that complement or substitute for full-time jobs. While gigs themselves are not new (the entertainment industry, for instance, has always relied on them), today they are being offered and demanded by a larger and more diverse group of people and cover a wider range of services than ever before.

The emergence of gig workers raises new questions on the appropriateness of self-employment rates or levels as proxies for the size of entrepreneurialism, as the relationship between the gig economy and entrepreneurial activity is by no means obvious. Participants in the gig economy may be small-scale entrepreneurs, but many of the gig workers provide their services under conditions that share strong similarities with conventional employees, in particular the absence of the entrepreneurial risk. At the same time, the flexibility that gigs offer do often contrast with traditional salaried employment and may encourage nascent entrepreneurs to implement their start-up ideas while still being able to cover living expenses.

Measurement challenges therefore exist in assessing the contribution of gig workers to entrepreneurialism, with some evidence suggesting that the gig economy may sometimes decrease entrepreneurial activity, in particular when gig economy platforms act as a substitute for low-quality entrepreneurship rather than as a complement to high-quality entrepreneurship.

Addressing these measurement challenges and exploring avenues to improve the availability of data in this area will form an addition to the commitment of this publication to provide better data for the measurement of entrepreneurship. Other on-going efforts in this regard include profiling new enterprises according to their ownership and trading status and integration into global value chains, the development of improved data on gender, and, also, more generally, with regards to highlighting statistical pitfalls and caveats in the use of entrepreneurship data.

Reader's guide

This publication presents indicators of entrepreneurship collected by the OECD-Eurostat Entrepreneurship Indicators Programme (EIP). Started in 2006, the programme develops multiple measures of entrepreneurship and its determinants according to a conceptual framework that distinguishes between the manifestation of entrepreneurship, the factors that influence it, and the impacts of entrepreneurship on the economy. A defining characteristic of the programme is that it does not provide a single composite measure of overall entrepreneurship within an economy. Rather, recognising its multi-faceted nature, the programme revolves around a suite of **indicators of entrepreneurial performance** that each provide insights into one or more of these facets. Perhaps most important is the recognition within the programme that entrepreneurship is not only about start-ups or the number of self-employed persons: entrepreneurs and entrepreneurial forces can be found in many existing businesses and understanding the dynamism these actors exert on the economy is as important as understanding the dynamics of start-ups or the self-employed.

Indicators of entrepreneurial performance, computed by National Statistical Offices (NSOs), are presented for the following countries: Australia, Austria, Belgium, Brazil, Canada, Chile, Colombia, the Czech Republic, Denmark, Estonia, Finland, France, Hungary, Germany, Israel, Italy, Japan, Korea, Latvia, Lithuania, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Portugal, Romania, the Russian Federation, the Slovak Republic, Slovenia, Spain, Sweden, Switzerland, the United Kingdom and the United States.

For each indicator, a short text explains what the indicator measures, how it is defined, and its policy relevance. Additional commentary is provided on the comparability of the indicator across countries.

Data are also presented for the entrepreneurial determinant "venture capital", while a list of **indicators of determinants of entrepreneurship,** together with their data sources, is included in an Annex.

Indicators

The set of indicators that are part of the EIP framework are developed to different degrees. Some of them are well-established components of regular data collections, while others are only compiled in a restricted number of countries, and their harmonised definition forms the object of discussion and further work. The indicators presented in this publication reflect this diversity:

A) New enterprise creations

B) Bankruptcies

C) Self-employment

D) Outlook and prospects of job creation

E) Enterprises by size
F) Employment by enterprise size
G) Value added by enterprise size
H) Turnover by enterprise size
I) Compensation of employees by enterprise size
J) Labour productivity by enterprise size
K) Birth rate of enterprises
L) Death rate of enterprises
M) Survival of enterprises
N) Employment creation and destruction by enterprise births and deaths
O) High-growth enterprises rate
P) Concentration of trade
Q) Exports and imports by enterprise size
R) Market proximity
S) Exports and imports by enterprise ownership
T) Self-employment by gender
U) Self-employment among the youth
V) Earnings from self-employment
W) Entrepreneurial attitude
X) Venture capital investments

Indicators A and B are drawn from the *OECD Timely Indicators of Entrepreneurship (TIE) Database*. Annex A provides the list of sources that are used to compile the database. The source of indicator C is the *OECD Main Economic Indicators (MEI) Database*. Indicator D is based on the results of the *Future of Business Survey,* a monthly online survey designed by Facebook jointly with the OECD Statistics Directorate and the World Bank.

For indicators E to O the source is the *OECD Structural and Demographic Business Statistics (SDBS) Database*. Indicators E to J refer to Structural Business Statistics, while indicators K to O consist of Business Demography statistics, generally computed from business registers. Indicators P to S originate from the *OECD Trade by Enterprise Characteristics (TEC) Database*. The harmonised data of the SDBS and TEC databases are collected annually from National Statistical Offices.

The indicators on self-employment come from Labour Force Surveys and Census Population data (indicators T and U) and Surveys on Income (indicators V).

Indicator W is based on the results of the *Future of Business Survey.*

The source of Indicator X is the *OECD Entrepreneurship Finance Database*.

Size-class breakdown

Structural Business Statistics indicators usually focus on five size classes based on the number of **persons employed**, where the data across countries and variables can be closely aligned in most cases: 1-9, 10-19, 20-49, 50-249, 250+. Not all country information fits perfectly into this classification, however, and any divergence from these target size classes is reported in each chapter.

For Business Demography data, the typical collection breakdown is 1-4, 5-9, 10+ **employees** to reflect the fact that a vast majority of newly created enterprises are micro-enterprises.

For Trade by Enterprise Characteristics (TEC) data, the size classification is based on four classes: 0-9, 10-49, 50-249, 250+ **employees**; in addition, a class denominated "unknown" contains information on trade for enterprises for which the size could not be established.

In this publication, micro-enterprises are defined as firms with 1-9 persons employed; small enterprises: 10-49; medium enterprises: 50-249; and large enterprises: 250 and more. The term "small and medium-sized enterprises (SMEs)" refers to the size class 1-249 persons employed. In figures based on TEC data, SMEs refer to enterprises with 0-249 employees.

Activity breakdown

Data are presented according to the International Standard Industrial Classification of all economic activities Revision 4 (ISIC Rev. 4). Business economy covers: Mining and quarrying (05-09), Manufacturing (10-33), Electricity, gas, steam and air conditioning supply (35), Water supply, sewerage, waste management and remediation activities (36-39), Construction (41-43) and Services (45-82). Services include: Wholesale and retail trade, repair of motor vehicles and motorcycles (45-47), Transportation and storage (49-53); Accommodation and food service activities (55-56), Information and communication (58-63), Financial and insurance activities (64-66), Real estate activities (68), Professional, scientific and technical activities (69-75), and Administrative and support service activities (77-82).

For Structural Business Statistics (Chapters 2 and 3), the entire section of Financial and insurance activities (64-66) is excluded from Services, except for Canada and Korea; for Business Demography (Chapters 4 and 5), activities of holding companies (642) are excluded from Financial and insurance activities, except for Israel, Korea, Mexico and the United States.

In Chapters 4 to 6, the aggregate Industry is used and includes sectors 05 to 39. In Chapter 6, Total Economy covers all ISIC Rev. 4 sectors, from 01 to 99 (i.e. from agriculture to activities of extraterritorial organisations).

For some countries, data provided by the respective NSOs follow national classification systems that are subsequently converted to ISIC Rev. 4 for the following countries in this publication. The source data for Canada and Mexico follow the North American Industry Classification System 2012 at the level of 2-digit sections or higher. For Japan, 2013 structural data for the number of enterprises and the number of employees originate from the 2014 Economic Census for Business Frame and follow the Japan Standard Industrial Classification Rev. 13 at the level of 2-digit sections or higher. For Korea, 2006-2014 structural data for the number of enterprises and the number of employees are based on the Census of Establishments, which together with business demography data follow the Korean Standard Industrial Classification at the level of 2-digit sections or higher. The source data for European Union member states, Norway, Switzerland and Turkey follow the NACE Rev. 2 classification at the level of 3-digit groups and higher.

Business demography data for the United States and structural business data for the Russian Federation are compiled according to ISIC Rev. 3.

Data for the remaining countries are received from NSOs in ISIC Rev. 4.

Country codes

The figures in this publication use ISO codes (ISO3) for country names as listed below.

ARG	Argentina	**LVA**	Latvia
AUS	Australia	**LTU**	Lithuania
AUT	Austria	**LUX**	Luxembourg
BEL	Belgium	**MEX**	Mexico
BRA	Brazil	**NLD**	Netherlands
CAN	Canada	**NZL**	New Zealand
CHL	Chile	**NOR**	Norway
COL	Colombia	**PER**	Peru
CZE	Czech Republic	**PRT**	Portugal
DNK	Denmark	**ROU**	Romania
EST	Estonia	**RUS**	Russian Federation
FIN	Finland	**SVK**	Slovak Republic
FRA	France	**SVN**	Slovenia
HUN	Hungary	**ESP**	Spain
DEU	Germany	**ZAF**	South Africa
IND	India	**SWE**	Sweden
IDN	Indonesia	**CHE**	Switzerland
ISR	Israel	**TUR**	Turkey
ITA	Italy	**GBR**	United Kingdom
JPN	Japan	**USA**	United States
KOR	Korea	**VNM**	Viet Nam

EIP Framework

Entrepreneurship is defined by the EIP as the phenomenon associated with entrepreneurial activity, which is the enterprising human action in pursuit of the generation of value, through the creation or expansion of economic activity, by identifying and exploiting new products, processes or markets. In this sense, entrepreneurship is a phenomenon that manifests itself throughout the economy and in many different forms with many different outcomes, not always related to the creation of financial wealth; for example, they may be related to increasing employment, tackling inequalities or environmental issues. The challenge of the EIP is to improve the understanding of these multiple manifestations. The programme recognises that no single indicator can ever adequately cover entrepreneurship, and it has therefore developed a set of measures that each captures a different aspect or type of entrepreneurship; these measures are referred to as EIP indicators of entrepreneurial performance. There are some 20 performance indicators covered in the EIP.

The EIP takes a comprehensive approach to the measurement of entrepreneurship by looking not only at the manifestation of the entrepreneurial phenomenon but also at the factors that influence it. These factors range from the market conditions to the regulatory framework, to the culture or the conditions of access to finance. While some areas of determinants lend themselves more readily to measurement (for instance, the existence and restrictiveness of anti-trust laws or the administrative costs of setting-up a new business in a country), for other determinants the difficulty resides in finding suitable measures (e.g. business angel capital) and/or in comprehending the exact nature of their relationship with entrepreneurship (e.g. culture). An objective of the EIP in this instance is to

contribute to advancing research on the less understood and less measurable determinants of entrepreneurship. Annex B presents a comprehensive list of indicators of determinants and the corresponding data sources.

Determinants						Entrepreneurial performance	Impact
Regulatory framework	Market conditions	Access to finance	Knowledge creation and diffusion	Entrepreneurial capabilities	Culture	Firm based	Job creation
Administrative burdens for entry	Anti-trust laws	Access to debt financing	R&D investment	Training and experience of entrepreneurs	Risk attitude in society	Employment based	Economic growth
Administrative burdens for growth	Competition	Business angels	University/ industry interface	Business and entrepreneurship education (skills)	Attitudes towards entrepreneurs	Wealth	Poverty reduction
Bankruptcy regulation	Access to the domestic market	Venture Capital	Technological co-operation between firms	Entrepreneurship infrastructure	Desire for business ownership		Formalising the informal sector
Safety, health and environmental regulations	Access to foreign markets	Crowdfunding	Technology diffusion	Immigration	Entrepreneurship education (mindset)		
Product regulation	Degree of public involvement	Access to other types of equity	Broadband access				
Labour market regulation	Public procurement	Stock markets					
Court and legal framework							
Social and health security							
Income taxes : wealth/bequest taxes							
Business and capital taxes	Patent system standards						

Firms	Employment	Wealth
Employer enterprise birth rates	Share of high growth firms (by employment)	Share of high growth firms (by turnover)
Employer enterprise death rates	Share of gazelles (by employment)	Share of gazelles (by turnover)
Business churn	Ownership rate start-ups	Value added, young or small firms
Net business population growth	Ownership rates business population	Productivity contribution, young or small firms
Survival rates at 3 and 5 years	Employment in 3 and 5 year old firms	Innovation performance, young or small firms
Proportion of 3 and 5 year old firms	Average firm size after 3 and 5 years	Export performance, young or small firms

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Chapter 1

Recent developments in entrepreneurship

The short-term indicators presented in this chapter provide timely information on business dynamics and self-employment. They offer an up-to-date snapshot of entrepreneurialism, and therefore growth and employment prospects, in the OECD area.

Enterprise creations are picking-up in most countries

In most OECD economies where data are available the number of new firms created continues to recover and in many cases, enterprise creations are above pre-crisis highs. Of the OECD economies where timely data are available, entries have trended upwards in nine in recent periods (up to the first quarter of 2017): Australia, Belgium, France, Hungary, Iceland, the Netherlands, Norway, Sweden and the United States (Figure 1.1).

Moreover in countries where the numbers of enterprise creations have continued to trend downwards in recent years this may mask other patterns. In Italy and Germany, for example, declines reflect falls in the number of new sole proprietors, with creations of other legal forms of companies picking up in recent years (Figure 1.2).

The services sector appears to have been the main driver of these upward trends in recent years. In Canada, France, Germany, and the United States, the trend growth of enterprise creations in the services sector outpaced that of the manufacturing sector (Figure 1.3).

Figure 1.1. **New enterprise creations**

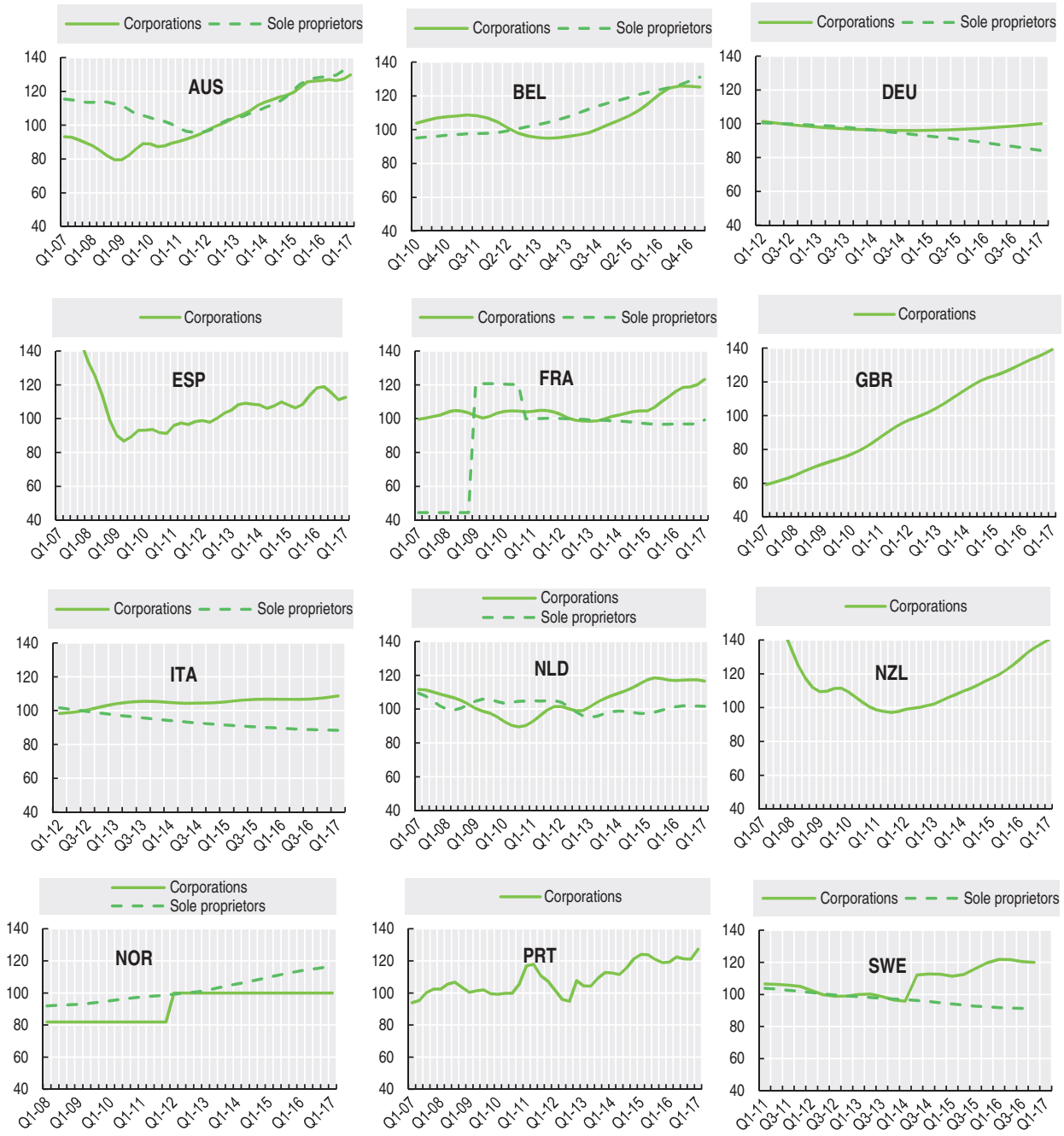
Trend-cycle, 2012 = 100

Source: OECD Timely Indicators of Entrepreneurship (database), July 2017.

StatLink http://dx.doi.org/10.1787/888933590454

Figure 1.2. **New enterprise creations by legal form**

Trend-cycle, 2012 = 100

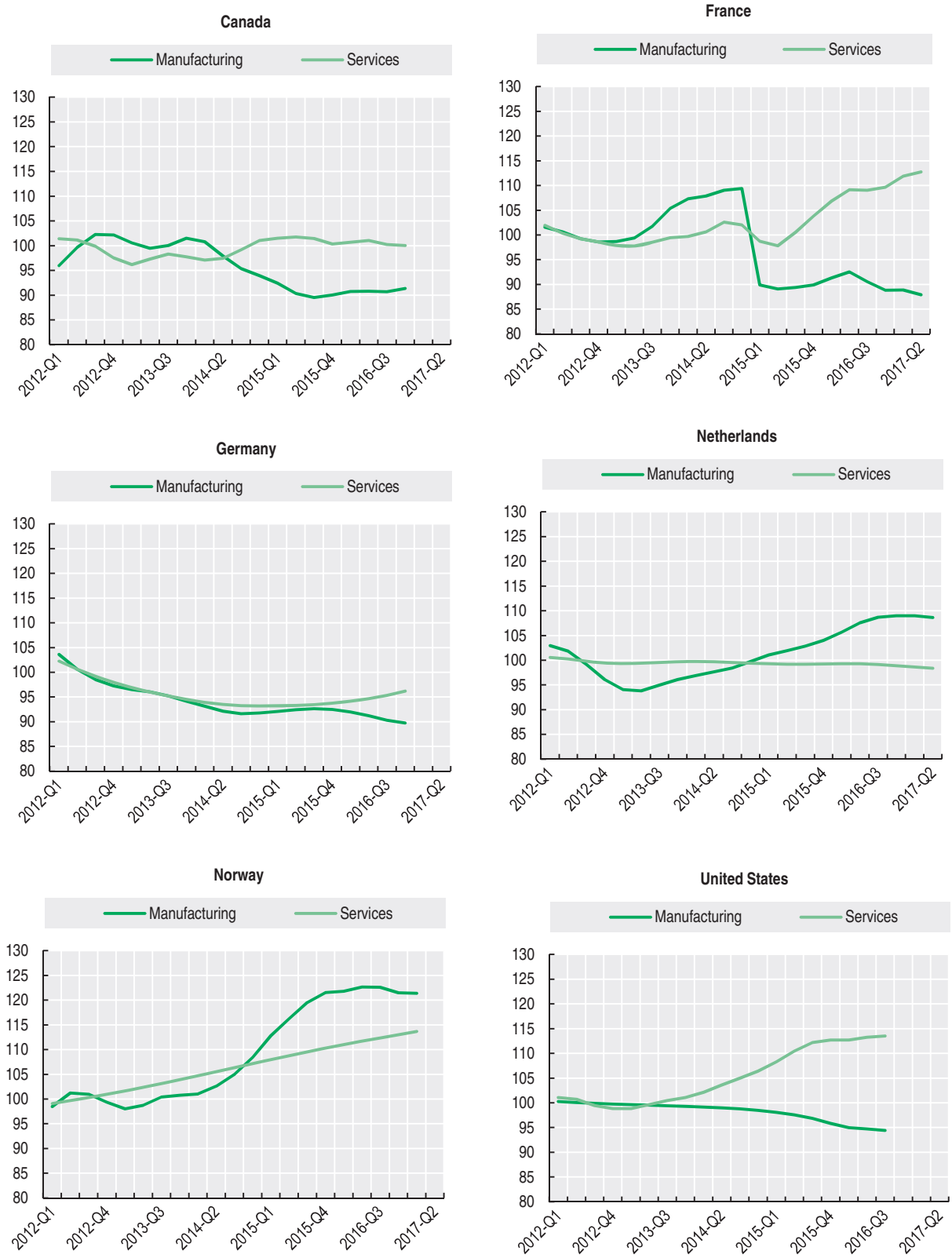


Source: OECD Timely Indicators of Entrepreneurship (database), July 2017.

StatLink http://dx.doi.org/10.1787/888933590473

Figure 1.3. **New enterprise creations by main sector, selected G7 countries**

Trend-cycle, 2012 = 100



Source: OECD Timely Indicators of Entrepreneurship (database), July 2017.

StatLink http://dx.doi.org/10.1787/888933590492

Box 1.1. **A closer look at the secular decline in enterprise creation rates**

Set against a backdrop of declining trends in productivity, there has been considerable debate in recent years on what has now become known as a secular decline in enterprise creation rates, focussing primarily on US data, where relatively long time series going back to the 1980s are available (Decker et al., 2016, Haltiwanger 2016). Similar studies, albeit with much shorter time series (Blanchenay et al., forthcoming) have drawn similar conclusions for other countries.

Although it is still too early to state with certainty, the timely evidence presented in this publication suggests that the secular decline may have abated. To reinforce this, albeit tentative, message, it is instructive to contextualise the debate around creations, or at least to highlight the statistical nature of their construction and how this may need to be interpreted in analyses.

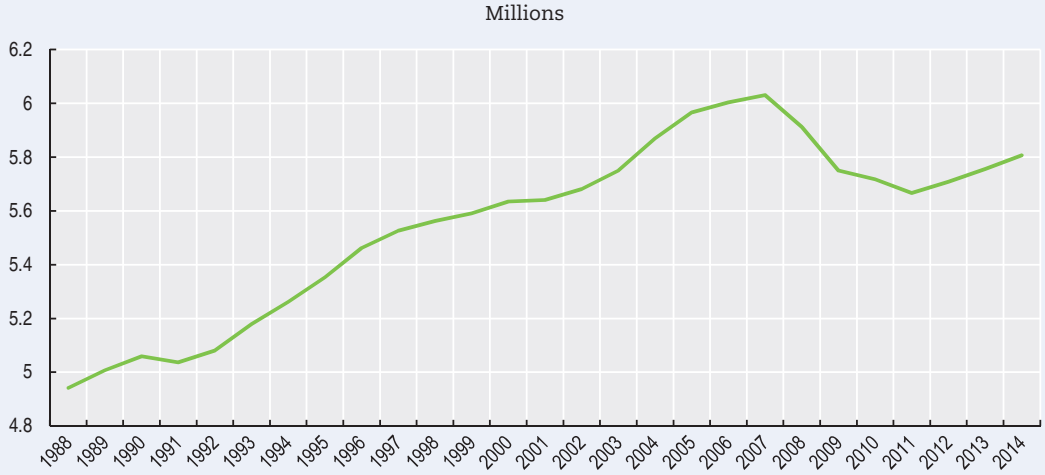
In many analyses, creation rates in business statistics are viewed analogously to birth rates in the general (human) population, even if the applications differ. But what is often forgotten in this debate is that, unlike with general population measures, existing firms do not typically give birth to new entries and create new firms, and where existing firms do engage in the creation of new firms, these are often recorded as 'growth' in the existing firm and not new creations.

Implicit in the analogy is that the existing stock of firms is a proxy for the pool of entrepreneurialism within an economy from which new firms can be created, hence the use of the number of existing firms as the denominator in measures of enterprise creation rates. This has proved, and continues to prove, to be a very useful measure of entrepreneurialism within an economy, which is why it features prominently in this publication. But it does not come without statistical caveats that can impact on comparability over time and across countries.

For example, two countries with exactly the same general population sizes and exactly the same numbers of new creations in a given year can have very different creation rates if the population of firms differ. Indeed, if one of these economies was an emerging economy and the other a mature developed economy, the assumption would likely be that the number of new creations in the emerging economy would be higher than in the developed economy as the emerging economy catches up. This difference would in turn be exacerbated in presenting creation rates through the application of a lower denominator (of firms). It is perhaps no coincidence in this respect that creation rates shown for former transition and emerging economies in this report are typically higher than for more mature developed economies.

In this context, it is helpful to keep one eye on levels of creations and not just the rates. Figure 1.4 below for example shows the number of employer establishments in the United States over the last quarter of a century, revealing a strong upward trend, notwithstanding the crisis dip, which presents the secular decline story in a slightly more nuanced context.

Figure 1.4. **Number of employer establishments in the United States**



Source: US Small Business Administration.

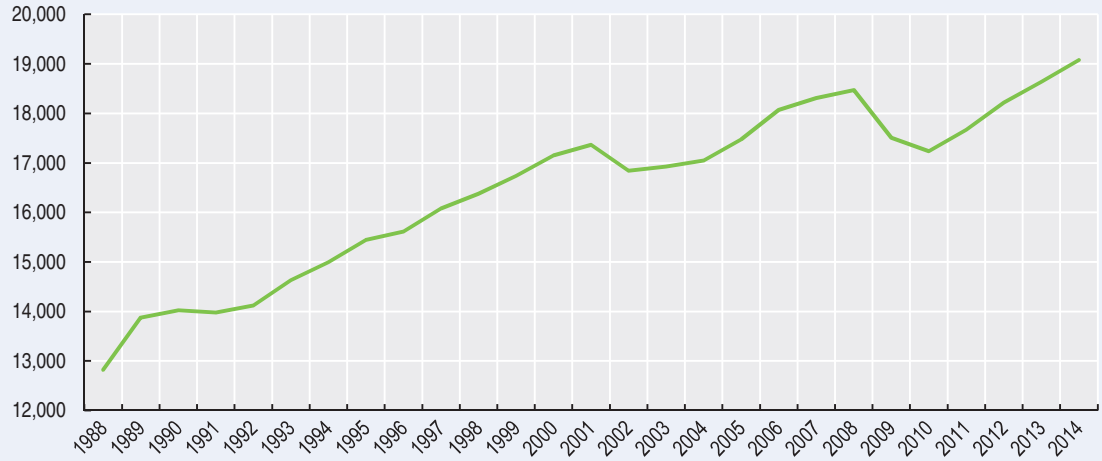
StatLink http://dx.doi.org/10.1787/888933590511

Box 1.1. **A closer look at the secular decline in enterprise creation rates** *(cont.)*

Additional context for the secular decline story also emerges when one looks at the strong growth in the population of large establishments (with more than 500 employees), as increased market concentration may have crowded out potential new entrants.

Figure 1.5. **Number of employer establishments with 500+ employees in the United States**

Number



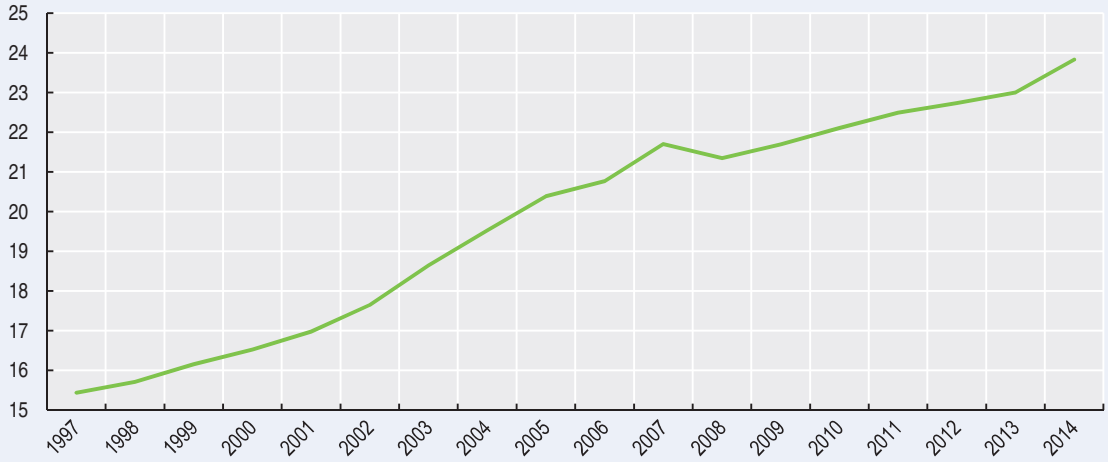
Source: US Small Business Administration

StatLink http://dx.doi.org/10.1787/888933590530

But looking at the numbers of non-employer establishments suggests that the impact of increased market concentration may not have been especially severe. The number of non-employer establishments increased by around 60% in the last fifteen years.

Figure 1.6. **Number of non-employer establishments in the United States**

Millions



Source: US Small Business Administration

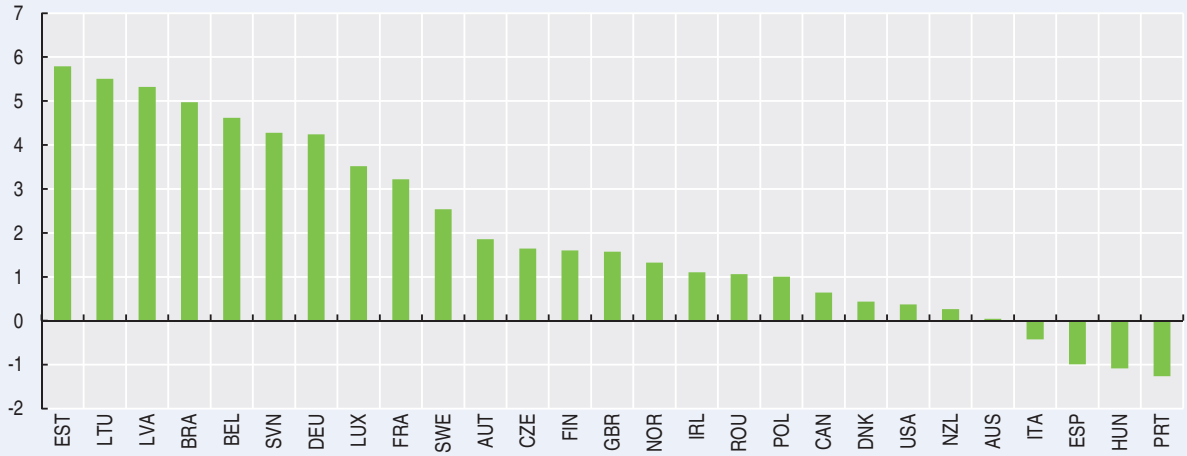
StatLink http://dx.doi.org/10.1787/888933590549

Box 1.1. **A closer look at the secular decline in enterprise creation rates** *(cont.)*

Similar patterns emerge among many OECD countries too when looking at growth in the number of enterprises over the last decade: growth between 2005 and 2014 was particularly strong across many countries, with contractions only in countries hit hard by the crisis (Figure 1.7). This slightly nuances the secular decline story.

Figure 1.7. **Growth in number of enterprises, 2005-2014**

Average annual percentage change



Source: OECD Structural Business Statistics database.

StatLink http://dx.doi.org/10.1787/888933590568

None of the above however completely discounts the secular decline story either. The figures presented above, for example, only show net changes in creations minus closures. Increases in the population of firms can certainly go hand-in-hand with decreases in the number of creations and decreases in failures, and so lower levels of creative destruction and by extension entrepreneurialism. But a focus on the number of active firms, which has increased significantly in many countries despite lower levels of start-ups, adds context and may suggest that the state of entrepreneurialism in its broadest sense has been less bleak than that suggested by creation rates alone.

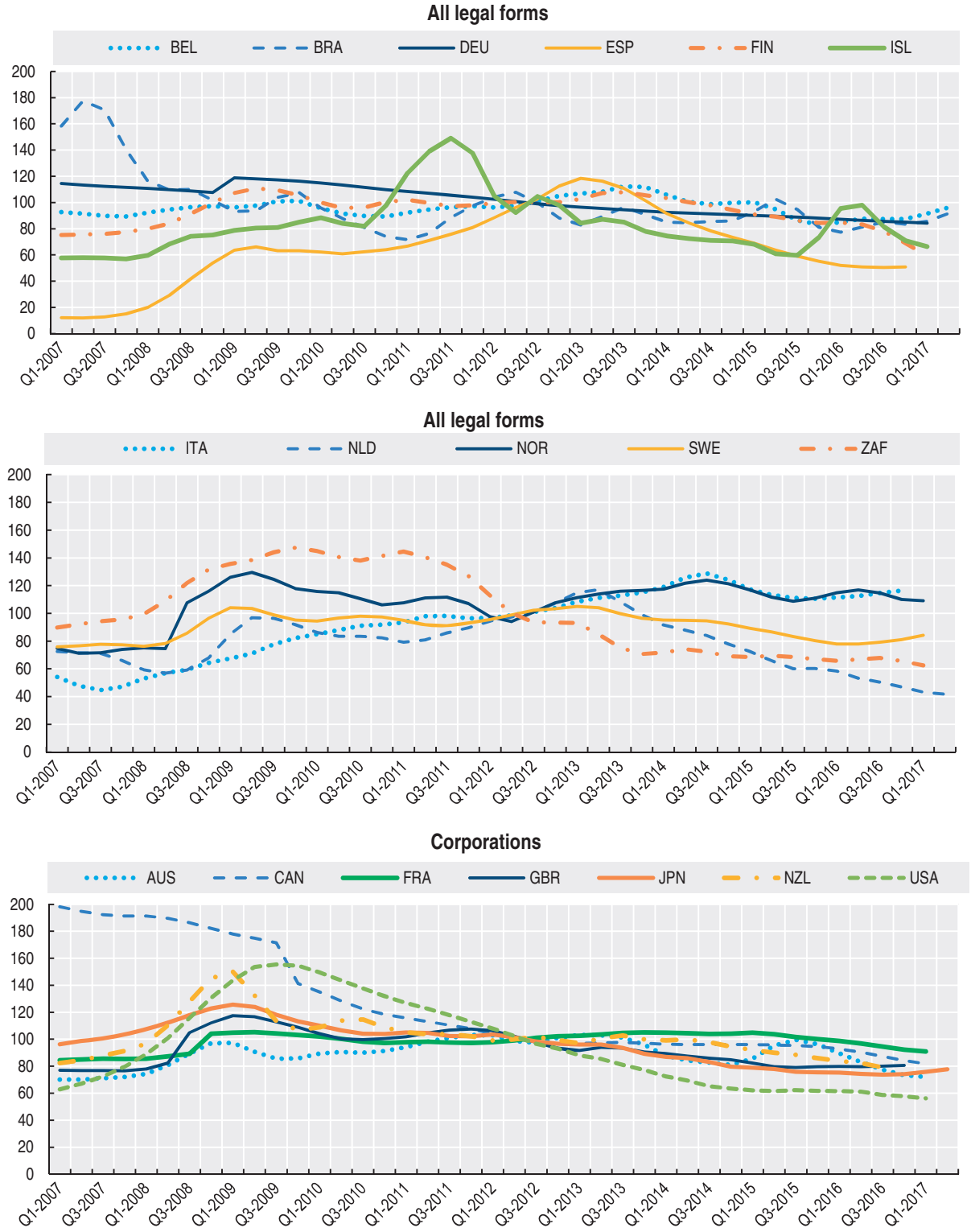
One final statistical point worth highlighting concerns comparisons of creation rates and firm growth across countries, where the size of a country matters too. The firm measure used for international comparisons and advocated in this publication is that of an "enterprise". When a US enterprise located in New York creates a new establishment in California, this counts as growth, but when an enterprise located in France, say, creates a new establishment (and so an "enterprise") in Luxembourg, this counts as a new enterprise creation in Luxembourg and no increase in growth in France.

Bankruptcies are back to pre-crisis levels

In line with the observed recovery in enterprise creations, is improvement in bankruptcy trends. At the end of 2016 the number of bankruptcies was back to pre-crisis levels, or below, in most countries. In Iceland, Italy and Spain levels remained higher than in 2007, although the most recent quarter on quarter trends at the beginning of 2017 point to improvements in all three countries.

Figure 1.8. **Bankruptcies, selected countries**

Trend-cycle, 2012 = 100



Source: OECD Timely Indicators of Entrepreneurship (database), July 2017.

StatLink http://dx.doi.org/10.1787/888933590587

Self-employment has evolved differently across countries

While trends in start-ups and bankruptcies are beginning to converge in most economies, patterns of self-employment (i.e. persons who own and work in their own business) continue to evolve differently across countries (Figure 1.9). In a large group of countries, including Australia, Germany, Italy, Korea, Poland, Sweden, and the United States, self-employment rates continue to decline, although the number of self-employed remains stable; reinforcing the messages highlighted in Box 1.1 concerning rates *versus* levels. But in Greece, Japan and Portugal declines in self-employment rate have occurred in parallel with significant decreases in the number of self-employment jobs.

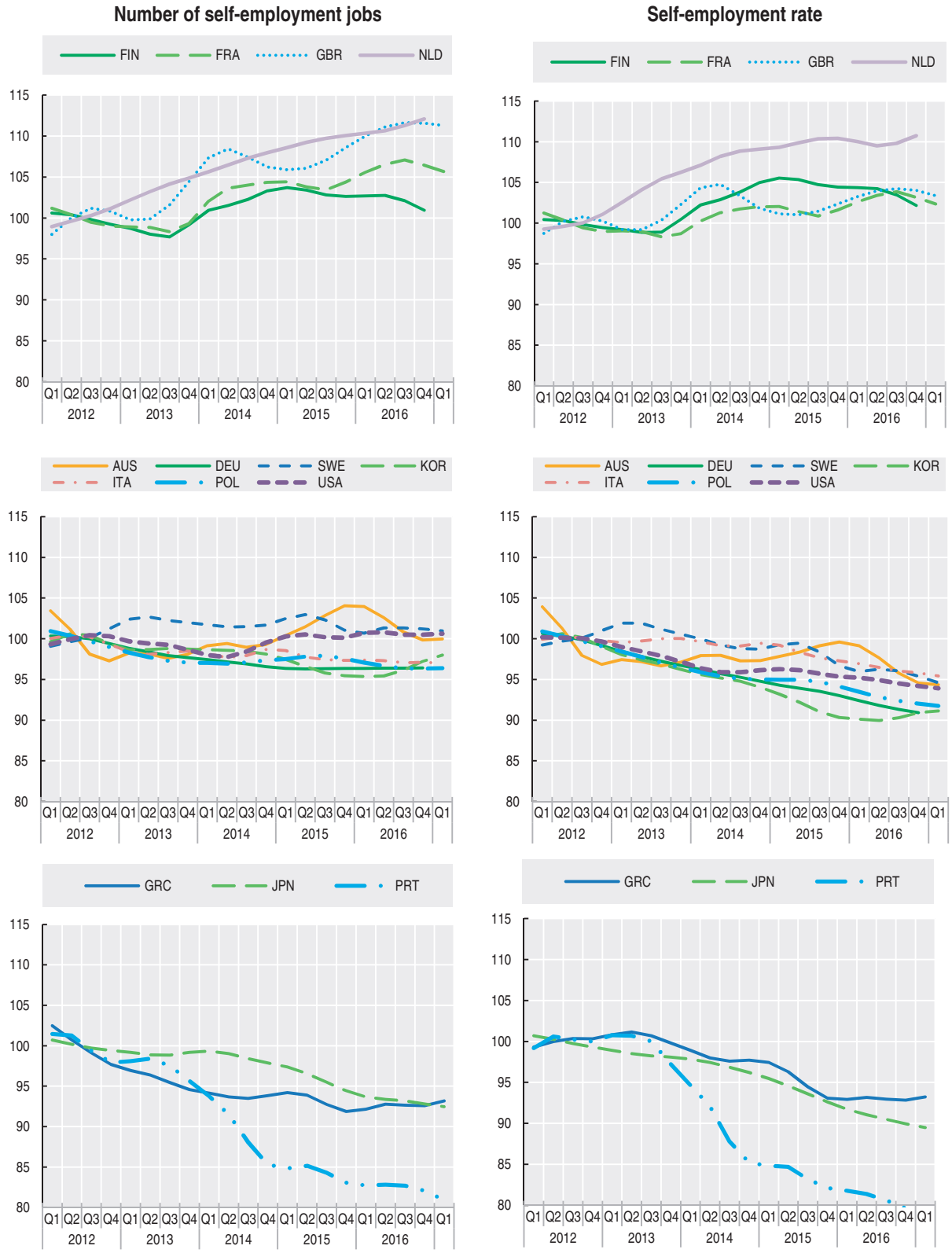
On the contrary, self-employment rates and the number of self-employed in 2016 were well above pre-crisis rates in the Netherlands and the United Kingdom, with trends also pointing strongly upwards. Self-employment rates and the number of self-employed were also significantly above pre-crisis levels in Finland and France, although recent trends are pointing downwards.

Despite cross-country differences in the evolution of the level of self-employment, a common trend across most countries has been the growth in numbers of self-employed working only part-time, and of their shares in self-employment (Figure 1.10). In many OECD countries, part-time self-employment has increased considerably in the past decade, in part reflecting new opportunities presented by the emergence of the "gig economy" in several countries (OECD, 2016). Indeed, the actual numbers of individuals engaged in the gig economy is likely to be higher than those figures shown below, as these only include those individuals who identify first and foremost as part-time self-employed and not those individuals in paid employment (employees) who also engage in self-employment activities for a secondary source of income (see Chapter 6).

The emergence of "gig workers" raises new questions on the appropriateness of self-employment rates or levels as proxies for the size of entrepreneurialism (Box 1.2). There has been a long standing awareness that care is needed in this regard, particularly with respect to those self-employed engaged in purely subsistence, low-growth activities and those pushed into self-employment by necessity. But gig-economy workers have compounded these concerns. In many instances, gig-economy workers have little discernible difference to classic employees, with the sole difference being that they have less access to rights and benefits typically associated with employees, and in some countries gig workers are taking legal action to contest their employment status as self-employed (see Sundararajan, 2015, and Balaram et al., 2017, for an overview of the controversy over the employment status of gig workers and the implications for tax and welfare).

Figure 1.9. **Self-employment, selected countries**

Trend-cycle, 2012 = 100



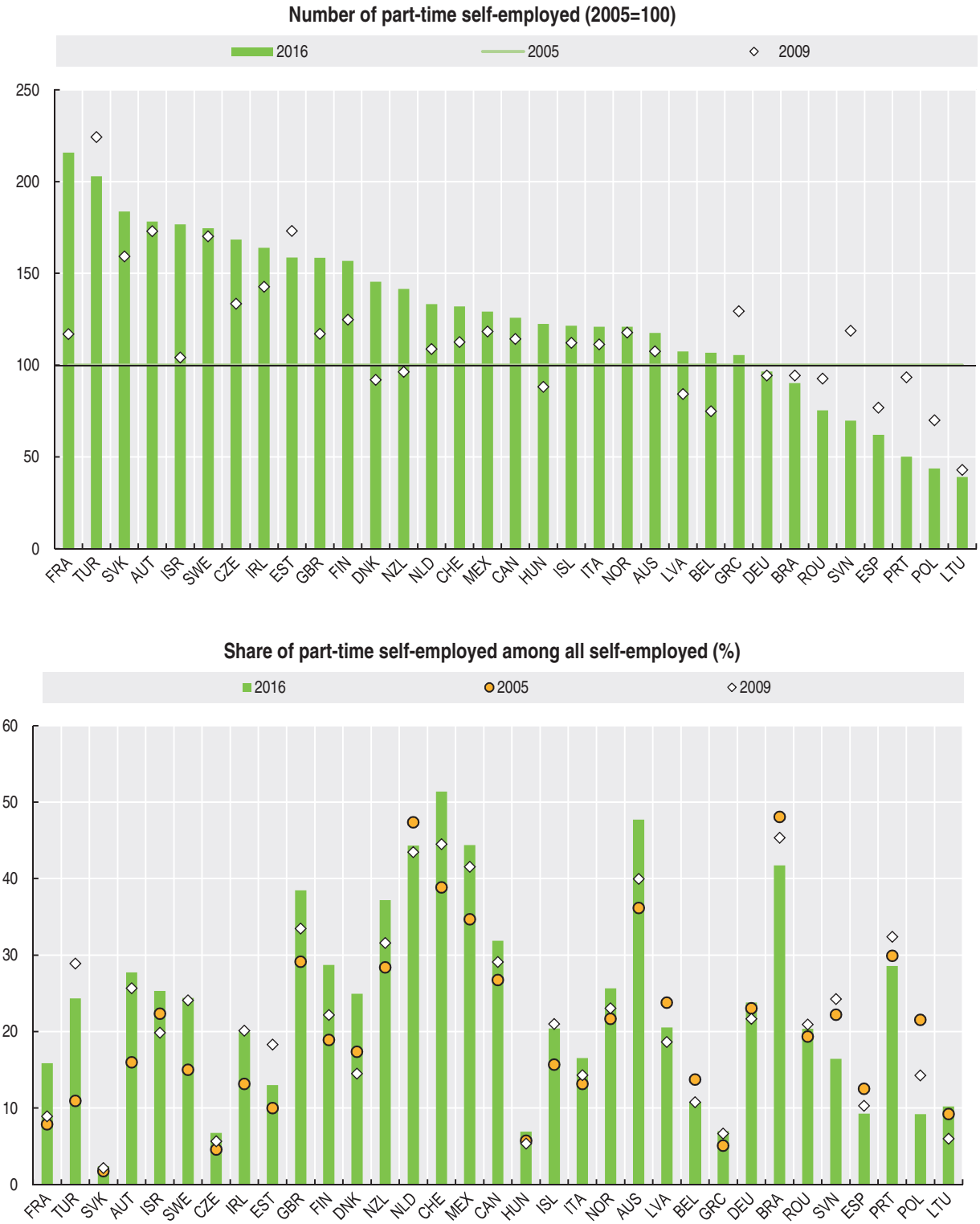
Source: Eurostat: EU Labour Force Survey, *http://ec.europa.eu/eurostat/web/microdata/european-union-labour-force-survey*; Japan: Labour Force Survey, *http://www.e-stat.go.jp/SG1/estat/eStatTopPortalE.do*; United States: Current Population Survey, *www.census.gov/cps/*.

StatLink *http://dx.doi.org/10.1787/888933590606*

Figure 1.10. **Part-time self-employment**

Index, 2001 = 100

Share of total self-employment



Source: OECD (2017),"*Labour Market Statistics: Full-time part-time employment - common definition*", OECD Employment and Labour Market Statistics (*database*), *http://dx.doi.org/10.1787/data-00298-en*.

StatLink http://dx.doi.org/10.1787/888933590625

Box 1.2. **How entrepreneurial is the "gig economy"?**

The term "gig economy" is typically taken to mean the rising phenomenon of flexible employment arrangements, or gigs, that increasing numbers of people engage in. While a formal definition of the "gig economy" does not exist, a recent UK study refers to it as the "trend of using online platforms to find small jobs, sometimes completed immediately after request (essentially, on-demand)" (Balaram et al., 2017). These flexible arrangements complement or substitute full-time jobs, and also offer a way into the labour force for those who were previously absent. Gigs themselves are not new; certain professions, notably in the entertainment industry, have always relied on them as an important source of income. But today they are being offered and demanded by a larger and more diverse group of people and cover a wider range of services than ever before.

The rapid popularisation of gigs has been fuelled by technology and is largely associated with the rise of online platforms such as Uber and TaskRabbit that connect buyers and sellers for one-time transactions.

The relative novelty of the gig economy means that assessments of the number of "gig workers" in OECD countries are mostly unavailable. Balaram et al. (2017) estimated that the number of gig workers is currently 1.1 million in the United Kingdom, with only 12% working every day and only 8% working for more than 35 hours or more per week.

The relationship between the gig economy and entrepreneurial activity is by no means obvious. Participants in the gig economy may be small-scale entrepreneurs: on the platform Etsy, for example, artisan retailers can easily sell their hand-crafted jewellery, clothing, and accessories around the world. But many may not be in the purest sense, in that they may for example be contractually tied to providing services uniquely to one firm and so have strong similarities with conventional employees. On the other side, the flexibility gigs offer do contrast with traditional salaried employment and may encourage nascent entrepreneurs to implement their start-up ideas while still being able to cover living expenses (indeed, this view is often advertised by digital matching firms themselves) and so in that respect their emergence cannot be immediately discounted from measures of entrepreneurialism.

In addition, some evidence is emerging that suggests that the gig economy may sometimes decrease entrepreneurial activity. Burtch et al. (2016) for example looked at how the entry of Uber (a taxi service) and Postmates (an on-demand delivery service) into local markets affected the level of local entrepreneurship as indicated by the volume of local crowdfunding campaigns launched on Kickstarter, the world's largest crowd-funding platform. The authors found that the volume of campaigns decreased significantly, and that this decrease was driven primarily by a reduction in unsuccessful campaigns. This led them to conclude that gig economy platforms act primarily as a substitute for low-quality entrepreneurship and less as a complement to high-quality entrepreneurship.

Digitalisation has opened new pathways and markets for entrepreneurial growth

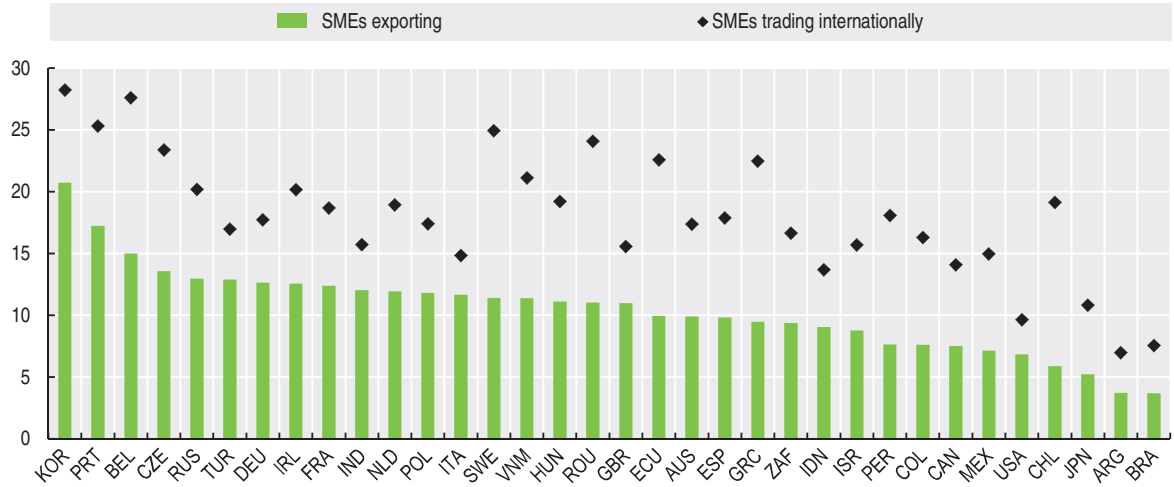
The development of affordable digital tools and platforms has provided new opportunities for micro-enterprises to tap into foreign markets in a way that would previously have been unimaginable.

New data from the *Future of Business Survey*, a joint Facebook-OECD-World Bank collaboration, show that even "just me" entrepreneurs (i.e. self-employed with no employees) can engage in exports as a major activity for their business, by capitalising on digital tools, despite their small scale (Facebook, OECD, World Bank, 2017). In the past, only large multinationals could, effectively, scale globally. Today, small businesses have a menu of digital tools that allow them to leverage global connections and market directly to potential customers all over the world, overcoming in turn barriers to trade which typically weigh more heavily on smaller firms with lower economies of scale.

Although there is a wide variation in the percentage of small and medium-sized enterprises (SMEs) trading in each country and region, in most economies approximately one in five SMEs with a digital presence surveyed between March and May 2017 reported trading internationally, including 6% importing and exporting, 5% exporting exclusively, and 8% importing exclusively (Figure 1.11). For the purpose of the survey SMEs are defined as enterprises with less than 250 employees. Cross-country variations partly reflect differences in the representativeness of surveyed SMEs - the survey by design only covers those firms with a Facebook presence, and in advanced economies this cohort of firms is likely to be more representative of the general population than in developing and emerging economies.

Figure 1.11. **International trade and SMEs with digital presence**

Share of survey respondents, March-May 2017



Note: Responses from enterprises with a Facebook Page over the period March-May 2017. Traders are defined as businesses being involved in import and/or export, whereas exporters include two-way traders and exporters only.

Source: Facebook-OECD-World Bank *Future of Business Survey* (database), June 2017.

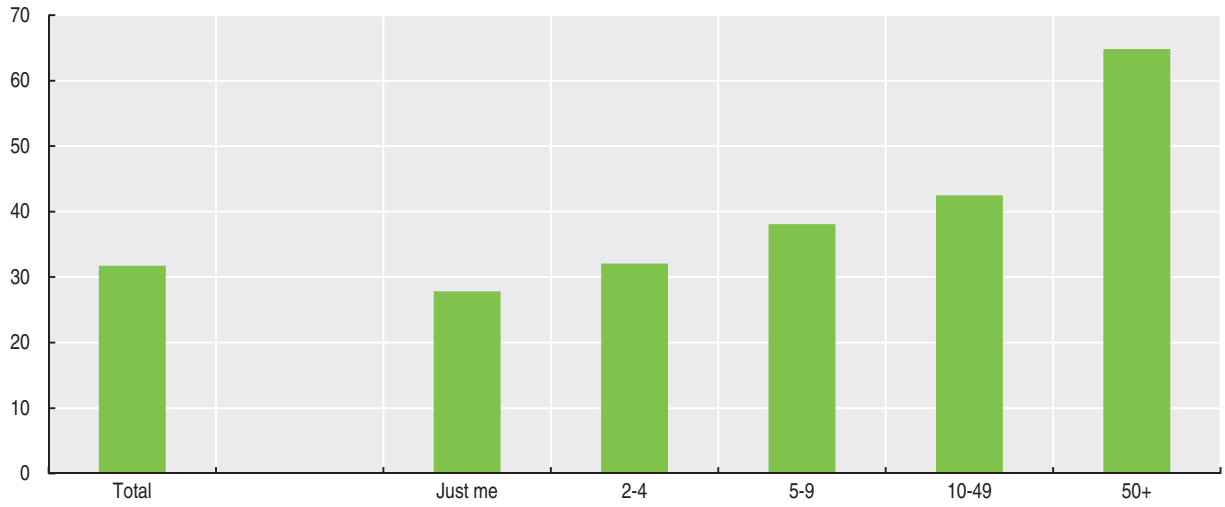
StatLink http://dx.doi.org/10.1787/888933590644

The survey findings reveal that among firms that export, exports represent a key element of the business model not only for significant shares of small enterprises (with less than 50 employees), but also for many just-me enterprises. Close to a third (28%) of just-me entrepreneurs who export indicate that more than 25% of their total revenue comes from international trade (Figure 1.12). Also, two in three exporting SMEs reported that more than 50% of their international sales depend on online tools, with export activities most common among manufacturing SMEs, followed by retail/wholesale businesses.

The most recent data from the *Future of Business Survey* also confirm previous findings on the relation between business confidence and international trade. Businesses that trade internationally appear more confident in the current state and future outlook of their businesses, and are also more likely to have positive prospects of job creation (Figures 1.13 and 1.14). This is true also for just-me entrepreneurs, although positive evaluation of current or future situation as well as prospects of job creation are typically higher for larger firms.

Figure 1.12. **Exports revenue greater than 25% of total revenue, by enterprise size**

Percentage of exporters, March-May 2017



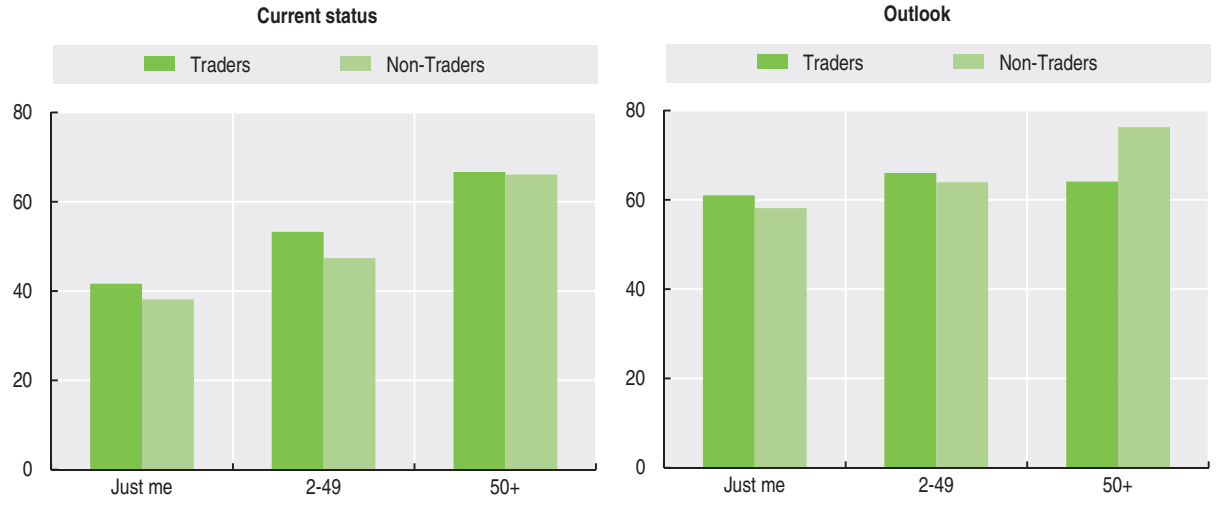
Note: Responses from enterprises with a Facebook Page over the period March-May 2017. Traders are defined as businesses being involved in import and/or export, whereas exporters include two-way traders and exporters only.

Source: Facebook-OECD-World Bank *Future of Business Survey* (database), June 2017.

StatLink http://dx.doi.org/10.1787/888933590663

Figure 1.13. **Digital presence, international trade and business confidence**

Percentage of positive replies among survey respondents, March-May 2017



Note: Responses from enterprises with a Facebook Page over the period March-May 2017. Traders are defined as businesses being involved in import and/or export, whereas exporters include two-way traders and exporters only. *Current status* and *Outlook* respectively report the reply "Positive" to the questions: "How would you evaluate the current state of your business?" and "What is your outlook for the next 6 months on your business?".

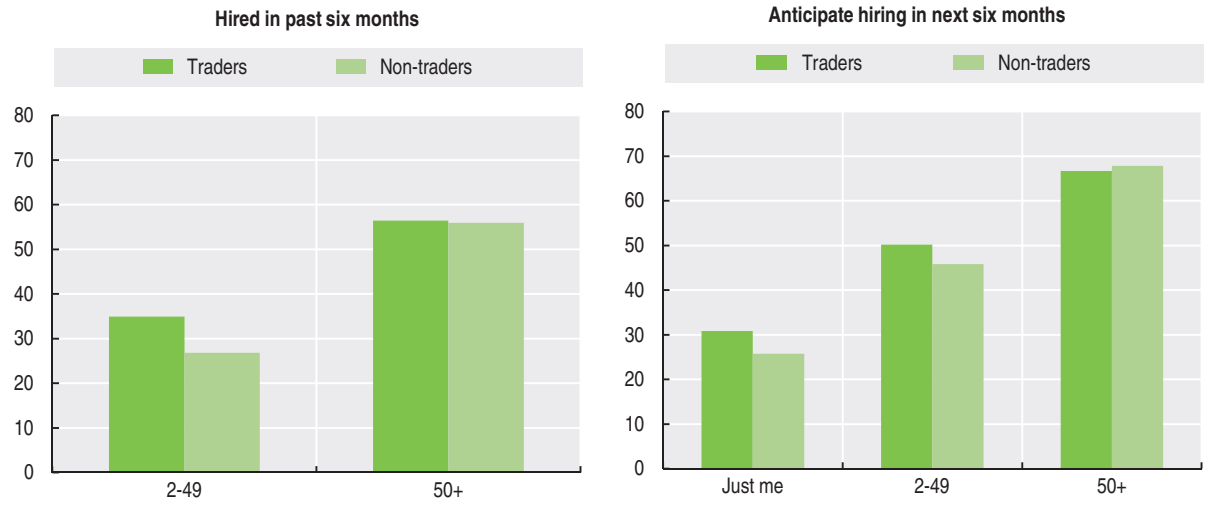
Source: Facebook-OECD-World Bank *Future of Business Survey* (database), June 2017.

StatLink http://dx.doi.org/10.1787/888933590682

The establishment of an exporting branch can play a major role in business success and growth as new markets are opened. However, almost half of exporting SMEs identified "selling to foreign countries" as a challenge (and these challenges might be even higher among SMEs that want to export but have not been able to do so). The main export barriers included finding business partners, market access limitations, and regulations. Overcoming challenges for export is a key factor to business success.

Figure 1.14. **Digital presence, international trade and prospects of job creations**

Percentage of positive replies among survey respondents, March-May 2017



Note: Responses from enterprises with a Facebook Page over the period March-May 2017. Traders are defined as businesses being involved in import and/or export, whereas exporters include two-way traders and exporters only. The figure illustrates the reply "Increase" respectively to the questions: "How did the number of employees in your business change in the last 6 months" and "How do you expect the number of employees in your business to change in the next six months?".

Source: Facebook-OECD-World Bank *Future of Business Survey* (database), June 2017.

StatLink http://dx.doi.org/10.1787/888933590701

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2. STRUCTURE AND PERFORMANCE OF THE ENTERPRISE POPULATION

Enterprises by size

Employment by enterprise size

Value added by enterprise size

Turnover by enterprise size

Compensation of employees by enterprise size

Enterprises by size

Key findings

- In all countries, the vast majority of enterprises (between 70% and 95%) are micro-businesses, i.e. enterprises with fewer than ten persons employed, and in most countries over half of all enterprises are non-employer enterprises, i.e. enterprises with no employees such as the self-employed who work on their own account and do not employ other persons.
- Partly reflecting the higher entry costs and capital intensity in manufacturing, SMEs in OECD countries are disproportionately located in the services sector, with high numbers of non-employer enterprises in wholesale and retail trade and construction activities.
- In around half of OECD economies, especially those hit hard by the crisis, the number of enterprises in 2014 remained below levels in 2008. The construction sector was especially affected, and to a lesser extent manufacturing, but services fared much better in most OECD economies. In all sectors growth in the number of SMEs typically outperformed growth in larger enterprises in most OECD economies.

Relevance

Small businesses can be important drivers of growth and innovation. Without a conducive business environment, however, they may face barriers to growth, in particular in capital-intensive sectors where access to finance and integration into global value chains are important determinants of success.

Definitions

An enterprise is defined as the smallest combination of legal units that is an organisational unit producing goods or services, which benefits from a certain degree of autonomy in decision-making, especially for the allocation of its current resources. An enterprise carries out one or more activities at one or more locations.

The basis for size classification is the *total number of persons employed*, which includes the self-employed.

In this publication, micro-enterprises are defined as firms with 1-9 persons employed; small enterprises: 10-49; medium enterprises: 50-249; and large enterprises: 250 and more. The group of micro, small and medium-sized enterprises (SMEs) refers to the size class 1-249.

The number of persons employed corresponds to the total number of persons who work for the observation unit, including working proprietors, partners working regularly in the unit and unpaid family workers.

Information on data for Israel: *http://dx.doi.org/10.1787/888932315602*.

Comparability

All countries present information using the enterprise as the statistical unit except Korea and Mexico, which use establishments. Since most enterprises in these countries, as elsewhere, consist of only one establishment, comparability issues are not expected to be significant in relation to the total population of businesses, but comparisons relating to the proportion of smaller firms will be upward biased, compared to other countries, while comparisons relating to the proportion of larger firms will be downward biased.

The size-class breakdown 1-9, 10-19, 20-49, 50-249, 250+ provides for the best comparability given the varying data collection practices across countries. Some countries use different conventions: the size class "1-9" refers to "1-10" for Mexico and "1-19" for Australia and Turkey; the size class "10-19" refers to "11-50" for Mexico; the size class "20-49" refers to "20-199" for Australia; the size class "50-249" refers to "50-299" for Japan and Korea, and "51-250" for Mexico; finally, the size class "250+" refers to "200+" for Australia, "300+" for Japan and Korea, and "251+" for Mexico.

For Canada, the United States and the Russian Federation, data do not include non-employer enterprise counts. For the business economy, estimates of non-employer enterprises amount to approximately 1.7 million in Canada, 15.3 million in the United States, and to 2.5 million in the Russian Federation. Data for Switzerland exclude businesses with less than 3 persons employed.

Data for Finland and Portugal exhibit a break in the series in 2013 and for Canada and France in 2014. Data for the United Kingdom exclude an estimate of 2.6 million small unregistered businesses; these are businesses below the thresholds of the value-added tax regime and/or the "pay as you earn (PAYE)" (for employing firms) regime.

In Figure 2.4, the Business Demography dataset is used as data source; this dataset covers non-employer enterprises for all countries including Switzerland.

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Figure 2.1. **Number of enterprises, by size and main sector, selected countries**

2008=100

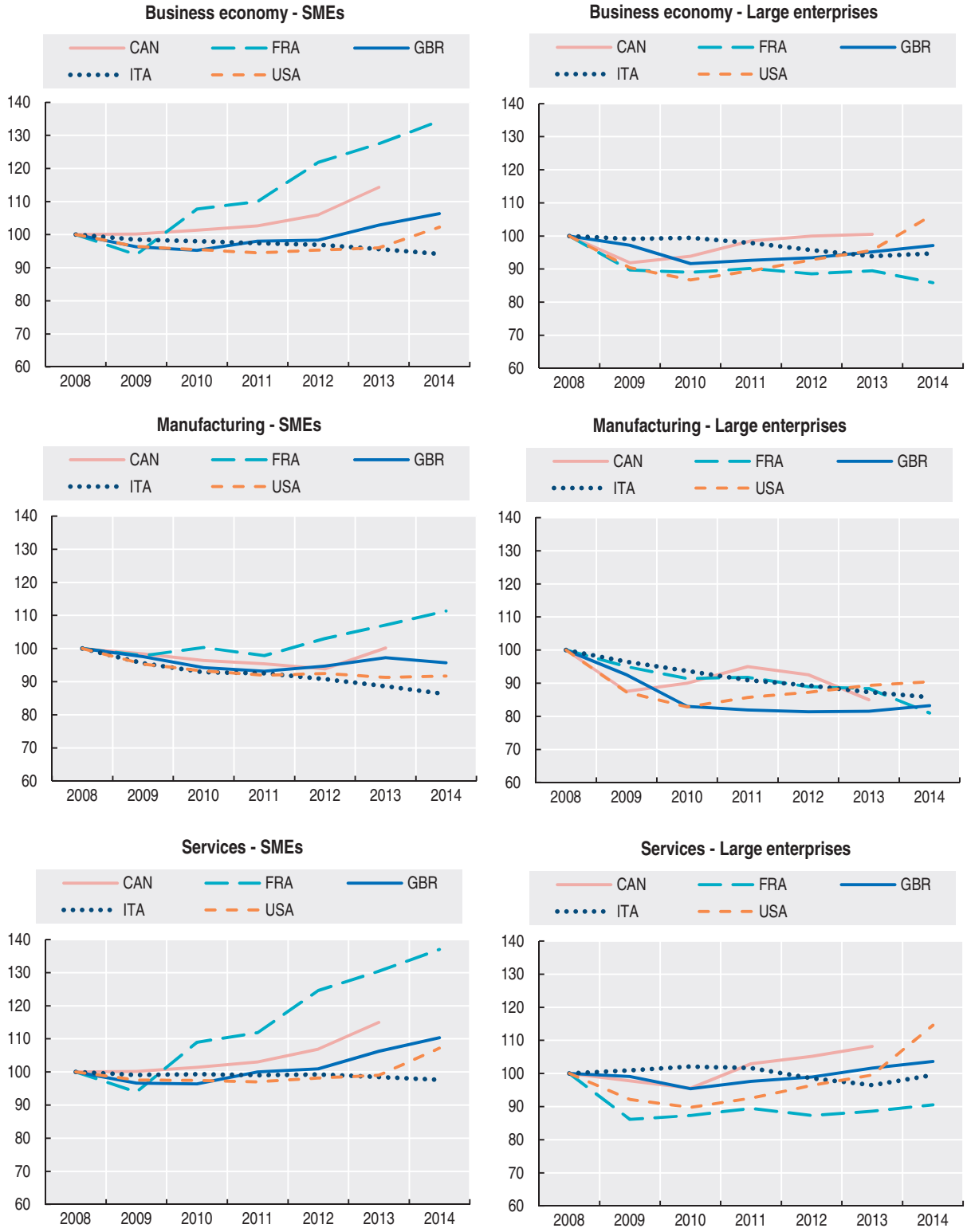

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Figure 2.2. **Enterprises by size, business economy**

Percentage of all enterprises, 2014, or latest available year

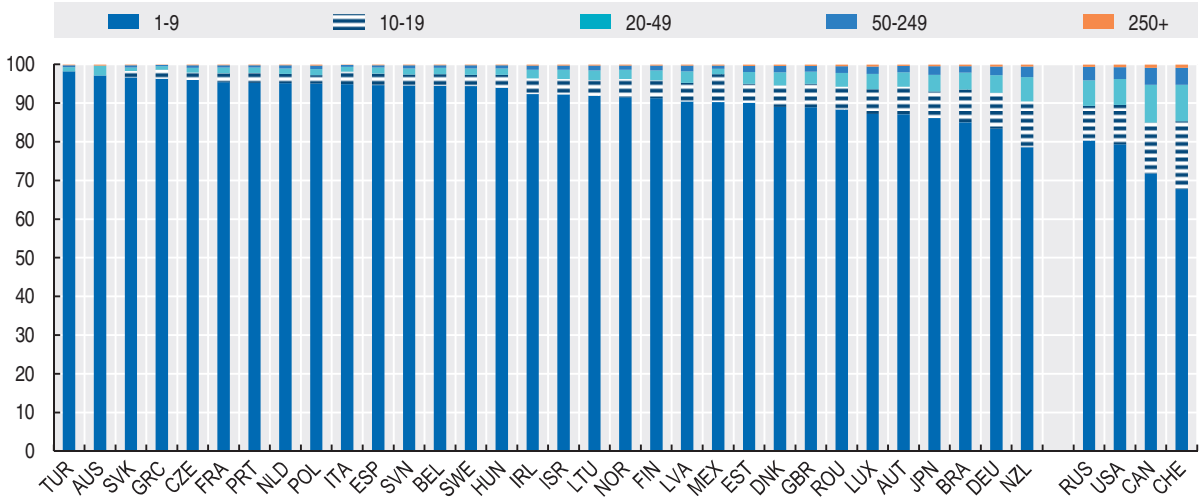

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Table 2.1. **Number of enterprises by size and main sector**

2014, or latest available year

Country	Manufacturing (10-33, ISIC4)					Services (45-82 excluding 64-66, ISIC4)					Construction (41-43, ISIC4)				
	1-9	10-19	20-49	50-249	250+	1-9	10-19	20-49	50-249	250+	1-9	10-19	20-49	50-249	250+
Australia	116,480		6,403		491	1,023,185		29,162		1,899	337,841		4,179		166
Austria	18,576	2,842	2,182	1,456	468	228,685	15,980	7,586	3,070	483	27,984	3,593	1,985	597	68
Belgium	29,944	2,331	1,992	1,169	311	425,095	12,262	6,321	2,256	470	101,414	2,695	1,362	476	51
Brazil	218,056	52,029	36,051	17,029	3,830	2,436,010	201,195	89,385	29,583	6,317	79,672	18,141	12,975	6,786	1,444
Canada	27,887	8,202	7,842	5,545	1,426	442,857	84,182	58,994	26,516	4,232	114,195	14,314	8,578	3,605	554
Czech Republic	157,909	4,427	3,866	3,045	794	608,722	11,693	6,370	2,704	537	166,011	2,674	1,521	546	54
Denmark	10,686	1,800	1,374	955	192	145,333	7,817	4,621	2,169	394	27,876	1,929	1,096	338	42
Estonia	4,984	589	548	429	63	43,761	1,916	1,065	506	85	8,189	507	252	71	10
Finland	17,035	1,707	1,279	822	199	149,499	6,656	3,488	1,531	327	38,495	2,035	988	273	36
France	205,876	12,761	9,554	5,545	1,357	2,194,656	46,097	28,660	11,901	2,455	553,442	13,717	6,858	1,487	229
Germany	138,436	37,010	16,420	16,484	4,252	1,650,651	149,686	83,924	34,690	6,205	282,570	41,135	11,180	3,417	233
Greece	55,447	1,132	936	581	115	529,809	13,366	4,677	1,542	211	82,243	1,549	688	177	15
Hungary	40,097	3,131	2,360	1,623	403	382,982	11,125	4,869	2,045	352	53,212	2,275	979	279	20
Ireland	12,503	823	664	494	144	153,628	7,838	4,142	1,876	273	46,180	731	333	89	16
Israel	19,287	1,850	1,420	1,061	191	322,699	12,455	7,629	3,437	639	53,390	2,702	1,152	275	21
Italy	328,486	39,402	18,988	8,349	1,197	2,649,255	61,824	21,397	8,512	1,639	509,648	14,000	4,335	1,041	79
Japan	315,669	42,791	34,305	21,591	3,576	1,845,690	124,559	77,552	39,878	6,836	397,861	36,298	16,781	4,827	545
Korea	328,505	33,847	23,963	10,155	701	2,321,477	74,551	37,252	15,522	1,486	106,539	13,080	6,017	2,353	226
Latvia	7,859	756	655	476	59	73,262	3,186	1,727	749	117	8,030	687	488	203	16
Lithuania	15,006	1,182	956	699	132	115,962	4,767	2,518	1,077	152	25,550	1,007	646	304	36
Luxembourg	503	101	105	78	25	24,083	1,421	771	380	97	2,592	443	352	137	18
Mexico	430,971	39,242	8,338	7,431	3,548	2,509,306	186,689	32,713	16,808	2,087	4,904	6,429	3,370	2,069	291
Netherlands	53,105	3,382	2,657	1,924	326	790,223	18,447	10,867	5,427	1,042	149,560	2,791	1,601	683	113
New Zealand	7,956	1,851	1,287	594	132	57,351	8,754	4,440	1,983	309	17,205	1,821	846	273	21
Norway	13,898	1,308	1,040	646	124	193,988	8,975	4,265	1,832	402	50,538	2,767	1,402	399	44
Poland	157,056	8,580	7,327	6,131	1,545	1,066,190	20,258	12,038	6,286	1,226	221,638	4,438	2,927	1,340	154
Portugal	54,420	5,527	3,943	2,061	250	610,235	11,571	5,287	2,137	413	73,245	2,845	1,271	433	50
Romania	34,577	5,174	4,438	3,118	784	320,262	17,272	8,964	3,506	609	40,669	3,805	2,296	956	87
Russian Federation	146,355	24,594	23,509	16,061	4,428	1,238,672	123,612	82,829	38,918	4,264	196,983	26,146	21,049	10,156	1,105
Slovak Republic	60,348	2,201	1,187	964	275	239,723	3,590	2,079	1,015	203	82,645	733	377	158	14
Slovenia	16,452	947	578	477	107	86,592	2,023	1,040	450	80	17,098	679	262	84	10
Spain	140,164	12,397	9,176	4,124	728	1,733,714	49,478	23,401	8,929	1,794	335,541	6,947	3,319	893	121
Sweden	47,482	2,752	2,072	1,284	306	473,822	12,574	7,144	3,206	567	91,020	3,370	1,755	501	48
Switzerland	11,476	4,432	3,072	1,933	389	73,093	16,782	8,015	3,573	664	14,118	4,257	2,425	798	63
Turkey	607,180	-	18,076	9,384	1,784	3,815,186	-	25,727	9,960	2,064	312,450	-	10,048	4,553	442
United Kingdom	95,804	13,081	9,485	6,220	1,377	1,274,346	86,371	42,248	18,640	4,299	252,747	11,003	4,873	1,832	315
United States	228,477	46,273	37,114	22,893	5,543	2,742,717	344,321	223,482	100,313	19,732	511,722	53,162	31,594	12,375	1,353

StatLink http://dx.doi.org/10.1787/888933564994

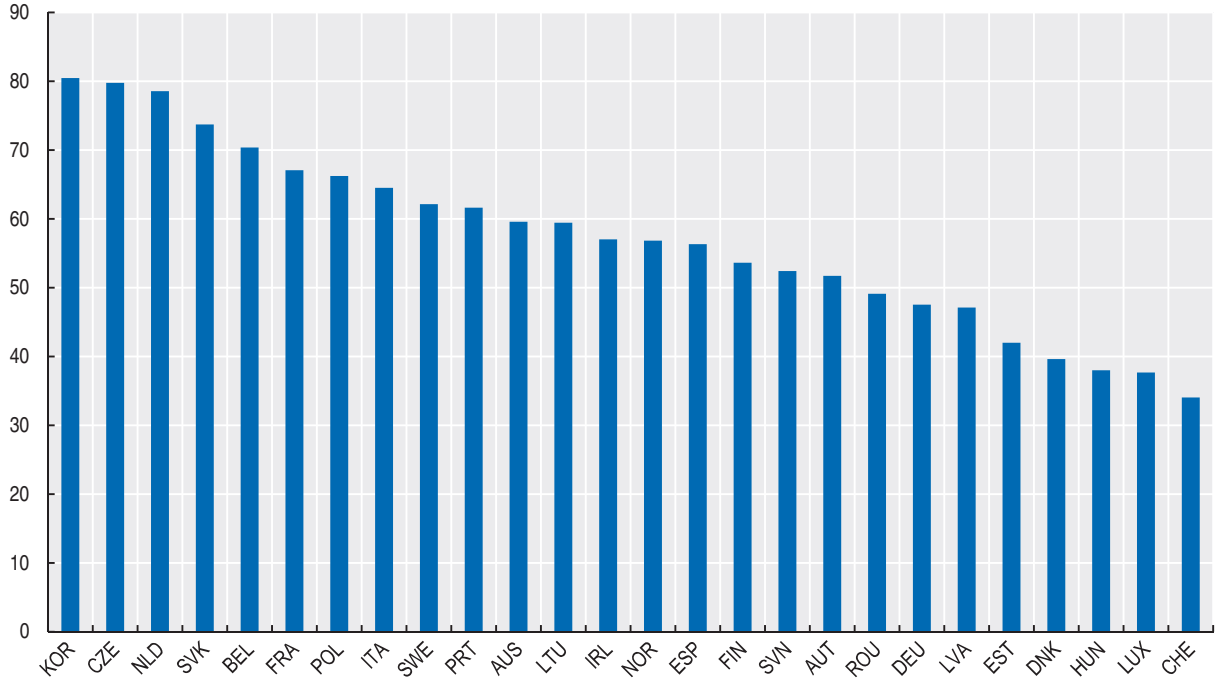
Figure 2.3. **Number of enterprises and GDP**

2014, or latest available year

StatLink http://dx.doi.org/10.1787/888933563094

Figure 2.4. **Share of non-employer enterprises, business economy**

Percentage of business population, 2014, or latest available year



StatLink http://dx.doi.org/10.1787/888933563113

Figure 2.5. **SMEs by economic activity**

Percentage of total number of SMEs, 2014, or latest available year

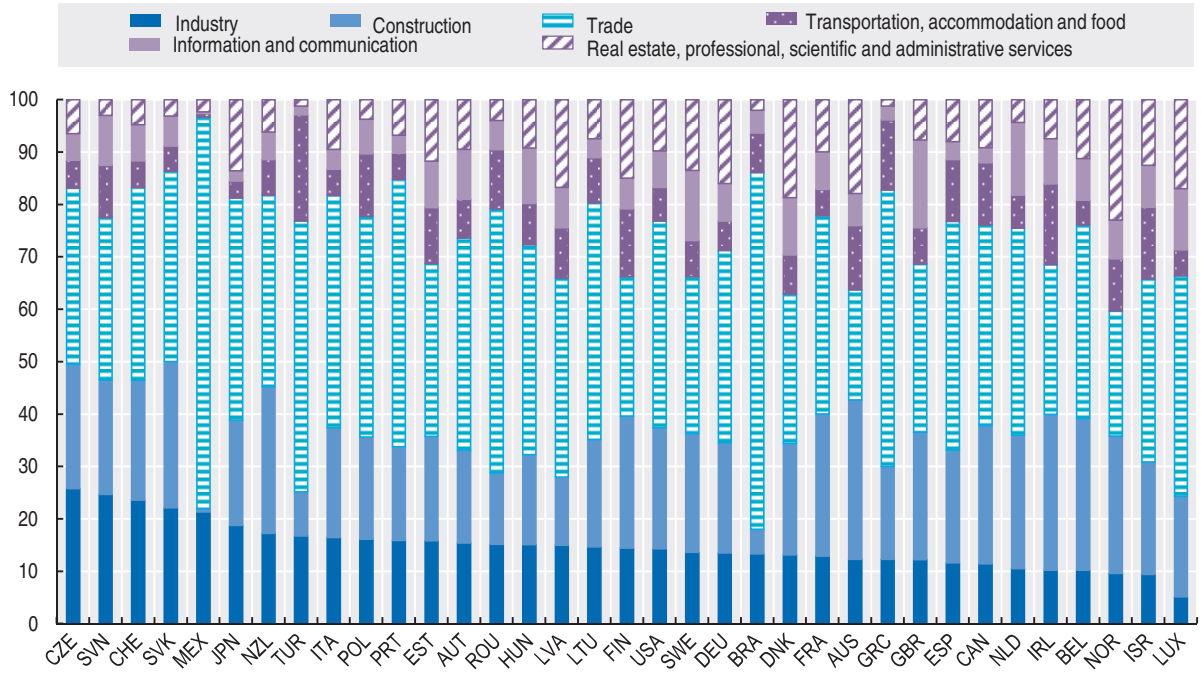


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Figure 2.6. **Change in the number of enterprises by size, business economy**

Average annual percentage change between 2008 and 2014

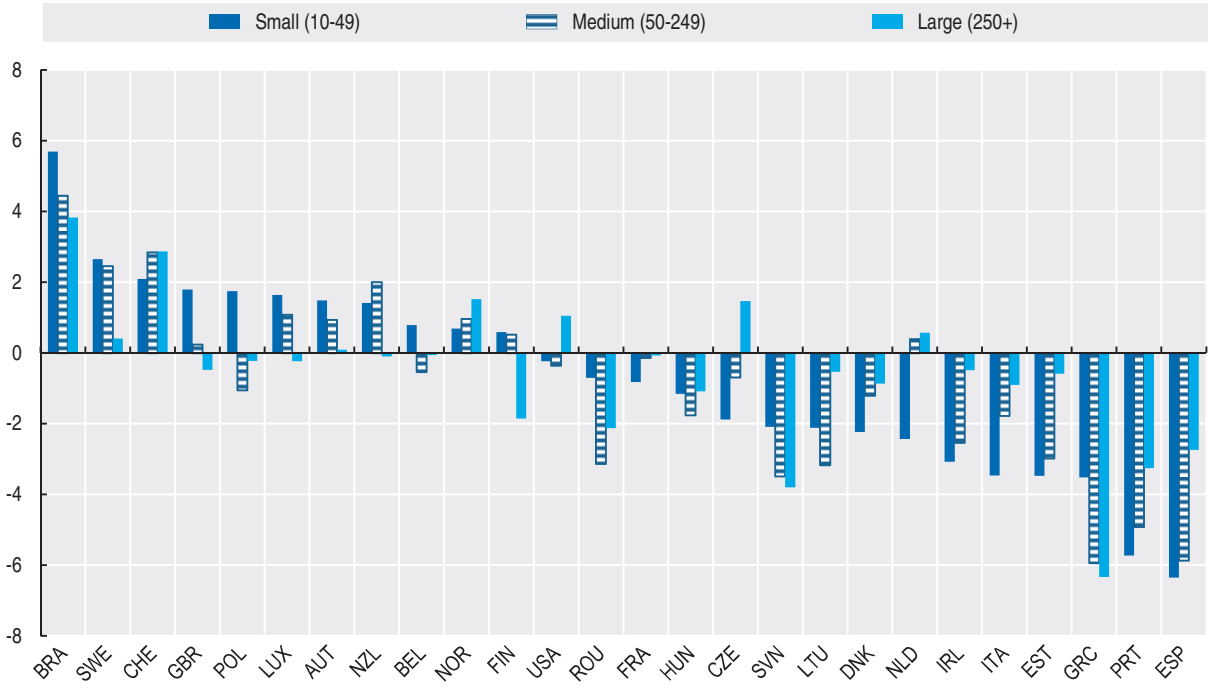

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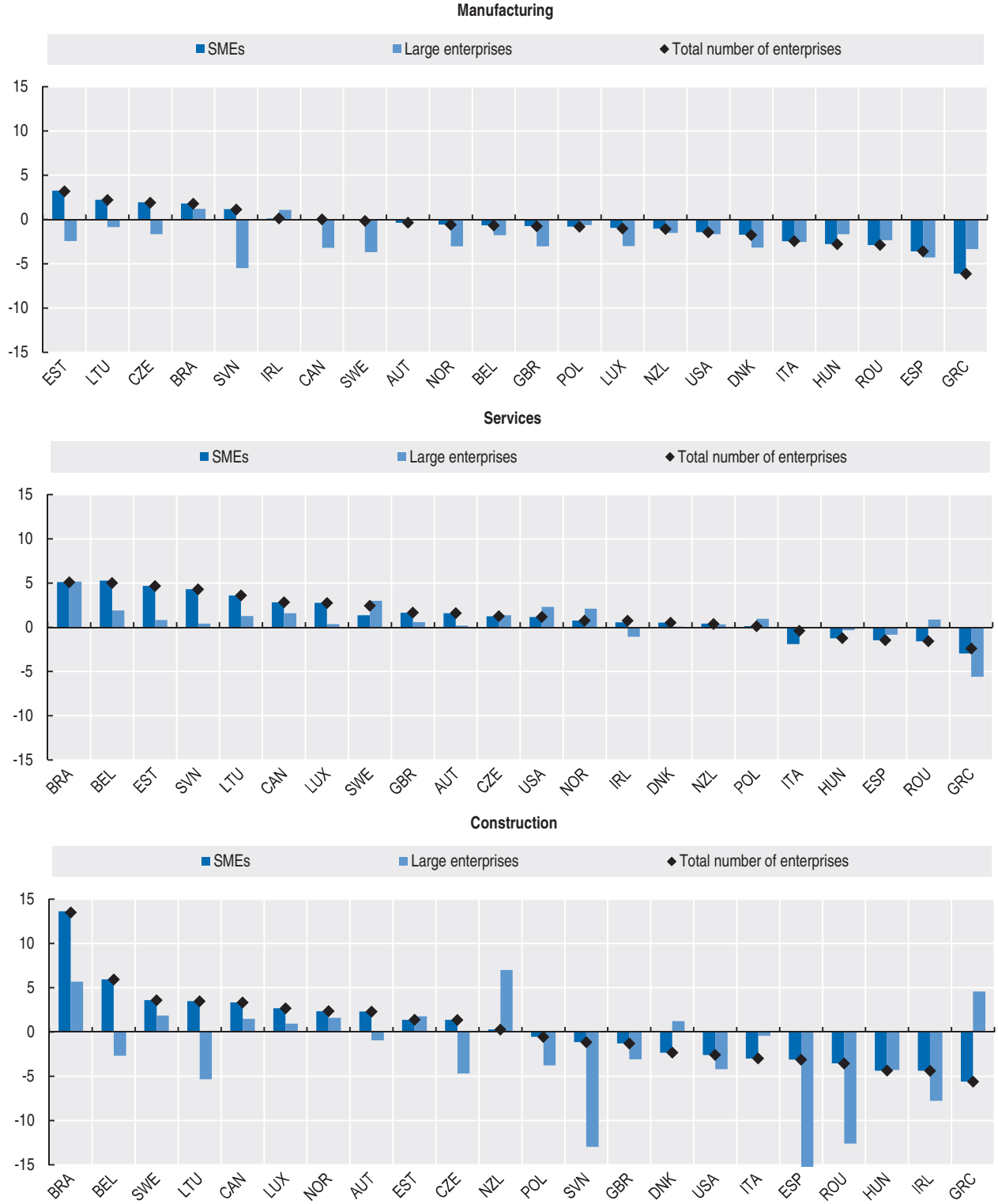
Figure 2.7. **Change in number of enterprises, by size and main sector**

Average annual percentage change between 2008 and 2014



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Employment by enterprise size

Key findings

- Although large enterprises represent only less than 1% of the total population of enterprises, they account for a significantly higher share of employment – between 47% of persons employed in the business sector in the United Kingdom and 12% in Greece. On average, across OECD countries large enterprises account for around 40% of total manufacturing employment while in services they account for around 25 %.
- Between 2008 and 2014, employment in manufacturing decreased in all but two OECD countries, Luxembourg and Germany, mainly reflecting declines in the number of enterprises, both SMEs and large. Employment levels in countries hit hardest by the crisis remained below 2008 levels in 2014, with SMEs in particular bearing the brunt of the contraction. Similarly, in most economies where employment surpassed pre-crisis highs, SMEs were the main drivers of growth. In the United States however, large service sector enterprises have driven post-crisis employment growth.
- Within manufacturing, employment growth in large enterprises in the euro area, which were less affected by the crisis than SMEs, has continued to outperform that for SMEs, whereas in the United States the opposite has been the case.

Relevance

SMEs are an important driver of employment growth, but can also be more vulnerable to downturns. A better understanding of employment distributions provides important insights on underlying resilience and job-security, and also potential employment growth. When factored with data on average salaries, which typically show lower salaries the smaller the firm, distributional data can shed light on income inequalities.

Definitions

The *number of persons employed* corresponds to the total number of persons who worked for the observation unit during the reference year, including working proprietors, partners working regularly in the unit and unpaid family workers. It excludes directors of incorporated enterprises and members of shareholders' committees who are paid solely for their attendance at meetings, labour force made available to the concerned unit by other units and charged for, persons carrying out repair and maintenance work in the unit on the behalf of other units, and home workers. It also excludes persons on indefinite leave, military leave or those whose only remuneration from the enterprise is by way of a pension.

The total change in the number of persons employed is decomposed into four drivers: changes in the number of SMEs and large enterprises, and changes in the average size of SMEs and large enterprises.

The *contribution generated by the change in the number of SMEs* is calculated as the product of the difference in the number of SMEs between 2008 and 2014 and the average SME size in 2008. The *contribution generated by the change in the average size of SMEs* is calculated as the product of the difference of the average SME size between 2008 and 2014 and the number of SMEs in 2014. Both contributions are calculated analogously for large enterprises. The relative share of each contribution is the absolute contribution expressed as a percentage of the total change in the number of persons employed (i.e. the sum of all absolute contributions).

Average employment in an enterprise size class is the number of persons employed in a size class divided by the number of enterprises in a size class, in a given economic sector.

Information on data for Israel: *http://dx.doi.org/10.1787/888932315602*.

Comparability

All countries present information using the enterprise as the statistical unit except Korea and Mexico, which use establishments. Data on employment in all countries refer to the number of persons employed except for: Switzerland, where data exclude employment in enterprises with less than 3 persons employed; and Canada, Israel, Japan, Korea, the United States and the Russian Federation, where data refer to employees. Estimates of non-employer enterprises in the business economy amount to approximately 1.7 million in Canada, 15.3 million in the United States, and 2.5 million in the Russian Federation.

Data for the United Kingdom exclude employment in (an estimated) 2.6 million small unregistered businesses that are below the thresholds of the value-added tax regime and/or the "pay as you earn (PAYE)" (for employing firms) regime.

Some countries use different conventions concerning the size-class breakdown: the size class "1-9" refers to "1-10" for Mexico and "1-19" for Australia, Canada and Turkey; the size class "10-19" refers to "11-50" for Mexico; the size class "50-249" refers to "20-199" for Australia, "51-250" for Mexico, "50-299" for Canada, Japan and Korea; finally, the size class "250+" refers to "200+" for Australia, "300+" for Canada, Japan and Korea and "251+" for Mexico.

Some care is needed when interpreting changes over time, as the data do not track cohorts of firms. Shrinkages in large firms may lead to them subsequently being recorded as SMEs and, correspondingly, expansions in SMEs may result in them being classified as large enterprises.

Source

OECD Structural and Demographic Business Statistics (SDBS) (database), *http://dx.doi.org/10.1787/sdbs-data-en*.

Further reading

OECD (2017), *Small, Medium, Strong. Trends in SME Performance and Business Conditions*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264275683-en*.

Figure 2.8. **Employment by enterprise size, Euro area and United States**

Number of jobs, 2008 = 100

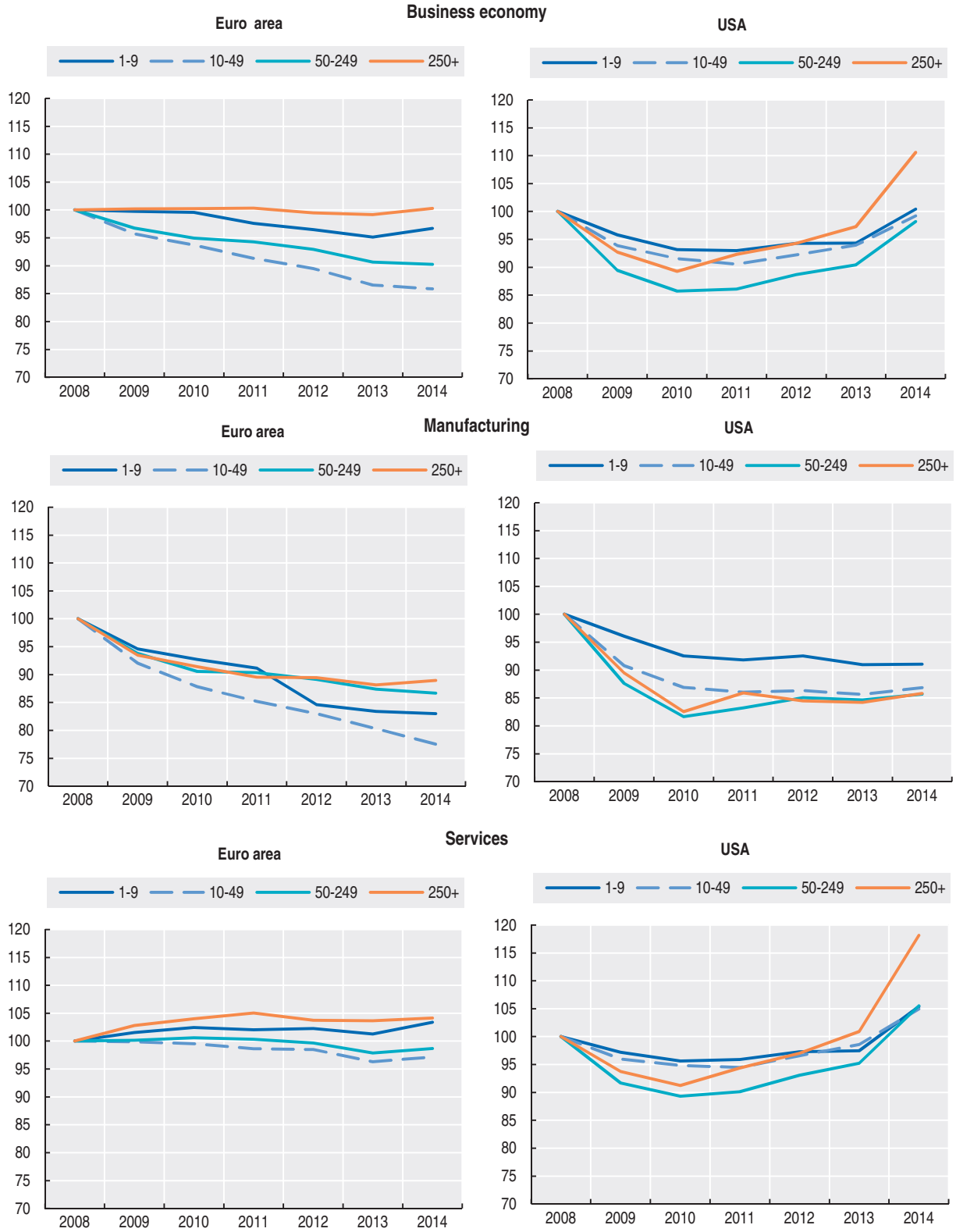

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Figure 2.9. **Employment by enterprise size, business economy**

Percentage of total employment, 2014, or latest available year

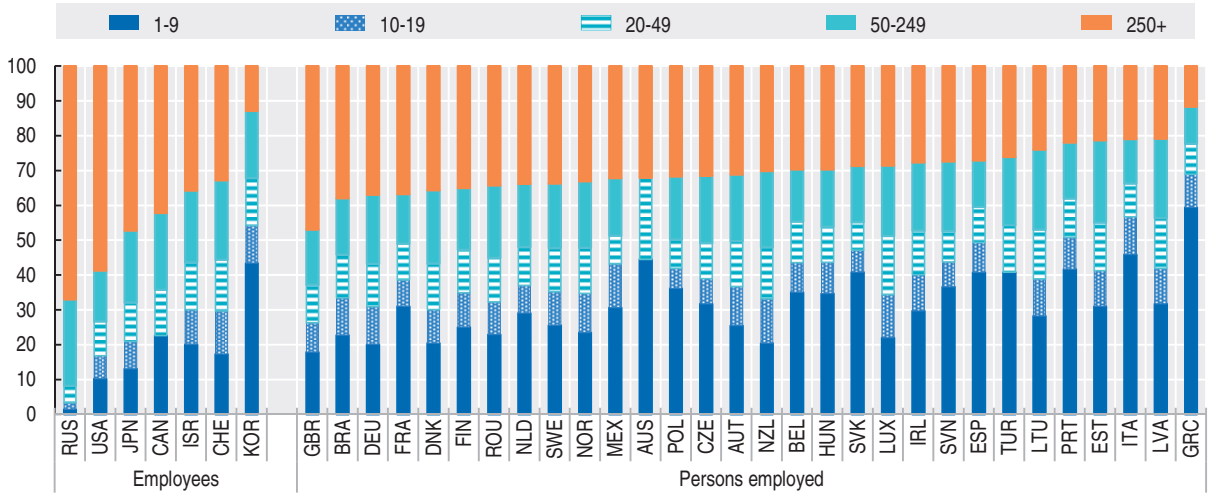

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Table 2.2. **Employment by enterprise size, business economy**

2014, or latest available year

Country	1-9	10-19	20-49	50-249	250+	Total
Australia	3,526,000		1,859,000		2,541,000	7,926,000
Austria	692,580	302,047	355,028	519,675	843,661	2,712,991
Belgium	946,348	232,801	316,460	404,696	801,748	2,702,053
Brazil	7,787,469	3,661,851	4,258,283	5,527,970	12,954,846	34,190,419
Canada	2,381,568		1,382,103	2,320,477	4,429,641	10,513,789
CzechRepublic	1,108,872	254,141	356,862	671,844	1,100,426	3,492,145
Denmark	334,699	156,685	216,595	344,423	581,782	1,634,184
Estonia	124,549	41,632	55,263	94,830	85,736	402,010
Finland	366,248	145,587	179,851	260,668	511,812	1,464,166
France	4,799,169	1,176,958	1,602,109	2,206,025	5,672,971	15,457,232
Germany	5,558,583	3,043,919	3,377,932	5,516,994	10,241,981	27,739,409
Greece	1,276,724	206,287	187,379	228,794	249,678	2,148,862
Hungary	852,339	223,372	250,067	405,303	728,848	2,459,929
Ireland	363,428	126,923	154,828	239,185	337,178	1,221,542
Israel	458,069	227,705	309,210	469,332	813,522	2,277,838
Italy	6,469,991	1,531,284	1,356,694	1,799,667	2,951,263	14,108,899
Japan	4,607,136	2,789,088	3,907,695	7,297,740	16,626,035	35,227,694
Korea	6,528,613	1,624,470	2,055,787	2,903,018	1,924,597	15,036,485
Latvia	196,115	63,122	88,957	140,615	128,651	617,460
Lithuania	250,168	93,916	125,271	203,336	212,164	884,855
Luxembourg	45,263	25,632	34,569	41,649	58,856	205,969
Mexico	5,670,630	2,328,081	1,499,174	3,077,857	5,942,343	18,518,085
Netherlands	1,537,522	424,692	579,738	956,911	1,787,609	5,286,472
NewZealand	268,655	167,209	194,173	287,310	394,720	1,312,067
Norway	367,681	177,626	204,653	299,511	517,052	1,566,523
Poland	3,031,711	486,859	690,145	1,517,269	2,655,280	8,381,264
Portugal	1,200,901	266,943	320,986	462,714	632,845	2,884,389
Romania	877,379	356,873	486,767	793,666	1,308,907	3,823,592
Russian Federation	255,837	363,909	892,153	4,588,166	12,366,162	18,466,227
Slovak Republic	579,089	89,648	114,156	229,617	405,531	1,418,041
Slovenia	203,000	39,808	49,745	110,653	151,632	554,838
Spain	4,325,165	916,784	1,078,404	1,407,623	2,875,335	10,603,311
Sweden	768,683	288,919	376,499	559,952	1,011,281	3,005,334
Switzerland	481,764	346,787	409,103	634,678	911,757	2,784,089
Turkey	5,097,885		1,689,941	2,439,017	3,255,113	12,481,956
UnitedKingdom	3,301,459	1,556,195	2,011,219	2,920,352	8,654,750	18,443,975
UnitedStates	9,245,888	6,048,538	8,918,826	13,305,796	53,250,192	90,769,240

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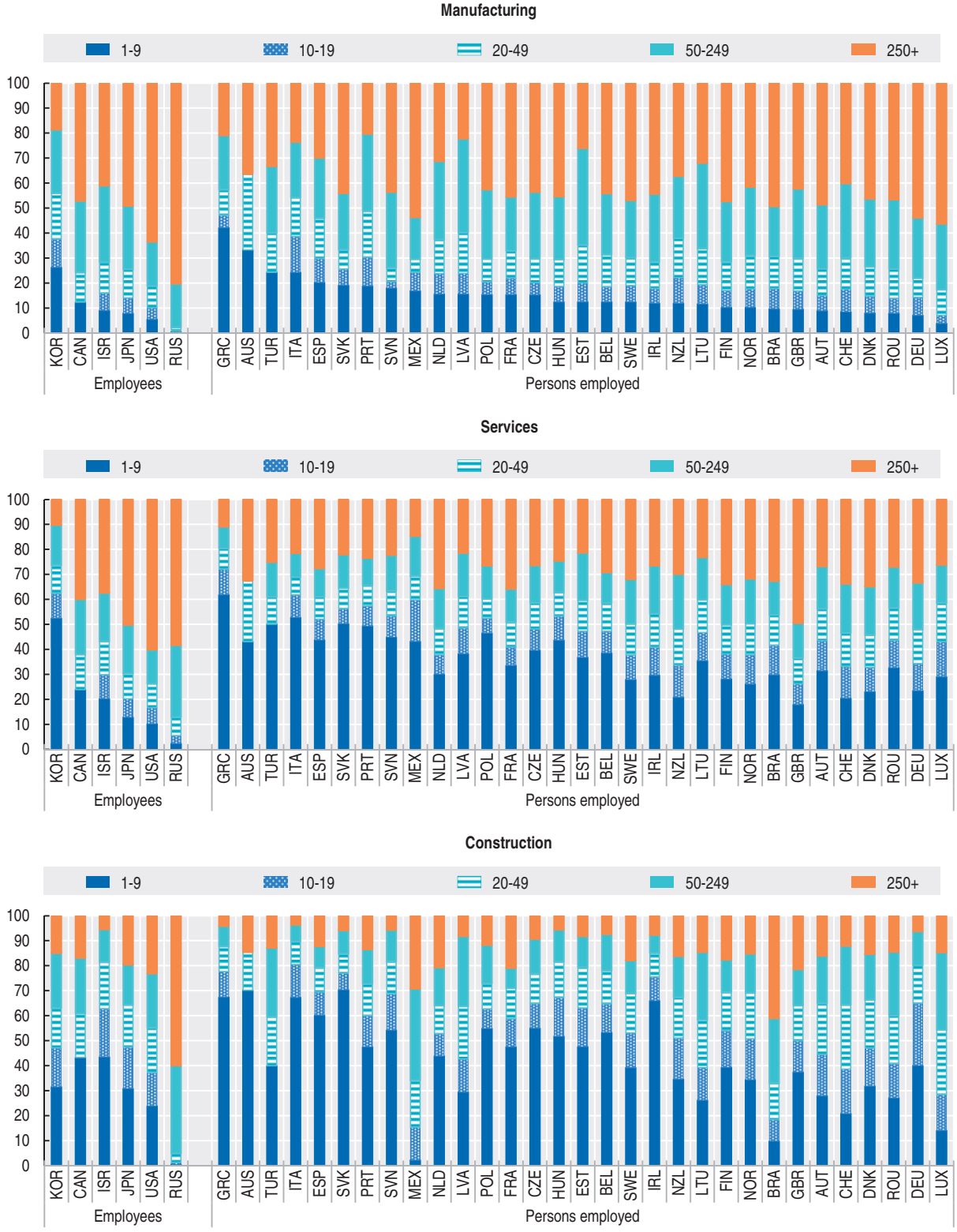
Figure 2.10. **Employment by enterprise size, main sectors**

Percentage of total employment in sector, 2014, or latest available year



StatLink http://dx.doi.org/10.1787/888933563227

Figure 2.11. **Employment in SMEs and large enterprises by economic activity**

Percentage of business economy employment in size class, 2014, or latest available year

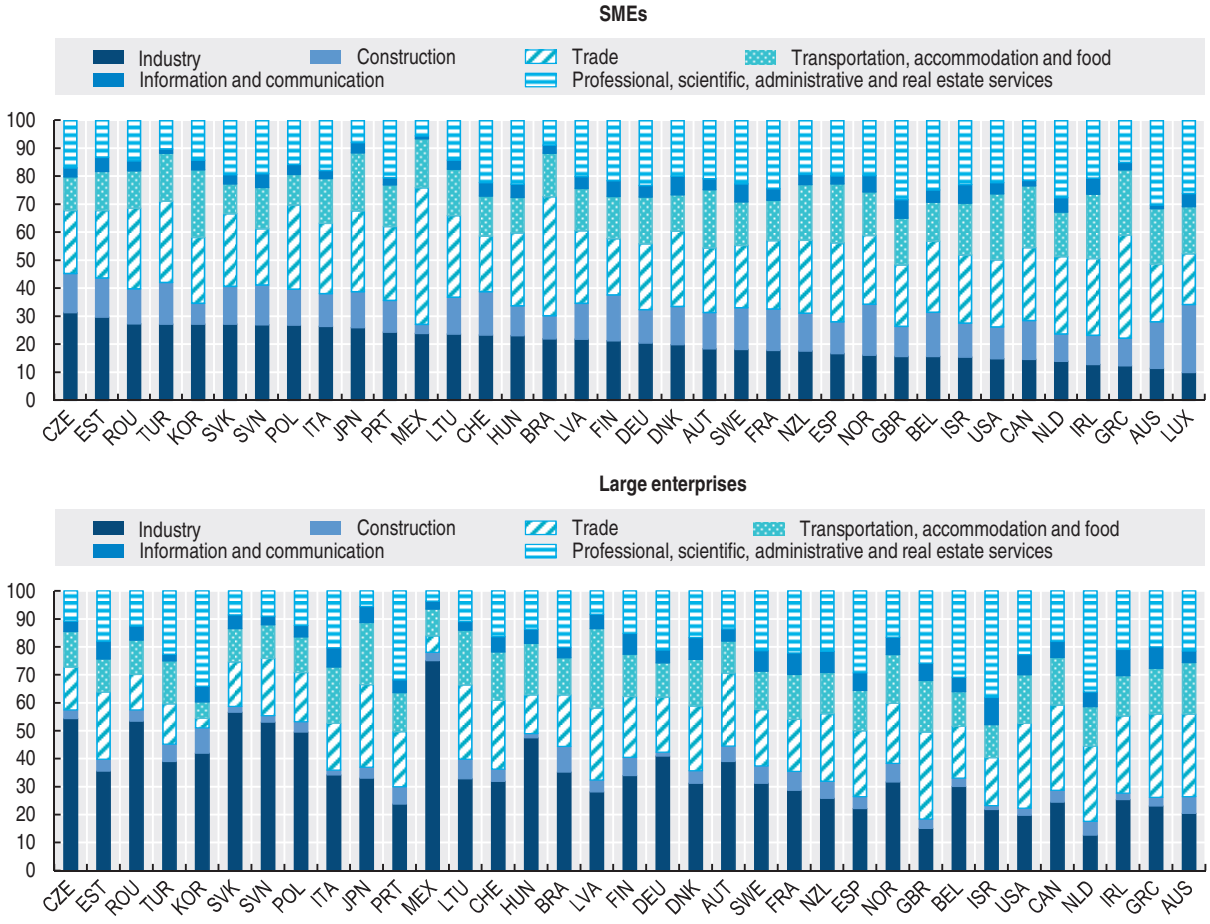


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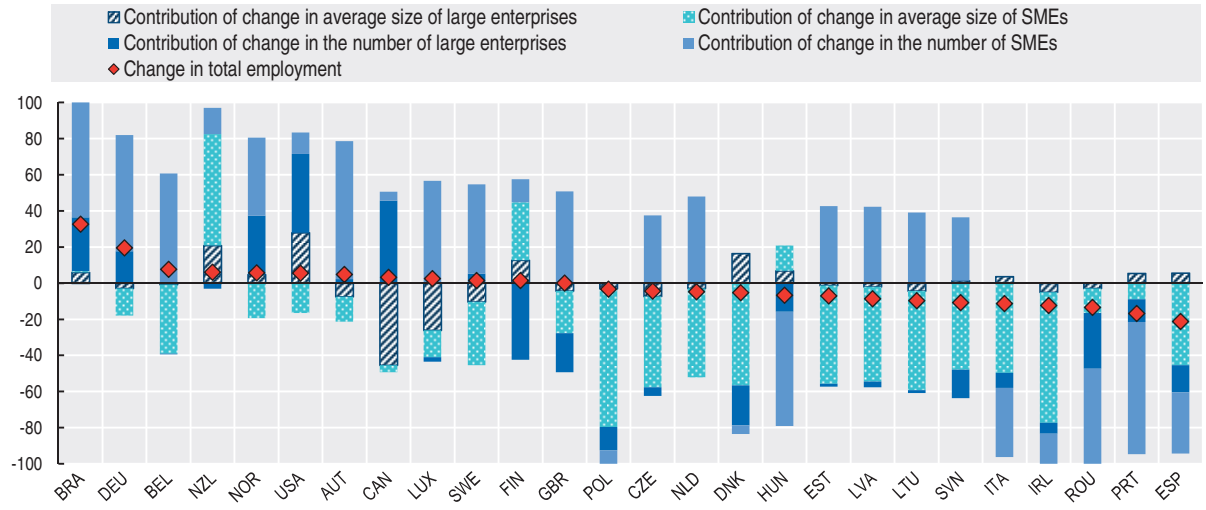
Figure 2.12. **Change in employment, business economy**

Contributions and percentage change between 2008 and 2014



StatLink http://dx.doi.org/10.1787/888933563265

Figure 2.13. **Change in employment, by main sector**

Contributions and percentage change between 2008 and 2014

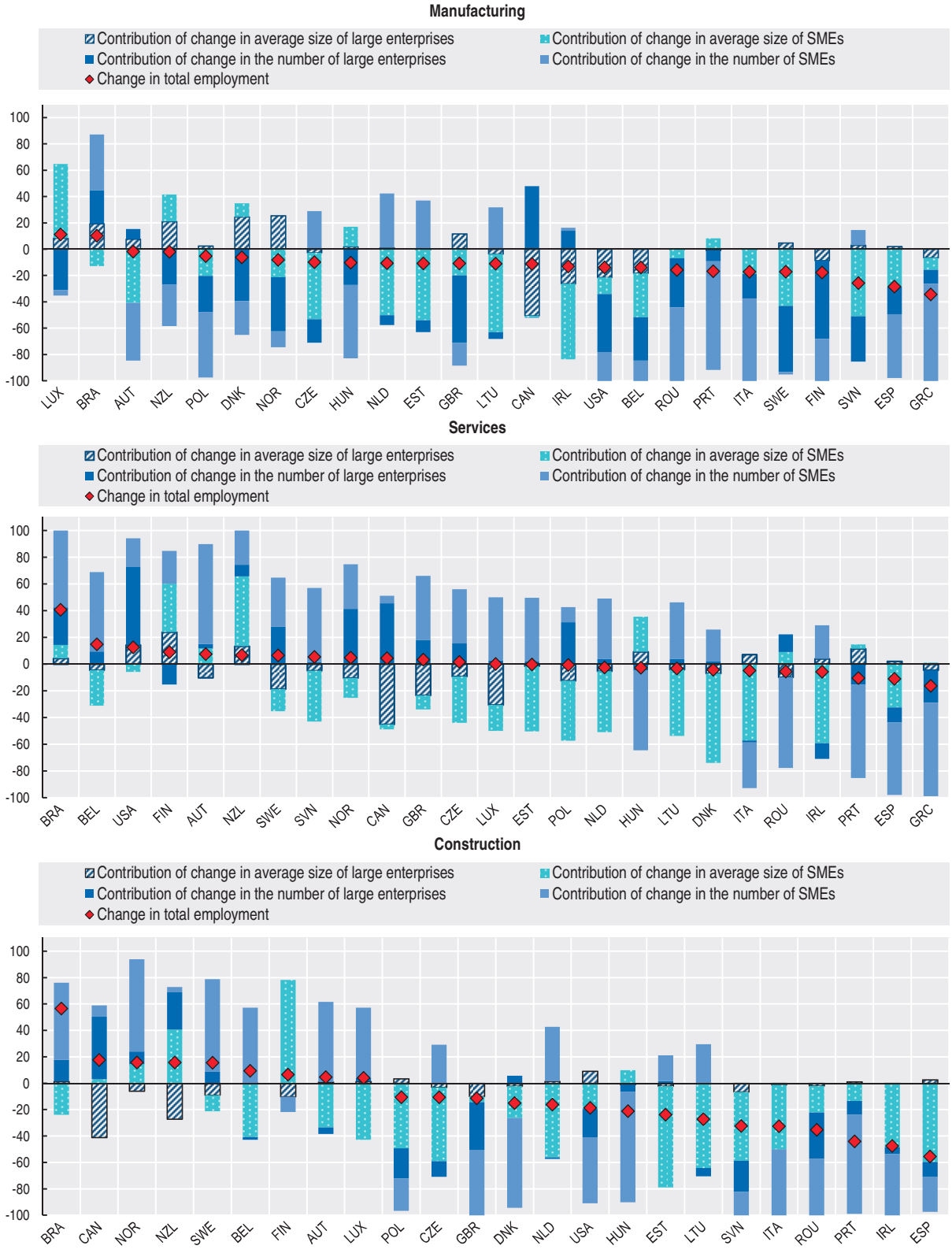


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Table 2.3. **Average employment by main sector and enterprise size**

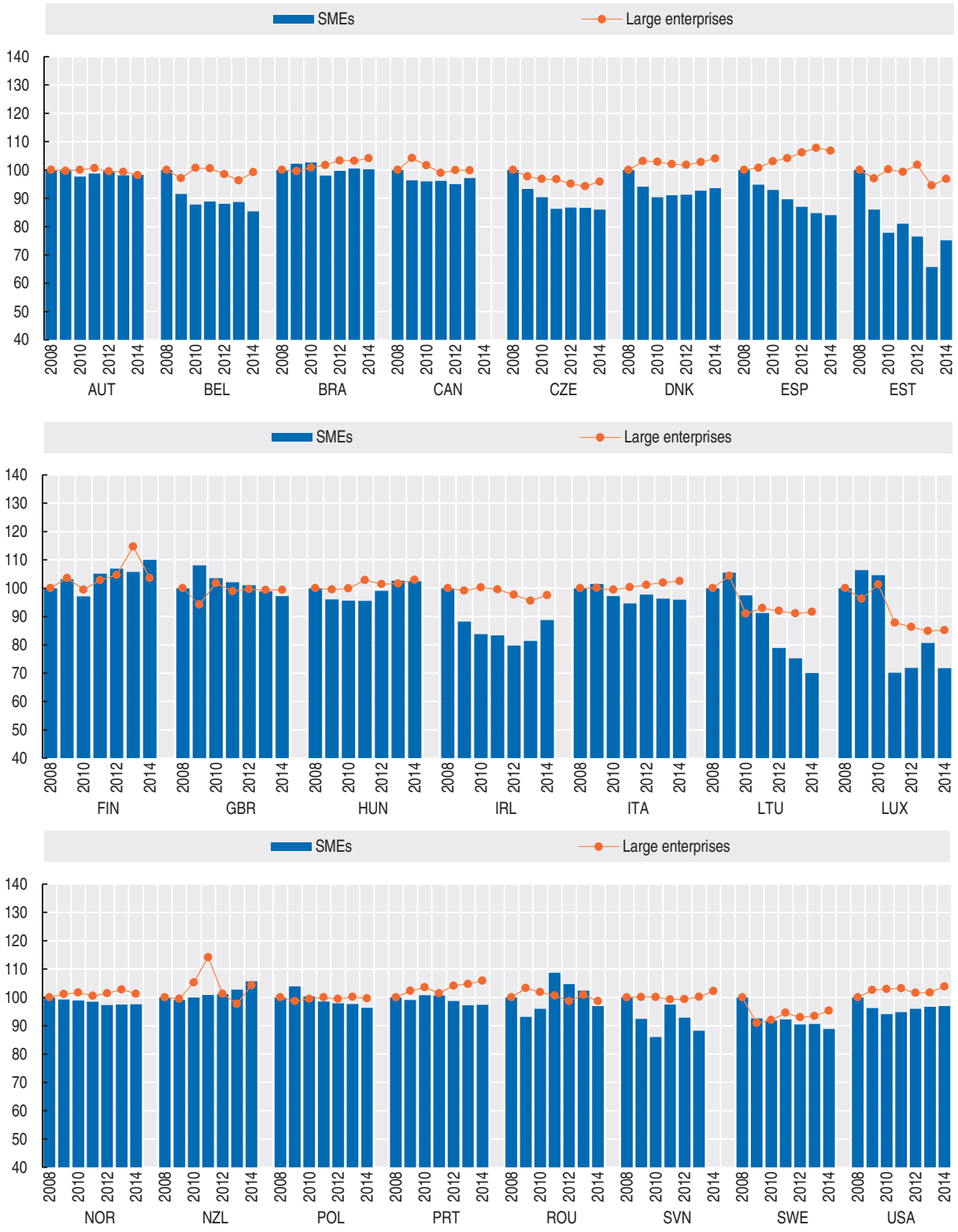
Employment per enterprise, number of individuals, 2014, or latest available year

Country	Manufacturing				Services				Construction			
	1-9	10-49	50-249	250+	1-9	10-49	50-249	250+	1-9	10-49	50-249	250+
AUT	3	21	110	644	2	18	97	969	3	19	92	680
BEL	2	22	106	716	2	20	101	1,142	2	20	99	464
BRA	4	20	100	1,090	3	19	102	1,156	4	21	109	811
CHE	5	20	105	701	5	18	95	876	5	21	98	625
CZE	1	22	108	674	1	18	99	872	1	19	94	634
DEU	4	20	107	920	3	19	96	953	3	17	87	585
DNK	3	21	103	869	2	20	96	949	2	19	92	617
ESP	2	21	101	707	2	18	98	1,180	2	19	95	995
EST	3	22	97	446	2	19	91	607	3	18	76	356
FIN	2	21	102	826	2	19	95	931	2	19	90	926
FRA	2	24	117	1,010	2	24	115	1,492	2	21	99	1,652
GBR	2	23	111	764	2	21	107	1,642	2	22	107	907
GRC	2	21	106	513	2	17	94	852	2	18	91	539
HUN	2	21	105	764	2	18	95	1,056	2	18	90	531
IRL	2	21	104	584	2	19	95	892	1	18	82	473
ISR	2	21	101	757	1	20	96	988	2	18	86	453
ITA	3	19	97	717	2	17	98	1,154	2	17	87	607
JPN	2	21	107	1,443	2	20	107	1,314	2	18	95	1,045
KOR	3	35	99	1,048	3	27	102	725	2	28	101	668
LTU	2	22	101	501	2	18	87	840	1	20	92	415
LUX	3	16	111	741	2	16	53	353	2	21	94	337
LVA	2	21	96	458	2	19	94	743	2	20	94	346
MEX	2	14	115	766	2	13	102	755	3	19	101	570
NLD	2	24	110	645	2	26	123	1,413	1	20	96	784
NOR	2	21	101	794	1	18	99	793	2	19	89	776
NZL	4	20	100	711	3	19	101	825	3	18	91	891
POL	2	22	110	667	2	20	100	1,014	2	20	95	632
PRT	2	21	98	527	2	18	96	1,072	2	18	94	786
ROU	3	22	105	700	2	19	98	914	2	20	98	603
SVK	1	20	109	748	2	19	101	825	1	19	86	608
SVN	2	20	108	701	2	18	97	813	2	18	87	345
SWE	2	23	112	953	1	22	109	1,099	2	21	96	1,352
TUR			103	675			100	865			95	453
USA	3	21	101	1,501	3	20	96	2,150	2	20	93	903

StatLink http://dx.doi.org/10.1787/888933565032

Figure 2.14. **Evolution of average size of SMEs and large enterprises**

2008 = 100



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Value added by enterprise size

Key findings

- In most countries, large enterprises employing more than 250 persons account for a considerable part of the value added of the business economy, despite constituting less than 1% of businesses. The share of value added created by large enterprises varies significantly across countries, reflecting economic size and the structure of the business population, ranging from 15% in Luxembourg, to 32% in Italy, and more than 60% in Mexico.
- Large industrial firms dominate the business landscape in many countries. In nearly half OECD economies, the industry sector accounts for over half of total business economy value-added generated by large firms; ranging from 26% in the United Kingdom to 85% in Mexico.
- SMEs are the backbone of the services sector in nearly all countries, where they account for 60% or more of total value added. In contrast, large firms provide a significant contribution to value added in manufacturing in most countries, partly reflecting increasing returns to scale from more capital-intensive production. However, in the Baltic States and Southern European economies, SMEs account for the lion's share of manufacturing, albeit reflecting a disproportionate contribution, compared to other countries, from larger SMEs (50-249).
- Between 2008 and 2014, the relative shares of SMEs and large firms in total value added in manufacturing remained stable in virtually all countries, with the exception of Ireland.

Relevance

There are significant differences in entrepreneurship and productivity performance across countries. Part of the explanation for these differences relates to the heterogeneity of enterprises. Larger enterprises, for example, typically have higher productivity levels than smaller enterprises, and while new enterprises are often drivers of innovation, many micro-enterprises have limited growth potential. Measures of value added broken down by enterprise size provide important insights into structural factors that drive growth, employment and entrepreneurial value, but also growing concerns about slowing productivity diffusion and productivity-wage decoupling.

Definitions

Value added corresponds to the difference between production and intermediate consumption, where total intermediate consumption is valued at purchasers' prices. Measures of production used below differ by country and are valued at basic prices or factor costs. Factor cost measures exclude other taxes and subsidies on production as defined in the 2008 System of National Accounts.

Data in this section present the value added in each enterprise size class (defined by the number of persons employed) as a percentage of the value added of all enterprises.

Information on data for Israel: *http://dx.doi.org/10.1787/888932315602*.

Comparability

Data refer to value added at factor costs in European countries and value added at basic prices for other countries; they cover the business economy, excluding financial intermediation.

The size-class breakdown 1-9, 10-19, 20-49, 50-249, 250+ provides for the best comparability given the varying data collection practices across countries. Some countries use different conventions: for Japan, "50-249" refers to "50+"; for Mexico, "1-9" refers to "1-10", "10-19" refers to "11-20", "20-49" refers to "21-50", "50-249" refers to "51- 250", "250+" refers to "251+"; for Turkey "1-9" refers to "1-19".

Data for Korea, Mexico and the United States are based on establishments and not on enterprises. Data for Israel and the United States exclude value added by non-employer enterprises. Manufacturing data for Korea exclude establishments with 10 or less employees. Data for Switzerland exclude information on enterprises with less than three persons employed.

Data exhibit a break in the series in 2013 for Finland and Portugal, and in 2014 for France. Data for the United Kingdom exclude an estimated 2.6 million small unregistered businesses below the thresholds of the value-added tax regime and/or the "pay as you earn (PAYE)" (for employing firms) regime.

Some care is needed when interpreting changes over time, as the data do not track cohorts of firms. Contractions in large firms may lead to them subsequently being recorded as SMEs and correspondingly, expansions in SMEs may result in them being classified as large enterprises.

Source

OECD Structural and Demographic Business Statistics (SDBS) (database), *http://dx.doi.org/10.1787/sdbs-data-en*.

Further reading

OECD (2017), *Small, Medium, Strong. Trends in SME Performance and Business Conditions*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264275683-en*.

OECD (2010), *Structural and Demographic Business Statistics*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264072886-en*.

System of National Accounts (SNA) 2008, New York. *http://unstats.un.org/unsd/nationalaccount/sna2008.asp*.

Figure 2.15. **Value added by enterprise size, business economy**

Percentage of total value added, 2014, or latest available year

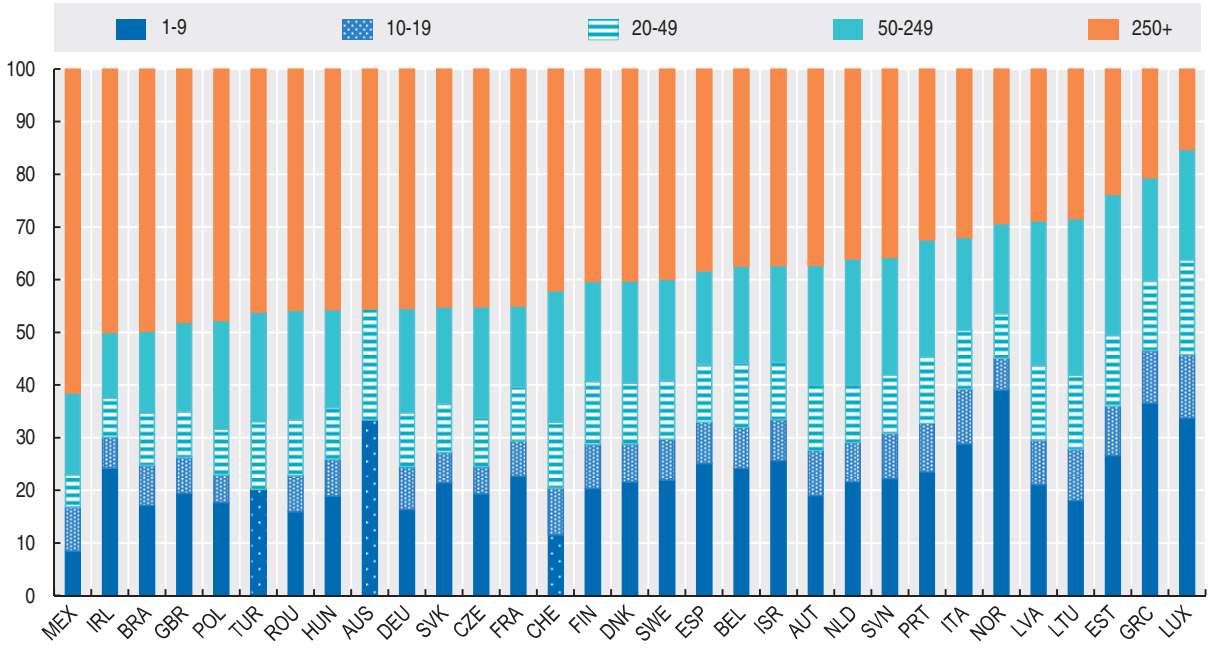

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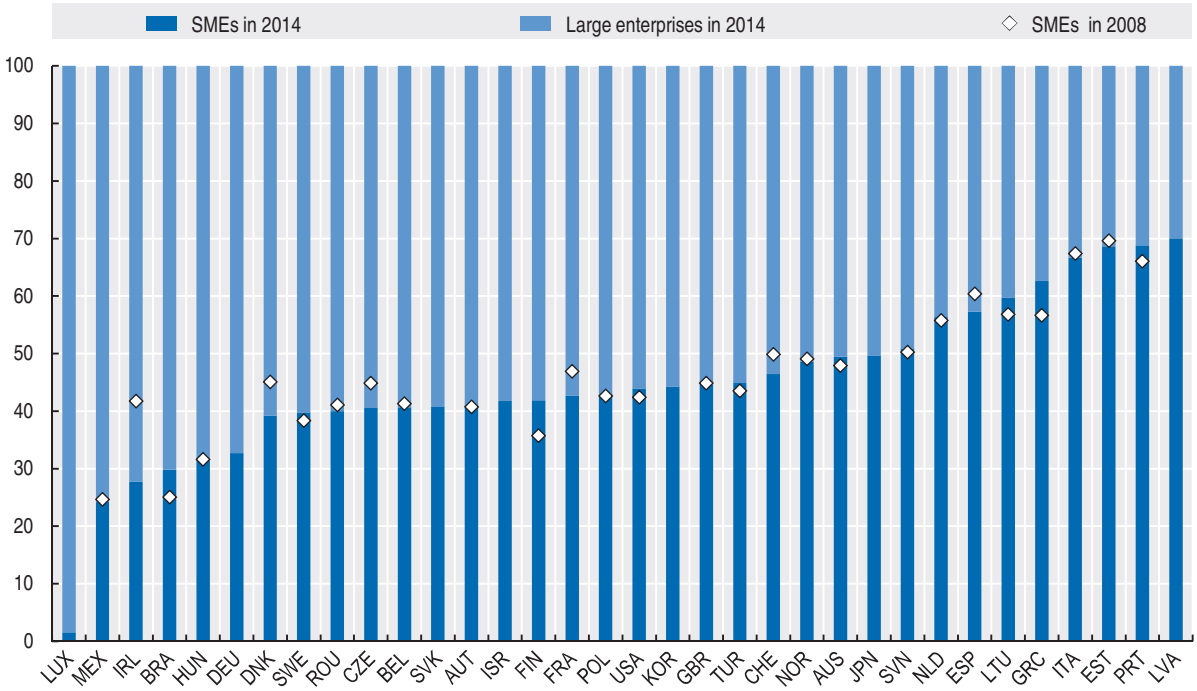
Figure 2.16. **Value added by enterprise size, manufacturing**

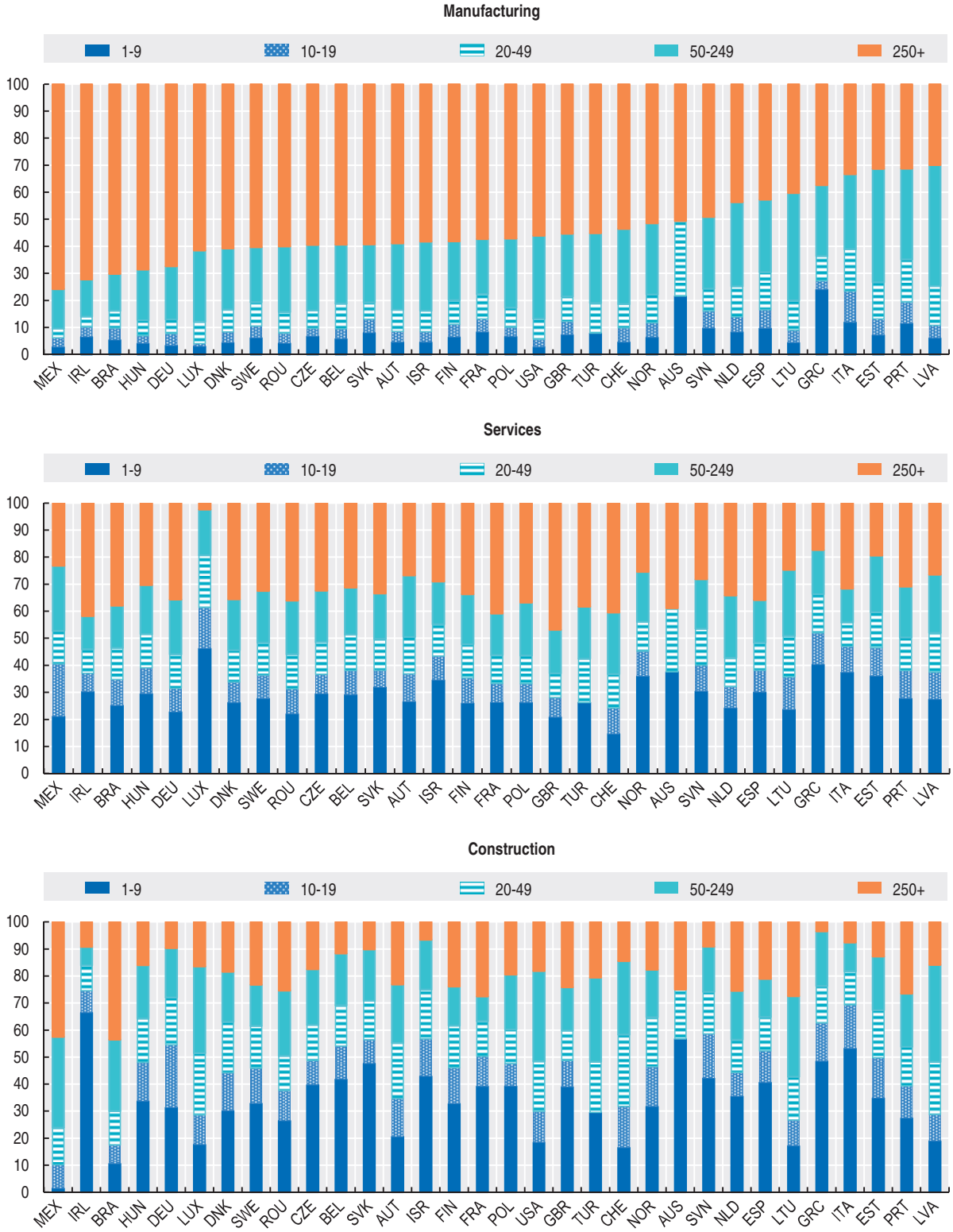
Percentage of total value added in manufacturing



StatLink http://dx.doi.org/10.1787/888933563341

Figure 2.17. **Value added by enterprise size and main sector**

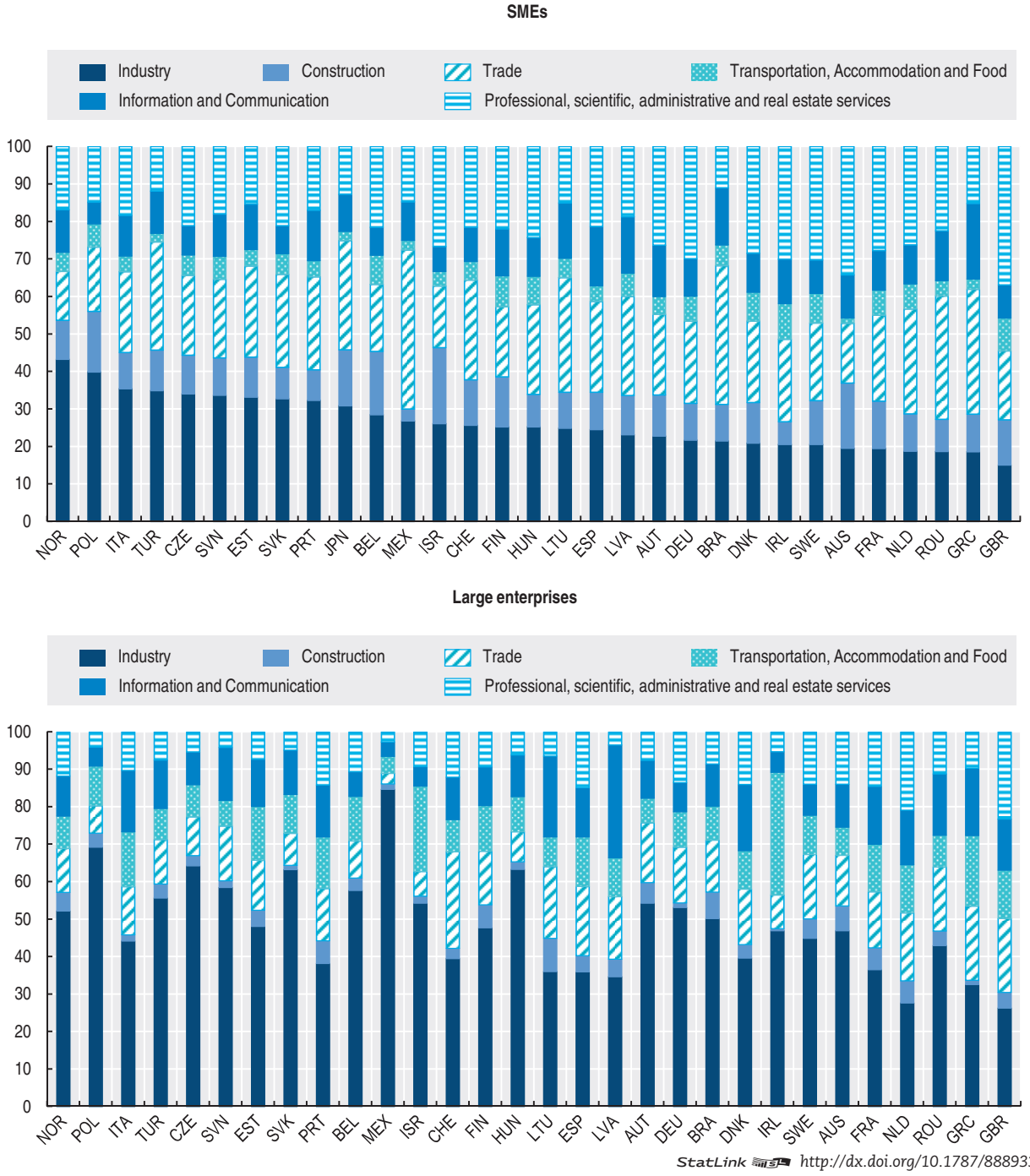
Percentage of total value added, 2014 or latest available year



StatLink http://dx.doi.org/10.1787/888933563360

Figure 2.18. **Value added of SMEs and large firms by economic activity**

Percentage of total value added of SMEs (Large enterprises), 2014, or latest available year



StatLink http://dx.doi.org/10.1787/888933563379

Turnover by enterprise size

Key findings

- In OECD countries, SMEs account on average for 60% of total turnover, and around 80% in smaller economies such as the Luxembourg, Estonia and Latvia.
- Turnover per person employed typically increases the larger the firm size. This partly reflects higher capital-intensity, but compositional effects and ownership structures can also play a determining factor, which means that in some economies smaller firms have higher turnover to employment figures. For example, retail and wholesale enterprises generally have higher turnover to employment figures than other firms, and dependent SMEs (i.e. those owned by larger enterprise groups) may also have relatively high (often intellectual property) capital intensities.

Definitions

Turnover is defined as the total value of invoices by the observation unit during the reference period, corresponding to market sales of goods or services supplied to third parties. Turnover includes all duties and taxes on the goods or services invoiced by the unit with the exception of the VAT invoiced by the unit vis-à-vis its customer and other similar deductible taxes directly linked to turnover. It also includes all other charges (transport, packaging, etc.) passed on to the customer, even if these charges are listed separately in the invoice and provided by the unit. Rebates and discounts as well as the value of returned packing are deducted from revenues received by the unit in calculating turnover. Income classified as other operating income, financial income and extra-ordinary income in company accounts is excluded. Operating subsidies received from public authorities, or supranational authorities are also excluded.

Turnover in each enterprise size class is expressed as a percentage of the turnover of all enterprises.

Turnover per person employed is calculated by dividing the turnover in each size class by the corresponding number of persons employed.

Relevance

The turnover of firms is one dimension used, alone or in combination with employment, to define size classes of enterprises for policy purposes. These size classes are used to determine, for instance, eligibility for financial assistance or other programmes designed to support small enterprises.

Comparability

The size-class breakdown 1-9, 10-19, 20-49, 50-249, 250+ persons employed provides for the best comparability given the varying data collection practices across countries. Some countries use different conventions: for Mexico, “1-9” refers to “1-10”, “10-19” refers to “11-20”, “20-49” refers to “21-50”, “50-249” refers to “51- 250”, “250+” refers to “251+”; for Turkey “1-9” refers to “1-19”; for Australia, “1-9” refers to “1-9”, “50-249” refers to “20-199”, “250+” refers to “200+”.

Data for Mexico are based on establishments and not on enterprises. Data for Switzerland, the United States and the Russian Federation refer to employees.

Data exhibit a break in the series in 2013 for Finland and Portugal, and in 2014 for France. Data for the United Kingdom exclude an estimate of 2.6 million small unregistered businesses; these are businesses below the thresholds of the value-added tax regime and/or the “pay as you earn (PAYE)” (for employing firms) regime.

Source

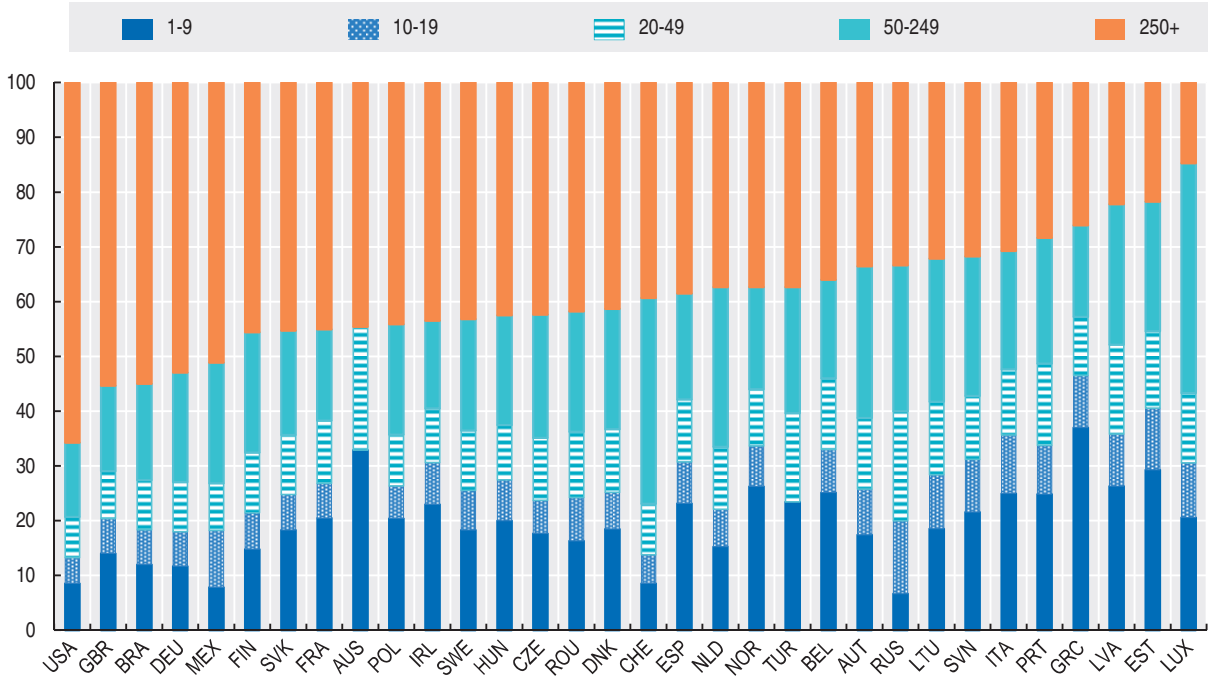
OECD Structural and Demographic Business Statistics (SDBS) (database), *http://dx.doi.org/10.1787/sdbs-data-en*.

Further reading

OECD (2010), *Structural and Demographic Business Statistics*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264072886-en*.

Figure 2.19. **Turnover by enterprise size, business economy**

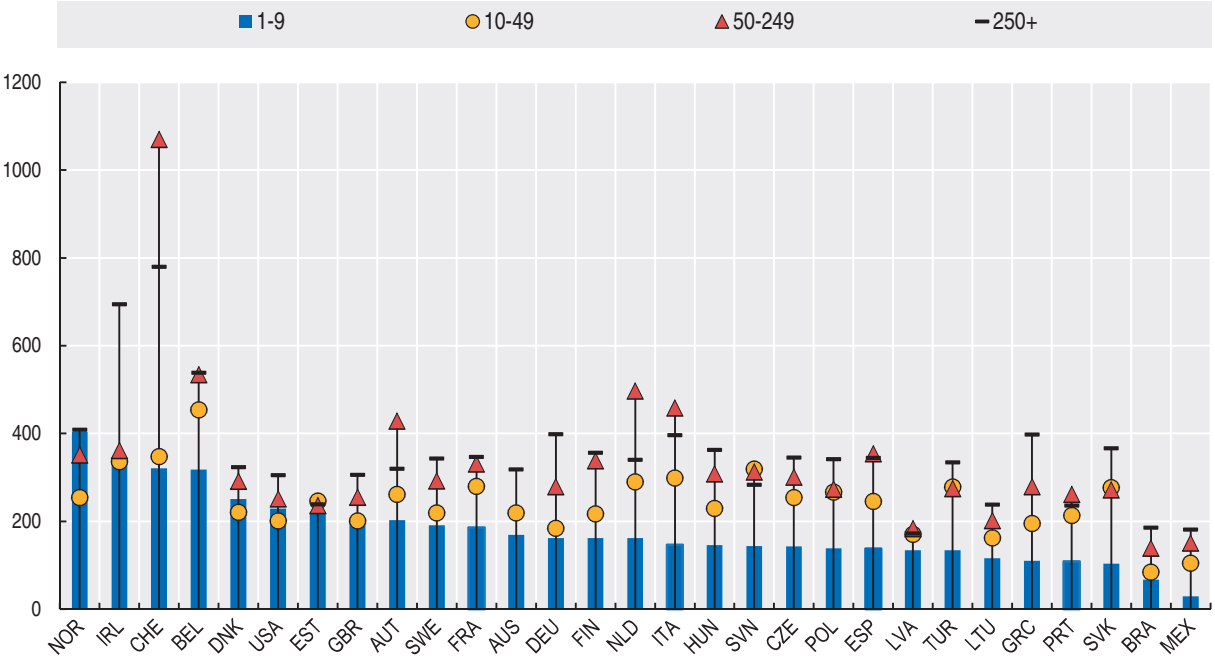
Percentage of total turnover, 2014, or latest available year



StatLink http://dx.doi.org/10.1787/888933563398

Figure 2.20. **Turnover per person employed, business economy**

Thousands of USD, current PPPs, 2014, or latest available year



StatLink http://dx.doi.org/10.1787/888933563417

Compensation of employees by enterprise size

Key findings

- In most countries, compensation of employees constitutes the largest part of value added, particularly in SMEs, which tend to be less capital-intensive than larger firms.
- The share of compensation of employees in total value added is particularly low in Ireland, Japan, Korea and Mexico, both in large and in small firms. In other countries with high foreign ownership or control of supply-chains, such as Hungary, shares are also typically below the OECD average. By contrast, in France and Germany the share exceeds 70% of value added.
- Between 2008 and 2014, the share of compensation of employees in total value added fell for both SMEs and large enterprises in several countries, including Czech Republic, Denmark, Slovak Republic, Slovenia and the Baltic countries, but increased in others, such as Greece, Finland and Ireland.

Relevance

There has been increased attention in recent years on labour's share of value added, and in particular on the role that increasing/decreasing labour-capital wedges have on inequality.

Definitions

Compensation of employees includes the total remuneration, in cash or in kind, payable to an employee in return for work done by the latter during the reference period. No compensation of employees is payable in respect of unpaid work undertaken voluntarily, including the work done by members of a household within an unincorporated enterprise owned by the same household. Compensation of employees does not include any taxes payable by the employer on the wage and salary. It includes therefore wages and salaries of employees and other employers' social contributions.

Compensation of labour for all persons employed is equivalent to the sum of wages and salaries of all persons employed and other employers' social contributions for employees.

Information on data for Israel: *http://dx.doi.org/10.1787/888932315602*.

Comparability

Many SMEs are unincorporated enterprises. The owners of these firms do not pay themselves a salary but instead receive compensation through *mixed income* (as defined in the *2008 System of National Accounts*), which is a component of *value added*. This means that estimates that focus only on compensation of employees as share of total value added are likely to underestimate the relative contribution made by labour to SMEs compared to estimates for larger enterprises. This may help to explain the lower shares for example for Italy and Latvia.

Data for Australia, Brazil and Israel refer to compensation of all persons employed. Data for the United States are based on establishments.

Data present a break in series in 2013 for Finland and Portugal, and in 2014 for France. Data for the United Kingdom exclude an estimate of 2.6 million small unregistered businesses; these are businesses below the thresholds of the value-added tax regime and/or the "pay as you earn (PAYE)" (for employing firms) regime.

Source

OECD Structural and Demographic Business Statistics (SDBS) (database), *http://dx.doi.org/10.1787/sdbs-data-en*.

Further reading

OECD (2017), *OECD Compendium of Productivity Indicators 2017*, OECD Publishing, Paris. *http://dx.doi.org/10.1787/pdtvy-2017-en*

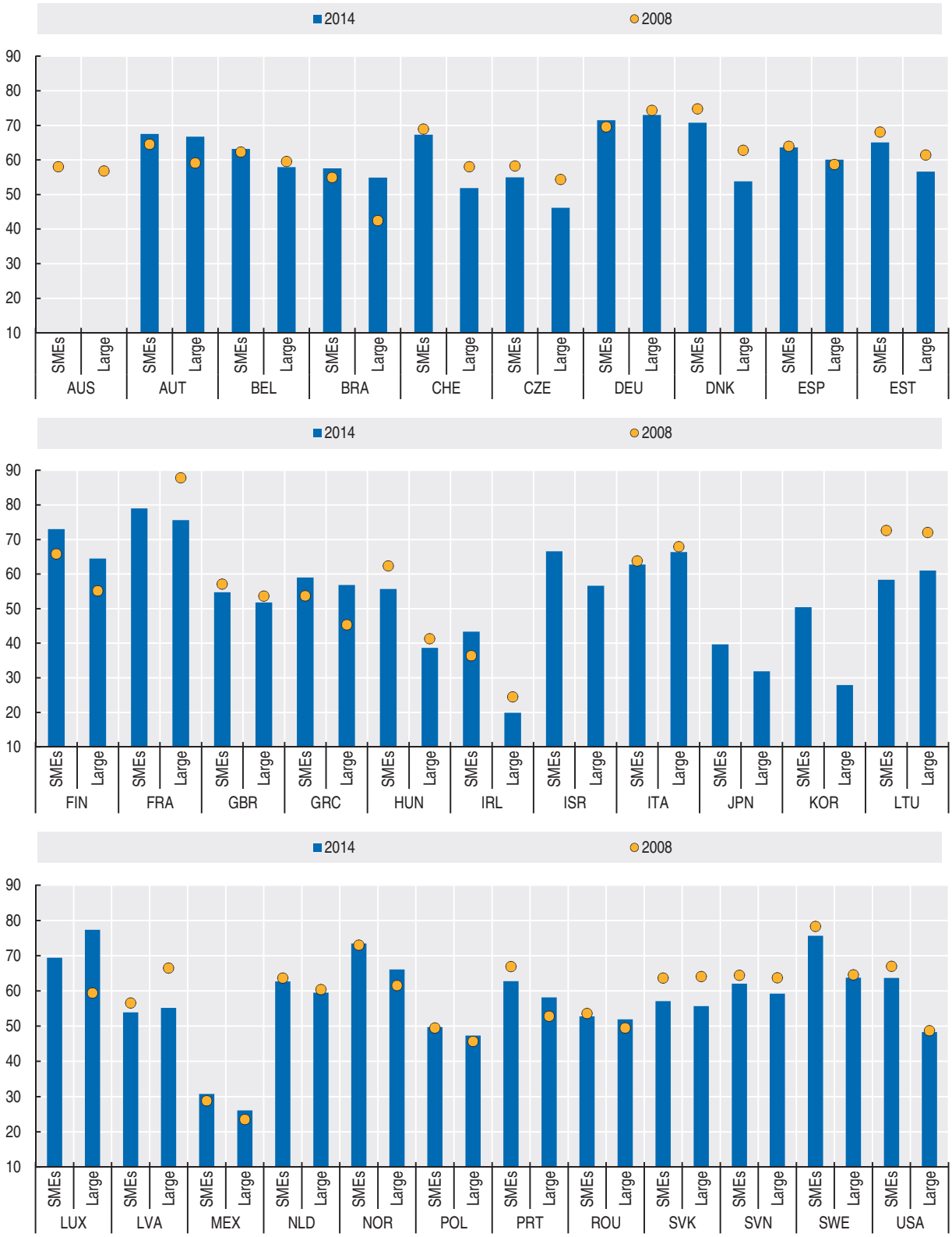
OECD (2017), *Small, Medium, Strong. Trends in SME Performance and Business Conditions*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264275683-en*.

OECD (2015), *Employment Outlook 2015*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/empl_outlook-2015-en*

OECD (2010), *Structural and Demographic Business Statistics*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264072886-en*.

Figure 2.21. **Compensation of employees over value added, by enterprise size, manufacturing**

Percentage



StatLink http://dx.doi.org/10.1787/888933563436

3. PRODUCTIVITY BY ENTERPRISE SIZE

Productivity gaps across enterprises

Productivity growth by enterprise size

Productivity and wage gaps across firms

Productivity gaps across enterprises

Key findings

- In the manufacturing sector, where production tends to be more capital-intensive and larger firms can exploit increasing returns to scale, large firms show almost consistently higher levels of productivity than smaller ones.
- The relative size (or spread) of productivity differences between larger and smaller firms varies considerably across countries. In the United Kingdom for example micro manufacturing firms have about 60% the productivity level of large firms compared with around 20% in Turkey and Hungary. Similarly for services, SMEs in Finland and Sweden operate at similar productivity levels to larger firms but in Mexico productivity levels of SMEs are between 25-75% lower than larger firms.
- Differences in productivity across size classes are relatively smaller in services sectors. In many countries, medium-sized firms outperform large firms, pointing to competitive advantages in niche, high-brand or high intellectual property content activities as well as the intensive use of affordable ICT.

Relevance

Productivity reflects the efficiency with which resources are allocated within an economy. Analyses typically only reflect contributions made at the sectoral (industry) level, masking heterogeneity in productivity among firms within the same sector, and in particular the contribution of SMEs, recognised as important drivers of growth as they scale-up. More granular statistics that show the relative contributions made by firms of different size class can better reveal this heterogeneity and lead to better targeted policies that can reduce barriers and capitalise on opportunities for productivity growth.

Definitions

Labour productivity is measured as the current price, gross value added per person employed. For the definition of "Manufacturing" and "Services", see the Reader's guide. Financial services activities are not included, so care is needed when extrapolating the results and drawing conclusions for total market sector activities across countries, in particular those with relatively large financial services activities, such as Luxembourg, Switzerland and the United Kingdom.

Labour productivity levels by firm size in national currency are converted to US dollars using purchasing power parities (PPPs) for GDP.

Information on data for Israel: *http://dx.doi.org/10.1787/888932315602*.

Comparability

Value added data refer to value added at factor costs in European countries and value added at basic prices for other countries. Estimates of value added and employment presented by size class are based on the *OECD Structural and Demographic Business Statistics (database)* and will not usually align with estimates produced according to the System of National Accounts. The latter includes a number of adjustments to reflect businesses and activities that may not be measured in structural business statistics, such as the inclusion of very small units or self-employed, or those made to reflect the Non-Observed Economy.

Comparability across size classes, industries and countries may be affected by differences in the shares of part-time employment. For these reasons, in productivity analysis the preferred measure of labour input is total hours worked rather than employment, but these data are typically not available by size class. Data gaps due to confidentiality rules in reporting countries may also hinder international comparability.

The size-class breakdown 1-9, 10-19, 20-49, 50-249, 250+ persons employed provides for the best comparability given the varying data collection practices across countries. Some countries use different conventions: for Australia, the size class "1-9" refers to "1-19", "20-49" refers to "20-199", "250+" refers to "200+"; for Mexico, "1-9" refers to "1-10", "10-19" refers to "11-20", "20-49" refers to "21-50", "50-249" refers to "51- 250", "250+" refers to "251+"; for Turkey "1-9" refers to "1-19".

Data for Switzerland and the United States refer to employees. Data for Mexico are based on establishments and not on enterprises. Data for the United Kingdom exclude an estimate of 2.6 million small unregistered businesses; these are businesses below the thresholds of the value-added tax regime and/or the "pay as you earn (PAYE)" (for employing firms) regime.

Sources

OECD Structural and Demographic Business Statistics (SDBS) (database), *http://dx.doi.org/10.1787/sdbs-data-en*.

OECD National Accounts Statistics (database), *http://dx.doi.org/10.1787/na-data-en*.

OECD Productivity Statistics (database), *http://dx.doi.org/10.1787/pdtvy-data-en*.

Further reading

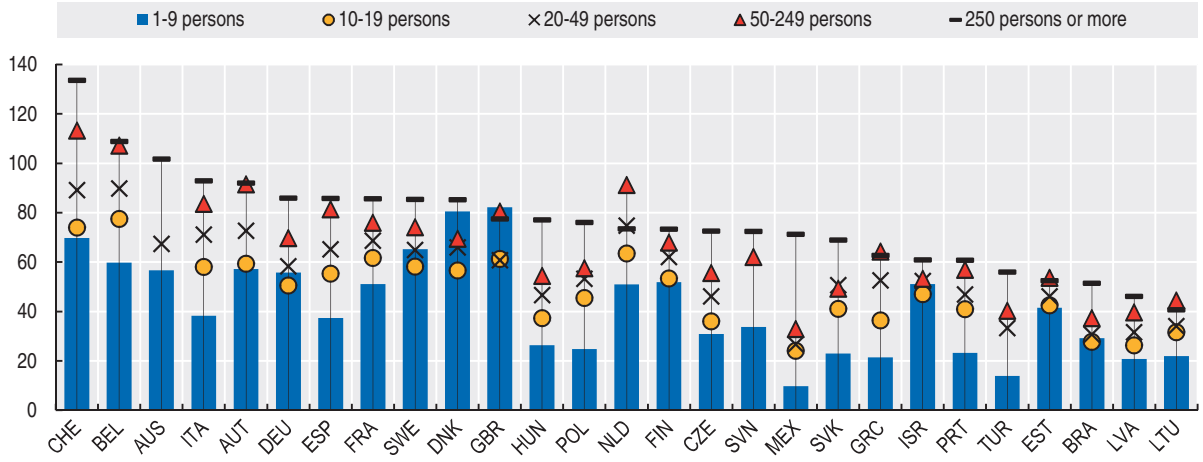
OECD (2017), *OECD Compendium of Productivity Indicators 2017*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/pdtvy-2017-en*

OECD (2017), *Small, Medium, Strong. Trends in SME Performance and Business Conditions*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264275683-en*

OECD (2001), *Measuring Productivity – OECD Manual: Measurement of Aggregate and Industry-level Productivity Growth*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264194519-en*.

Figure 3.1. **Labour productivity by enterprise size, business economy**

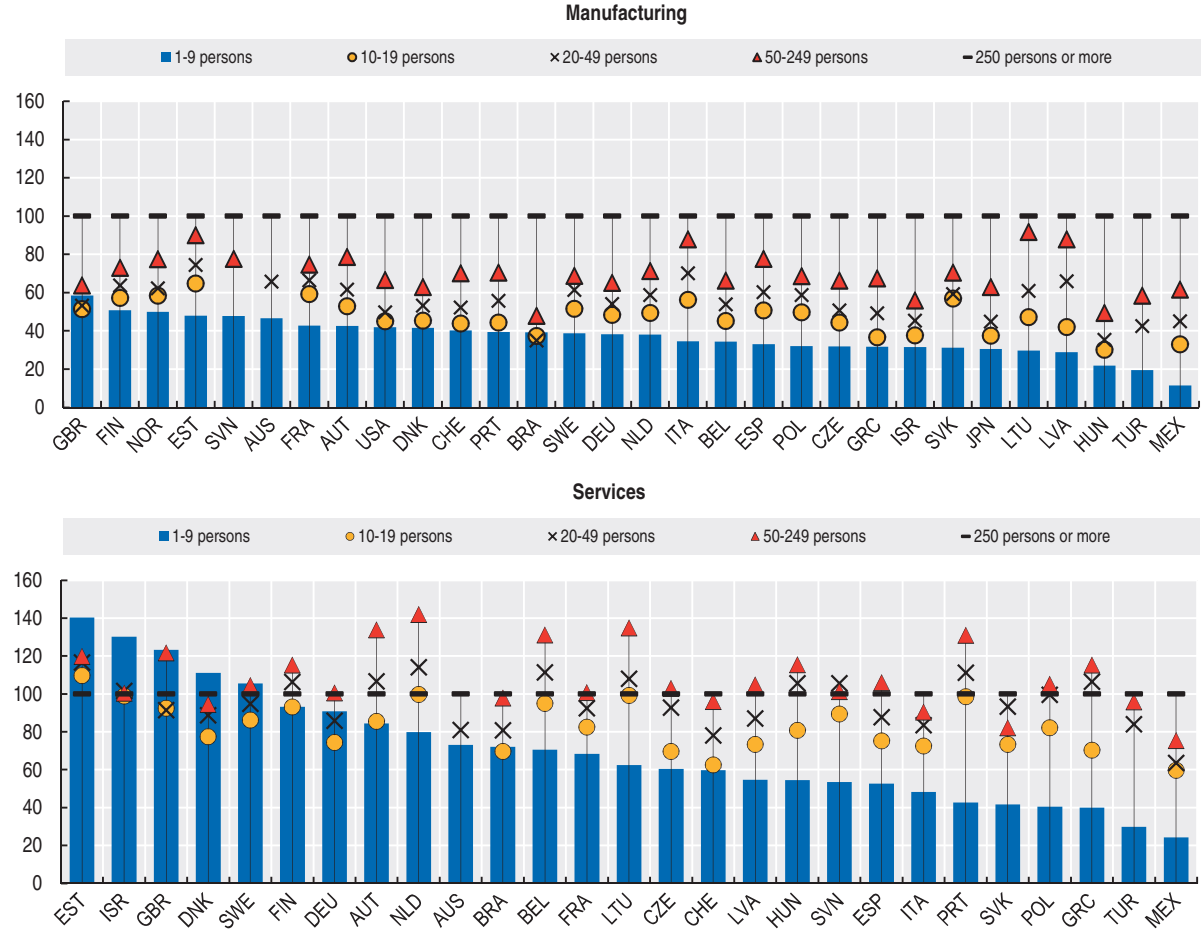
Value added per person employed, thousands of USD, current PPPs, 2014, or latest available year



StatLink http://dx.doi.org/10.1787/888933563455

Figure 3.2. **Labour productivity by enterprise size, manufacturing and services**

Value added per person employed, index 250+ = 100, 2014, or latest available year



StatLink http://dx.doi.org/10.1787/888933563474

Productivity growth by enterprise size

Key findings

- In many economies, post-crisis labour productivity growth in SMEs in the manufacturing sector lagged large enterprises, exacerbating existing productivity gaps, especially in Belgium, the Czech Republic, Germany, Latvia and the Slovak Republic. In Lithuania, Poland and Turkey, SME productivity growth significantly outpaced that of large firms, however significant productivity gaps remain.
- In Spain and Portugal, positive labour productivity growth in SMEs in the manufacturing sector occurred against a backdrop of declining employment and value added, suggesting that exits of low-performing firms or from low-performing activities may have played a role in the overall increase in recorded labour productivity.
- The picture for services was more mixed, with SME productivity growth outpacing large firms in many countries in the post-crisis period. However, SME employment growth was relatively weak in many countries.

Relevance

Firm-level performance depends on a variety of factors, including the size of an enterprise and its sector of activity. While larger firms tend to be more productive than smaller ones, productivity growth in smaller firms may be spurred by the intensive use of affordable information and communication technologies (ICT) and competitive advantages in niche, high-brand or high intellectual property content activities.

Definitions

Labour productivity is measured as the current price, gross value added per person employed sourced from *OECD Structural and Demographic Business Statistics* (database), divided by the industry deflator sourced from *OECD National Accounts Statistics* (database).

For the definition of "Manufacturing" and "Services", see the Reader's guide.

Comparability

Value added data refer to value added at factor costs in European countries and value added at basic prices for other countries. The value added and employment estimates presented by size class are based on *OECD Structural and Demographic Business Statistics (database)* and will not usually align with estimates produced according to the System of National Accounts. The latter includes a number of adjustments to reflect businesses and activities that may not be measured in structural business statistics, such as the inclusion of micro-firms or self-employed, or those made to reflect the Non-Observed Economy.

Comparability across size classes, industries and countries may be affected by differences in the shares of part-time employment. For these reasons, in productivity analysis, the preferred measure of labour input is total hours worked rather than employment, but these data are typically not available by size class. Data gaps due to confidentiality rules in reporting countries may also hinder international comparability.

Because the estimates presented here are not based on a fixed cohort of firms, estimates of productivity growth in large enterprises are upward biased and those in SMEs downward biased, as SMEs in the start-period exhibiting higher productivity growth are also more likely to become larger enterprises while low productivity large enterprises are more likely to contract and become SMEs.

Data for the United Kingdom exclude an estimate of 2.6 million small unregistered businesses; these are businesses below the thresholds of the value-added tax regime and/or the "pay as you earn (PAYE)" (for employing firms) regime.

Figures 3.3. to 3.6. cover the period 2009-2014, and not 2008-2014 as in other parts of this publication, due to data availability issues. Employment growth rates shown in Figures 3.5 and 3.6 might differ from those reported in Chapter 2 as the former cover only those activities for which value added statistics are also available.

Sources

OECD Structural and Demographic Business Statistics (SDBS) (database), *http://dx.doi.org/10.1787/sdbs-data-en*.

OECD National Accounts Statistics (database), *http://dx.doi.org/10.1787/na-data-en*.

OECD Productivity Statistics (database), *http://dx.doi.org/10.1787/pdtvy-data-en*.

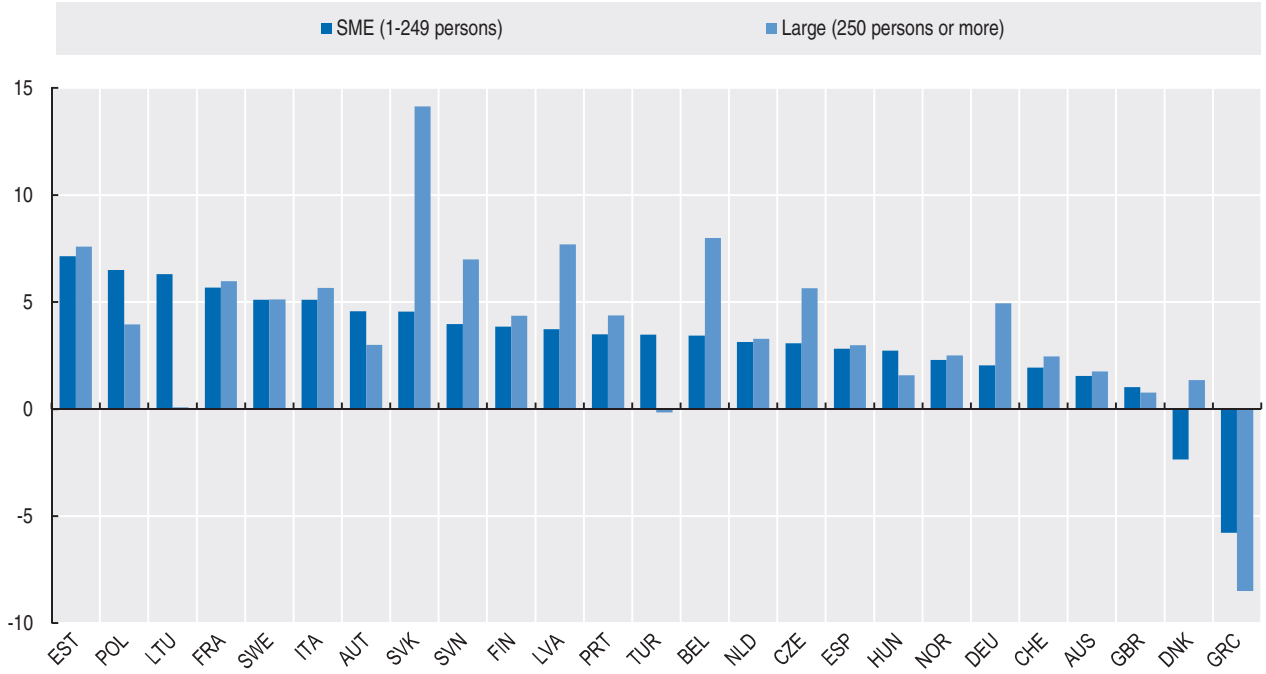
Further reading

OECD (2017), *OECD Compendium of Productivity Indicators 2017*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/pdtvy-2017-en*

Hsieh, C. (2015), "Policies for Productivity Growth", *OECD Productivity Working Papers*, No. 3, OECD Publishing, Paris, *http://dx.doi.org/10.1787/5jrp1f5rddtc-en*.

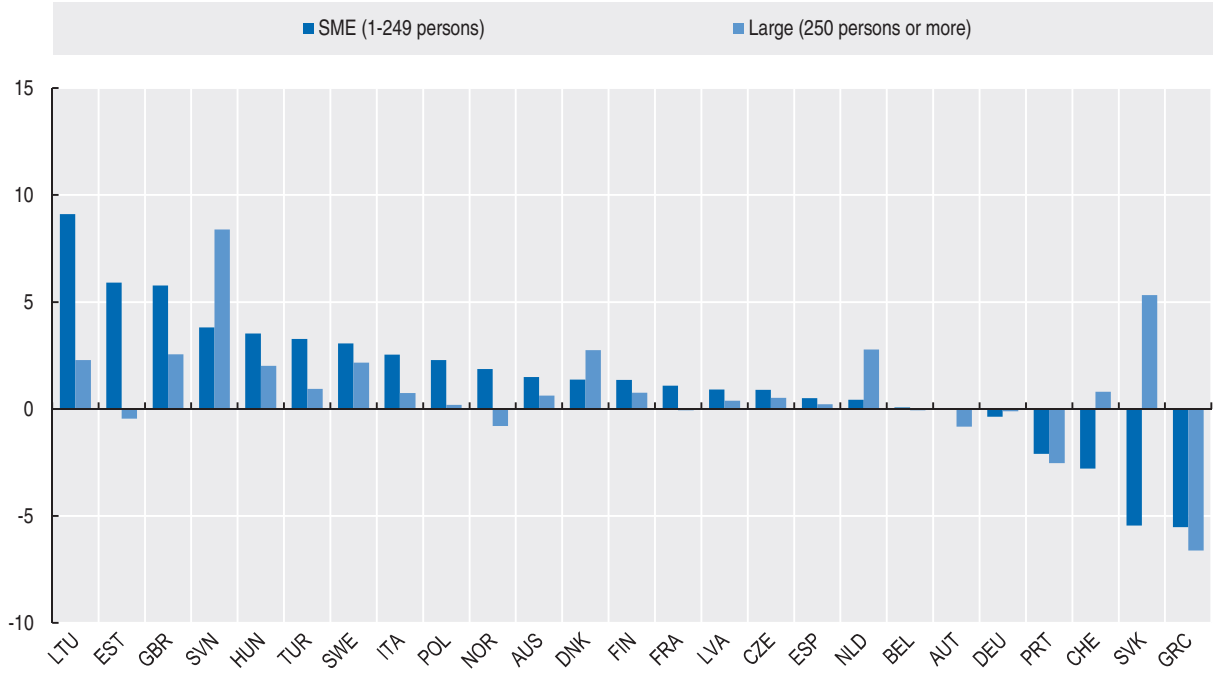
OECD (2001), *Measuring Productivity – OECD Manual: Measurement of Aggregate and Industry-level Productivity Growth*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264194519-en*.

Figure 3.3. **Labour productivity growth by enterprise size, manufacturing**
Real value added per person employed, average annual rate, 2009-2014



StatLink http://dx.doi.org/10.1787/888933563493

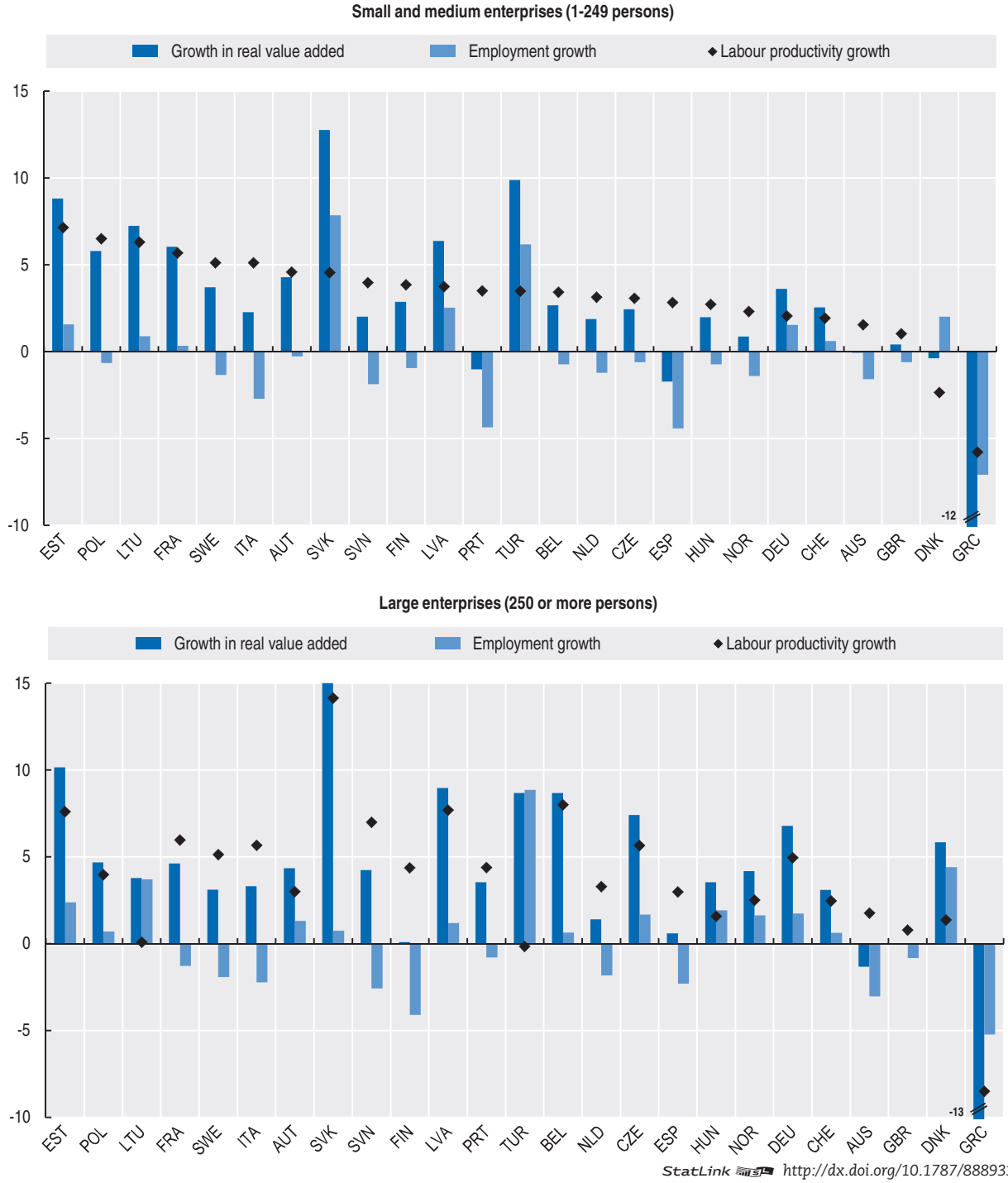
Figure 3.4. **Labour productivity growth by enterprise size, services**
Real value added per person employed, average annual rate, 2009-2014



StatLink http://dx.doi.org/10.1787/888933563512

Figure 3.5. **Growth in real value added and employment by enterprise size, manufacturing**

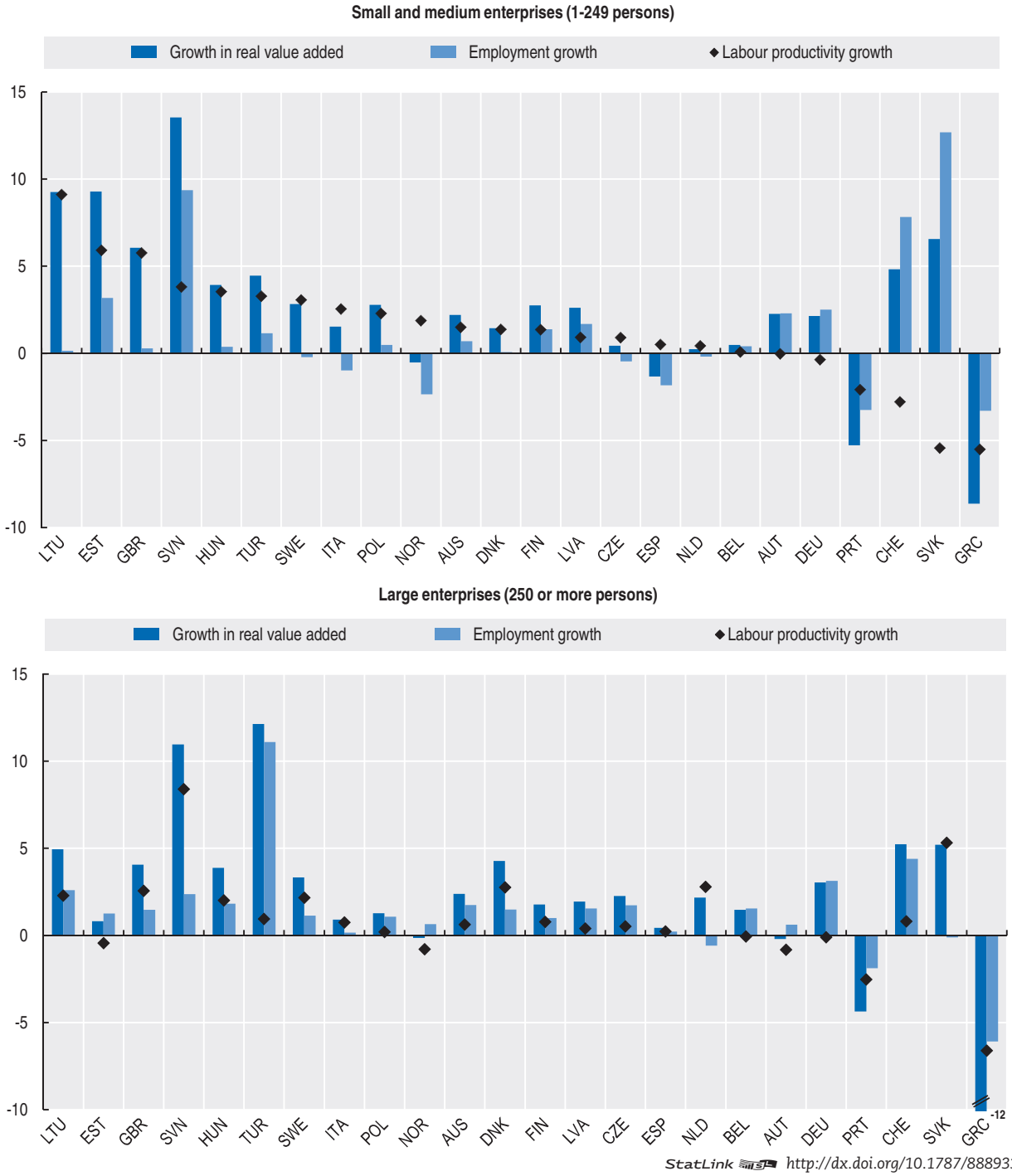
Average annual rate, percentage, 2009-2014



StatLink http://dx.doi.org/10.1787/888933563531

Figure 3.6. **Growth in real value added and employment by enterprise size, services**

Average annual rate, percentage, 2009-2014



StatLink http://dx.doi.org/10.1787/888933563550

Productivity and wage gaps across firms

Key findings

- Large manufacturing firms tend to pay higher wages than SMEs. In Germany for example large firms paid a wage premium of over 50% of medium-size firms and over double that of smaller and micro enterprises. Similarly, large differentials also occurred in Belgium, France and the Netherlands. However, wage differentials were significantly smaller in some other countries, such as in Finland and Slovenia.
- Wage differentials across firms typically align with labour productivity gaps. Large firms in the manufacturing sector are on average more productive and tend to pay higher wages than SMEs.
- Differences in average labour compensation across firm size classes have increased in the manufacturing sector in a number of countries, including in all OECD Eastern European economies - except Poland-, Estonia, Latvia, Norway and the United Kingdom.

Relevance

Recent years have seen growing concerns about rising inequalities of income within countries. Weaker productivity growth in SMEs in some countries in the post-crisis period has exacerbated longstanding productivity gaps in many countries, limiting the scope to address inequalities.

Definitions

Compensation of employees includes the total remuneration, in cash or in kind, payable to an employee in return for work done by the latter during the reference period. No compensation of employees is payable in respect of unpaid work undertaken voluntarily, including the work done by members of a household within an unincorporated enterprise owned by the same household. Compensation of employees does not include any taxes payable by the employer on the wage and salary. It includes therefore wages and salaries of employees and other employers' social contributions.

Compensation of labour for all persons employed is equivalent to the sum of wages and salaries of all persons employed and other employers' social contributions for employees.

Compensation per employee by firm size in national currency are converted to US dollars using purchasing power parities (PPPs) for actual individual consumption and as such reflects average labour compensation per employee from a worker/consumer's perspective.

Labour productivity is measured as the current price, gross value added per person employed. For the definition of "Manufacturing", see the Reader's guide.

Information on data for Israel: *http://dx.doi.org/10.1787/888932315602*.

Comparability

Value added data refer to value added at factor costs in European countries and value added at basic prices for other countries. Estimates of value added and employment presented by size class are based on the OECD Structural and Demographic Business Statistics (database) and will not usually align with estimates produced according to the System of National Accounts. The latter includes a number of adjustments to reflect businesses and activities that may not be measured in structural business statistics, such as the inclusion of very small units or self-employed, or those made to reflect the Non-Observed Economy.

Many SMEs are unincorporated enterprises. The owners of these firms do not pay themselves a salary but instead receive compensation through mixed income (as defined in the System of National Accounts), which is a component of value added. This means that estimates that focus only on compensation of employees are likely to underestimate the relative contribution made by labour to SMEs compared to estimates for larger enterprises.

Data for Australia and Israel refer to compensation of all persons employed.

Comparability across size classes, industries and countries, may be affected by differences in the shares of part-time employment. For these reasons, in productivity analysis the preferred measure of labour input is total hours worked rather than employment, but these data are typically not available by size class. Measuring compensation of employees per hour worked provides a better account of cross-country differences in part-time employment; this measure is however available for a limited number of countries.

Some countries use different conventions concerning the size-class breakdown: for Australia, the size class "1-9" refers to "1-19", "20-49" refers to "20-199", "250+" refers to "200+"; for Mexico, "1-9" refers to "1-10", "10-19" refers to "11-20", "20-49" refers to "21-50", "50-249" refers to "51- 250", "250+" refers to "251+".

Data for Mexico are based on establishments and not on enterprises. Data for the United Kingdom exclude an estimate of 2.6 million small unregistered businesses; these are businesses below the thresholds of the value-added tax regime and/or the "pay as you earn (PAYE)" (for employing firms) regime.

Sources

OECD Structural and Demographic Business Statistics (SDBS) (database), *http://dx.doi.org/10.1787/sdbs-data-en*.

Further reading

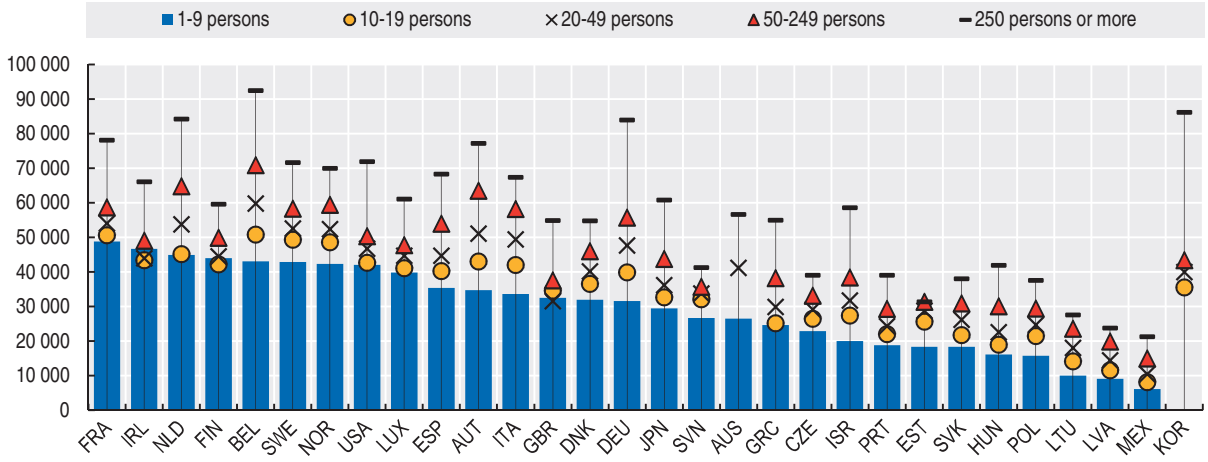
OECD (2017), *OECD Compendium of Productivity Indicators 2017*, OECD Publishing, Paris, http://dx.doi.org/10.1787/pdtvy-2017-en

OECD (2017), *OECD Employment Outlook 2017*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/empl_outlook-2017-en*

OECD (2001), *Measuring Productivity – OECD Manual: Measurement of Aggregate and Industry-level Productivity Growth*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264194519-en*.

Figure 3.7. **Compensation per employee by enterprise size, manufacturing**

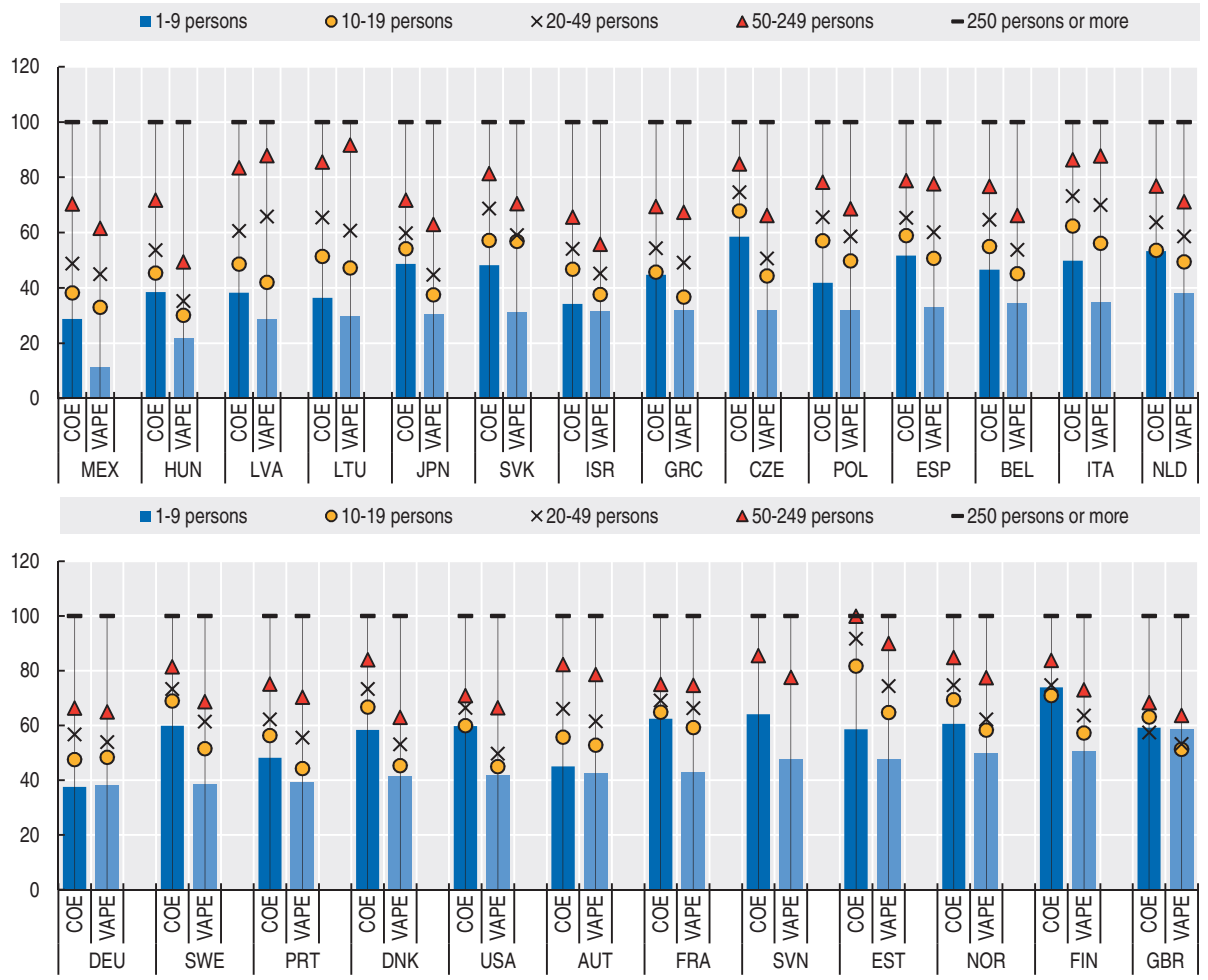
Thousands of USD, current PPPs for actual individual consumption, 2014, or latest available year



StatLink http://dx.doi.org/10.1787/888933563569

Figure 3.8. **Labour productivity and compensation per employee by enterprise size, manufacturing**

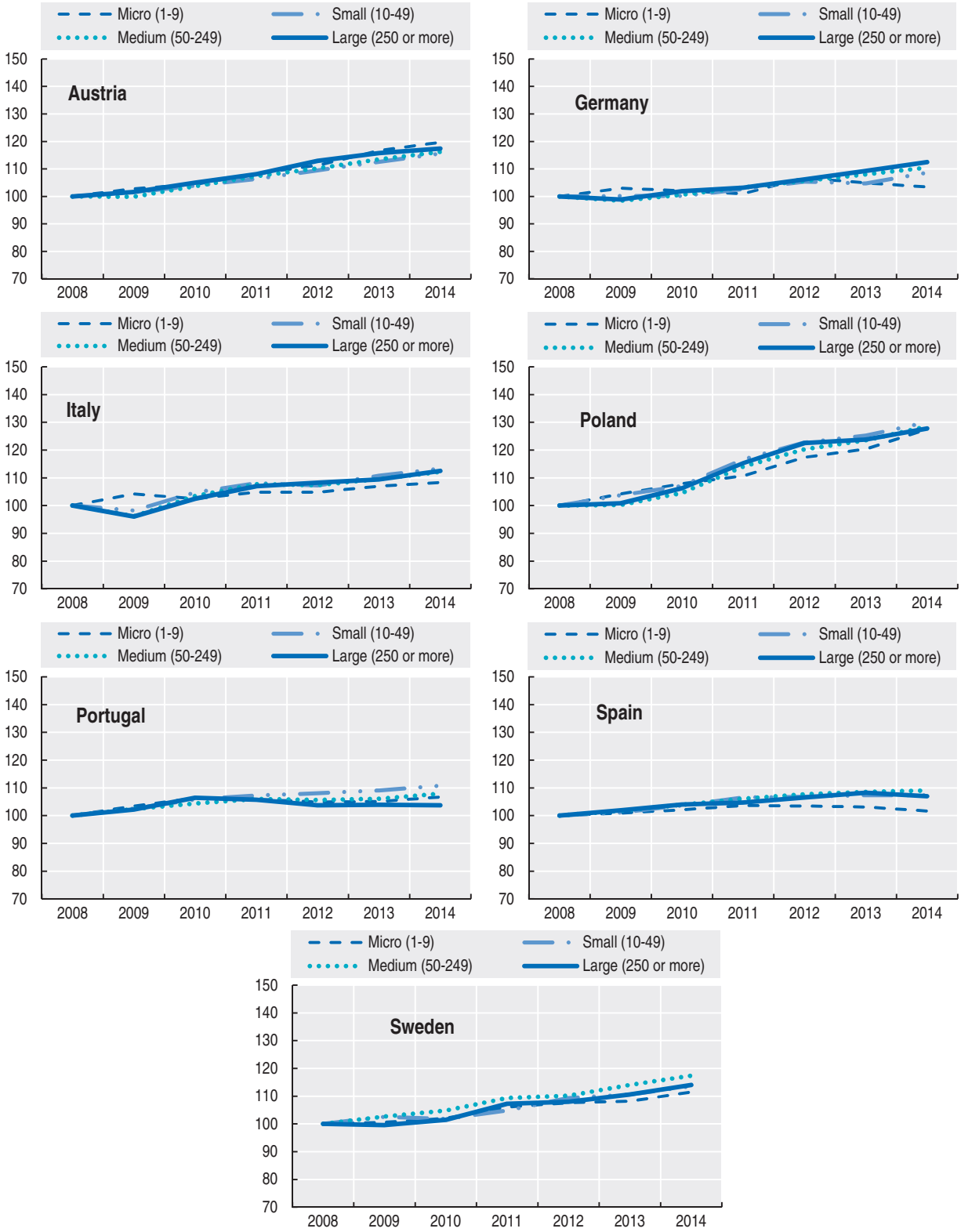
Value added per person employed (VAPE) and compensation per employee (COE), index 250+ = 100, 2014, or latest available year



StatLink http://dx.doi.org/10.1787/888933563588

Figure 3.9a. **Growth in average compensation per employee by enterprise size class, manufacturing**

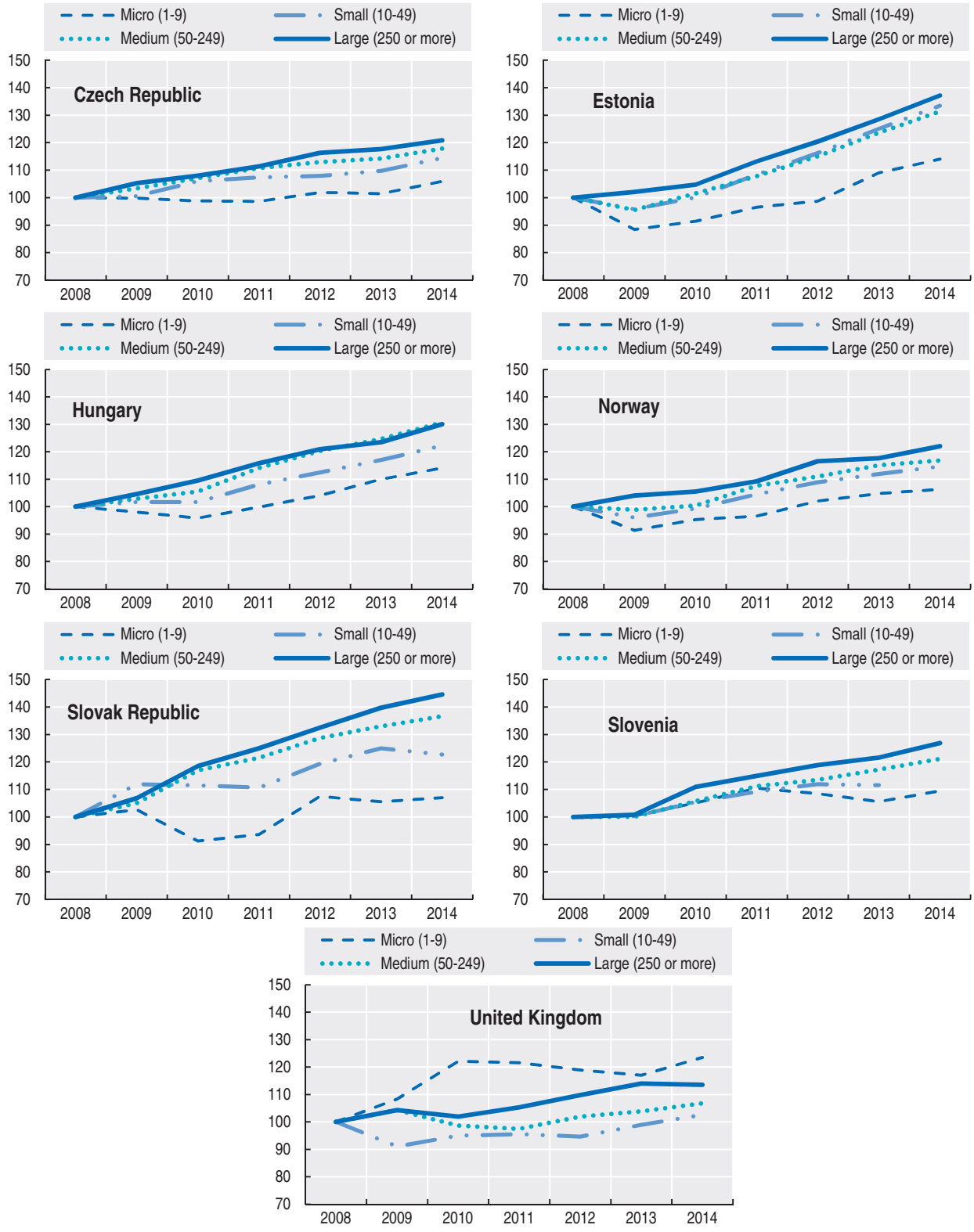
Countries with similar wage growth across firm size classes, current prices, index 2008 = 100



StatLink http://dx.doi.org/10.1787/888933563607

Figure 3.9b. **Growth in average compensation per employee by enterprise size class, manufacturing (cont.)**

Countries with growing wage disparities between SMEs and large firms, current prices, index 2008 = 100



StatLink http://dx.doi.org/10.1787/888933563626

4. BUSINESS DYNAMICS AND JOB CREATION

Birth of enterprises

Death of enterprises

Churn rate

Young enterprises

High-growth enterprises rate

Birth of enterprises

Key findings

- Although births of non-employer enterprises are typically higher than births of enterprises with employees, in most OECD economies they accounted for a lower share of overall jobs created in 2014.
- Most new employer enterprises in OECD economies are created with between one and four employees. The average number of persons employed in employer enterprise births is typically higher in industry than in services, reflecting economies of scale.
- Across countries, the average size of employer enterprise births is broadly similar in the services sector, but more significant differences exist in industry. The average size of newly-born industrial enterprises in the United States was three times the size of their Italian counterparts in 2014.
- In nearly all countries, birth rates are higher in the construction and services sectors, especially in accommodation and food and in professional, scientific and technical activities, than in industry, reflecting the lower fixed capital entry costs.

Definitions

An *employer enterprise birth* refers is the birth of an enterprise with at least one employee. The population of employer enterprise births consists of "new" enterprise births, i.e. new enterprises reporting at least one employee in the birth year; and of enterprises that existed before the year under consideration but were then below the threshold of one employee, and that reported one or more employees in the current, i.e. birth, year. Employer enterprise births do not include entries into the population due to: mergers, break-ups, split-offs or restructuring of a set of enterprises. They also exclude entries into a sub-population resulting only from a change of activity.

The *employer enterprise birth rate* corresponds to the number of births of employer enterprises as a percentage of the population of active enterprises with at least one employee. The birth rate for sector x is measured as percentage over active enterprises with at least one employee in sector x.

A *non-employer enterprise birth* refers to the birth of an enterprise with no employees. The *non-employer enterprise birth rate* corresponds to the number of births of non-employer enterprises as a percentage of the population of active non-employer enterprises.

Average employment in employer enterprise births is the number of persons employed in employer enterprises at birth in t divided by the number of employer enterprise births in t.

Information on data for Israel: *http://dx.doi.org/10.1787/888932315602*.

Relevance

The birth of new enterprises is a key indicator of business dynamism. It reflects an important dimension of entrepreneurship in a country, namely the capacity to start up an entirely new business. New enterprises are considered as key drivers of growth due to their contribution to aggregate job creation and because of the productivity-enhancing effect associated with a pace of firm entry and exit.

Comparability

"Employer" indicators are less sensitive to the coverage of business registers than indicators covering all enterprises. In many countries, the main sources of data used in business registers are administrative tax and employment registers, meaning that often only businesses above a certain turnover and/or employment threshold are captured. An economy with relatively high thresholds would therefore be expected to have lower birth statistics than similar economies with lower thresholds. Also, changes in thresholds may occur over time, e.g. changes in monetary-based thresholds in response to factors such as inflation and fiscal policy. The use of the one-employee threshold improves comparability, as it excludes very small units, which are most subject to threshold variations.

The concept of employer enterprise birth is not without problems. Many countries have sizeable populations of self-employed who own enterprises with no employees. If a country creates incentives for the self-employed to become employees of their own company, the total number of employer enterprise births will increase. This can distort comparisons over time and across countries, even if from an economic and entrepreneurial perspective little has changed.

Employment data for Canada, Israel and the United States refer to the number of employees. In Figure 4.1, for Brazil, Canada, Israel, New Zealand and the United States data refer to the population of employer enterprises only.

For Australia, Korea, and Mexico, enterprise births and indicators derived from enterprise births do not take into account the transition of enterprises from zero employees to one or more employees, i.e. the transition of a non-employer enterprise to an employer enterprise is not considered as an "employer enterprise birth".

Source

OECD Structural and Demographic Business Statistics (SDBS) (database), http://dx.doi.org/10.1787/sdbs-data-en.

Counts of Australian Businesses, including Entries and Exits. 8165.0, http://dx.doi.org/10.1787/sdbs-data-en.

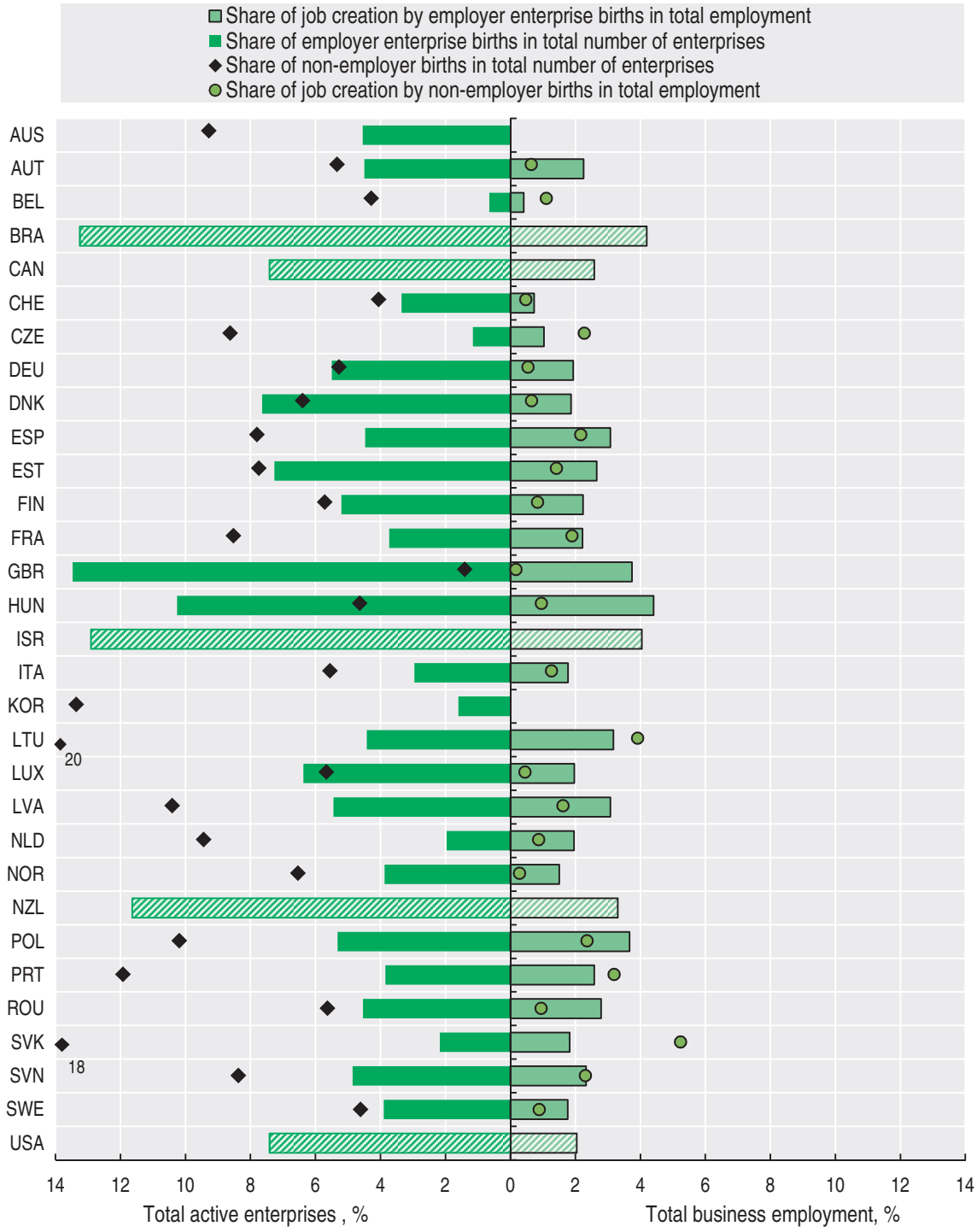
Further reading

Ahmad, N. (2006), "A Proposed Framework for Business Demography Statistics", *OECD Statistics Working Papers*, 2006/3, OECD Publishing, Paris, *http://dx.doi.org/10.1787/145777872685*.

OECD/Eurostat (2008), *Eurostat-OECD Manual on Business Demography Statistics*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264041882-en*.

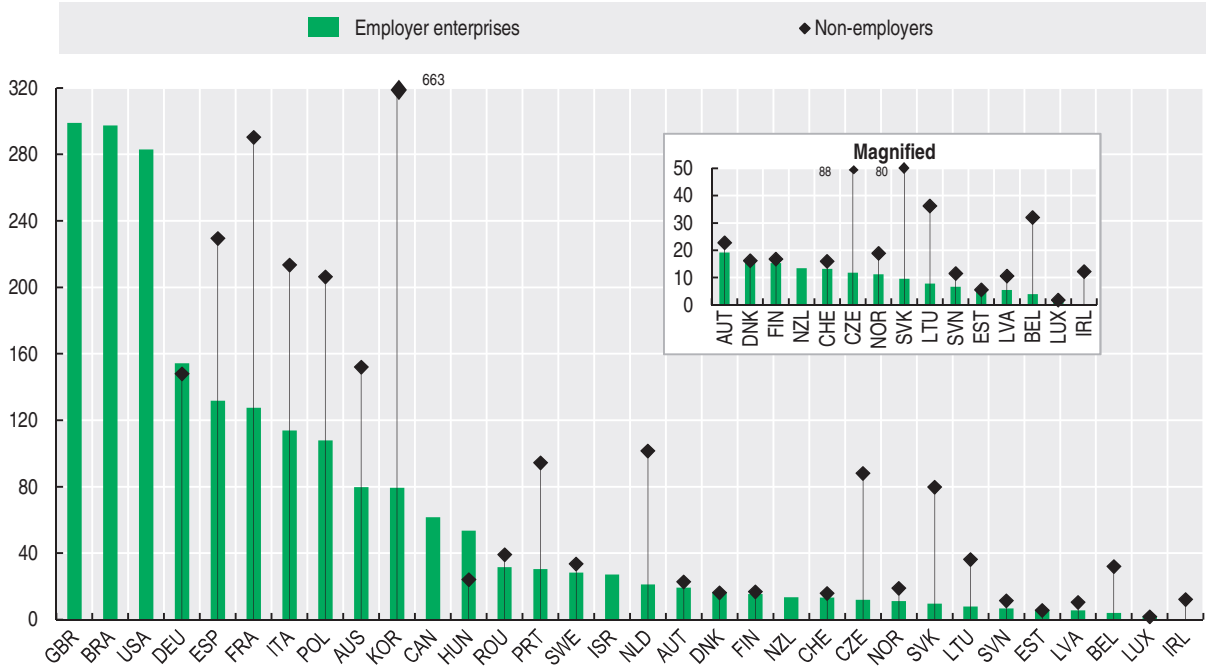
Figure 4.1. **Births of non-employer and employer enterprises and job creation, business economy**

Percentage, 2014 or latest available year



StatLink http://dx.doi.org/10.1787/888933563645

Figure 4.2. **Number of births of employer enterprises and non-employers, business economy**
Thousands of enterprises, 2014 or latest available year



StatLink http://dx.doi.org/10.1787/888933563664

Figure 4.3. **Birth rates of employer enterprises, business economy**
Number of employer enterprise births as percentage of active employer enterprises, 2014 or latest available year

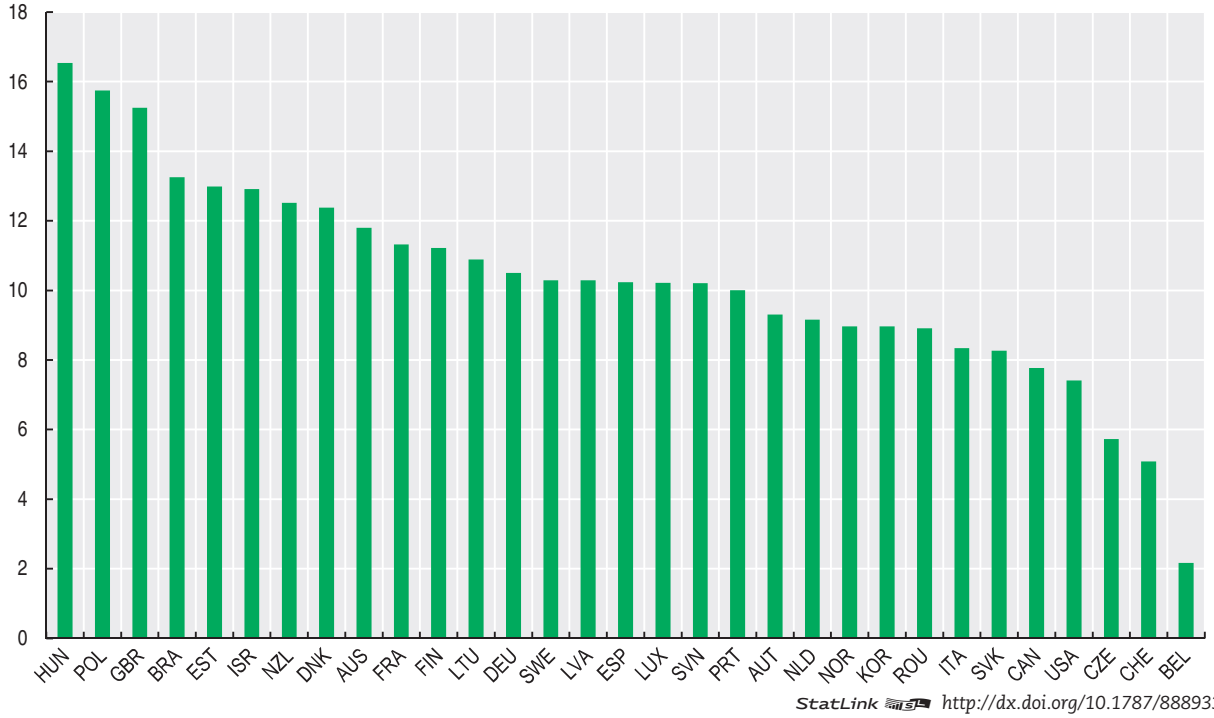


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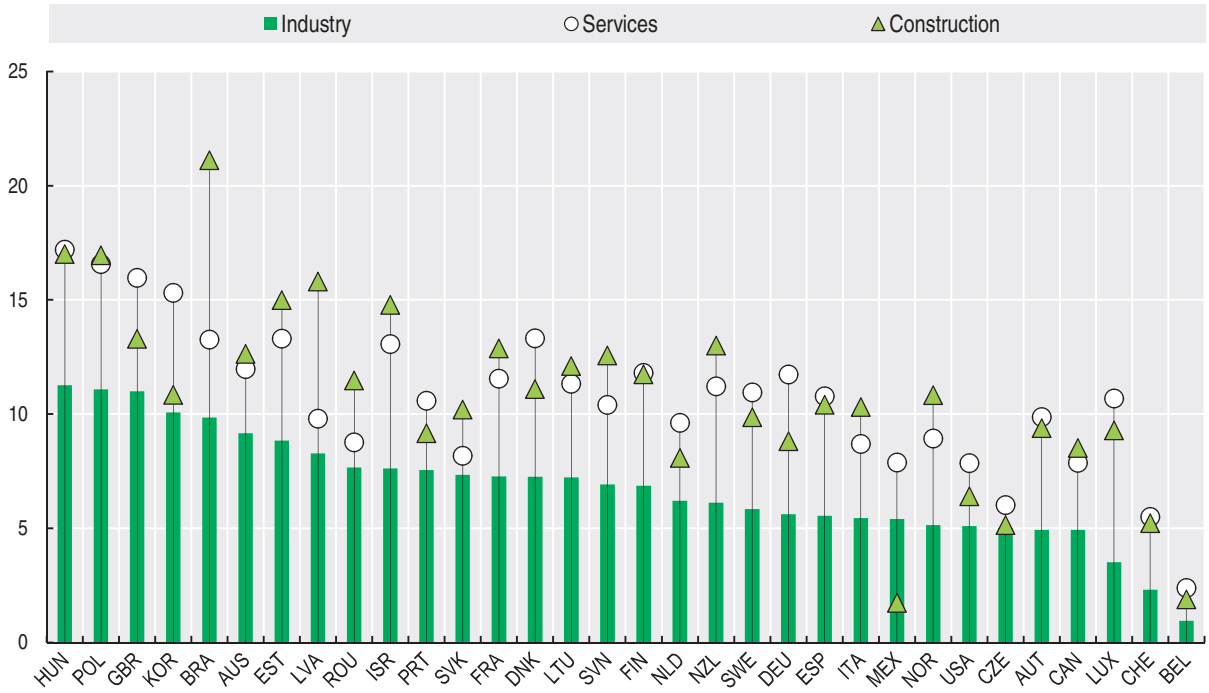
Figure 4.4. **Birth rates of employer enterprise, by sector**

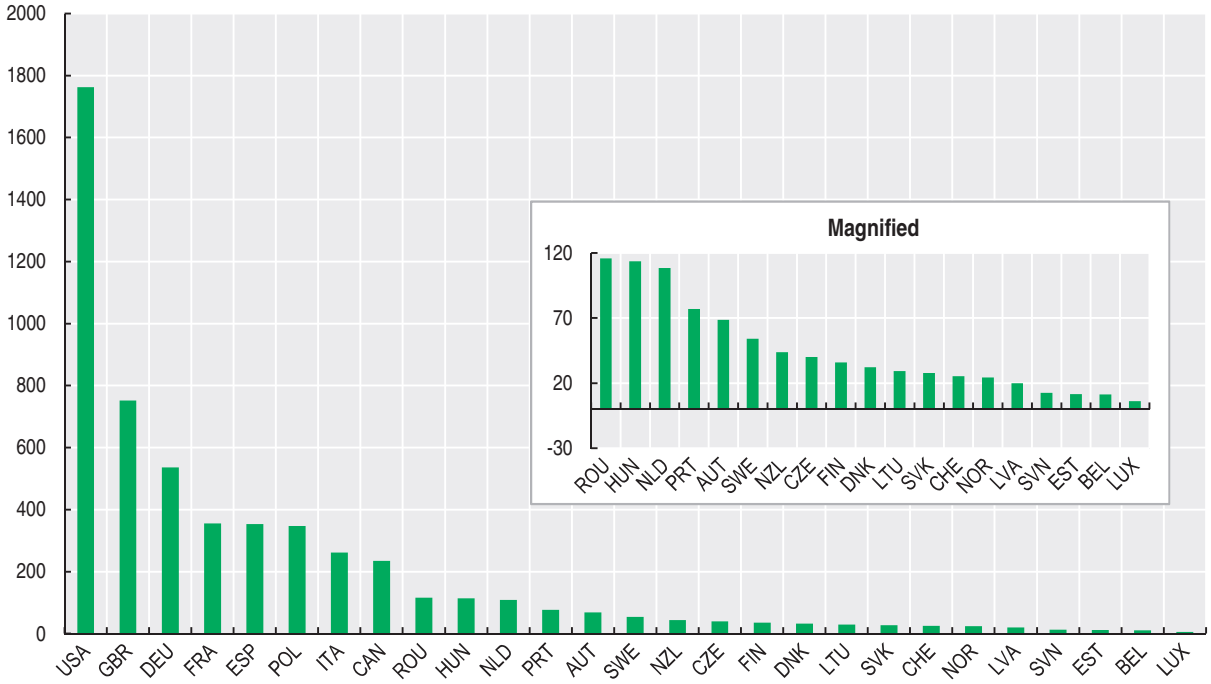
Percentage of active employer enterprises in each sector, 2014, or latest available year



StatLink http://dx.doi.org/10.1787/888933563702

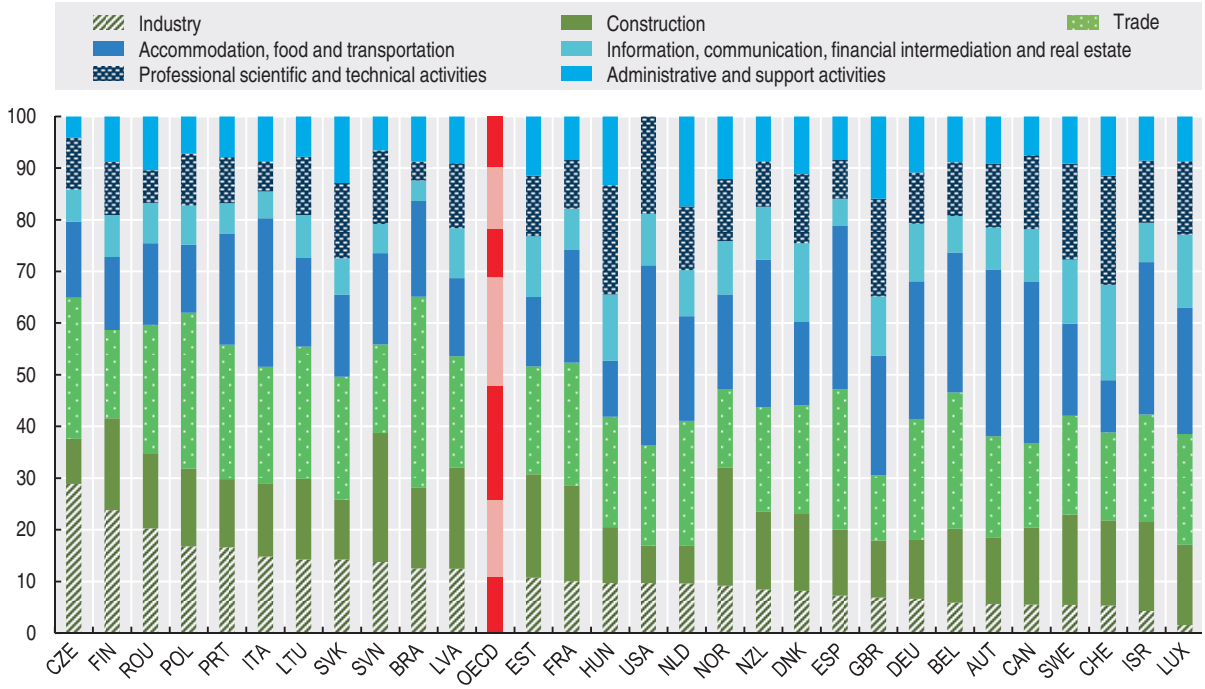
Figure 4.5. **Job creation by employer enterprise births, business economy**

Number of persons employed, thousands, 2014 or latest available year



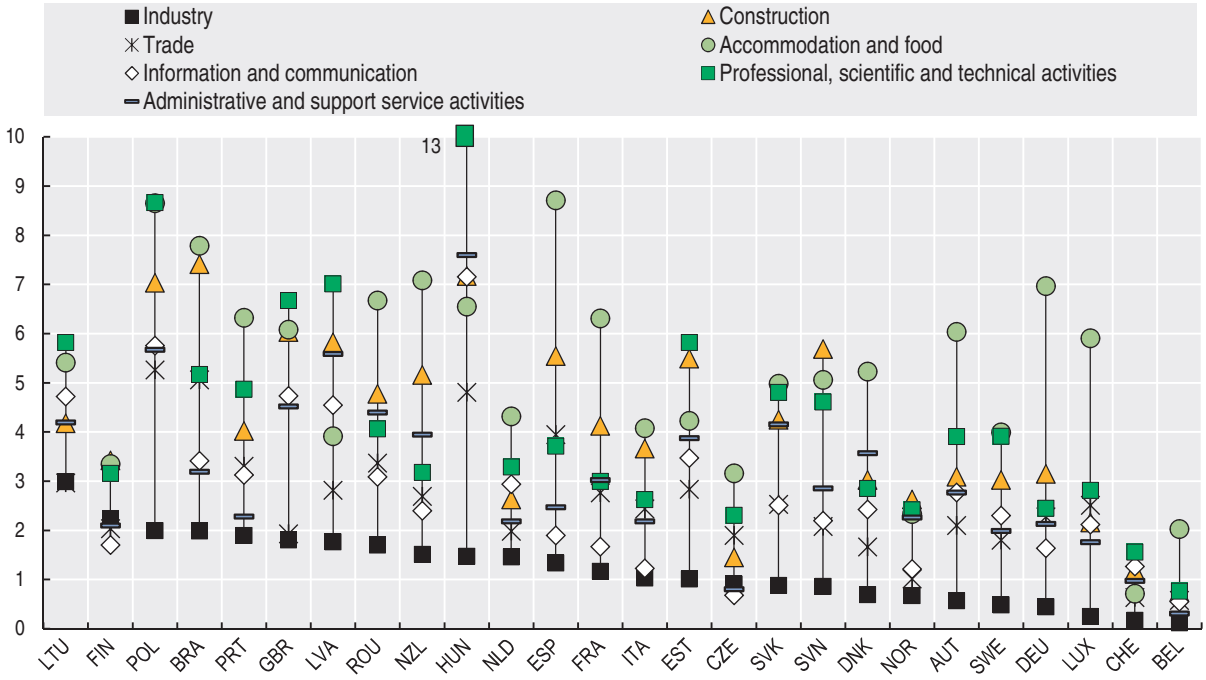
StatLink http://dx.doi.org/10.1787/888933563721

Figure 4.6. **Job creation by employer enterprise births, distribution by economic activity**
Percentage, 2014, or latest available year



StatLink http://dx.doi.org/10.1787/888933563740

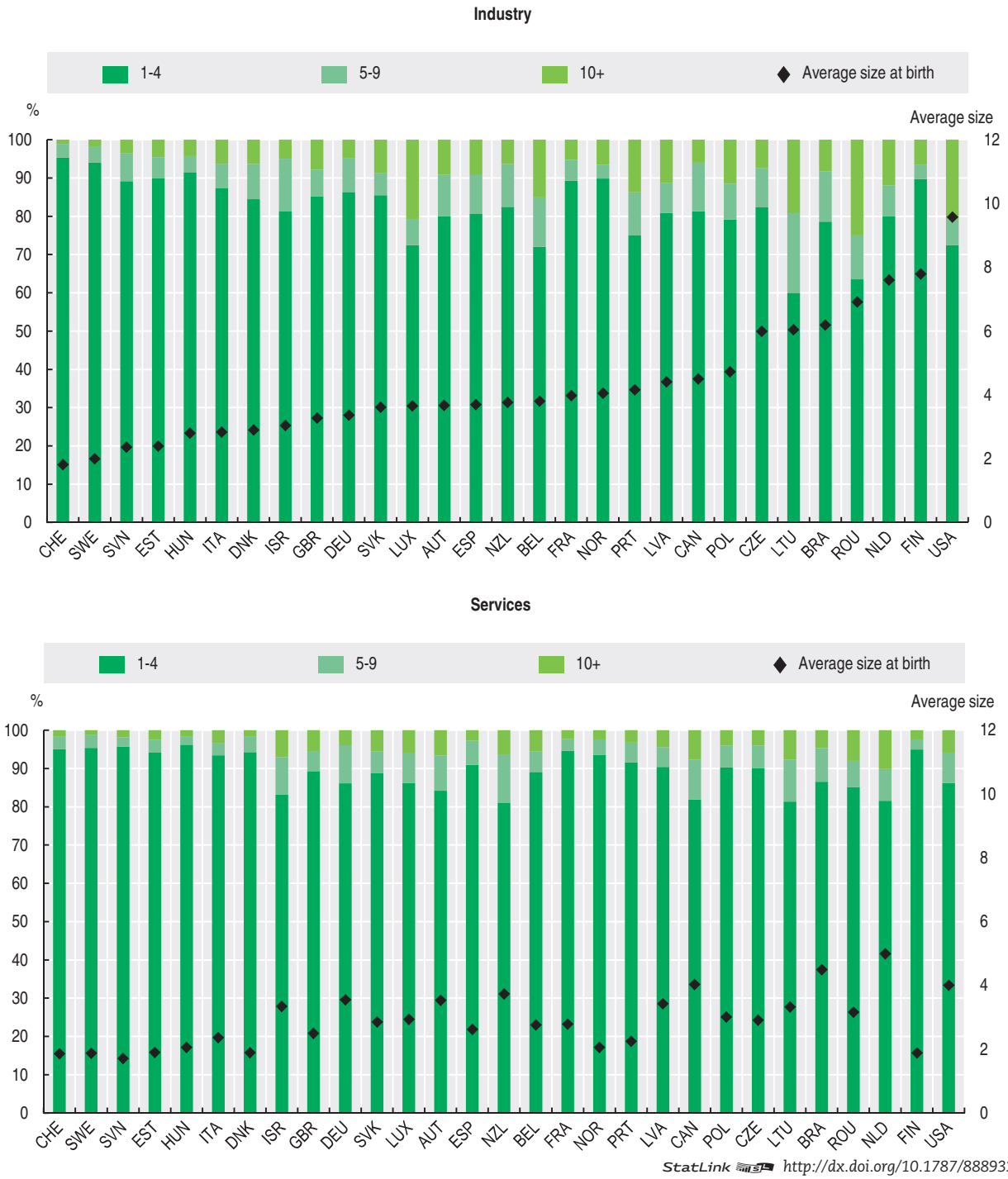
Figure 4.7. **Job creation rate by employer enterprise, by economic activity**
Percentage of total employment in each economic activity, 2014, or latest available year



StatLink http://dx.doi.org/10.1787/888933563759

Figure 4.8. **Births of employer enterprise, by size and sector**

Share of each size class in total number of employer enterprise births, and average employment at birth, 2014, or latest available year



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Death of enterprises

Key findings

- Death rates are typically higher for non-employer enterprises than for employer enterprises, reflecting the often precarious nature of the former. However, employer enterprise deaths contribute more to job losses than non-employer deaths in most countries.
- Across countries the average size of employer enterprise deaths are broadly similar in the services sector but more significant differences exist in industry. The average size of employer enterprise deaths in industry in the United States (35) was ten times the size of their Italian counterparts in 2014.
- In all countries, the death rates of employer enterprises in the construction and services sectors are consistently higher than the corresponding rates in industry.

Relevance

The death of enterprises is an integral part of the phenomenon of entrepreneurship. Monitoring the rate of exit of firms from the market, over time and across countries, helps the understanding of the process of "creative destruction" and the impact of economic cycles on entrepreneurship.

Definitions

An *employer enterprise death* occurs either at the death of an enterprise with at least one employee in the year of death or when an enterprise shrinks to below the threshold of one employee for at least two years. Deaths do not include exits from the population due to mergers, take-overs, break-ups and restructuring of a set of enterprises. They also exclude exits from a sub-population resulting only from a change of activity.

A non-employer enterprise death occurs at the exit of an enterprise from the population of non-employers, either as a result of death or employment increase.

The *employer enterprise death rate* corresponds to the number of deaths of employer enterprises as a percentage of the population of active enterprises with at least one employee. The death rate for sector x is measured as percentage over active enterprises with at least one employee in sector x.

The *non-employer enterprise death rate* corresponds to the number of deaths of non-employer enterprises as a percentage of the population of active non-employer enterprises.

Average employment in employer enterprise deaths is the number of persons employed in employer enterprises at death in t divided by the number of employer enterprise deaths in t.

Information on data for Israel: *http://dx.doi.org/10.1787/888932315602*.

Comparability

"Employer" indicators are less sensitive to the coverage of business registers than indicators covering all enterprises. In many countries, the main sources of data used in business registers are administrative tax and employment registers, meaning that often only businesses above a certain turnover and/or employment threshold are captured. Also, changes in thresholds can occur over time, e.g. changes in monetary-based thresholds in response to factors such as inflation and fiscal policy, both of which can be expected to affect comparisons of death rates across countries and over time. The use of the one-employee thresholds improves comparability, as it excludes very small units, which are the most subject to threshold variations.

The computation of enterprise deaths requires an additional time lag compared to data on enterprise births. This is due to the process of confirming the event: it has to be checked that the enterprise has not been reactivated (or had no employees) in the two years following its death.

Employment data for Canada, Israel and the United States refer to the number of employees. In Figure 4.9, for Brazil, Canada, Israel, New Zealand and the United States data refer to the population of employer enterprises only.

For Australia, Korea and Mexico, enterprise deaths and indicators derived from them do not take into account the transition of an enterprise with one or more employees to an enterprise with zero employees, i.e. the transition of an employer enterprise to a non-employer enterprise is not considered as an "employer enterprise death".

Source

OECD Structural and Demographic Business Statistics (SDBS) (database), *http://dx.doi.org/10.1787/sdbs-data-en*.

Counts of Australian Businesses, including Entries and Exits. 8165.0, *http://dx.doi.org/10.1787/sdbs-data-en*.

Further reading

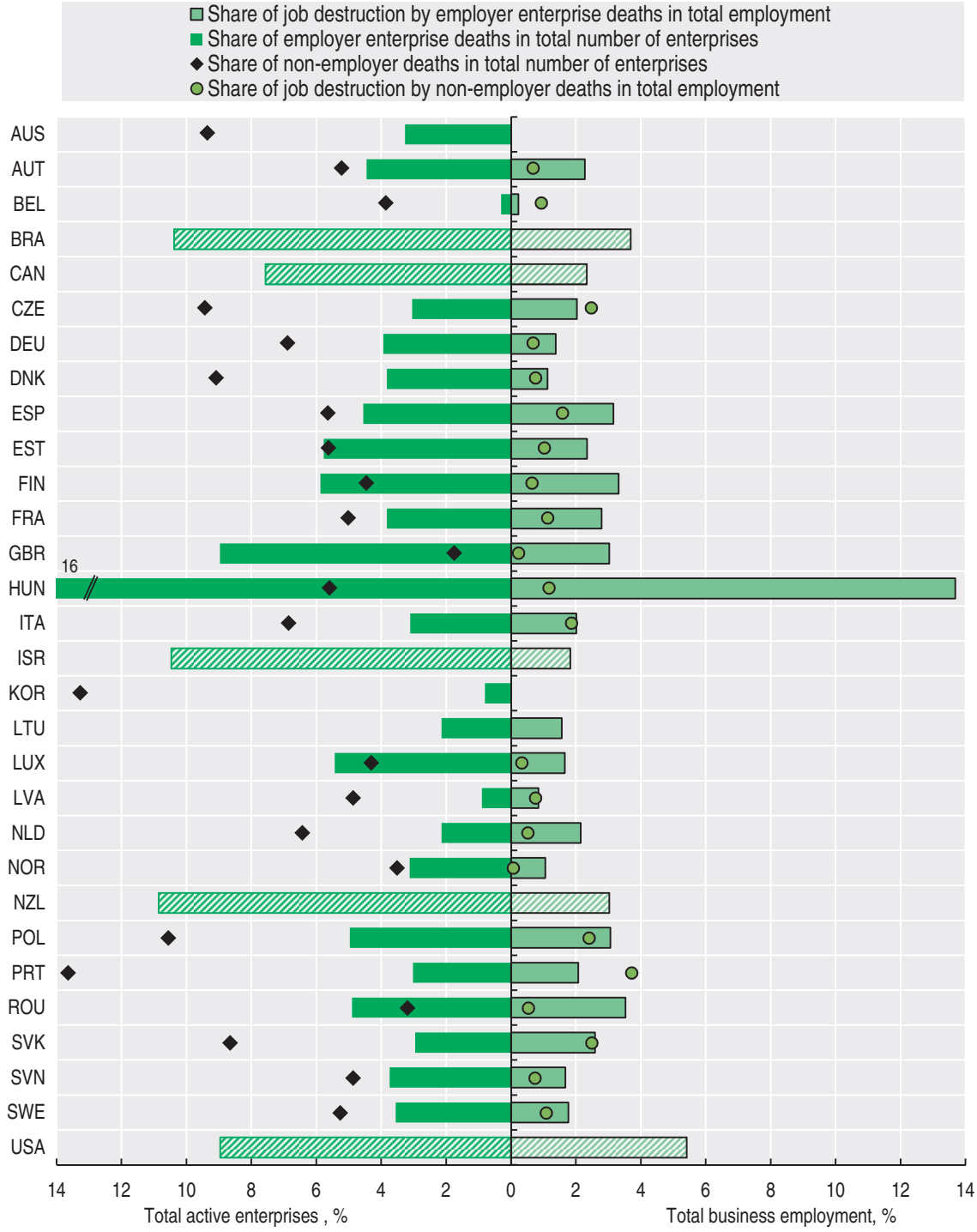
Ahmad, N. (2006), "A Proposed Framework for Business Demography Statistics", *OECD Statistics Working Papers*, 2006/3, OECD Publishing, Paris, *http://dx.doi.org/10.1787/145777872685*.

OECD (2010), *Structural and Demographic Business Statistics*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264072886-en*.

OECD/Eurostat (2008), *Eurostat-OECD Manual on Business Demography Statistics*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264041882-en*.

Figure 4.9. **Deaths of non-employer and employer enterprises and job destruction, business economy**

Percentage, 2014 or latest available year



StatLink http://dx.doi.org/10.1787/888933563797

Figure 4.10. **Number of deaths of employer enterprises and non-employers, business economy**

Thousands of enterprises, 2014 or latest available year

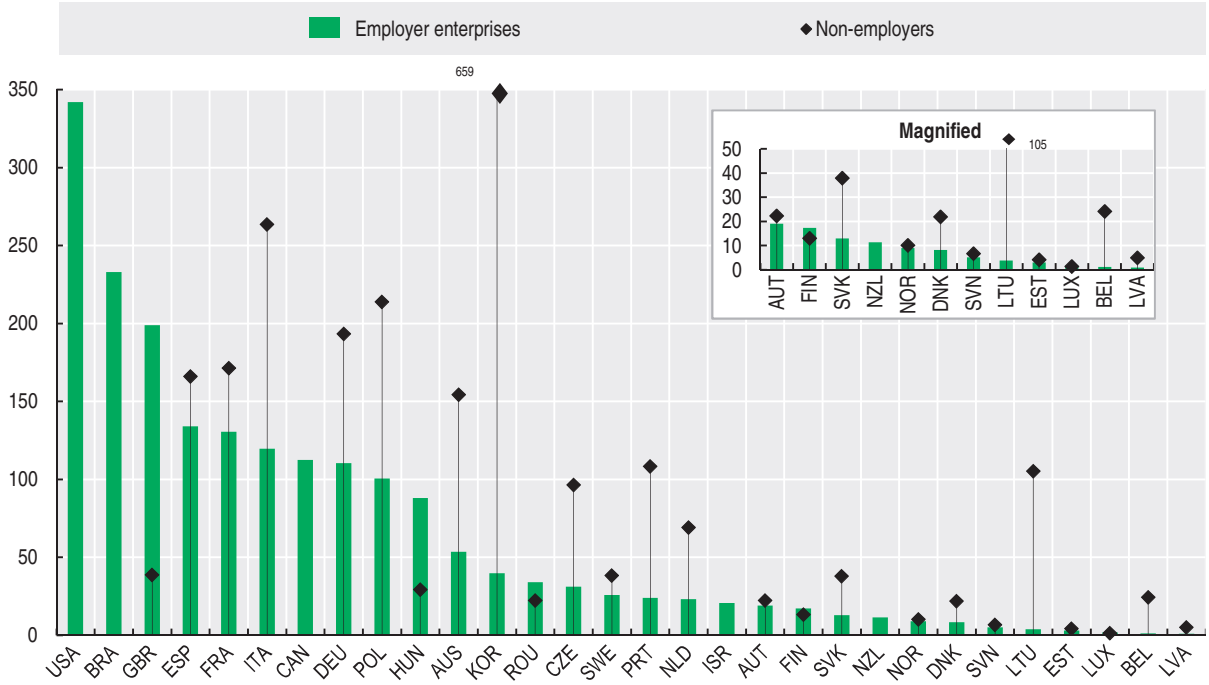


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Figure 4.11. **Death rates of employer enterprises, business economy**

Number of employer enterprise deaths as percentage of active employer enterprises, 2014 or latest available year

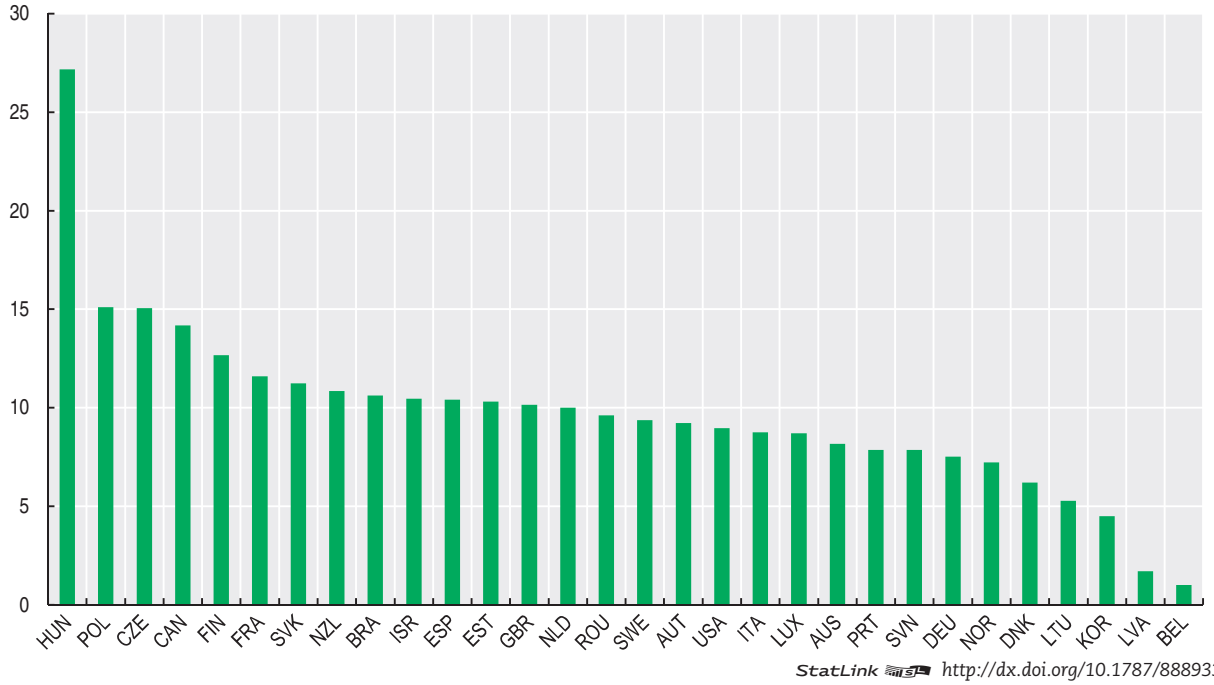

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Figure 4.12. **Death rates of employer enterprises, by main sector**

Percentage of active employer enterprises in each sector, 2014 or latest available year

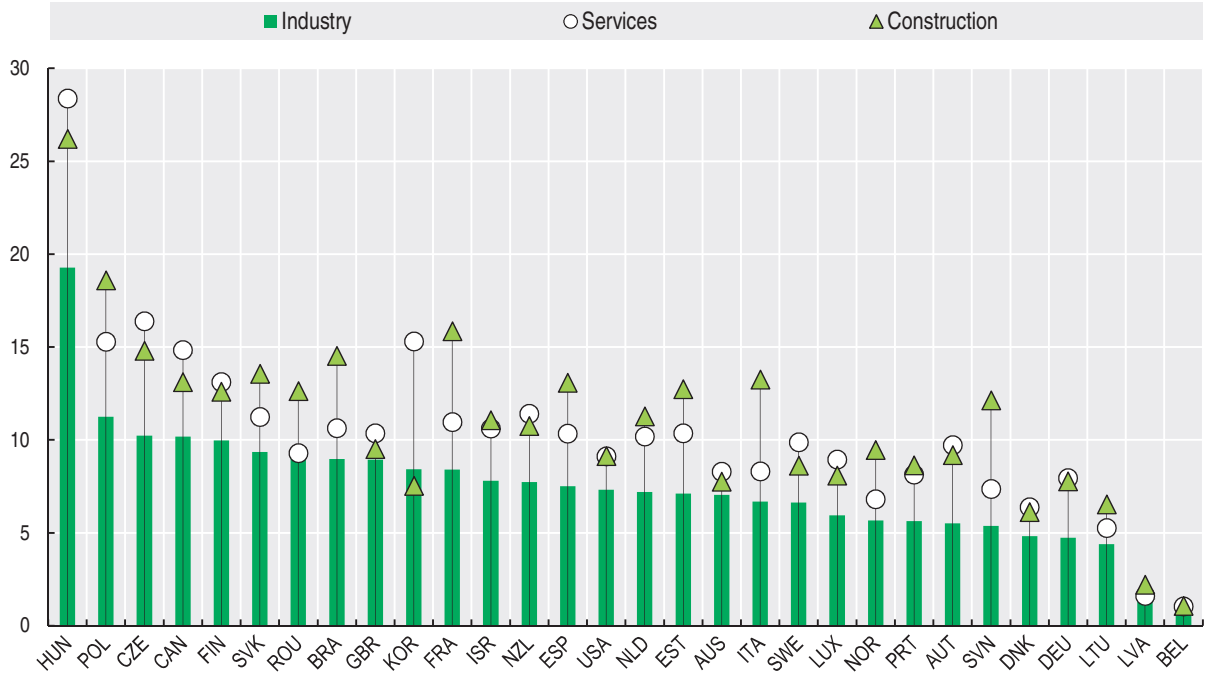

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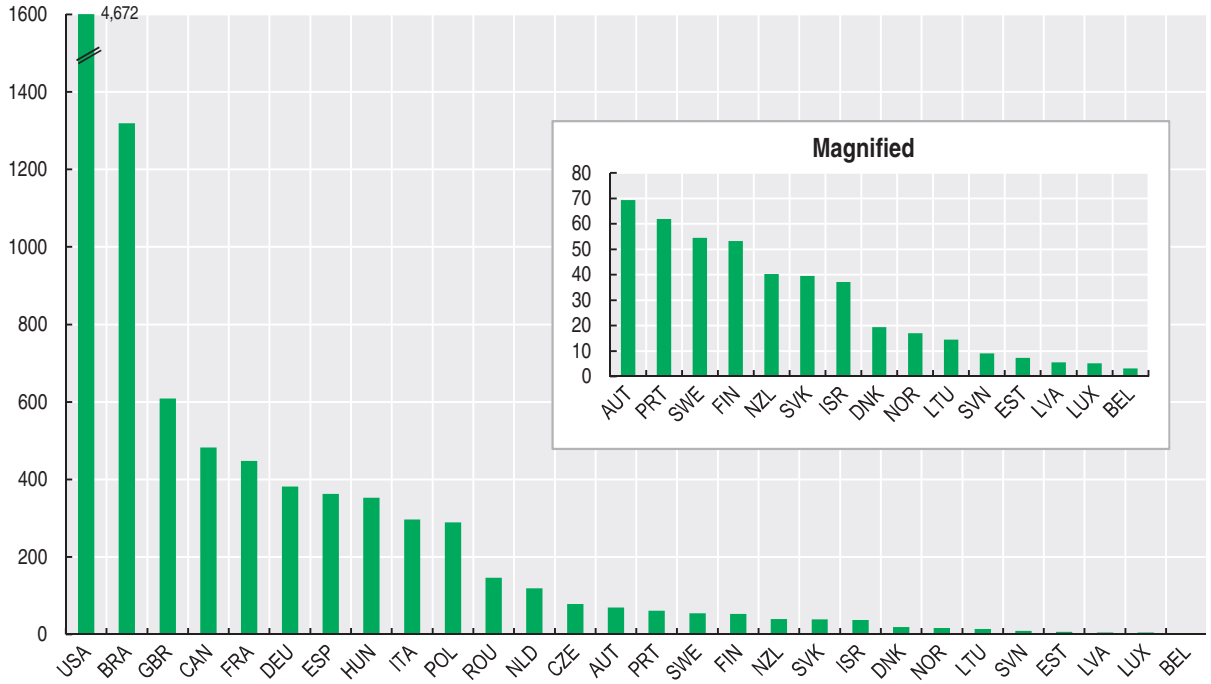
Figure 4.13. **Job destruction by employer enterprise deaths, business economy**

Number of persons employed, thousands, 2014 or latest available year



StatLink http://dx.doi.org/10.1787/888933563873

Figure 4.14. **Job destruction by death of employer enterprises, by main sector**

Percentage of total job destruction in the business economy, 2014, or latest available year

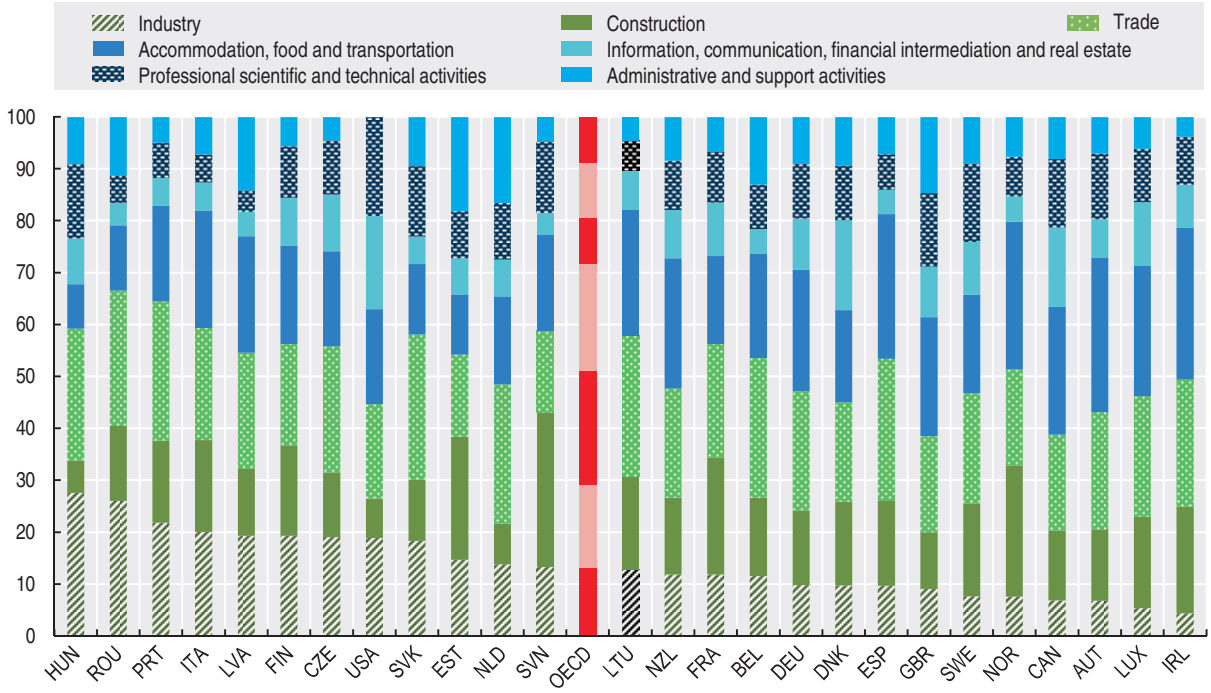


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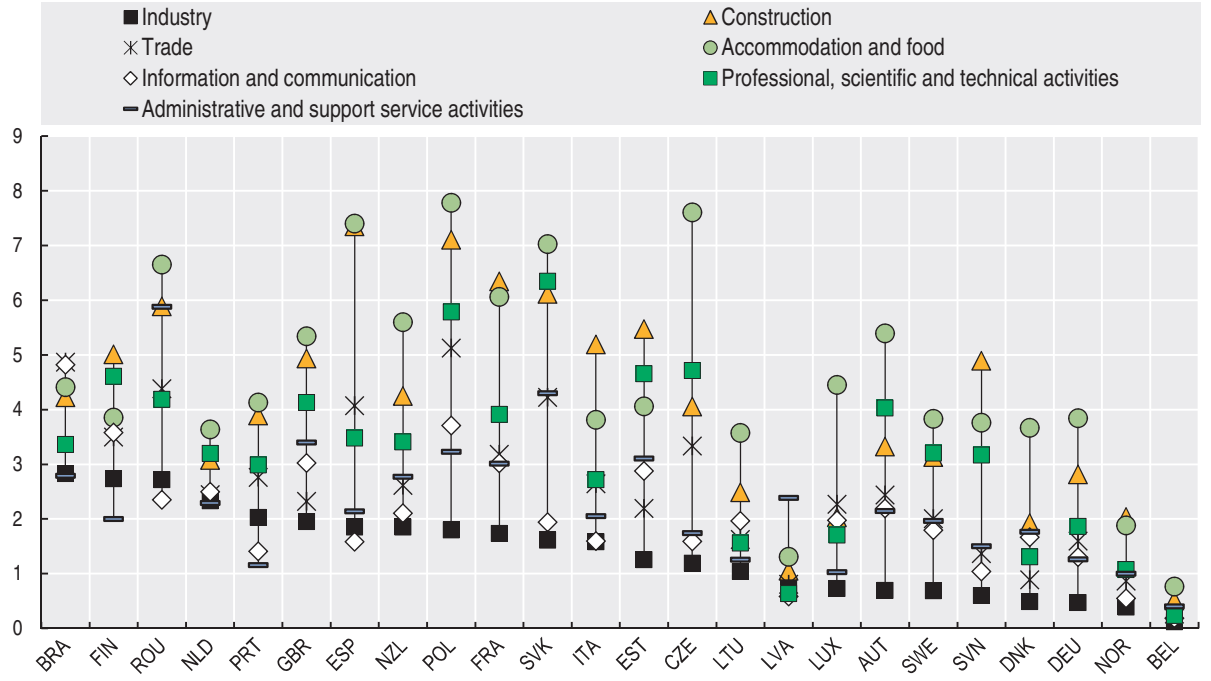
Figure 4.15. **Job destruction rate by economic activity**

Employment in employer enterprise deaths as percentage of total employment, business economy, 2014, or latest available year



StatLink http://dx.doi.org/10.1787/888933563911

Figure 4.16. **Deaths of employer enterprises, by size and sector**

Share of each size class in total number of employer enterprise deaths and average employment at death, 2014, or latest available year

StatLink http://dx.doi.org/10.1787/888933563930

Churn rate

Key findings

- In 2014 the churn rate of employer enterprises was on average around 20% in the OECD area; only a few countries show a much lower (Belgium) or much higher (Hungary) churn rate.
- In several countries, i.e. Austria, Canada, Czech Republic, Hungary, Luxembourg, New Zealand, and Slovenia, the churn rate increased in 2014 compared to its level at the beginning of the global crisis.
- The net employment creation associated with employer enterprise churn varies considerably across countries. For example, in Latvia and Slovenia job creation due to churn accounted for more than 55% of total change in business employment between 2013 and 2014, and around 25% in Norway, the United Kingdom and Brazil. In several other countries, enterprise churn resulted instead in net job destruction, representing in the Netherlands and Hungary more than 40% of total change in business employment between 2013 and 2014.

Definitions

The *employer enterprise churn rate* is calculated as the sum of the employer enterprise birth rate and the employer enterprise death rate. Employer enterprise birth and death data used in the compilation of the employer enterprise churn rate follow the definitions recommended by the *Eurostat-OECD Manual on Business Demography Statistics* (2008).

The *employer enterprise churn rate* does not include entries and exits into the population due to mergers, break-ups, split-offs, take overs or restructuring of a set of enterprises. It also excludes entries and exits into a sub-population resulting only from a change of activity.

Net employment creation due to employer enterprise births and deaths is calculated as the difference between the number of employees in employer enterprise births in the reference period (t) and the number of employees in employer enterprise deaths in the reference period (t).

Information on data for Israel: *http://dx.doi.org/10.1787/888932315602*.

Relevance

The churn rate, i.e. the sum of birth and death rates of enterprises, provides a measure of how frequently new firms are created and existing enterprises close down. In most economies, the number of births and deaths of enterprises is a sizeable proportion of the total number of firms. The indicator reflects a country's degree of "creative destruction", and supports the analysis of the contribution of business dynamism to aggregate productivity growth.

Comparability

As indicated in previous sections, "employer" indicators provide the basis for a higher degree of international comparability than indicators based on all enterprises, as the latter are sensitive to the coverage of, and thresholds used in, business registers.

For Australia enterprise births and deaths and indicators derived from them do not take into account the transition of an enterprise with zero employees to an enterprise with one or more employees or *vice versa,* i.e. the transition of a non-employer enterprise to an employer enterprise is not considered as an "employer enterprise birth", and the transition of an employer enterprise to a non-employer enterprise is not considered as an "employer enterprise death".

Source

OECD Structural and Demographic Business Statistics (SDBS) (database), *http://dx.doi.org/10.1787/sdbs-data-en*.

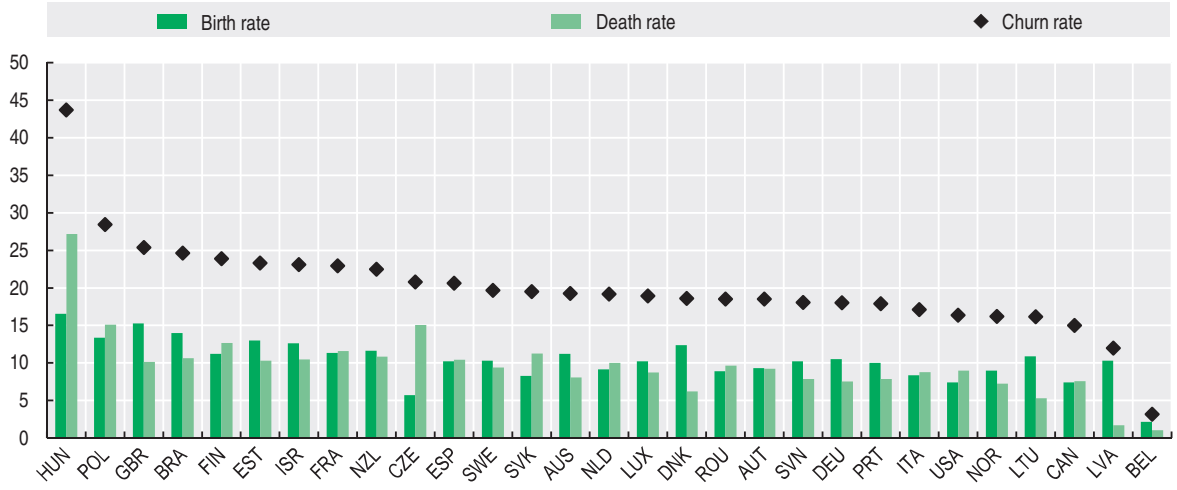
Further reading

Ahmad, N. (2006), "A Proposed Framework for Business Demography Statistics", *OECD Statistics Working Papers*, 2006/3, OECD Publishing, Paris, *http://dx.doi.org/10.1787/145777872685*.

OECD/Eurostat (2008), *Eurostat-OECD Manual on Business Demography Statistics*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264041882-en*.

Figure 4.17. **Churn rate of employer enterprises, business economy**

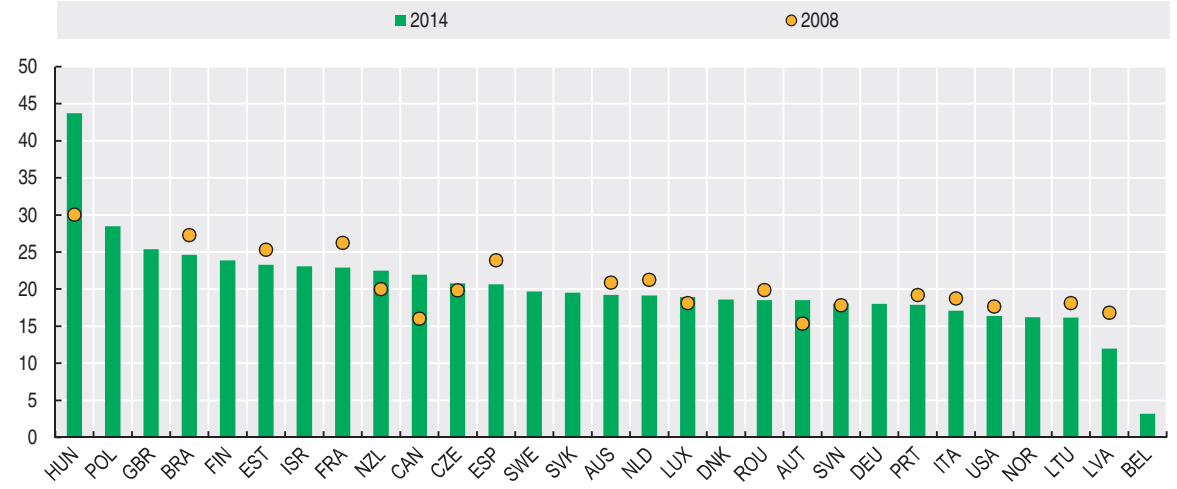
Percentage of total employer enterprises, 2014 or latest available year



StatLink http://dx.doi.org/10.1787/888933563949

Figure 4.18. **Evolution of employer enterprise churn rate, business economy**

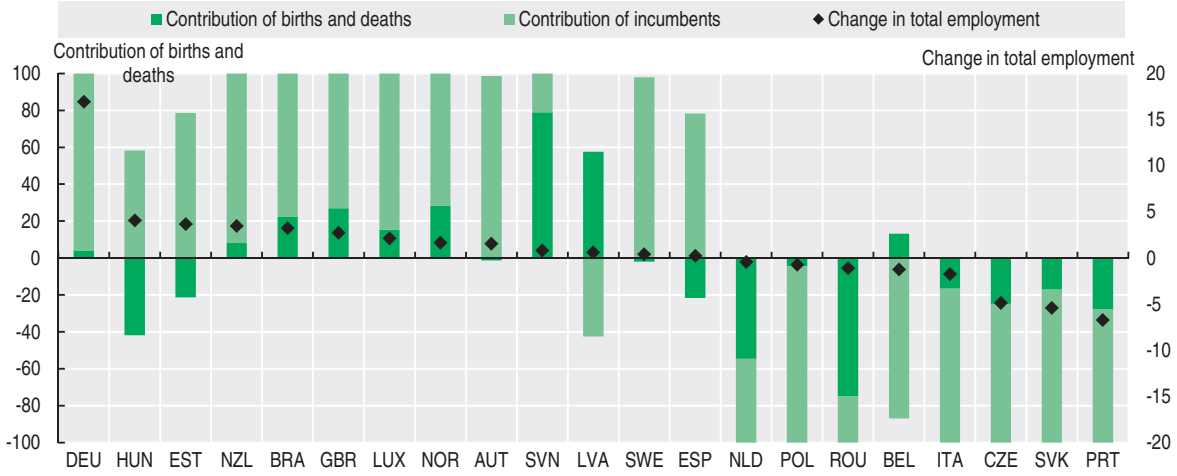
Percentage of all employer enterprises



StatLink http://dx.doi.org/10.1787/888933563968

Figure 4.19. **Enterprise churn and net job creation, business economy**

Contributions and percentage change between 2013 and 2014, or latest available year



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Young enterprises

Key findings

- Many newly-created enterprises fail within the first few years of life, although there are important differences across countries. The one-year survival rate of employer enterprises born in 2013 was above 90% in Sweden, the United States, Luxembourg, Lithuania and the United Kingdom, but between 60% and 70% in the Czech Republic and Poland, and below 55% in the Slovak Republic.
- Survival rates are typically higher in industry than in services or construction, and for enterprises born with five employees or more.
- In 2014 start-ups accounted for around 20% or more of all employer enterprises in all countries apart from Belgium, and for more than 30% in the United Kingdom, Hungary, Brazil, Israel and Poland.
- In 2014 start-ups represented less than 10% of business employment in most countries.

Definitions

The number of n-year survival enterprises for a particular year t refers to the number of enterprises which had at least one employee for the first time in year t-n and remained active in year t. This definition of survival excludes cases in which enterprises merge or are taken over by an existing enterprise in year t-n.

The employer enterprise survival rate in sector (class size) x measures the number of enterprises of a specific birth cohort in sector (size class) x that have survived over different years. The n-year employer enterprise survival rate for a reference year t is calculated as the number of n-year survival enterprises as a percentage of all enterprises that reported at least one employee for the first time in year t-n.

The *share of n-year-old employer enterprises* for a particular year t refers to the number of n-year survival enterprises as a percentage of the total employer enterprise population in year t.

Employer start-ups, as defined in this publication, include all employer enterprises that are up to two years old, i.e. the newly-born enterprises plus those that are one and two years old.

The *employment share of employer start-ups* refers to the number of persons employed by the population of employer enterprises that have existed for up to two years, divided by the total number of persons employed in all employer enterprises.

The average size of employer start-ups is expressed as the number of persons employed in employer start-ups in the reference period (t), divided by the number of employer start-ups in t.

Information on data for Israel: *http://dx.doi.org/10.1787/888932315602*

Relevance

Observing the post-entry performance of firms is as important as analysing their birth rate. Very high failure rates can act as a disincentive to both budding entrepreneurs as well as potential creditors, which could hinder long-term growth and innovation. The study of employment shares in young surviving enterprises contributes to the understanding of the role that different firms have in overall employment changes in the economy.

Comparability

Data presented refer to the whole population of employer enterprises. For Canada, Israel and the United States statistics on employment in employer enterprise births and surviving enterprises refer to the number of employees and not to the persons employed.

Employer enterprise survival statistics in this publication are compiled according to the definition recommended by the *Eurostat-OECD Manual on Business Demography Statistics* (2008).

For Australia, Korea and Mexico, enterprise births and indicators derived from them do not take into account the transition of an enterprise with zero employees to an enterprise with one or more employees or *vice versa*, i.e. the transition of a non-employer enterprise to an employer enterprise is not considered as an "employer enterprise birth".

Source

OECD Structural and Demographic Business Statistics (SDBS) (database). http://dx.doi.org/10.1787/sdbs-data-en.

Further reading

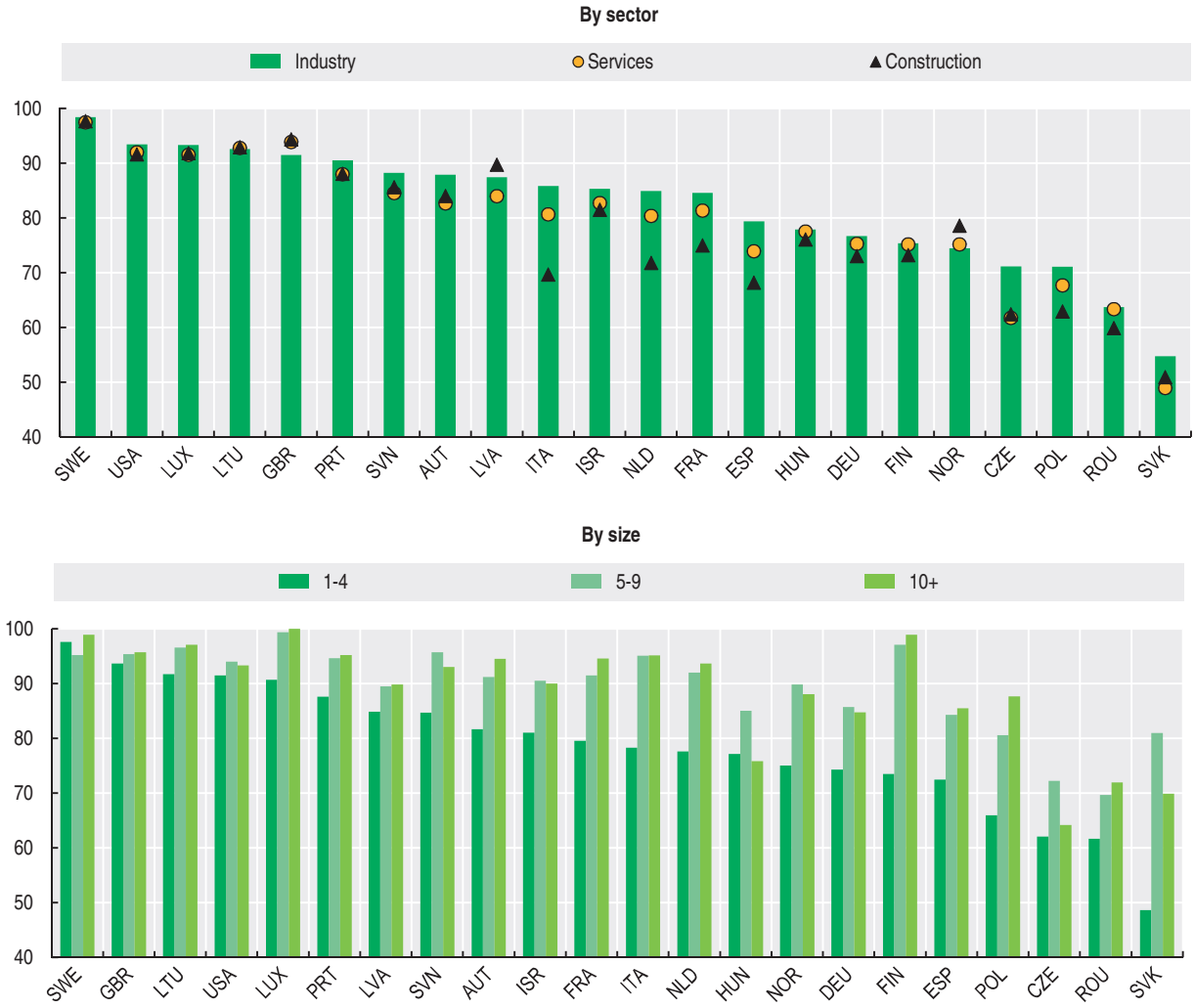
Ahmad, N. (2006), "A Proposed Framework for Business Demography Statistics", *OECD Statistics Working Papers*, 2006/3, OECD Publishing, Paris, http://dx.doi.org/10.1787/145777872685.

Decker, R. A., J. Haltiwanger, R.S. Jarmin and J. Miranda (2016), "Where has all the skewness gone? The decline in high-growth (young) firms in the U.S.", *European Economic Review*, http://www.nber.org/papers/w21776.

OECD/Eurostat (2008), *Eurostat-OECD Manual on Business Demography Statistics*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264041882-en.

Figure 4.20. **Survival rate of one-year old employer enterprises**

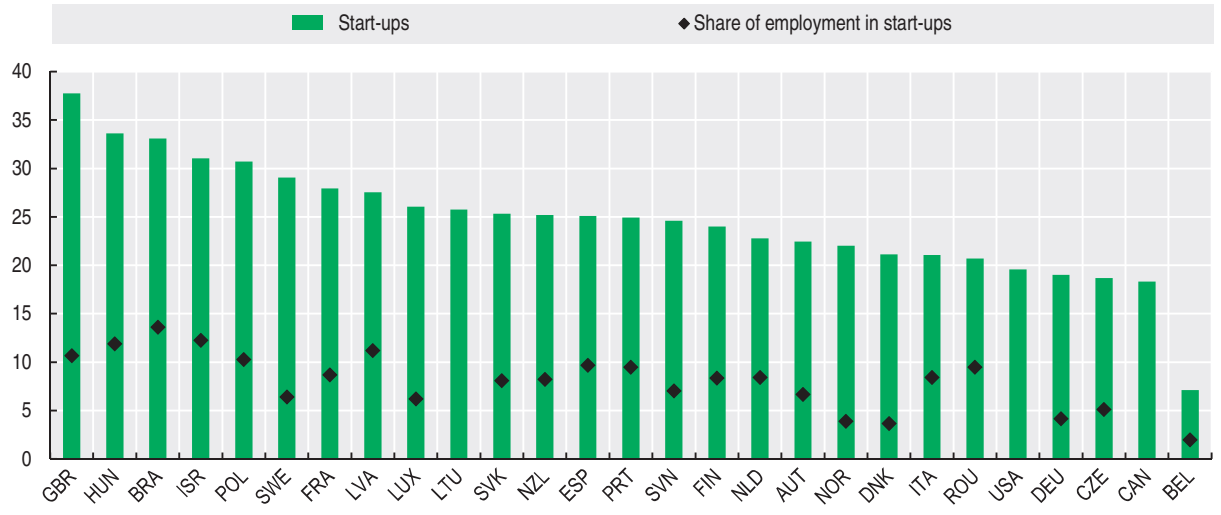
Percentage, 2013 cohort



StatLink http://dx.doi.org/10.1787/888933564006

Figure 4.21. Share of start-ups and their employment, business economy

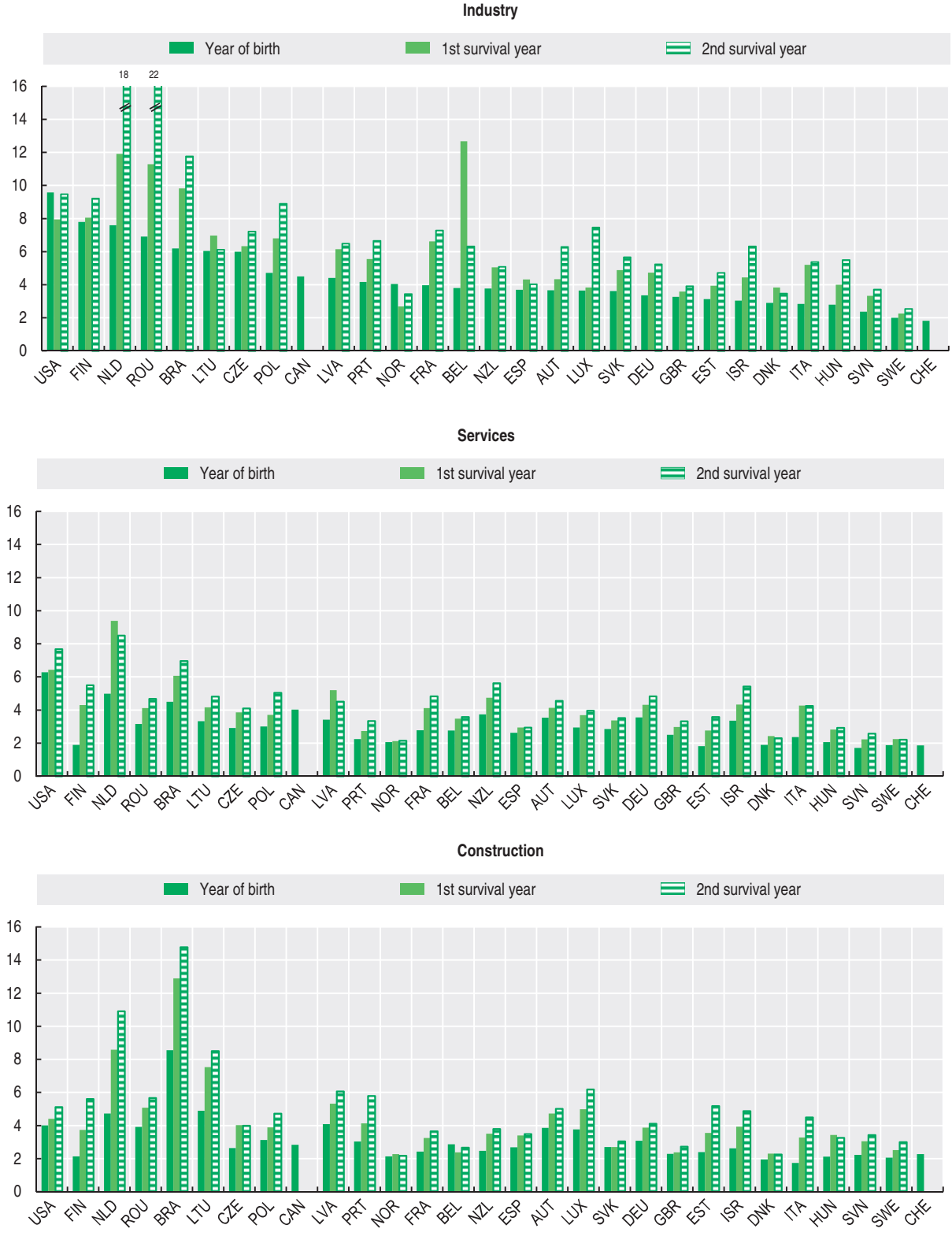
Percentage of all employer enterprises and of employment in all employer enterprises, 2014 or latest available year



StatLink http://dx.doi.org/10.1787/888933564025

Figure 4.22. **Average size of employer start-ups**

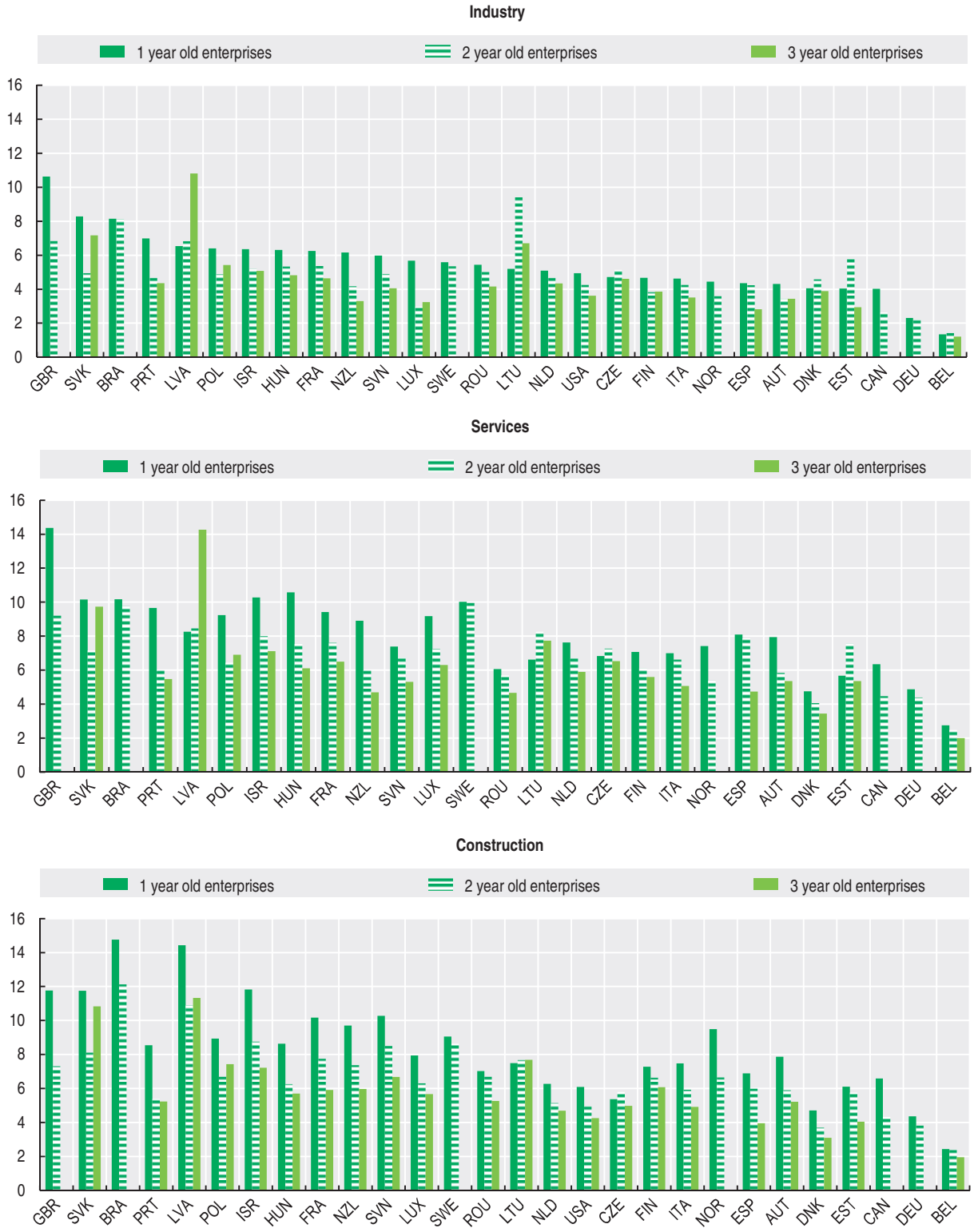
Employment in 0-2 year old enterprises over number of enterprises, 2014, or latest available year



StatLink http://dx.doi.org/10.1787/888933564044

Figure 4.23. **Share of young employer enterprises in business population**

Percentage of all employer enterprises, 2014, or latest available year



StatLink http://dx.doi.org/10.1787/888933564063

High-growth enterprises rate

Key findings

- While few in numbers, fast-growing firms contribute disproportionally to employment generation. For example, in 2014 they accounted for around 20% of employment in all enterprises with 10 or more employees in Ireland, Israel or the United Kingdom.
- The rate of high-growth enterprises varies significantly across countries and also by sector, reflecting the relative specialisation or comparative advantages of countries in certain activities. For example, in France and Sweden the rate of high-growth enterprises is higher in services than in industry, while in Hungary and Latvia the opposite is true.
- However, within countries trends in the evolution of high-growth rates by sector are generally aligned, suggesting that dynamic drivers of high-growth are strongly influenced by the underlying business environment. Countries with a comparatively large share of high-growth enterprises in one activity tend to have a large share of high-growth enterprises in other activities too.
- In 2014, the highest shares of gazelles, i.e. young high-growth enterprises, were in administrative and support services activities, notably in security and investigation, computer programming and employment placement activities.

Definitions

High-growth enterprises are enterprises with average annualised growth in the number employees greater than 20% per year, over a three-year period, and with ten or more employees at the beginning of the observation period (*Eurostat-OECD Manual on Business Demography Statistics*, 2008).

In the European Union, the Commission implementing regulation (EU) No 439/2014 set the definition of high-growth enterprises as follows: all enterprises with at least 10 employees in the beginning of their growth and having average annualised growth in number of employees greater than 10% per annum, over a three year period.

In this section, both definitions of high-growth enterprises (respectively based on 20% and 10% threshold) are used.

The *share of high-growth enterprises* measures the number of high-growth enterprises as a percentage of the population of enterprises with ten or more employees.

Average employment in high-growth enterprises is calculated by dividing the number of employees in high-growth enterprises in the reference period by the number of high-growth enterprises in the reference period.

Gazelles form a subset of high-growth enterprises. They are high-growth enterprises that have been employers for a period of up to five years. The *share of gazelles* corresponds to the number of gazelles as a percentage of the population of enterprises with ten or more employees.

Information on data for Israel: *http://dx.doi.org/10.1787/888932315602*

Relevance

High-growth firms are important contributors to job and wealth creation. A small set of high-growth enterprises drives a disproportionately large amount of employment creation.

Comparability

When measuring the population of high-growth enterprises a size threshold of ten employees at the start of any observation period is set to avoid introducing a small size class bias. The choice of size class threshold will necessarily have a bigger or lower impact on the representativeness of the results depending on the size of the country.

Data for Denmark, Estonia, Finland, France and Portugal exhibit a break in the series in 2013 and for France and Ireland in 2014.

Source

OECD Structural and Demographic Business Statistics (SDBS) (database), http://dx.doi.org/10.1787/sdbs-data-en.

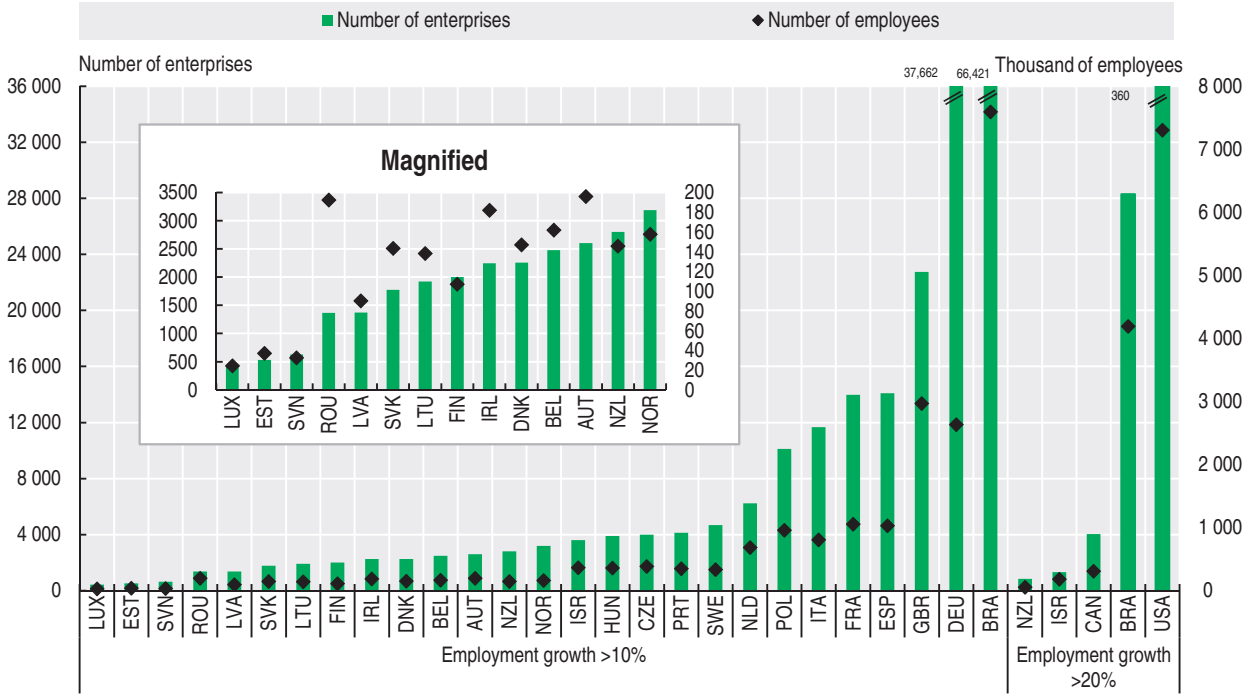
Further reading

Ahmad, N. and D. Rude Petersen (2007), High-Growth Enterprises and Gazelles – Preliminary and Summary Sensitivity Analysis, OECD-FORA, Paris, *www.oecd.org/document/31/0,3746,en_2825_499554_39151327_1_1_1_1,00.html*.

Coad, A. et al. (2014), "High-growth firms: introduction to the special section", *Oxford Journals, Industrial and Corporate Change*, *http://icc.oxfordjournals.org/content/23/1/91.full*.

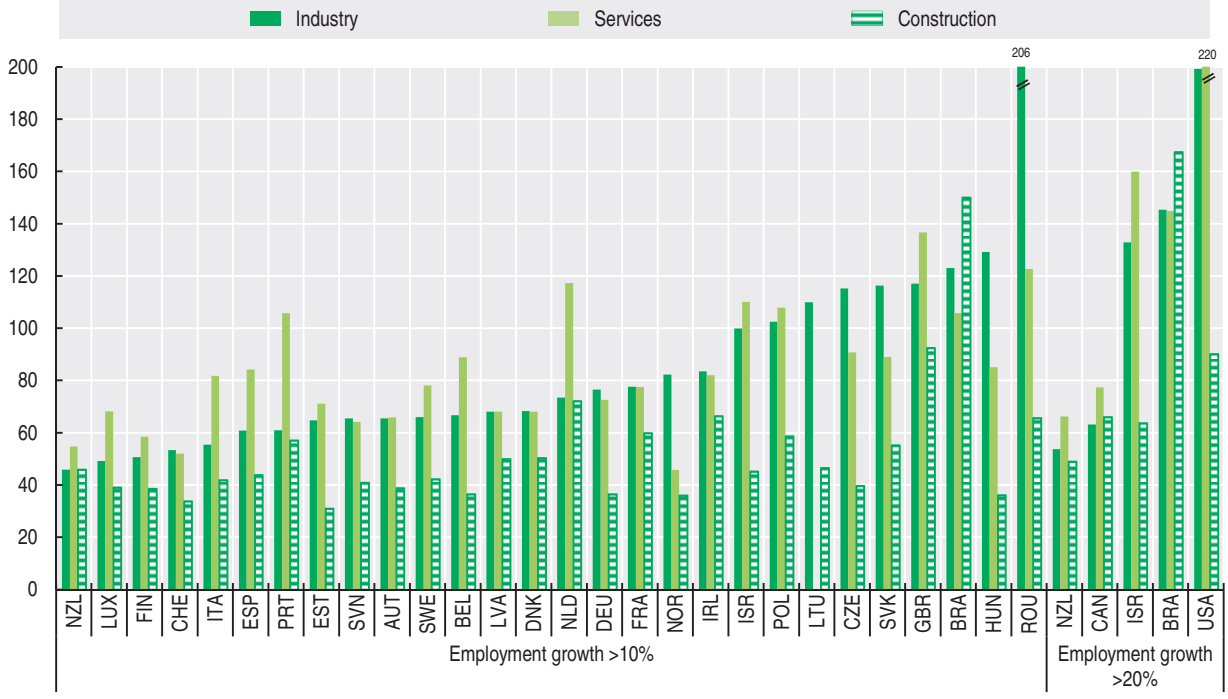
OECD/Eurostat (2008), *Eurostat-OECD Manual on Business Demography Statistics*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264041882-en*.

Figure 4.24. **Number of high-growth enterprises and employment, business economy**
2015, or latest available year



StatLink http://dx.doi.org/10.1787/888933564082

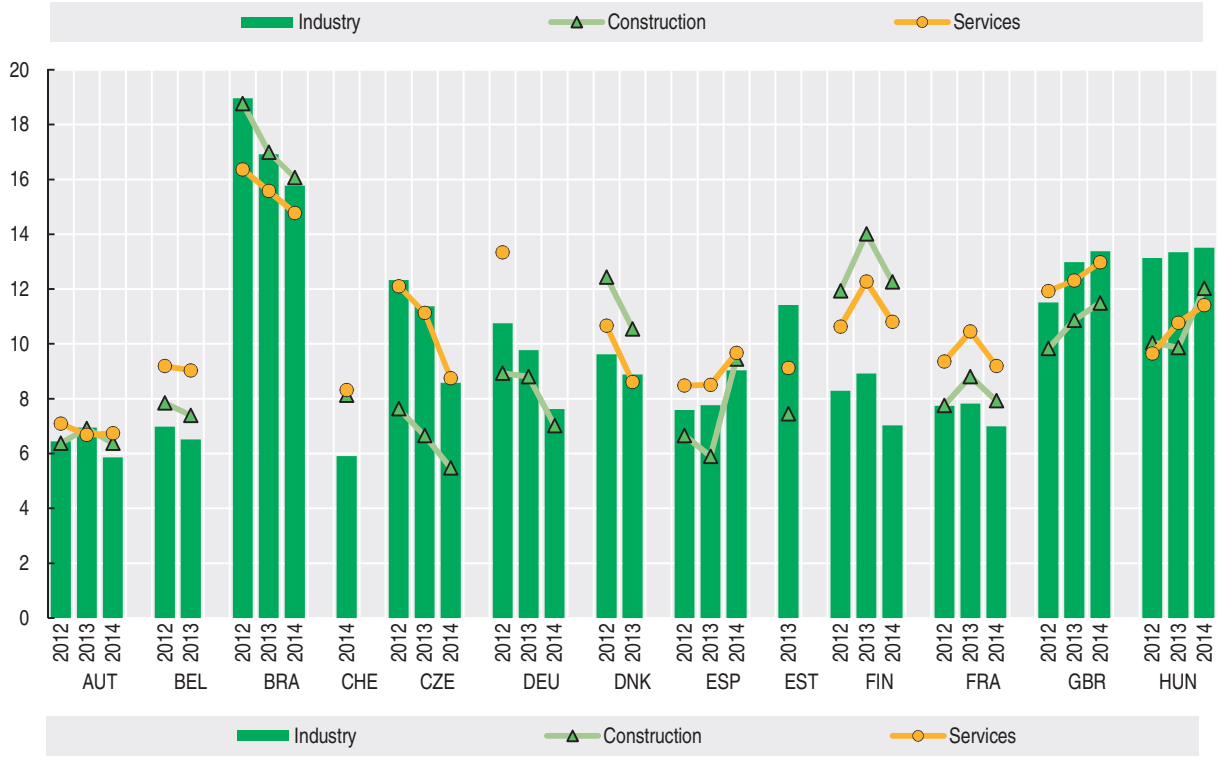
Figure 4.25. **Average employment in high-growth enterprises, by main sector**
Number of employees per enterprise by sector, 2014, or latest available year

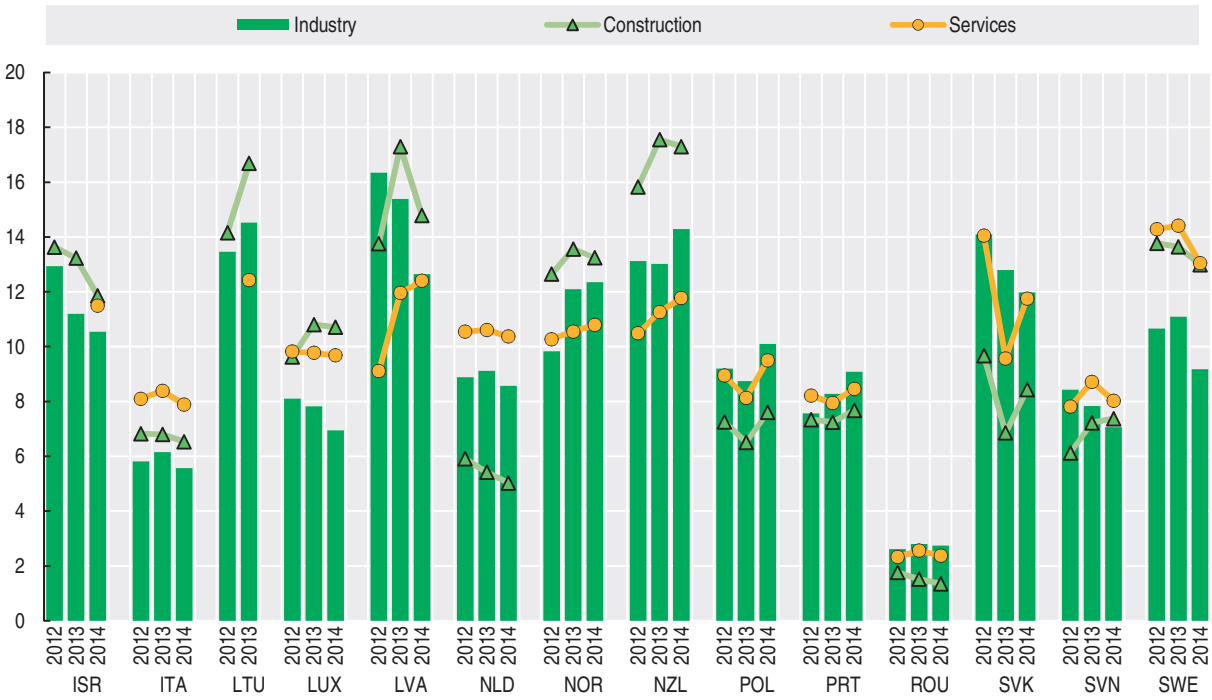


StatLink http://dx.doi.org/10.1787/888933564101

Figure 4.26. **Share of high growth enterprises (more than 10% employment growth)**

Percentage of enterprises with 10 or more employees

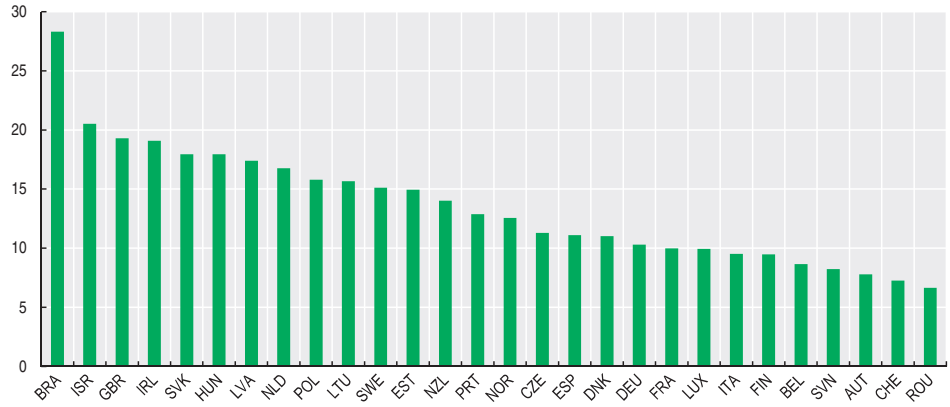




StatLink http://dx.doi.org/10.1787/888933564120

Figure 4.27. **Share of employment in high growth enterprises (more than 10% employment growth)**

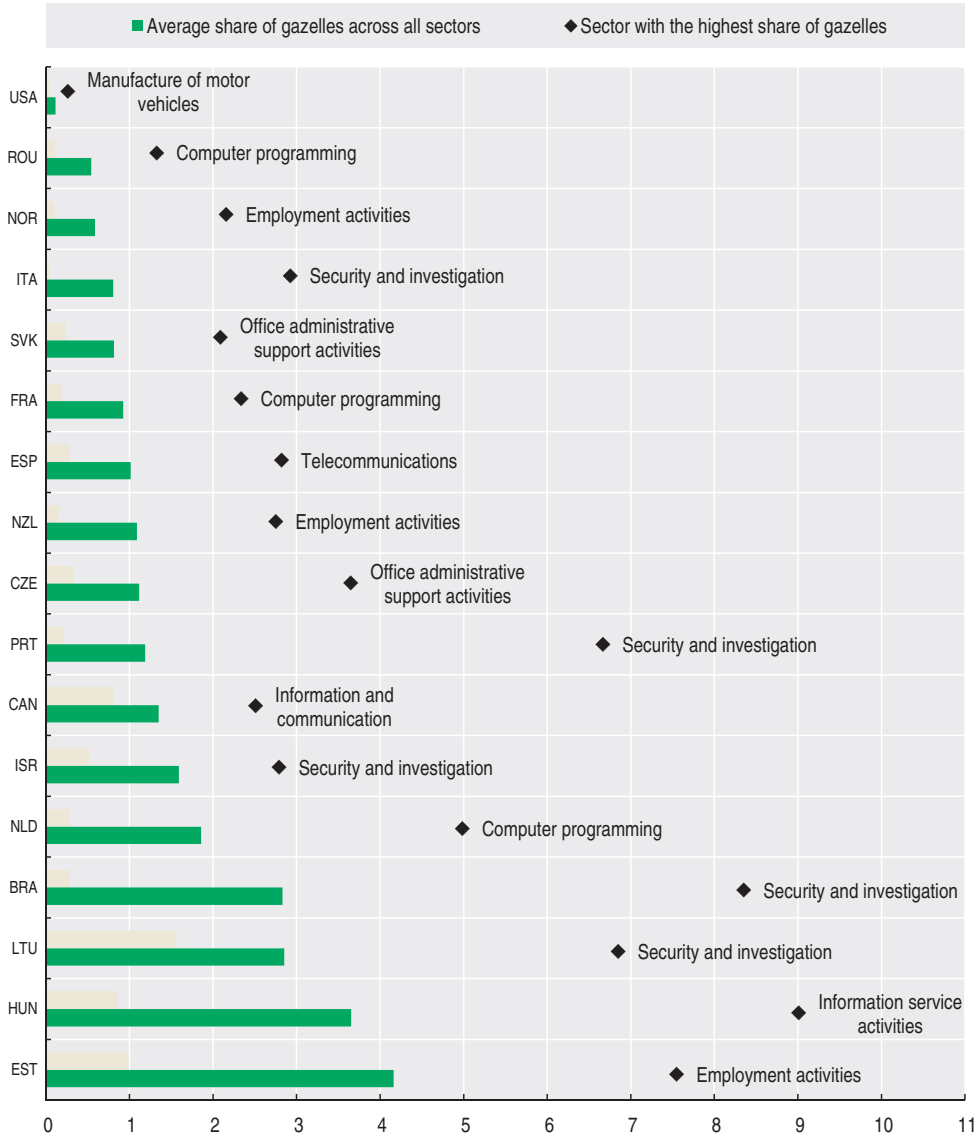
Percentage of employment in enterprises with 10 or more employees, 2014 or latest available year



StatLink http://dx.doi.org/10.1787/888933564139

Figure 4.28. **Share of gazelles (more than 20% employment growth)**

Percentage of all enterprises with 10 or more employees, by sector, 2014, or latest available year



5. SMES AND INTERNATIONAL TRADE

Trade concentration

Trade by enterprise size

SMEs and market proximity

Trade by enterprise ownership

Trade concentration

Key findings

- The share of enterprises participating in international trade varies significantly from country to country, ranging from 10% to 40% for exports and from 10% to 70% for imports. Small countries tend to have larger shares, reflecting the limited size of their internal market, although significant differences exist even among them.
- In nearly all economies, and across all size classes, the number of importing enterprises is typically higher than the number of exporters. The United States is a notable exception, with the number of exporting enterprises higher than importing enterprises across all SME size classes.
- Significant differences exist among SMEs of different sizes with regards to participation in international trade. On average 15% of micro-enterprises are traders, while the share is 60% for small enterprises and 80% for medium-sized enterprises.
- The top 100 exporting companies account for a significant share of exports in all countries, ranging from about one-quarter in Italy to over 90% in Luxembourg.

Relevance

In recent decades, international fragmentation of production has fuelled the growth in global value chains, characterised by increasing trade in intermediates. However, differences across countries in the scale of integration, particularly by SMEs, and the scale of market(s) penetration, remain. Diversity in markets can often indicate comparative advantages and resilience to demand shocks.

Definitions

Data on customs-based trade in goods aim to capture any movement of merchandise across a country's border, both outgoing (exports), and incoming (imports). This approach measures the two-way physical flow of commodities crossing the border, following the international standard established in "International Merchandise Trade Statistics: Concepts and Definitions 2010", United Nations (New York, 2010).

The key concepts for customs-based trade data are as follows: for exports, the final destination known to the company in a given country that is exporting a good determines the trading partner; for imports, the country within which the good was extracted, produced or last processed, known as the country of origin, determines the trading partner.

Conventional international trade statistics describe trade flows between countries, broken down by types of goods and services. The OECD Trade by Enterprise Characteristics (TEC) data break down international merchandise trade statistics by the characteristics of the trading enterprise.

The *incidence of exporters (importers)* is the ratio of the number of exporters (importers) to the total number of enterprises. The *incidence of two-way traders,* i.e. firms that both export and import, is the share of two-way traders among exporting (importing) enterprises.

The *concentration of exports by exporting enterprises* is calculated as the ratio of the value of exports by each rank (top 10, top 11 to 50, and top 51 to 100 exporting enterprises) divided by the total value of exports.

The *percentage of export value to x partner countries* is calculated as the ratio of the value of exports by enterprises who have x partner countries to the total value of exports.

Comparability

Data that reflect direct export (and import) channels only may understate the true underlying scale of integration within global value chains, particularly by size class. For example, upstream SME producers of intermediates may participate in global value chains by supplying goods and services to larger exporting firms. Similarly, many small firms may export (and import) via intermediary wholesalers.

Not all firms are able to be matched in trade and business registers. Typically, unmatched cases relate to smaller enterprises, as the small average trade values for these unallocated firms suggests. For this reason, Figures 5.1 and 5.2 include all unallocated firms and values in the SME population.

Data shown in Figures 5.1, 5.2 and 5.4 result from the combination of the OECD SDBS and TEC databases. Coverage of firms in the two databases may differ, if different thresholds exist or different statistical units are used for recording the number of firms.

Source

OECD Structural and Demographic Business Statistics (SDBS) (database), *http://dx.doi.org/10.1787/sdbs-data-en.*

OECD Trade by Enterprise Characteristics Database (TEC), http://stats.oecd.org/Index.aspx?DataSetCode=TEC1_REV4.

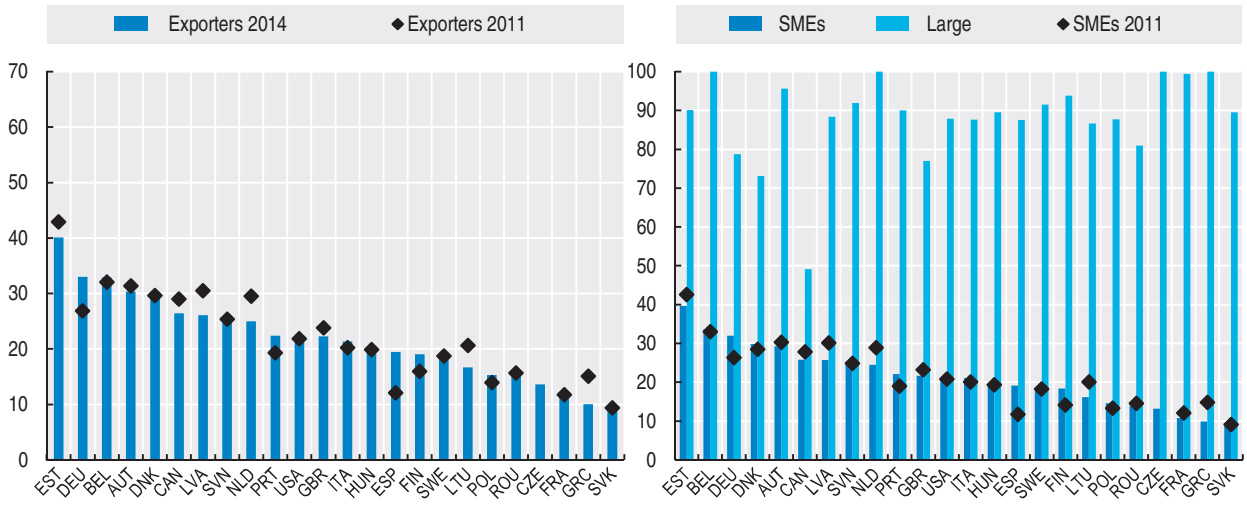
Further reading

Nordic Council of Ministers and OECD (2016), *Nordic Countries in Global Value Chains 2016, http://www.dst.dk/Site/Dst/Udgivelser/GetPubFile.aspx?id=28140&sid=nordglobchains.*

OECD and World Bank Group (2015) "Inclusive Global Value Chains. Policy options in trade and complementary areas for GVC. Integration by small and medium enterprises and low-income developing countries", *https://www.oecd.org/trade/OECD-WBG-g20-gvc-report-2015.pdf.*

Figure 5.1. **Incidence of exporters, industry**

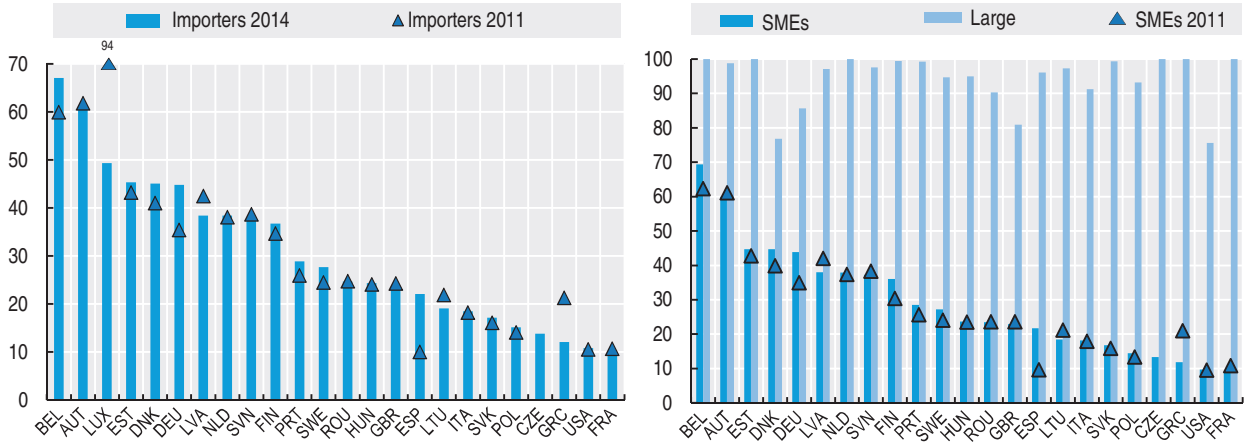
Share of exporting enterprises in total enterprises | *Share of exporting enterprises, by size class, 2014*



StatLink http://dx.doi.org/10.1787/888933564158

Figure 5.2. **Incidence of importers, industry**

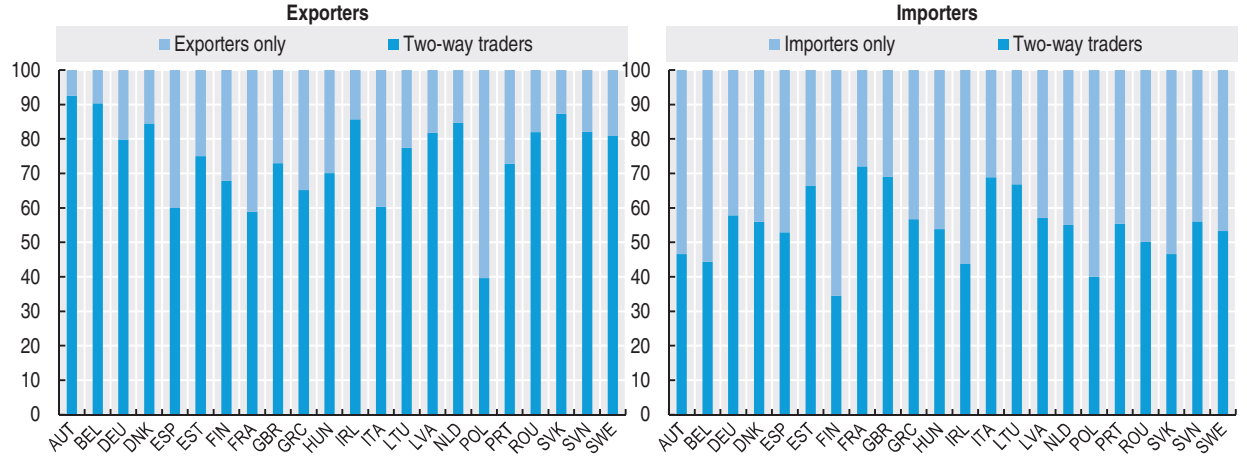
Share of importing enterprises in total enterprises | *Share of importing enterprises, by size class, 2014*



StatLink http://dx.doi.org/10.1787/888933564177

Figure 5.3. **Incidence of two-way traders, industry**

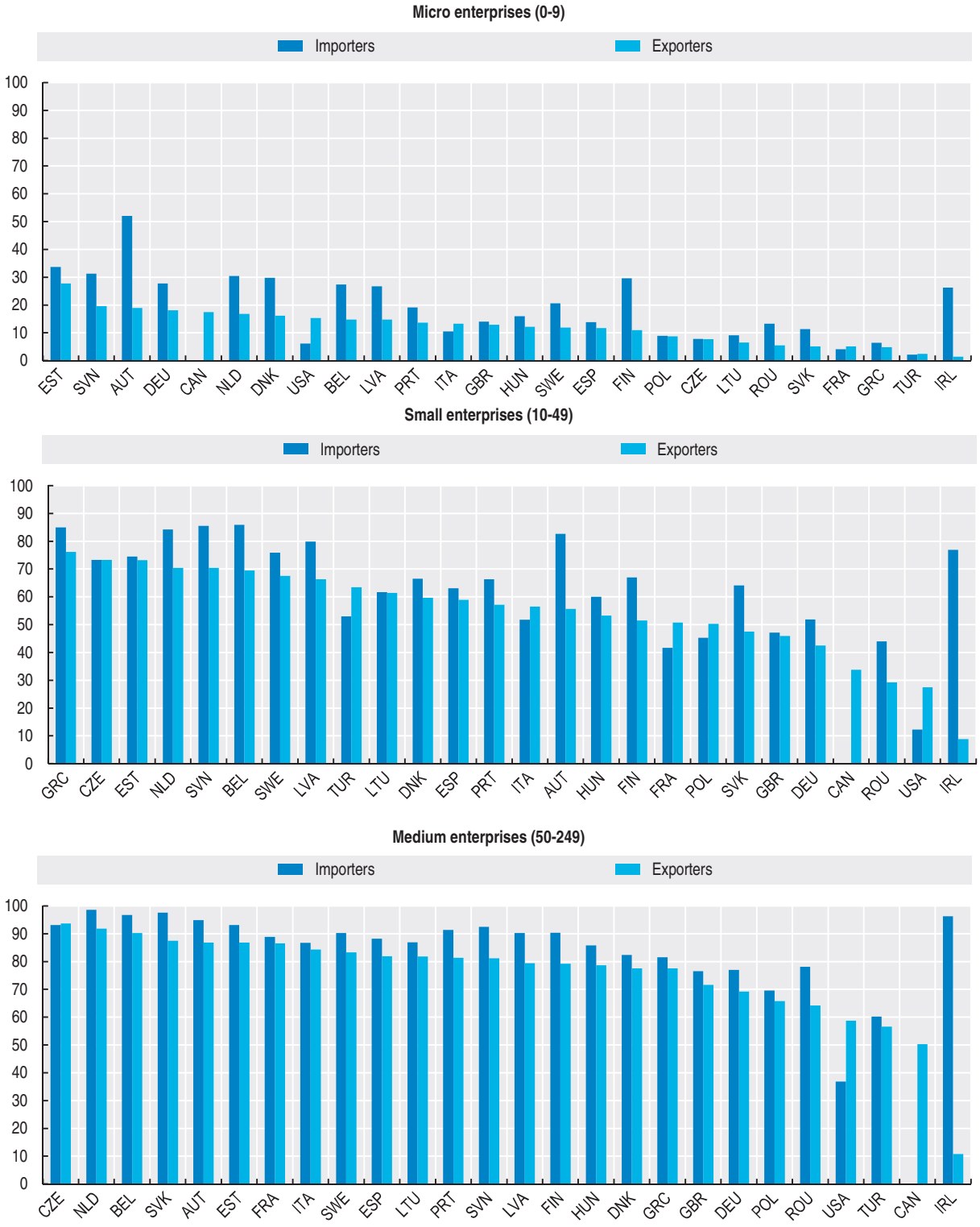
Share of two-way traders among all exporting (importing) enterprises, 2015 or latest available year



StatLink http://dx.doi.org/10.1787/888933564196

Figure 5.4. **Incidence of SME traders, by size class, industry**

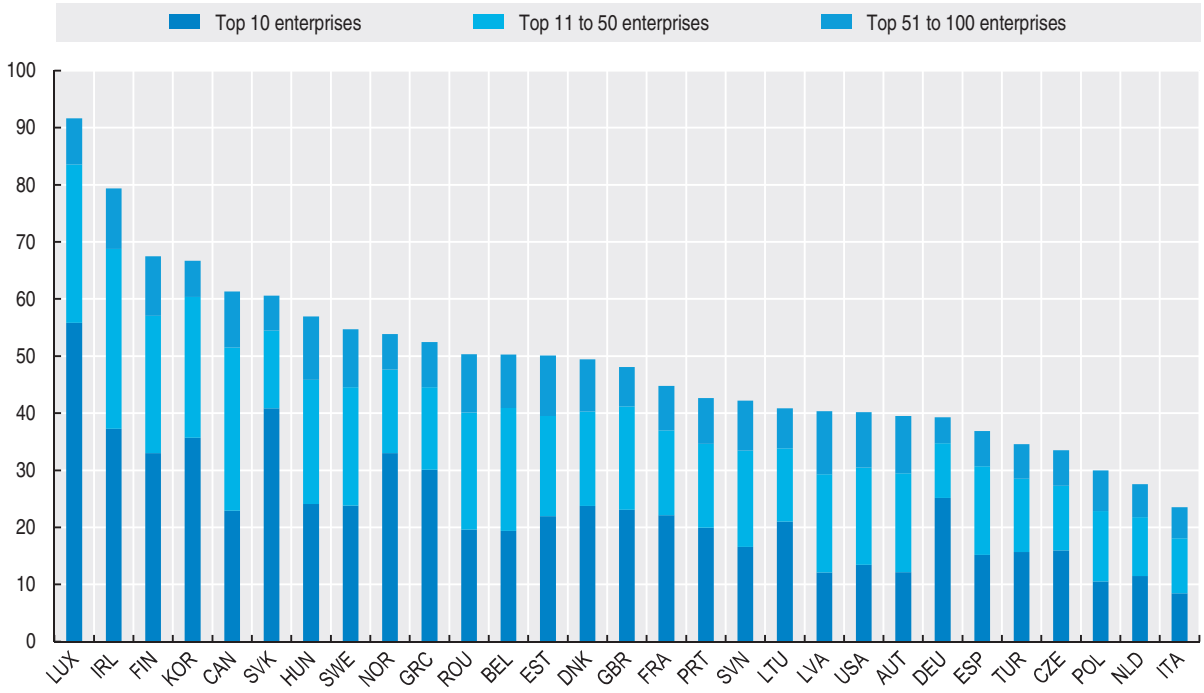
Percentage of all enterprises, 2014 or the latest available year



StatLink http://dx.doi.org/10.1787/888933564215

Figure 5.5. **Concentration of exports by exporting enterprises, total economy**

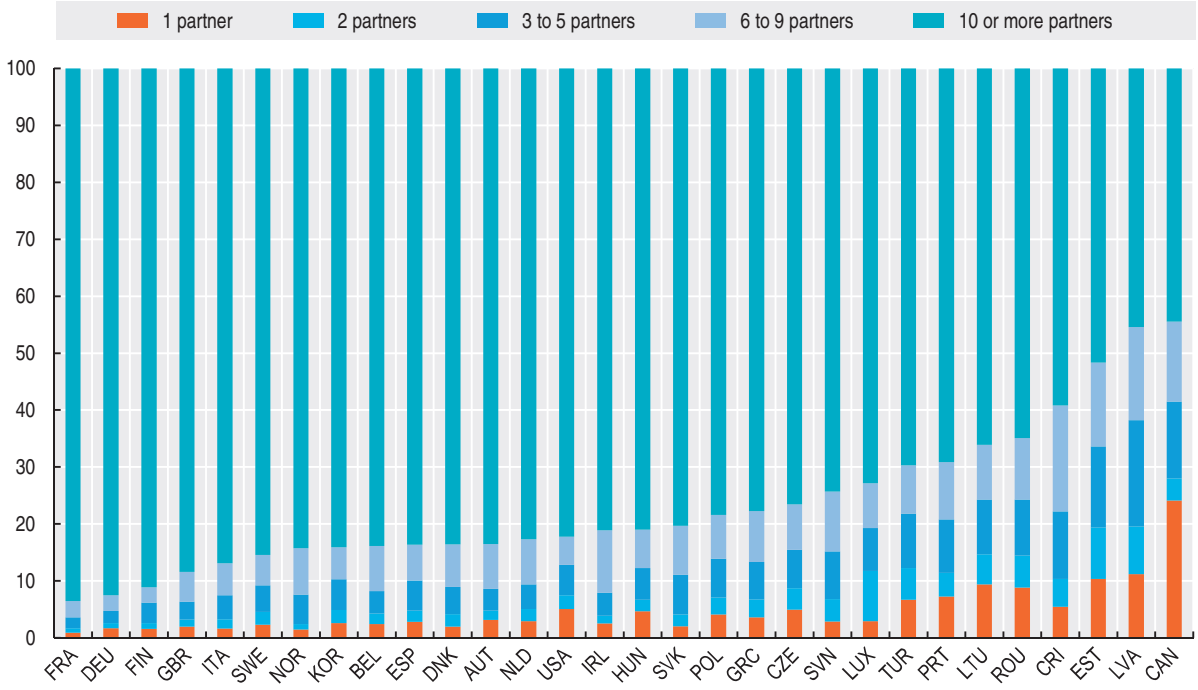
Percentage of total value of exports, 2015, or latest available year



StatLink http://dx.doi.org/10.1787/888933564234

Figure 5.6. **Concentration of the value of exports by number of partners, total economy**

Percentage of total value of exports, 2015, or latest available year



StatLink http://dx.doi.org/10.1787/888933564253

Trade by enterprise size

Key findings

- Although between 25 and 70% of exporting firms are micro enterprises, i.e. with less than 10 employees, they account for only a limited share of total export value.
- Micro-enterprises in wholesale and retail trade services play an important role in driving international trade. They comprise around three-quarters of all enterprises in the sector that engage in international trade, and around 15-50% of all imports and exports of the sector.
- The export (import) value to turnover ratio is generally higher the larger the firm and the smaller the economy. Ireland and the Netherlands, home to many foreign multinationals with high use of intellectual property, have the highest export to turnover ratios in the OECD,

Relevance

Differences in trade participation across size classes and countries can highlight important barriers to participation in international trade, particularly for smaller firms, and in turn stress the importance of examining indirect channels of integration into global value chains.

Definitions

The shares of exporters (importers) by enterprise size are calculated as the ratio of the number of exporters (importers) in each size class over the total number of exporters (importers).

The shares of exports (imports) by enterprise size are calculated as the ratio of the value of exports (imports) by each size class over the total value of exports (imports).

Export (import) value to turnover ratio is defined as the ratio of the value of exports (imports) of exporting (importing) enterprises to the total turnover of all enterprises.

Average value of exports (imports) per enterprise is defined as the value of exports (imports) divided by the number of exporting (importing) enterprises.

Comparability

Not all firms are able to be matched in trade and business registers. Typically the unmatched cases relate to smaller enterprises, as the small average trade values for these unallocated firms suggests. For this reason, Figures 5.8 and 5.10 include all unallocated firms and values in the SME population.

Data that reflect direct export (and import) channels only may understate the true underlying scale of integration within global value chains, particularly by size class. For example, upstream SME producers of intermediates may participate in global value chains by supplying goods and services to larger exporting firms. Similarly, many small firms may export (and import) via intermediary wholesalers.

Data shown in figures 5.8 and 5.10 result from the combination of OECD SDBS and TEC databases. Coverage of firms in the two databases may differ, if different thresholds exist or different statistical units are used for recording the number of firms.

Source

OECD Structural and Demographic Business Statistics (SDBS) (database), *http://dx.doi.org/10.1787/sdbs-data-en*.

OECD Trade by Enterprise Characteristics Database (TEC), http://stats.oecd.org/Index.aspx?DataSetCode=TEC1_REV4.

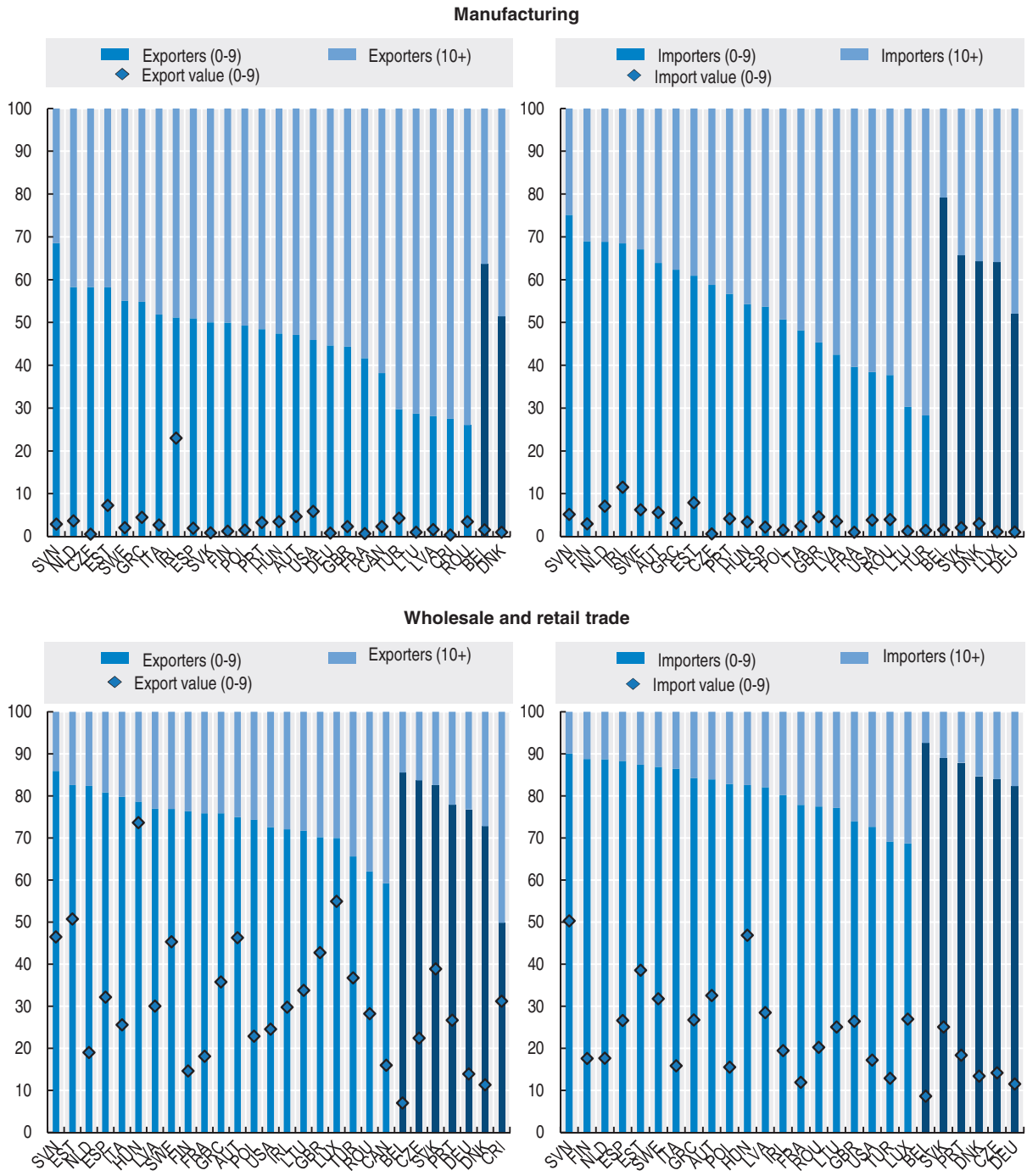
Further reading

OECD (2016), "Who's Who in International Trade: A Spotlight on OECD Trade by Enterprise Characteristics data", *OECD Insights Blog*, *http://oecdinsights.org/2016/04/25/statistical-insights-whos-who-in-international-trade-a-spotlight-on-oecd-trade-by-enterprise-characteristics-data/*.

OECD (2009), "Top Barriers and Drivers to SME Internationalisation", Report by the OECD Working Party on SMEs and Entrepreneurship, OECD, *https://www.oecd.org/cfe/smes/43357832.pdf*.

Figure 5.7. **Share of exporters and importers**

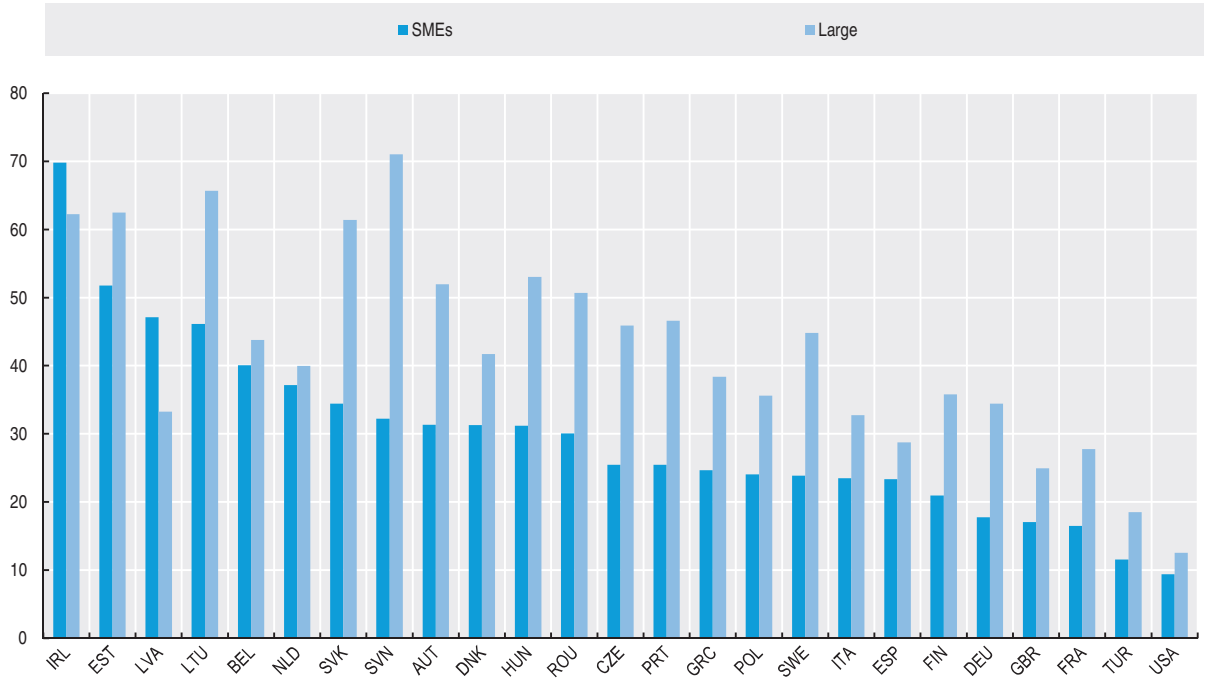
Percentage of all exporters (importers) and of total export (import) value, 2015, or latest available year



StatLink http://dx.doi.org/10.1787/888933564272

Figure 5.8. **Export value to turnover ratio, by enterprise size, industry**

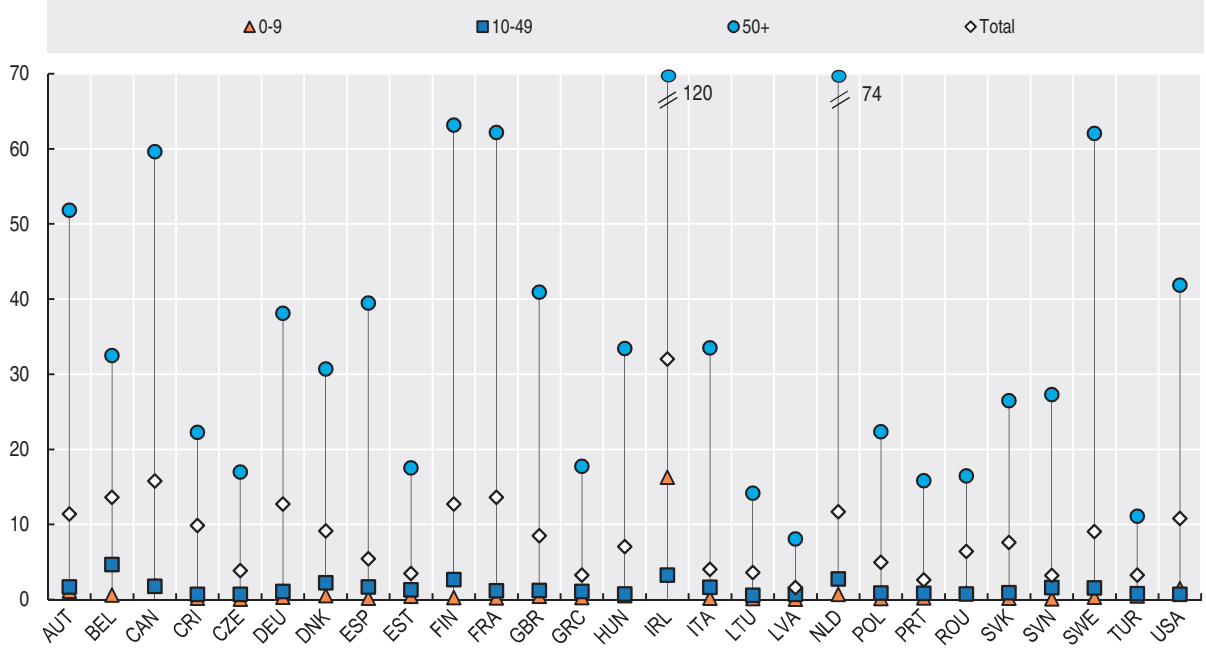
Export value as percentage of turnover, 2014, or latest available year



StatLink http://dx.doi.org/10.1787/888933564291

Figure 5.9. **Average value of exports per enterprise, by enterprise size, industry**

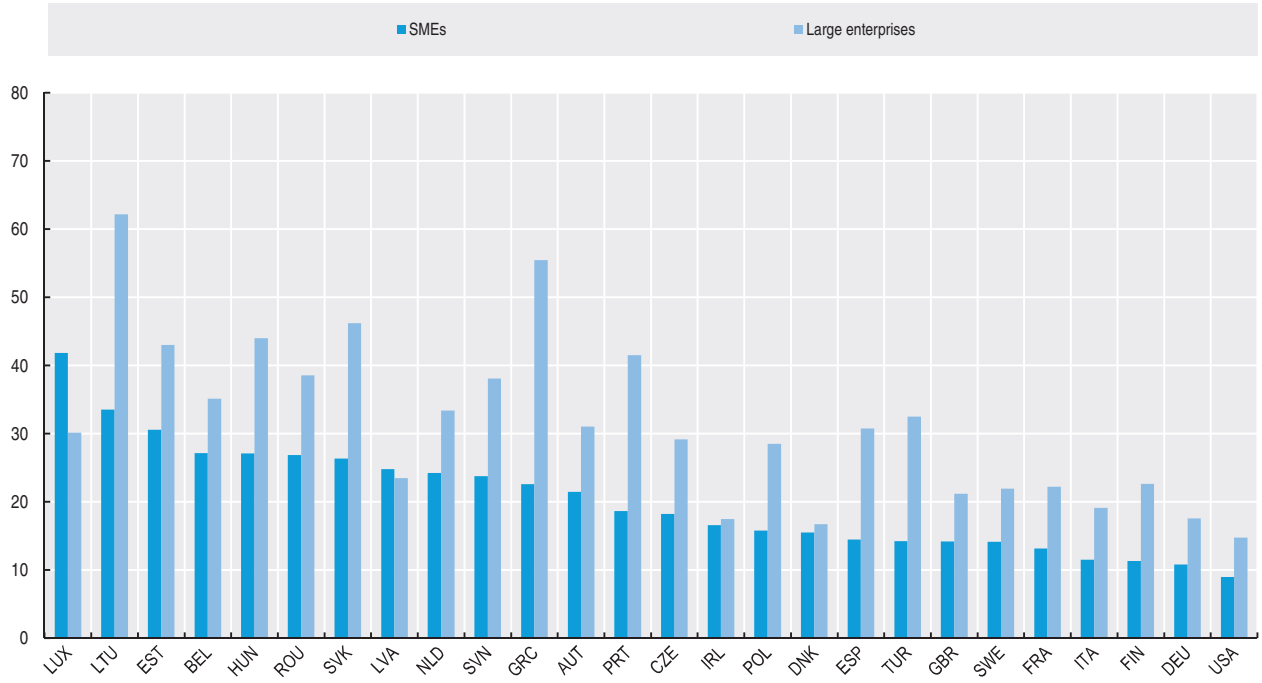
Million US dollars, 2015, or latest available year



StatLink http://dx.doi.org/10.1787/888933564310

Figure 5.10. **Import value to turnover ratio, by enterprise size, industry**

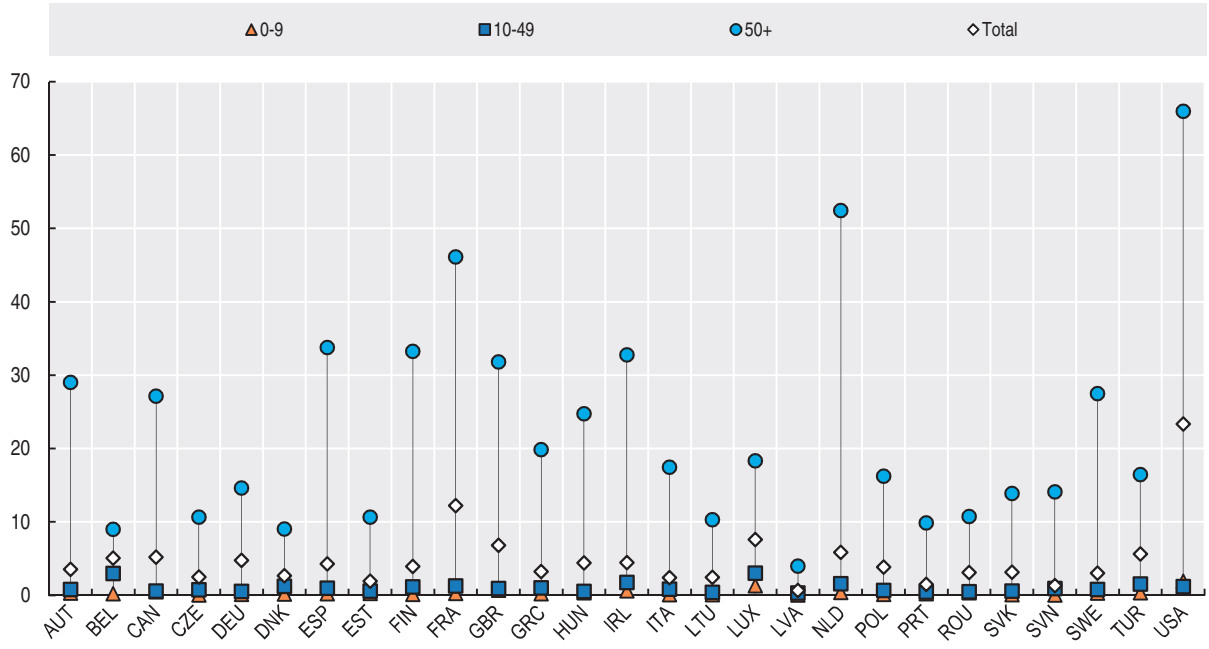
Import value as percentage of turnover, 2014, or latest available year



StatLink http://dx.doi.org/10.1787/888933564329

Figure 5.11. **Average value of imports per enterprise by enterprise size, industry**

Million US dollars, 2015, or latest available year



StatLink http://dx.doi.org/10.1787/888933564348

SMEs and market proximity

Key findings

- Generally, compared to large firms, small firms are more likely to export to markets relatively close to their home country – evidence of the fixed costs related to breaking into new markets that tend to be relatively higher for smaller firms. Barriers to SMEs importing appear less onerous than those for exporting.
- The share of SMEs in the number of firms that export to (or import from) China and India is typically lower than their share of trade at the global level. However, the contribution of SMEs to overall exports to China and India is higher in the Czech Republic, Portugal and Turkey, and to overall import is higher in Korea, Latvia, Belgium, Netherlands and the United Kingdom.
- In all countries, the share of SMEs importing from China is systematically higher than the share of SMEs importing from India.

Relevance

Data on trade participation by partner country and size class can highlight important barriers to participation in international trade, particularly for smaller firms, and in turn stress the importance of examining indirect channels of integration into global value chains.

Definitions

The *share of SMEs among exporters (importers)* is the number of exporting (importing) SMEs divided by the total number of exporting (importing) enterprises. The share of *SMEs among exporters (importers) to country x* is calculated as the number of SMEs exporting (importing) to country x divided by the total number of enterprises exporting (importing) to that country.

SME share of exports to (imports from) country x is calculated as the value of SME exports to (imports from) country x divided by the total exports to (imports from) that country.

Comparability

Data cover all sectors of the economy.

Source

OECD Trade by Enterprise Characteristics Database (TEC), http://stats.oecd.org/Index.aspx?DataSetCode=TEC1_REV4.

Further reading

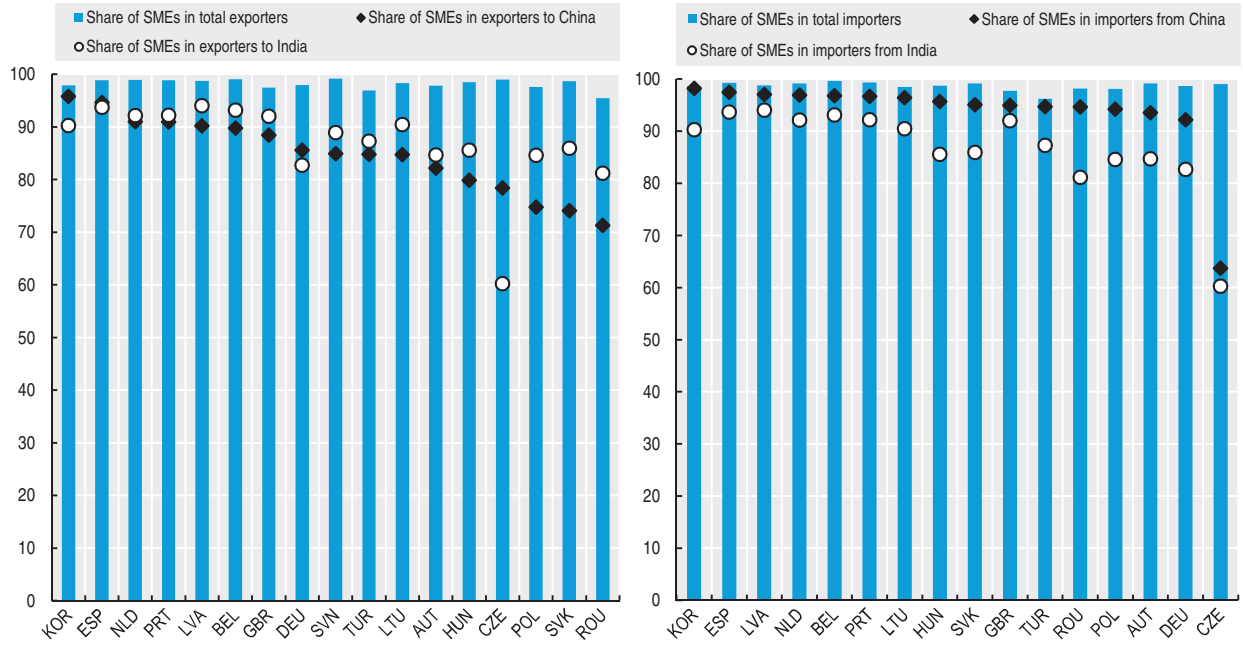
Nordic Council of Ministers and OECD (2016), *Nordic Countries in Global Value Chains 2016, http://www.dst.dk/Site/Dst/Udgivelser/GetPubFile.aspx?id=28140&sid=nordglobchains*.

OECD (2016), "Who's Who in International Trade: A Spotlight on OECD Trade by Enterprise Characteristics data", *OECD Insights Blog, http://oecdinsights.org/2016/04/25/statistical-insights-whos-who-in-international-trade-a-spotlight-on-oecd-trade-by-enterprise-characteristics-data/*.

OECD (2009), "Top Barriers and Drivers to SME Internationalisation", Report by the OECD Working Party on SMEs and Entrepreneurship, OECD, *https://www.oecd.org/cfe/smes/43357832.pdf*.

Figure 5.12. **Share of SMEs engaged in trade with China and India, total economy**

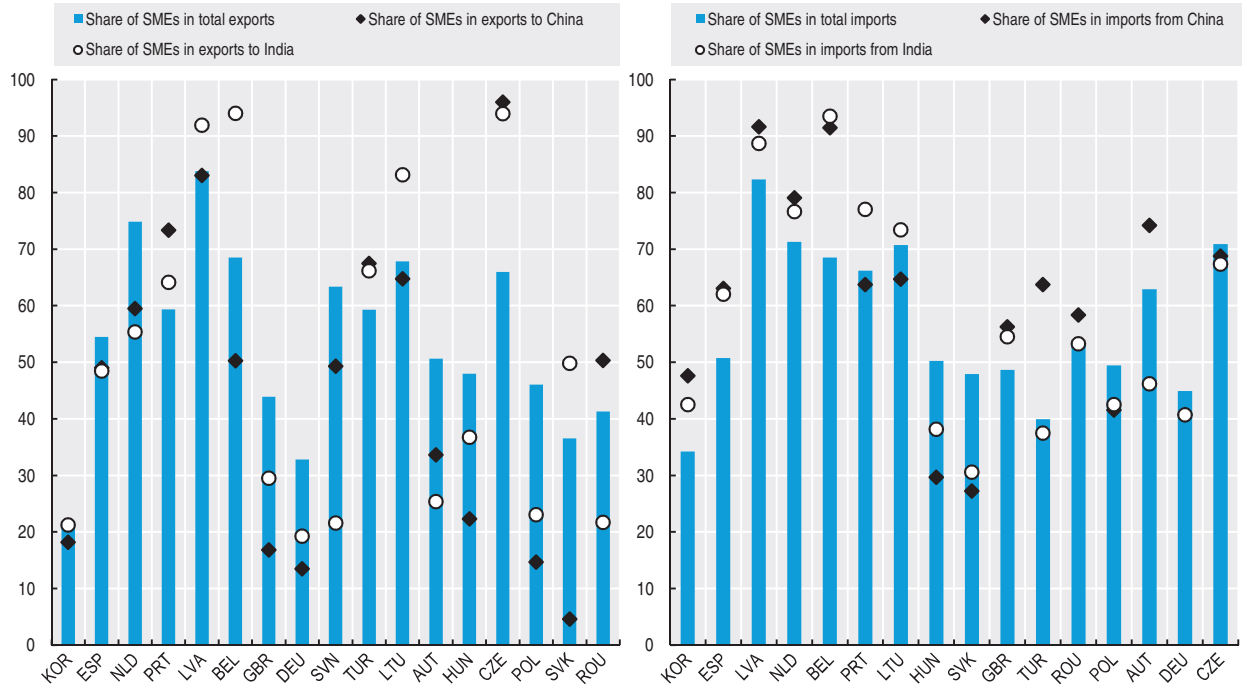
Percentage, 2014, or latest available year



StatLink http://dx.doi.org/10.1787/888933564367

Figure 5.13. **SME share of trade with China and India, total economy**

Percentage, 2014 or latest available year



StatLink http://dx.doi.org/10.1787/888933564386

Trade by enterprise ownership

Key findings

- Foreign-owned firms account for a large share of overall exports and imports compared to domestically owned firms. In the Czech Republic, Hungary and the Slovak Republic, foreign-owned exporters provide more than 80% of the total value of exports and imports, but represent only around 20% of the trading firms; this pattern is even more pronounced in Italy, Portugal and Spain where less than 5% of foreign-owned firms account for disproportionately large shares of imports and exports.
- In a majority of countries, foreign-owned enterprises have higher ratios of exports and imports to turnover than domestically-owned enterprises.

Relevance

Global value chains are dominated by multinational enterprises, which increasingly allocate stages of production to different locations on the basis of relative specialisations (skills, access to natural resources, infrastructure, regulatory environment etc.) and access to markets, driving disproportionate growth in trade in intermediates. Understanding the nature of these chains and the role of foreign affiliates in generating spillovers, both from knowledge and through the development of upstream domestic supplier chains, is a crucial component of upgrading strategies.

Definitions

Ownership is defined in terms of control. The notion of control implies the ability to appoint a majority on the company board, guide its activities and determine its strategy. This ability is exercised by a single direct investor or a group of associated shareholders acting in concert and controlling the majority (more than 50%) of ordinary shares or voting power. The control of an enterprise may be direct or indirect, immediate or ultimate.

The *share of exports (and imports) of foreign-owned enterprises* is calculated as the value of exports (imports) by foreign-owned enterprises divided by the total value of exports.

Share of foreign-owned exporters (importers) is the number of foreign-owned exporting (importing) enterprises divided by the total number of exporting (importing) enterprises.

Export (import) to turnover ratio is defined as the ratio of the value of exports (imports) of exporting (importing) enterprises to the total turnover of exporting (importing) enterprises.

Comparability

Some care is needed in interpretation. Data showed in this section result from the combination of two data sources, namely OECD TEC and AMNE databases. Coverage of firms in the two databases may differ if different thresholds exist or different statistical units are used for recording the number of firms.

Source

OECD Trade by Enterprise Characteristics Database (TEC), http://stats.oecd.org/Index.aspx?DataSetCode=TEC1_REV4.

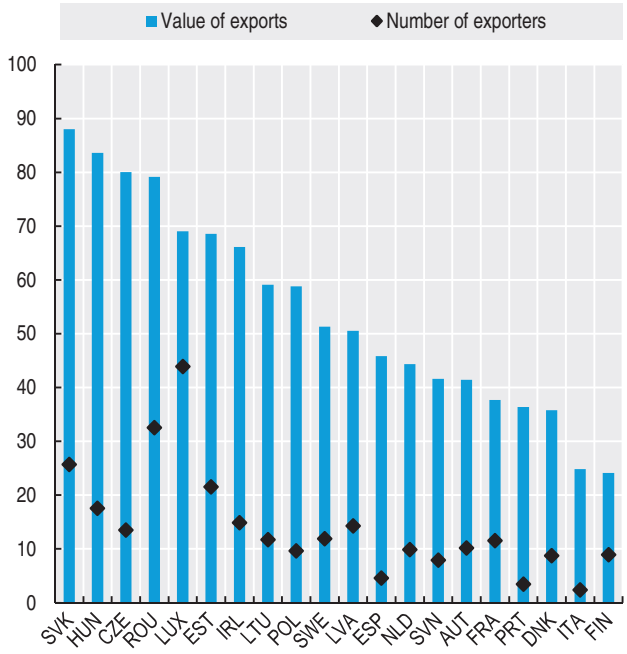
OECD Activity of Multinational Enterprises Database (AMNE), http://stats.oecd.org/Index.aspx?DataSetCode=AMNE_IN.

Further reading

OECD (2016), "Who's Who in International Trade: A Spotlight on OECD Trade by Enterprise Characteristics data", *OECD Insights Blog, http://oecdinsights.org/2016/04/25/statistical-insights-whos-who-in-international-trade-a-spotlight-on-oecd-trade-by-enterprise-characteristics-data/*

Figure 5.14. **Share of exporters and export value, foreign-owned enterprises, industry**

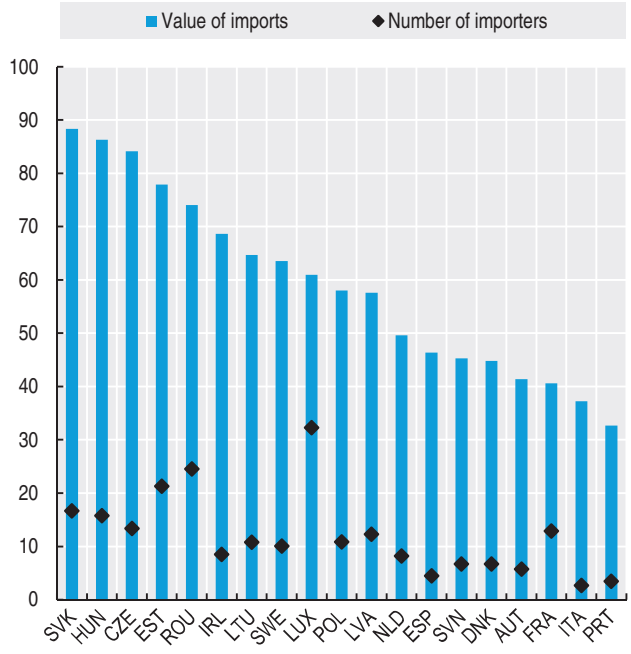
Percentage, 2014, or latest available year



StatLink http://dx.doi.org/10.1787/888933564405

Figure 5.15. **Share of importers and import value, foreign-owned enterprises, industry**

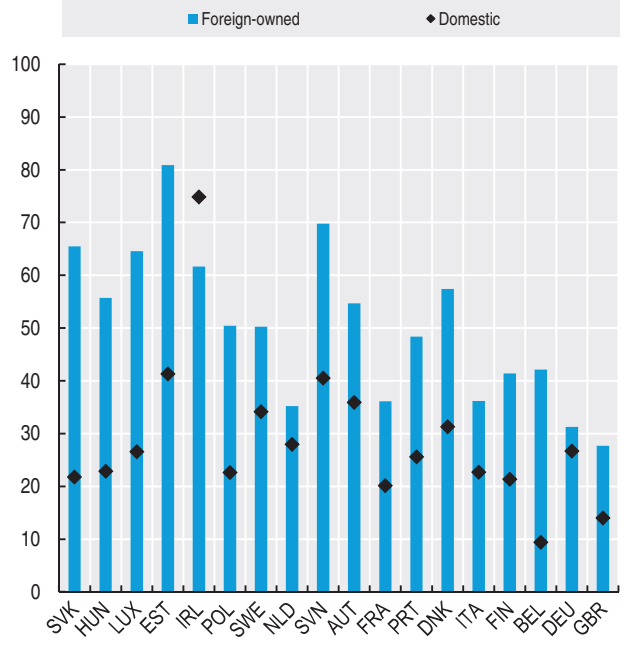
Percentage, 2014, or latest available year



StatLink http://dx.doi.org/10.1787/888933564424

Figure 5.16. **Export to turnover ratio by enterprise ownership, industry**

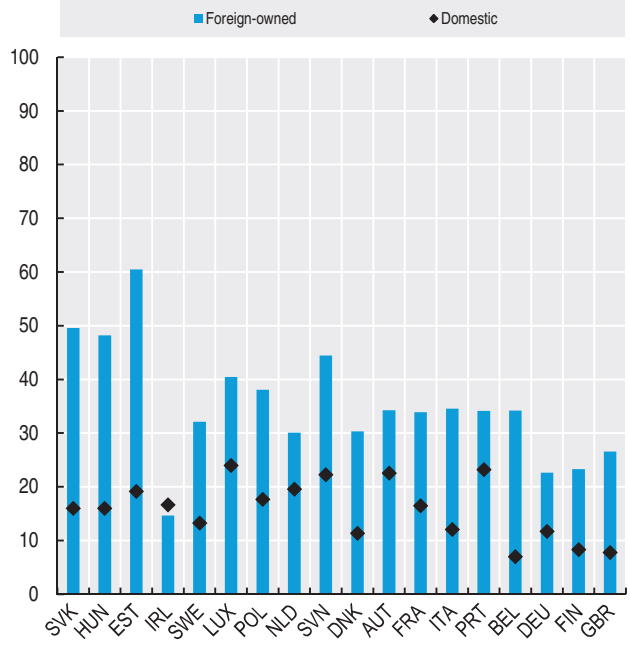
Percentage, 2014, or latest available year



StatLink http://dx.doi.org/10.1787/888933564443

Figure 5.17. **Import to turnover ratio by enterprise ownership, industry**

Percentage, 2014, or latest available year



StatLink http://dx.doi.org/10.1787/888933564462

6. FEMALE ENTREPRENEURSHIP

Gender differences in self-employment rates

Earnings from self-employment

Entrepreneurial attitude

Gender differences in self-employment rates

Key findings

- In OECD economies, one in ten employed women is self-employed, almost half the rate of self-employed men (17%). During the past ten years, however, the gap between male and female self-employment rates has closed in almost every country, and particularly so in Iceland, New Zealand and Turkey.
- In a majority of countries, women self-employed work predominantly in the services sector (70% or more), and mostly as own-account workers rather than employers. The patterns for men are different, with a large share of self-employed men working in manufacturing and, generally, two and a half times more likely to employ others than self-employed women.
- A gender gap is observed in all countries also among young self-employed, i.e. individuals less than 30 years old. In 2016, only in Chile and Mexico the self-employment rate of women was slightly higher than that of men.
- The share of employees having a second job as self-employed increased in 2016 compared to 2007 in most countries, to around 2% and 1% respectively for men and women employees.

Relevance

Entrepreneurship is an important source of employment creation and innovation. It is also a vehicle for addressing inequalities, particularly across genders where significant differences remain, despite the scope that self-employment provides to manage work-home balances.

Definitions

The *self-employed* are defined as those who own and work in their own business, including unincorporated businesses and own-account workers, and declare themselves as "self-employed" in population or labour force surveys. Self-employed category consists therefore of the sum of employers and own-account workers.

The number of women (men) employers is given by the number of women (men) who report their status as "self-employed with employees" in population surveys. The number of women (men) own-account workers is given by the number of women (men) who report their status as "self-employed without employees". *The share of women (men) employers (own-account workers)* is given in relation to the total number of women (men) in employment.

The gender gap in self-employment rate for the year t corresponds to the difference between male and female self-employment rates in t. *Contribution of female (male) self-employment rate change* is calculated as the difference between t and t-n female (male) self-employment rates.

The share of self-employed in the population of young employed is calculated by dividing the number of self-employed women (men) between 15 and 29 years old by the number of all employed women (men) between 15 and 29 years old.

The share of self-employed in the population of employed with foreign citizenship is calculated by dividing the number of self-employed women (men) with foreign citizenship by the number of all employed women (men) with foreign citizenship.

The share of women (men) employees having a second job as self-employed is calculated by dividing the number of women (men) employees who declare that they have a second job as self-employed by the total number of women (men) employees.

Information on data for Israel: *http://dx.doi.org/10.1787/888932315602*.

Comparability

The main comparability issue relates to the classification of "self-employed" owners of incorporated businesses. Some countries, notably Japan, New Zealand and Norway include only the self-employed owners of unincorporated businesses, following the 2008 SNA, which is likely to create a downward bias in the contribution of self-employed owners with employees in these countries.

In Figure 6.6, services include sectors 45-96 of ISIC Rev. 4. In Figure 6.7, data refer to self-employed with foreign citizenship for all countries with exception of the United States, where data refer to foreign-born.

Not all the self-employed are necessarily entrepreneurs in the purest sense, as defined in the OECD Entrepreneurship Indicators Programme. Self-employment statistics include, for example, craft-workers engaging in low level activity, often for leisure purposes. Care is thus needed in interpreting the data in analyses of entrepreneurship.

Source

Canada: Labour Force Survey, *www.statcan.gc.ca/imdb-bmdi/3701-eng.htm*.

Chile: Encuesta Nacional del Empleo, *http://www.ine.cl/estadisticas/laborales/ene*.

Eurostat: EU Labour Force Survey, *http://ec.europa.eu/eurostat/web/microdata/european-union-labour-force-survey*.

Israel: Labour Force Survey, *http://www.cbs.gov.il/ts/databank/databank_main_func_e.html?i=21&ti=11&r=0&f=3&o=0*.

Japan: Labour Force Survey, *http://www.e-stat.go.jp/SG1/estat/eStatTopPortalE.do*.

Mexico: Encuesta National de Empleo, *http://www.inegi.org.mx/est/contenidos/proyectos/encuestas/hogares/default.aspx*.

United States: Current Population Survey, *www.census.gov/cps/*.

Brazil: National Household Sample Survey, *http://www.ibge.gov.br/english/estatistica/populacao/trabalhoerendimento/pnad2008/default.shtm#brasil*.

South Africa: Labour Force Survey, *http://www.statssa.gov.za/?page_id=1854&PPN=P0211*.

Further reading

OECD (2017), *Report on the implementation of the OECD Gender Recommendations*, Meeting of the OECD Council at Ministerial Level Paris, 7-8 June 2017, *http://www.oecd.org/mcm/documents/C-MIN-2017-7-EN.pdf*.

Figure 6.1. **Trends in self-employment rate, OECD average, by category and gender**

2007 = 100

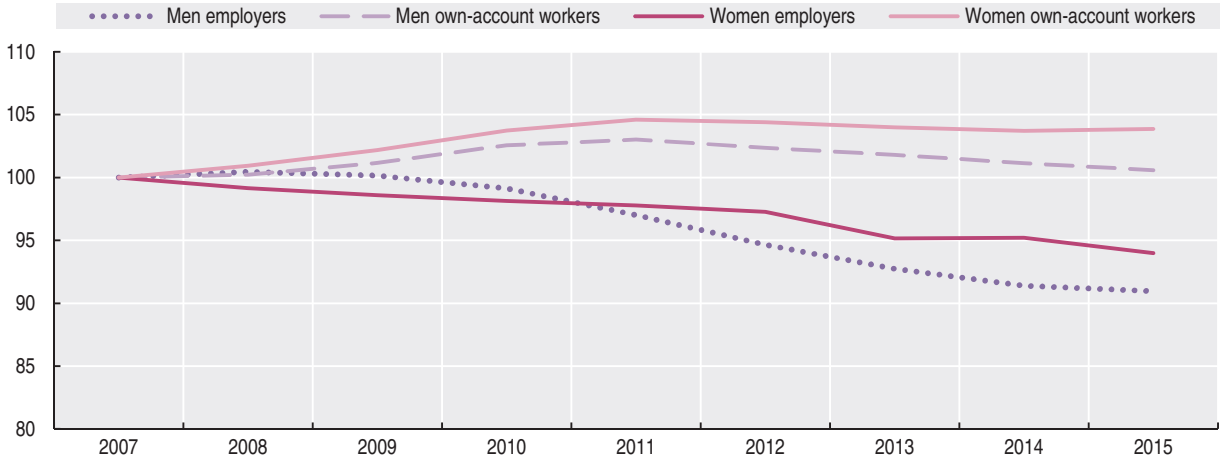


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Table 6.1. **Number of self employed by category and gender**

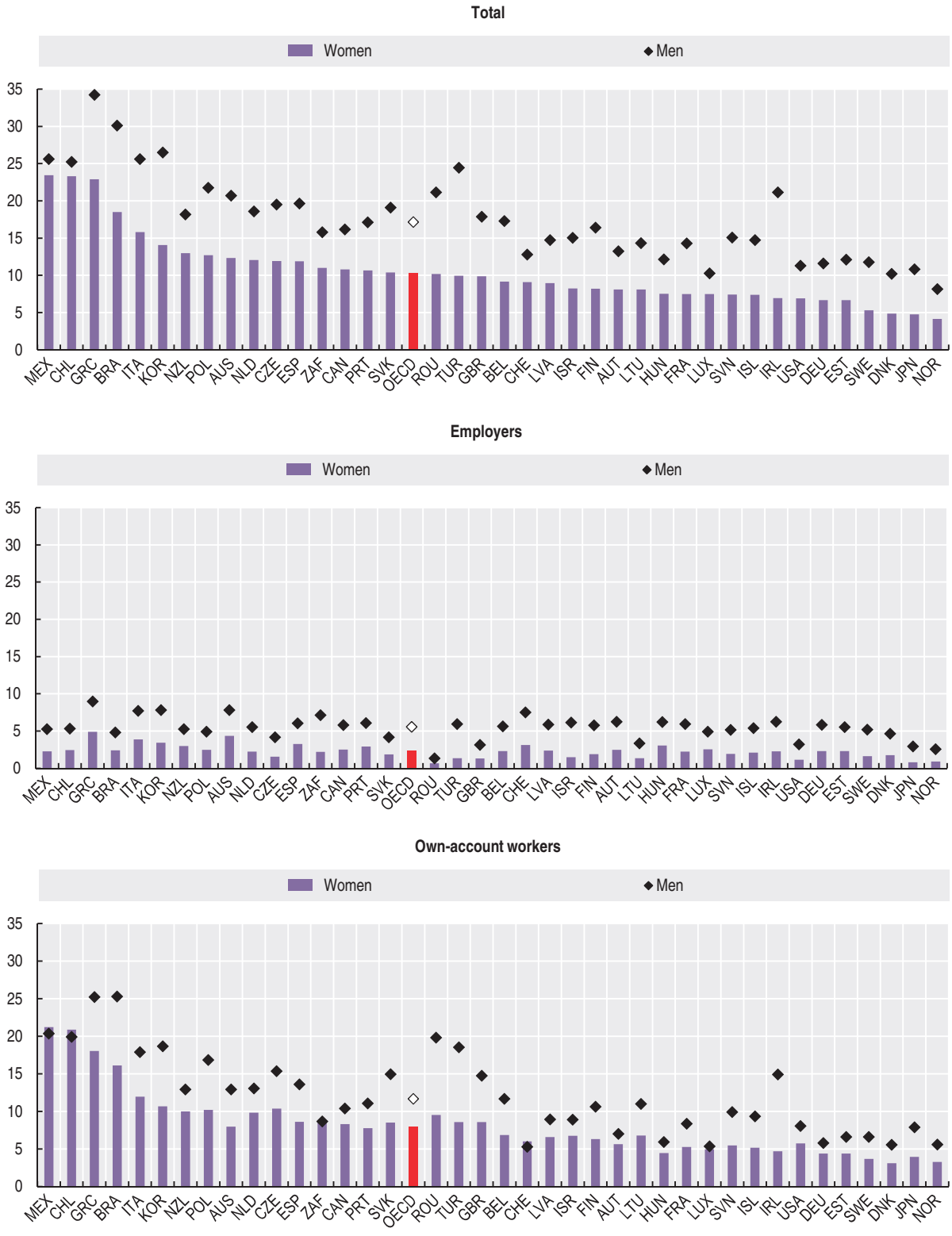
Thousands of persons, 2016 or latest available year

Country	Age	Employers		Own account workers	
		Men	Women	Men	Women
Australia	15+	494	236	818	431
Austria	15-64	137	49	153	110
Belgium	15-64	137	49	284	144
Canada	15-64	559	220	1,001	729
Chile	15+	253	80	946	684
Czech Republic	15-64	117	34	431	229
Denmark	15-64	67	23	80	40
Estonia	15-64	18	7	21	13
Finland	15-64	71	22	130	73
France	15-64	807	285	1,132	666
Germany	15-64	1,246	436	1,237	824
Greece	15-64	188	74	528	274
Hungary	15-64	146	61	138	88
Iceland	15-64	5	2	9	4
Ireland	15-64	66	21	156	43
Israel	15+	119	26	172	116
Italy	15-64	992	362	2,299	1,121
Japan	15-64	107	23	287	110
Korea	15+	1,203	378	2,771	1,211
Latvia	15-64	25	10	38	29
Lithuania	15-64	22	9	71	46
Luxembourg	15-64	7	3	8	6
Mexico	15-64	1,536	408	5,948	3,829
Netherlands	15-64	243	86	572	377
New Zealand	15-64	25	13	66	44
Norway	15-64	34	11	74	40
Poland	15-64	429	179	1,471	731
Portugal	15-64	134	63	244	167
Romania	15-64	63	24	925	333
Slovak Republic	15-64	57	21	204	94
Slovenia	15-64	25	8	48	23
South Africa	15-64	631	152	786	626
Spain	15-64	600	270	1,348	712
Sweden	15-64	127	37	162	84
Switzerland	15-64	179	66	126	126
Turkey	15-64	1,087	109	3,403	697
United Kingdom	15-64	505	188	2,376	1,227
United States	16-64	2,408	766	6,026	3,798

StatLink http://dx.doi.org/10.1787/888933565051

Figure 6.2. **Share of self-employed by category and gender**

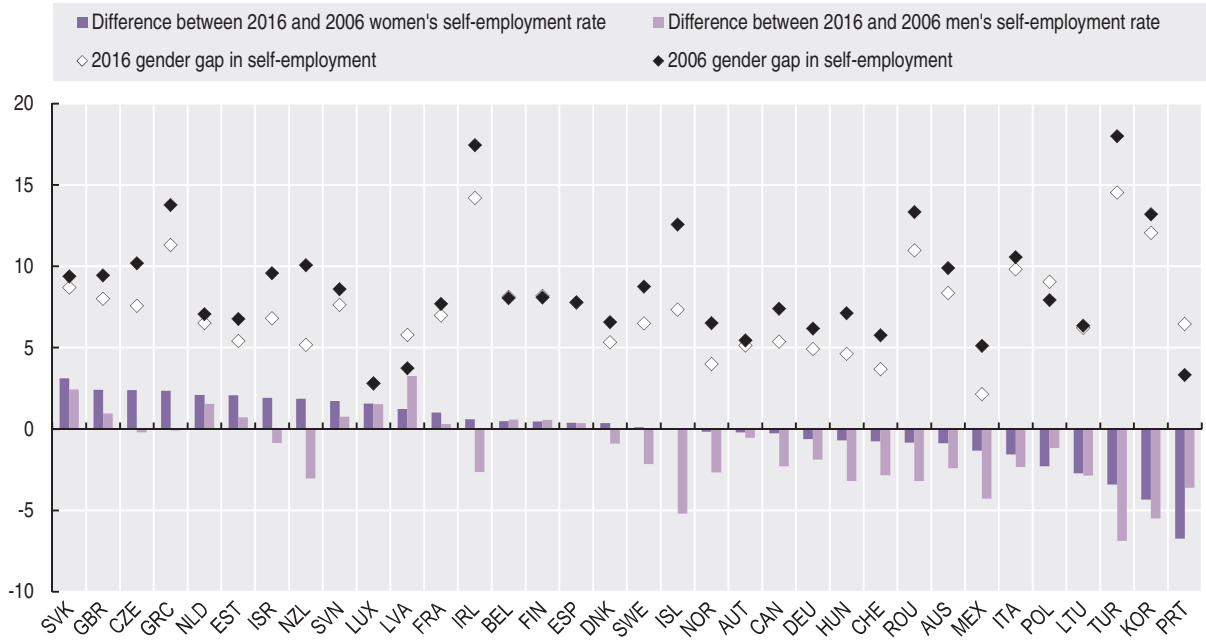
Percentage of total employment, 2016 or latest available year



StatLink http://dx.doi.org/10.1787/888933564500

Figure 6.3. **Gender gap in self-employment rates**

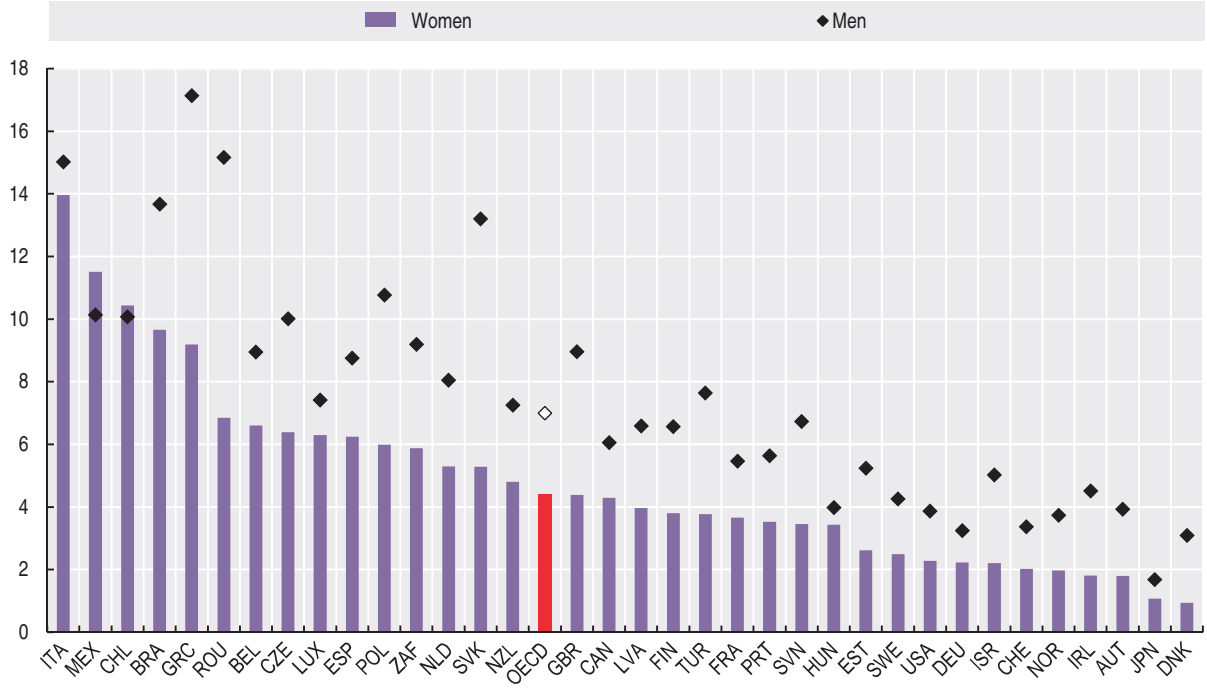
Percentage point difference



StatLink http://dx.doi.org/10.1787/888933564519

Figure 6.4. **Share of self-employed in the population of young employed, by gender**

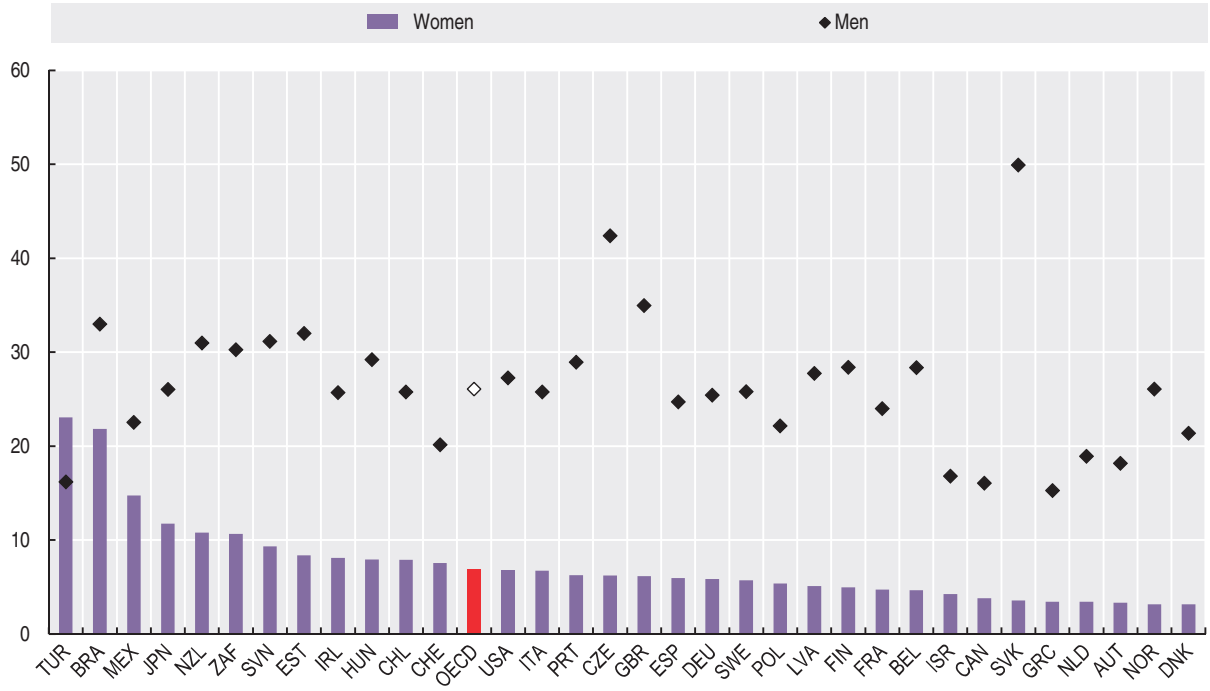
Percentage of total employment less than 30 years old, average 2015- 2016 or latest available year



StatLink http://dx.doi.org/10.1787/888933564538

Figure 6.5. **Self-employed whose activity is in manufacturing and construction**

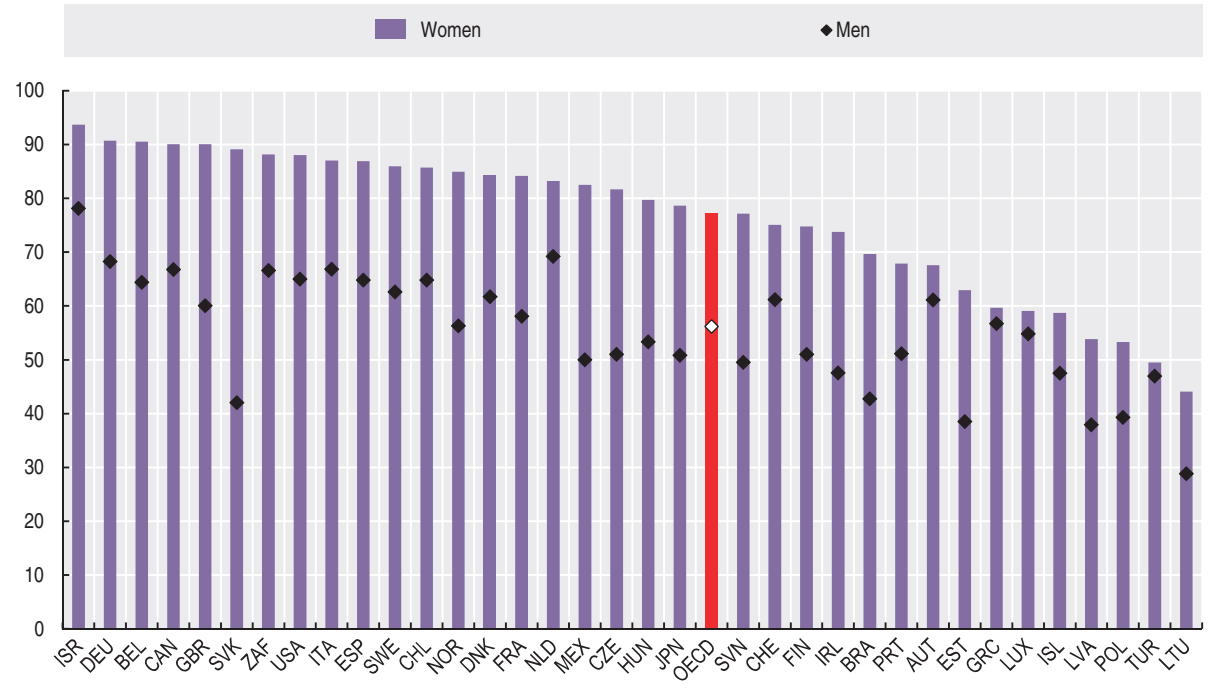
Percentage of total self-employed by gender, 2016 or latest available year



StatLink http://dx.doi.org/10.1787/888933564557

Figure 6.6. **Self-employed whose activity is in services**

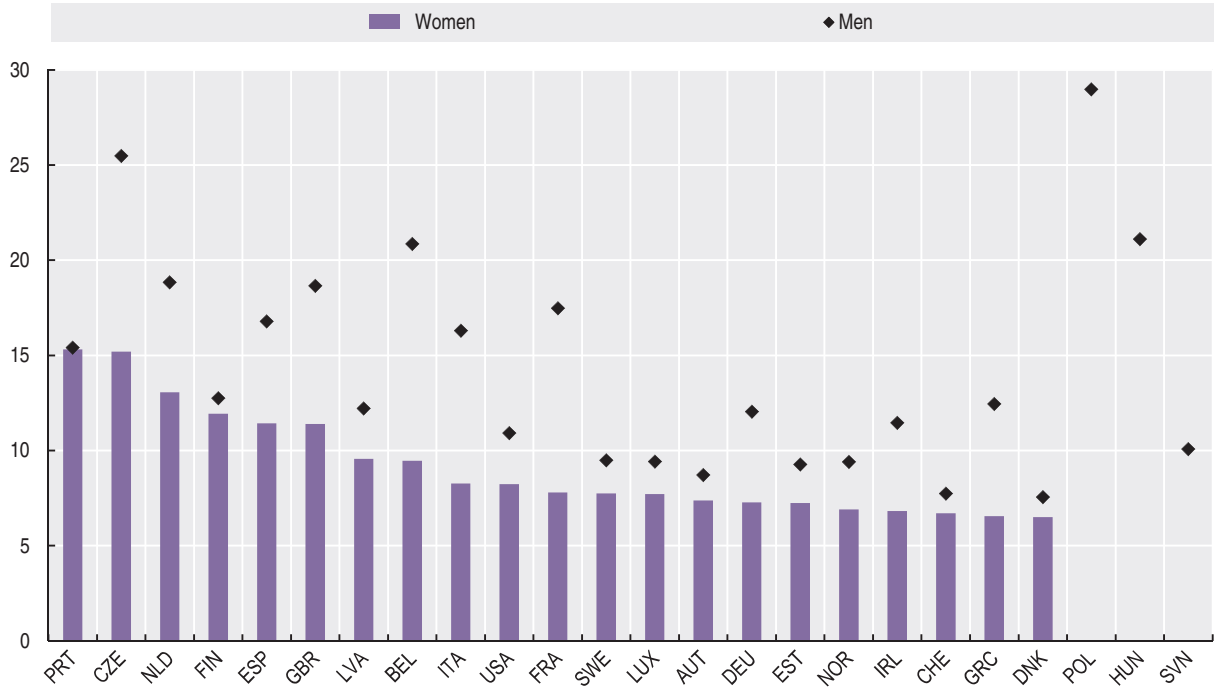
Percentage of total self-employed by gender, 2016 or latest available year



StatLink http://dx.doi.org/10.1787/888933564576

Figure 6.7. **Share of self-employed in the population of employed with foreign citizenship**

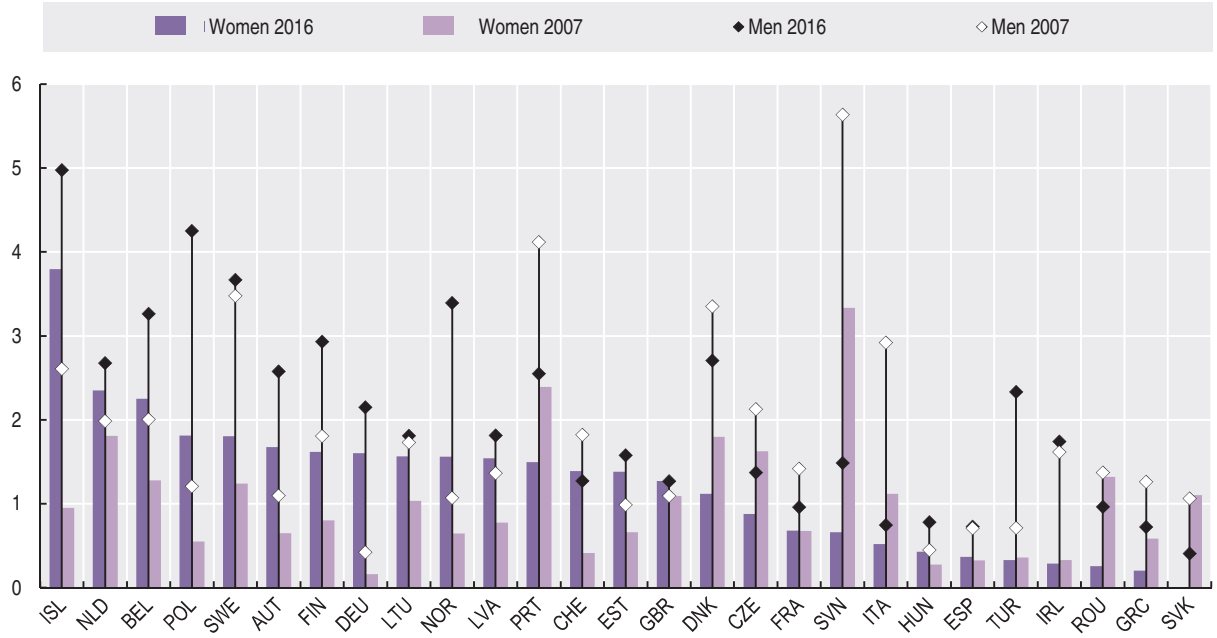
Percentage of total employment with foreign citizenship, 2016 or latest available year



StatLink http://dx.doi.org/10.1787/888933564595

Figure 6.8. **Share of employees having a second job as self-employed, by gender**

Percentage of all employees by gender



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Earnings from self-employment

Key findings

- In 2014, self-employed women earned 10% less than men in Luxembourg and Lithuania, but almost 60% less than men in Poland, the United States and Romania. Over the period 2007 to 2014 the gender gap in self-employed earnings decreased in most countries, except in Poland, Italy, Slovak Republic, Slovenia and Romania
- Among the factors that can explain the gender gap in self-employment earnings are the average hours worked per week by the self-employed: these are generally higher for men than women across countries. Overall, the self-employed tend to work longer hours on average than employees; however, in a few countries such as Latvia, Turkey or the United Kingdom, self-employed women work less hours per week on average than male and d = female employees.

Relevance

The fear of low or erratic earnings is one of the main reasons why many people do not become entrepreneurs. While entrepreneurship is a pathway to wealth for highly successful individuals, many self-employed struggle with relatively low incomes and eventually work longer hours than waged employees. Low incomes mean lower opportunities to accumulate savings, and thus a higher likelihood of falling into poverty if the business fails.

Definitions

The *gender gap in self-employment earnings* is defined as the difference between male and female average self-employment incomes divided by the male average self-employment income. Income here includes any losses that may have been incurred. The *changes in gender gap in self-employment earnings* are defined as the percentage-point difference between two years of the gender gap in self-employment earnings.

The average hours of work corresponds to the number of hours an employed person normally works per week. This includes all hours worked, including overtime, regardless of whether they were paid. It excludes travel time between home and workplace, and main meal breaks (normally taken at midday).

Comparability

There are methodological hurdles that complicate comparing earnings statistics across countries and periods. The self-employed often have accounting practices which make it difficult for them to provide accurate responses to survey questions on earnings. Moreover, their financial and accounting framework does not relate well to that used in constructing the national accounts or household income analysis. It is also important to take account of the gender gap in hours worked by the self-employed.

Women generally spend more time than men on unpaid care work; this needs to be taken into account when considering the average hours worked by self-employed.

Source/online databases

Canada: Survey of Labour and Income Dynamics & Canadian Income Survey.

Europe: Labour Force Surveys and European Union Statistics on Income and Living Conditions (EU-SILC) and EU Labour Force Survey.

Mexico: Encuesta Nacional de Ocupación y Empleo.

New Zealand: Income Survey and Labour Force Survey.

United States: Current Population Survey (CPS), American Community Survey (ACS), Survey of Income and Program Participation (SIPP).

For further reading

Hamilton, B. H. (2000). "Does Entrepreneurship Pay? An Empirical Analysis of the Returns to Self-Employment", *Journal of Political Economy*, University of Chicago Press, vol. 108(3), pages 604-631, June.

OECD (2017), *Report on the implementation of the OECD Gender Recommendations*, Meeting of the OECD Council at Ministerial Level Paris, 7-8 June 2017, *http://www.oecd.org/mcm/documents/C-MIN-2017-7-EN.pdf*.

OECD (2014), *Enhancing Women's Economic Empowerment through Entrepreneurship and Business Leadership in OECD Countries*, Background Report, *http://www.oecd.org/gender/Enhancing%20Women%20Economic%20Empowerment_Fin_1_Oct_2014.pdf*.

OECD/European Union (2015), *The Missing Entrepreneurs 2015: Policies for Self-employment and Entrepreneurship*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264226418-en.

OECD (2012), *Closing the Gender Gap: Act Now*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264179370-en*.

Figure 6.9. **Gender gap in self-employment earnings**

Difference between male and female earnings as percentage of male earnings

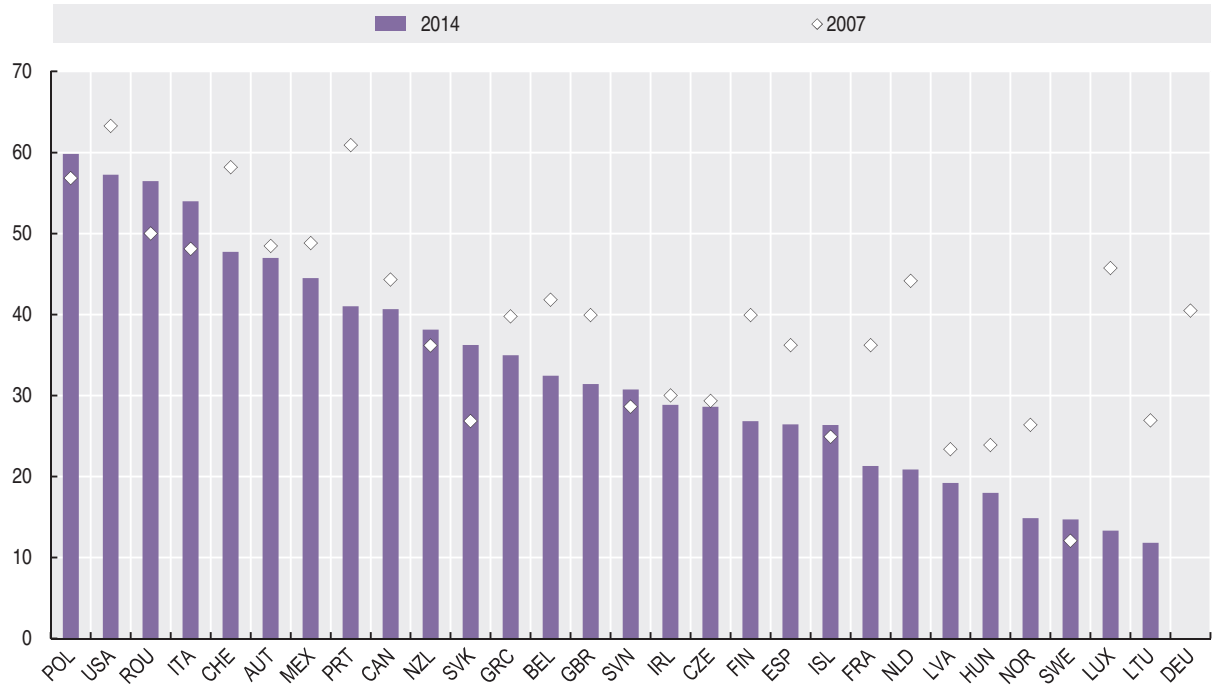

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Figure 6.10. **Average hours of work by professional status and gender**

Average number of hours per week in main job, 2016 or latest available year

StatLink http://dx.doi.org/10.1787/888933564652

Entrepreneurial attitude

Key findings

- Empirical research generally shows a gender gap in the perception of barriers to business creation. However, women feel equally confident as men about their business and its future, including the prospects of job creation, once it is up and running.
- Online training and media are considered by men and women alike as relevant sources of knowledge to improve their ability to run a business. In contrast, female-run businesses are more inclined to learn from family or friends than their male counterparts, while male entrepreneurs value learning from other businesses.
- Businesses run by men are more likely to be involved in international trade, whether as exporters or importers, than female-run enterprises. In addition, among male-run businesses significant shares (on average 33% in OECD countries) export to businesses only, while high shares of female-run businesses in all countries export only to individual consumers (on average 50% in OECD countries), reflecting, in part, gender differences in the prevalent sectors of activity of female and male entrepreneurs.

Relevance

The attitude of individuals toward the entrepreneurial risk as well as their confidence as business owners reflect a combination of personal characteristics (including the skills acquired through education and professional life) and factors inherent to societal values and the underlying business environment. Indicators measuring gender gap in entrepreneurial attitudes can provide important insights for policies promoting gender equality in entrepreneurship.

Definitions

Male (female) owned/managed enterprises are identified as enterprises having at least 65% of male (female) owners or top managers.

Positive current business status and *Positive business outlook* respectively report the reply "Positive" to the questions: "How would you evaluate the current state of your business?" and "What is your outlook for the next 6 months on your business?" respectively, where possible answers include "Positive", "Neutral" or "Negative".

Prospects of job creation are measured by the employment outlook of enterprises, as provided by the reply to the question "How do you expect the number of employees in your business to change in the next six months?", where possible answers include "Increase", "No change" or "Decrease".

Sources of learning show the share of respondents that pointed to each category when answering the multiple-choice question "How do you learn new things that will help you to run your business?", where categories include: "other businesses", "friends and family", "online search", "online blogs and forum" "online training", "offline training", "media".

Involvement in international trade measures positive answers to the question "Is your company engaged in international trade?", where trading companies include those that export only, import only or are both exporters and importers.

Export scope shows the share of respondents that pointed to each category of export destinations, where possible answers include "Only businesses", "Only individuals" and "Both".

Information on data for Israel: *http://dx.doi.org/10.1787/888932315602*.

Comparability

Data are drawn from the *Future of Business Survey*, a monthly survey conducted by Facebook and designed in cooperation with the OECD Statistics Directorate and the World Bank. The survey is administrated via an online questionnaire enquiring about perceptions on the current state and future outlook of the business, and more broadly of the economy and relevant industry, and on the past and expected development of employment in the business. The survey currently covers 42 countries in developed and emerging economies, where the reference population are enterprises having a Facebook account. The country samples are not stratified, and figures in this section present unweighted data with respect to enterprise size, age and economic activity of enterprises.

Some care is needed when comparing results of the survey for developed and developing economies. The survey by design only covers those firms with a Facebook presence. In advanced economies, this cohort of firms is likely to be more representative than the total business population in developing economies.

Source

Facebook *Future of Business Survey*, *www.futureofbusinesssurvey.org*

Further reading

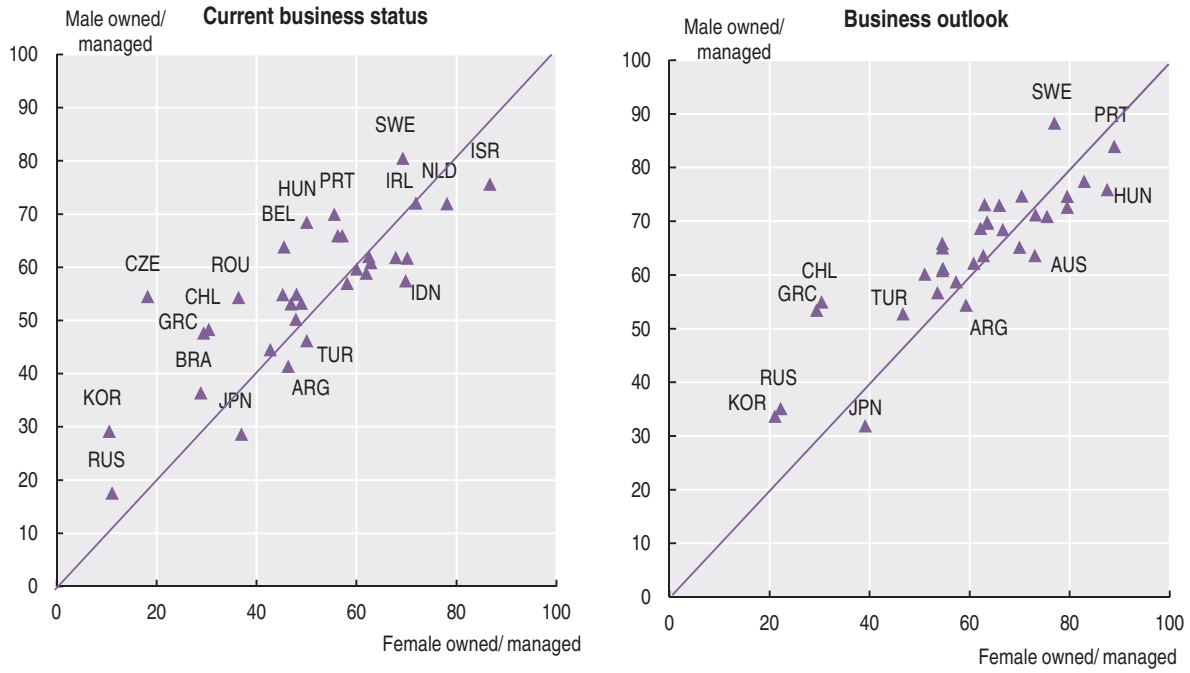
Facebook, OECD, World Bank (2017), *Future of Business Survey - Gender Management in Business, January 2017*, *www.futureofbusinesssurvey.org*

Facebook, OECD, World Bank (2016), *Future of Business Survey - September 2016*, *www.futureofbusinesssurvey.org*

OECD (2003), Business *Tendency Surveys. A Handbook*, OECD Paris Publishing, *https://www.oecd.org/std/leading-indicators/31837055.pdf*.

Figure 6.11. **Positive current business status and outlook, by gender of ownership or top management**

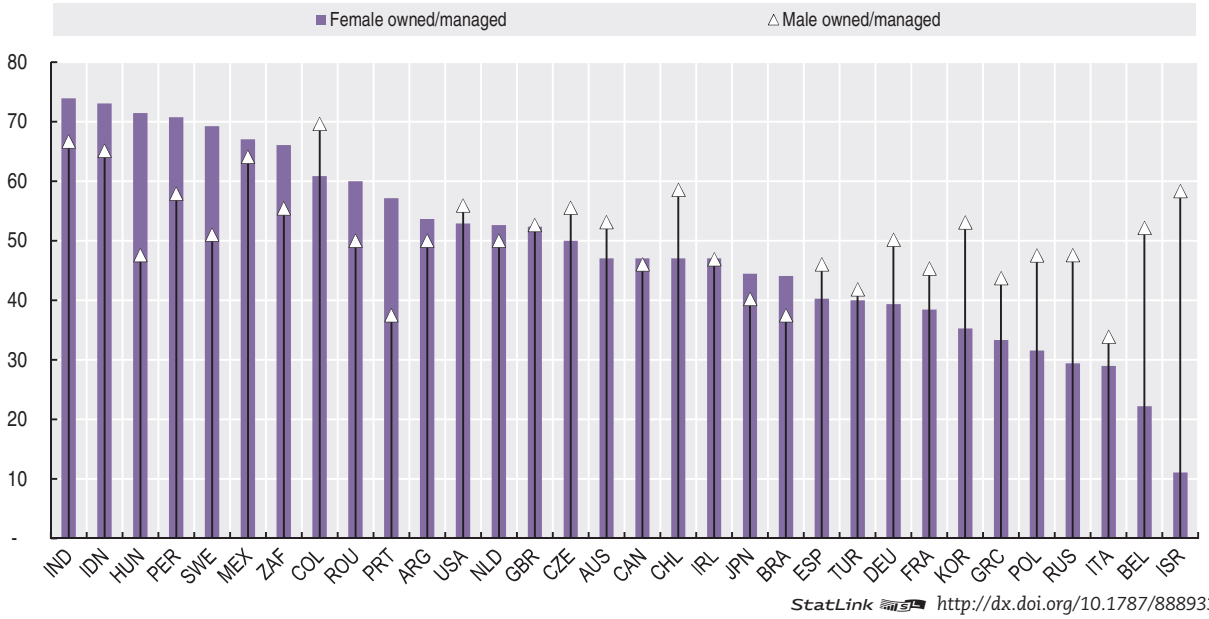
Percentage of survey respondents, average 2016 –2017



StatLink http://dx.doi.org/10.1787/888933564671

Figure 6.12. **Positive prospects of job creation, by gender of ownership or top management**

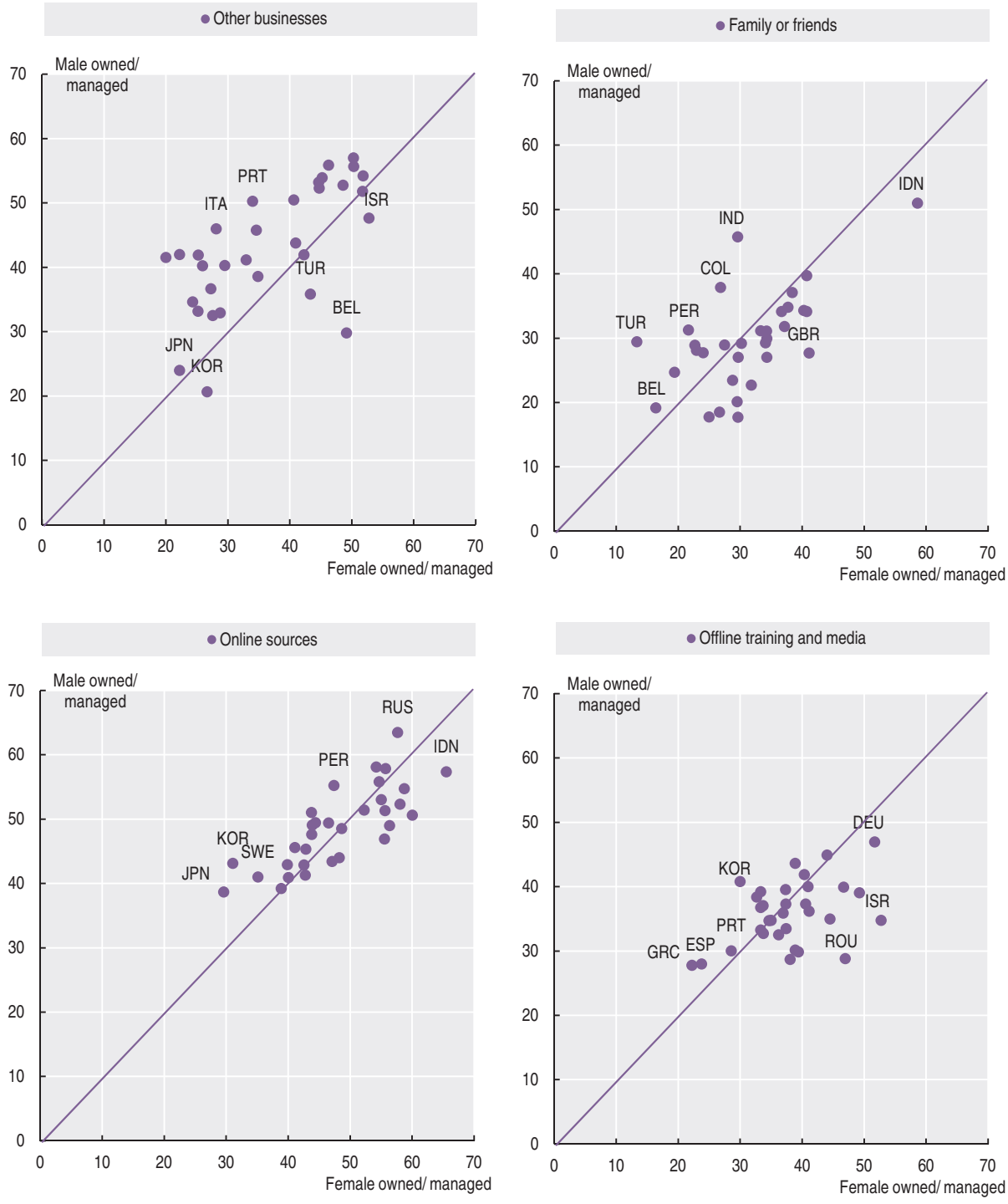
Percentage of survey respondents, average 2016-2017



StatLink http://dx.doi.org/10.1787/888933564690

Figure 6.13. **Learning sources, by gender of ownership or top management**

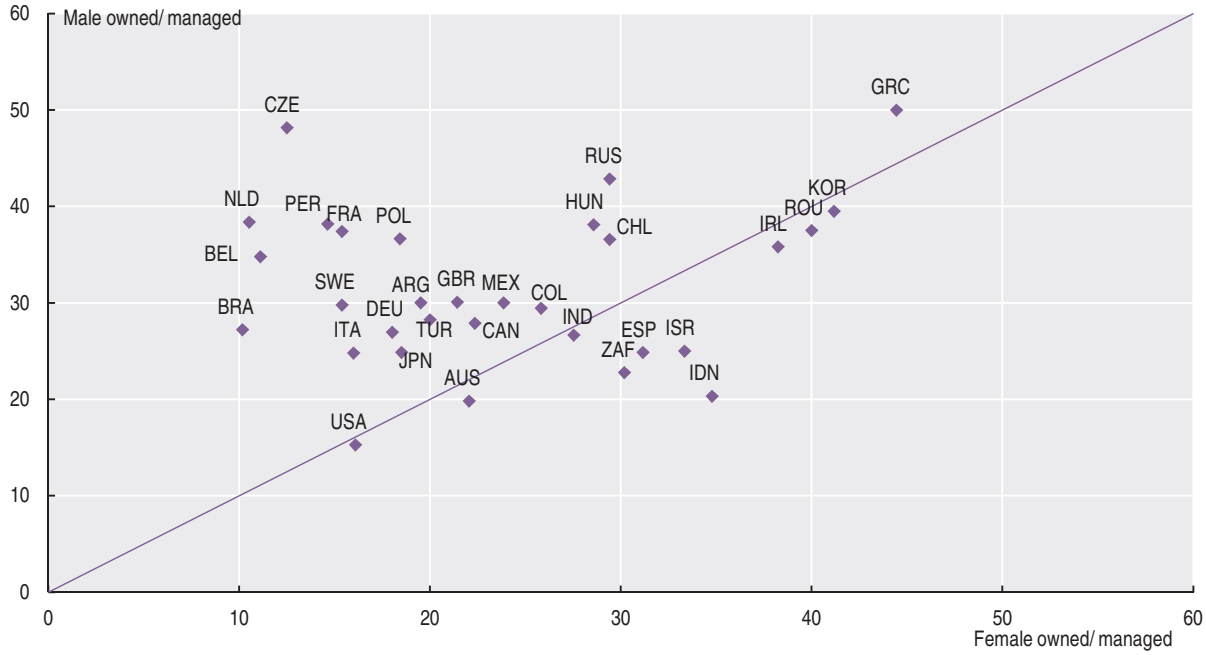
Percentage of survey respondents, average 2016-2017



StatLink http://dx.doi.org/10.1787/888933564709

Figure 6.14. **Involvement in international trade, by gender of ownership or top management**

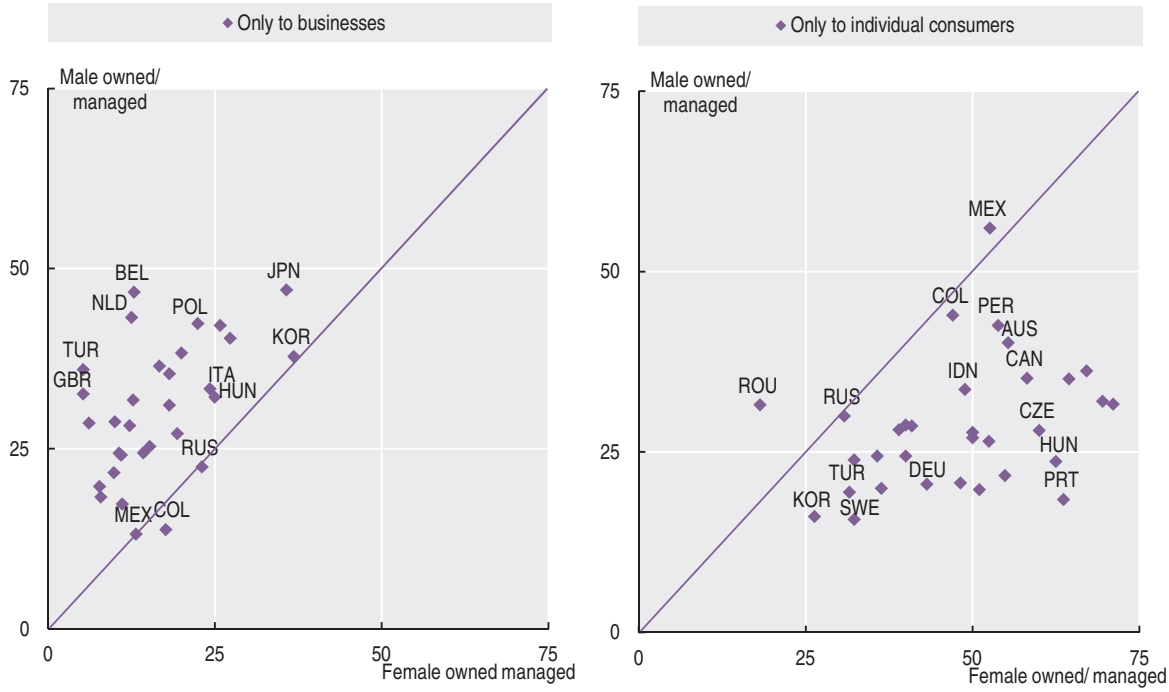
Percentage of survey respondents, average 2016-2017



StatLink http://dx.doi.org/10.1787/888933564728

Figure 6.15. **Export scope, by gender of ownership or top management**

Percentage of all exporting firms, average 2016-2017



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7. VENTURE CAPITAL

Venture capital investments

Venture capital investments by investee company

Venture capital investments by sector

Venture capital investments

Key findings

- In 2016, venture capital investments in the United States amounted to USD 66.6 billion and accounted for 86% of total venture capital investments in the OECD. Venture capital investments in Europe amounted to USD 4.7 billion.
- In the majority of OECD countries, venture capital constitutes a very small percentage of GDP, often less than 0.05%. The two major exceptions are Israel and the United States, where the venture capital industry is more mature, representing more than 0.35% of GDP.
- From 2010 to 2016 venture capital investments evolved differently across countries: in Ireland, Korea, Poland and the United States, venture capital investments more than doubled. By contrast, in Australia, Norway, Portugal and the Russian Federation, the level of venture capital investments was 50% lower in 2016 than in 2010.

Relevance

Venture capital is a form of equity financing particularly relevant for young companies with innovation and growth potential but untested business models and no track record; it replaces or complements traditional bank finance. The development of the venture capital industry is considered an important framework condition to stimulate innovative entrepreneurship.

Definitions

Venture capital is a subset of private equity (i.e. equity capital provided to enterprises not quoted on a stock market) and refers to equity investments made to support the pre-launch, launch and early stage development phases of a business (*Source*: Invest Europe).

Information on data for Israel: *http://dx.doi.org/10.1787/888932315602*.

Comparability

There are no standard international definitions of either venture capital or venture capital investments by development stage. In addition, the methodology for data collection differs across countries.

Data on venture capital are drawn from national or regional venture capital associations that produce them, in some cases with the support of market research organisations, except for Australia, where the Australian Bureau of Statistics collects and publishes statistics on venture capital.

The statistics presented correspond to the aggregation of investment data according to the location of the portfolio companies, regardless of the location of the private equity firms. Exceptions are Australia, Japan, and Korea where data refer to the location of the investing venture capital firms.

Data for Israel refer only to venture capital-backed high-tech companies. Data for the United States include also venture capital investments done by other investors alongside venture capital firms, but exclude investment deals that are 100% financed by corporations, and/or business angels. Data for Australia, Japan and New Zealand refer to the fiscal year. Data for Europe includes only venture capital investments (seed, start-up and later stage) by formal fund managers including private equity funds making direct private equity investments, mezzanine private equity funds, co-investment funds or rescue/turnaround funds; investments by business angels, incubators, infrastructure funds, real estate funds, distress debt funds, primary funds-of-funds or secondary funds-of-funds are excluded; the investment amount only captures the equity amount that is invested by formal fund managers and not the value of the entire financing round. Growth capital or buyout investments in current or formerly venture capital-backed companies are also not included.

In the *OECD Entrepreneurship Financing Database* venture capital is made up of the sum of *early stage* (including pre-seed, seed, start-up and other early stage) and *later stage* venture capital. As there are no harmonised definitions of venture capital stages across venture capital associations and other data providers, original data have been re-aggregated to fit the OECD classification of venture capital by stages. Korea, New Zealand, the Russian Federation and South Africa do not provide breakdowns of venture capital by stage that would allow meaningful international comparisons.

Annex C presents the list of data sources by country; Table C.2 shows the correspondences between original data and OECD harmonised data for venture capital investments by stage.

Source

OECD Entrepreneurship Financing Database.

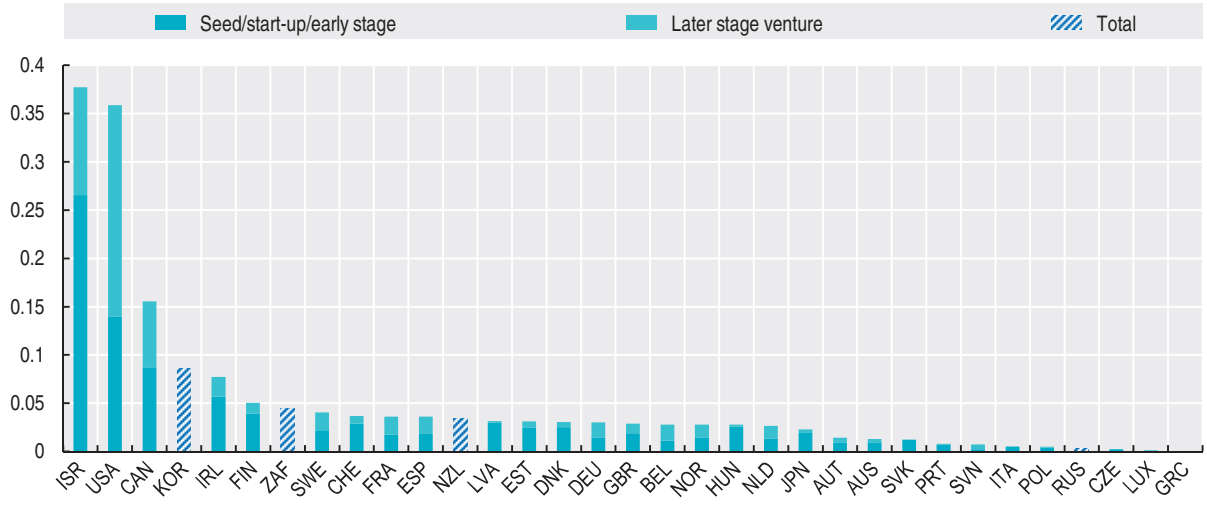
Further reading

OECD (2017), *Financing SMEs and Entrepreneurs 2017: An OECD Scoreboard*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/fin_sme_ent-2017-en*.

OECD (2015), *New Approaches to SME and Entrepreneurship Financing: Broadening the Range of Instruments*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264240957-en*.

Figure 7.1. **Venture capital investments as a percentage of GDP**

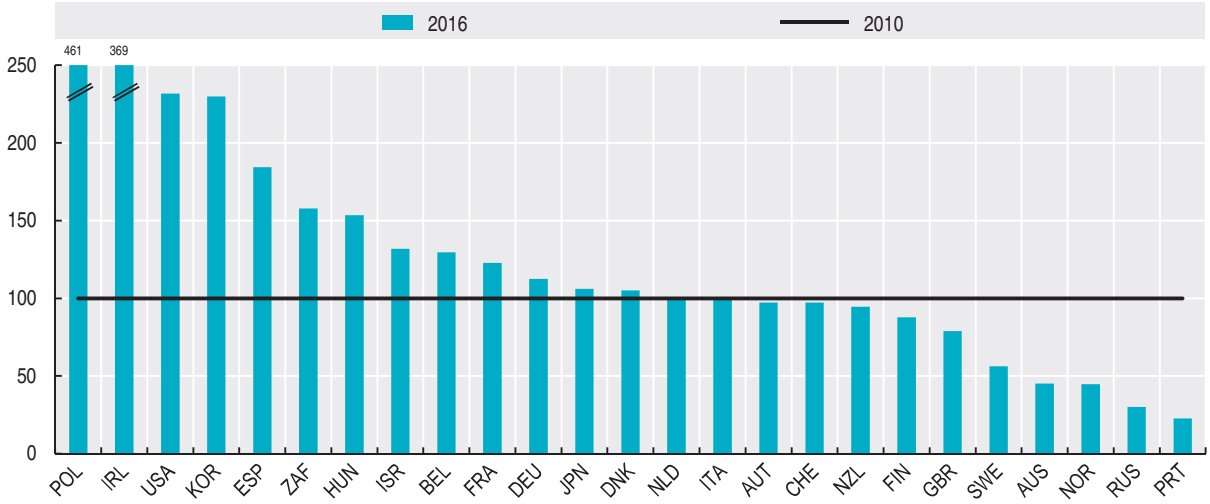
Percentage, 2016, or latest available year



StatLink http://dx.doi.org/10.1787/888933564766

Figure 7.2. **Trends in venture capital investments**

Index 2010 = 100



StatLink http://dx.doi.org/10.1787/888933564785

Table 7.1. **Venture capital investments**

Million US dollars, 2016, or latest available year

Greece	0.00	New Zealand	64.25	Spain	446.52
Luxembourg	0.79	Denmark	93.87	United Kingdom	761.36
Slovenia	3.28	Italy	96.84	France	894.22
Czech Republic	4.65	Norway	103.00	Germany	1051.38
Estonia	7.20	Finland	119.65	Israel (2014)	1165.00
Latvia	8.73	South Africa	129.61	Korea	1212.22
Slovak Republic	11.03	Belgium	130.73	Japan	1367.77
Portugal	16.71	Australia	165.77	Canada	2377.40
Poland	23.71	Netherlands	204.10	Total Europe	4744.81
Hungary	34.57	Sweden	206.61	United States	66626.56
Russian Federation	46.00	Ireland	226.94		
Austria	55.87	Switzerland	243.04		

StatLink http://dx.doi.org/10.1787/888933565070

Venture capital investments by investee company

Key findings

- Only a small number of companies are backed by venture capital, and typically represent tiny percentages of total enterprise births in a given year. In most OECD countries, venture capital-backed companies represented less than 1% of enterprise births in 2016.
- In 2016, the average investment per company exceeded USD 5 million in Canada, Ireland, Israel and the United States, while in the four major Euro area economies, France, Germany, Italy and Spain, it ranged between one and two USD million.
- Between 2007 and 2016 the share of venture capital investments in companies employing less than 20 employees increased from 30% to 40 % in Europe.

Relevance

Venture capital is a form of equity financing particularly important for young companies with innovation and growth potential but untested business models and no track record; it replaces or complements traditional bank finance. The development of the venture capital industry is considered an important framework condition to stimulate innovative entrepreneurship.

Definitions

Venture capital-backed companies (portfolio companies or investee companies) are new or young enterprises that are (partially or totally) financed by venture capital.

Venture capital-backed companies by development stage refers to the percentage share of venture-capital backed companies according to their development stage as harmonised by OECD (Pre-seed/Seed; Start-up/Other early stage; Later stage venture. See Table C.2, Annex C).

The *average venture capital investment* per company is the ratio between the total venture capital investments in a country and the number of venture capital-backed companies in the country.

The *venture capital-backed companies rate* is computed as the number of enterprises that received venture capital over 1000 employer enterprise births.

The *trend-cycle* reflects the combined long-term (trend) and medium-to-long-term (cycle) movements in the original series (see *http://stats.oecd.org/glossary/detail.asp?ID=6693*).

Information on data for Israel: *http://dx.doi.org/10.1787/888932315602*.

Comparability

There are no standard international definitions of either venture capital or venture capital investments by development stage. In addition the methodology for data collection differs across countries.

Data on venture capital are drawn mainly from national or regional venture capital associations that produce them, in some cases with the support of research market companies, except for Australia, where the Australian Bureau of Statistics collects and publishes statistics on venture capital.

The statistics presented correspond to the aggregation of investment data according to the location of the portfolio companies, regardless of the location of the private equity firms. Exceptions are Australia, Japan, and Korea where data refer to the location of the investing venture capital firms.

Data for Israel refer only to venture capital-backed high-tech companies. Data for the United States include also venture capital investments done by other investors alongside venture capital firms, but exclude investment deals that are 100% financed by corporations, and/or business angels; also, data refer to the number of deals instead of the number of investee companies. Data for Australia, Japan and New Zealand refer to the fiscal year. Data for Europe includes only venture capital investments (seed, start-up and later stage) by formal fund managers including private equity funds making direct private equity investments, mezzanine private equity funds, co-investment funds or rescue/turnaround funds; investments by business angels, incubators, infrastructure funds, real estate funds, distress debt funds, primary funds-of-funds or secondary funds-of-funds are excluded; the investment amount only captures the equity amount that is invested by formal fund managers and not the value of the entire financing round. Growth capital or buyout investments in current or formerly venture capital-backed companies are also not included.

In the *OECD Entrepreneurship Financing Database* venture capital is made up of the sum of *early stage* (including pre-seed, seed, start-up and other early stage) and *later stage* venture capital. As there are no harmonised definitions of venture capital stages across venture capital associations and other data providers, original data have been re-aggregated to fit the OECD classification of venture capital by stages. Korea, New Zealand, the Russian Federation and South Africa do not provide breakdowns of venture capital by stage that would allow meaningful international comparisons.

Annex C presents the list of data sources by country; Table C.2 shows the correspondences between original data and OECD harmonised data for venture capital investments by stage.

Source

OECD Entrepreneurship Financing Database.

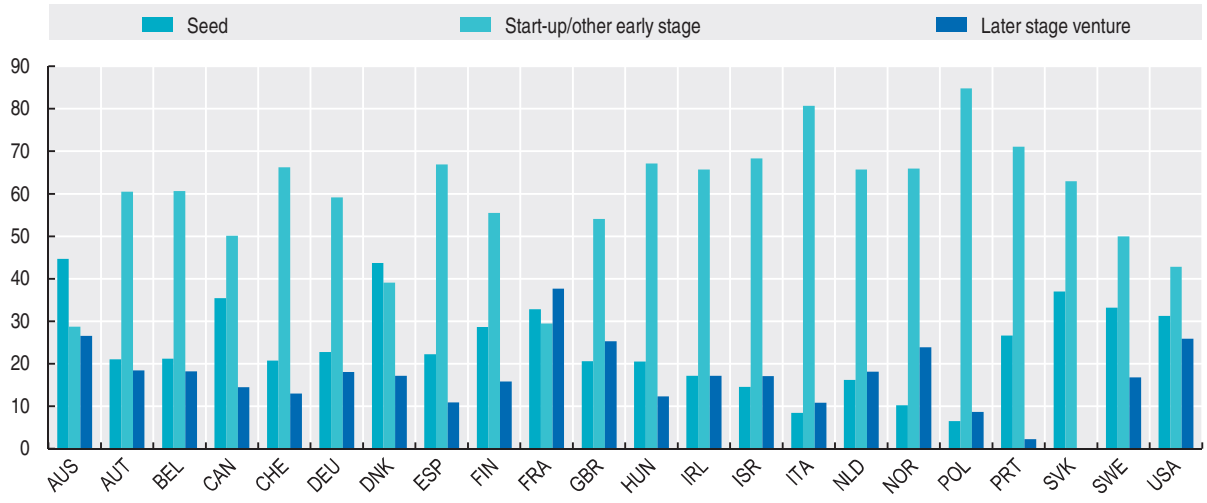
Further reading

OECD (2017), *Financing SMEs and Entrepreneurs 2017: An OECD Scoreboard*, OECD Publishing, Paris. *http://dx.doi.org/10.1787/fin_sme_ent-2017-en*.

OECD (2015), *New Approaches to SME and Entrepreneurship Financing: Broadening the Range of Instruments*, OECD Publishing, Paris. *http://dx.doi.org/10.1787/9789264240957-en*.

Figure 7.3. **Venture capital-backed companies by development stage**

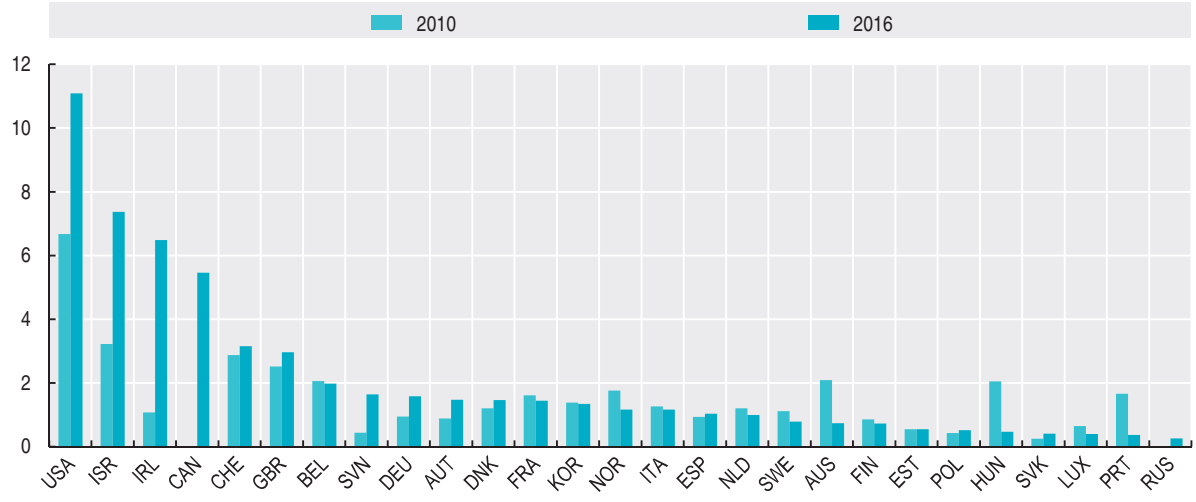
Percentage, 2016, or latest available year



StatLink http://dx.doi.org/10.1787/888933564804

Figure 7.4. **Average venture capital investments per company**

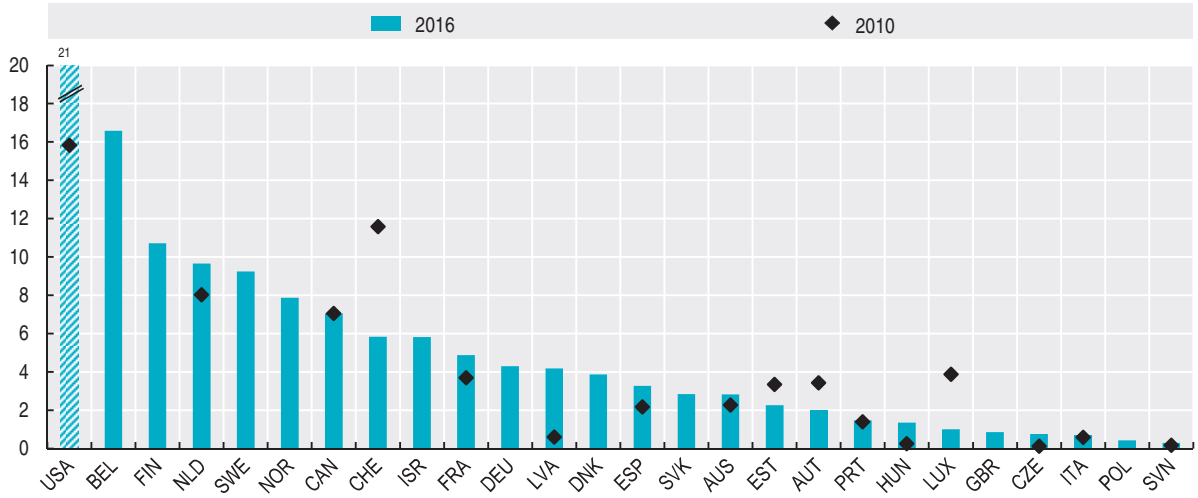
Million US dollars



StatLink http://dx.doi.org/10.1787/888933564823

Figure 7.5. **Venture capital-backed companies rate**

Per 1000 employer enterprise births



StatLink http://dx.doi.org/10.1787/888933564842

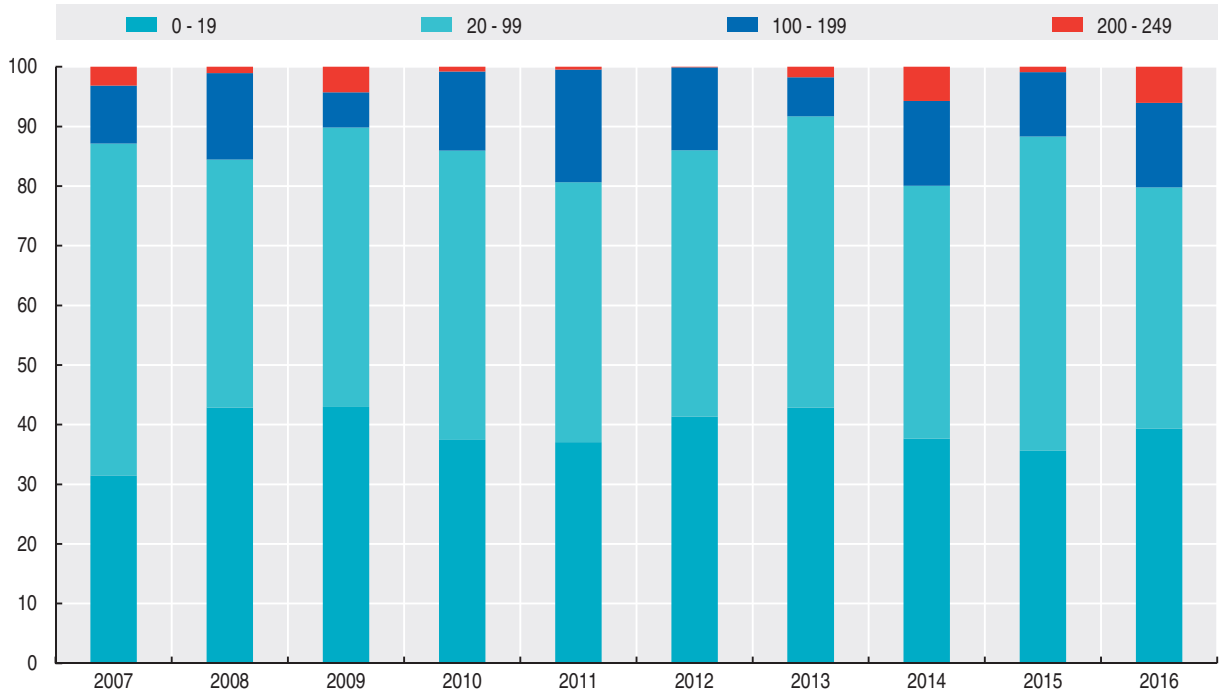
Table 7.2. **Number of venture capital-backed companies**

Country	2010	2016	Country	2010	2016
Greece	2	0	Italy	77	83
Luxembourg	7	2	Norway	131	88
Slovenia	1	2	Israel (2014)	274	158
Czech Republic	3	9	Finland	159	164
Estonia	15	13	Netherlands	169	204
Latvia	4	23	Australia	176	226
Slovak Republic	11	27	United Kingdom	383	257
Ireland	57	35	Sweden	329	262
Austria	65	38	Spain	258	432
Portugal	44	45	Canada	344	435
Poland	12	46	France	452	621
Denmark	74	64	Germany	991	663
Belgium	49	66	Korea	382	902
Hungary	11	73	United States	4311	6009
Switzerland	87	77			

StatLink http://dx.doi.org/10.1787/888933565089

Figure 7.6. **Trends of venture capital investments, by size of venture-backed company, Europe**

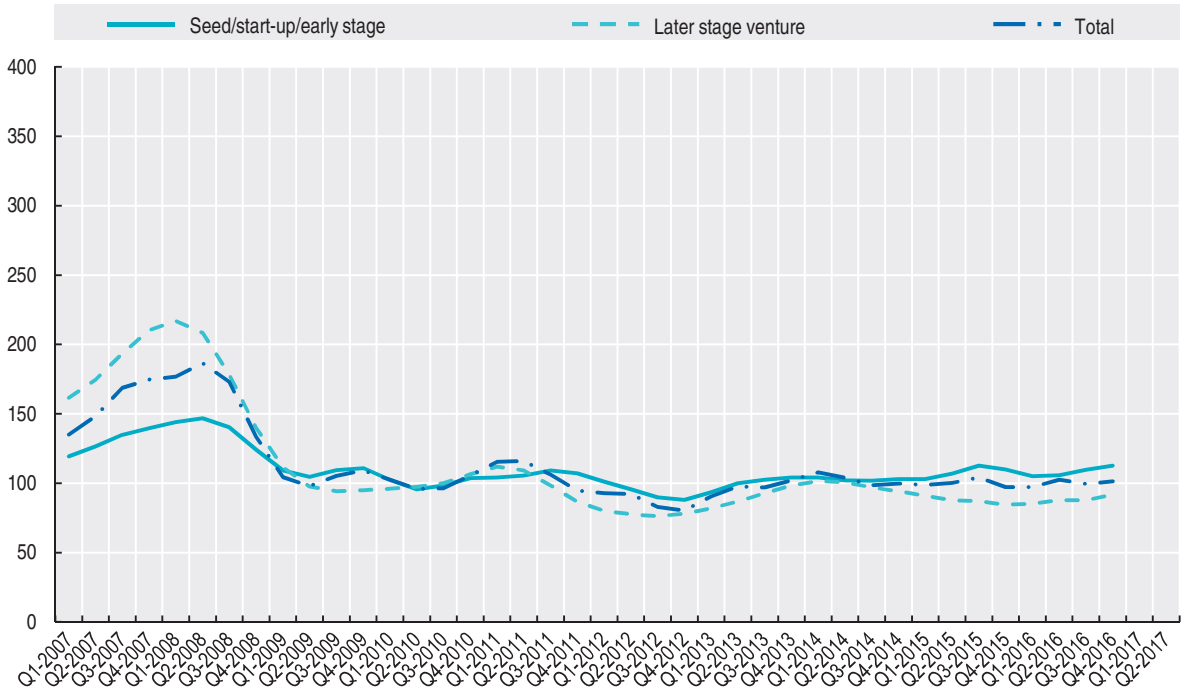
Percentage of all SME venture-capital investments



StatLink http://dx.doi.org/10.1787/888933564861

Figure 7.7. **Venture capital investments, Europe**

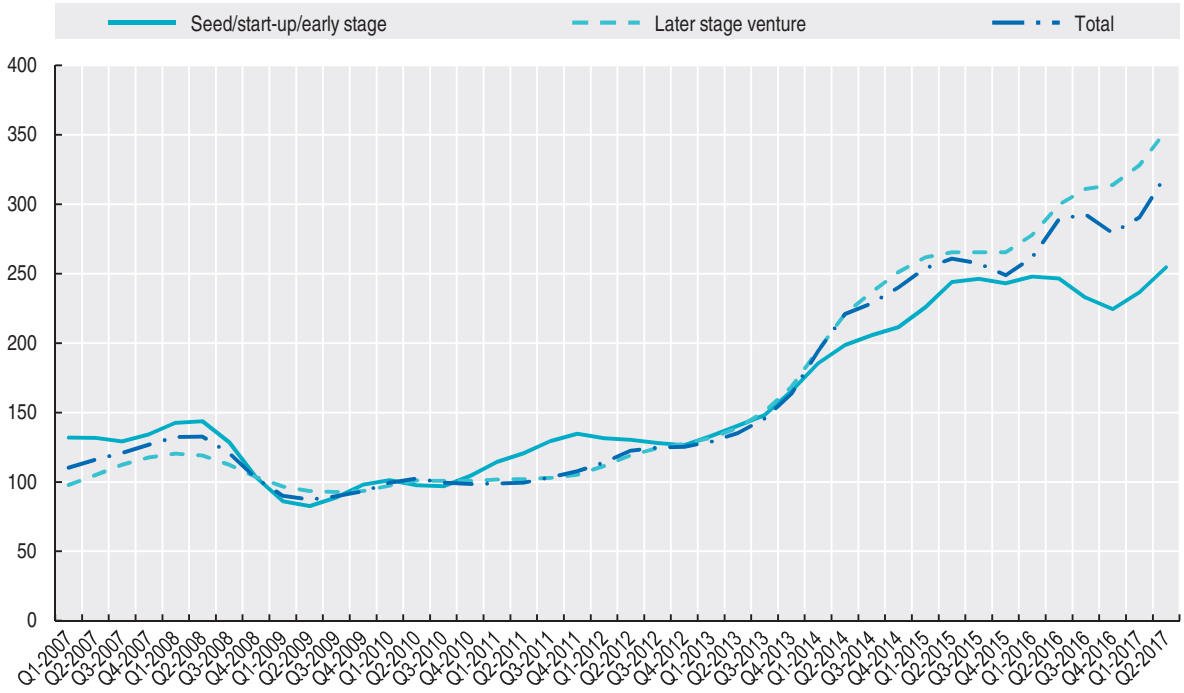
Trend-cycle, 2010 = 100



StatLink http://dx.doi.org/10.1787/888933564880

Figure 7.8. **Venture capital investments, United States**

Trend-cycle, 2010 = 100



StatLink http://dx.doi.org/10.1787/888933564899

Venture capital investments by sector

Key findings

- In 2016, in the United States, the ICT sector received more than half of the total venture capital investments (53.6%), followed by life sciences (20.7%). In Europe, the ICT sector attracted significant venture capital investments (44% of the total), followed by life sciences (27%).
- Between 2007 and 2016, the venture capital investment gap widened between the United States and Europe in all sectors.

Relevance

Venture capital is a form of equity financing particularly important for young companies with innovation and growth potential but untested business models and no track record; it replaces or complements traditional bank finance. Venture capital seeks to generate big returns on small initial investments and mostly in sectors with low capital requirements, such as in ICT or life sciences. Sectors with typically higher capital requirements such as real estate and mining attract a comparatively smaller amount of venture capital investments.

Definitions

Venture capital is a subset of private equity (i.e. equity capital provided to enterprises not quoted on a stock market) and refers to equity investments made to support the pre-launch, launch and early stage development phases of a business (*Source*: Invest Europe).

Comparability

There are no standard international definitions of either venture capital or venture capital investments by development stage. In addition the methodology for data collection differs across countries.

Data on venture capital are drawn mainly from national or regional venture capital associations that produce them, in some cases with the support of commercial data providers, except for Australia, where the Australian Bureau of Statistics collects and publishes statistics on venture capital.

Data for the United States include also venture capital investments done by other investors alongside venture capital firms, but exclude investment deals that are 100% financed by corporations, and/or business angels. Data for Europe includes only venture capital investments (seed, start-up and later stage) by formal fund managers including private equity funds making direct private equity investments, mezzanine private equity funds, co-investment funds or rescue/turnaround funds; investments by business angels, incubators, infrastructure funds, real estate funds, distress debt funds, primary funds-of-funds or secondary funds-of-funds are excluded; the investment amount only captures the equity amount that is invested by formal fund managers and not the value of the entire financing round. Growth capital or buyout investments in current or formerly venture capital-backed companies are also not included.

In the *OECD Entrepreneurship Financing Database* venture capital is made up of the sum of *early stage* (including pre-seed, seed, start-up and other early stage) and *later stage* venture capital. As there are no harmonised definitions of venture capital stages across venture capital associations and other data providers, original data have been re-aggregated to fit the OECD classification of venture capital by stages. Korea, New Zealand, the Russian Federation and South Africa do not provide breakdowns of venture capital by stage that would allow meaningful international comparisons.

Table C.3, Annex C, presents the correspondences between original data and OECD harmonised data for venture capital investments by sector.

Sources

OECD Entrepreneurship Financing Database, drawing from:

Invest Europe, Invest Europe Yearbook - 2016 European Private Equity Activity, *http://www.investeurope.eu/knowledgecenter/statisticsdetail.aspx?id=6392*.

NVCA (National Venture Capital Association, United States)/ PitchBook data, *http://www.nvca.org/*.

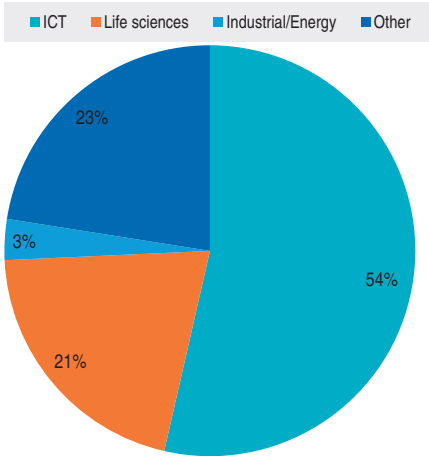
Further reading

OECD (2017), *Financing SMEs and Entrepreneurs 2017: An OECD Scoreboard*, OECD Publishing, Paris. *http://dx.doi.org/10.1787/fin_sme_ent-2017-en*.

OECD (2015), *OECD Digital Economy Outlook 2015*, OECD Publishing, Paris. *http://dx.doi.org/10.1787/9789264232440-en*.

Figure 7.9. **Venture capital investments in the United States, by sector**

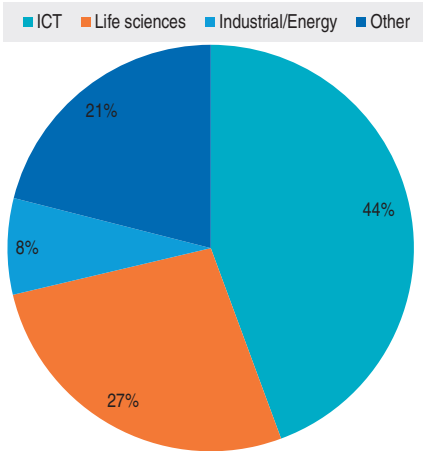
Percentage, 2016



StatLink http://dx.doi.org/10.1787/888933564918

Figure 7.10. **Venture capital investments in Europe, by sector**

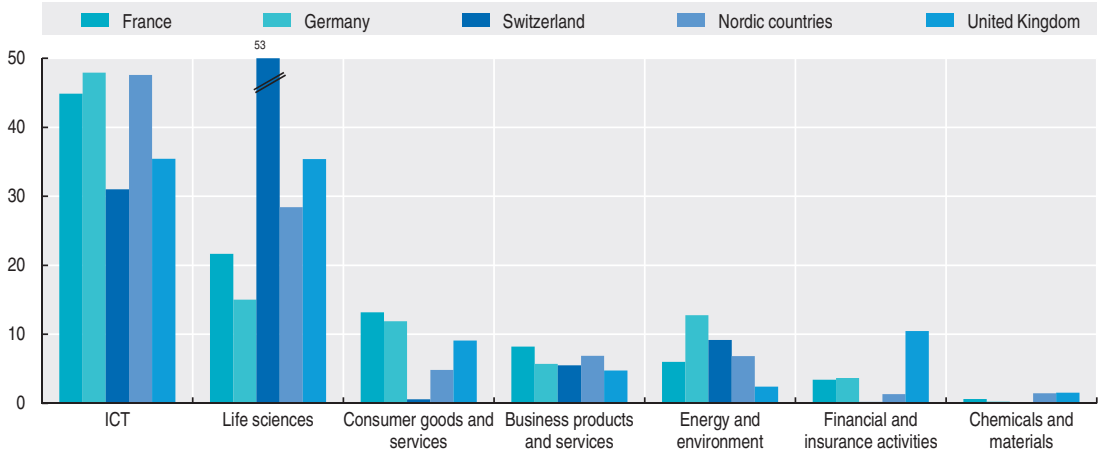
Percentage, 2016



StatLink http://dx.doi.org/10.1787/888933564937

Figure 7.11. **Venture capital investments by sector, selected European countries**

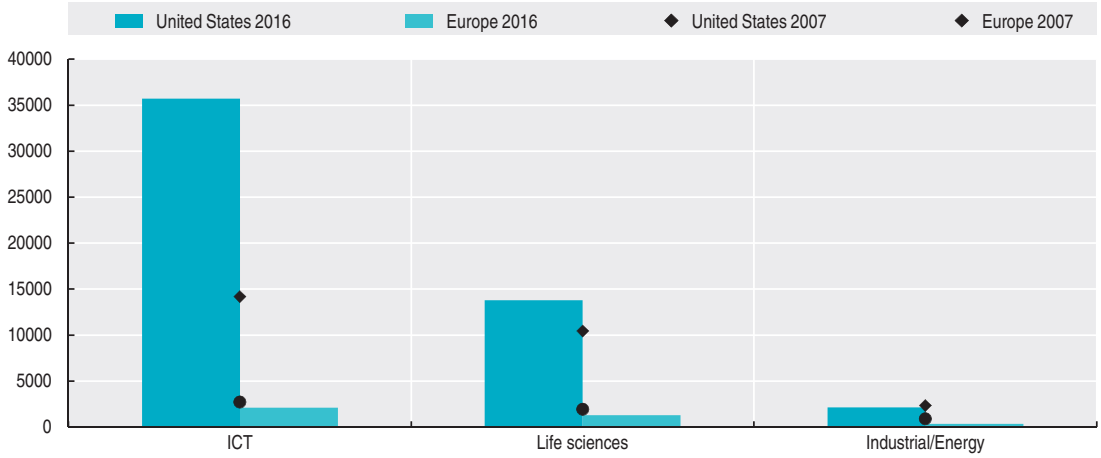
Percentage, 2016



StatLink http://dx.doi.org/10.1787/888933564956

Figure 7.12. **Venture capital investments by sector**

Million US dollars



StatLink http://dx.doi.org/10.1787/888933564975

ANNEX A

Sources of data on timely indicators of entrepreneurship

This Annex presents the sources used to develop the *OECD Timely Indicators of Entrepreneurship* database, which contains sub-annual data on enterprise creations and bankruptcies. The database is available on *http://stats.oecd.org//Index.aspx?QueryId=72208*.

Data on **enterprise creations** are sourced from a variety of administrative and statistical sources (Table A.1), whose definitions and coverage vary significantly by country, and may differ from the concepts and coverage of the benchmark definitions of births provided by the *Eurostat-OECD Manual on Business Demography Statistics*. For instance, enterprise creations may include new enterprises created via mergers, break-ups, split-offs as well as re-activations of dormant enterprises, in addition to pure births.

The underlying administrative and statistical data can vary significantly by country, with differences in the population of enterprises covered, such as types of legal form (e.g. corporates only), sectors of activity (e.g. coverage of agriculture or education) or enterprises below a certain turnover or employment threshold. For example, the underlying administrative data for Spain exclude natural persons and sole proprietors, and data for the United Kingdom exclude non-incorporated companies.

The underlying data can also be volatile as the scope enterprises covered may change over time. For example, for the United Kingdom, data from 2009 on also include Northern Ireland; and for Sweden, methodological changes were introduced in 2010. Changes in policies towards particular forms of enterprises (in particular legal status) can also have a considerable impact on the raw data, particularly if the policy favours a change in legal form towards enterprises covered in the raw administrative data away from legal forms not covered (or indeed vice-versa). For example in France, a new individual enterprise status (*régime de l'auto-entrepreneur*) was implemented in January 2009.

Data on **bankruptcies** (Table A.2) are sourced from raw administrative sources. Whenever possible the raw data are adapted to ensure that the sectoral coverage reflects the standard used in this publication, i.e. only the business economy is considered. Bankruptcy is based on the legal and institutional frameworks in place. A key difference with the enterprise death measure discussed in this publication is that a 'bankrupt' firm may continue to operate.

Data on bankruptcies are affected by differences in national legislation. In some countries a declaration of bankruptcy means that the enterprise must stop trading immediately, and so is more closely aligned with the concept of enterprise death used in this publication. In other countries however enterprises are able to continue trading with receivers in operational control even after a formal declaration of bankruptcy.

Indeed, some of those firms declaring themselves bankrupt may eventually recover. The proportion of bankruptcy procedures that end up in actual liquidations (deaths) of the companies, and not in reorganisations, varies across countries depending on the bankruptcy code. Of additional note in relation to comparisons with enterprise deaths is that not all firms file for bankruptcy in advance of closure (death).

Because of these comparability challenges, international comparisons of new creations and bankruptcies data focus on changes in levels rather than levels per se. Trends are computed for both new creations and bankruptcies; specifically, the *trend-cycle* reflects the combined long-term (trend) and medium-to-long-term (cycle) movements in the original series (see *http://stats.oecd.org/glossary/detail.asp?ID=6693*).

Table A.1. **National sources and definitions of enterprise creations**

	Sources and definitions of enterprise creation
Australia	*Source*: Australian Business Register. Quarterly data. Data cover all enterprises based on initial registration date. Data also include individuals / sole traders who are mainly tradesmen and professionals operating their own businesses (unincorporated); partnerships and trusts are common unincorporated business structures (not registered with ASIC) in addition to incorporated companies (registered with ASIC), government entities (federal, state and local levels) and superannuation funds are also included as they require ABN.
Belgium	*Source*: Statistics Belgium. Monthly Data. These statistics are derived by Statistics Belgium from the Banque-Carrefour des Entreprises. Data refer to the population of persons (natural and legal) liable for Value Added Tax. *http://statbel.fgov.be/en/*
Canada	*Source*: Statistics Canada. Quarterly data. Data come from experimental quarterly estimates of Industry-Level Firm Dynamics Using PD7 (payroll account deductions) data. The annual firm entry and exit statistics are produced from the statements of remuneration paid (T4 slips). T4 data include information on both employers and employees, making it possible to track individuals as they move between businesses and limiting false births. *http://www.statcan.gc.ca/*
Denmark	*Source*: Danish Business Authority. Monthly data Data refer to all legal forms (including sole proprietors) and to the total economy, including agriculture. The new registrations also include changes in the activity sector or address changes, but exclude mergers and spin-offs unless they are accompanied by a change in sector or address. *www.cvr.dk*
Finland	*Source*: Statistics Finland. Quarterly data. Statistics are derived from data in Statistics Finland's Business Register. They cover those enterprises engaged in business activity that are liable to pay value-added tax or act as employers. Excluded are foundations, housing companies, voluntary associations, public authorities and religious communities. The statistics cover state enterprises but not enterprises owned by municipalities. Data are provided for the number of enterprise "openings". *http://www.stat.fi/til/aly/2014/aly_2014_2015-10-29_tie_001_en.html*
France	*Source*: INSEE, Sirene. Monthly data. Number of births. A birth is the creation of a combination of production factors with the restriction that no other enterprises are involved in the event. 2009 data presents a break in series due to the implementation of a new individual enterprise status ("'auto-entrepreneur"). Since December 2014 onwards, a new denomination is used for the self-managed enterprises, now called micro-entrepreneurs instead of "auto-entrepreneurs". Excluding data on agriculture. www.insee.fr/en/
Germany	*Source*: Statistiches Bundesamt – Destatis. Monthly data. Number of new creations (main offices and secondary establishments). Small units and auxiliary activities are not included. Transformation, take-over and change in ownership are excluded. New enterprises coming from abroad are also removed from the data on birth. All activities are taken into account. *www.destatis.de*
Hungary	*Source:* Hungarian Central Statistical Office Monthly data by legal form. Registered enterprises refer to units which according to administrative registrations legally exist at the date of survey and have a tax number, including those under bankruptcy, liquidation and dissolution proceedings at the reference date. *https://www.ksh.hu/stadat_infra_3_2*.

Table A.1. **National sources and definitions of enterprise creations** *(cont.)*

	Sources and definitions of enterprise creation
Iceland	*Source*: Statistics Iceland. Monthly data. Data are based on newly registered enterprises as reported by Internal Revenue Directorate. *www.statice.is*
Italy	*Source*: InfoCamere, Movimprese – Business register of Italian Chambers of Commerce. Quarterly data. Number of entries (iscritte). All legal forms and all activities are taken into account. *www.infocamere.it*
Netherlands	*Source:* Statistics Netherlands. Monthly data. Data refer to the total economy excluding agriculture, and to all legal forms. A creation is defined as the emergence of a new company. *http://www.cbs.nl/*
New Zealand	*Source:* New Zealand Companies Office. Quarterly data Data include incorporated companies only.
Norway	*Source:* Statistics Norway. Monthly data. Data refer to the total economy excluding agriculture. Sole proprietorships are also included. *https://www.ssb.no*
Portugal	*Source*: Statistics Portugal. Monthly data. New registrations of Legal Persons and Equivalent Entities registered by the Ministry of Justice – Directorate General for Justice Policy. *www.ine.pt*
Russian Federation	*Source*: Federal State Statistics Service. Monthly data. New registrations. *http://www.gks.ru/bgd/regl/b17_01/Main.htm*
Spain	*Source*: Instituto Nacional de Estadistica de Espana (INE) and Central Business Register (CBR). Monthly data. Number of entries. The "Mercantile Companies" register includes information on incorporated and trading enterprises (natural persons or sole proprietors are excluded). "Created mercantile companies" may not be active and "dissolved mercantile companies" might be removed from the register without having ever been active. *www.ine.es/en/*
Sweden	*Source*: Swedish Agency for Growth Policy Analysis. Quarterly data. Number of newly established companies. Data refer to the total economy including agriculture. *www.tillvaxtanalys.se/*
Turkey	*Source:* The Union of Chambers and Commodity Exchanges of Turkey Monthly data of new creations by three main legal forms. *http://tobb.org.tr/BilgiErisimMudurlugu/Sayfalar/Eng/KurulanKapananSirketistatistikleri.php*
United Kingdom	*Source*: Companies House. Monthly data. New registrations (number of entries). All limited companies in England, Wales, Northern Ireland and Scotland are registered at Companies House. Entries reflect the appearance of a new enterprise within the economy, whatever the demographic event, be it a merger, renaming, split-off or birth. *www.gov.uk/government/statistics*
United States	*Source:* Bureau of Labor Statistics (BLS) – Business Employment Dynamics (BED). Quarterly data. Data refer to births of establishments of all sizes operating in goods producing and service providing sectors. These are units with positive third month employment for the first time in the current quarter with no links to the prior quarter, or units with positive third month employment in the current quarter and zero employment in the third month of the previous four quarters. Births are a subset of openings not including re-openings of seasonal businesses. *www.bls.gov/data/*

Table A.2. **National sources and definitions of bankruptcies**

Country	Sources and definitions of bankruptcies
Australia	*Source*: Australian Securities and Investments Commission (ASIC). Monthly data. Insolvency statistics – Companies entering external administration. The statistics on "companies entering external administration" show the number of companies entering into a form of external administration for the first time. ASIC advises that a company will be included only once in these statistics, regardless of whether it subsequently enters into another form of external administration. The only exception occurs where a company is taken out of external administration, for example as the result of a court order, and at a later date re-enters external administration. Members voluntary winding up are excluded. *www.asic.gov.au*
Belgium	*Source*: Statistics Belgium. Monthly data. Bankruptcy statistics. The figures are derived by Statistics Belgium based on the declarations of commercial courts and supplemented if necessary by information from the enterprise register of Statistics Belgium. Data refer to corporate bankruptcies. All economic activities are taken into account. *http://statbel.fgov.be/en/*
Brazil	*Source:* Serasa Experian. Monthly data. Data refer to total lifting required bankruptcies and enacted as well as the total required judicial recoveries, deferred and granted. *http://www.serasaexperian.com.br/release/indicadores/falencias_concordatas.htm*
Canada	*Source*: Office of the Superintendent of Bankruptcy Canada. Monthly data. A business bankruptcy is defined as the state of a business that has made an assignment in bankruptcy or against whom a bankruptcy order has been made. A business is defined as any commercial entity or organisation other than an individual, or an individual who has incurred 50 percent or more of total liabilities as a result of operating a business. *www.ic.gc.ca/eic/site/icgc.nsf/eng/home*
Finland	*Source*: Statistics Finland. Monthly data. Bankruptcies. The data cover bankruptcy cases referring to business enterprises and corporations instigated and decided by district courts. All activities are taken into account. *http://pxnet2.stat.fi/PXWeb/pxweb/en/StatFin/*
France	*Source*: Institut national de la statistique et des études économiques (INSEE) and Banque de France. Monthly data. Business failures. A business failure is defined as the opening of insolvency proceedings. The statistics on business failures cover both the opening of insolvency proceedings and direct liquidations. They do not reflect the outcome of the proceedings: continuation, take-over or liquidation. *www.insee.fr/en/*
Germany	*Source*: Statistiches Bundesamt – Destatis Monthly data. Insolvencies. Data cover businesses and formerly self-employed persons. All activities are taken into account. *www.destatis.de/EN/Homepage.html*
Iceland	*Source*: Statistics Iceland. Monthly data. Data on insolvencies of Icelandic enterprises, from the Internal Revenue Directorate, Enterprise Register. *www.statice.is/*
Italy	Source: Cerved. Quarterly data. Bankruptcies. *https://know.cerved.com*
Japan	*Source*: Teikoku Databank (TDB). Monthly data. Number of Bankruptcies. Statistics are from the Ministry of Economy, Trade and Industry Small and Medium Enterprise Agency Business Environment Department Planning Division Research Office. Bankruptcy is determined when more than 10 million US dollars of the total liabilities of the concerned company are involved. Included under the definition of bankruptcy are: defaults on due payments, legal and corporate reorganisations, special liquidation companies. *www.tdb.co.jp/english/index.html*
Netherlands	*Source*: Statistics Netherlands. Monthly data. Number of bankruptcies pronounced by Dutch courts. Data refer to the total economy including agriculture and include bankruptcies of corporations or institutions (exclusion of sole proprietorship). *http://statline.cbs.nl*

Table A.2. **National sources and definitions of bankruptcies** *(cont.)*

Country	Sources and definitions of bankruptcies
New Zealand	*Source:* New Zealand Companies Office. Quarterly data. Data refer to liquidations and include incorporated companies only.
Norway	*Source*: Statistics Norway. Monthly data. Bankruptcy statistics. Data refer to the total economy excluding agriculture. Sole proprietorships are also included. *http://statbank.ssb.no*
South Africa	*Source*: Statistics South Africa. Monthly data. Liquidation statistics. *www.statssa.gov.za/*
Spain	*Source*: Instituto Nacional de Estadistica de Espana (INE) The Mercantile Companies (MC) for monthly data. Companies Central Directory (CCD) for annual data. Number of exits. The "Mercantile Companies" register includes information on incorporated enterprises (natural persons or sole proprietors are excluded). "Created mercantile companies" may not be active and "dissolved mercantile companies" might be removed from the register without having ever been active. *www.ine.es*
Sweden	*Source*: Swedish Agency for Growth Policy Analysis. Monthly data. Bankruptcy statistics. Data cover corporate bankruptcies, including sole traders, ruled by district courts. All activities are taken into account. *www.tillvaxtanalys.se*
United Kingdom	*Source*: Companies House. Monthly data. Incorporated companies only. Data refer to liquidations, including compulsory liquidations, creditors' voluntary liquidations, and administrative orders converted to Cred. Excluding Members' voluntary liquidations. *www.companieshouse.gov.uk/*
United States	*Source*: United States Courts. Quarterly data. Statistics on bankruptcy petition filings – total business filings (Chapters 7, 11 and 13). Non-business filings as well as Chapter 12 filings (family farmer and family fisherman bankruptcies) are excluded. *http://www.uscourts.gov/*

ANNEX B

List of Indicators of Entrepreneurial Determinants

This Annex presents a comprehensive list of indicators of entrepreneurial determinants. Indicators are classified into the six categories of determinants set by the conceptual framework of the OECD-Eurostat Entrepreneurship Indicators Programme: 1. Regulatory Framework; 2. Market Conditions; 3. Access to Finance; 4. Creation and Diffusion of Knowledge; 5. Entrepreneurial Capabilities; 6. Entrepreneurial Culture. For each indicator, a short description and the source of data are provided.

While many critical factors affecting entrepreneurship are covered by the indicators presented in the table, the list should not be considered as exhaustive. The selection of indicators reflects the current availability of data, meaning that important indicators may be missing just because no source of international data was found.

Table B.1. **Indicators of entrepreneurial determinants and data sources**

Category of determinants	Definition	Data sources
	1. REGULATORY FRAMEWORK	
Administrative burdens (entry and growth)		
Burden of government regulation	Survey responses to the question: For businesses, complying with administrative requirements permits, regulations, reporting) issued by the government in your country is (1 = burdensome, 7 = not burdensome). *http://reports.weforum.org/global-competitiveness-report-2015-2016/competitiveness-rankings/*	World Economic Forum, *Global Competitiveness Report*
Costs required for starting a business	The official cost of each procedure in percentage of Gross National Income (GNI) per capita based on formal legislation and standard assumptions about business and procedure. *http://www.doingbusiness.org/data/exploretopics/starting-a-business*	World Bank, *Doing Business*
Minimum capital required for starting a business	The paid-in minimum of capital requirement that the entrepreneur needs to deposit in a bank before registration of the business starts as percentage of income per capita. *http://www.doingbusiness.org/data/exploretopics/starting-a-business*	World Bank, *Doing Business*
Number of days for starting a business	The average time (recorded in calendar days) spent during each enterprise start-up procedure. *http://www.doingbusiness.org/data/exploretopics/starting-a-business*	World Bank, Doing Business
Number of procedures for starting a business	All generic procedures that are officially required to register a firm. *http://www.doingbusiness.org/data/exploretopics/starting-a-business*	World Bank, *Doing Business*
Procedures time and costs to build a warehouse	Corresponds to an average of three measurements: 1) Average time spent during each procedure, 2) Official cost of each procedure and 3) Number of procedures to build a warehouse. *http://www.doingbusiness.org/data/exploretopics/dealing-with-construction-permits*	World Bank, *Doing Business*
Building quality control index	The indicator is based on six other indices—the quality of building regulations, quality control before construction, quality control during construction, quality control after construction, liability and insurance regimes, and professional certifications indices. *http://www.doingbusiness.org/methodology/dealing-with-construction-permits*	World Bank, *Doing Business*
Registering property	Corresponds to an average of three measurements: 1) Number of procedures legally required to register property, 2) Time spent in completing the procedures and 3) Registering property costs. *http://www.doingbusiness.org/data/exploretopics/registering-property*	World Bank, *Doing Business*
Index of the quality of the land administration system	The quality of land administration index is the sum of the scores on the reliability of infrastructure, transparency of information, geographic coverage and land dispute resolution indices. The index ranges from 0 to 30, with higher values indicating better quality of the land administration system. *http://www.doingbusiness.org/data/exploretopics/registering-property*	World Bank, *Doing Business*

Table B.1. **Indicators of entrepreneurial determinants and data sources** *(cont.)*

Category of determinants	Definition	Data sources
Time for paying taxes	Time it takes to prepare, file and pay the corporate income tax, vat and social contributions. Time is measured in hours per year. *http://www.doingbusiness.org/data/exploretopics/paying-taxes*	World Bank, *Doing Business*
Bankruptcy regulations		
Cost - Average cost of bankruptcy proceedings.	The cost of the proceedings is recorded as a percentage of the estate's value. *http://www.doingbusiness.org/data/exploretopics/resolving-insolvency*	World Bank, *Doing Business*
Time - Average duration of bankruptcy proceedings	Time is recorded in calendar years. It includes appeals and delays. *http://www.doingbusiness.org/data/exploretopics/resolving-insolvency*	World Bank, *Doing Business*
Recovery rate	The recovery rate calculates how many cents on the dollar secured creditors recover from an insolvent firm at the end of insolvency proceedings. *http://www.doingbusiness.org/data/exploretopics/resolving-insolvency*	World Bank, *Doing Business*
Court and legal framework		
Enforcing contracts– Cost in % of claim	Cost is recorded as a percentage of the claim, assumed to be equivalent to 200% of income per capita or USD 5000, whichever is greater. No bribes are recorded. Three types of costs are recorded: court costs, enforcement costs and average attorney fees. *http://www.doingbusiness.org/data/exploretopics/enforcing-contracts*	World Bank, *Doing Business*
Enforcing contracts – Time	Time is recorded in calendar days, counted from the moment the plaintiff files the lawsuit in court until payment. This includes both the days when actions take place and the waiting periods between. *http://www.doingbusiness.org/data/exploretopics/enforcing-contracts*	World Bank, *Doing Business*
Enforcing contracts – Quality of judicial process	The quality of judicial processes index measures whether each economy has adopted a series of good practices in its court system in four areas: court structure and proceedings, case management, court automation and alternative dispute resolution. *http://www.doingbusiness.org/data/exploretopics/enforcing-contracts*	World Bank, *Doing Business*
Product and labour market regulations		
Difficulty of hiring	It measures whether laws or other regulations have implications for the difficulties of hiring a standard worker in a standard company. It covers components such as whether fixed-term contracts are prohibited for permanent tasks, the maximum cumulative duration of fixed-term contracts, the ratio of the minimum wage to the average value added per worker or the availability of incentives for employers to hire employees under the age of 25. *http://www.doingbusiness.org/data/exploretopics/labor-market-regulation#difficultyHiring*	World Bank, *Doing Business*
Difficulty of firing	It measures whether laws or other regulations have implications for the difficulties of firing a standard worker in a standard company. Components of the indicator include elements such as the length in months of the maximum probationary period or whether the employer needs to notify a third party (such as a government agency) to terminate a redundant worker. *http://www.doingbusiness.org/data/exploretopics/labor-market-regulation#difficultyFiring*	World Bank, *Doing Business*
Ease of hiring foreign labour	Survey responses to a question related to labour market efficiency: In your country, how restrictive are regulations related to the hiring of foreign labor? [1 = highly restrictive; 7 = not restrictive at all]. *http://reports.weforum.org/global-competitiveness-report-2015-2016/appendix-a-measurement-of-key-concepts-and-preliminary-index-structure/*	World Economic Forum, *Executive Opinion Survey*
Rigidity of hours index	The indicator is an index with seven components, the most important being: i) the maximum number of days allowed in the work week; ii) the premium for night work; iii) whether there are restrictions on night work; iv) whether there are restrictions on weekly holiday work; vii) the average paid annual leave for workers. *http://www.doingbusiness.org/data/exploretopics/labor-market-regulation#rigidityHours*	World Bank, *Doing Business*
Job quality	The indicator covers 12 questions: (i) whether the law mandates equal remuneration for work of equal value; (ii) whether the law mandates non-discrimination based on gender in hiring; (iii) whether the law mandates paid or unpaid maternity leave; (iv) the minimum length of paid maternity leave (in calendar days); (v) whether employees on maternity leave receive 100% of wages; (vi) the availability of five fully paid days of sick leave a year; (vii) the availability of on-the-job training at no cost to the employee; (viii) whether a worker is eligible for an unemployment protection scheme after one year of service; (ix) the minimum duration of the contribution period (in months) required for unemployment protection; (x) whether an employee can create or join a union; (xi) the availability of administrative or judicial relief in case of infringement of employees' rights; and (xii) the availability of a labor inspection system. *http://www.doingbusiness.org/data/exploretopics/labor-market-regulation#rigidityEmployment*	World Bank, *Doing Business*
Income taxes, wealth/bequest taxes		
Average income tax plus social contributions	The average rate of taxation in percentage of the gross wage. The indicator is based on a standard case: single (without children) with high income. *http://dx.doi.org/10.1787/data-00265-en*	OECD *Revenue Statistics*
Highest marginal income tax plus social contributions	The highest rate of taxation in percentage of the gross wage. The indicator is based on a standard case: single (without children) with high income. http://dx.doi.org/10.1787/data-00265-en	OECD *Revenue Statistics*

Table B.1. **Indicators of entrepreneurial determinants and data sources** *(cont.)*

Category of determinants	Definition	Data sources
Revenue from bequest tax	The revenue from bequest tax as a per cent of GDP. *http://dx.doi.org/10.1787/ctpa-rev-data-en*	OECD *Revenue Statistics*
Revenue from net wealth tax	The revenue from net wealth tax as a per cent of GDP. *http://dx.doi.org/10.1787/ctpa-rev-data-en*	OECD *Revenue Statistics*
Business and capital taxes		
SME tax rates	*http://stats.oecd.org//Index.aspx?DataSetCode=TABLE_II2*	OECD *Revenue Statistics*
Taxation of corporate income revenue	The revenue from corporate income tax as percentage of GDP. *http://dx.doi.org/10.1787/ctpa-rev-data-en*	OECD *Revenue Statistics*
Taxation of stock options	The average tax wedge for purchased and newly listed stocks. Average incomes are used. *http://dx.doi.org/10.1787/9789264012493-en*	OECD, The Taxation of Employee Stock Options – Tax Policy Study No. 11
Patent system; standards		
Intellectual property protection	Survey responses to the question: in your country, how strong is the protection of intellectual property, including anti-counterfeiting measures? (1 = extremely weak, 7 = extremely strong). *http://reports.weforum.org/global-competitiveness-report-2015-2016/competitiveness-rankings/*	World Economic Forum, *Global Competitiveness Report*
Property rights	Survey responses to the question: property rights, including over financial assets (1 = are poorly defined and not protected by law, 7 = are clearly defined and well protected by law). *http://reports.weforum.org/global-competitiveness-report-2015-2016/competitiveness-rankings/*	World Economic Forum, *Global Competitiveness Report*
2. MARKET CONDITIONS		
Access to Foreign Markets		
Trading across borders	The indicator is an index composed of two components: 1) Time, in days, to comply with all procedures required to import/export goods, 2) The cost associated with all procedures required to import/export goods. *http://www.doingbusiness.org/data/exploretopics/trading-across-borders*	World Bank, *Doing business*
Barriers to trade and investment	This indicator measures explicit barriers and other barriers to trade and investment. It is based on qualitative information on laws and regulations collected periodically and turned into quantitative indicators. *http://www.oecd.org/eco/growth/indicatorsofproductmarketregulationhomepage.htm#indicators*	OECD, *Product Market Regulation Indicators*
Services Trade Restrictiveness Index (STRI)	The indicator is calculated on the basis of a regulatory database of comparable, standardised information on trade and investment relevant policies in force in each country. *http://www.oecd.org/tad/services-trade/services-trade-restrictiveness-index.htm*	*OECD, Services Trade Restrictiveness Index Regulatory Database*
Degree of public involvement		
Government enterprises and investment	Data reflect the number, composition and share of output supplied by State-Operated Enterprises (SOEs) and government investment as a share of total investment. *https://www.fraserinstitute.org/sites/default/files/economic-freedom-of-the-world-data-for-researchers.xls*	IMF, World Bank, UN National Accounts and World Economic Forum
Licensing restrictions	Zero-to-10 ratings are constructed for 1) the time cost (measured in number of calendar days required to obtain a license) and 2) the monetary cost of obtaining the license (measured as a share of per-capita income). These two ratings are then averaged to arrive at the final rating. *http://iresearch.worldbank.org/servicetrade/default.htm#*	World Bank
Private Demand		
Buyer sophistication	Survey responses to: purchasing decisions are (1 = based solely on the lowest price, 7 = based on a sophisticated analysis of performance). *http://reports.weforum.org/global-competitiveness-report-2015-2016/competitiveness-rankings/*	World Economic Forum, *Global Competitiveness Report*
3. ACCESS TO FINANCE		
Access to debt financing		
Country credit rating	The indicator is based on an assessment by the *Institutional Investor Magazine Ranking*. *http://www.imd.org/wcc*	IMD *World Competitiveness Yearbook*
Domestic credit to private sector	The indicator refers to financial resources provided to the private sector – such as through loans, purchases of non-equity securities, and trade credits and other accounts receivable – that establish a claim for repayment. Data are from IMF's International Financial Statistics. *http://databank.worldbank.org/data/views/variableSelection/selectvariables.aspx?source=world-development-indicators#*	Published in *World Indicators*, World Bank. *Development*
Ease of access to loans	Survey responses to: how easy it is to obtain a bank loan in your country with only a good business plan and no collateral (1 = extremely difficult, 7 = extremely easy). *http://reports.weforum.org/global-competitiveness-report-2015-2016/competitiveness-rankings/*	World Economic Forum, *Global Competitiveness Report*
Interest rate spread	The lending rate minus deposit rate based on an average of annual rates for each country. *http://data.worldbank.org/indicator/FR.INR.LNDP*	World Bank Open Data
Legal rights index	The degree to which collateral and bankruptcy laws facilitate lending. Higher scores indicating that collateral and bankruptcy laws are better designed to expand access to credit. *http://www.doingbusiness.org/data/exploretopics/getting-credit*	World Bank, *Doing Business*

Table B.1. **Indicators of entrepreneurial determinants and data sources** *(cont.)*

Category of determinants	Definition	Data sources
Share of SME loans in total business loans	Specific definitions are implemented by the countries covered in the Scoreboard. *http://www.oecd.org/cfe/smes/financing-smes-and-entrepreneurs-23065265.htm*	*OECD Financing SMEs and Entrepreneurs: An OECD Scoreboard*
Interest rate spread between average SME and large firm rate	Specific definitions are implemented by the countries covered in the Scoreboard. *http://www.oecd.org/cfe/smes/financing-smes-and-entrepreneurs-23065265.htm*	*OECD Financing SMEs and Entrepreneurs: An OECD Scoreboard*
Access to venture capital		
Venture capital availability	Survey responses to: how easy it is for entrepreneurs with innovative but risky projects to find venture capital in your country (1 = extremely difficult, 7 = extremely easy). *http://reports.weforum.org/global-competitiveness-report-2015-2016/competitiveness-rankings/*	World Economic Forum, *Global Competitiveness Report*
Venture capital	Private equity investments	*OECD Entrepreneurship Finance Database*
Stock markets		
Capitalisation of primary stock market	The capitalisation of the primary stock market (the value of the issued shares on the market) relative to GDP. *http://www.world-exchanges.org/home/index.php/statistics/ipo-database*	World Federation of Exchanges
Capitalisation of secondary stock	An assessment of the efficiency of stock markets providing finance to companies. Ranking market goes from 1 (worst) to 10 (best). *http://www.imd.org/wcc*	IMD, *World Competitiveness Yearbook*
Investor protection	The main indicators include: transparency of transactions (Extent of Disclosure Index), liability for self-dealing (Extent of Director Liability Index), shareholders' ability to sue officers and directors for misconduct (Ease of Shareholder Suits Index), strength of Investor Protection Index (the average of the three index). *http://www.doingbusiness.org/data/exploretopics/protecting-minority-investors*	World Bank, *Doing Business*
Market capitalisation of newly listed companies	The market capitalization (total number of new shares issued multiplied by their value on the first day of quotation) of newly listed domestic shares relative to GDP. *http://www.world-exchanges.org/home/index.php/statistics/ipo-database*	World Federation of Exchanges
4. CREATION AND DIFFUSION OF KNOWLEDGE		
R&D activity		
Business expenditure on R&D BERD	Business enterprise expenditure on R&D (BERD) at current prices and PPPs. *http://dx.doi.org/10.1787/msti-v2015-2-table23-en*	OECD, *Main Science and Technology Indicators*
Gross domestic expenditure on R&D GERD	Gross domestic expenditures on R&D covers total intramural expenditure performed on the national territory during a given period. *http://dx.doi.org/10.1787/msti-v2015-2-table12-en*	OECD, *Main Science and Technology Indicators*
Higher education expenditure on R&D HERD	Higher education expenditure on R&D (HERD) at 2010 prices and PPPs. *http://dx.doi.org/10.1787/msti-v2015-2-table45-en*	OECD, *Main Science and Technology Indicators*
International co-operation between patent applications at PCT	The indicator measures international co-operation between patent applications under the Patent Cooperation Treaty (PCT). The measure is calculated as a percentage of total patents (by application date). *http://dx.doi.org/10.1787/data-00507-en*	*OECD Patent Statistics*
Patents awarded	Number of patents awarded to inventors based on their residence. The indicator is a sum of patents awarded by the European Patent Office (EPO) and US Patent and Trademark Office (USPTO). *http://dx.doi.org/10.1787/data-00507-en*	*OECD Patent Statistics*
Transfer of non-commercial knowledge		
Research in higher education sector financed by business	R&D expenditure performed at higher education and funded by business, measured in 2010 US dollars, constant prices and PPPs. *http://dx.doi.org/10.1787/data-00189-en*	OECD *Science and Technology Statistics*
Patents filed by universities and public labs	Patents filed by universities and public labs per GDP. Only countries having filed at least 250 patents over the period are included. *http://dx.doi.org/10.1787/139a90c6-en*	OECD Science, Technology and Industry Outlook
Universities or other Public Research Organizations as source of information	The share of innovative enterprises that states universities or other PROs as an important source of information for product and process innovation.	(National) Innovation Surveys
University / Industry collaboration on R&D	Survey responses to: the level of collaboration between business and universities in R&D (1 for non-existent collaboration to 7 for extensive collaboration). *http://reports.weforum.org/global-competitiveness-report-2015-2016/competitiveness-rankings/*	World Economic Forum, *Global Competitiveness Report*
Co-operation among firms		
SMEs co-operating with other firms for innovation	Share of innovative SMEs stating any type co-operation as the source of innovation.	(National) Innovation Surveys

Table B.1. **Indicators of entrepreneurial determinants and data sources** *(cont.)*

Category of determinants	Definition	Data sources
Technology availability and take-up		
Turnover from e-Commerce	Total internet sales over the last calendar year, excluding VAT, as a percentage of total turnover. *http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tin00110&plugin=1*	Eurostat, *Information Society Statistics*
Enterprises Using e-Government	The share of enterprises using any eGovernment services. The measure is based on all firms with 10 employees or more, excluding the financial sector. *http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tin00107&plugin=1*	Eurostat, *Information Society Statistics*
ICT expenditure	Expenditure for ICT equipment, software and services as a percentage of GDP. *http://ec.europa.eu/eurostat/product?code=isoc_tc_ite&language=en&mode=view*	European Information Technology Observatory (EITO)
ICT expenditure in Communications	Expenditure for telecommunications equipment and carrier services as a percentage of GDP. *http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=isoc_tc_ite&lang=en*	European Information Technology Observatory (EITO)
5. ENTREPRENEURIAL CAPABILITIES		
Entrepreneurship education		
Population with tertiary education	The share of persons between 25-34 of age with tertiary education including doctoral education or equivalent. *http://dx.doi.org/10.1787/eag-2015-table8-en*	OECD *Education at a Glance*
Quality of Management Schools	Survey responses to: the quality of business schools across countries is (1 = extremely poor — among the worst in the world; 7 = excellent—among the best in the world). *http://reports.weforum.org/global-competitiveness-report-2015-2016/competitiveness-rankings/*	World Economic Forum, *Global Competitiveness Report*
Training in starting a business	The percentage of the population aged 18-64 that received training in starting a business during school or after school. *A Global Perspective on Entrepreneurship Education and Training (2008). http://www.gemconsortium.org/report*	Global Entrepreneurship Monitor (GEM)
Immigration		
Migrants with tertiary education	The share of highly skilled migrants as a percentage of total migrants. *http://www.oecd.org/els/mig/databaseonimmigrantsinoecdcountriesdioc.htm*	Database on immigrants in OECD countries (DIOC)
6. ENTREPRENEURSHIP CULTURE		
High status successful entrepreneurship	Percentage of 18-64 population who agree with the statement that in their country, successful entrepreneurs receive high status. *http://www.gemconsortium.org/*	Global Entrepreneurship Monitor (GEM)
Entrepreneurial intention	The percentage of 18-64 population (individuals involved in any stage of entrepreneurial activity excluded) who intend to start a business within three years. *http://www.gemconsortium.org/*	Global Entrepreneurship Monitor (GEM)
Desirability of becoming self-employed	Survey responses to: desire to become self-employed within the next 5 years. This question is asked only to non-self-employed individuals. *http://ec.europa.eu/public_opinion/flash/fl_354_en.pdf*	European Commission, Flash Eurobarometer
Opinion about entrepreneurs	Survey responses to: overall opinion about entrepreneurs (self-employed, business owners). They are ranked against managers in large companies and professions. *http://ec.europa.eu/public_opinion/flash/fl_354_en.pdf*	European Commission, Flash Eurobarometer
Fear of failure	Percentage of 18-64 population who perceives good opportunities but who indicates that fear of failure would prevent them from setting up a business. *http://www.gemconsortium.org/*	Global Entrepreneurship Monitor (GEM)
Risk for business failure	Survey responses to: being willing to start a business if a risk exists that it might fail. *http://ec.europa.eu/public_opinion/flash/fl_354_en.pdf*	European Commission, Flash Eurobarometer
Second chance for entrepreneurs	Survey responses to: people who have started their own business and have failed should be given a second chance. *http://ec.europa.eu/public_opinion/flash/fl_354_en.pdf*	European Commission, Flash Eurobarometer

ANNEX C

International comparability of venture capital data

Aggregate data on venture capital provide useful information on trends in the venture capital industry. These data are typically compiled by national or regional Private Equity and Venture Capital Associations, often with the support of commercial data providers. The quality and availability of aggregate data on venture capital have improved considerably in recent years; international comparisons, however, remain complicated because of two main problems.

The first difficulty comes from the *lack of a standard international definition of venture capital*. While there is a general understanding, the definition of the types of investments included in venture capital varies across countries and regions. In some cases, differences are purely linguistic; in others, they are more substantive.

The second problem relates to the *diverse methodologies employed by data compilers*. The completeness and representativeness of venture capital statistics with respect to the venture capital industry of a country will differ depending on how data were collected.

The following tables illustrate differences concerning respectively: the definition of private equity and venture capital (Table C.1); the breakdown of venture capital investment by stage of development (Table C.2); the breakdown of venture capital investment by sector (Table C.3); and the methods of data collection (Table C.4).

The sources of venture capital data reviewed include:

Australian Bureau of Statistics, *Venture Capital and Later Stage Private Equity*.

CVCA - Canada's Venture Capital and Private Equity Association.

Invest Europe, *Invest Europe Yearbook*.

KVCA - Korean Venture Capital Association.

NVCA/PitchBook - National Venture Capital Association/PitchBook quarterly report, United States.

NZVCA - New Zealand Private Equity and Venture Capital Association.

PwC MoneyTree, Israel.

RVCA - Russian Venture Capital Association.

SAVCA - South African Venture Capital and Private Equity Association/KPMG.

VEC - Venture Enterprise Center, Japan.

Table C.1. **Definitions of private equity and venture capital**

Source	Private equity (PE)	Venture capital (VC)
Invest Europe	PE is equity capital provided to enterprises not quoted on a stock market.	VC is a subset of private equity and refers to equity investments made to support the pre-launch, launch and early stage development phases of a business.
National Venture Capital Association - United States (NVCA)/PitchBook	PE is equity investment in non-public companies, usually defined as being made up of venture capital funds. Real estate, oil and gas, and other such partnership are sometimes included in the definition.	VC is a segment of the private equity industry which focuses on investing in start-up companies with high growth potential and accompanying high risk.
Australian Bureau of Statistics (ABS)	(Later Stage) PE is an investment in companies in later stages of development, as well as investment in underperforming companies. These companies are still being established, the risks are still high and investors have a divestment strategy with the intended return on investment mainly in the form of capital gains (rather than long-term investment involving regular income streams).	VC is a high risk private equity capital for typically new, innovative or fast growing unlisted companies. A venture capital investment is usually a short to medium-term investment with a divestment strategy with the intended return on investment mainly in the form of capital gains (rather than long-term investment involving regular income streams).
Canada's Private Equity and Venture Capital Association (CVCA)	The generic term for the private market reflecting all forms of equity or quasi-equity investment. In a mature private equity universe, there are generally three distinct market segments: Buyout Capital, Mezzanine Capital and Venture Capital.	A specialized form of private equity, characterized chiefly by high-risk investment in new or young companies following a growth path.
Korean Venture Capital Association (KVCA)	PE means an equity investment method with fund raised by less than 49 Limited Partners. It takes a majority stake of company invested, improves its value and then obtains capital gain by selling stock.	Company/Fund investing in early-stage, high-potential and growth companies.
Venture Enterprise Center -Japan (VEC)	PE is an investment method by which investors are involved in the management and governance of enterprises for the improvement of its value by providing those enterprises, in different developing stages and business environments, with necessary funds.	Funds provided via shares, convertible bonds, warrants etc. to venture businesses, which are closed (non-public) small and medium size enterprises with growth potentials.

Table C.2. **Breakdown of venture capital by stage, selected VC associations and OECD**

		Invest Europe	NVCA/ PitchBook	PwC Money Tree – Israel	ABS - Australia	CVCA	VEC	KVCA	NZVCA	RVCA	SAVCA	OECD
Private equity	**Venture capital**				Pre-seed							**Pre-seed/ Seed**
		Seed	Angel/Seed	Seed/ Start-up	Seed	Seed	Seed	Early stage	Seed/ Start-up	Seed/ Start-up	Seed	
		Start-up	Early VC		Start-up	Start-up	Early stage	Expansion stage			Start-up and early stage	**Start-up/ Other early stage**
		Other early stage		Early stage/ Expansion stage		Other early stage	Expansion		Early stage Expansion	Other early stages		
		Later-stage venture	Later VC	Later Stage	Early expansion	Expansion	Later		Expansion			**Later stage venture**
	Other Private Equity	Growth capital/ Rescue/ Turnaround Replacement, Buyout	Buyout and mezzanine capital		Late Expansion, Turnaround, LBO/MBO/ MBI	Acquisition/ Buyout, Turnaround, Other stage		Later stage	Turnaround	Expansion	Expansion and development	**Other Private Equity**
									Mid-market PE, Buyout PE	Restructuring	Replacement, Buyout	
										Later stage		

Note: CVCA includes "Expansion" in "Other Private Equity". NZVCA includes "Turnaround" in "Venture capital".

Table C.3. **Breakdown of venture capital by sector, Europe and United States**

OECD classification	United States – NVCA/PitchBook	Europe – Invest Europe
ICT (Information and communications technology)	Information technology	ICT (Communications, computer and electronics)
Life sciences	Healthcare	Biotech and healthcare
Industrial/Energy	Energy	Energy and environment
	Materials and resources	Chemicals and materials
Other	B2C (Business to consumer)	Consumer goods and services
	B2B (Business to business)	Business products and services
	Financial services	Financial and insurance activities
		Agriculture
		Real estate
		Construction
		Transportation
		Other

Table C.4. **Methods for collecting data on venture capital**

ABS	Census of VC and later stage PE funds domiciled in Australia and identified by the Australian Bureau of Statistics. Investments by non-resident funds in Australian investee companies are out of scope of the survey; however funds sourced from non-residents and Australian funds investing in non-resident companies are in scope.
CVCA	Quarterly surveys of PE fund managers active in the Canadian industry, conducted by Thomson Reuters. Coverage of the industry is claimed to be very high.
Invest Europe	For the 2016 European Private Equity report, a new database, the European Data Cooperative (EDC), replaced the previous database PEREP_Analytics. All relevant historic data were migrated to the EDC system. All data since 2007 were restated and complemented with additional information. All audit efforts are conducted in close coordination with data contributors and partnering national associations to ensure the best coverage and consistent application of methodology and definitions. The EDC was developed by Invest Europe and its national association partners to collect Europe-wide industry activity on fundraising, investments and divestments. It remains a non-commercial pan-European private equity database with its own staff and resources courtesy of the associations that own and operate it. Its approach is based on a Census of European PE and VC firms identified by Invest Europe and its PE and VC partner associations. Firms are surveyed on a half-year and annual basis. Throughout the data-collection periods, the associations are contacting non-respondents to encourage participation in the survey. Information can be complemented by data from public sources (e.g. press, media, websites of PE and VC firms or their portfolio companies); data are included if complying with rules defining the qualifying fund managers (GPs), the transaction date, the relevant amounts and the qualitative parameters. Two independent public sources are usually required before information is added to the database.
KVCA	Census of registered Korean VC firms (for registration, the capital of a VC firm should exceed 5000 won). By law, VC firms report their activities monthly.
NVCA/Pitchbook	NVCA/PitchBook report: Quarterly study of venture capital investment activity in the United States, produced by NVCA in cooperation with PitchBook. The report includes the investment activity (in investee companies domiciled in the United States) of professional venture capital firms with or without a US office, Small Business Investment Companies (SBICs), corporate VC, institutions, investment banks and similar entities whose primary activity is financial investing. Angel, incubator and similar investments that are part of a VC round are included if they involve cash for equity and not buyout or services in kind. Data are primarily obtained from a quarterly survey of venture capital practitioners conducted by PitchBook. Information is augmented by other research techniques including other public and private sources. All data are subject to verification with the venture capital firms and/or the investee companies.
NZVCA	Survey of VC and PE participants in the New Zealand market performed by NZVCA and Ernst & Young, including firms from both New Zealand and Australia (the 2011 sample consisted of 21 responses). Also included is any publicly announced information (*e.g.* S&P Capital IQ; New Zealand Venture Investment Fund's *Young Company Finance* publication). NZVCA and Ernst & Young acknowledge that a small number of industry participants elect not to participate in the survey.
Israel/PwC	The MoneyTree™ Report: Quarterly study by PwC Israel.
RVCA	Survey of PE and VC funds active in the Russian market completed with information from interviews with Russian PE&VC industry experts and open sources. In 2012, the review of data covered more than 180 funds. RVCA considers that the total figures collected adequately reflect the Russian market trends.
SAVCA	Survey of PE industry participants, conducted by KPMG and SAVCA. Investments are included if there are made in South Africa, regardless of where they are managed from. Investments in private equity from corporates, banks and Development Financing Institutions are covered. In 2012, the survey obtained 95 responses representing 102 funds; information from 15 additional PE firms representing 15 funds was added drawing from alternative sources. KPMG and SAVCA estimate that the survey represents in excess of 90% of the South African Private Equity industry by funds under management.
VEC	Survey of VC investors identified by VEC.

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