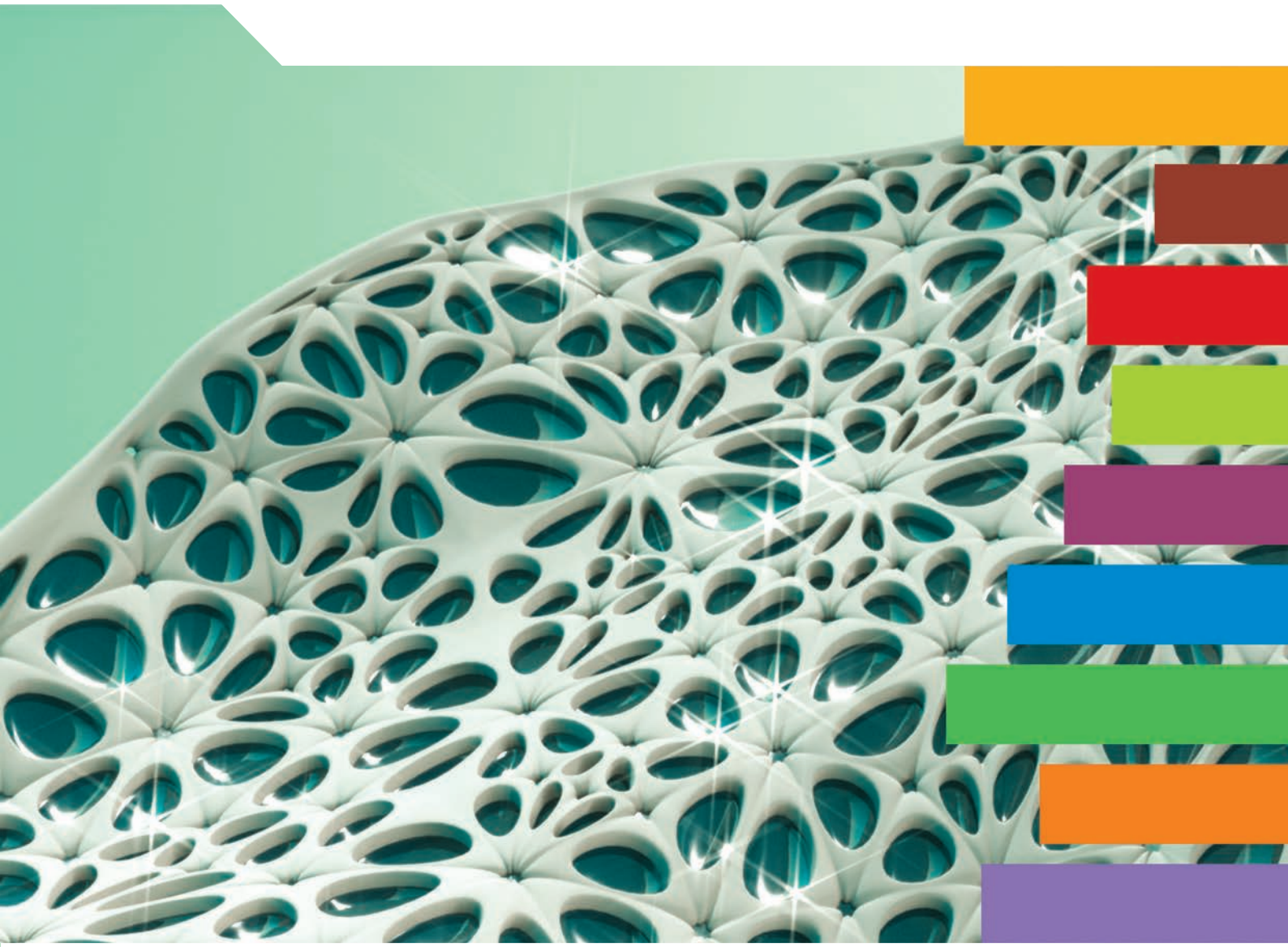
Entrepreneurship at a Glance 2016



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Entrepreneurship at a Glance 2016

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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. In particular, the global financial crisis highlighted the need for more timely information on the situation of small businesses. To that purpose, Entrepreneurship at a Glance *features an opening section on recent trends in entrepreneurship, discussing new data on enterprise creations and exits, bankruptcies and self-employment. In the present edition, the opening section also introduces for the first time findings on expected job creation in the SME sector; they result from a new online business survey designed by Facebook in cooperation with the OECD Statistics Directorate and the World Bank.*

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

Particular thanks go to Eurostat and to experts in National Statistical Offices from Australia, Austria, Belgium, Brazil, Bulgaria, Canada, Chile, Colombia, Croatia, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Iceland, Israel, Italy, Japan, Korea, Latvia, Lithuania, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, Romania, the Russian Federation, the Slovak Republic, Slovenia, South Africa, Spain, Sweden, Switzerland, the United Kingdom and the United States; and to Cornelius Mueller from Invest Europe, and Ted Liu from the Canadian Venture Capital and Private Equity Association for help and advice on equity capital statistics.

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Executive summary

Entrepreneurialism is on the rise again

Although the post-crisis recovery in entrepreneurialism remains mixed across countries - with enterprise creation rates at half their pre-crisis levels in the case of Finland, around one-fifth to one-third lower in the United States, Germany, Spain, Belgium and Italy, and higher in the United Kingdom, France, Sweden and the Netherlands - the most recent data (end of 2015 and beginning of 2016) provide tentative signs of a turning point, with trends in enterprise creation rates pointing upwards in most economies.

New evidence from a survey prepared by Facebook in cooperation with the OECD and the World Bank also points to a more positive outlook on job creation. Around half of firms with 50 or more employees and between 10% and 20% of self-employed firms in G7 economies, for example, expect to increase employment in the next six months. Moreover the survey provides essential insights on the importance of creative destruction and innovation in driving employment growth, with the proportion of firms less than three years old expecting to increase employment in the short term higher than the corresponding proportion for firms more than ten years old in nearly all countries.

This should help to boost growth and begin to reverse the weak post-crisis contribution of enterprise creations to overall employment, a slowdown that was exacerbated in most OECD countries by the smaller average employment size of enterprise births in 2013 compared to 2008, and weak self-employment levels - notably so in Portugal and Greece, as well as in Japan and Korea.

Moreover, improvements in enterprise creations should also help boost labour productivity growth, with evidence pointing to a correlation between start-up and churn rates, and productivity growth; although, the impact on recorded labour productivity growth may not be immediate. On average, smaller firms have lower labour productivity levels than large firms, particularly in the manufacturing sector.

Interestingly, post-crisis comparisons of enterprise creations in the euro area and the United States point to greater dependence on SMEs as drivers of economic growth in the euro area. Growth in the number of SMEs in the euro area was higher than in the United States in all sectors, especially in manufacturing where the number of US SMEs was lower in 2013 than in 2008. On the contrary, growth in the number of large firms in the euro area was lower than in the United States in all sectors. Similarly, in the euro area, growth in the number of large firms was lower than growth of SMEs across all sectors, while the reverse was true in the United States. This may, at least in part, point to structural factors underpinning the productivity gap between the euro area and the United States.

Improved access to foreign markets, directly and indirectly, may further bolster entrepreneurialism

In all countries, most micro and small firms do not export; indeed, only between 10% and 40% of SMEs are direct exporters. In general, the share of all enterprises participating in international trade varies significantly across countries, with larger countries typically having lower shares reflecting the size of the internal market. Significant differences exist however even among large countries: for example, the share of firms that export in Germany is three times as large as in France.

When they do export, small firms are more likely than large firms to export exclusively to markets relatively close to their home country. European small and micro-enterprises, on average, account for nearly 20% of trade with nearby destinations such as Germany, Italy and the Netherlands, but only for slightly more than 5% of exports to China, Japan or the United States. Fostering export opportunities to new, particularly emerging markets, and helping address barriers to trade, can help channel growth while also adding momentum to entrepreneurialism.

The evidence points to SMEs in the service sector contributing disproportionately more to exports compared to SMEs in (tangible) capital-intensive industries such as motor vehicles and other transport equipment. This suggests that policies that nurture SMEs in knowledge-based (services) sectors, where investment in intangible assets such as brand, design and organisational capital provide opportunities to create comparative advantages, and that also encourage SMEs in niche manufacturing activities that depend on knowledge-based assets, such as furniture, textiles and clothing, can be a road to success.

However, the evidence also cautions against focusing only on direct exporters, which understates the true exposure of SMEs to foreign markets, and the recent slowdown in international trade, given that many SMEs are indirectly linked to export markets as upstream suppliers to other larger domestic exporting firms.

Once passed the barriers to create a business, women feel as confident as men about their enterprise

Most countries in the OECD area show gender gaps in factors that are important for entrepreneurship. On average, men are more likely than women to declare that they would have access to money to set up a business (34% for men and 27% for women) and to training to help them do so (51% for men 44% for women). These gender gaps are likely to explain differences in outcomes as well. On average, 5.1% of employed men aged 15-24 are self-employed, compared with 3.6% for women, while 29.2% of employed men aged 55+ are self-employed compared with 15.9% for women. However, new evidence from the Facebook-OECD-World Bank survey suggests that despite these gender gaps, women feel as confident as men about their business and its future once it is up and running.

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 provides 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, Bulgaria, Canada, Chile, Colombia, Croatia, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, 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.

This year's edition also presents data resulting from a new collaboration between Facebook, the OECD and the World Bank to develop a new survey, the *Future of Business Survey*. Launched in February 2016, the new and innovative monthly and on-line survey asks respondents (businesses with a Facebook presence) a range of questions that provide the basis for timely and qualitative measures of the future outlook of businesses, and the economy in general. In addition the survey also contains a series of complementary questions designed to provide granular information on important characteristics of the firm, such as gender of the top management, age of the firm, involvement in international trade, and use of digital tools. In combination with the insights on the future outlook, these provide a powerful tool to assess potential factors that may help shape future growth but they also provide important insights on contemporary structural factors, with examples given in this publication. To date the survey has been conducted in 22 countries but country coverage will be extended over the coming years.

Finally, a selection of **indicators of determinants of entrepreneurship** is also included in this publication: the choice of these indicators is based on their novelty, i.e. they were recently produced and/or updated by their producers.

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

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) Enterprise exits

C) Bankruptcies

D) Self-employment

E) Outlook and prospects of job creation

F) Enterprises by size

G) Employment by enterprise size

H) Value added by enterprise size

I) Turnover by enterprise size

J) Compensation of employees by enterprise size

K) Labour productivity by enterprise size

L) Birth rate of enterprises

M) Death rate of enterprises

N) Survival of enterprises

O) Employment creation and destruction by enterprise births and deaths

P) High-growth enterprises rate

Q) Incidence of traders

R) Trade concentration

S) Exports and imports by enterprise size

T) Market proximity

U) Exports and imports by enterprise ownership

V) Self-employment by gender

W) Self-employment among the youth

X) Earnings from self-employment

Y) Inventors by gender

Z) Perception of entrepreneurial risk

AA) Venture capital investments

Indicators A, B and C 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 D is the *OECD Main Economic Indicators (MEI) Database*. Indicator E is based on the results of a new online SME survey designed by Facebook in collaboration with the OECD Statistics Directorate and the World Bank.

For Indicators F to P the source is the *OECD Structural and Demographic Business Statistics (SDBS)* (database). Indicators F to K refer to Structural Business Statistics, while Indicators L to P consist of Business Demography statistics, generally computed from business registers. Indicators Q to U originate from the *OECD Trade by Enterprise Characteristics (TEC)*

Database. SDBS and TEC data are collected annually via harmonised questionnaires completed by National Statistical Offices.

The indicators on self-employment come from Labour Force Surveys and Census Population data (Indicators V and W) and Surveys on Income (Indicator X). Indicators Y and Z are based on *OECD Patent Database* and *Gallup World Poll Survey* data, respectively.

The source of Indicator AA 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). Total 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 an alternative classification system and were converted into ISIC Rev. 4. 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 at the level of 3-digit groups and higher. Data for all the countries mentioned above are converted into ISIC Rev. 4.

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

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 currently 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 important objective of the EIP in this instance is to contribute to and advance 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	Access to other types of equity	Technology diffusion	Immigration	Entrepreneurship education (mindset)		
Product regulation	Degree of public involvement	Stock markets	Broadband access				
Labour market regulation	Public procurement						
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	Share of high growth firms	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

1. RECENT DEVELOPMENTS IN ENTREPRENEURSHIP

New enterprise creations

Enterprise exits

Bankruptcies

Self-employment

Outlook and prospects of job creation

New enterprise creations

Key facts

- Trend start-ups remain below pre-crisis rates in most OECD economies, with rates in Belgium, Finland, Germany, Iceland, Italy and Spain between 20% and 50% lower, according to the most recent data. Only Canada, France, the Netherlands, Norway, Sweden and the United Kingdom had higher rates at the end of 2015 and beginning of 2016.
- Trends in the most recent periods however are pointing upwards in most countries, notably in France, New Zealand and Sweden; although they remain weak in Italy and Finland (with overall rates significantly below pre-crisis levels).

Relevance

The short-term indicators presented in this section provide timely information on business dynamics (births and deaths of enterprises and the associated job creation and destruction) and so provide an up-to-date snapshot of entrepreneurialism in the economy, and therefore growth, productivity, and employment prospects.

Definitions

The *OECD Timely Indicators of Entrepreneurship* are sourced from raw administrative sources of enterprise creations and exits (see Table A.1, Annex A for creations), whose definitions and coverage vary significantly by country, and indeed differ from the concepts and coverage of the benchmark definitions of births and deaths described in the *Eurostat-OECD Manual on Business Demography Statistics*. To improve international comparability and coherence with benchmark series, and where evidence of a strong correlation exists, the trend timely data series of entries and exits are benchmarked to the benchmark series (using the Cholette-Dagum method); with trend growth rates in the most recent periods fixed to the levels in the last benchmark period. For the most recent periods therefore, *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.

For Belgium, Germany, Denmark, Finland, France, Norway, Sweden and the United Kingdom, *enterprise births* were used as the benchmark concept (orange diamonds in Figure 1.1); and for Australia, Canada, Italy, New Zealand, Portugal, Spain and the United States, *employer enterprise births* were used as the benchmark concept (red diamonds). No benchmarking was applied to data for the Netherlands (white diamond).

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*).

Comparability

The underlying administrative data can vary significantly by country, with differences in the population of enterprises covered, such as types of legal form (e.g. sole proprietors), sectors of activity (e.g. 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; data for the United Kingdom exclude non-incorporated companies; and data for the United States refer only to establishments with employees.

Moreover the underlying data can be volatile as the scope of enterprises covered may change over time. For example: for Australia, the raw data exhibit a break in 2010 due to the change in the treatment of "long term non-remitters" (i.e. dormant businesses); 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.

In an effort to improve comparability of historic data, timely series are benchmarked to either the *employer enterprise birth* or the *enterprise birth* concept described in the *Eurostat-OECD Manual on Business Demography Statistics* (as described above). Similar corrections are not possible for the most recent data and, so, underlying comparability issues remain but the use and (main) focus on trend growth rates (rather than levels *per se*) does help to improve comparability.

Source

Eurostat Structural Business Statistics (SBS) (database), *http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=bd_9bd_sz_cl_r2&lang=en*.

OECD Timely Indicators of Entrepreneurship (TIE) Database, *http://stats.oecd.org//Index.aspx?QueryId=72208*.

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

Further reading

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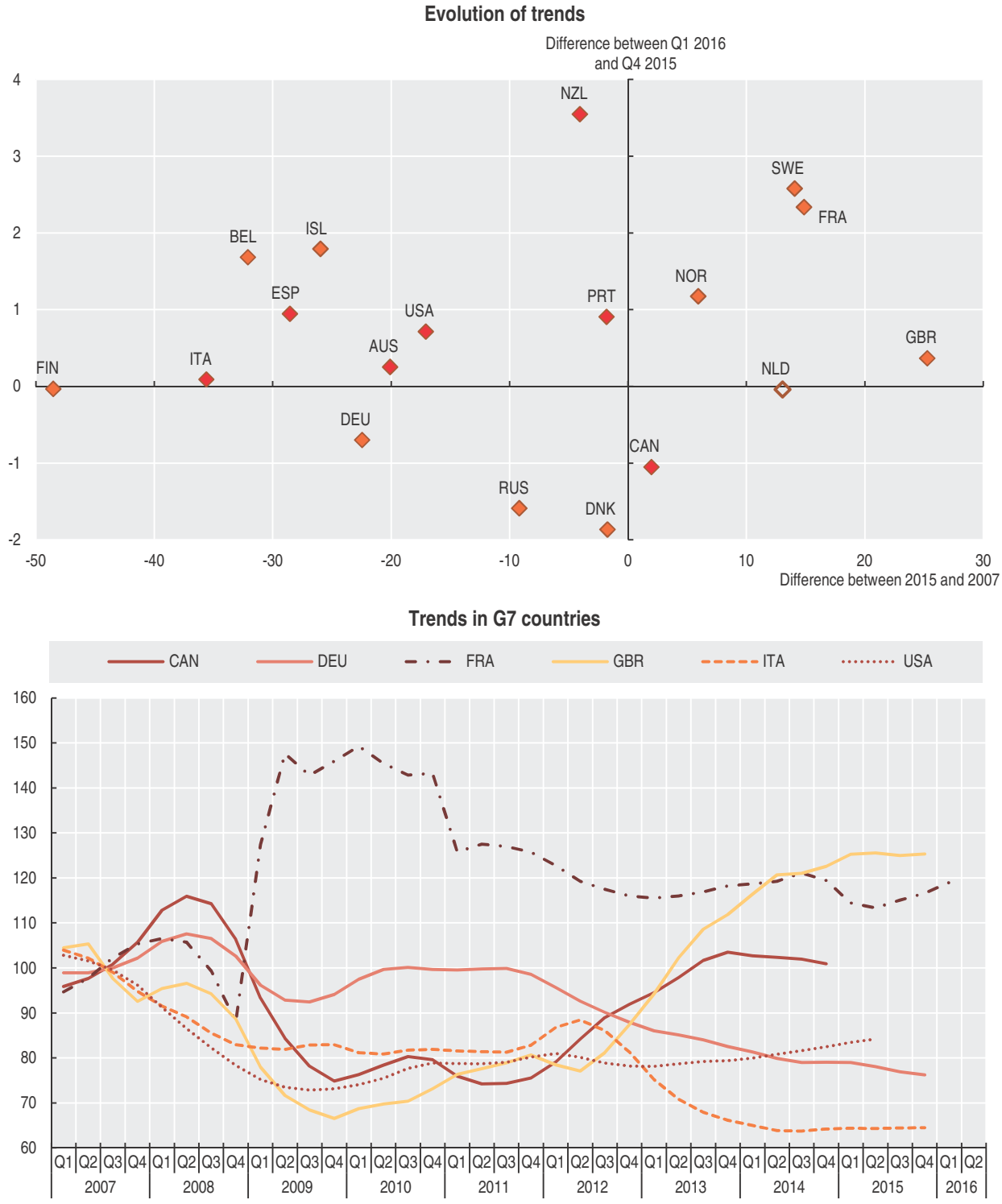
Eurostat (2010), Estimation of recent business demography data, DOC.06/EN/EUROSTAT/G2/BD/JUN10.

OECD (2010), "Measuring Entrepreneurship", *OECD Statistics Brief*, No. 15, *www.oecd.org/dataoecd/50/56/46413155.pdf*.

UN (2008), International Standard Industrial Classification of All Economic Activities (ISIC), Revision 4, 2008, United Nations, New York, *http://unstats.un.org/unsd/cr/registry/isic-4.asp*.

Figure 1.1. **New enterprise creations, selected countries**

Trend-cycle, 2007=100



StatLink http://dx.doi.org/10.1787/888933403530

Enterprise exits

Key facts

- Enterprise exits in most countries remained below pre-crisis levels in 2015, except, notably, in Finland and the Netherlands, where rates were significantly above pre-crisis levels with a strong upward trend.
- In Belgium, Germany, the United States and Spain, movements since 2007 and recent trends in enterprise exits aligned with those in enterprise entries but in Italy enterprise deaths relative to crisis rates have significantly outpaced the evolution of enterprise births and the most recent data point to that decoupling continuing.
- In Finland enterprise death rates were significantly above pre-crisis levels, with strong upward trends in the most recent data, despite enterprise birth rates remaining significantly below pre-crisis levels and negligible trend growth in the most recent periods. Enterprise death rates were also significantly above pre-crisis levels in the Netherlands, with trends pointing strongly upwards in the most recent period.

Definitions

The *OECD Timely Indicators of Entrepreneurship* are sourced from raw administrative sources of enterprise creations and exits (see Table A.2, Annex A, for exits), whose definitions and coverage vary significantly by country, and indeed differ from the concepts and coverage of the benchmark definitions of births and deaths described in the *Eurostat-OECD Manual on Business Demography Statistics*. To improve international comparability and coherence with benchmark series, and where evidence of a strong correlation exists, the trend timely data series of entries and exits are benchmarked to the benchmark series (using the Cholette-Dagum method); with trend growth rates in the most recent periods fixed to the levels in the last benchmark period. For the most recent periods therefore, *enterprise exits* may include exits arising through mergers, changes in legal form, or firms suspending activity for one-year in addition to pure deaths.

For Germany and the Netherlands, the *enterprise death* concept was used as the benchmark concept (orange diamonds in Figure 1.2), while for Italy, New Zealand and the United States, *employer enterprise deaths* were used as the benchmark concept (red diamonds). No benchmarking was applied to data for Belgium, Canada, Finland, Spain and the United Kingdom (white diamonds).

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*).

Relevance

The short-term indicators presented in this section provide timely information on business dynamics (births and deaths of enterprises and the associated job creation and destruction) and so provide an up-to-date snapshot of entrepreneurialism in the economy, and therefore growth, productivity, and employment prospects.

Comparability

The underlying administrative data can vary significantly by country, with differences in the population of enterprises covered, such as types of legal form (e.g. sole proprietors), sectors of activity (e.g. agriculture or education) or enterprises below a certain turnover or employment threshold.

In an effort to improve comparability of historic data, timely series are benchmarked to either the *employer enterprise birth* or the *enterprise birth* concept described in the *Eurostat-OECD Manual on Business Demography Statistics* (as described above). Similar corrections are not possible for the most recent data and, so, underlying comparability issues remain but the use and (main) focus on trend growth rates (rather than levels *per se*) does help to improve comparability.

Data for the United Kingdom are presented relative to 2010 instead of 2007.

Source

Eurostat Structural Business Statistics (SBS) (database), *http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=bd_9bd_sz_cl_r2&lang=en*.

OECD Timely Indicators *of Entrepreneurship (TIE) Database*, *http://stats.oecd.org//Index.aspx?QueryId=72208*.

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

Further reading

Cholette, P.A. and E.B. Dagum (1994), "Benchmarking time series with autocorrelated survey errors", *International Statistical Review*, Vol. 62, No. 3, *www2.stat.unibo.it/beedagum/Papers/0407-0420.pdf*.

Eurostat (2010), Estimation of recent business demography data, DOC.06/EN/EUROSTAT/G2/BD/JUN10.

OECD (2010), "Measuring Entrepreneurship", *OECD Statistics Brief*, No. 15, *www.oecd.org/dataoecd/50/56/46413155.pdf*.

UN (2008), International Standard Industrial Classification of All Economic Activities (ISIC), Revision 4, 2008, United Nations, New York, *http://unstats.un.org/unsd/cr/registry/isic-4.asp*.

Figure 1.2. **Enterprise exits, selected countries**

Trend-cycle, 2007=100

StatLink http://dx.doi.org/10.1787/888933403541

Bankruptcies

Key facts

- Bankruptcy rates in 2015 were significantly below pre-crisis levels in Canada, Brazil and South Africa and around 15% to 25% lower in Germany, Japan and the United States. By contrast, they were significantly higher in Austria, France, the Netherlands and Norway, and were over double their pre-crisis rates in Italy and nearly four times as high in Spain, although recent quarter on quarter trends point strongly downwards in both countries.

Relevance

The short-term indicators presented in this section provide timely information on business dynamics (births and deaths of enterprises and the associated job creation and destruction) and so provide an up-to-date snapshot of entrepreneurialism in the economy, and therefore growth, productivity, and employment prospects.

Definitions

The bankruptcy data shown here are sourced from raw administrative sources whose definitions and coverage vary significantly by country. Whenever possible the raw data are adapted to ensure that the sectoral coverage reflects the standard used in the 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 elsewhere in this publication is that a 'bankrupt' firm may continue to operate.

Sources for Bankruptcies used in the *Timely Indicators of Entrepreneurship Database* are described in Table A.3, Annex A.

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*).

Comparability

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 bankruptcy data focus mainly on changes in levels rather than levels *per se*.

Source

OECD Timely Indicators *of Entrepreneurship (TIE) Database*, *http://stats.oecd.org//Index.aspx?QueryId=72208*.

Further reading

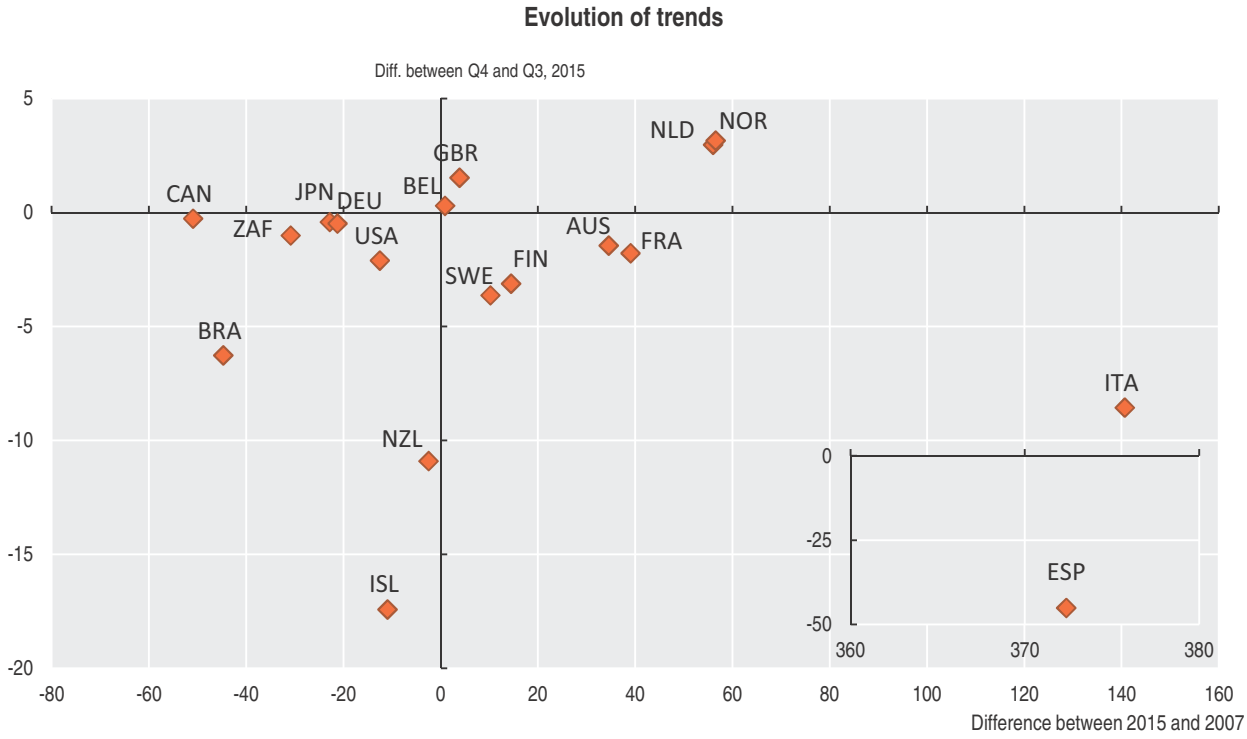
Eurostat (2010), Estimation of recent business demography data, DOC.06/EN/EUROSTAT/G2/BD/JUN10.

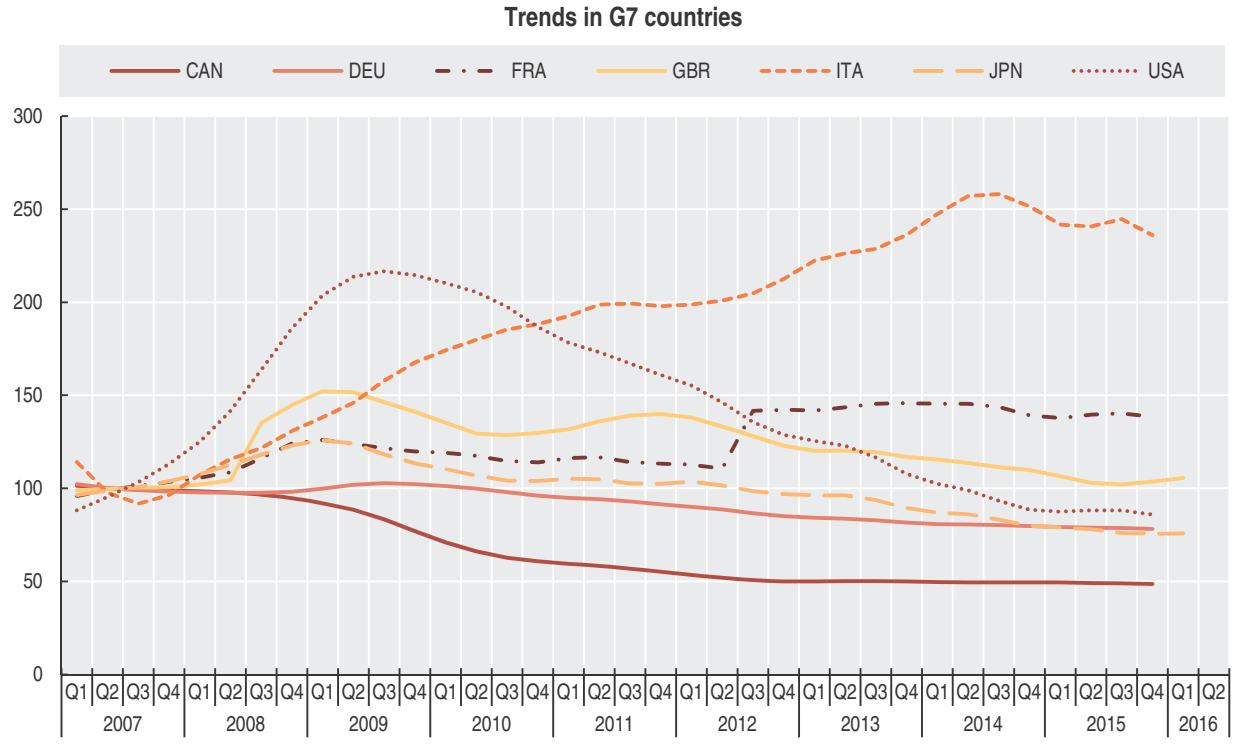
OECD (2010), "Measuring Entrepreneurship", *OECD Statistics Brief*, No. 15, *www.oecd.org/dataoecd/50/56/46413155.pdf*.

UN (2008), International Standard Industrial Classification of All Economic Activities (ISIC), Revision 4, 2008, United Nations, New York, *http://unstats.un.org/unsd/cr/registry/isic-4.asp*.

Figure 1.3. **Bankruptcies, selected countries**

Trend-cycle, 2007=100





StatLink http://dx.doi.org/10.1787/888933403557

Self-employment

Key facts

- Self-employment rates and the number of self-employed were significantly above pre-crisis values in 2015 in France (partly reflecting a change in legislation to simplify the creation of small businesses), the Netherlands and the United Kingdom, with recent trends also pointing strongly upwards. Self-employment rates and the number of self-employed were also significantly above pre-crisis values in Finland and the Czech Republic but recent trends are pointing downwards pointing downwards in these countries.
- Self-employment rates and the number of self-employed remained below pre-crisis values in most countries, although recent trends in both are pointing upwards in Australia, Hungary and Norway.
- Self-employment levels were significantly below pre-crisis values in Greece, Japan, Korea and Portugal with recent trends pointing downwards.

Definitions

The *self-employed* are defined as those who own and work in their own busines, including unincorporated businesses and own-account workers, and declare themselves as "self-employed" in population or labour force surveys.

Self-employment jobs are defined as those "jobs where the remuneration is directly dependent upon the profits (or the potential for profits) derived from the goods and services produced (where own consumption is considered to be part of profits). The incumbents make the operational decisions affecting the enterprise, or delegate such decisions while retaining responsibility for the welfare of the enterprise" (15th Conference of Labour Statisticians, January 1993). The definition thus includes both unincorporated and incorporated businesses and as such differs from the definitions used in the System of National Accounts which classifies self-employed owners of incorporated businesses and quasi-corporations as employees.

The *self-employment rate* refers to the number of self-employed as a percentage of total employment.

Relevance

Entrepreneurship is an important determinant of sustainable and inclusive growth, with significant potential for creating further jobs beyond self-employment.

Comparability

Evidence in many countries points to rising shares of part-time employees, which may impair the interpretability and comparability of self-employment and self-employment rates across time and countries.

For Japan and Norway, data for self-employment do not include owners who work in their incorporated businesses, and instead are counted as employees.

Care is needed in interpreting the results with regards to entrepreneurship. Not insignificant shares of the self-employed in some countries may reflect arts and crafts or subsistence type activities.

Sources

OECD *Main Economic Indicators* (database), *http://dx.doi.org/10.1787/mei-data-en*.

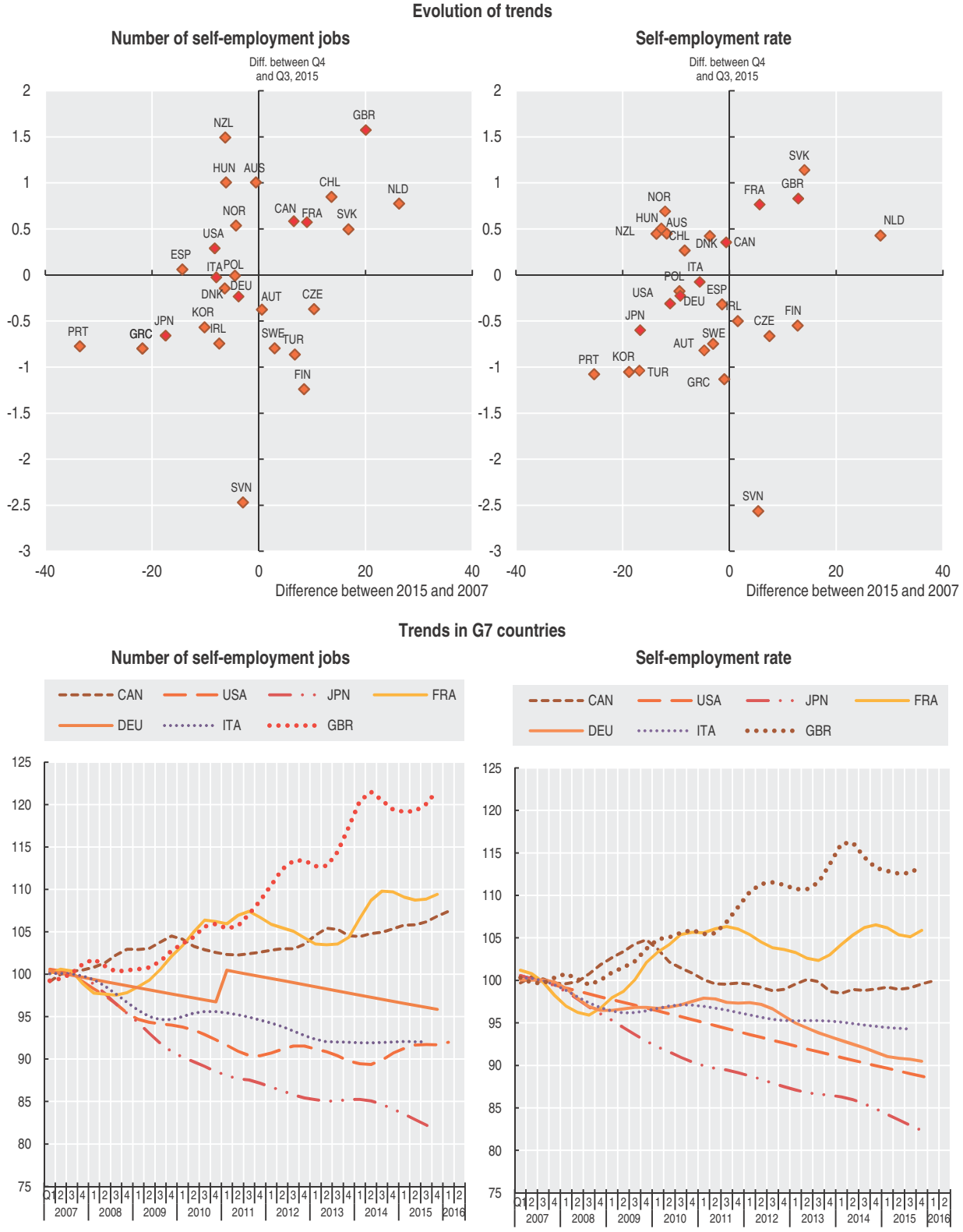
Further reading

Hipple, S. and L. Hammond (2016), "Self-employment in the United States", Spotlight on Statistics, *www.bls.gov/spotlight/2016/self-employment-in-the-united-states/home.htm*.

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*.

Figure 1.4. **Self-employment, selected countries**

Trend-cycle, 2007=100



StatLink http://dx.doi.org/10.1787/888933403568

Outlook and prospects of job creation

Key facts

- Across countries and over time, micro enterprises typically have a less positive evaluation of their current or future situation than do larger firms. Cultural as well as economic factors help to shape responses, with Japanese firms of all sizes scoring the lowest of all G7 countries in positive assessments and highest for negative assessments. Of note, given that the survey period began five months prior to the UK Referendum on European Union membership, is the significantly higher negative assessments of UK firms with 50 or more employees, than those made by smaller firms.
- The age of a firm also has an influence on expectations. Young enterprises are significantly more positive about the short term, and have higher expectations about job growth, than do enterprises more than 10 years old, especially in emerging economies such as Colombia, India and Viet Nam.
- Despite the gender gap in perception of barriers in setting up a business (as seen further in Chapter 7), women feel equally confident as men about their business and its future, once it is up and running.
- Around half of firms with 50 or more employees in G7 countries (two-thirds in the United States) expect to increase employment in the latter half of 2016, a significantly greater share than that of micro enterprises (between 10% and 20% for self-employed firms). However, in general, large firms are much more likely to shed jobs in the latter half of 2016 than smaller firms: around 15% of large firms in Italy and 10% in the United Kingdom and Canada.
- Past success is a useful indicator of future expectations. The highest shares of "positive employment outlook" in the latter half of 2016 are found among enterprises, of all sizes, that have already increased employment in the previous six months.

Definitions

Current status and *Outlook* respectively report the reply ("Positive", "Neutral" or "Negative") 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?".

Prospects of job creation in the short-term are measured responses ("Increase", "No change" or "Decrease") to the question "How do you expect the number of employees in your business to change in the next six months?".

Male (female) managed/owned enterprises are identified as enterprises having at least 65% of male (female) owners or top managers. *Balanced management* of an enterprise refers to firms where neither gender constitutes 65% or more of ownership or top management.

Relevance

Entrepreneurship is an important determinant for achieving sustainable and inclusive growth, and has significant potential for creating further jobs beyond self-employment. Prospects of job creation by the business sector are not only contingent on the economic cycle, but also depend on characteristics of the enterprises.

Comparability

Data are drawn from the first six waves (February to July 2016) of a new monthly survey of enterprises, the *Future of Business Survey,* conducted by Facebook in collaboration with the OECD and the World Bank. The survey is administrated via an online questionnaire enquiring about perceptions on the current state and future outlook of the firm, and more broadly of the economy and relevant industry; granular information on enterprise characteristics such as age, size and involvement in international trade is also collected. The survey currently covers 22 countries, where the reference population are enterprises with a Facebook account. Country samples are not stratified, and figures in this section present unweighted data with respect to enterprise size, age and economic activity of enterprises (see also Reader's Guide). In Figures 1.6, 1.7 and 1.11, for July 2016 data, the class size 2-3 refers to 2-4; 4-10 refers to 5-9; 11-50 refers to 10-49; and more than 50 refers to 50 and more.

Source

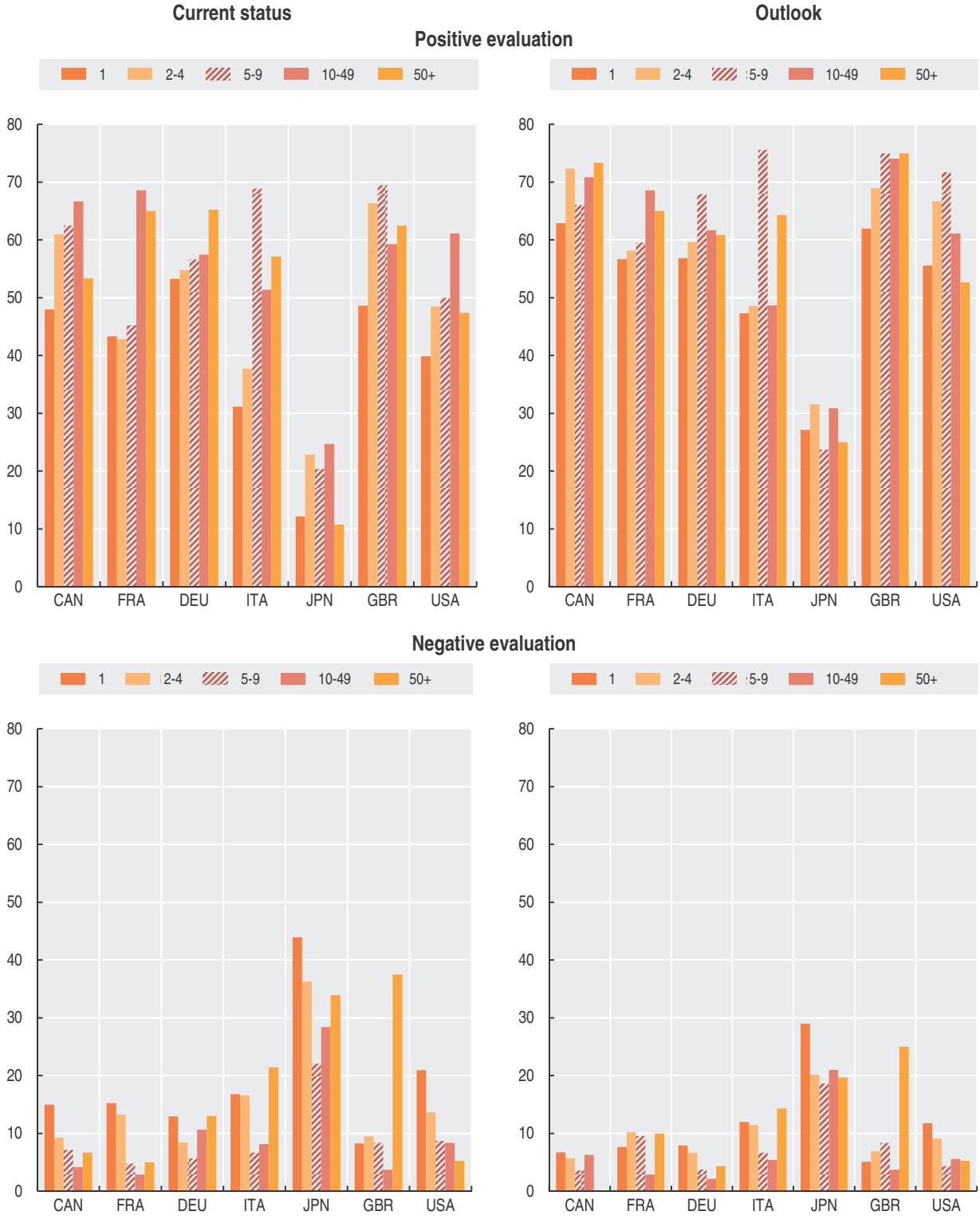
Facebook Future of the Business Survey, *www.futureofbusinesssurvey.org*.

Further reading

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

Figure 1.5. **Current business status and outlook, by enterprise size, G7 countries**

Percentage of survey respondents, July 2016



StatLink http://dx.doi.org/10.1787/888933403576

Figure 1.6. **Positive current business status, by enterprise size**

Percentage of survey respondents, February-July 2016

StatLink http://dx.doi.org/10.1787/888933403582

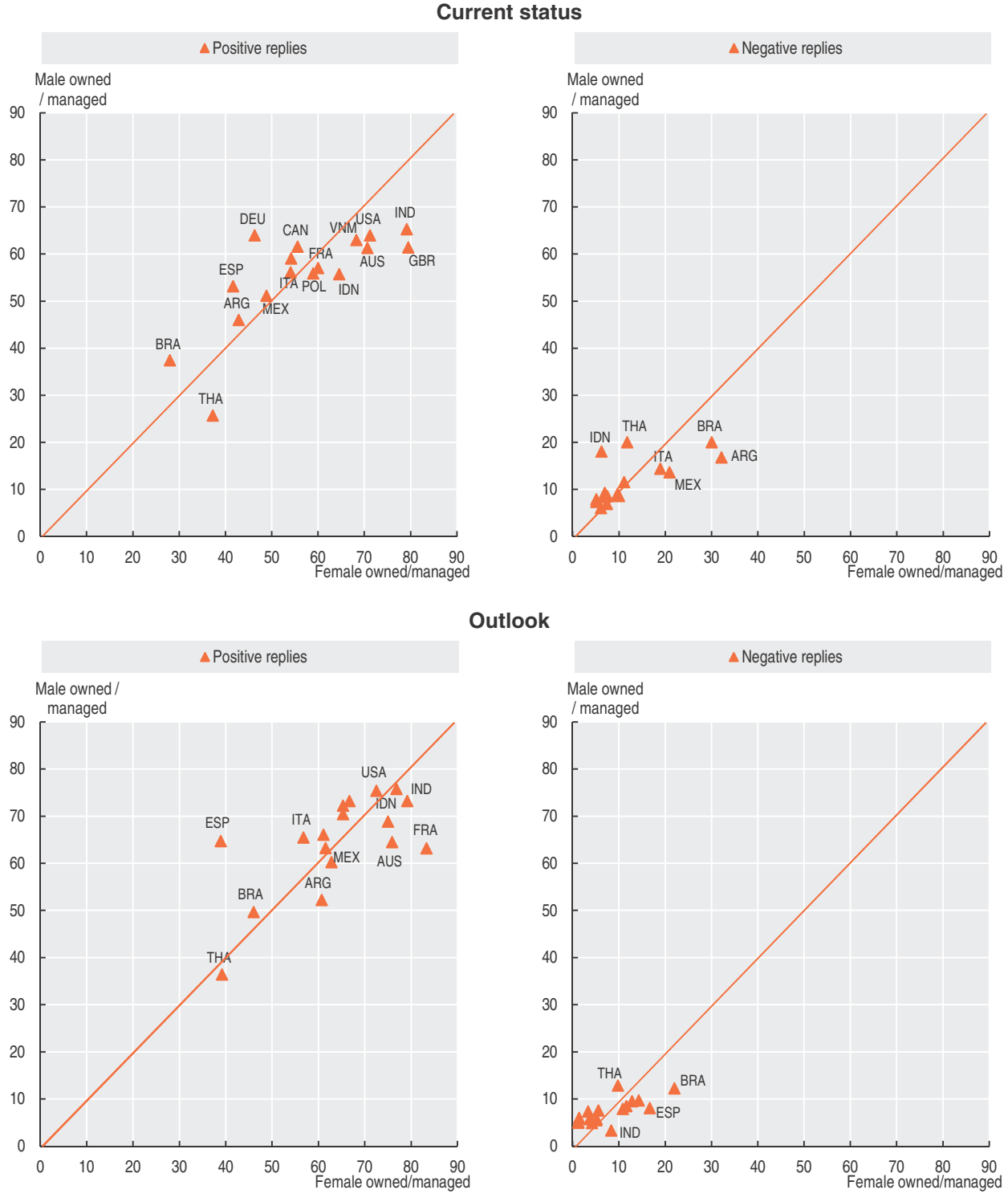
Figure 1.7. **Positive business outlook, by enterprise size**

Percentage of survey respondents, February-July 2016

StatLink http://dx.doi.org/10.1787/888933403591

Figure 1.8. **Current business status and outlook, by gender**

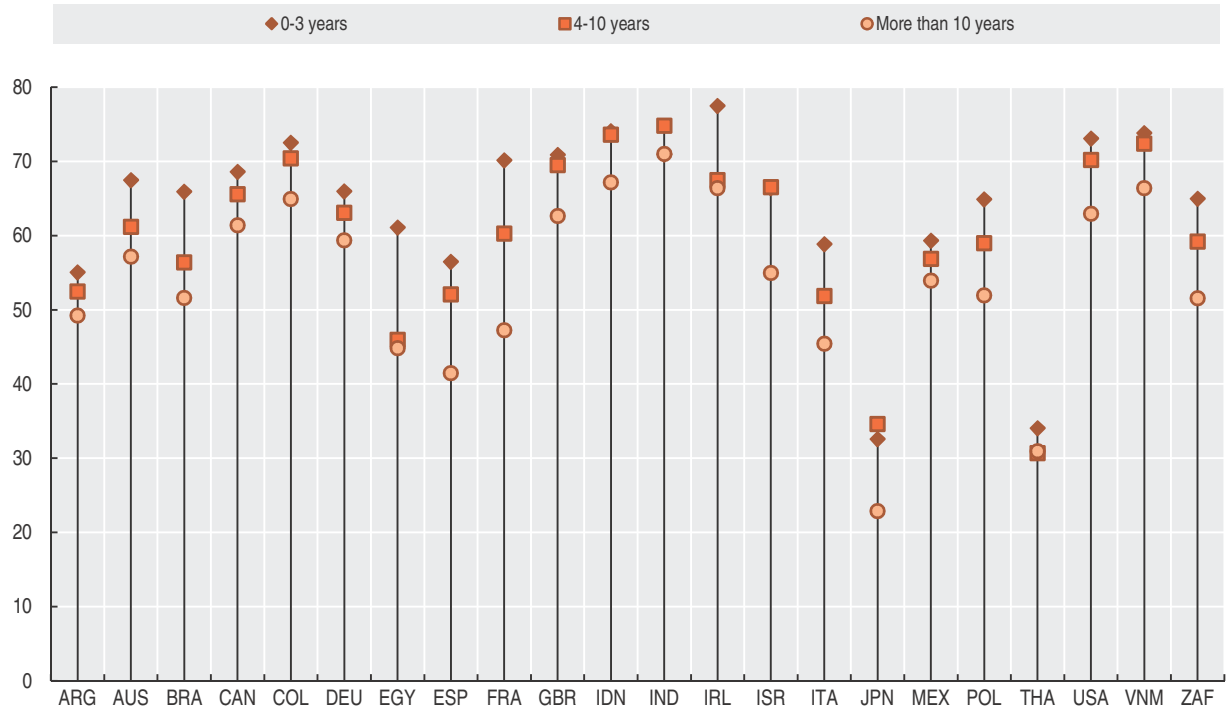
Percentage of survey respondents, February-July 2016



StatLink http://dx.doi.org/10.1787/888933411120

Figure 1.9. **Positive business outlook, by enterprise age**

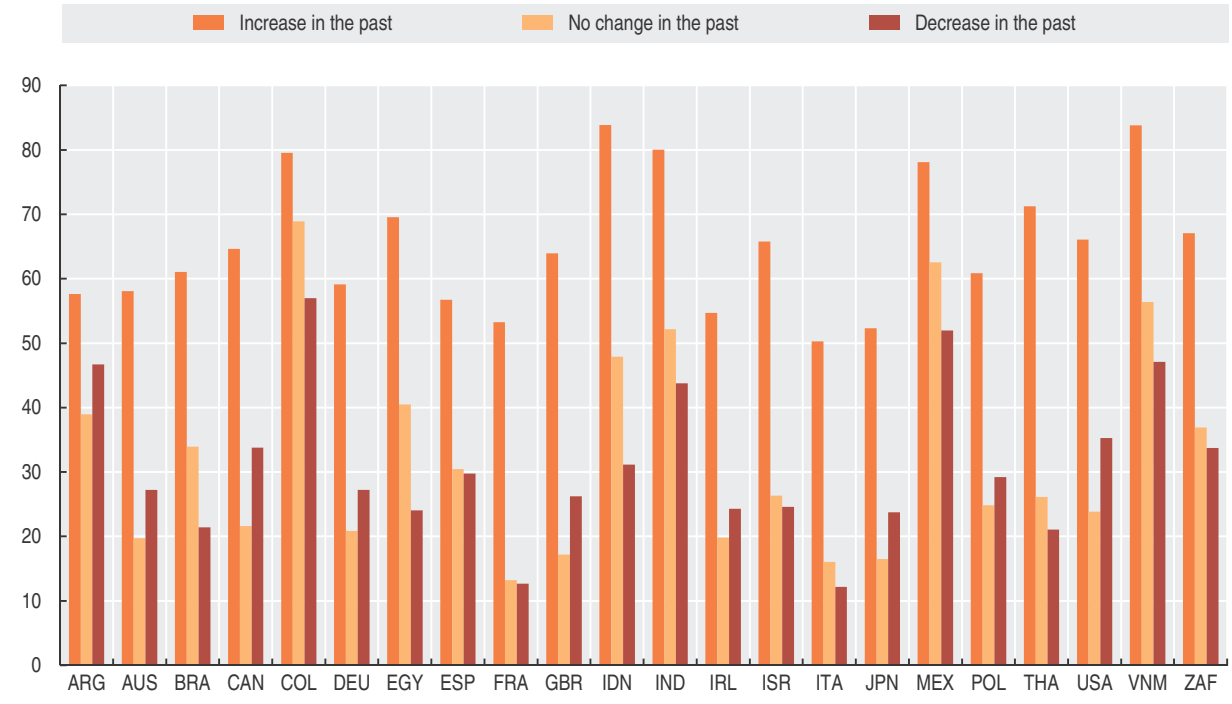
Percentage of survey respondents, February-July 2016



StatLink http://dx.doi.org/10.1787/888933411130

Figure 1.10. **Positive prospects of job creation, by past employment evolution**

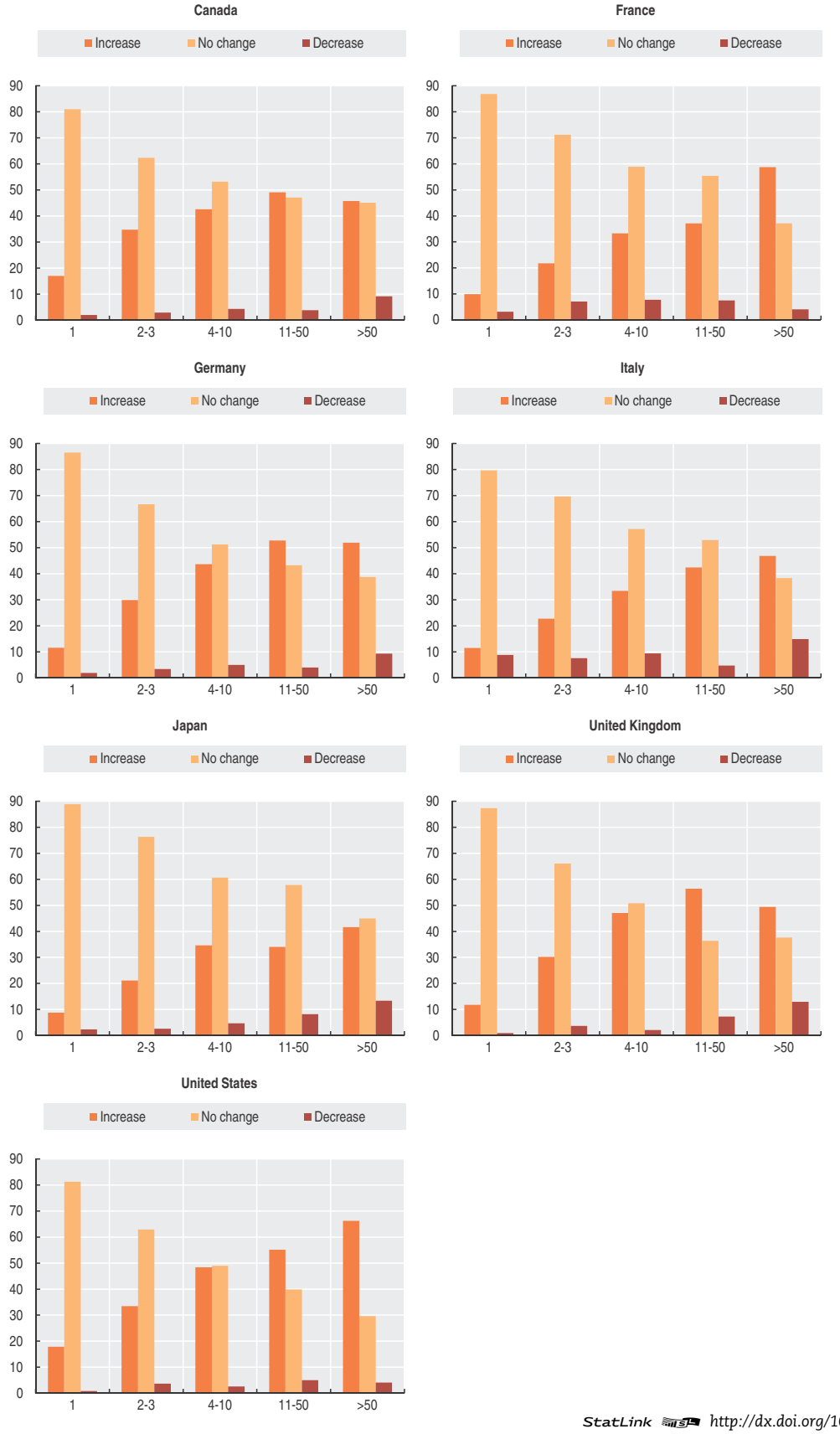
Percentage of survey respondents, February-July 2016



StatLink http://dx.doi.org/10.1787/888933411144

Figure 1.11. **Prospects of job creation, by enterprise size, G7 countries**

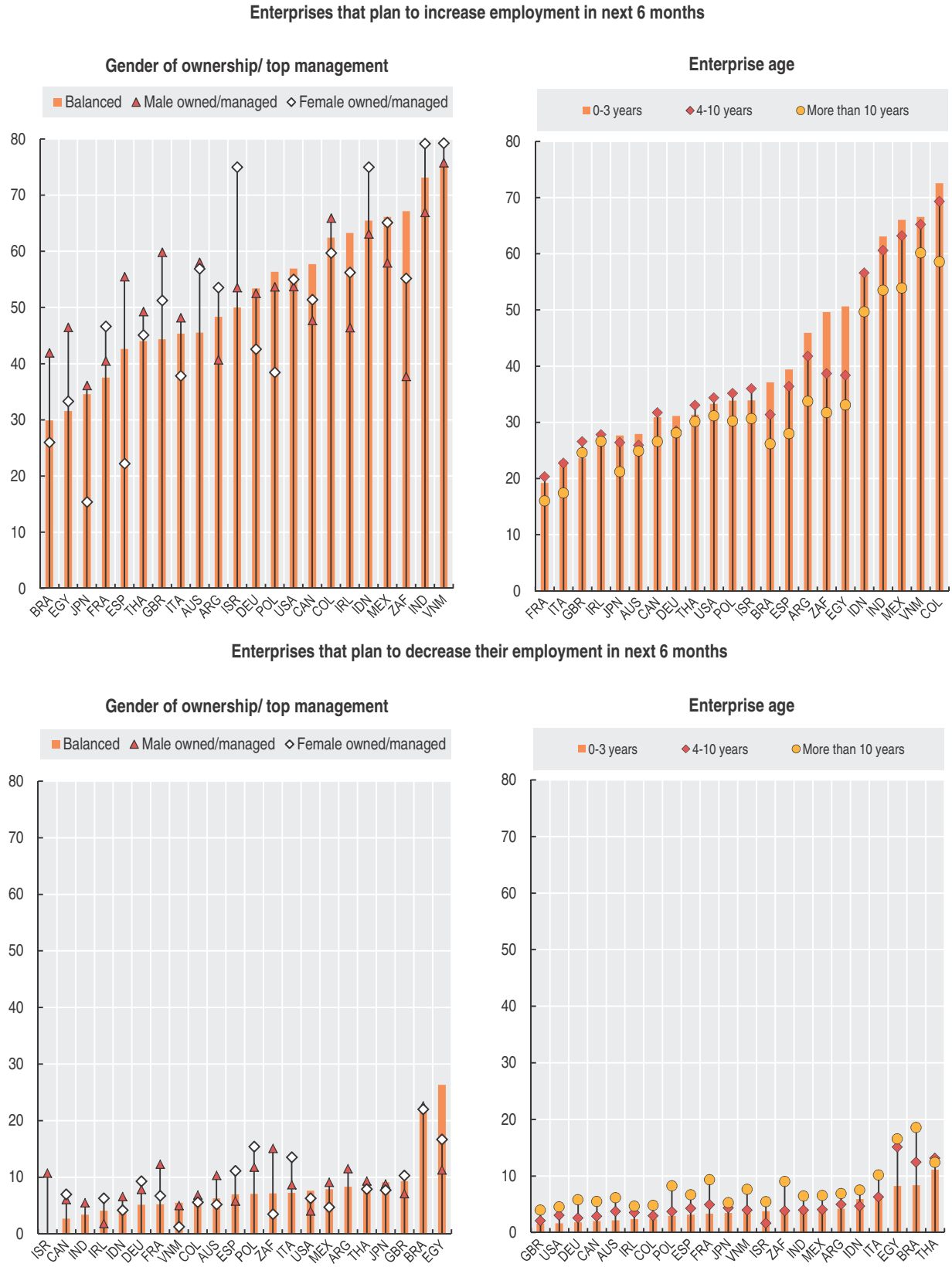
Percentage of survey respondents, February-July 2016



StatLink http://dx.doi.org/10.1787/888933411152

Figure 1.12. **Prospects of job creation, by gender of ownership or top management and by enterprise age**

Percentage of survey respondents, February-July 2016



StatLink http://dx.doi.org/10.1787/888933411161

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 facts

- In all countries, between 70% and 95% of all firms are micro-enterprises, i.e. enterprises with fewer than ten persons employed. Moreover, a very large share of micro-enterprises are non-employer enterprises, i.e. enterprises with no employees.
- Between 2009 and 2013, the overall number of SMEs in the total economy slightly declined in the United States but increased in the euro area. The development in the euro area was driven, in many cases, by growing numbers of micro-enterprises. The manufacturing sector in the euro area saw a decrease in the number of large enterprises (0.4%), contrary to the services sector, where it increased by 1%.
- Partly reflecting the higher entry costs and capital intensity in manufacturing, SMEs in OECD countries are disproportionately located in the services and construction sectors, which capture many self-employed labourers.

Relevance

Small businesses can be important drivers of growth and innovation. Without the right policy environment, however, they may face barriers to growth 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, Switzerland, the United States and the Russian Federation, data do not include non-employer enterprise counts. For the total 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 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 2.2, the euro area excludes Ireland. In Figure 2.5, both the Structural Business Statistics and the Business Demography datasets are used as data sources.

Sources

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

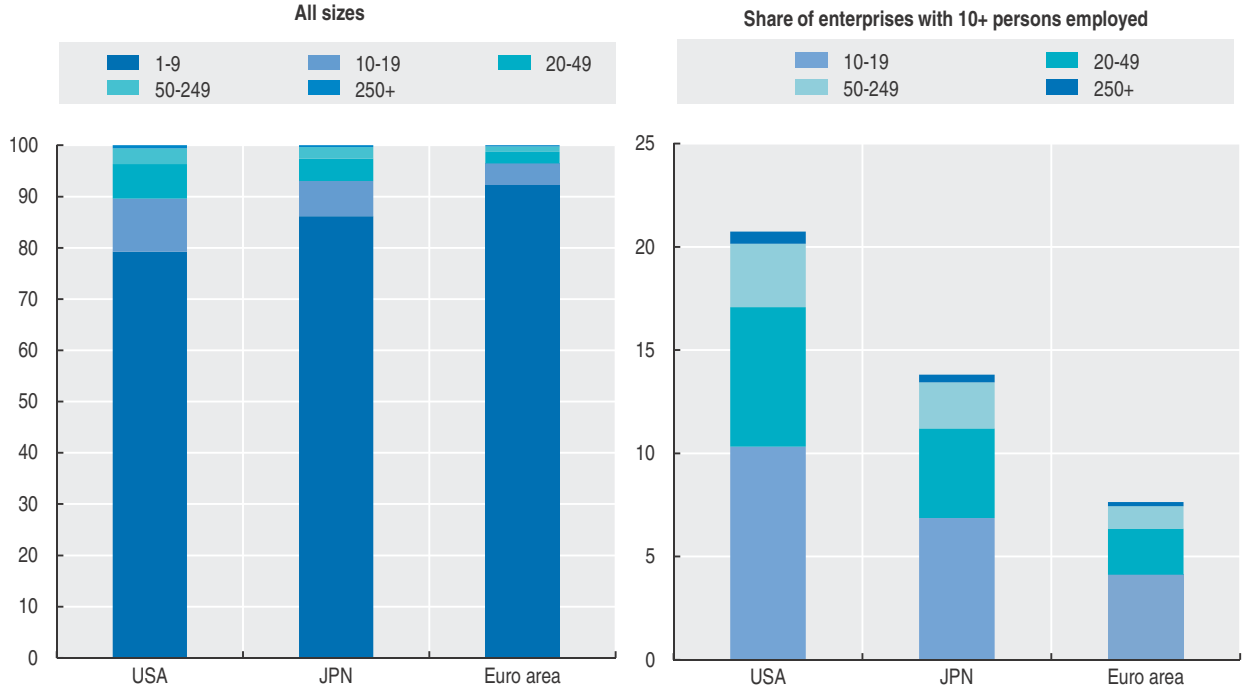
Further reading

Ahmad N. (2007), The *OECD's Business Statistics Database* and Publication, Paper presented at the Structural Business Statistics Expert Meeting, Paris, 10-11 May 2007, *www.oecd.org/dataoecd/59/34/38516035.pdf*.

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

Figure 2.1. **Enterprises by size, total business economy, selected countries**

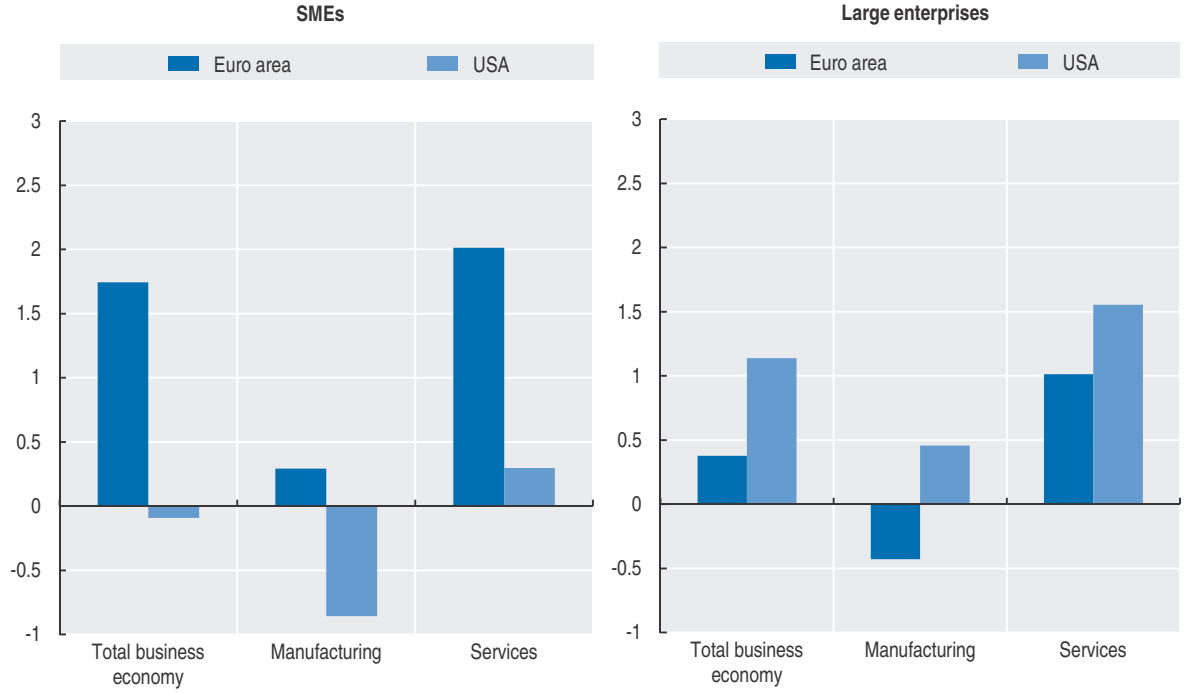
Percentage of all enterprises, 2013, or latest available year



StatLink http://dx.doi.org/10.1787/888933403607

Figure 2.2. **Change in number of enterprises, by main sector, euro area and United States**

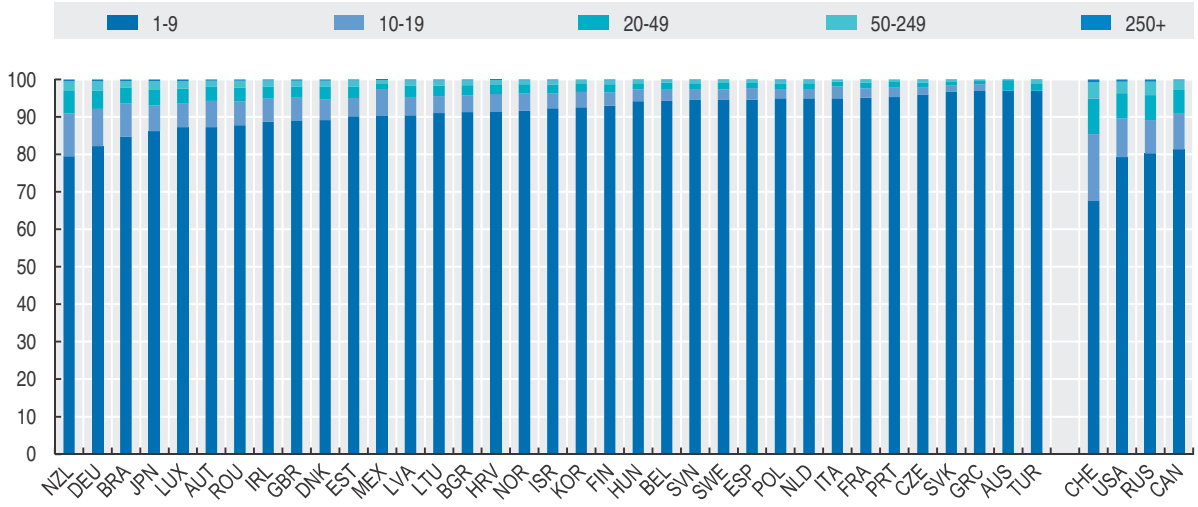
Average annual percentage change between 2009 and 2013



StatLink http://dx.doi.org/10.1787/888933403615

Figure 2.3. **Enterprises by size, total business economy**

Percentage of all enterprises, 2013, or latest available year



StatLink http://dx.doi.org/10.1787/888933403628

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

2013, or latest available year

Country	Manufacturing (10-33, ISIC4)					Services (45-82 less 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	113 436		6 694		590	955 015		28 412		1 821	309 292		4 544		208
Austria	18 124	2 905	2 190	1 438	472	226 931	15 662	7 427	3 024	484	27 442	3 480	1 956	570	70
Belgium	27 359	2 527	2 058	1 204	320	409 082	11 654	6 545	2 304	456	92 063	2 747	1 438	488	55
Brazil	213 562	56 594	35 535	17 594	4 062	2 314 049	198 056	82 124	28 652	6 331	73 184	17 460	12 702	7 172	1 413
Bulgaria	22 520	2 951	2 595	1 737	288	242 829	9 185	4 884	1 759	251	15 885	1 435	870	500	48
Canada	33 480	7 680	6 320	3 440	340	480 890	58 080	36 020	14 850	1 460	128 320	11 460	6 200	2 180	140
Croatia	17 311	1 565	994	644	159	96 529	4 104	1 804	791	190	17 598	914	469	221	34
Czech Republic	155 485	4 518	3 880	3 025	780	606 602	11 533	6 396	2 711	533	165 513	2 748	1 601	579	53
Denmark	10 719	1 867	1 359	933	184	144 640	7 684	4 587	2 131	383	27 417	1 853	1 096	302	39
Estonia	4 765	595	552	411	58	42 927	1 831	1 051	473	86	7 989	532	254	86	9
Finland	18 090	1 400	1 138	766	188	153 240	5 220	2 930	1 259	290	40 213	1 614	763	220	34
France	196 379	12 735	9 969	5 810	1 480	2 085 904	45 405	28 923	11 940	2 402	512 492	14 598	7 280	1 794	325
Germany	124 483	41 295	16 435	16 415	4 196	1 447 408	139 959	77 221	32 932	5 917	216 882	36 390	10 991	3 338	248
Greece	54 891	1 182	947	602	114	532 193	9 960	4 734	1 606	250	82 841	1 280	332	157	12
Hungary	40 127	3 065	2 294	1 601	388	370 430	10 622	4 676	1 953	344	52 221	2 071	885	277	17
Ireland	2 163	656	578	471	130	99 071	7 447	3 662	1 914	288	26 966	556	428	122	8
Israel	19 384	1 896	1 394	1 059	196	301 610	11 452	7 017	3 178	590	50 844	2 525	1 119	286	18
Italy	338 015	40 214	19 394	8 502	1 219	2 672 153	63 133	21 941	8 097	1 588	528 592	15 374	4 669	1 132	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	7 623	763	625	465	60	70 977	3 135	1 705	727	109	7 415	688	446	204	14
Lithuania	13 232	1 124	955	688	121	101 872	4 716	2 486	1 062	146	20 790	979	634	301	32
Luxembourg	525	102	106	81	25	23 559	1 400	748	376	93	2 562	460	332	143	15
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	51 914	3 525	2 753	1 970	344	767 578	18 860	11 260	5 494	1 055	146 699	3 124	1 812	772	112
New Zealand	8 028	1 793	1 195	578	111	56 587	8 277	4 062	1 805	328	15 968	1 537	738	237	23
Norway	14 126	1 334	1 055	637	121	190 989	8 753	4 220	1 774	388	49 632	2 638	1 360	391	43
Poland	151 506	8 034	7 298	6 083	1 493	1 026 200	20 264	12 016	6 194	1 173	214 070	5 137	3 035	1 401	151
Portugal	54 864	5 463	3 860	1 988	248	601 426	11 365	5 227	2 118	398	76 562	2 988	1 273	460	52
Romania	33 025	5 342	4 520	3 127	747	304 760	17 483	8 831	3 485	572	38 045	4 000	2 228	1 020	89
Russian Fed.	143 210	24 290	23 225	16 071	4 713	1 214 885	122 056	82 501	39 619	4 435	190 118	25 199	20 275	10 192	1 257
Slovak Republic	59 434	1 390	1 166	949	269	235 563	4 752	1 690	990	195	80 603	739	372	171	17
Slovenia	16 053	911	588	489	107	83 866	2 002	1 015	452	83	17 045	653	270	88	10
Spain	141 195	13 655	9 269	4 095	721	1 736 802	49 880	23 198	8 794	1 710	307 882	8 019	3 142	914	129
Sweden	47 140	2 836	2 078	1 305	322	482 780	12 398	7 096	3 173	590	88 856	3 308	1 692	463	49
Switzerland	11 389	4 423	3 060	1 904	385	71 151	16 476	7 794	3 406	640	13 691	4 193	2 358	758	65
Turkey	312 352		17 808	8 598	1 680	1 958 544		23 739	9 130	1 912	145 552		7 868	3 786	452
United Kingdom	97 773	13 128	9 443	6 250	1 349	1 229 834	81 912	39 154	17 937	4 217	244 720	10 916	4 805	1 840	305
United States	228 262	45 877	36 524	22 786	5 471	2 524 148	326 167	209 445	91 210	17 150	508 110	51 445	30 252	11 624	1 277

StatLink http://dx.doi.org/10.1787/888933403632

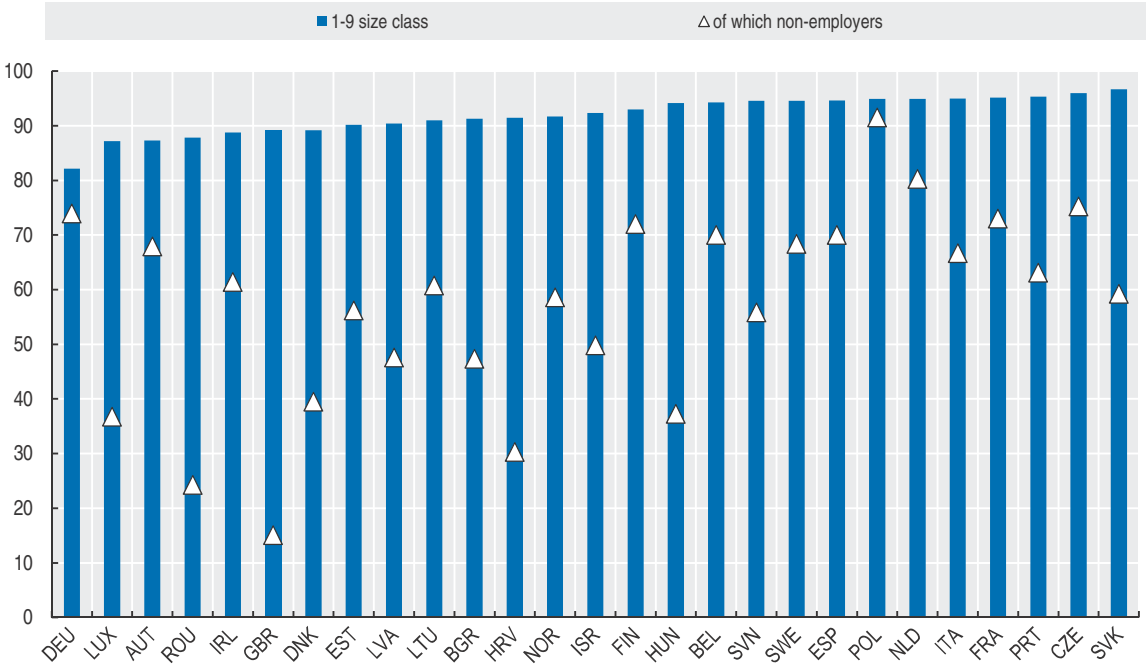
Figure 2.4. **Number of enterprises and GDP**

2013, or latest available year

StatLink http://dx.doi.org/10.1787/888933403646

Figure 2.5. **Non-employers and micro-enterprises**

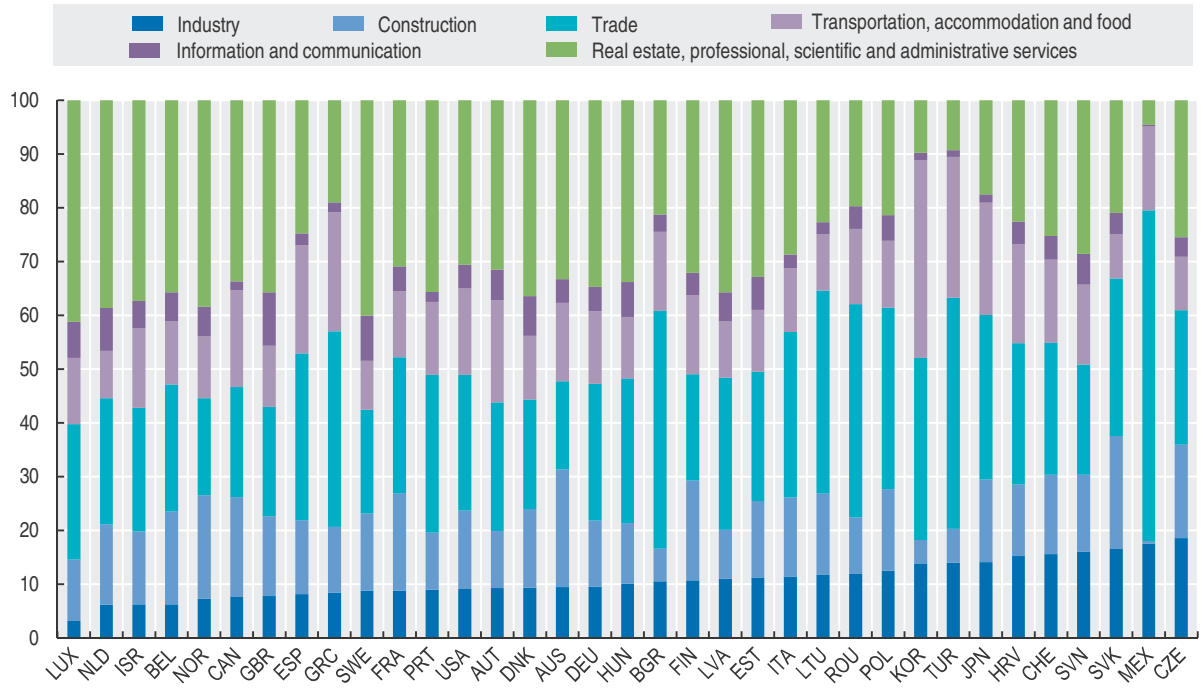
Percentage of total business population, 2013, or latest available year



StatLink http://dx.doi.org/10.1787/888933403653

Figure 2.6. **SMEs by economic activity**

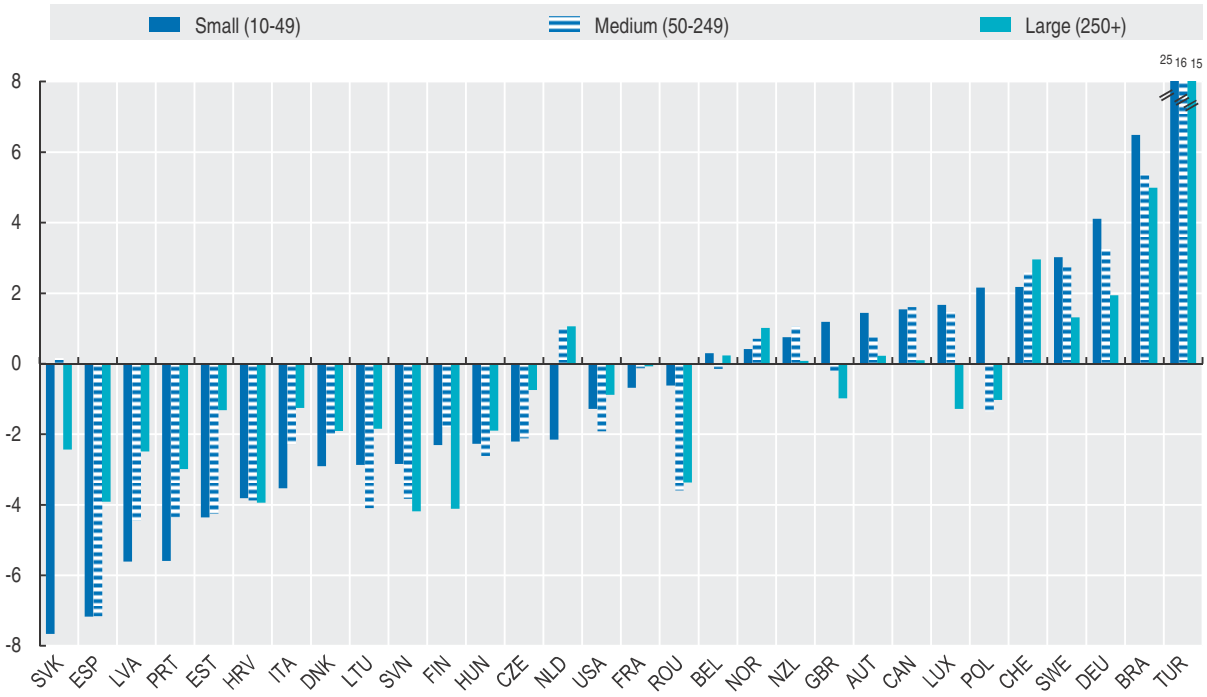
Percentage of total number of SMEs, 2013, or latest available year



StatLink http://dx.doi.org/10.1787/888933403662

Figure 2.7. **Change in the number of enterprises, total business economy**

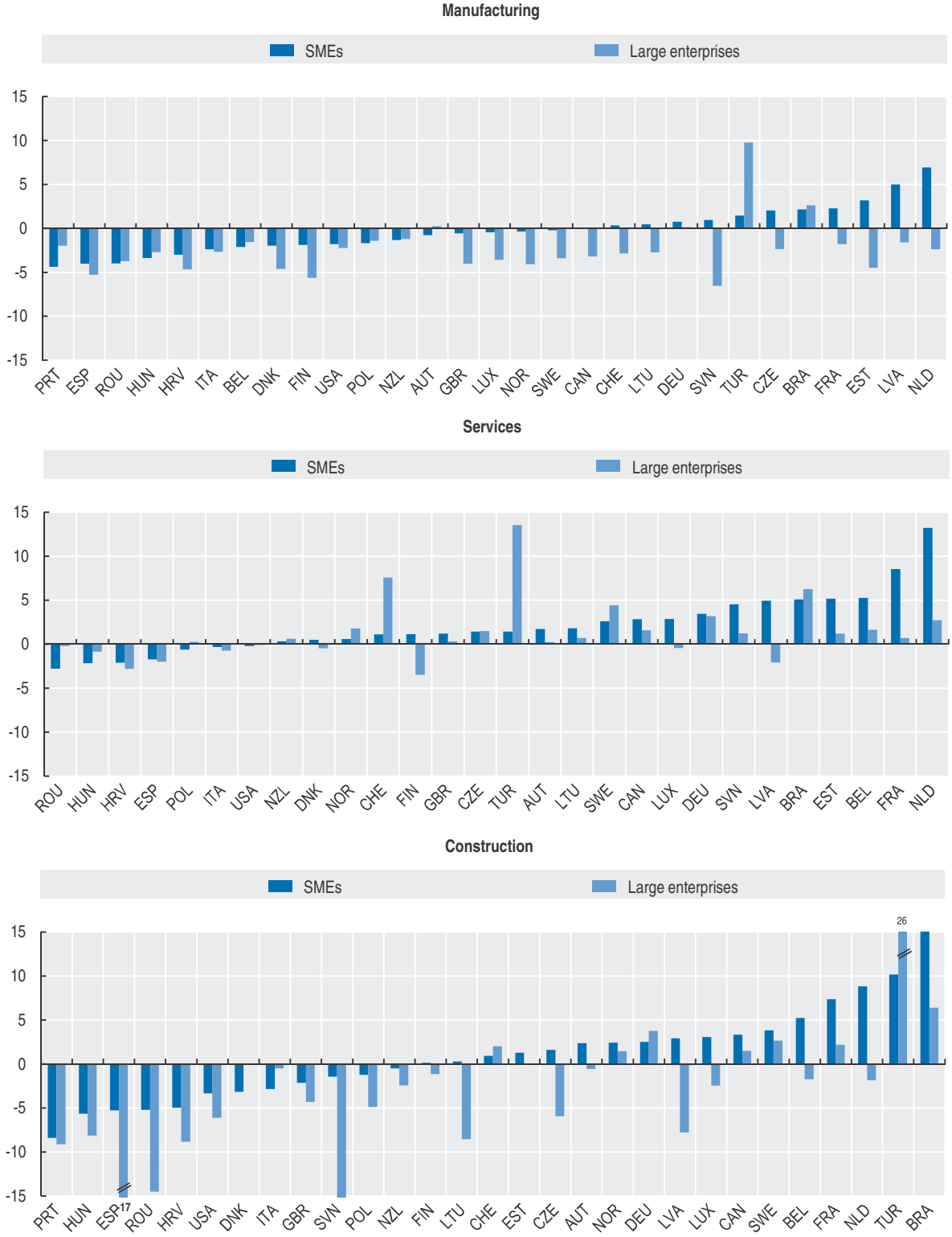
Average annual percentage change between 2008 and 2013



StatLink http://dx.doi.org/10.1787/888933403672

Figure 2.8. **Change in number of enterprises, by main sector**

Average annual percentage change between 2008 and 2013



StatLink http://dx.doi.org/10.1787/888933403682

Employment by enterprise size

Key facts

- In countries where employment in the business sector grew between 2008 and 2013, for instance in Germany and in Brazil, this was mainly due to the increase in the number of active enterprises.
- There are significant variations across countries in the distribution of employment among enterprises of different sizes. The share of employed persons working in micro-enterprises is above 40% in Italy and Portugal and almost 60% in Greece, while in Germany this share is around 19%.
- Employment in manufacturing is dominated by large firms: they employ more than 40% of people working in the sector, despite accounting for less than 1% of all manufacturing firms. In OECD countries, the average size of large manufacturing firms is 750 employed persons. The average size is much larger in the United States (almost 1500 employed persons). Between 2008 and 2013, employment in manufacturing decreased in virtually all countries apart from Germany, Turkey and Brazil.

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 can be divided into the employment change in SMEs and the employment change in large enterprises. The employment change in each size class, in turn, depends on the change in the average size of enterprises in that size class and on the change in the number of enterprises in the same size class. The contributions of these different changes to the aggregate employment change can be quantified.

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 2013 and 2008 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 2013 and 2008 and the number of SMEs in 2013. 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).

Unpaid persons employed are a subset of persons employed and include unpaid family workers and working proprietors.

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*.

Relevance

The employment distribution across firms in the business sector reflects a number of factors, such as the industrial structure in a country, its economic size and market openness. The evolution of this distribution over time and across the heterogeneous universe of enterprises is useful in assessing the underlying potential that exists within an economy to generate employment growth.

Comparability

All countries present information using the enterprise as the statistical unit except Korea and Mexico, which use establishments. Data for Canada, Israel, Japan, Korea, Switzerland, the United States and the Russian Federation refer to employees.

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 "1-4" for Canada, "1-10" for Mexico and "1-19" for Australia and Turkey; the size class "10-19" refers to "5-19" for Canada, "11-50" for Mexico; the size class "50-249" refers to "51-250" for Mexico, "50-299" for Canada, Japan and Korea; finally, the size class "250+" refers to "300+" for Canada, Japan and Korea and "251+" for Mexico.

For Canada, Switzerland, the United States and the Russian Federation, data do not include non-employer enterprise counts. For the total 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 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 2.9, the euro area excludes the Slovak Republic.

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

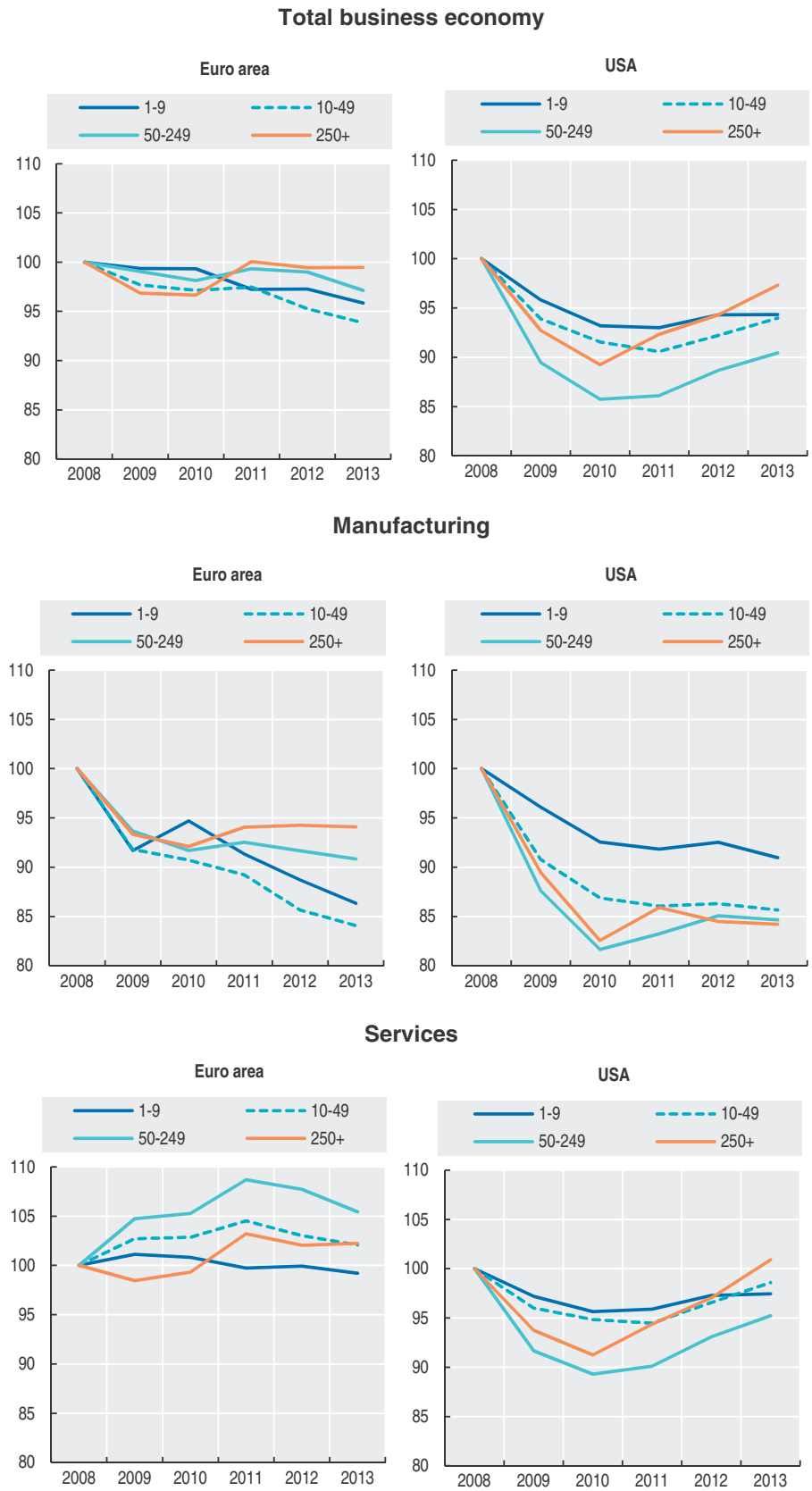
OECD Structural and Demographic Business Statistics (SDBS) (database), *http://dx.doi.org/10.1787/sdbs-data-en*.

Further reading

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

Figure 2.9. **Employment by enterprise size, euro area and United States**

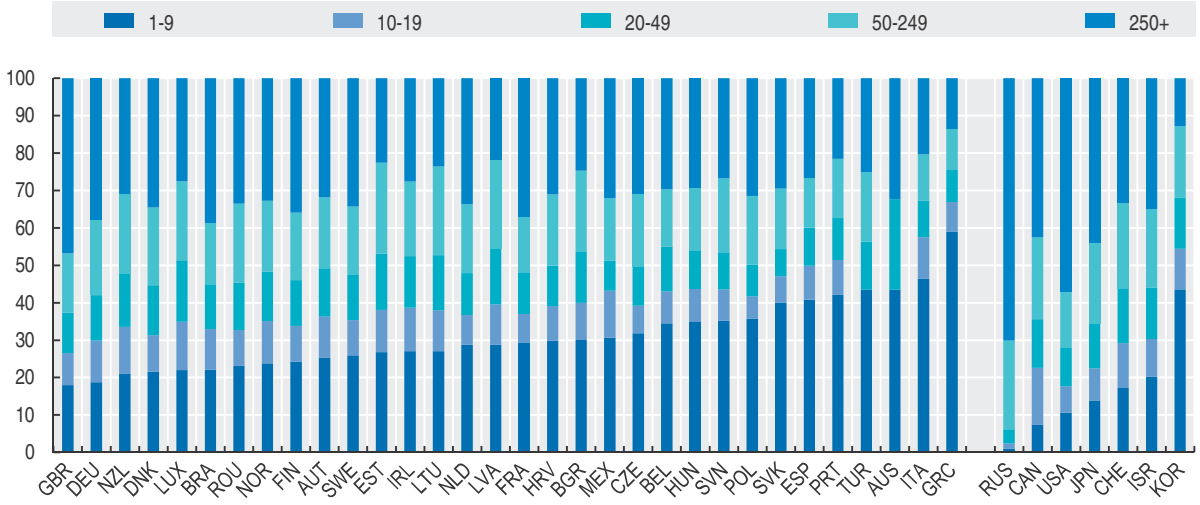
Persons employed, 2008=100



StatLink http://dx.doi.org/10.1787/888933403696

Figure 2.10. **Persons employed by enterprise size, total business economy**

Percentage of all persons employed, 2013, or latest available year



StatLink http://dx.doi.org/10.1787/888933403708

Table 2.2. **Persons employed by enterprise size, total business economy**

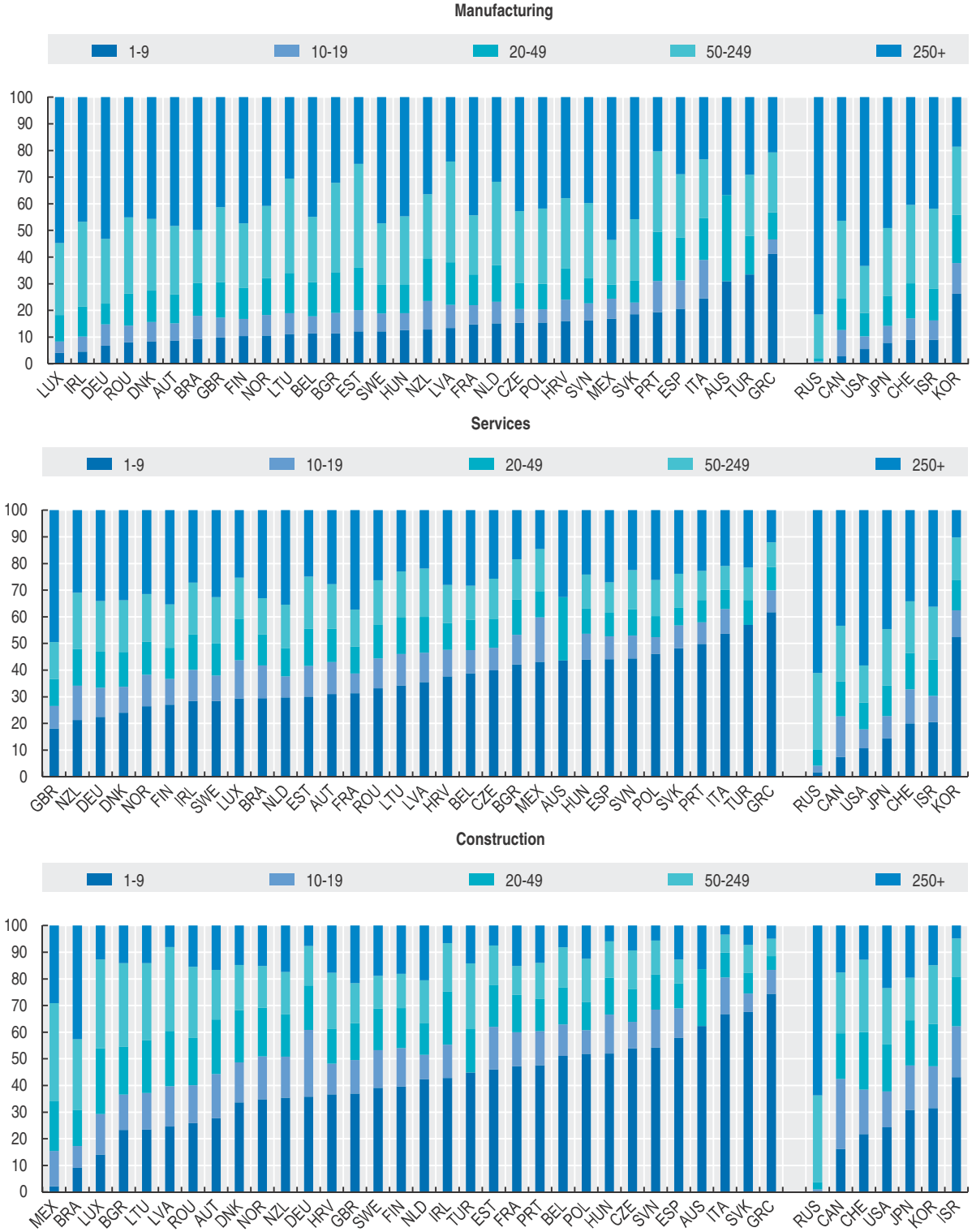
2013, or latest available year

Country	1-9	10-19	20-49	50-249	250+	Total
Australia	3 489 000		1 938 000		2 593 000	8 020 000
Austria	682 846	297 307	350 491	513 503	859 044	2 703 191
Belgium	920 753	227 883	317 933	409 456	790 400	2 666 425
Brazil	7 485 043	3 682 285	4 053 982	5 528 956	13 112 564	33 862 830
Bulgaria	556 110	183 205	255 013	399 122	456 808	1 850 258
Canada	782 120	1 583 989	1 364 923	2 298 171	4 449 155	10 478 358
Croatia	286 743	89 048	103 526	182 952	298 318	960 587
Czech Republic	1 103 676	254 044	365 801	670 747	1 070 664	3 464 932
Denmark	343 789	154 184	213 172	329 521	550 368	1 591 034
Estonia	96 609	40 410	54 242	87 663	81 140	360 064
Finland	347 271	136 510	175 580	259 109	514 284	1 432 754
France	4 458 283	1 194 027	1 641 370	2 301 345	5 617 918	15 212 943
Germany	4 961 175	2 926 964	3 215 165	5 348 428	9 978 541	26 430 273
Greece	1 251 565	166 024	181 134	232 029	287 972	2 118 724
Hungary	829 506	213 030	240 708	399 928	698 044	2 381 216
Ireland	279 703	120 023	141 587	206 129	285 313	1 032 755
Israel	558 031	188 253	271 999	404 441	651 766	2 074 490
Italy	6 648 235	1 579 329	1 395 738	1 778 521	2 912 169	14 313 992
Japan	4 505 388	2 754 264	3 854 779	7 058 130	14 226 095	32 398 656
Korea	6 525 242	1 622 297	2 043 421	2 870 646	1 914 742	14 976 348
Latvia	167 452	62 985	86 426	138 861	126 519	582 243
Lithuania	228 120	91 973	124 028	199 497	198 453	842 071
Luxembourg	44 489	26 132	33 173	42 613	55 738	202 145
Mexico	5 670 630	2 328 081	1 499 174	3 077 857	5 942 343	18 518 085
Netherlands	1 509 372	419 507	586 639	965 237	1 769 792	5 250 547
New Zealand	260 634	155 878	177 688	262 160	383 840	1 240 200
Norway	366 421	172 745	202 417	292 230	503 998	1 537 811
Poland	2 916 628	485 941	693 261	1 507 580	2 569 133	8 172 543
Portugal	1 198 105	264 975	316 582	451 746	612 044	2 843 452
Romania	885 653	365 878	482 684	807 866	1 282 760	3 824 841
Russian Federation	174 390	259 913	686 755	4 274 242	12 687 736	18 083 036
Slovak Republic	546 731	95 140	99 312	220 933	402 851	1 364 967
Slovenia	198 787	47 517	55 797	111 787	151 397	565 285
Spain	4 297 648	953 313	1 067 509	1 399 088	2 806 952	10 524 510
Sweden	780 940	283 470	369 137	547 824	1 033 344	3 014 715
Switzerland	472 317	328 138	398 402	628 738	914 159	2 741 754
Turkey	5 243 816		1 548 300	2 243 078	3 037 767	12 072 961
United Kingdom	3 264 430	1 539 249	1 958 638	2 868 968	8 479 151	18 110 436
United States	8 683 126	5 768 039	8 408 482	12 251 827	46 860 640	81 972 114

StatLink http://dx.doi.org/10.1787/888933403719

Figure 2.11. **Persons employed by enterprise size, main sectors**

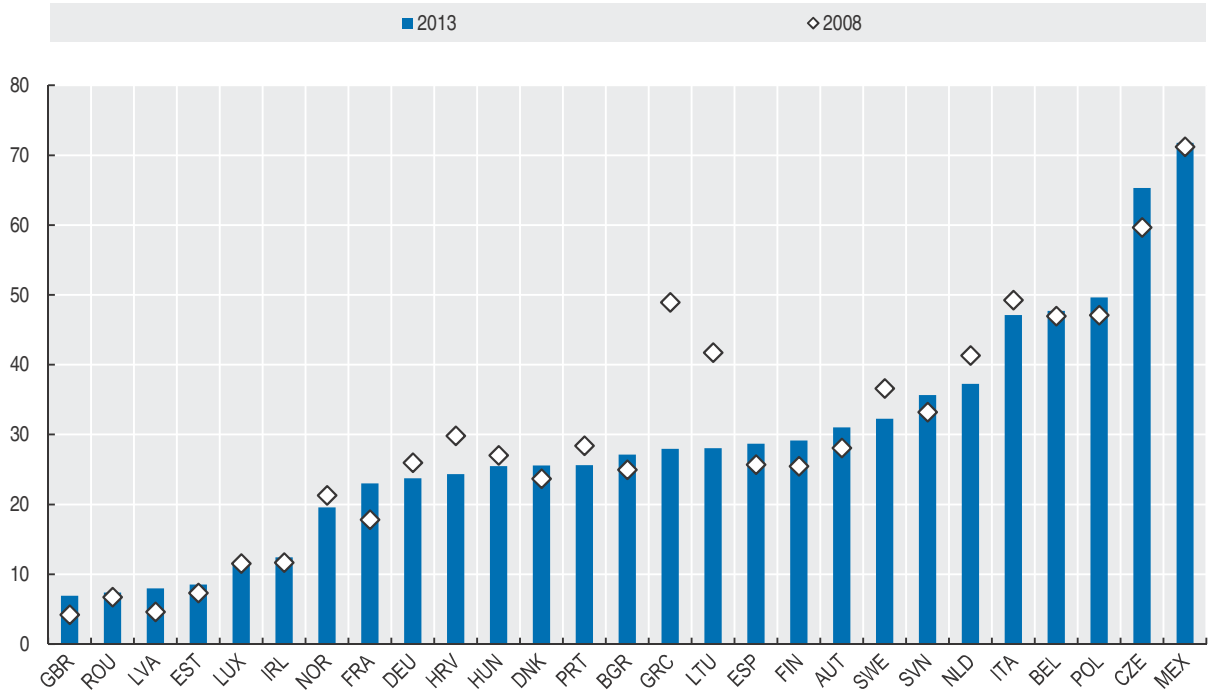
Percentage of all persons employed in sector, 2013, or latest available year



StatLink http://dx.doi.org/10.1787/888933403729

Figure 2.12. **Share of unpaid persons employed in micro-enterprises, manufacturing**

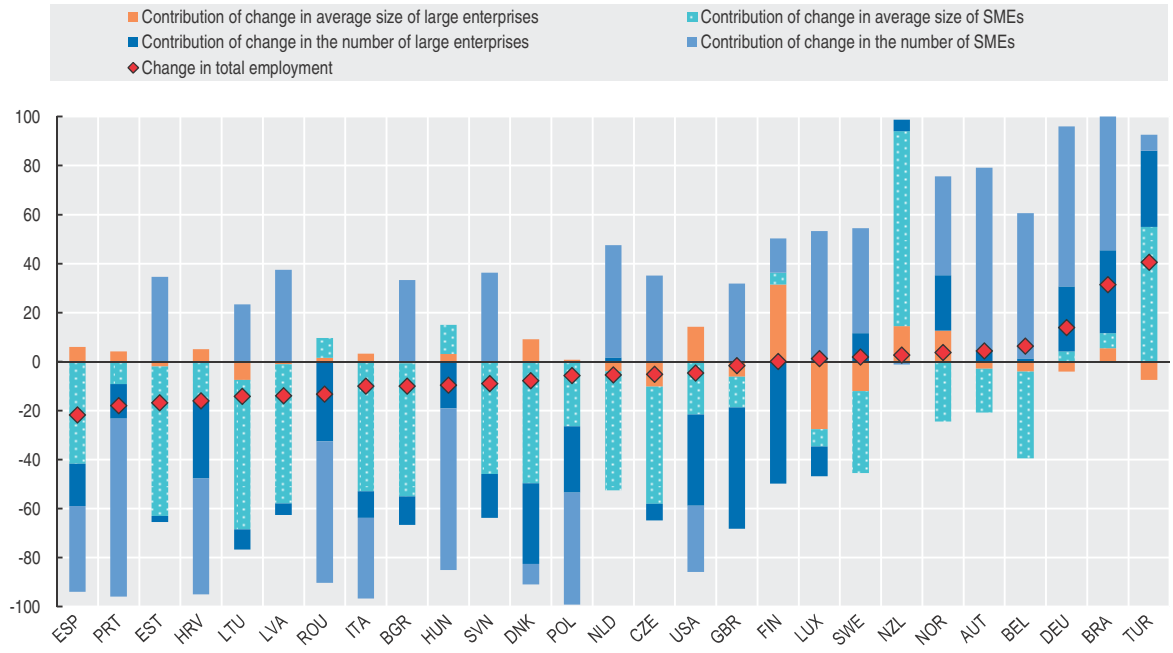
Percentage of all persons employed in manufacturing micro-enterprises



StatLink http://dx.doi.org/10.1787/888933403731

Figure 2.13. **Change in employment, total business economy**

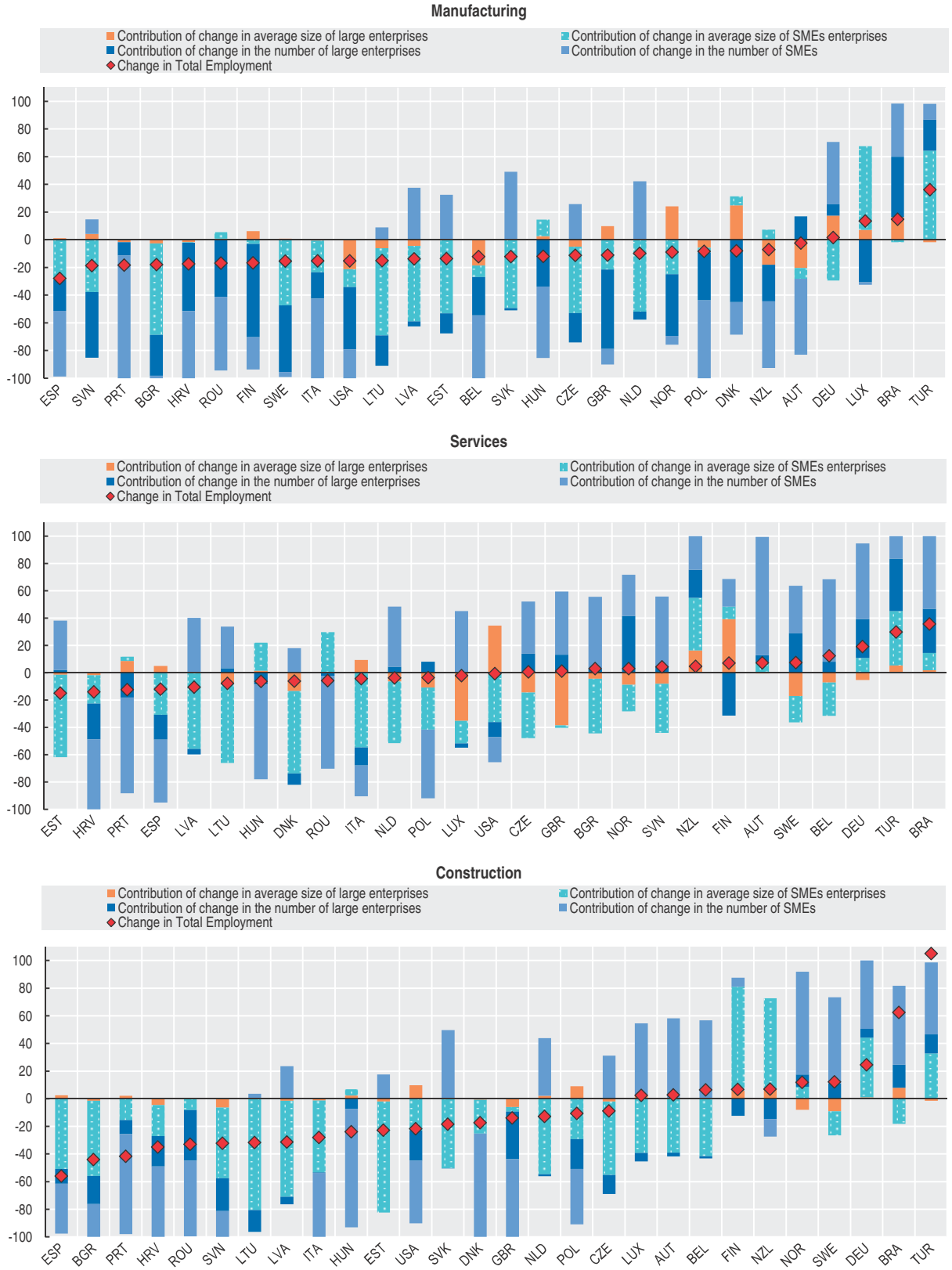
Contributions and percentage change between 2008 and 2013



StatLink http://dx.doi.org/10.1787/888933403744

Figure 2.14. **Change in employment, by main sector**

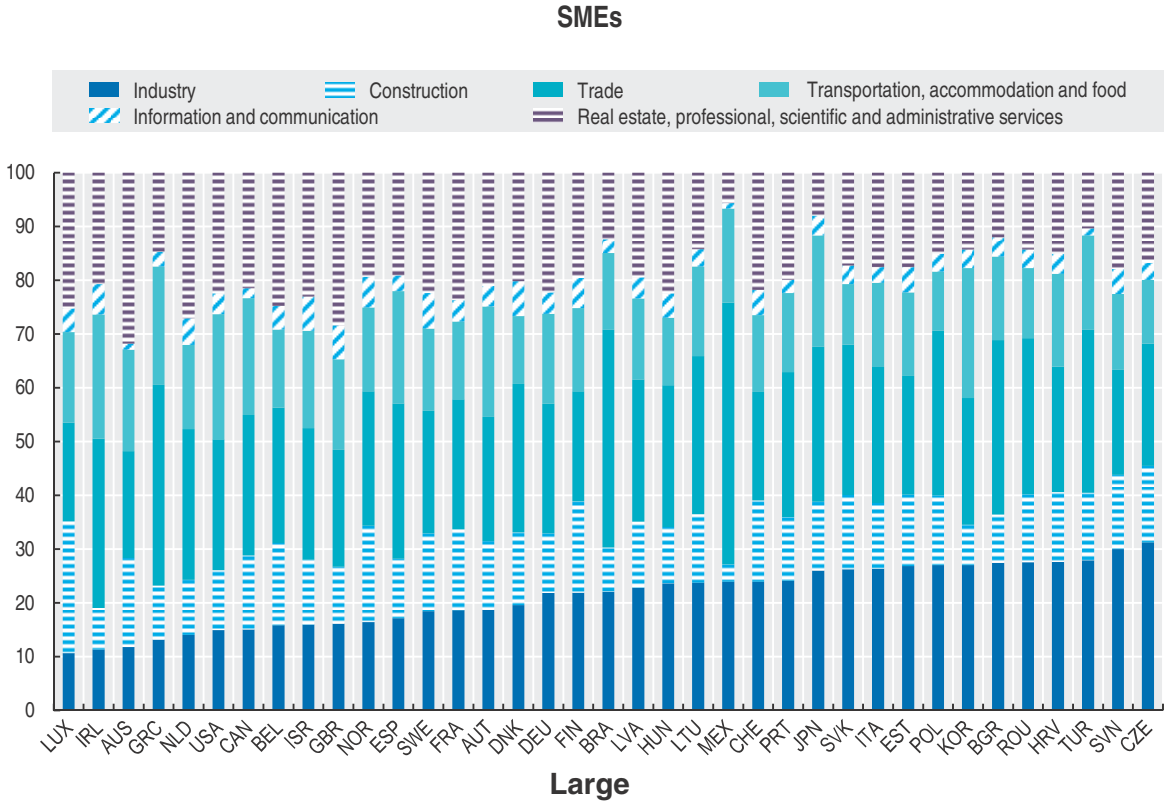
Contributions and percentage change between 2008 and 2013



StatLink http://dx.doi.org/10.1787/888933403756

Figure 2.15. **Employment in SMEs and large enterprises by economic activity**

Percentage of all persons employed in size class, 2013, or latest available year



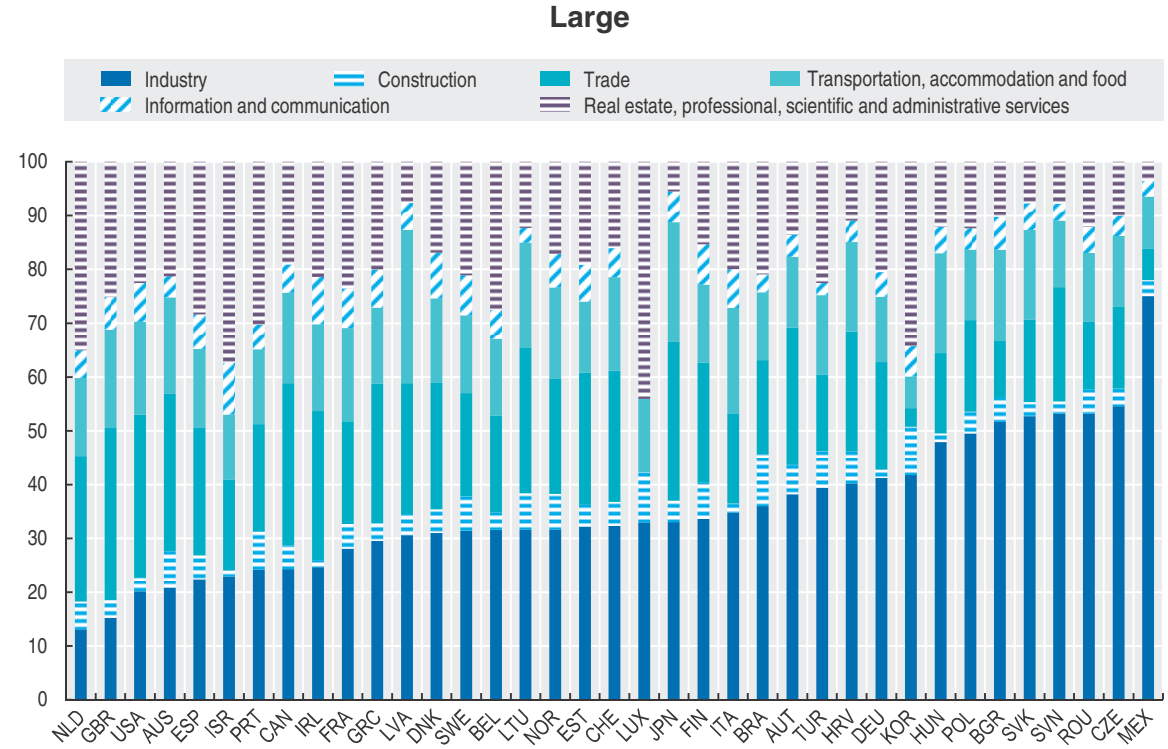


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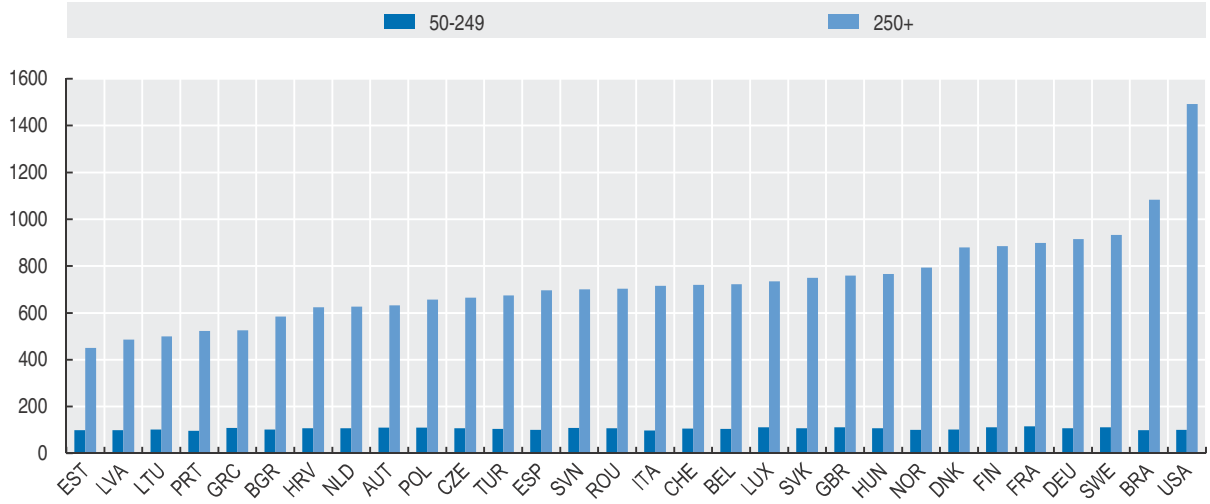
Figure 2.16. **Average employment in medium and large enterprises, manufacturing**

2013, or latest available year



StatLink http://dx.doi.org/10.1787/888933403774

Table 2.3. **Average employment by enterprise size, manufacturing**

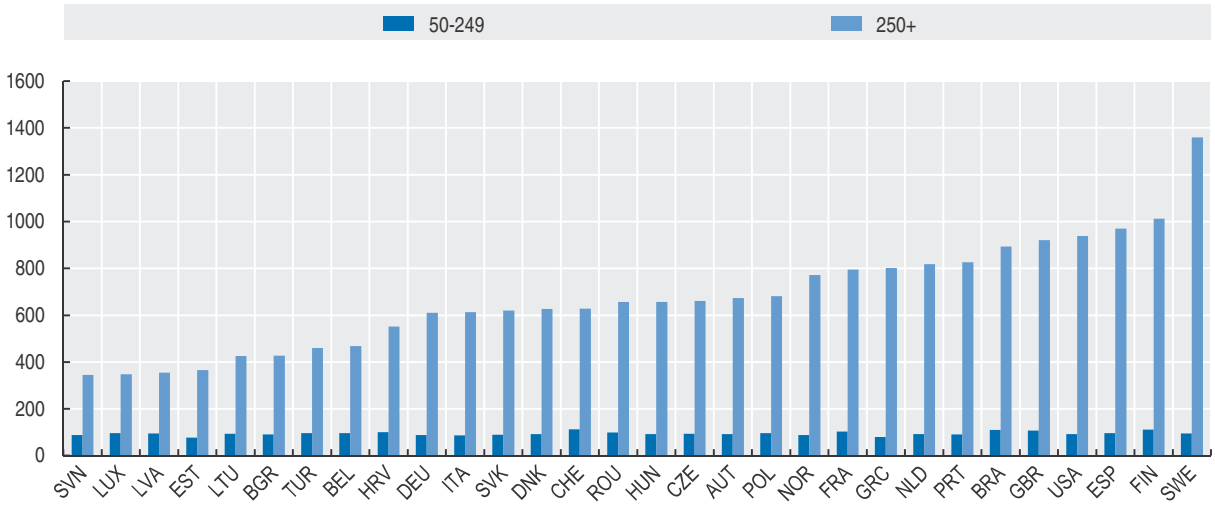
2013, or latest available year

Country	1-9	10-19	20-49	50-249	SMEs	250+
AUT	3,0	13,5	30,9	109,9	13,0	631,6
BEL	2,1	13,2	32,1	104,5	8,5	721,8
BGR	2,6	13,6	31,0	101,2	11,9	584,1
BRA	3,8	13,5	30,8	99,0	13,7	1083,5
CHE	5,4	12,5	29,5	105,9	19,7	720,1
CZE	1,2	13,9	30,8	107,6	4,2	664,6
DEU	3,9	14,0	34,0	106,7	17,0	915,5
DNK	2,8	13,7	30,8	102,0	12,9	879,2
ESP	2,5	13,4	30,2	100,8	7,3	696,5
EST	2,7	14,0	30,1	99,2	12,4	450,5
FIN	2,0	16,2	35,7	111,8	8,7	885,5
FRA	2,3	16,9	34,7	115,3	7,4	899,2
GBR	2,5	13,9	35,0	111,7	11,5	759,0
GRC	2,2	13,2	31,1	108,0	4,0	525,7
HRV	2,4	13,5	30,6	107,3	7,9	624,1
HUN	2,1	13,7	30,9	106,5	7,8	766,3
ITA	2,7	13,4	30,1	96,9	7,0	715,2
LTU	1,7	13,6	31,4	101,7	8,6	499,5
LUX	2,6	14,0	31,6	111,8	18,7	734,8
LVA	2,1	13,8	30,7	98,3	9,7	485,5
NLD	2,0	15,6	33,9	107,7	7,7	626,4
NOR	1,8	13,7	30,8	100,1	8,1	794,0
POL	2,4	14,6	30,6	109,3	7,9	656,6
PRT	2,2	13,6	30,5	96,8	7,7	522,8
ROU	2,8	13,7	31,1	106,5	13,9	703,1
SVK	1,4	13,7	31,0	107,3	3,8	749,2
SVN	1,9	13,5	30,5	108,4	6,3	700,6
SWE	1,6	15,0	33,4	111,8	6,3	933,4
TUR	3,0		31,6	103,7	7,1	674,1
USA	3,1	13,6	30,7	100,2	14,2	1492,3

StatLink http://dx.doi.org/10.1787/888933403782

Figure 2.17. **Average employment in medium and large enterprises, construction**

2013, or latest available year



StatLink http://dx.doi.org/10.1787/888933403798

Table 2.4. **Average employment by enterprise size, construction**

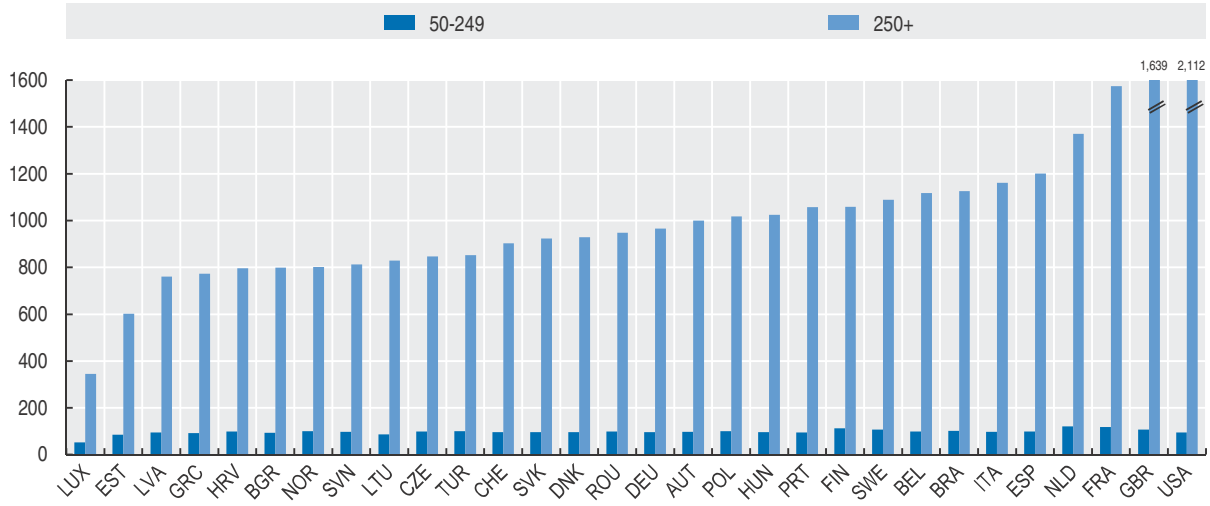
2013, or latest available year

Country	1-9	10-19	20-49	50-249	SMEs	250+
AUT	2,9	13,4	29,7	92,5	7,1	673,0
BEL	1,7	13,5	30,4	96,7	3,0	467,5
BGR	2,1	13,5	30,1	91,2	6,7	426,4
BRA	3,7	13,9	31,1	110,2	15,4	893,4
CHE	5,0	12,6	29,1	113,0	13,2	627,5
CZE	1,2	13,6	29,2	93,9	2,0	660,2
DEU	3,3	13,6	29,9	87,6	6,8	609,9
DNK	2,0	13,4	29,5	92,3	4,6	626,9
ESP	1,8	13,6	29,2	96,2	2,7	970,2
EST	2,5	13,3	27,1	76,6	4,6	365,6
FIN	1,9	16,9	37,5	111,2	3,6	1 012,7
FRA	1,6	14,9	33,0	103,2	2,7	794,7
GBR	2,0	15,1	37,3	106,5	3,9	921,0
GRC	1,7	13,6	30,1	80,3	2,2	802,3
HRV	2,2	13,3	29,9	100,7	4,6	551,9
HUN	1,9	13,3	29,3	92,2	3,2	657,1
ITA	1,8	13,0	29,0	86,0	2,5	612,8
LTU	1,1	13,5	30,3	93,0	3,7	425,3
LUX	2,3	13,6	30,5	95,7	10,3	348,3
LVA	2,0	13,5	28,5	94,3	6,4	354,4
NLD	1,3	13,2	29,5	92,6	2,3	817,5
NOR	1,5	13,3	29,2	87,8	3,4	771,8
POL	2,0	14,3	29,2	95,9	3,3	681,9
PRT	1,9	13,1	29,3	91,0	3,3	826,7
ROU	2,6	13,4	30,2	99,0	7,1	656,2
SVK	1,2	13,5	30,2	88,7	1,6	619,8
SVN	1,9	13,4	29,8	87,3	3,2	344,8
SWE	1,6	15,1	32,6	94,4	3,0	1 359,7
TUR	3,7		30,4	95,9	7,3	460,4
USA	2,4	13,4	29,7	92,6	6,5	938,2

StatLink http://dx.doi.org/10.1787/888933403806

Figure 2.18. **Average employment in medium and large enterprises, services**

2013, or latest available year



StatLink http://dx.doi.org/10.1787/888933403810

Table 2.5. **Average employment by enterprise size, services**

2013, or latest available year

Country	1-9	10-19	20-49	50-249	SMEs	250+
AUT	2,4	13,3	29,4	97,1	5,0	999,9
BEL	1,7	13,4	31,2	99,6	3,0	1118,2
BGR	1,9	13,2	29,5	93,7	3,4	798,8
BRA	2,8	13,4	30,7	102,1	5,5	1126,2
CHE	4,8	13,1	29,6	96,6	11,3	903,5
CZE	1,2	12,9	29,6	98,3	2,1	846,7
DEU	2,6	13,1	29,5	96,4	6,5	965,5
DNK	1,7	13,4	29,9	95,8	4,4	928,2
ESP	1,9	13,0	29,3	98,2	3,0	1201,4
EST	1,5	13,1	27,6	85,2	3,4	601,4
FIN	1,5	16,1	34,7	112,5	3,5	1058,5
FRA	1,5	16,5	35,6	117,4	2,9	1574,6
GBR	2,0	14,4	36,4	107,6	5,2	1638,5
GRC	1,9	13,2	29,4	92,1	2,6	773,4
HRV	2,1	13,1	29,8	98,3	3,8	796,2
HUN	1,7	13,3	29,6	95,8	2,9	1025,1
ITA	1,8	13,0	29,5	97,5	2,5	1161,1
LTU	1,8	13,2	28,9	86,3	3,7	828,5
LUX	1,6	13,0	26,1	52,8	3,6	345,6
LVA	1,9	13,4	29,8	94,3	3,9	760,3
NLD	1,6	17,1	38,6	121,1	3,3	1371,0
NOR	1,4	13,3	29,3	99,6	3,3	802,3
POL	2,0	14,1	29,7	99,6	3,2	1017,8
PRT	1,5	13,1	29,8	95,4	2,3	1057,7
ROU	2,2	13,3	29,8	98,4	4,5	947,8
SVK	1,5	13,6	29,7	96,6	2,4	922,9
SVN	1,6	12,9	29,2	97,2	2,7	812,6
SWE	1,2	15,2	33,7	107,5	2,6	1088,2
TUR	1,9		30,0	100,4	2,7	852,3
USA	2,6	13,4	29,9	95,0	8,2	2112,3

StatLink http://dx.doi.org/10.1787/888933403826

Value added by enterprise size

Key facts

- In most countries, large enterprises account for a considerable part of the value added of the business sector despite constituting less than 1% of businesses. However, the share of value added created by large enterprises varies significantly across countries, partly reflecting economic size, ranging from around 15% in Luxembourg to close to 60% in Mexico.
- Between 2008 and 2013, the relative shares of SMEs and large firms in total value added in manufacturing remained stable in the euro area and in major economies, including Australia, Turkey, the United Kingdom and the United States.
- The share of value added generated by different enterprise size classes varies across sectors. SMEs are the backbone of the services sector in nearly all countries, where they account for 60% or more of total employment and total value added. In contrast, large firms provide a substantive contribution to value added in manufacturing, where increasing returns to scale from more capital-intensive production are decisive. Still, in some smaller economies, such as Latvia and Estonia, SMEs capture a significant share of total employment and value added in manufacturing. This is also the case in some larger economies where small and medium firms have traditionally dominated the business landscape, such as Italy.

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.

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 Australia, the size class "1-9" refers to "1-19", "20-49" refers to "20-199", "250+" refers to "200+"; 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 Mexico are based on establishments and not on enterprises. Data for Canada, Israel, Japan, Korea, Switzerland, the United States and the Russian Federation refer to employees.

Data for Finland and Portugal exhibit a break in the series in 2013. 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.

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*.

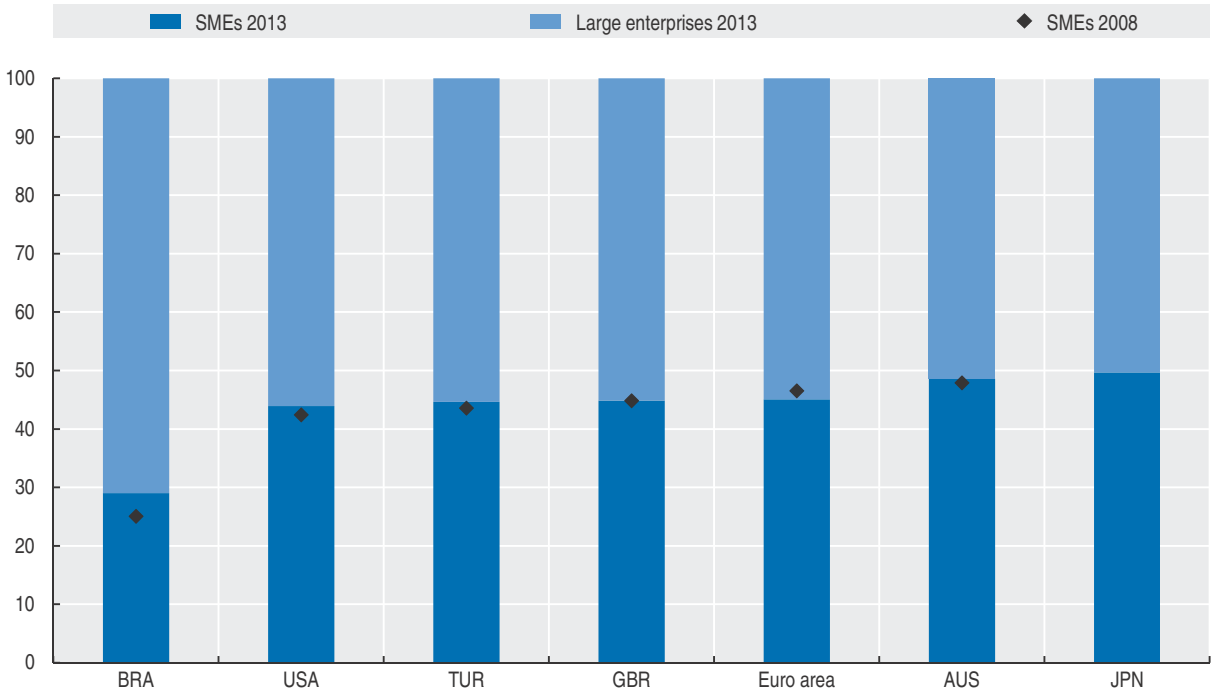
Further reading

OECD (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 2.19. **Value added by enterprise size, manufacturing**

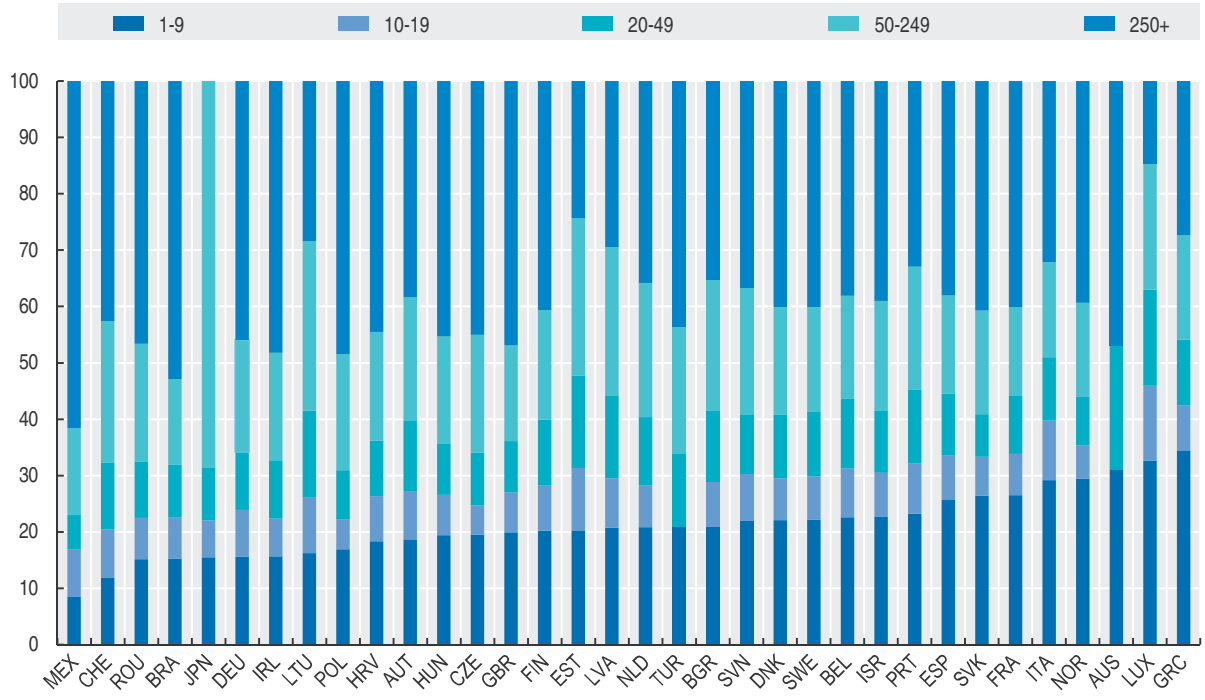
Percentage of total value added in manufacturing



StatLink http://dx.doi.org/10.1787/888933403835

Figure 2.20. **Value added by enterprise size, total business economy**

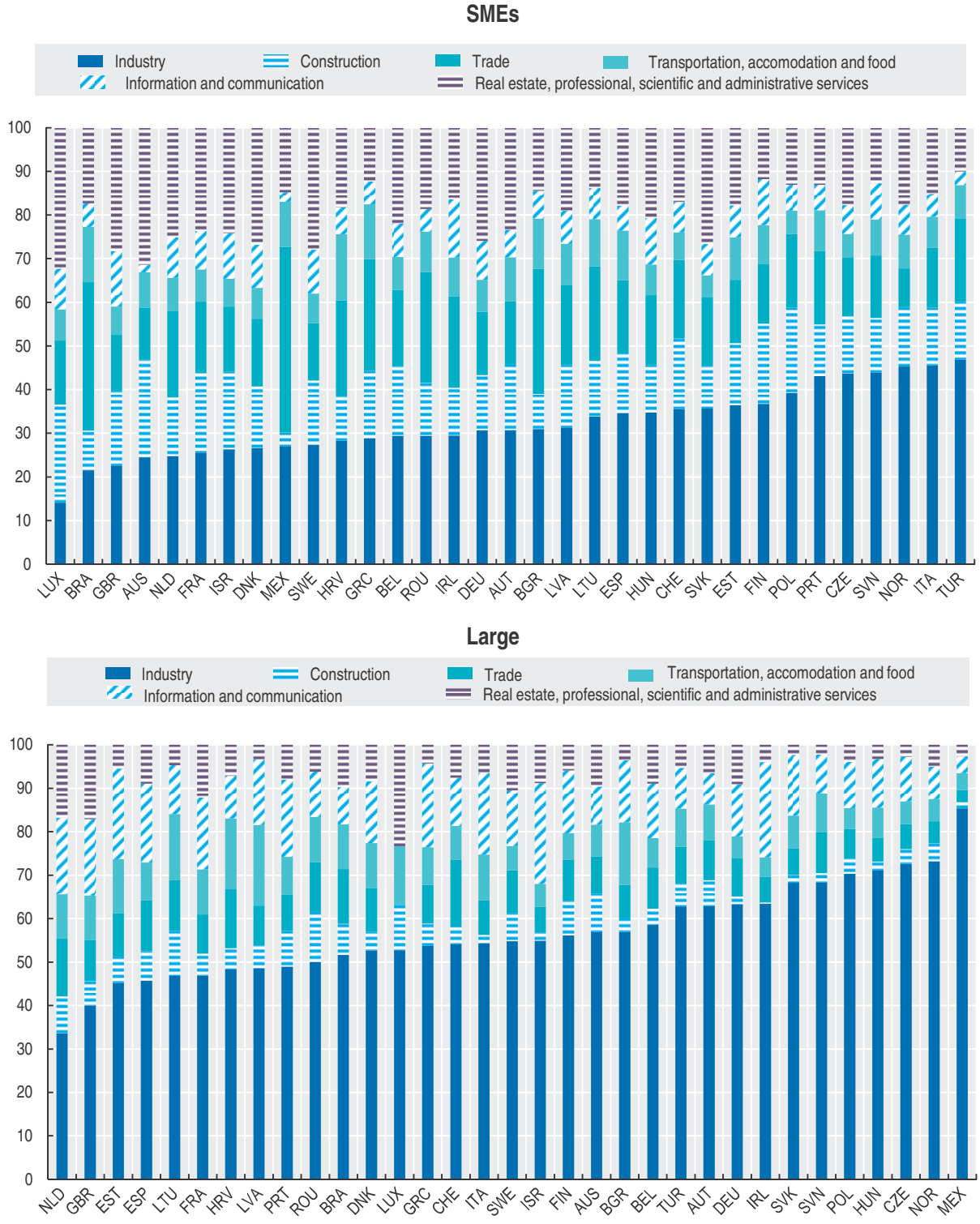
Percentage of total value added, total business economy, 2013, or latest available year



StatLink http://dx.doi.org/10.1787/888933403846

Figure 2.21. **Value added by economic activity**

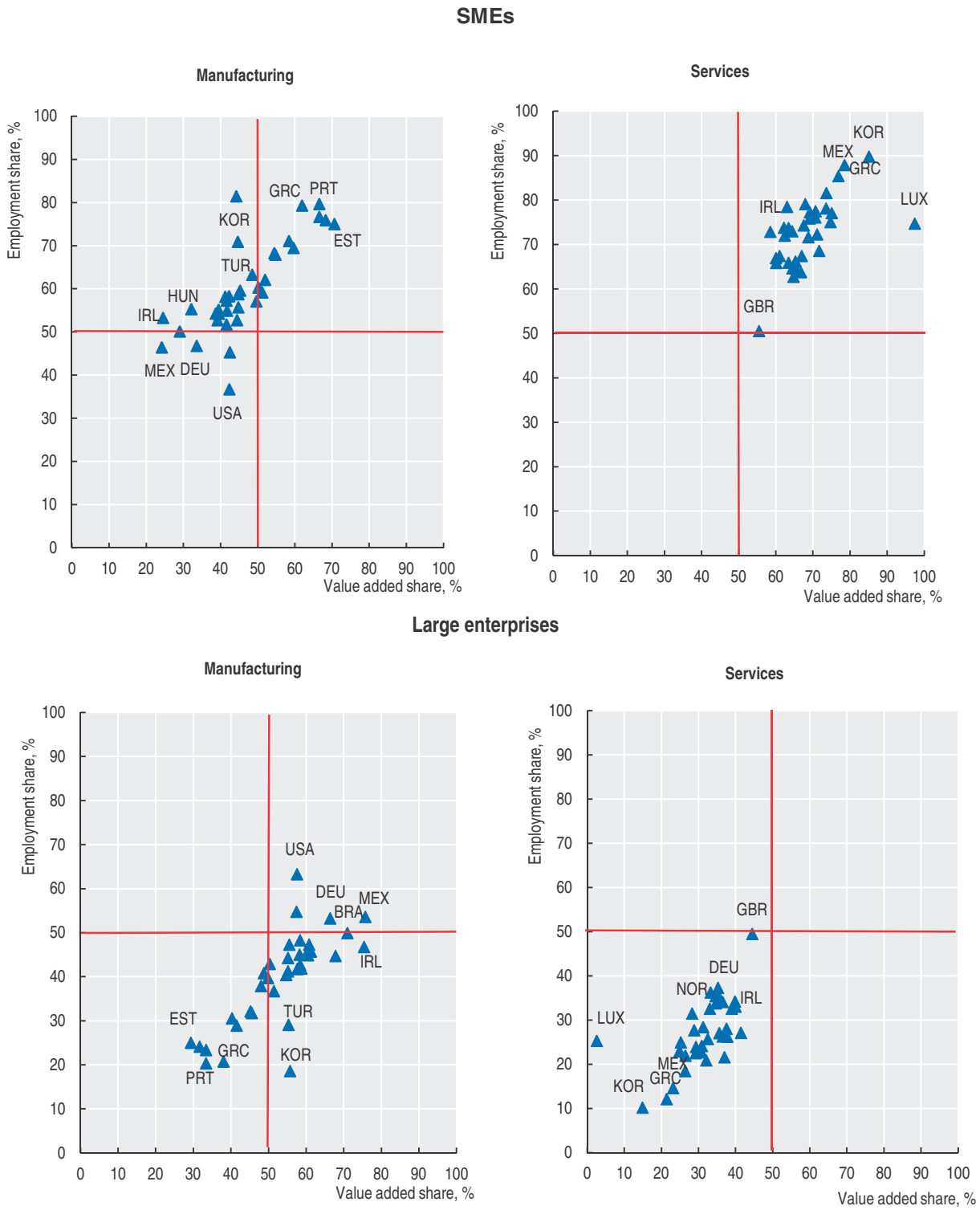
Percentage of total value added by enterprise size class, 2013, or latest available year



StatLink http://dx.doi.org/10.1787/888933403854

Figure 2.22. **Contribution of SMEs and large enterprises to employment and value added**

Percentage of total employment and of total value added, 2013 or latest available year



StatLink http://dx.doi.org/10.1787/888933403867

Turnover by enterprise size

Key facts

- In OECD countries, SMEs account on average for 60% of total turnover. Enterprises in the size classes 10-19 and 20-49 persons employed account for the smallest share of turnover: 8% and 11%, respectively.
- In manufacturing, the turnover per person employed in large firms is considerably higher than the turnover per person employed in any other class of firms, including medium-sized firms (with 50-249 persons employed) in most countries.

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 extraordinary 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.

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

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 for Finland and Portugal exhibit a break in the series in 2013. 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

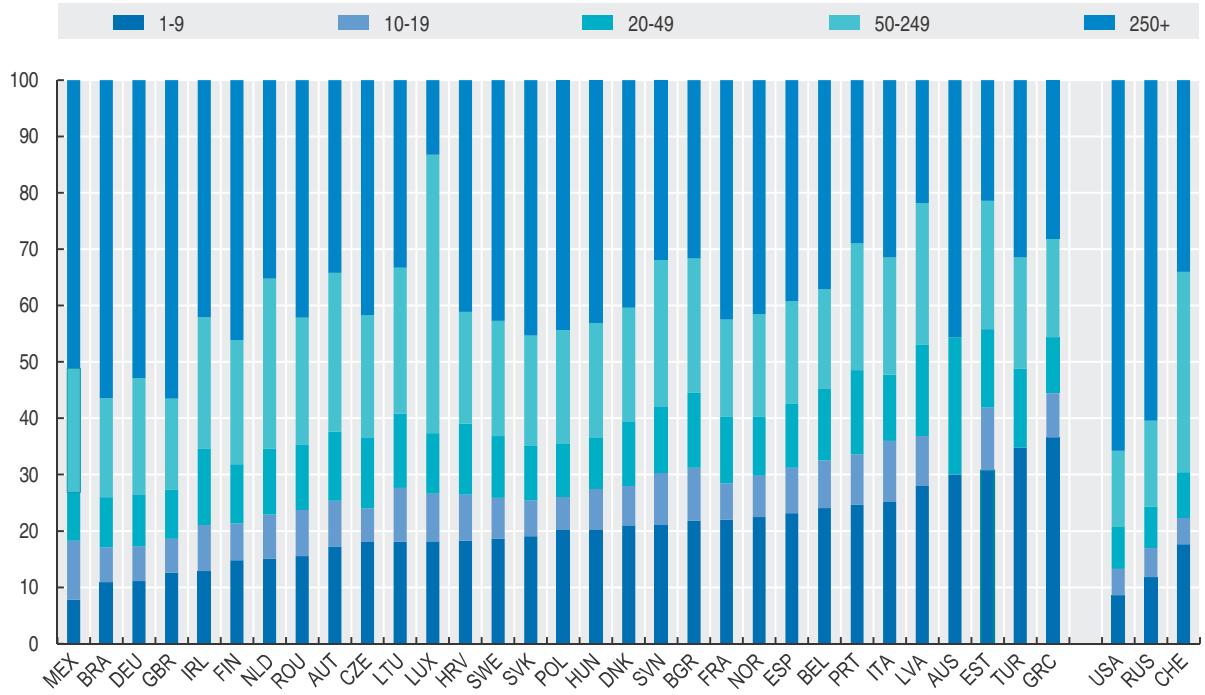
OECD Structural and Demographic Business Statistics (SDBS) (database), *http://dx.doi.org/10.1787/sdbs-data-en*.

Further reading

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

Figure 2.23. **Turnover by enterprise size, total business economy**

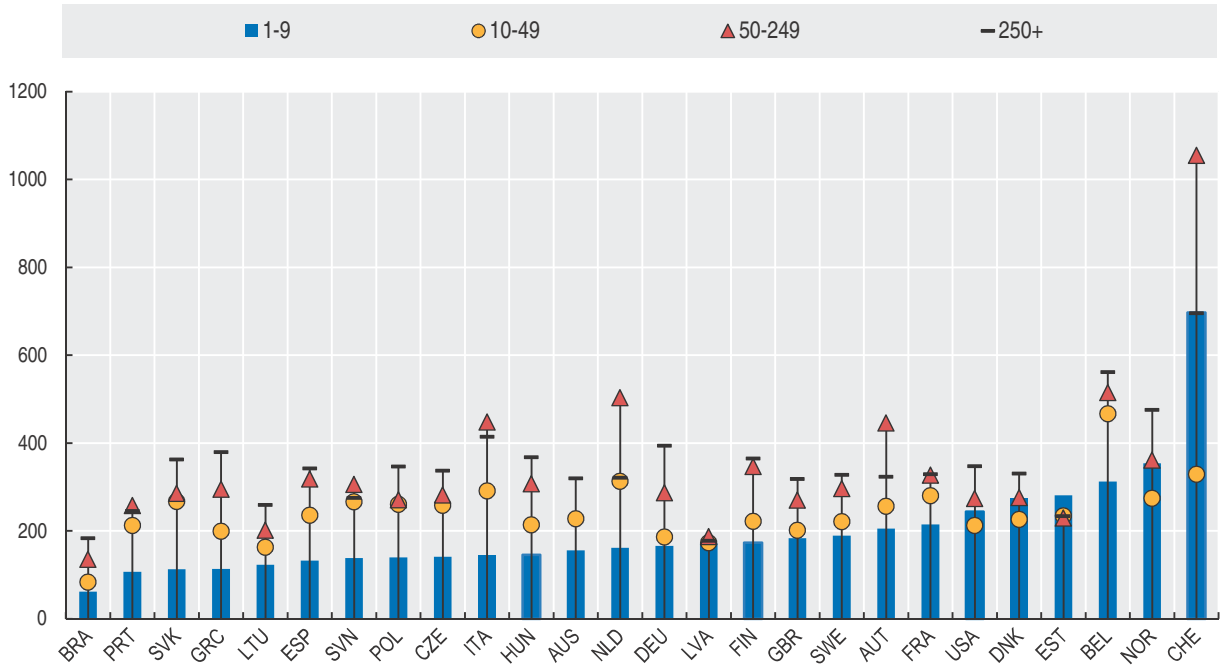
Percentage of all turnover, total business economy, 2013, or latest available year



StatLink http://dx.doi.org/10.1787/888933403870

Figure 2.24. **Turnover per person employed, total business economy**

Turnover per person employed, thousands of USD, current PPPs, 2013, or latest available year



StatLink http://dx.doi.org/10.1787/888933403885

Compensation of employees by enterprise size

Key facts

- 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, Germany and Norway, the share exceeds 70% of value added.
- Between 2008 and 2013, the share of compensation of employees in total value added fell for both SMEs and large enterprises in most countries.

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*.

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.

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 Annual National Accounts data and not on annual business surveys.

2013 data for Finland and Portugal present a break in the series. 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*.

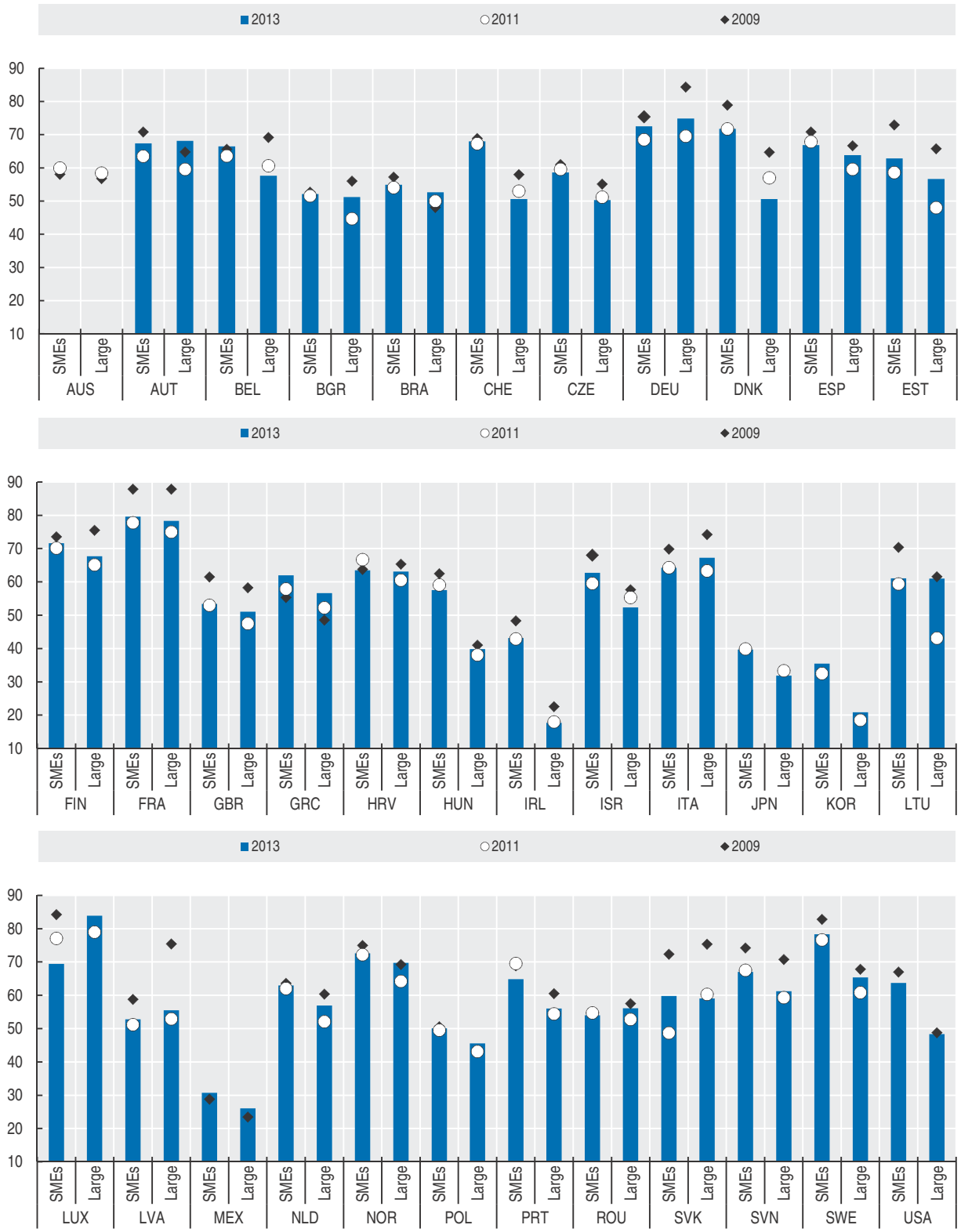
Further reading

OECD (2015), *OECD 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 2.25. **Compensation of employees over value added, manufacturing**

Percentage



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3. PRODUCTIVITY BY ENTERPRISE SIZE

Productivity gaps across enterprises

Productivity growth by enterprise size

Business dynamics and productivity

Productivity gaps across enterprises

Key facts

- Firm heterogeneity matters for productivity. To the extent that large firms can exploit increasing returns to scale, productivity typically increases with firm size. In the manufacturing sector, where production tends to be more capital-intensive, larger firms show almost consistently higher levels of productivity than smaller ones.
- However, differences in productivity across size classes are relatively smaller in market services sectors, particularly in wholesale and retail trade services. In some 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.
- In most sectors, productivity gaps between large and smaller firms remained broadly stable over time, with some variability by country and sector. By contrast, in the information and communication services sector, productivity gaps generally narrowed post-crisis.

Relevance

Productivity reflects the efficiency with which resources are allocated within an economy. But 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 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. Also, the value added and employment estimates 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 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.

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

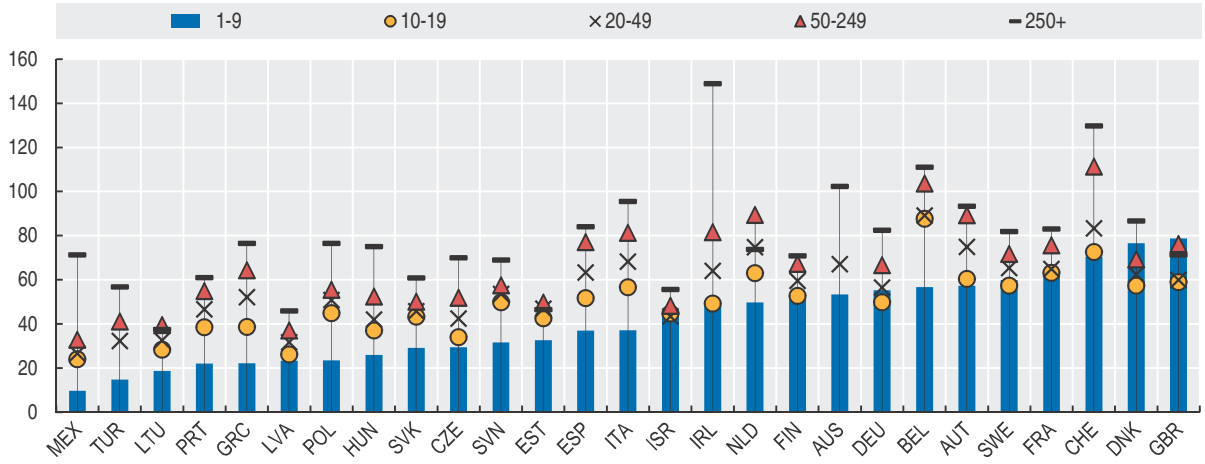
Andrews, D., C. Criscuolo and P.N. Gal (2015), "Frontier Firms, Technology Diffusion and Public Policy: Micro Evidence from OECD Countries", *OECD Productivity Working Papers*, No. 2, OECD Publishing, Paris, *http://dx.doi.org/10.1787/5jrql2q2jj7b-en*.

OECD (2016), *OECD Compendium of Productivity Indicators 2016*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/pdtvy-2016-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, total business economy**

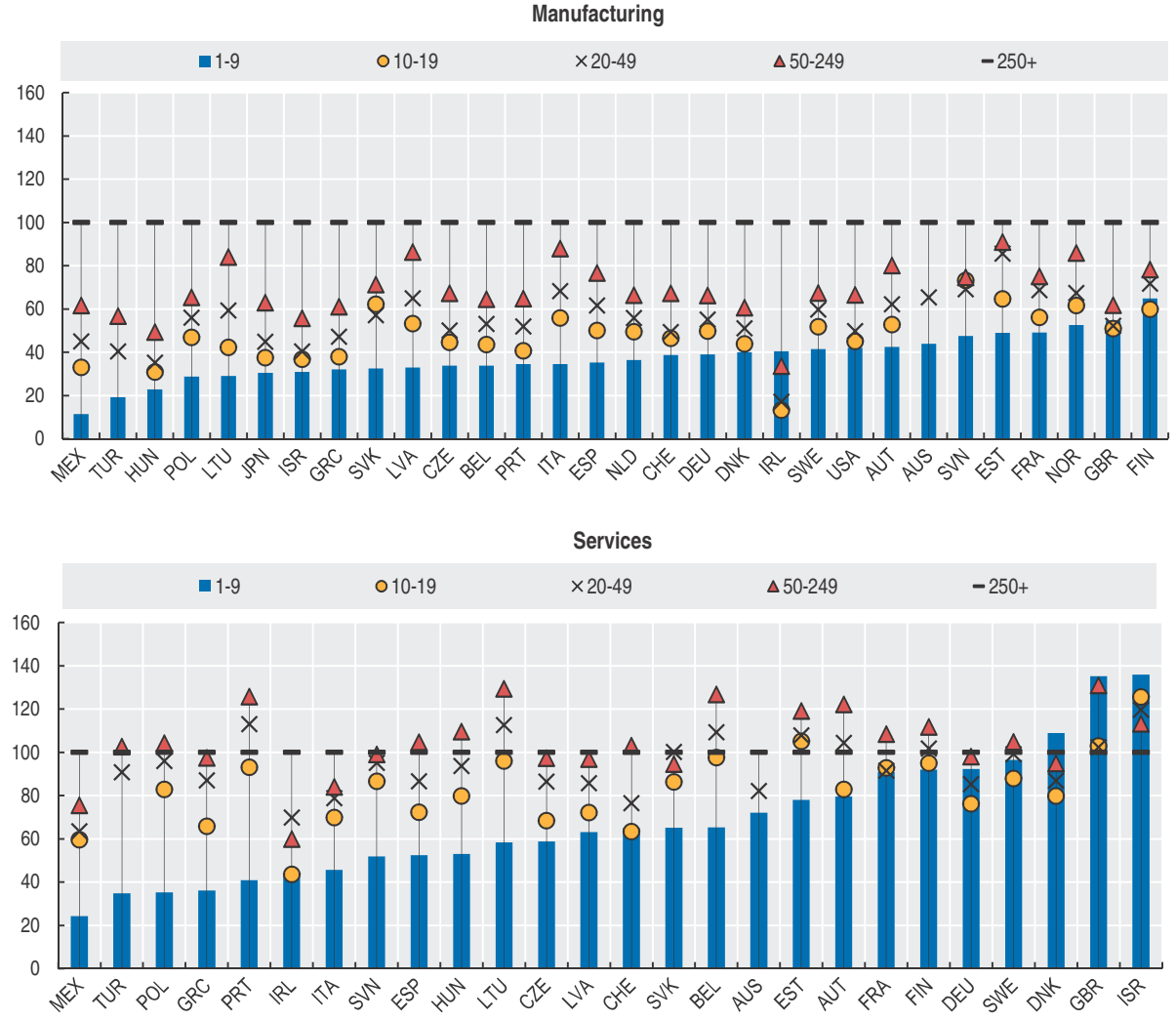
Value added per person employed, thousands of USD, current PPPs, 2013, or latest available year



StatLink http://dx.doi.org/10.1787/888933403908

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

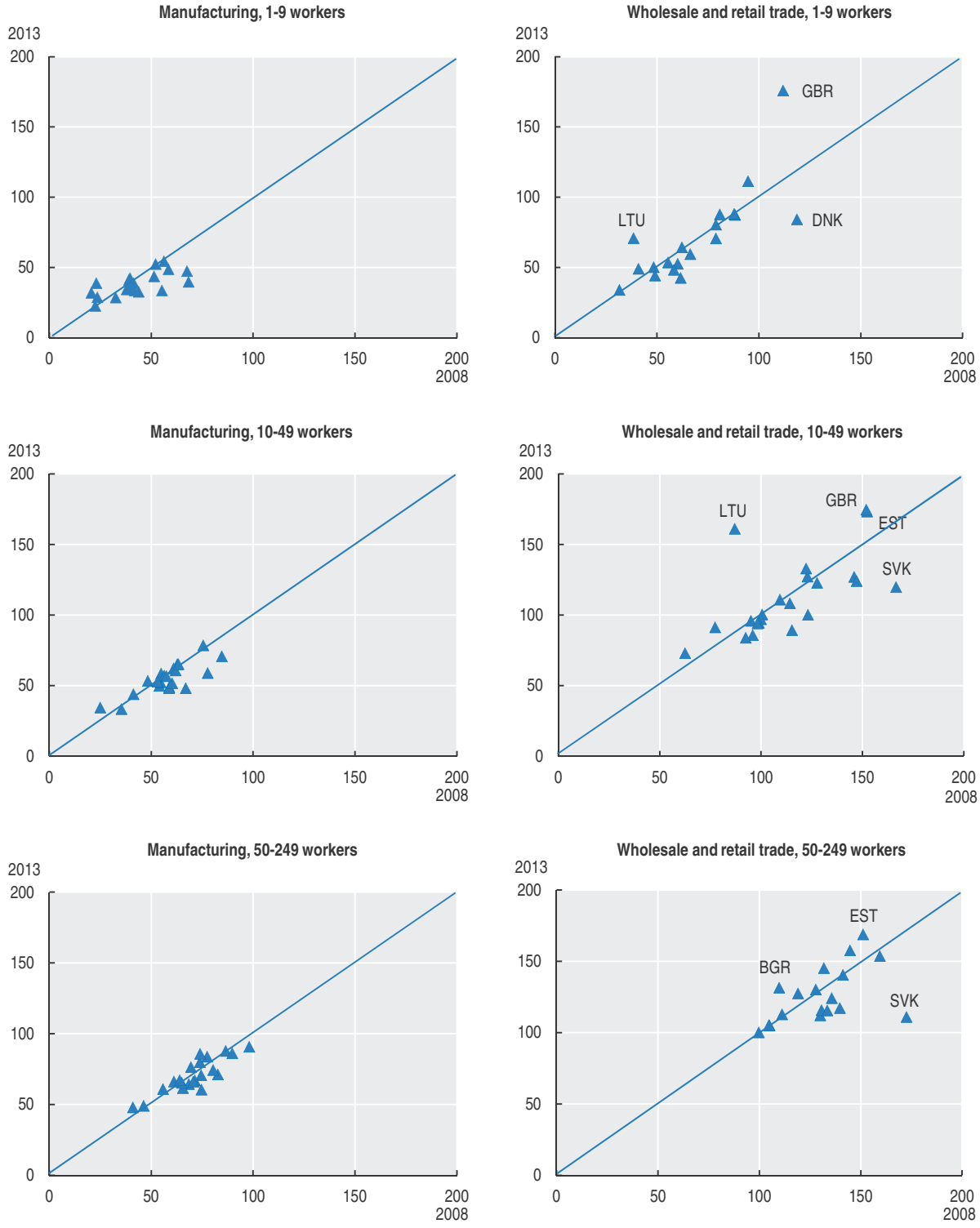
Value added per person employed, index 250+ = 100, 2013, or latest available year



StatLink http://dx.doi.org/10.1787/888933403914

Figure 3.3. **Labour productivity by enterprise size, manufacturing and wholesale and retail trade**

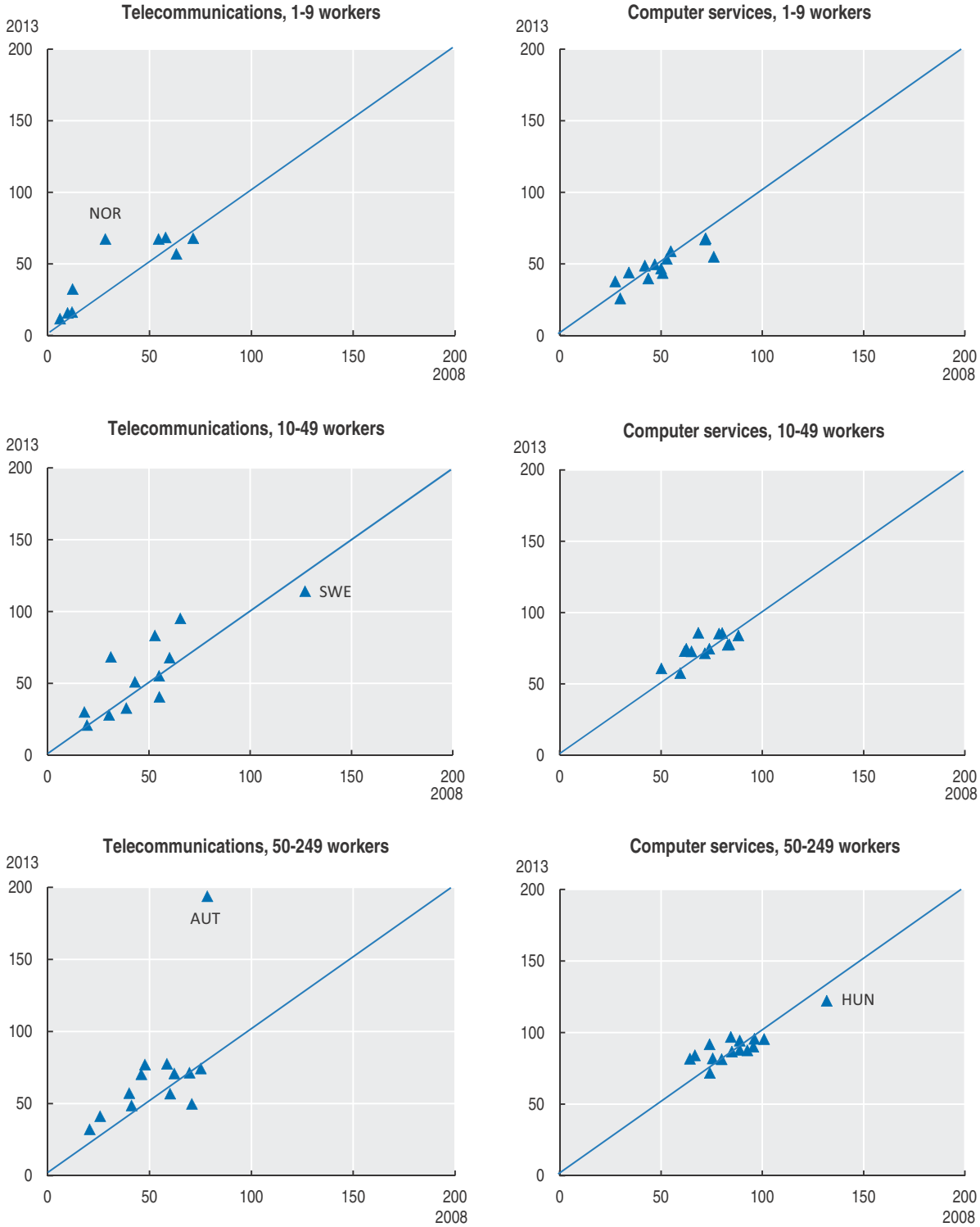
Value added per person employed, index 250+=100



StatLink http://dx.doi.org/10.1787/888933403929

Figure 3.4. **Labour productivity by enterprise size, information and communication services**

Value added per person employed, index 250+=100



StatLink http://dx.doi.org/10.1787/888933403933

Productivity growth by enterprise size

Key facts

- In many economies, post-crisis labour productivity growth in the manufacturing sector was broadly similar in SMEs and large enterprises. However, in Denmark, the Czech Republic, the Slovak Republic and Slovenia, large firms outperformed SMEs, while in Greece the opposite was true.
- In most countries, labour productivity growth rates both in SMEs and large firms occurred against a backdrop of declining employment and value added, suggesting that exits of low-performing firms or activities may have played a strong role in the overall increase in recorded labour productivity.

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", 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. 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.

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

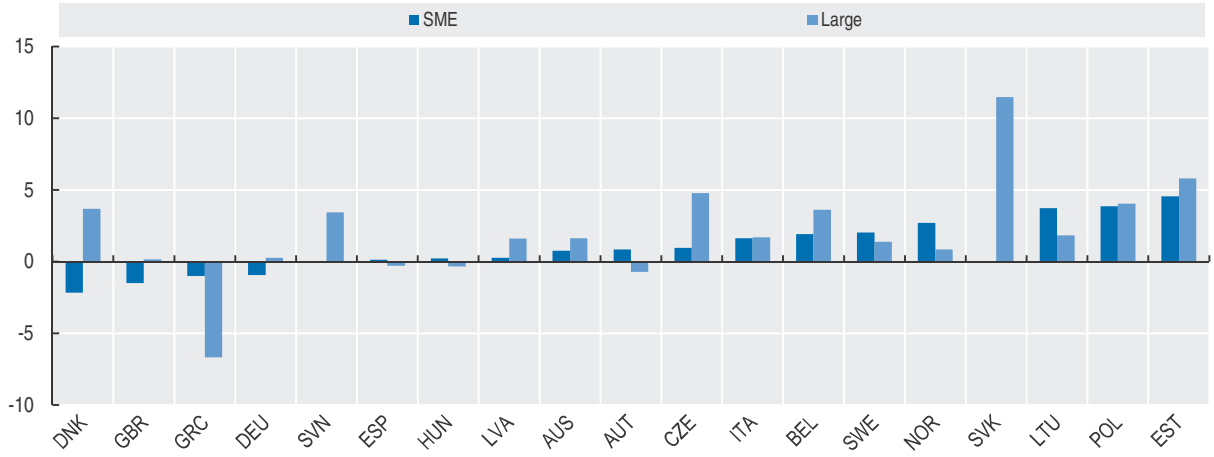
Hsieh, C. (2015), "Policies for Productivity Growth", *OECD Productivity Working Papers*, No. 3, OECD Publishing, Paris, *http://dx.doi.org/10.1787/5jrp1f5rddtc-en*.

OECD (2016), *OECD Compendium of Productivity Indicators 2016*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/pdtvy-2016-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 3.5. **Labour productivity growth by enterprise size, manufacturing**

Real value added per person employed, average annual rate, 2008-2013



StatLink http://dx.doi.org/10.1787/888933403940

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

Average annual rate, percentage, 2008-2013

StatLink http://dx.doi.org/10.1787/888933403957

Business dynamics and productivity

Key facts

- Labour productivity growth appears to be higher in countries with higher start-up rates and churn rates, pointing to a possible positive impact of business dynamism (i.e. the entry and exit of firms) on productivity growth.
- However, deviating patterns are observed in several countries. In Italy, for instance, high start-up rates co-occur with high productivity growth in the manufacturing sector and flat-lining productivity growth in services; in the United Kingdom, a high churn rate in services is associated with a low level of productivity growth.

Relevance

New, typically small firms are often found to spur aggregate productivity growth as they enter with new technologies and stimulate productivity-enhancing changes in incumbents. The reallocation of resources across enterprises, driven by firm dynamics, is also expected to increase aggregate productivity via a process of "creative destruction", whereby innovative firms enter the market and expand while displacing lower productivity firms. Several other factors also affect the relationship between productivity and business dynamics, however, including labour skills or the distribution of start-ups by activity.

Definitions

The *employer enterprise churn rate* is computed as the sum of the employer enterprise birth rate and the employer enterprise death rate, as defined in the *Eurostat-OECD Manual on Business Demography Statistics*.

The *start-up rate* is defined as the share of 0-2 year-old employer firms in the total enterprise population.

The services sector covers: wholesale and retail trade, repair of motor vehicles and motorcycles; transportation and storage; accommodation and food services; information and communication services; real estate activities; professional and support activities.

Labour productivity growth is measured as the growth in real gross value added per hour worked as sourced from *OECD Productivity Statistics* (database).

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

Comparability

Some care is needed in interpretation. Large countries are, other things equal, likely to exhibit lower birth and death rates than smaller countries, as firms are able to expand within the national economic territory via the creation of new establishments. For smaller countries, similar expansions will be recorded as a birth if the parent enterprise in one country expands through the creation of an affiliate enterprise in a neighbouring country.

Sources

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

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

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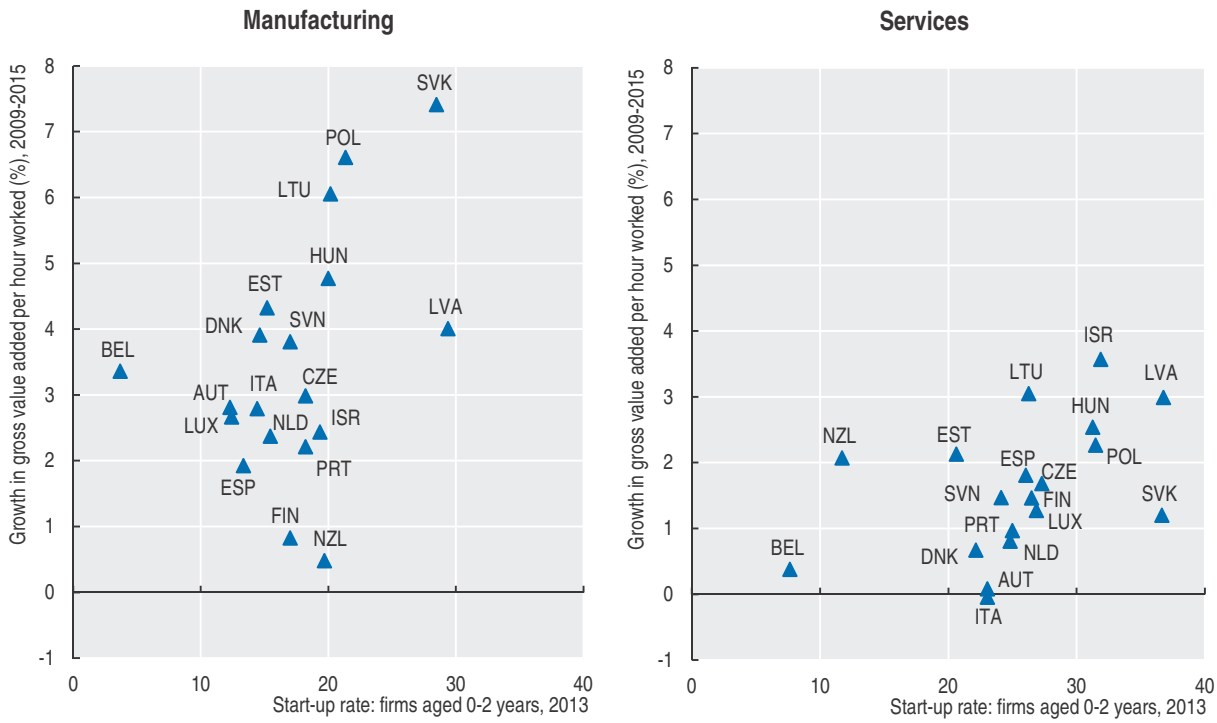
OECD (2015), *The Future of Productivity*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264248533-en*.

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*.

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

Figure 3.7. **Start-up rates and labour productivity growth**

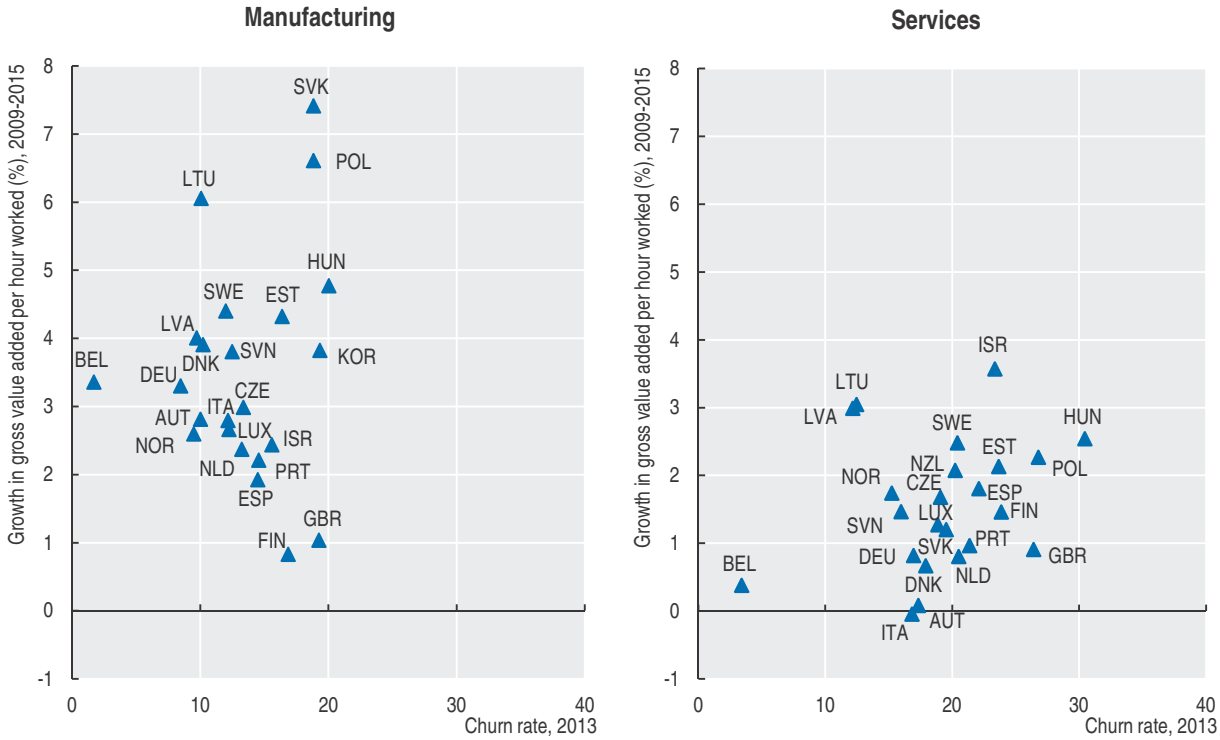
Percentage of total firm population (x-axis); average annual growth (y-axis)



StatLink http://dx.doi.org/10.1787/888933403969

Figure 3.8. **Churn rates and labour productivity growth**

Churn rates (x-axis); average annual growth (y-axis)



StatLink http://dx.doi.org/10.1787/888933403979

4. ENTERPRISE BIRTH, DEATH AND SURVIVAL

Birth rate of enterprises

Death rate of enterprises

Churn rate of enterprises

Survival of enterprises

Birth rate of enterprises

Key facts

- Start-ups with employees, i.e. the group of employer enterprises that are up to two years old, represent between 20% and 35% of all employing firms in the OECD area. In a majority of countries, this proportion decreased significantly between 2006 and 2013, and particularly so in the Czech Republic, Hungary, Italy, Luxembourg and Spain. The falling share of start-ups was mainly due to the decline in birth rates rather than to the decrease in survival rates of enterprises in their first two years of life.
- Between 2006 and 2013, the share of non-employer start-ups also declined, and often more dramatically than the share of employer start-ups, e.g. by 20 percentage points in several countries.
- In nearly all countries, birth rates are higher in the construction and services sectors than in industry, partly reflecting the lower fixed capital entry costs.
- Across all sectors and countries, most new enterprises are created with between one and four employees.

Relevance

Young enterprises are considered as key drivers of growth due to their disproportionate contribution to aggregate job creation and because of the productivity-enhancing effect associated with a rapid pace of firm entry and exit.

Definitions

Start-ups, as defined in this publication, include all enterprises that are up to two years old, i.e. the newly-born enterprises plus those that are one year old and two years old. The *start-up rate* is the number of employer (non-employer) start-ups as a percentage of the number of active employer (non-employer) enterprises.

An *employer enterprise birth* refers to the birth of an enterprise with at least one employee. The population of employer enterprise births consists, first, of "new" enterprise births, i.e. new enterprises reporting at least one employee in the birth year; and second, 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 *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.

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

Comparability

"Employer" indicators are found to be more relevant for international comparisons than indicators covering all enterprises, as the latter are sensitive to the coverage of business registers. 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. An additional complication relates to changes in thresholds over time. Monetary-based thresholds change over time in response to factors such as inflation and fiscal policy, both of which can be expected to affect comparisons of birth rates across countries and over time. The use of the one-employee threshold improves comparability, as it excludes very small units, which are most subject to threshold variations.

However, the concept of employer enterprise birth is not without problems. Many countries have sizeable populations of self-employed. 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.

Data for employer and non-employer enterprise births exhibit breaks in the series in 2013 for Estonia, Finland and Portugal, in 2009 for the Netherlands, and in 2011 for Romania. In Estonian non-employer data, the 2008 increase in the birth rate was caused by the requirement for all sole proprietors to register in the Commercial Register.

Data for the United States follow ISIC Rev. 3; also, in Figures 4.1 and 4.2, data for the period 2006-2007 are compiled according to ISIC Rev. 3 for European countries.

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".

In Figure 4.1, for the United Kingdom data for two-year-old enterprises are estimates.

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*.

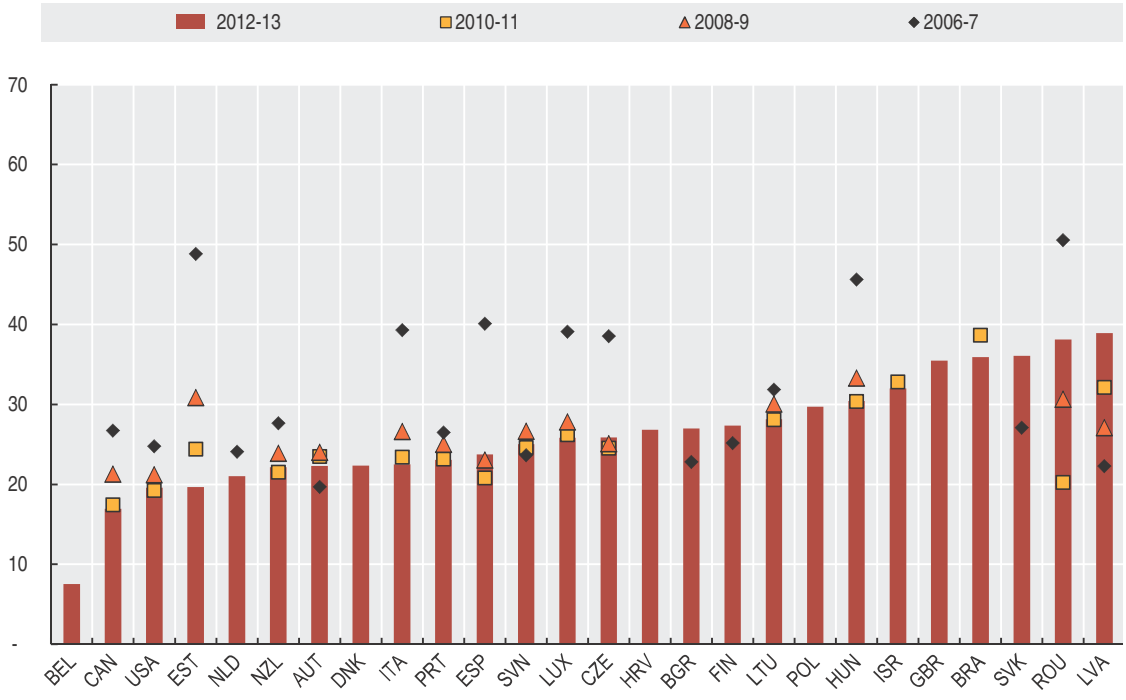
Further reading

Ahmad, N. (2006), "A Proposed Framework for Business Demography Statistics", *OECD Statistics Working Papers*, No. 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. **Start-up rates, employer enterprises, total business economy**

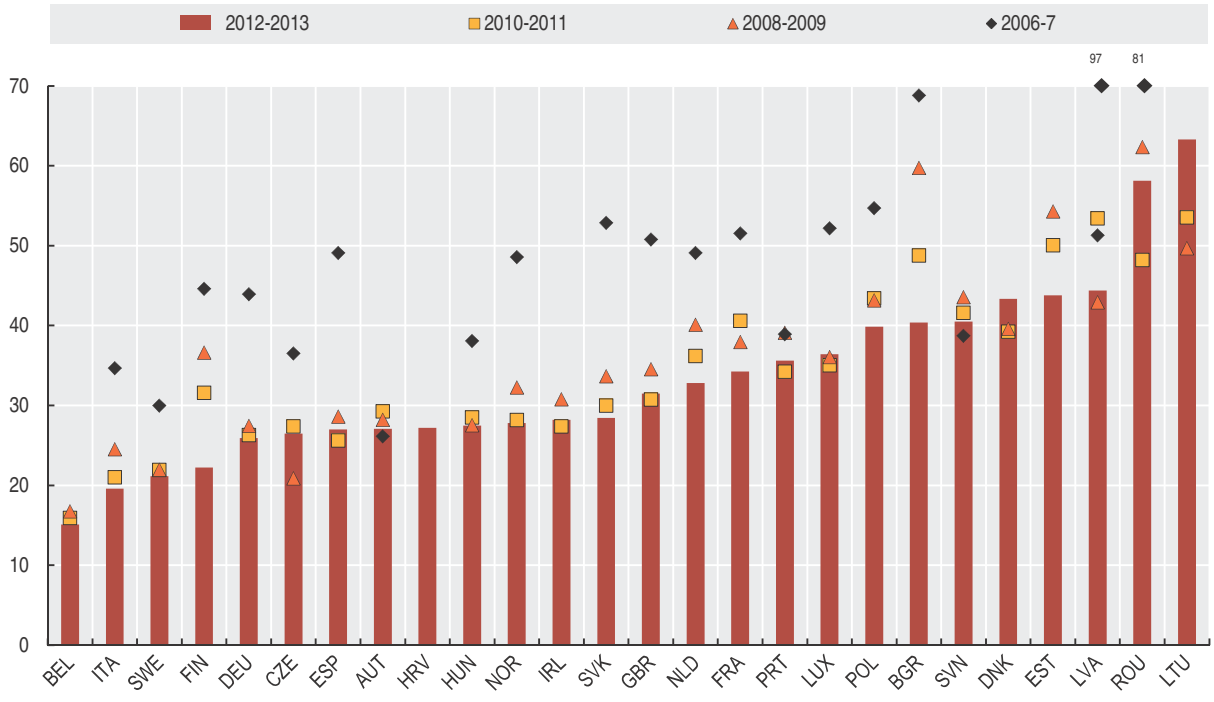
Percentage of 0- to 2-year-old employer enterprises over total number of employer enterprises



StatLink http://dx.doi.org/10.1787/888933403989

Figure 4.2. **Start-up rates, non-employer enterprises, total business economy**

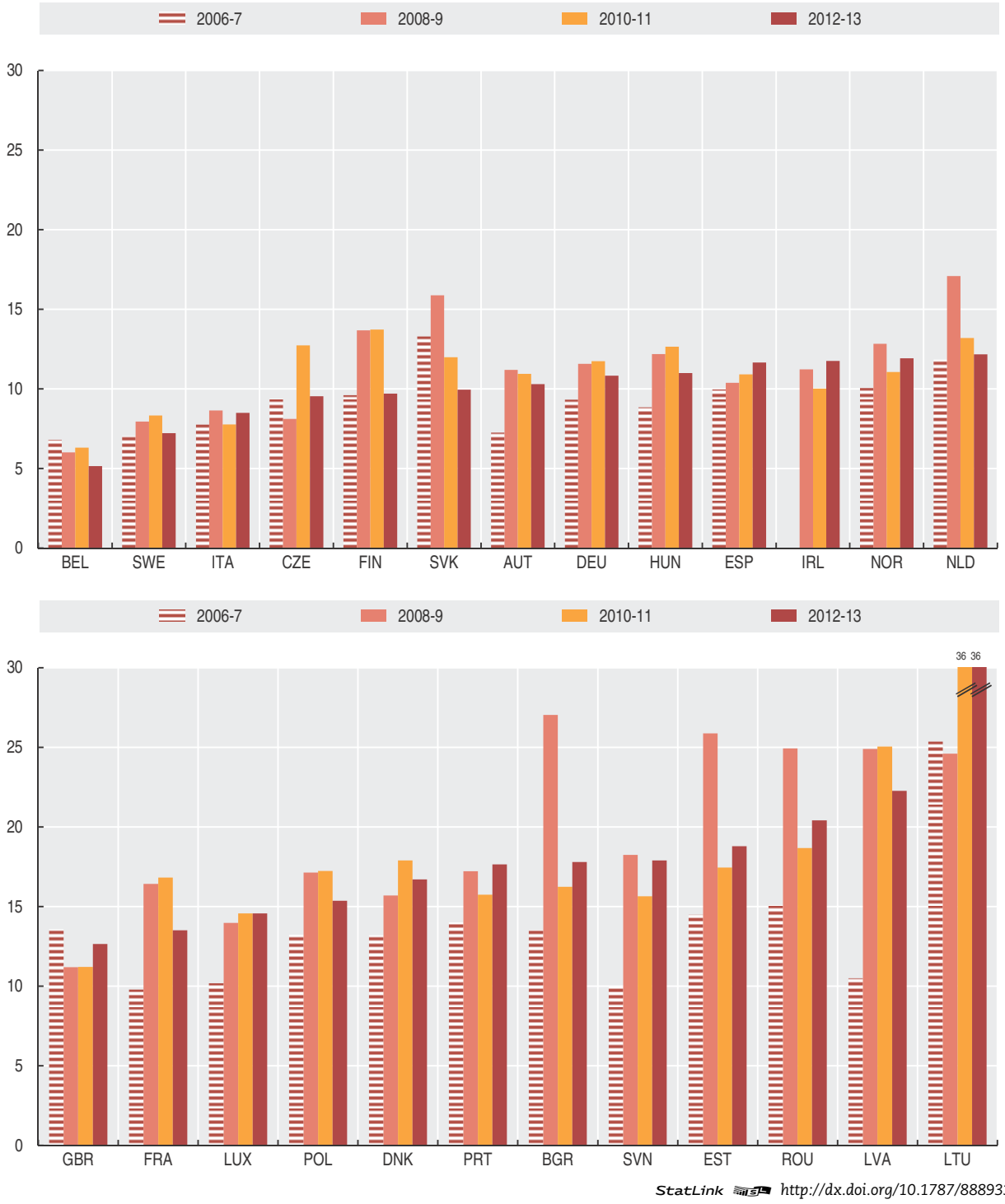
Percentage of 0- to 2-year-old non-employer enterprises over total number of non-employer enterprises



StatLink http://dx.doi.org/10.1787/888933403993

Figure 4.3. **Non-employer enterprise birth rate, total business economy**

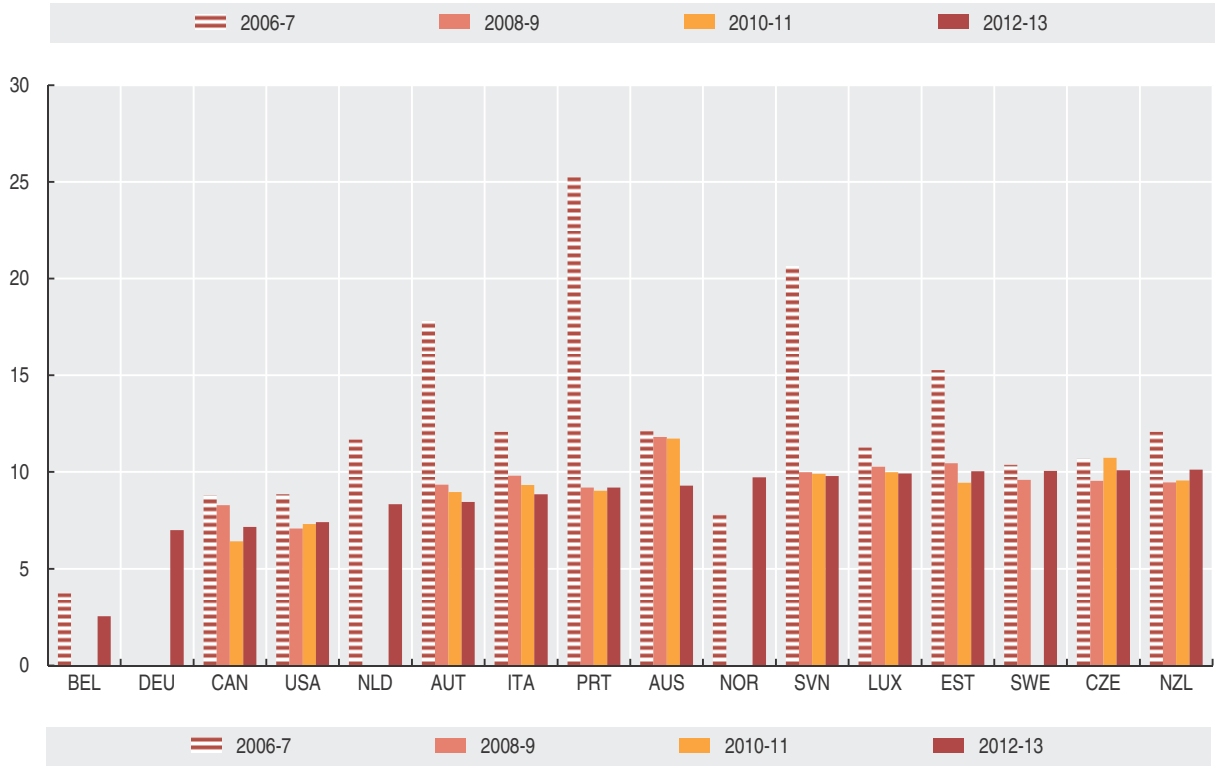
Number of non-employer births as percentage of total non-employer enterprises

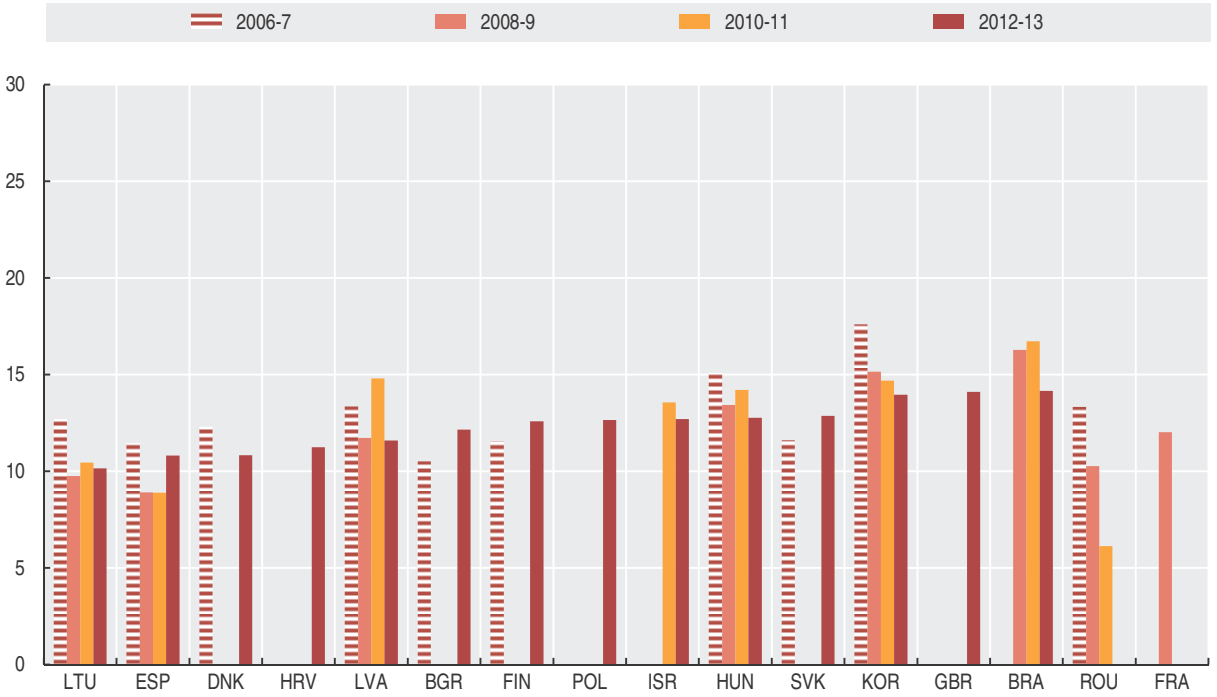


StatLink http://dx.doi.org/10.1787/888933404001

Figure 4.4. **Employer enterprise birth rate, total business economy**

Number of employer births as percentage of total employer enterprises

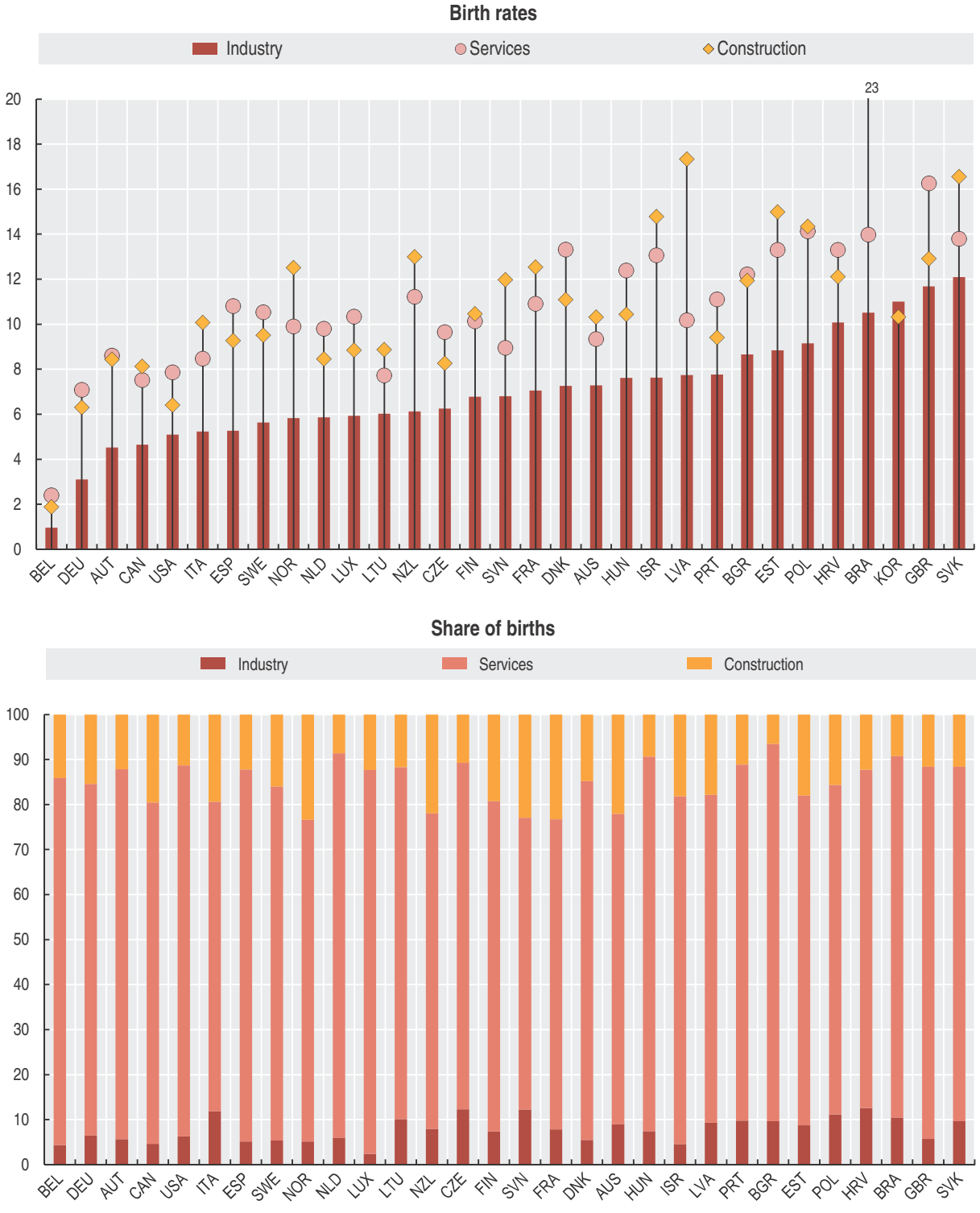




StatLink http://dx.doi.org/10.1787/888933404012

Figure 4.5. **Employer enterprise births by sector**

Percentage, 2013, or latest available year



StatLink http://dx.doi.org/10.1787/888933404028

Figure 4.6. **Employer enterprise birth rates, by size and sector**

Percentage, 2013, or latest available year

StatLink http://dx.doi.org/10.1787/888933404037

Death rate of enterprises

Key facts

- Levels of deaths and births are generally of a similar magnitude within countries. However, in many countries post-crisis trends in death rates have remained broadly stable, while birth rates have trended downwards.
- Death rates are typically higher for non-employer enterprises than for employer enterprises, reflecting the often precarious nature of the former.
- In all countries, the death rates of employer enterprises in the construction and services sectors are consistently higher than the corresponding rates in industry.
- Very small firms, with one to four employees, have the highest death rates.

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.

Comparability

"Employer" indicators are found to be more relevant for international comparisons than indicators covering all enterprises, as the latter are sensitive to the coverage of business registers. 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 additional complication in this regard relates to changes in thresholds over time. Monetary-based thresholds change over time 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.

Data on the number of deaths for Denmark, Estonia, Finland and the Netherlands present a break in the series in 2013; for Portugal in 2011 and 2013; for Austria in 2007; and for Romania in 2009 and 2011. Data for the United States are compiled according to ISIC Rev. 3; also, in Figures 4.5 and 4.6, data for the period 2006-2007 are compiled according to ISIC Rev. 3 for European countries.

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".

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.

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 *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.

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

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*, No. 2006/3, OECD Publishing, Paris, *http://dx.doi.org/10.1787/145777872685*.

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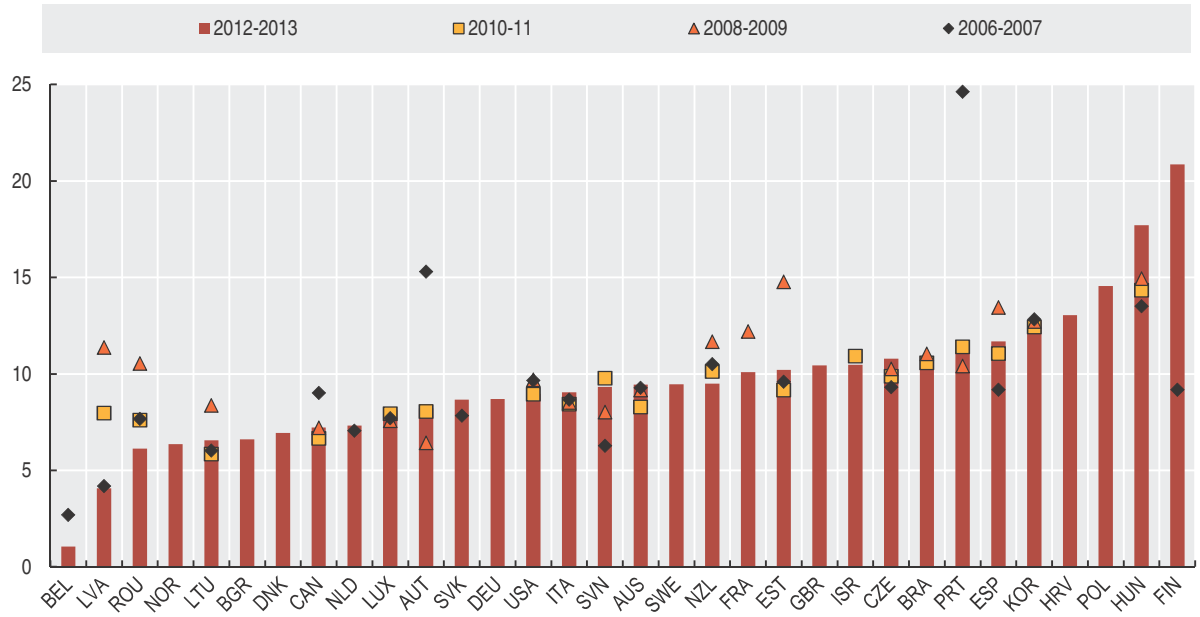
OECD/Eurostat (2008), *Eurostat-OECD Manual on Business Demography Statistics*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264041882-en*.

Figure 4.7. **Death rates of employer enterprises, total business economy**

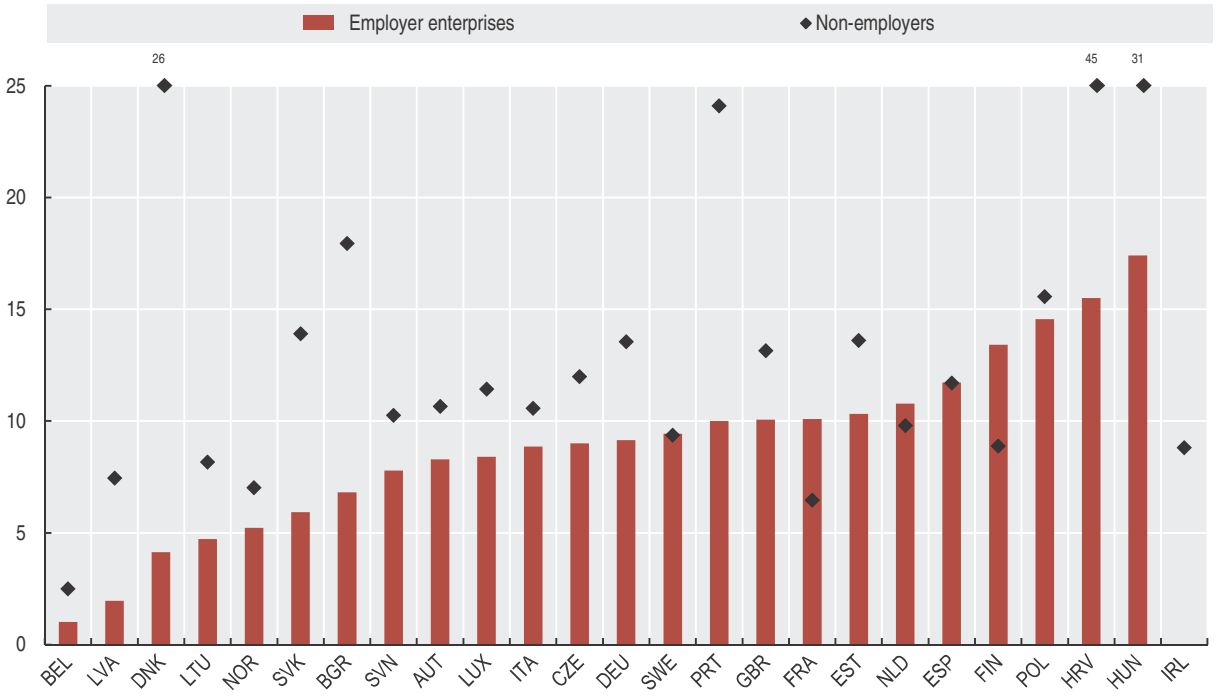
Number of employer deaths as percentage of total employer enterprises



StatLink http://dx.doi.org/10.1787/888933404043

Figure 4.8. **Death rates of employer enterprises and non-employers, total business economy**

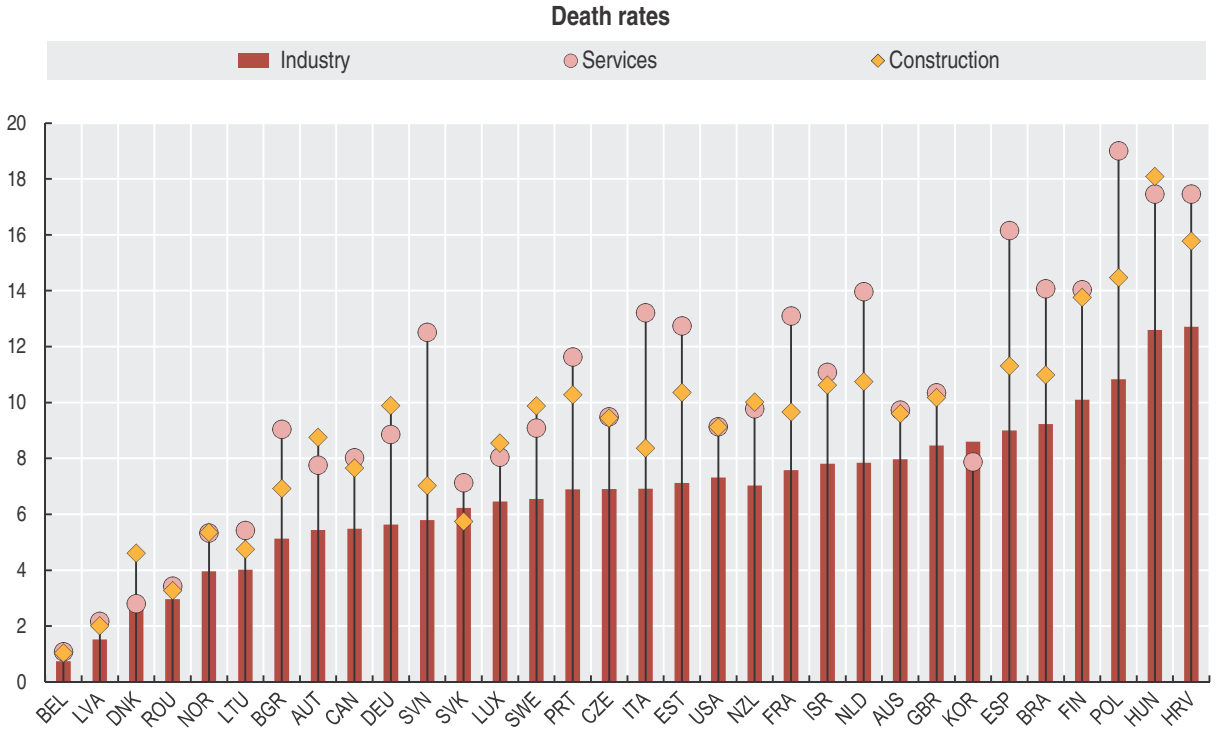
Number of enterprise deaths as percentage of total enterprises, by enterprise type, 2013 or latest available year

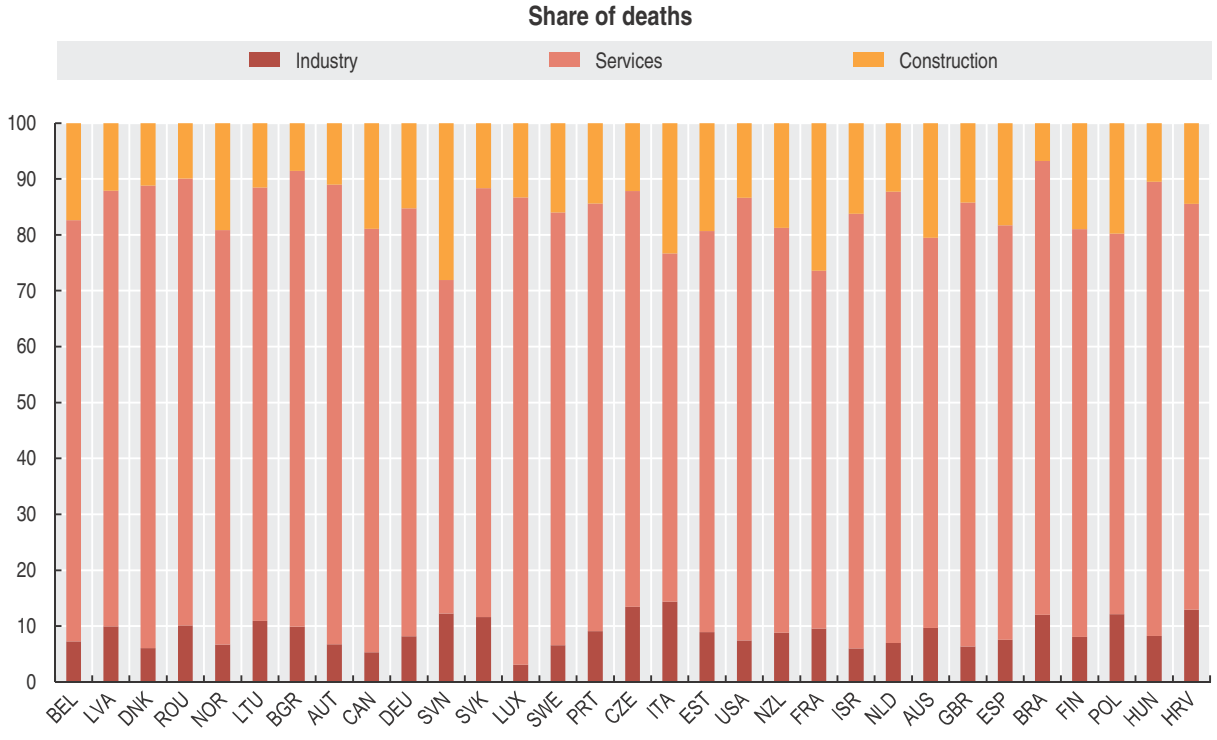


StatLink http://dx.doi.org/10.1787/888933404050

Figure 4.9. **Employer enterprise deaths, by sector**

Percentage, 2013, or latest available year





StatLink http://dx.doi.org/10.1787/888933404066

Figure 4.10. **Employer enterprise death rates, by size and sector**

Percentage, 2013, or latest available year

StatLink http://dx.doi.org/10.1787/888933404075

Churn rate of enterprises

Key facts

- The churn rates of employer enterprises range on average between 10% and 20% in industry and between 15% and 30% in services and construction. In 2013, only a few countries showed much lower (Belgium) or much higher (Hungary) churn rates.
- Between 2008 and 2013, churn rates decreased in virtually all countries and across all sectors, reflecting in particular declining birth rates.
- The churn rates of employer enterprises are higher in services and construction than in industry, suggesting more significant business dynamics in these sectors.

Relevance

The churn rate, i.e. the sum of birth and death rates of enterprises, indicates 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, for example, the analysis of the contribution of business dynamism to aggregate productivity growth.

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.

There is a time lag in the employer enterprise churn rate compilation, linked to the process of confirmation of employer enterprise deaths.

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

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.

Data for the United States as well as 2006-2007 data for European countries are compiled according to ISIC Rev. 3. Data for Denmark, Estonia, Finland, the Netherlands and Portugal exhibit a break in the series in 2013.

For Australia, Korea and Mexico, 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*.

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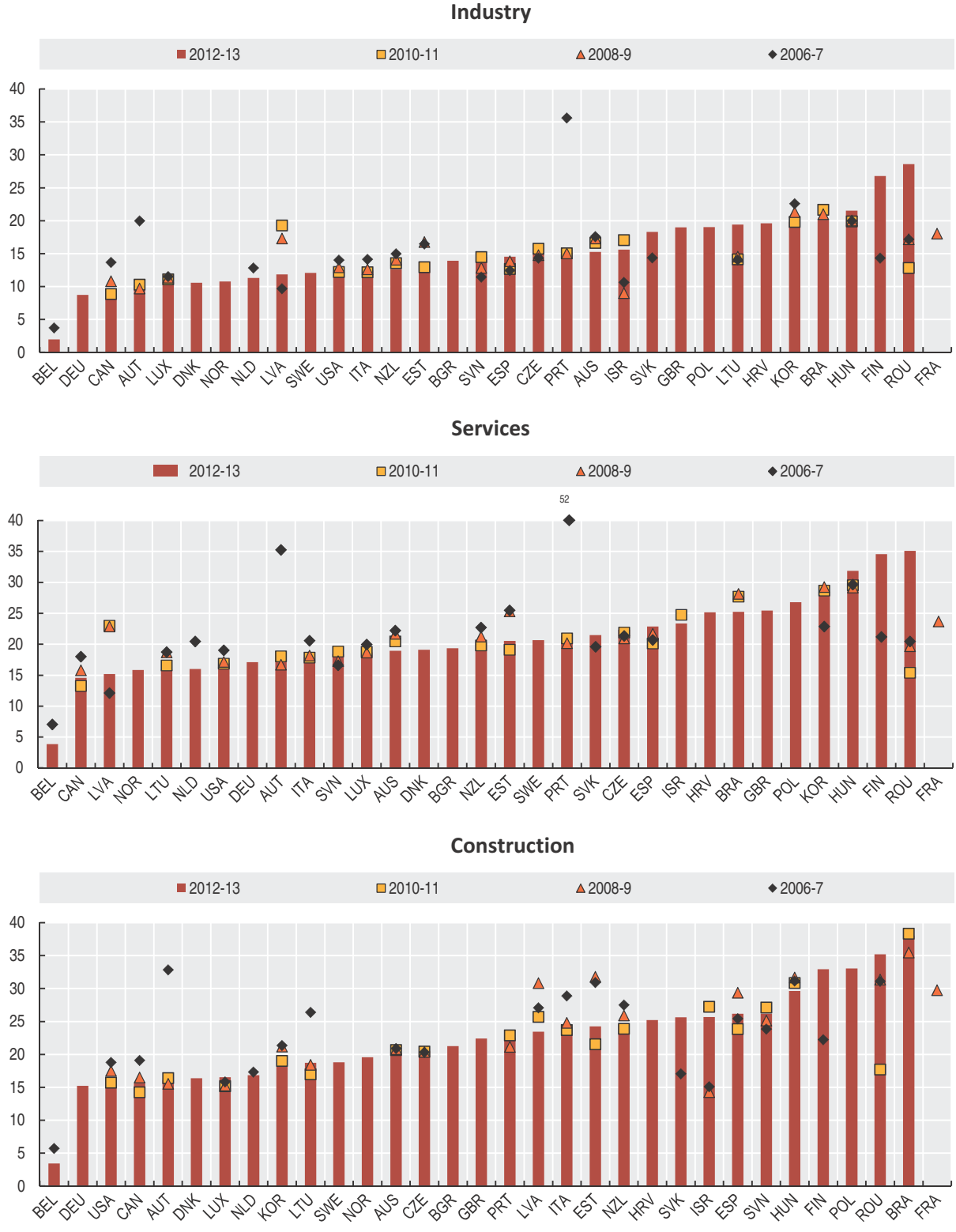
Scarpetta, S. et al. (2002), "The role of policy and institutions for productivity and firm dynamics: evidence from micro and industry data", *OECD Economic Department Working Papers*, No. 329, OECD Publishing, Paris, *http://dx.doi.org/10.1787/547061627526*.

Figure 4.11. **Employer enterprise churn rates, by sector**

Sum of employer enterprise births and deaths as percentage of total employer enterprises



StatLink http://dx.doi.org/10.1787/888933404082

Survival of enterprises

Key facts

- In most countries, more than half of newly created enterprises fail within the first five years. Nevertheless, there are important differences across countries; for instance, the two-year survival rate of enterprises active in industry is 85% in Austria and only 50% in Hungary.
- In the vast majority of countries, the shares of enterprises aged respectively one, two or three years are declining in order, partly reflecting the higher probability of failure in the first few years of operation and partly the evolving composition of the population of enterprises, i.e. with variable numbers of newly created firms and exiting firms.
- Survival is usually higher in industry than in services or construction. In 2013, the lowest one-year survival rates were registered in construction and in food and accommodation activities in a large majority of countries, with a few exceptions, notably Lithuania and the Netherlands.

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 measures the number of enterprises of a specific birth cohort 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.

The *n-year survival rate of enterprises (including non-employer and employer enterprises)* for a reference year t is calculated as the number of enterprises newly born in t-n having survived to t divided by the number of enterprise births in t-n.

The survival of an enterprise is an event that should always be observed between two consecutive years. For instance, an enterprise born in year t-2 should be considered as having survived to t only if it had at least one employee also in year t-1, and so forth.

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.

Comparability

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

Data for the United States are compiled according to ISIC Rev. 3. Data for Denmark, Estonia, Finland, the Netherlands and Portugal exhibit a break in the series in 2013.

For Australia, Korea and Mexico, 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*, No. 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 4.12. **Employer enterprise survival rates, by sector**

Percentage

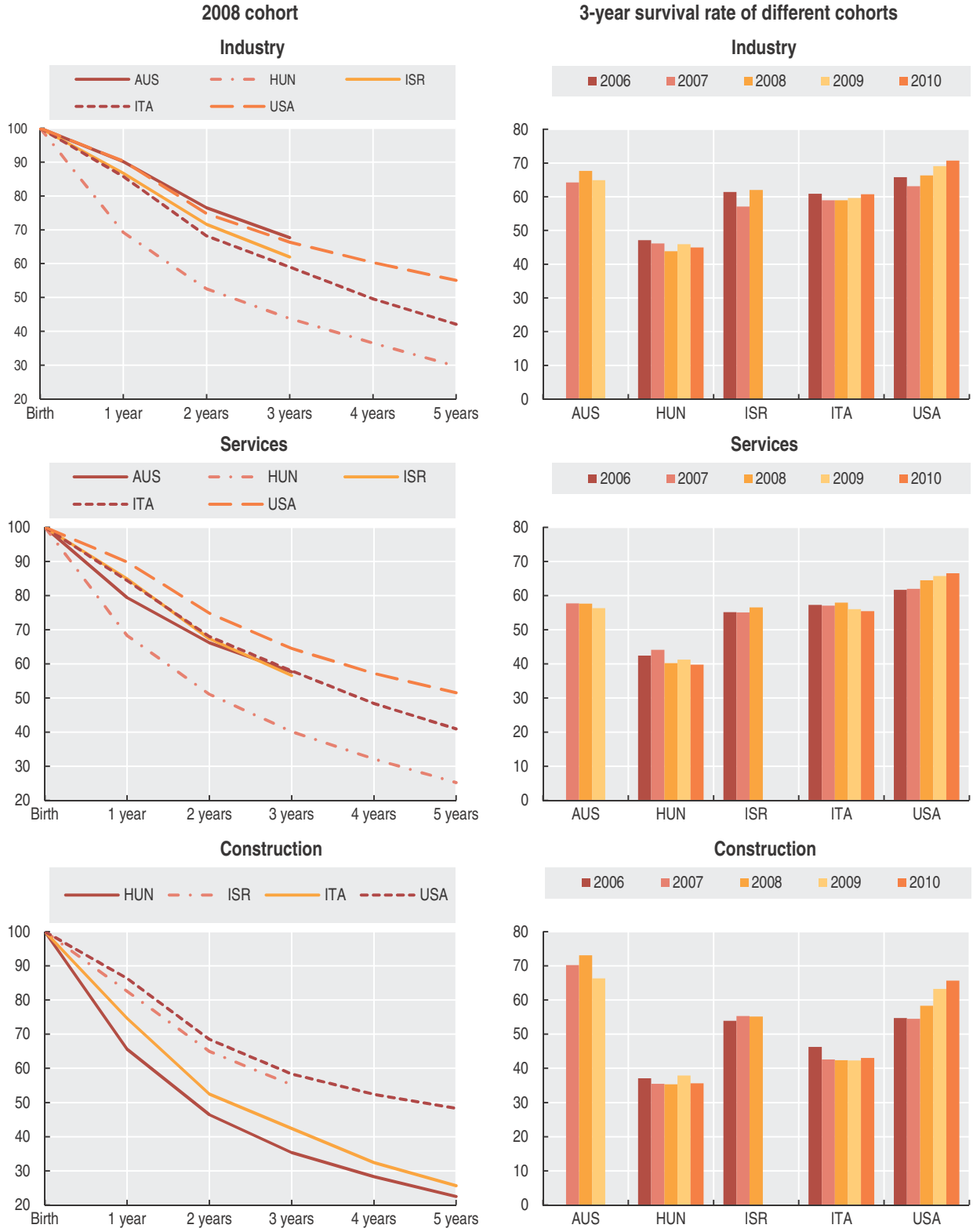


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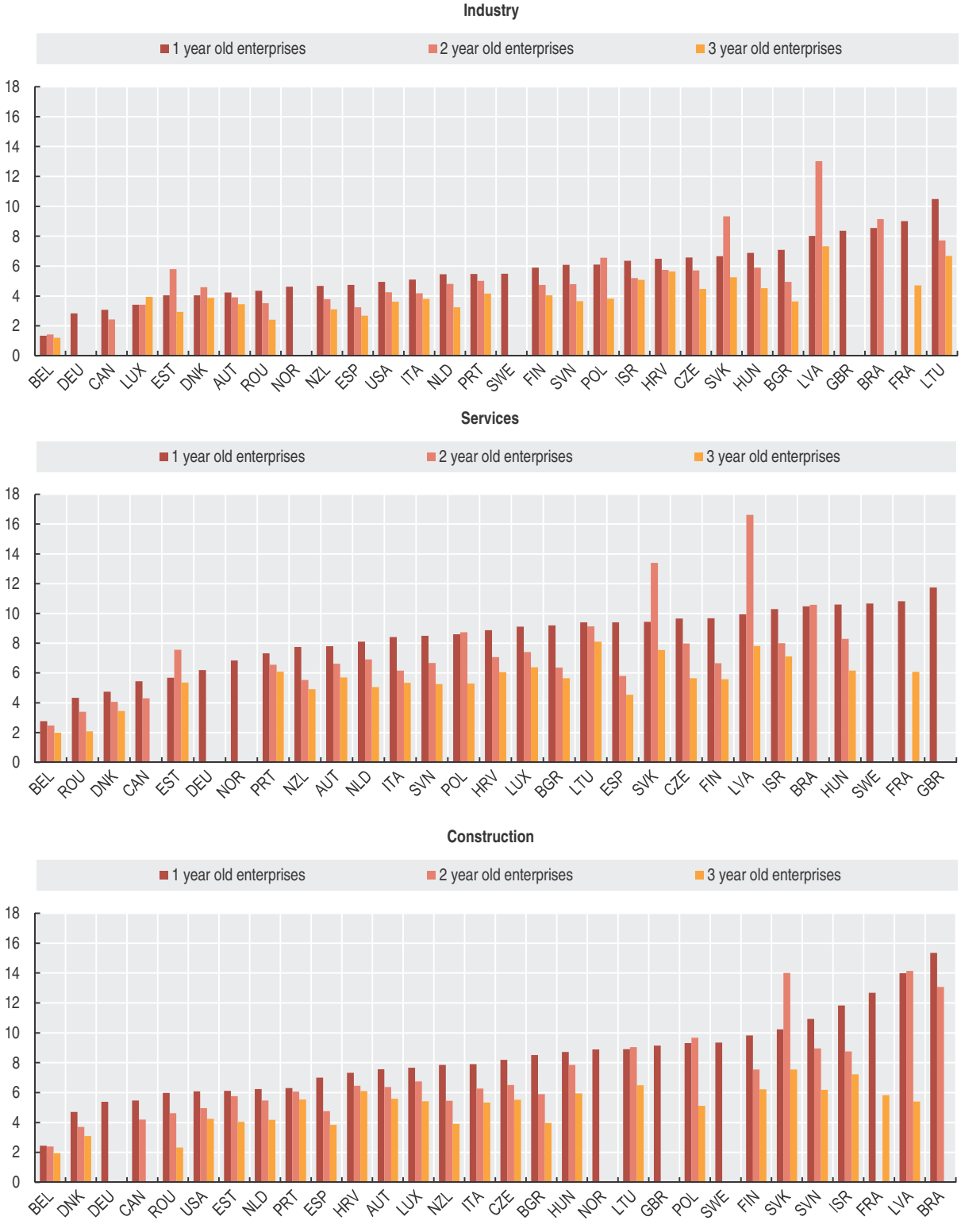
Figure 4.13. **Share of young employer enterprises in business population, by sector**

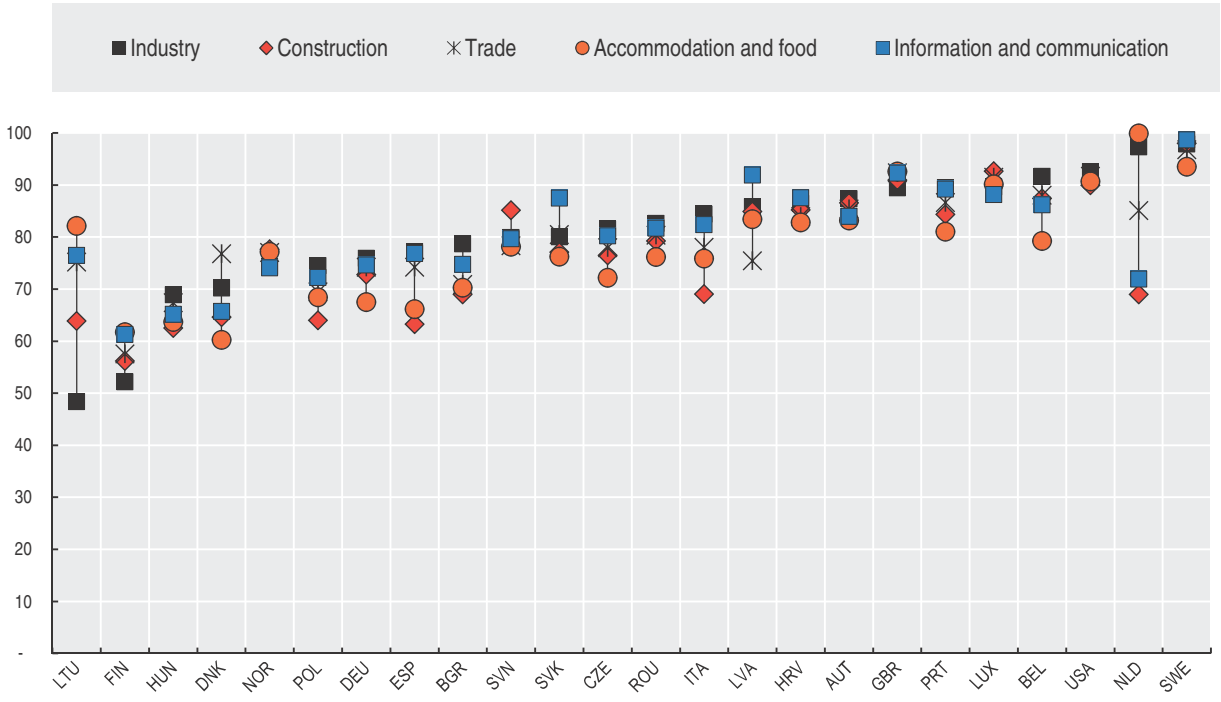
Percentage of all employer enterprises, 2013, or latest available year



StatLink http://dx.doi.org/10.1787/888933404105

Figure 4.14. **1-year survival rate of employer enterprises, by economic activity**

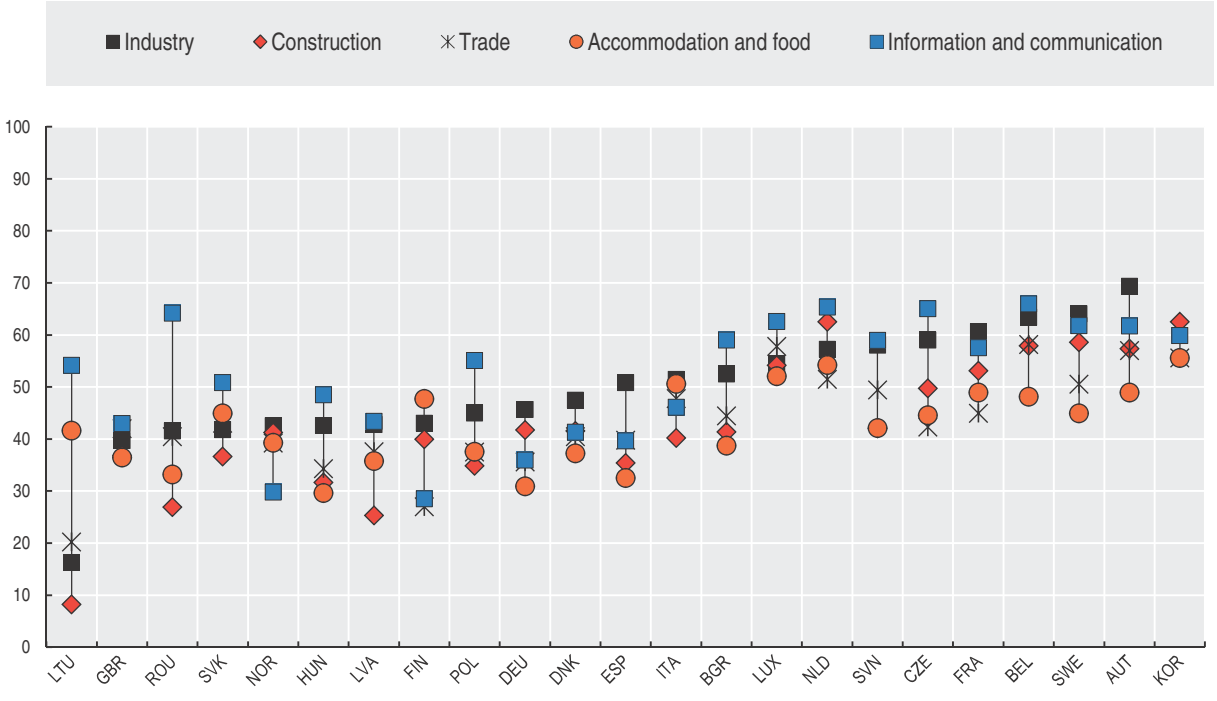
Percentage, 2012 cohort



StatLink http://dx.doi.org/10.1787/888933404112

Figure 4.15. **5-year survival rate of enterprises (including non-employers), by economic activity**

Percentage, 2008 cohort



StatLink http://dx.doi.org/10.1787/888933404121

5. ENTERPRISE GROWTH AND EMPLOYMENT CREATION

Employment creation and destruction by enterprise births and deaths

Employment creation in start-ups

High-growth enterprises rate

Employment creation and destruction by enterprise births and deaths

Key facts

- Rates of employment creation and destruction by births and deaths of employer enterprises vary widely across countries, though rarely exceeding 6% of total employment. In many countries, rates of employment creation and destruction are closely correlated.
- Between 2008 and 2013, the share of employment generated by newly created firms remained rather stable, despite the decline in birth rates and in the average size of enterprises at birth. At the same time, in most countries the employment destruction by enterprise deaths was lower in 2013 than in 2008, reflecting a decrease in business dynamism.
- In 2013, in a majority of countries, net employment creation from enterprise births and deaths was positive in services but negative in industry. At the total economy level, net creation was positive and above 1% of total employment in a few countries, including Denmark, Norway and the Slovak Republic.
- Average employment in newly born employer enterprises typically ranges between two and three employees. The size of new employer enterprises is significantly higher in the United States (around seven employees) and in Brazil and the Netherlands (five employees). The average number of employees in enterprise births and deaths is generally higher in industry than in other sectors, partly reflecting economy of scale factors.

Definitions

The employment creation by employer enterprises births is measured as the employment share of employer enterprise births. It is calculated as the number of persons employed in the reference period t in employer enterprises born in t divided by the number of persons employed in t in the population of employer enterprises.

The employment destruction by employer enterprises deaths is measured as the employment share of employer enterprise deaths. It is calculated as the number of persons employed in the reference period t in exiting employer enterprises divided by the number of persons employed in t in the population of employer enterprises.

Net employment creation due to employer enterprise births and deaths is calculated as a 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).

Average employment in employer enterprise births (deaths) is the number of persons employed by employer enterprise at birth (death) in t divided by the number of employer enterprise births (deaths) in t.

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

Relevance

Employment created by enterprise births or destroyed by enterprise deaths provides an indication of how enterprise business demography contributes to overall employment changes in the economy, and in particular the important contribution to employment growth made by start-ups.

Comparability

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

Data for the United States are compiled according to ISIC Rev. 3. Data for Denmark, Estonia, Finland, the Netherlands and Portugal exhibit a break in the series in 2013.

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*, No. 2006/3, OECD Publishing, Paris, *http://dx.doi.org/10.1787/145777872685*.

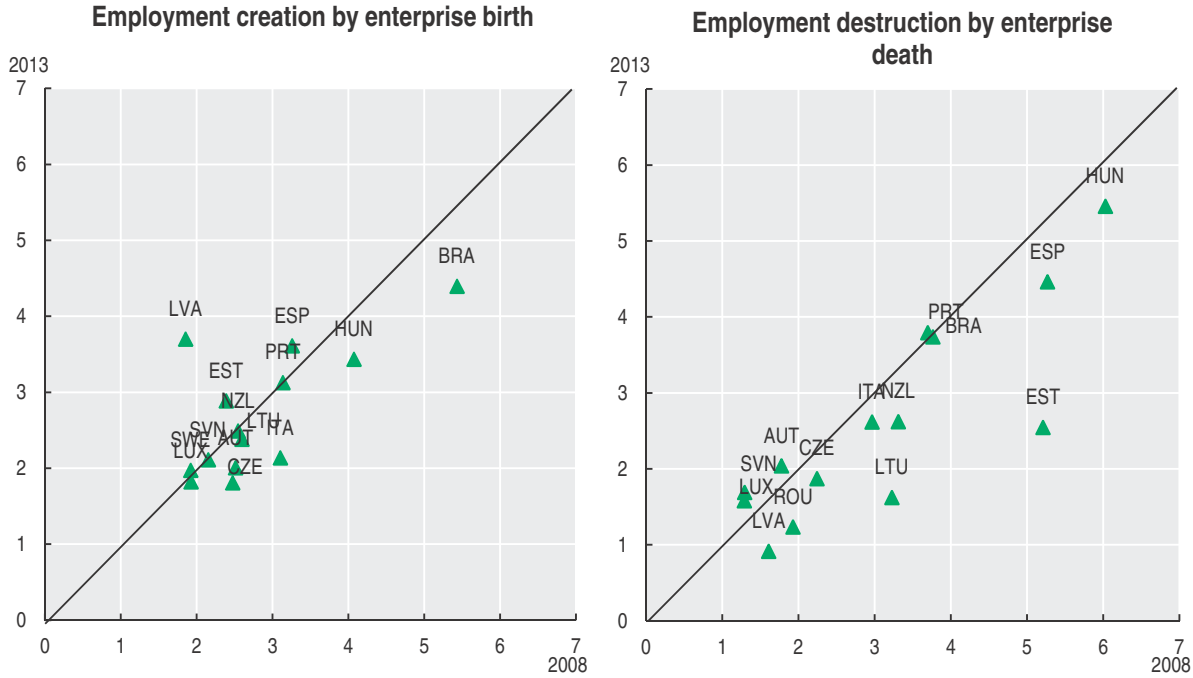
Criscuolo, C., P.N. Gal and C. Menon (2014), "The Dynamics of Employment Growth: New Evidence from 18 Countries", *OECD Science, Technology and Industry Policy Papers*, No. 14, OECD Publishing, Paris, *http://dx.doi.org/10.1787/5jz417hj6hg6-en*.

Haltiwanger, J., R.S. Jarmin and J. Miranda (2010), "Who creates jobs? Small vs. Large vs. Young", *Discussion Papers*, US Census Bureau, *www.nber.org/papers/w16300.pdf?new_window=1*.

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

Figure 5.1. **Employment share of employer enterprise births and deaths, total business economy**

Percentage of total employment in employer enterprises



StatLink http://dx.doi.org/10.1787/888933404139

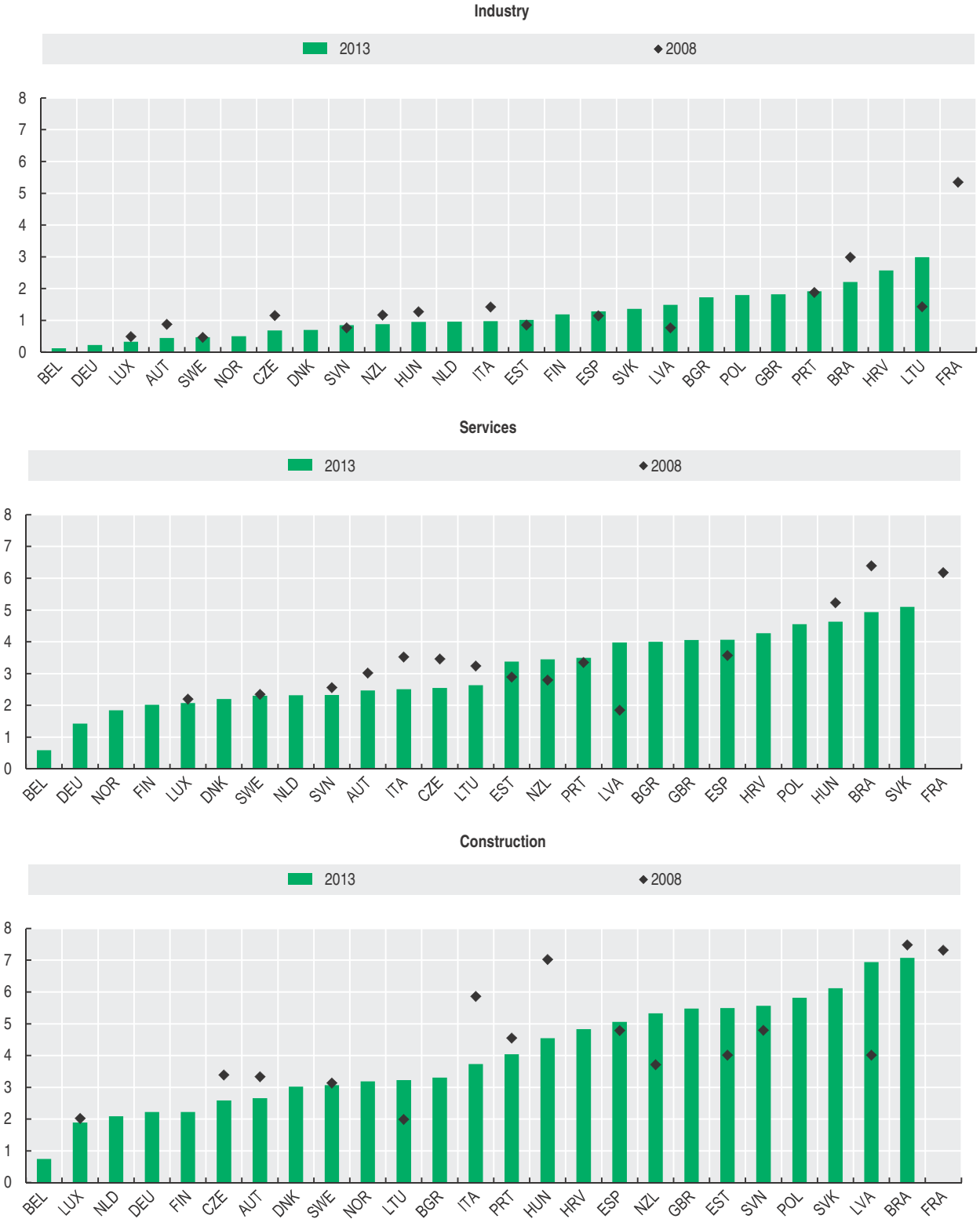
Figure 5.2. **Net employment creation due to employer enterprise births and deaths, total business economy**

Percentage of total employment in employer enterprises

StatLink http://dx.doi.org/10.1787/888933404146

Figure 5.3. **Employment creation by employer enterprise births, by sector**

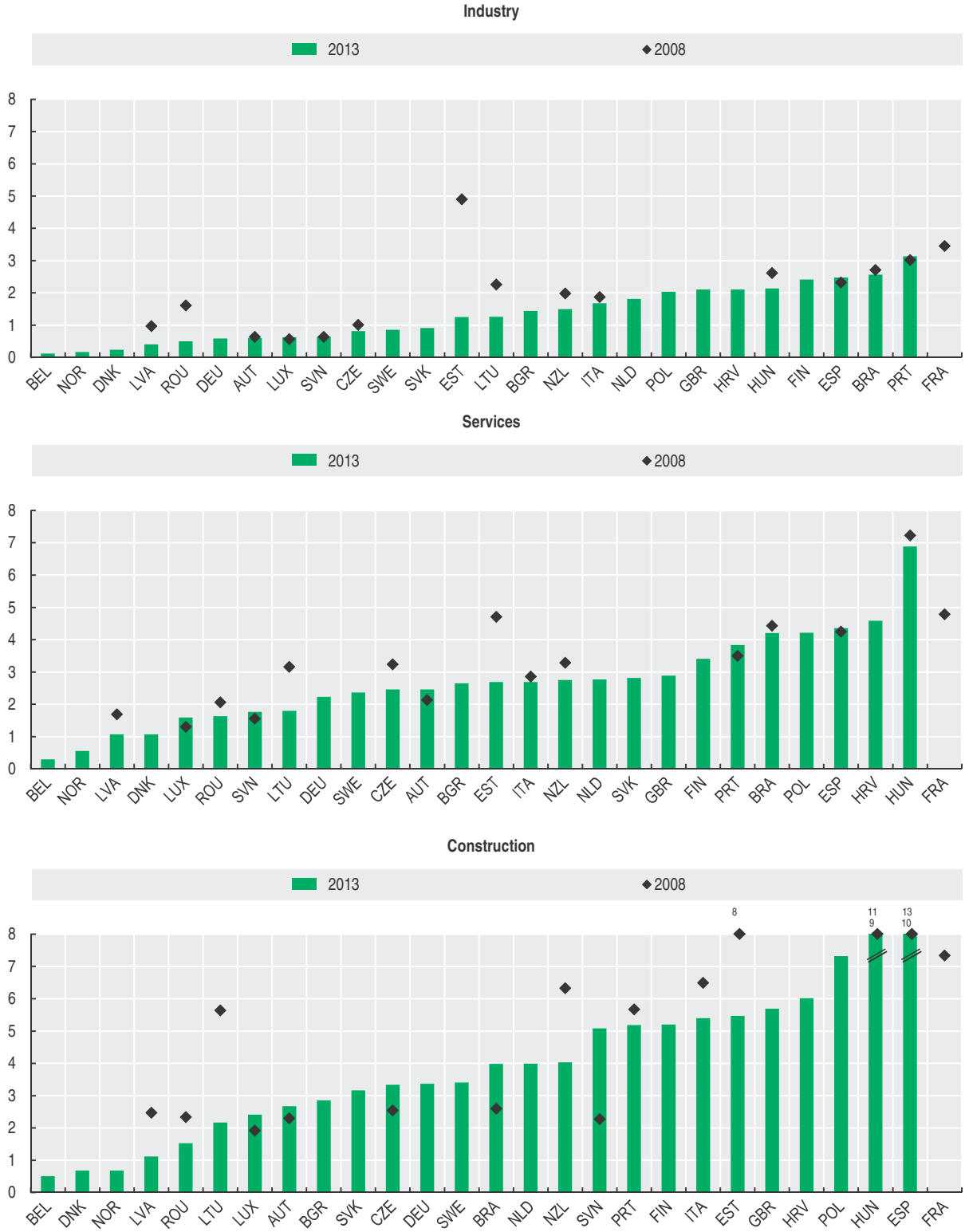
Percentage of total sector employment in employer enterprises



StatLink http://dx.doi.org/10.1787/888933404159

Figure 5.4. **Employment destruction by employer enterprise deaths, by sector**

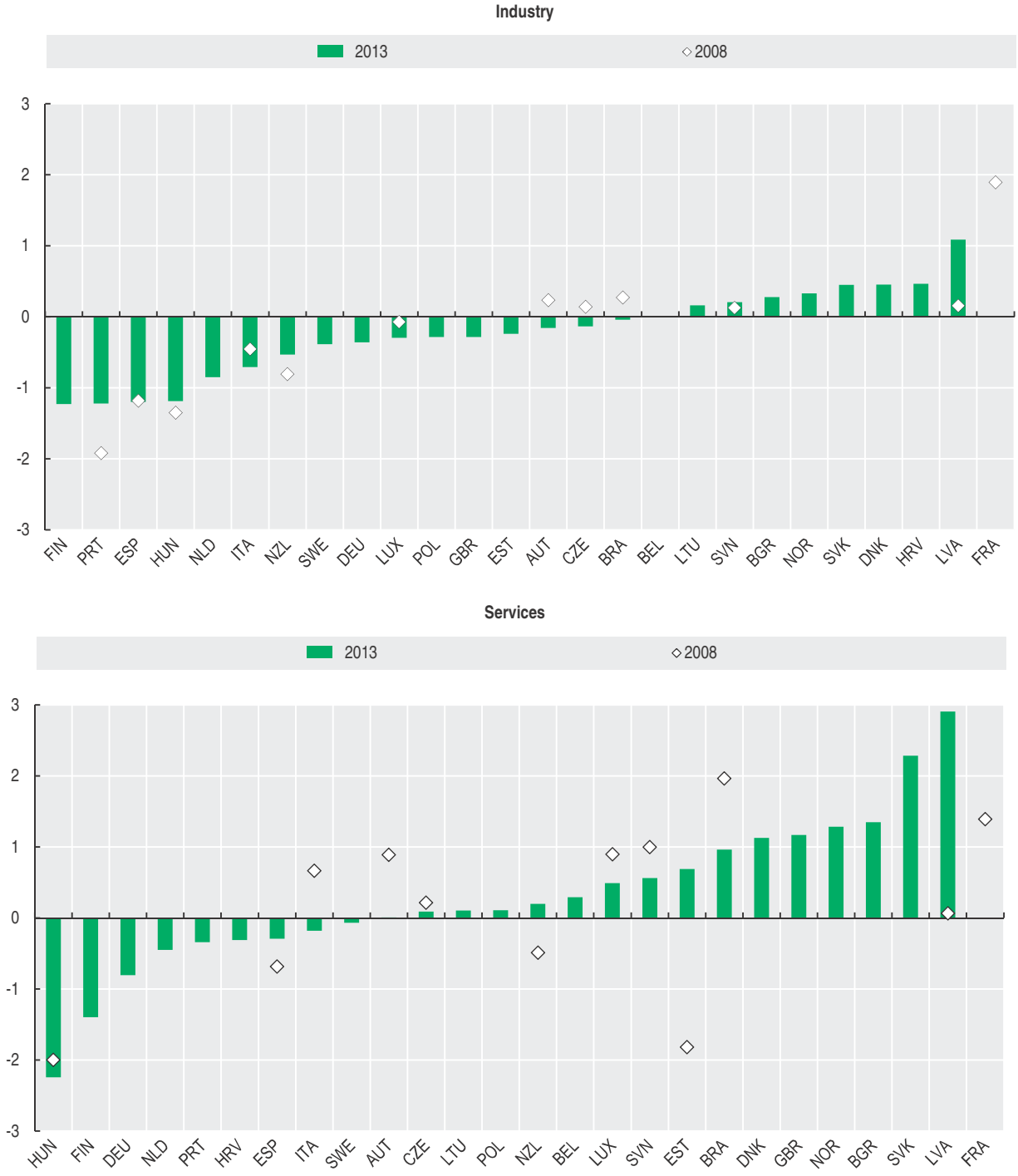
Percentage of total sector employment in employer enterprises



StatLink http://dx.doi.org/10.1787/888933404160

Figure 5.5. **Net employment creation due to employer enterprise births and deaths**

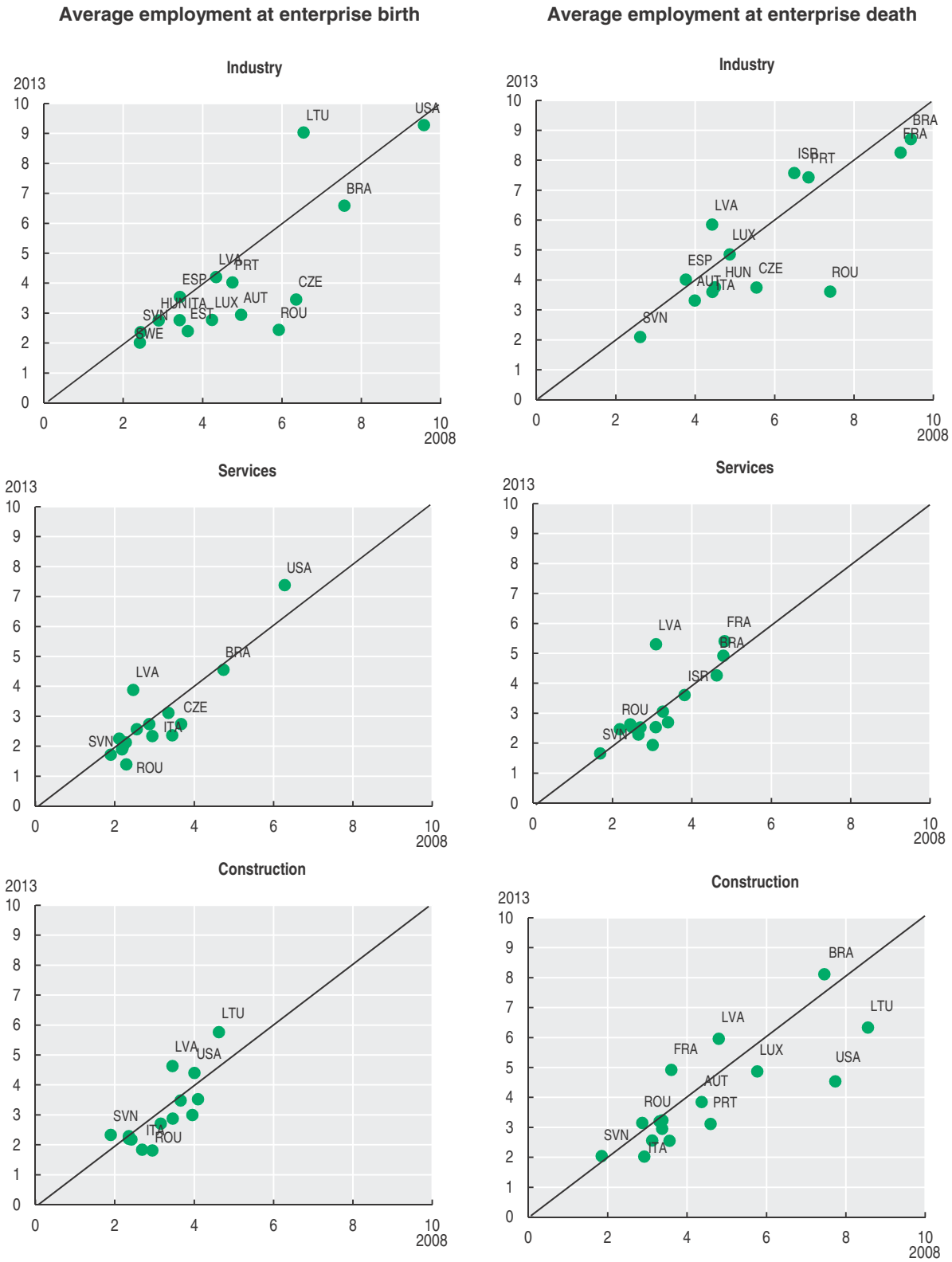
Percentage of total sector employment in employer enterprises



StatLink http://dx.doi.org/10.1787/888933404179

Figure 5.6. **Average employment in employer enterprises at birth and death, by main sector**

Number of persons employed per employer enterprise birth/death, 2008 and 2013



StatLink http://dx.doi.org/10.1787/888933404181

Employment creation in start-ups

Key facts

- The employment generated by start-ups, i.e. newly created enterprises and those aged one and two years, ranges from 4% to 15% of total employment in most countries. The contribution of start-ups to total employment decreased in 2013 compared to 2008 in many countries where data are available.
- In many countries, one-year-old firms account for more employment than new firms, and two-year-old-firms account for a similar share of employment as one-year-old firms. This is the case despite firms' high probability of failure in their first few years of operation, reflecting employment growth in surviving firms.
- Generally, start-ups account for a more important employment share in services and construction, where the churning of enterprises is high.

Definitions

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 *employment in the first (second) survival year* of employing enterprises refers to the number of persons employed in employer enterprises surviving one (two) years, divided by the total number of persons employed in employer enterprises.

The *average size of newly-born employer enterprises* is expressed as the number of persons employed in the reference period (t) in enterprises born in t divided by the number of enterprises born in t.

The *average size of one-year-old (two-year-old) employer enterprises* refers to the number of persons employed in the reference period (t) in enterprises born in t-1 (t-2) that survived to t divided by the number of enterprises in t born in t-1 (t-2) having survived to t.

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

Relevance

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 Israel, statistics on employment in employer enterprise births and surviving enterprises refer to the number of employees and not to the persons employed. Data for Denmark, Estonia, Finland, the Netherlands and Portugal exhibit a break in the series in 2013.

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*, No. 2006/3, OECD Publishing, Paris, *http://dx.doi.org/10.1787/145777872685*.

Criscuolo, C., P.N. Gal and C. Menon (2014), "The Dynamics of Employment Growth: New Evidence from 18 Countries", *OECD Science, Technology and Industry Policy Papers*, No. 14, OECD Publishing, Paris, *http://dx.doi.org/10.1787/5jz417hj6hg6-en*.

Haltiwanger, J., R.S. Jarmin and J. Miranda (2010), "Who creates jobs? Small vs. Large vs. Young", *Discussion Papers*, US Census Bureau, *www.nber.org/papers/w16300.pdf?new_window=1*.

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

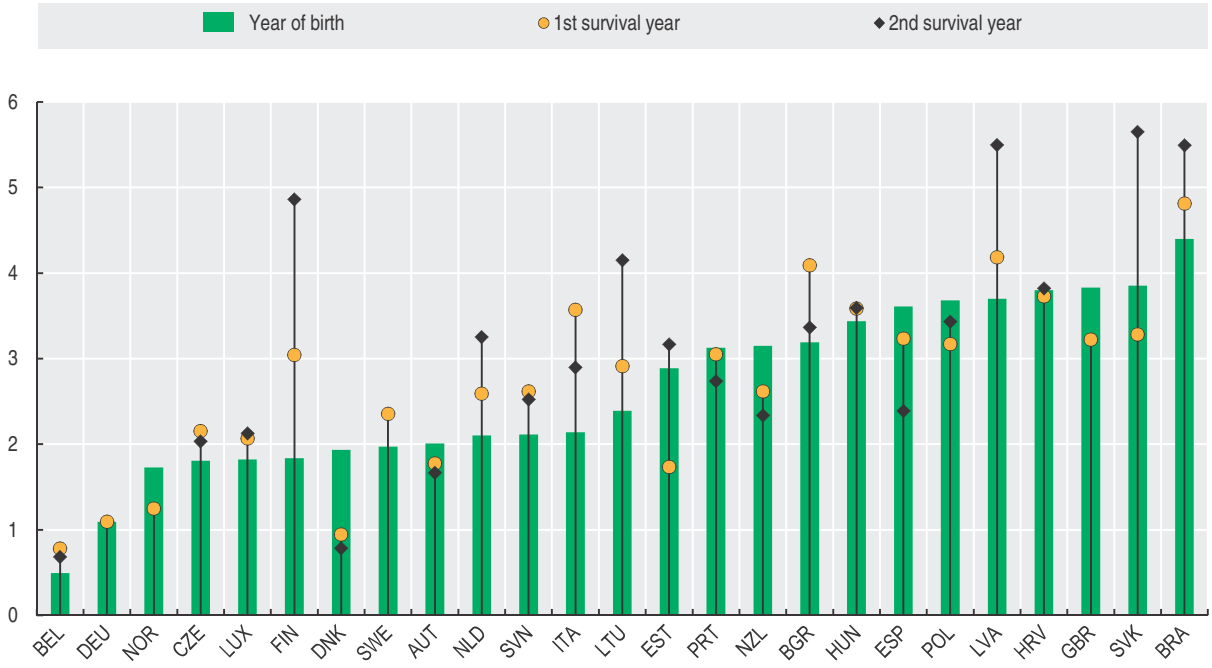
Figure 5.7. **Employment share of start-ups**

Percentage of employment in employer enterprises

StatLink http://dx.doi.org/10.1787/888933404190

Figure 5.8. **Employment share of employer start-ups, by enterprise age**

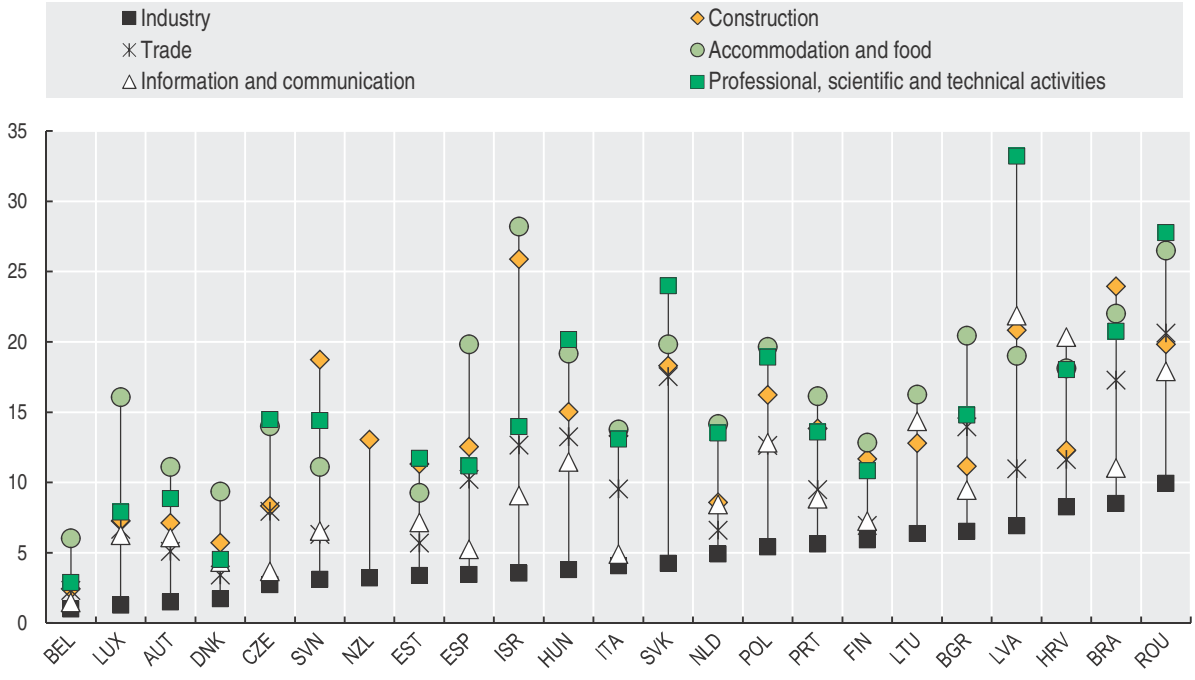
Percentage of employment in employer enterprises, total business economy, 2013, or latest available year



StatLink http://dx.doi.org/10.1787/888933404202

Figure 5.9. **Employment share of employer start-ups, by economic activity**

Percentage of employment in employer enterprises, total business economy, 2013, or latest available year



StatLink http://dx.doi.org/10.1787/888933404217

Figure 5.10. **Average size of employer start-ups, by enterprise age and main sector**

2013, or latest available year

StatLink http://dx.doi.org/10.1787/888933404222

High-growth enterprises rate

Key facts

- High-growth enterprises represent a small share of the total enterprise population, typically between 2% and 6% in most countries. While few in number, fast-growing firms generate employment for a considerable number of persons.
- High-growth enterprises are found in all economic sectors, although the share of high-growth enterprises can vary substantially between sectors. There is no consistent pattern across countries as to which sectors host the largest shares of high-growth enterprises.
- Across economic activities, relatively large shares of high-growth enterprises are found in scientific research and development as well as in computer programming and consultancy.
- 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 as well. Countries that stand out with regard to high shares of high-growth enterprises include Latvia, the Slovak Republic and Bulgaria.

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. Detailed information on each figure is presented under "Comparability".

The *rate 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

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 higher or lower impact on the representativeness of the results depending on the size of the country.

In Figures 5.11 and 5.12, data on high-growth enterprises use a threshold of 20% or more employment growth for Brazil, Canada, Israel, New Zealand and the United States; for all the other countries, the growth threshold is 10% or more.

In Figure 5.13, data on high-growth enterprises use a threshold of 20% or more employment growth for Canada and the United States; for all the other countries, the growth threshold is 10% or more.

Figure 5.14 presents high-growth enterprises and gazelles data based on the employment growth of 20% or more for all countries.

Data for the United States are compiled according to ISIC Rev. 3. Data for Denmark, Estonia, Finland, the Netherlands and Portugal exhibit a break in the series in 2013.

Source

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

Further reading

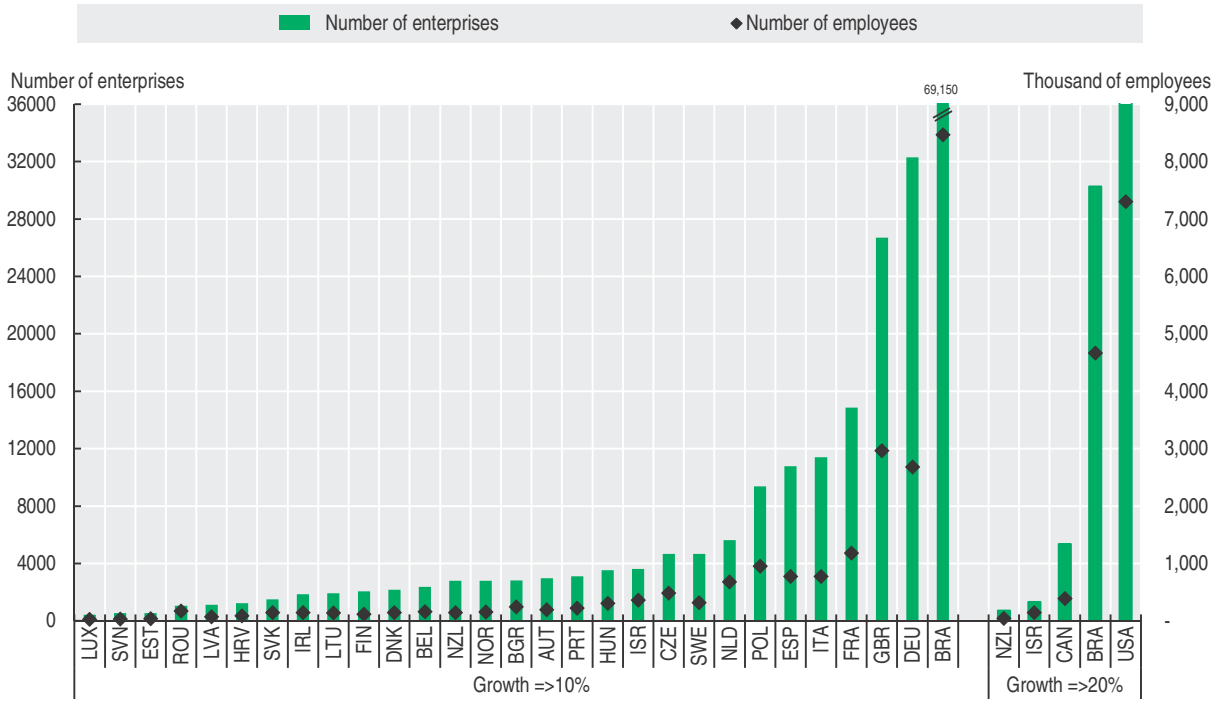
Ahmad, N. and D. Rude Petersen (2007), High-Growth Enterprises and Gazelles – Preliminary and Summary Sensitivity Analysis, OECD-FORA, Paris, *www.oecd.org/document/31/0,3746,en_2825_499554_39151327_1_1_1_1,00.html*.

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 (2007), The OECD Entrepreneurship Indicators Programme: Workshop on the Measurement of High-growth Enterprises, 19 November 2007, Paris.

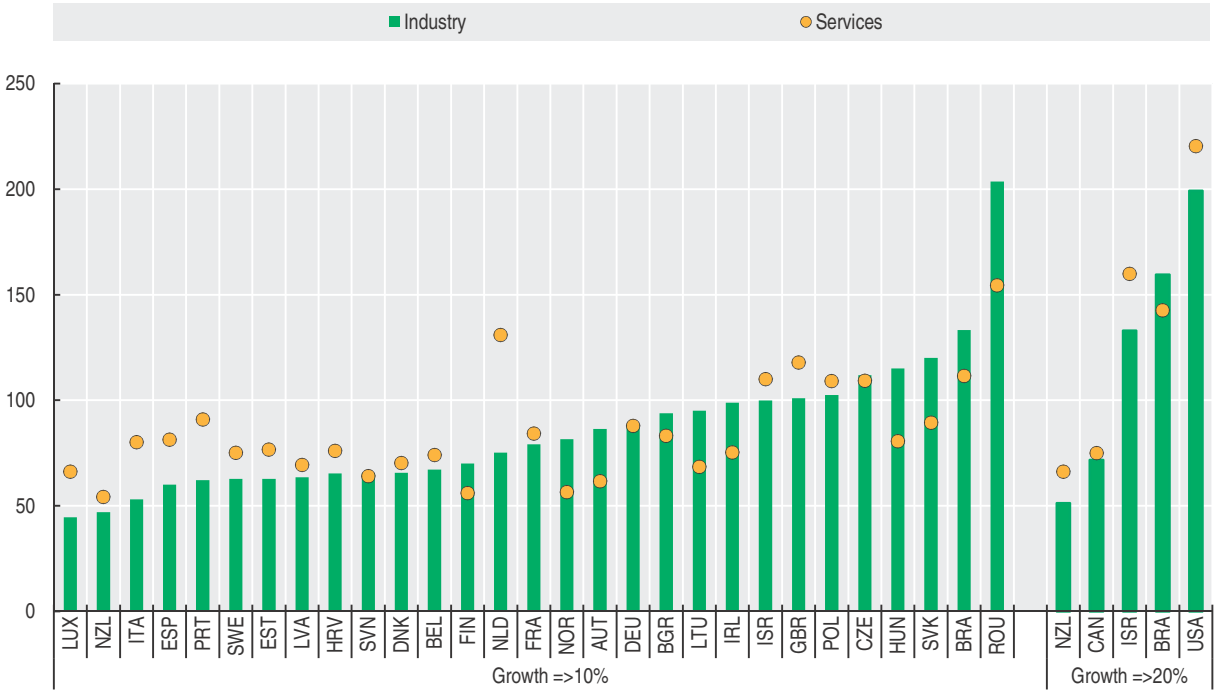
OECD/Eurostat (2008), *Eurostat-OECD Manual on Business Demography Statistics*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264041882-en*.

Figure 5.11. **Number of high-growth enterprises and employment, total business economy**
2014, or latest available year



StatLink http://dx.doi.org/10.1787/888933404234

Figure 5.12. **Average employment in high-growth enterprises, by main sector**
Number of employees per enterprise, 2014, or latest available year



StatLink http://dx.doi.org/10.1787/888933404248

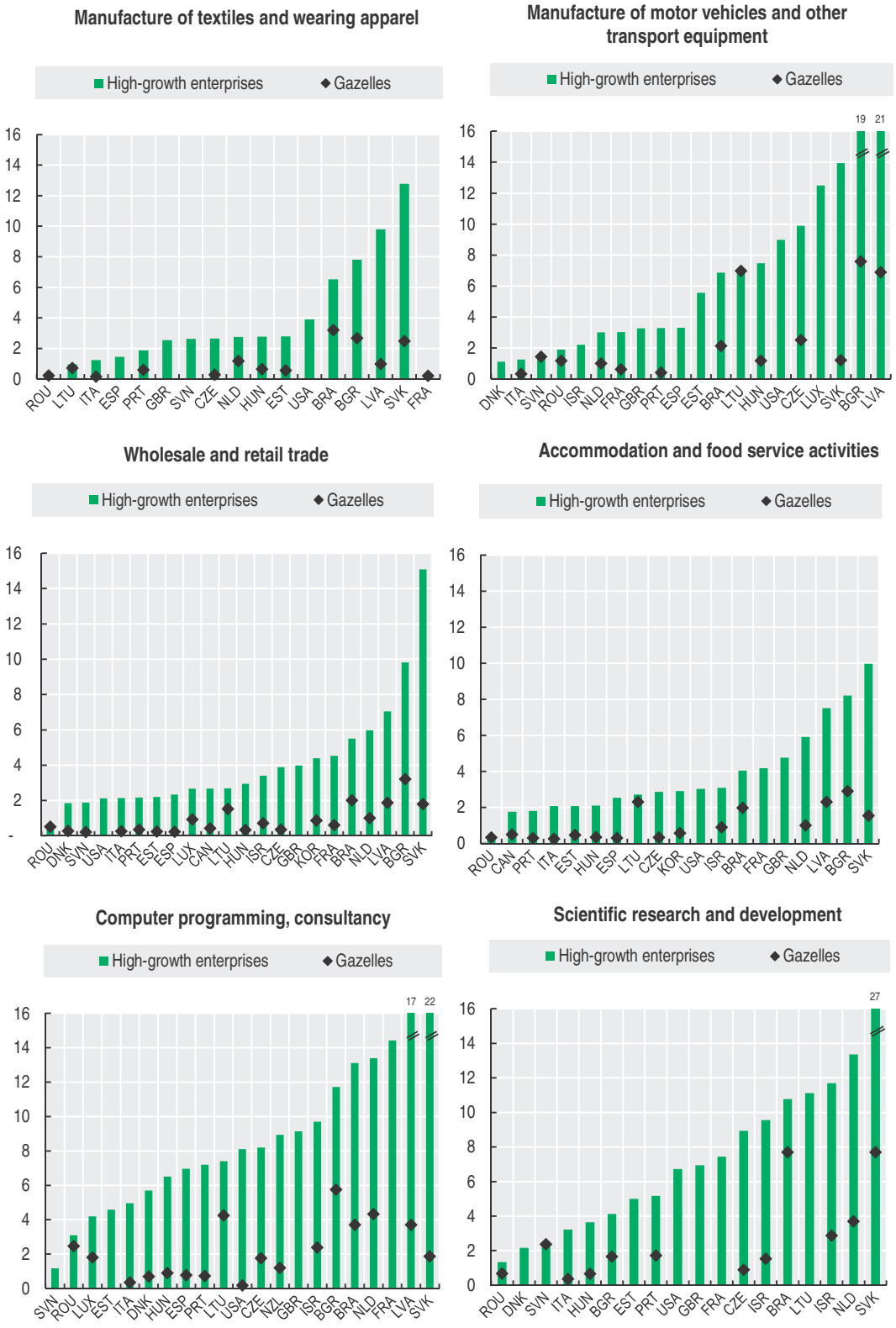
Figure 5.13. **High-growth enterprises rate, by main sector**

Percentage of all sector enterprises with 10 or more employees, 2013, or latest available year

StatLink http://dx.doi.org/10.1787/888933404254

Figure 5.14. **Share of high-growth enterprises and gazelles**

Percentage of total number of enterprises with 10 or more employees, 2013, or latest available year



StatLink http://dx.doi.org/10.1787/888933404266

6. SMES AND INTERNATIONAL TRADE

Incidence of traders

Trade concentration

Trade by enterprise size

SMEs and market proximity

Trade by enterprise ownership

Incidence of traders

Key facts

- The share of enterprises participating in international trade varies significantly from country to country, ranging from 10% to 40% for exporters and from 10% to 70% for importers. Larger countries tend to have smaller shares, largely reflecting the size of their internal market.
- But significant differences exist even among large countries. For example, the share of firms that export (import) in Germany is three (four) times as large as in France, reflecting the very low incidence of directly importing and exporting SMEs in France.
- In most countries, the number of directly importing enterprises was systematically higher than the number of exporters in 2013 and increased in many countries compared to 2011, pointing towards increased participation in global value chains.
- With the exception of Poland, most exporters are importers, again pointing to the importance of global value chains.

Definitions

Customs-based trade in goods data aims 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 for imports.

Conventional international trade statistics offer a picture of trade flows between countries, broken down by types of goods and services. The OECD Trade by Enterprise Characteristics (TEC) data presented in this chapter 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* is the share of two-way traders among trading enterprises.

Industry covers the following sectors: Mining and quarrying; Manufacturing; Electricity, gas, steam and air conditioning supply; Water supply and sewerage, waste management and remediation activities.

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

Relevance

International fragmentation of production has fuelled the growth in global value chains in recent decades, characterised by increasing trade in intermediates. However, differences across countries in the scale of integration, particularly in SMEs, and the scale of market(s) penetration, remain.

Comparability

Some care is needed in interpreting the data which reflect direct export (and import) channels only, and so may understate the true underlying scale of integration within global value chains (particularly by size class), for example by upstream SME producers of intermediates supplying goods and services to larger exporting firms. Similarly, many, particularly small, firms may export (and import) via intermediary wholesalers.

Not all firms are able to be matched in trade and business registers. Typically these relate to smaller enterprises, as the small average trade values for these unallocated firms suggest. As such, Figures 6.1 and 6.2 include all unallocated firms and values in the SME population.

Data shown in Figures 6.1 and 6.2 result from the combination of two data sources, namely OECD SDBS and TEC databases. However, coverage of firms in the two databases may differ if different thresholds exist or 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*.

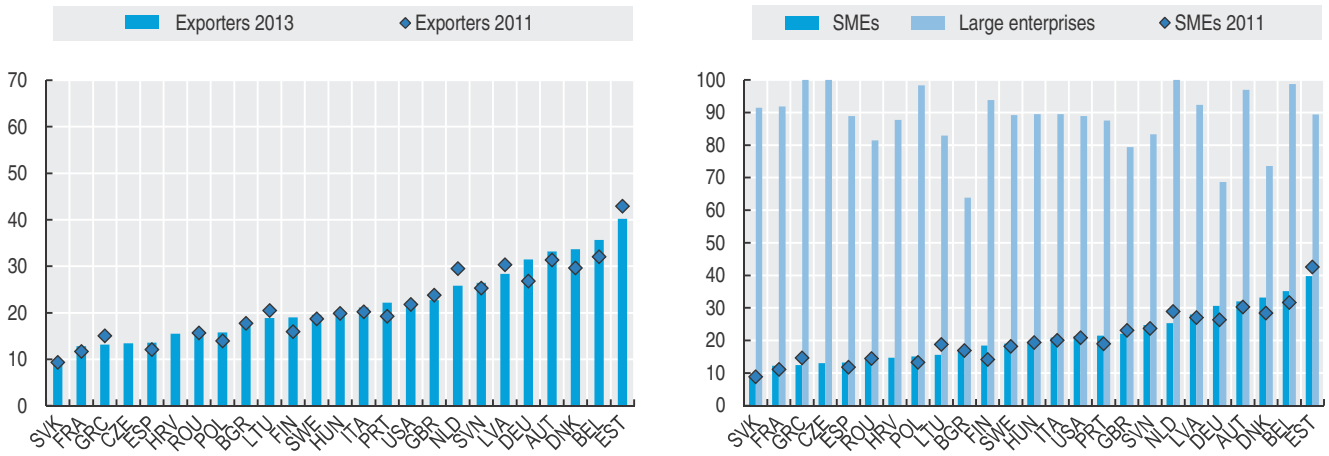
Further reading

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 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", *www.oecd.org/trade/OECD-WBG-g20-gvc-report-2015.pdf*.

Figure 6.1. **Incidence of exporters, industry**

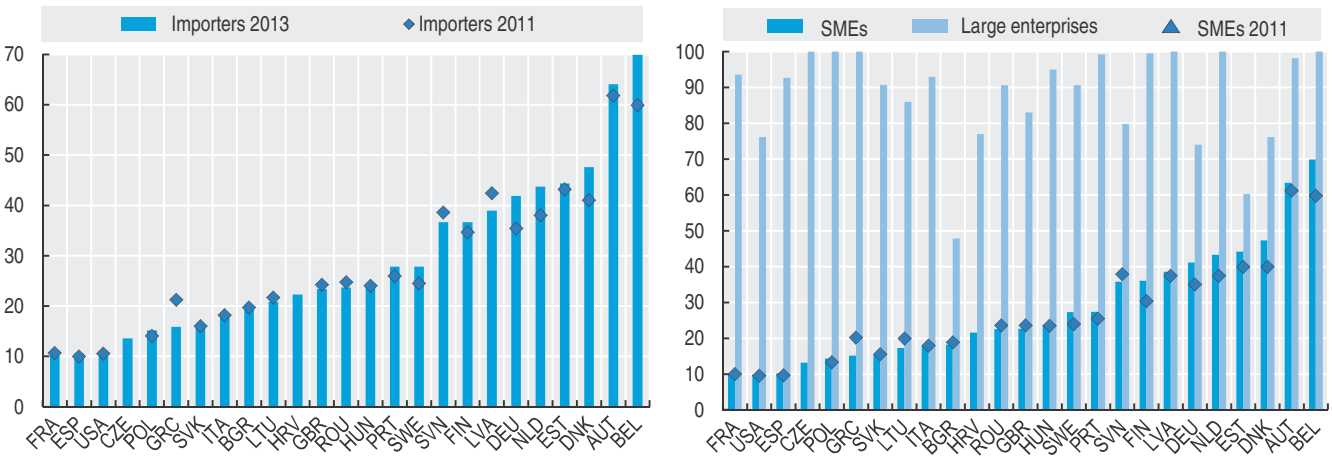
Share of exporting enterprises, total enterprises | *Share of exporting enterprises, by size class, 2013*



StatLink http://dx.doi.org/10.1787/888933404274

Figure 6.2. **Incidence of importers, industry**

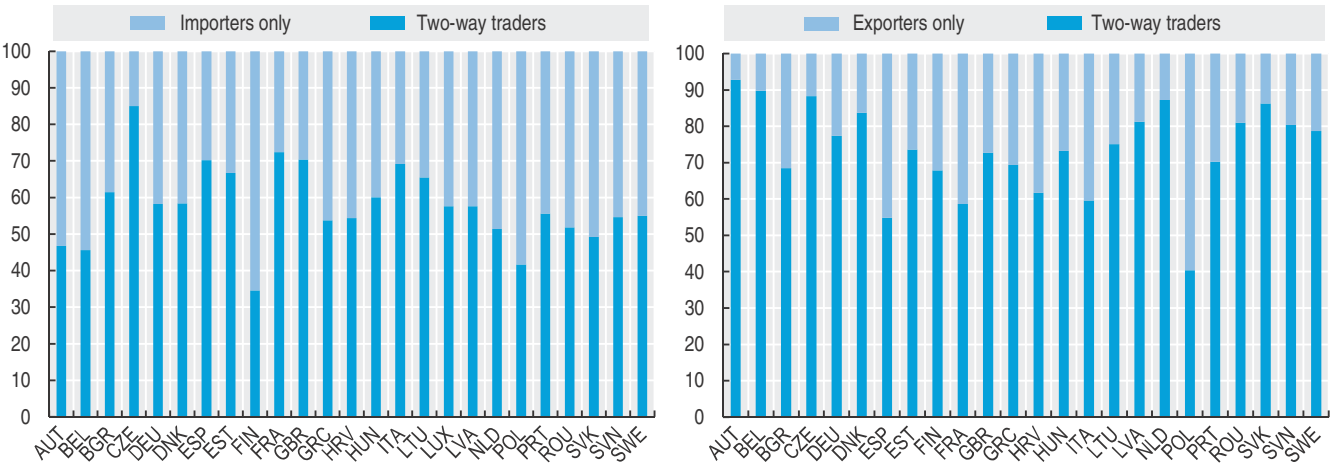
Share of importing enterprises, total enterprises | *Share of importing enterprises, by size class, 2013*



StatLink http://dx.doi.org/10.1787/888933404286

Figure 6.3. **Incidence of two-way traders, industry**

Share of two-way traders among trading enterprises, 2013



StatLink http://dx.doi.org/10.1787/888933404297

Trade concentration

Key facts

- 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.
- In a majority of OECD economies, 50% or more of exporting enterprises trade with only one country. These one-country exporters, however, usually account for a small share of the total value of a country's exports. Typically, firms that export to more than 10 countries dominate trade, accounting for around 90% or more of total exports in Finland, France, Germany and the United Kingdom. In the United States, this trend holds, with firms that trade to more than 10 countries accounting for over 80% of total exports.

Definitions

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 exporters and of export value to x partner countries* is respectively calculated as the ratio of the number of exporters who export to x countries to the total number of exporting enterprises; and as the ratio of the value of exports by enterprises who have x partner countries to the total value of exports.

Total economy covers all sectors of ISIC Rev. 4 classification.

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

Relevance

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

Comparability

Data presented refer to the total economy. Data for Canada, Ireland and Turkey refer to 2012.

Source

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

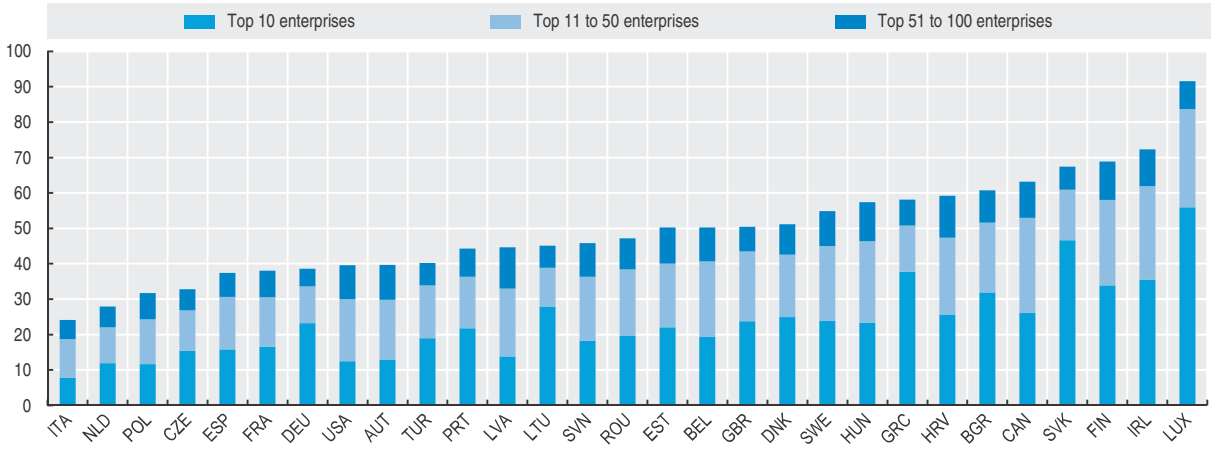
OECD Trade by Enterprise Characteristics Database (TEC), *http://stats.oecd.org/Index.aspx?DataSetCode=TEC1_REV4*.

Further reading

OECD 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", *www.oecd.org/trade/OECD-WBG-g20-gvc-report-2015.pdf*.

Figure 6.4. **Concentration of exports by exporting enterprises, total economy**

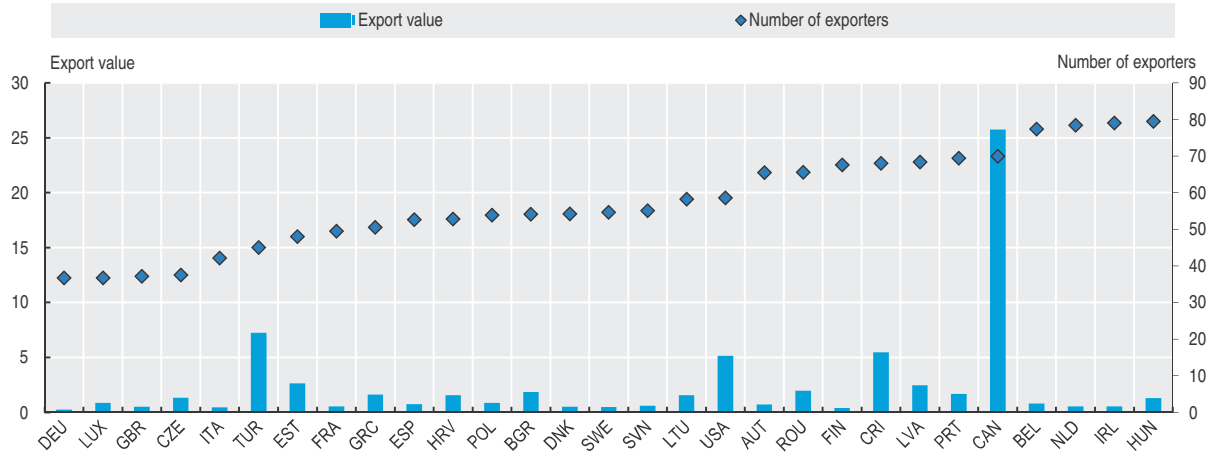
Percentage of total value of exports, 2013, or latest available year



StatLink http://dx.doi.org/10.1787/888933404305

Figure 6.5. **Exporters with, and export value to, only one partner, total economy**

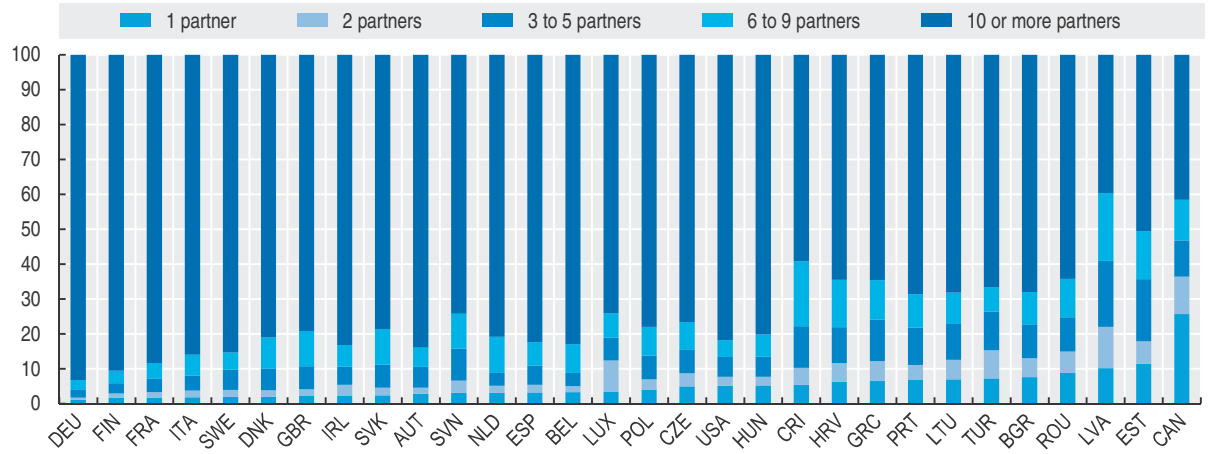
Percentage of total value of exports, percentage of total number of exporters, 2013 or latest available year



StatLink http://dx.doi.org/10.1787/888933404310

Figure 6.6. **Concentration of the value of exports by number of partners, total economy**

Percentage of total value of exports, 2013, or latest available year



StatLink http://dx.doi.org/10.1787/888933404325

Trade by enterprise size

Key facts

- In all countries, micro and small firms, i.e. enterprises with less than 10 and between 10 and 50 employees respectively, are high in number and account for the majority of exporting enterprises, but are responsible for a limited share of total export value.
- Large firms tend to account for virtually all exports in (tangible) capital-intensive industries such as motor vehicles and other transport equipment. In contrast, smaller firms make a larger contribution to exports in industries such as furniture, textiles and clothing, where specialized manufacturing, niche products, and investment in knowledge-based assets, such as brand, design, and organisational capital provide opportunities to create comparative advantages.
- The export (*import*) intensity (share of exports (*imports*) in total turnover) is generally higher the larger the firm and the smaller the economy.
- The importance of large firms in manufacturing exports varies across countries. In the United States and Mexico, large firms dominate across nearly all sectors. This is likely to reflect a combination of the large size of the domestic US market as well as maquiladora (processing firms) relationships between Mexico and the United States. On the other hand, in France and Germany, SMEs are the key exporters in a number of sectors, such as apparel and textiles.

Definitions

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) 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.

The *share of SMEs among exporters (importers)* is the number of exporting (importing) SMEs divided by the total number of exporting (importing) enterprises.

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

Share of large firms in export value by manufacturing sector x is defined as the ratio of the value of exports (imports) of large firms in manufacturing sector x over the total value of exports (imports) in manufacturing sector x.

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

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.

Comparability

Data cover goods producing industries (ISIC Rev. 4 sectors 05 to 39).

Data on Canada, Ireland and Turkey refer to 2012. In addition, data on Bulgaria in Fig. 6.10, 6.11 and 6.13, data on Romania in Fig. 6.7 to 6.9, 6.11, 6.12 and 6.14, data on Slovenia in Fig. 6.9 to 6.11, as well as data on the United States in Fig. 6.10 and 6.13 refer to 2012. Data on Luxembourg in Fig. 6.7 and 6.9 refer to 2011.

Not all firms are able to be matched in trade and business registers. Typically, and the small average trade values for these unallocated firms bears this out, these relate to smaller enterprises. As such, Figures 6.10 and 6.13 include all unallocated firms and values in the SME population.

Some care is needed in interpreting the data which reflect direct export channels only, and so may understate the true underlying scale of integration within global value chains (particularly by size class), for example by upstream SME producers of intermediates supplying goods and services to larger exporting firms. Similarly many (particularly small) firms may export via intermediary wholesalers. Data shown in Figures 6.10 and 6.13 result from the combination of two data sources, namely OECD SDBS and TEC databases. However, coverage of firms in the two databases may differ if different thresholds exist or 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*.

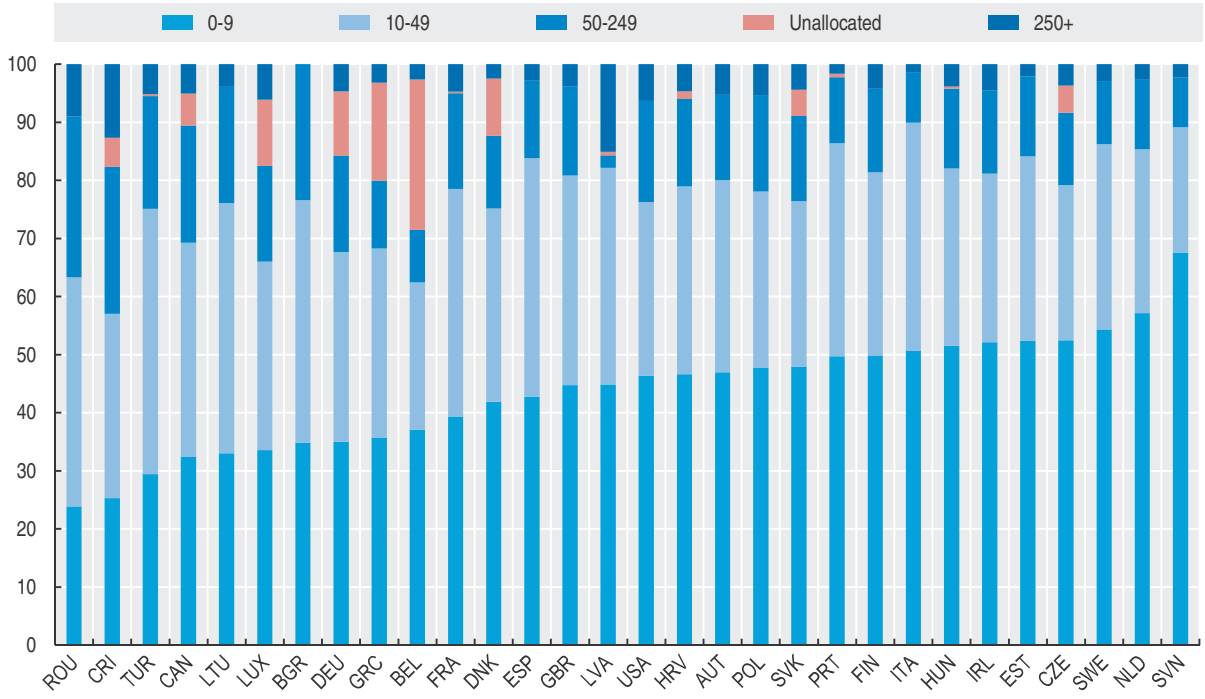
Further reading

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, *www.oecd.org/cfe/smes/43357832.pdf*.

Figure 6.7. **Share of exporters by enterprise size, industry**

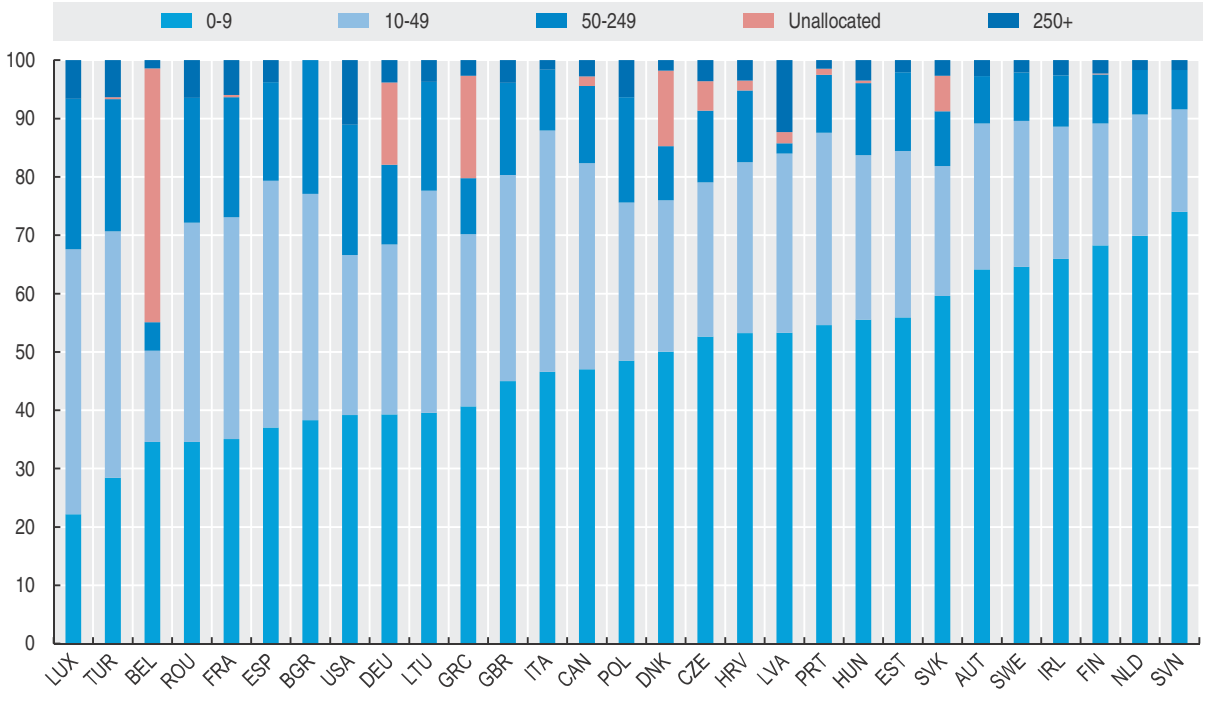
Percentage of all industry exporters, 2013, or latest available year



StatLink http://dx.doi.org/10.1787/888933404330

Figure 6.8. **Share of importers by enterprise size, industry**

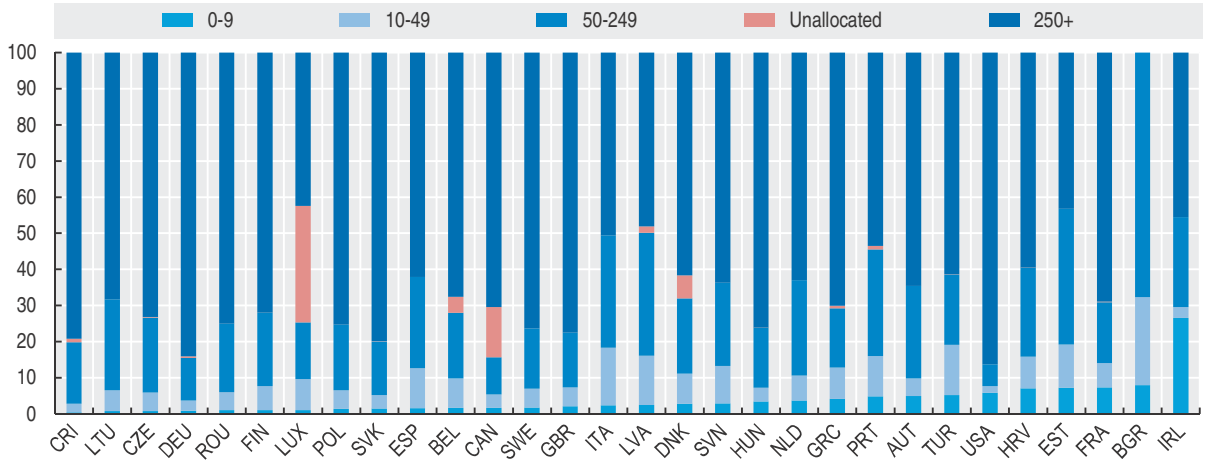
Percentage of all industry importers, 2013, or latest available year



StatLink http://dx.doi.org/10.1787/888933404347

Figure 6.9. **Share of export value by enterprise size, industry**

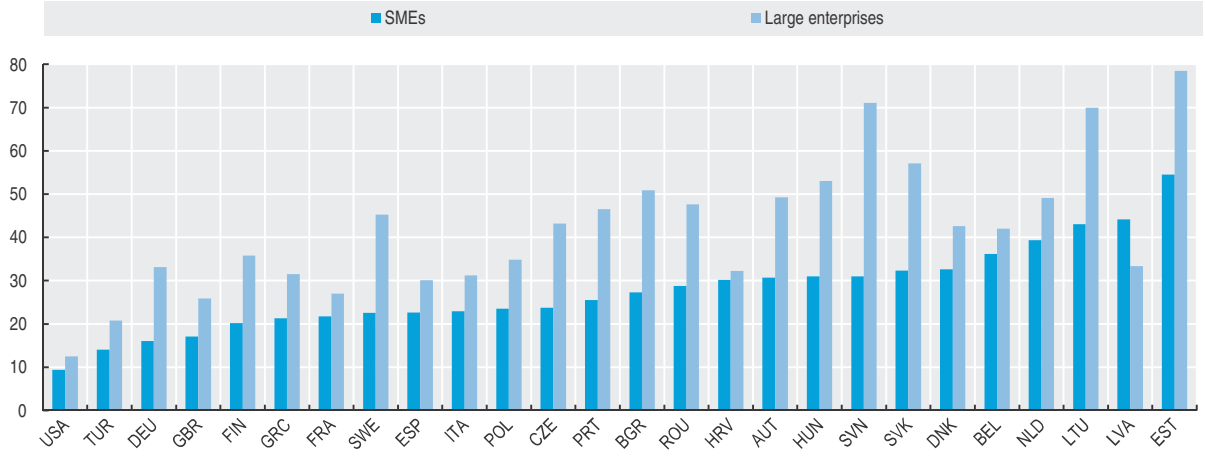
Percentage of total industry export value, 2013, or latest available year



StatLink http://dx.doi.org/10.1787/888933404350

Figure 6.10. **Export value to turnover ratio by enterprise size, industry**

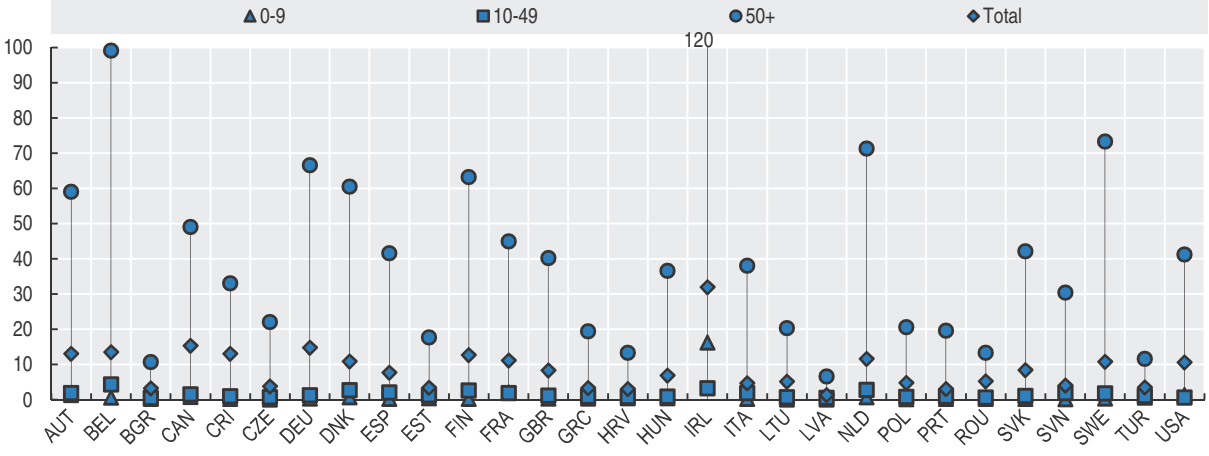
Industry export value as percentage of industry turnover, 2013, or latest available year



StatLink http://dx.doi.org/10.1787/888933404364

Figure 6.11. **Average value of exports per enterprise by enterprise size, industry**

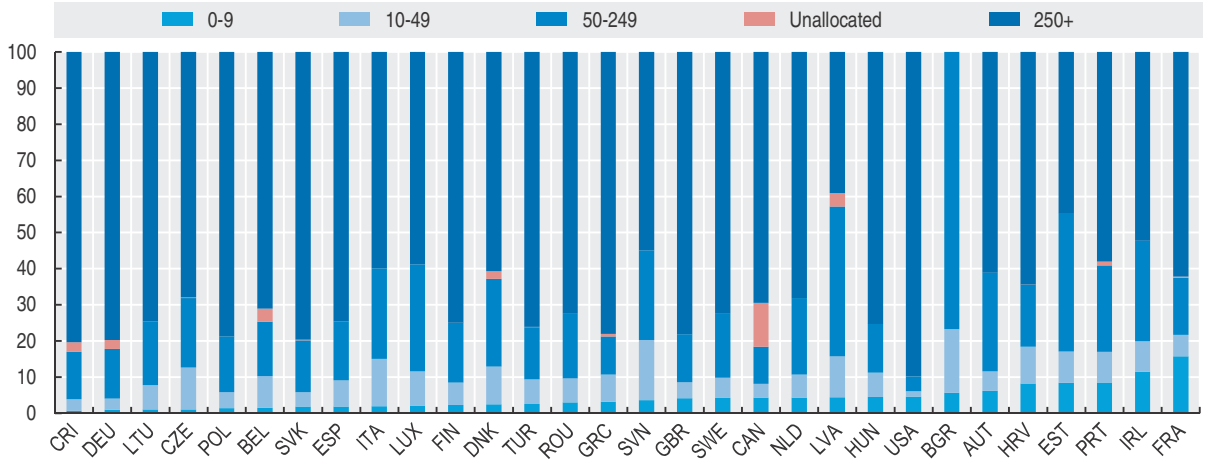
Million US dollars, 2013, or latest available year



StatLink http://dx.doi.org/10.1787/888933404375

Figure 6.12. **Share of import value by enterprise size, industry**

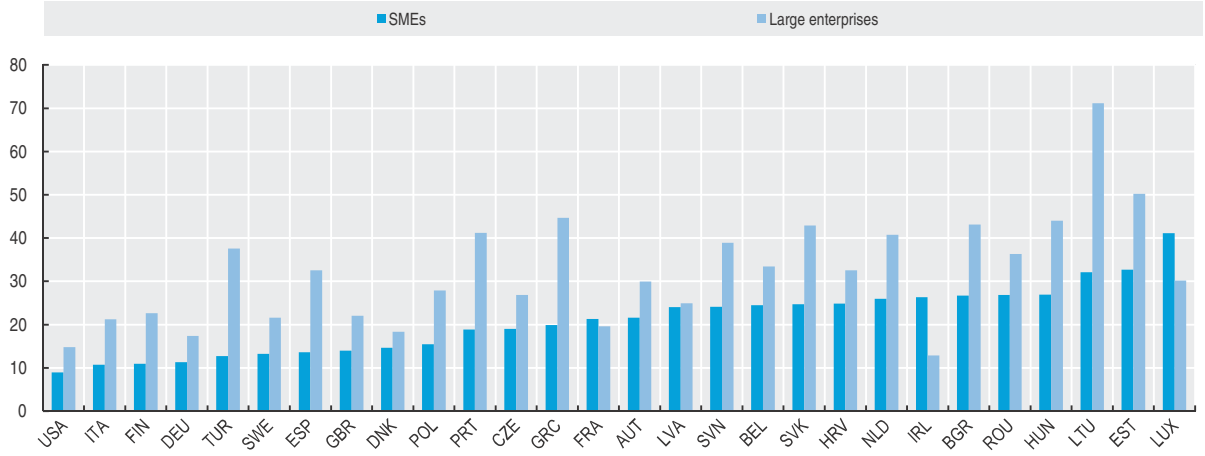
Percentage of total industry import value, 2013, or latest available year



StatLink http://dx.doi.org/10.1787/888933404386

Figure 6.13. **Import value to turnover ratio by enterprise size, industry**

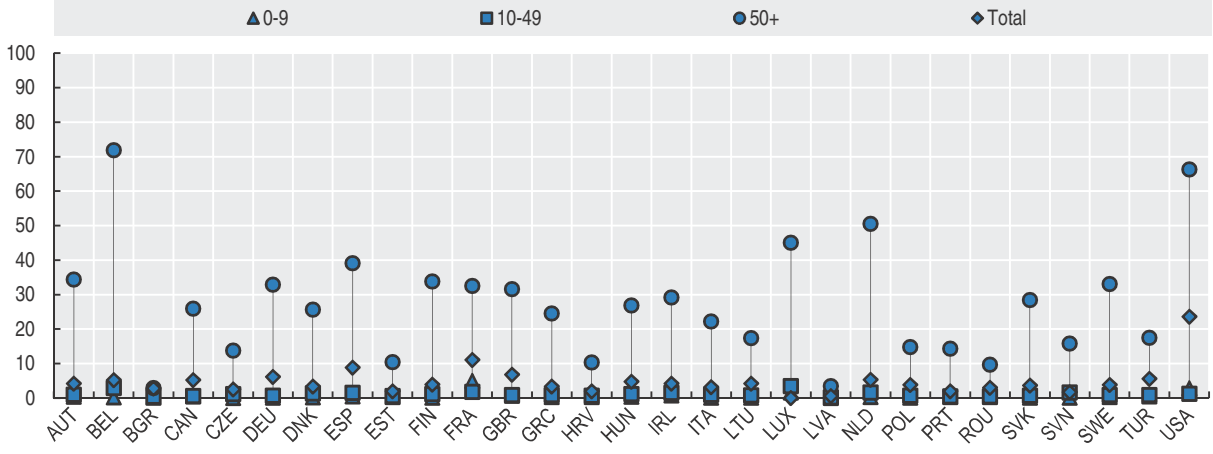
Industry import value as percentage of industry turnover, 2013, or latest available year



StatLink http://dx.doi.org/10.1787/888933404393

Figure 6.14. **Average value of imports per enterprise by enterprise size, industry**

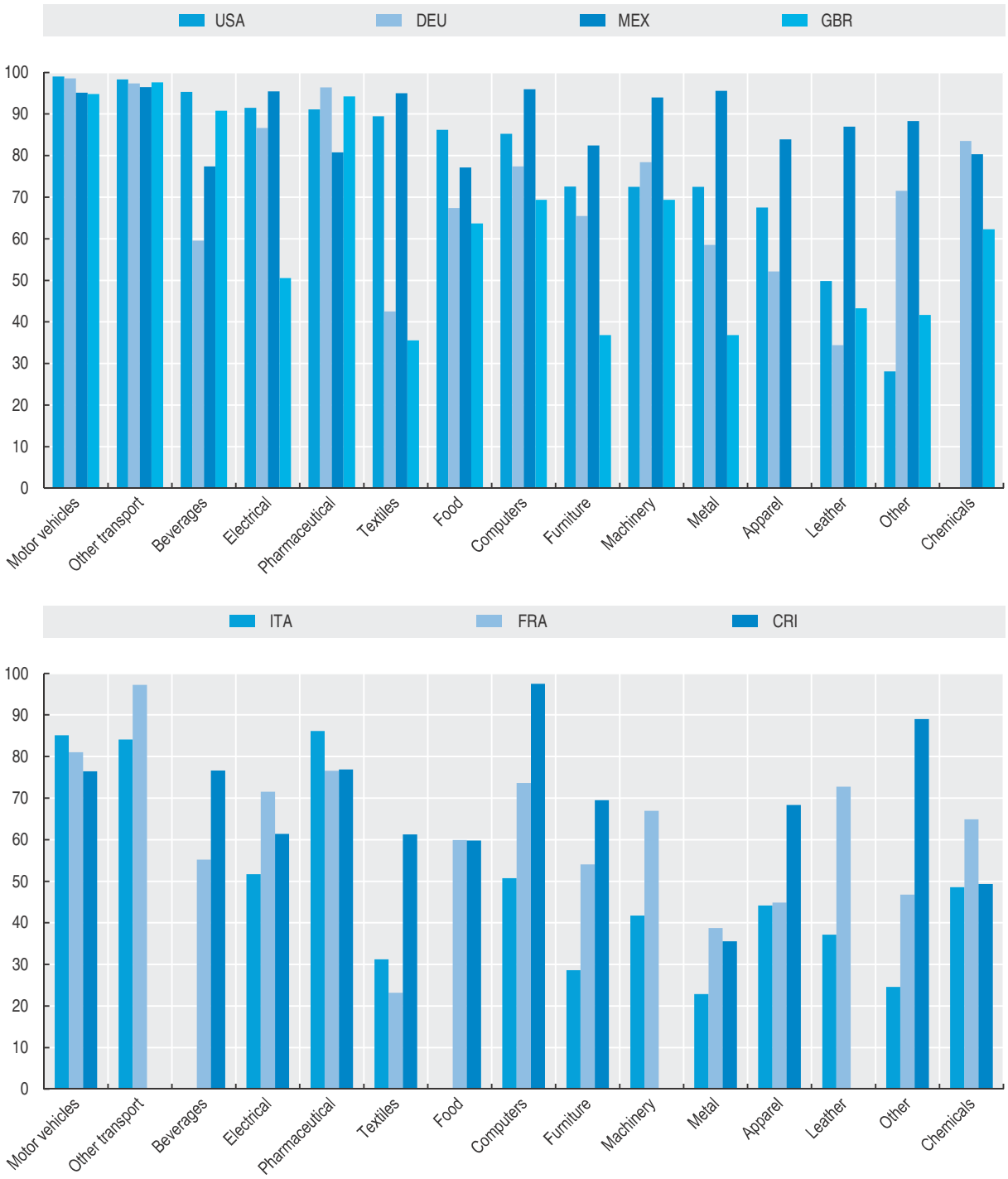
Million US dollars, 2013, or latest available year



StatLink http://dx.doi.org/10.1787/888933404402

Figure 6.15. **Share of large firms in export value, selected countries, manufacturing sectors**

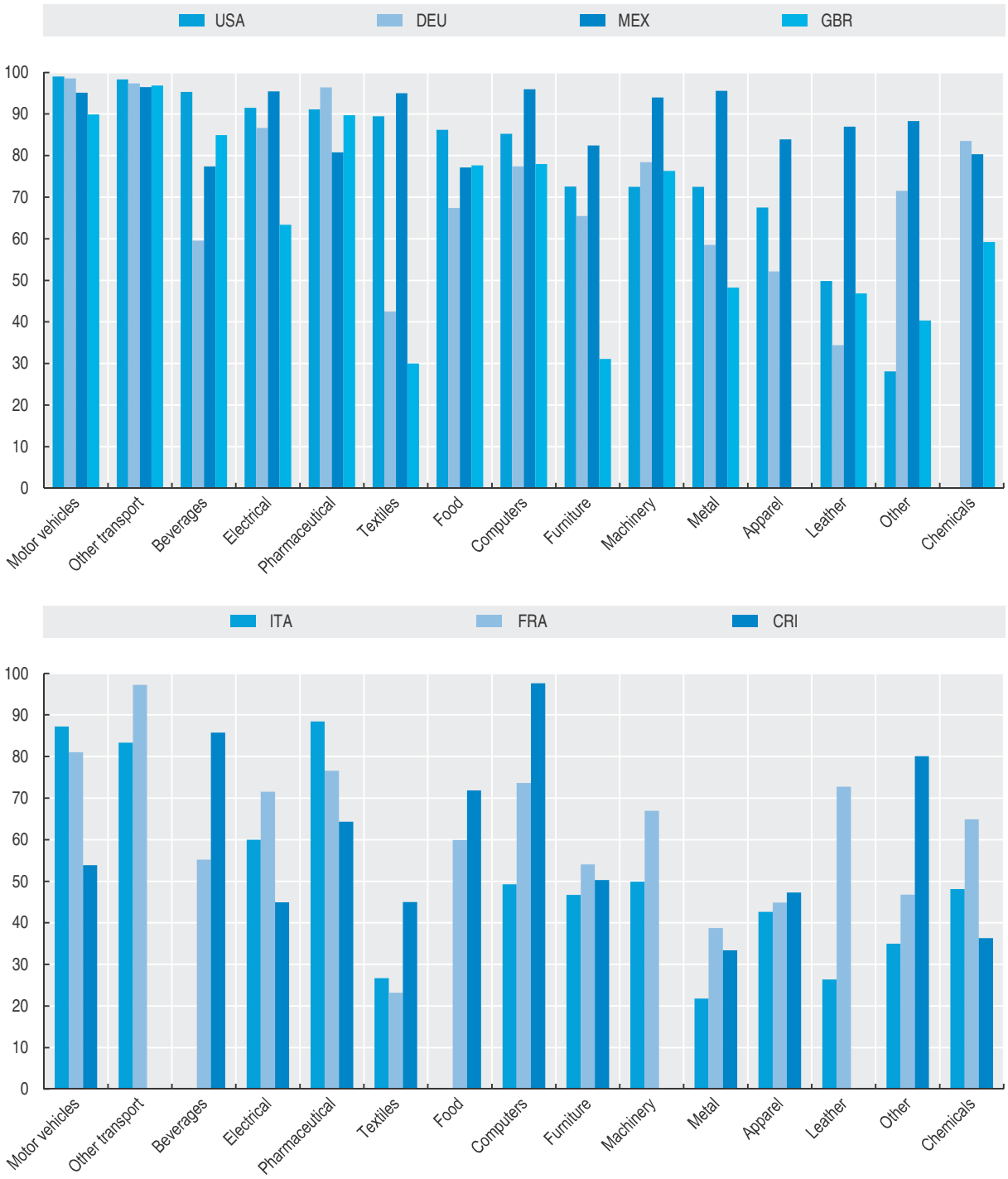
Percentage of total sector export value, 2013



StatLink http://dx.doi.org/10.1787/888933404410

Figure 6.16. **Share of large firms in import value, selected countries, manufacturing sectors**

Percentage of total sector import value, 2013



StatLink http://dx.doi.org/10.1787/888933404423

SMEs and market proximity

Key facts

- 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. On the other hand, barriers to importing appear less onerous than those for exporting.
- Although the share of SMEs in the number of firms that export to (or import from) China and India is lower than their share at the global level in all economies, the contribution of SMEs to the value of overall exports to China and India is higher in many, including the Czech Republic and Lithuania.
- Barriers to SMEs for importing appear less onerous than those for exporting. In many countries SMEs account for over half of all imports from China and India, and over 40% of imports from the United States and Japan, significantly higher than corresponding figures on exports.

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

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

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

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.

Comparability

Data cover all sectors of the economy. Data for the Slovak Republic and Turkey in Fig. 6.17 and 6.18 refer to 2012.

Not all firms are able to be matched in trade and business registers. Typically, and the small average trade values for these unallocated firms bears this out, these relate to smaller enterprises. As such, Figures 6.17, 6.18 and 6.19 include all unallocated firms and values in the SME population.

Source

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

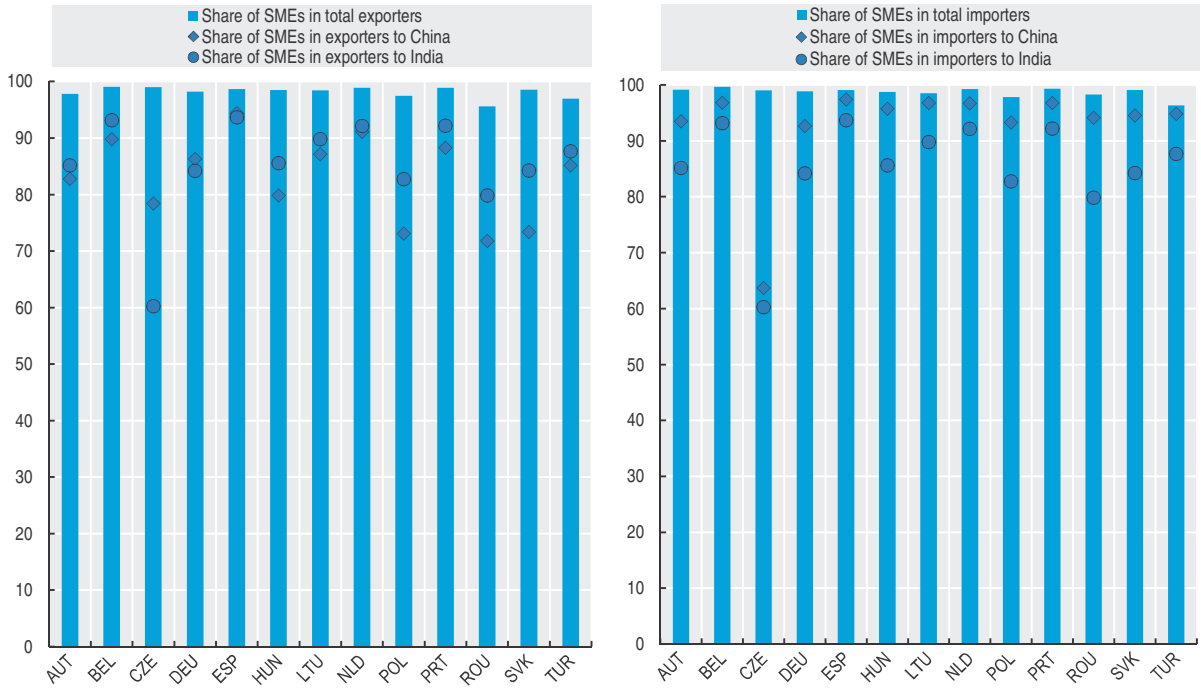
OECD Trade by Enterprise Characteristics Database (TEC), *http://stats.oecd.org/Index.aspx?DataSetCode=TEC1_REV4*.

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/*.

Figure 6.17. **SMEs engaged in trade with China and India, total economy**

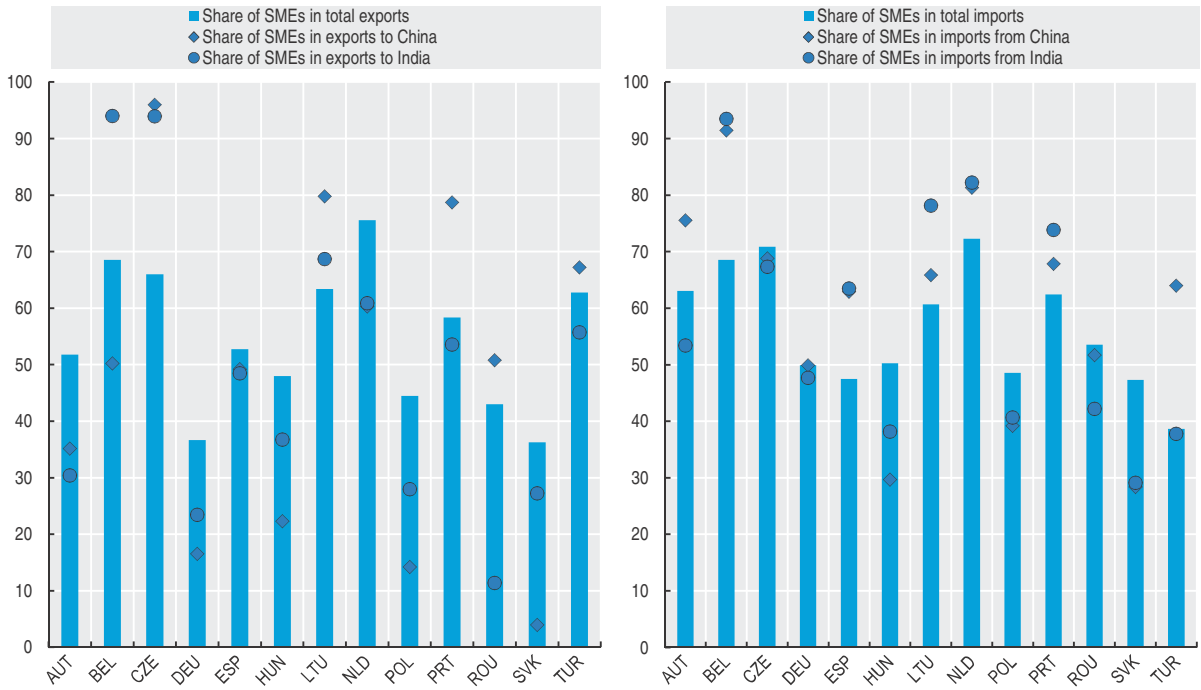
Percentage, 2013, or latest available year



StatLink http://dx.doi.org/10.1787/888933404431

Figure 6.18. **SME share of trade with China and India, total economy**

Percentage, 2013, or latest available year



StatLink http://dx.doi.org/10.1787/888933404443

Figure 6.19. **Exports and imports by partner country, selected countries**

Percentage of total value of exports/imports to partner country, 2013

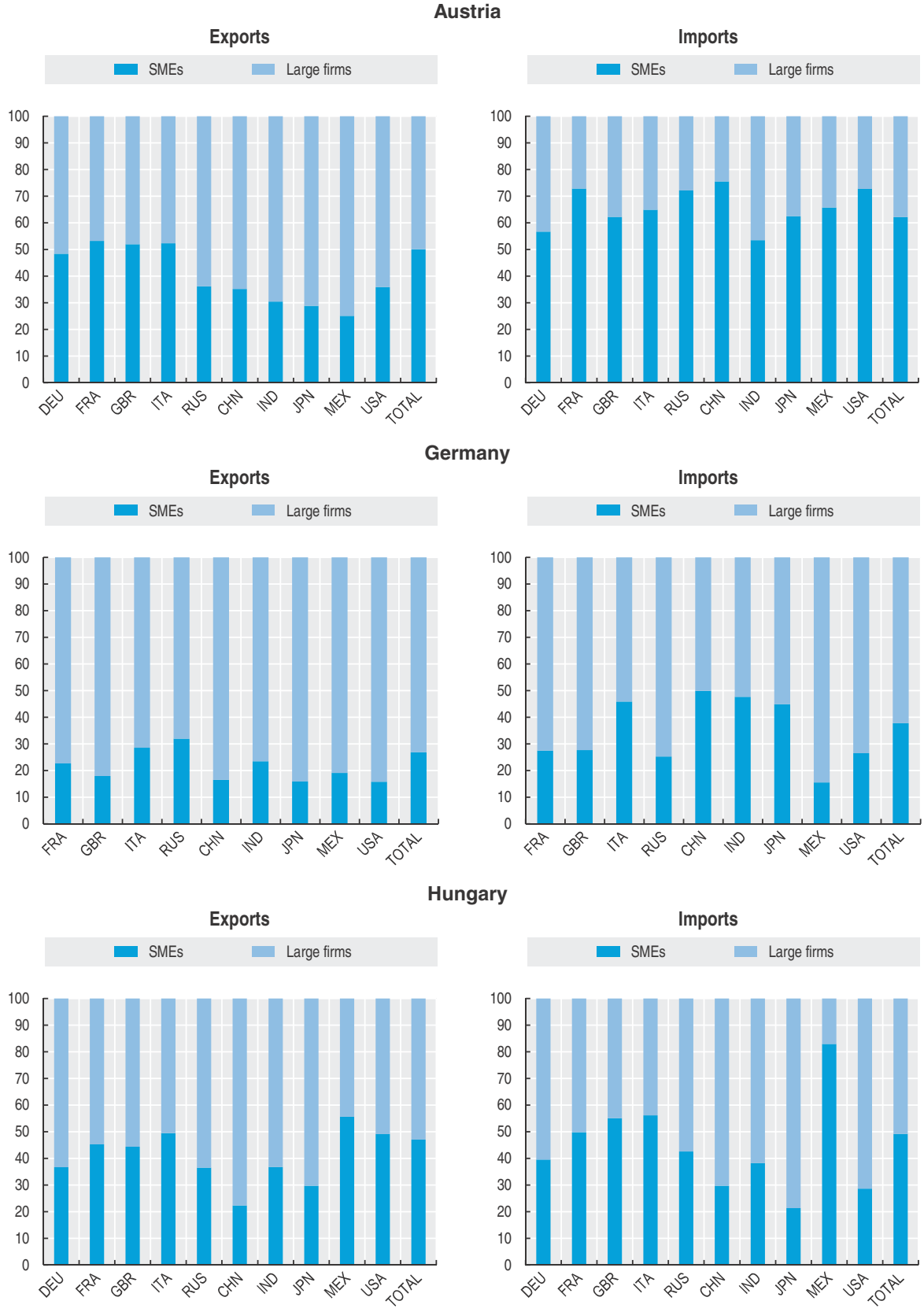


Figure 6.19. **Exports and imports by partner country, selected countries** *(cont.)*

Percentage, 2013

StatLink http://dx.doi.org/10.1787/888933404453

Trade by enterprise ownership

Key facts

- Foreign-owned firms account for a large share of overall exports and imports compared to domestically-owned firms. In Hungary and the Slovak Republic, for example, foreign-owned exporters account for more than 80% of the total value of exports and imports but constitute only around 20% of the trading firms.
- In a majority of countries, enterprises that are foreign-owned have higher ratios of exports and imports to turnover than domestically-owned enterprises.

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.

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

Relevance

Global value chains are dominated by multinationals, 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.

Comparability

Data for Estonia and the Slovak Republic refer to 2012. In addition, data in Fig. 6.22 and 6.23 for Finland, data for Ireland in Fig. 6.23, and data for Slovenia in Fig. 6.20 refer to 2012. Data for Bulgaria, Denmark, France, Italy, Latvia, Spain and Sweden refer to 2011. Data for Ireland in Fig. 6.22 and for Luxembourg in Fig. 6.20 and 6.22 refer to 2011.

Some care is needed in interpretation. Data shown in this section result from the combination of two data sources, namely OECD TEC and AMNE databases. However, coverage of firms in the two databases may differ if different thresholds exist or 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*.

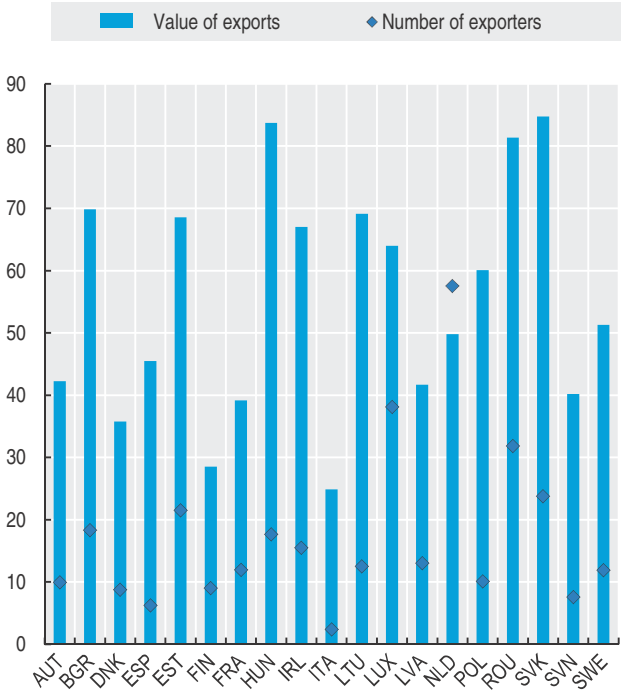
OECD Activity of Multinational Enterprises Database (AMNE), *http://stats.oecd.org/Index.aspx?DataSetCode=AMNE_IN*.

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

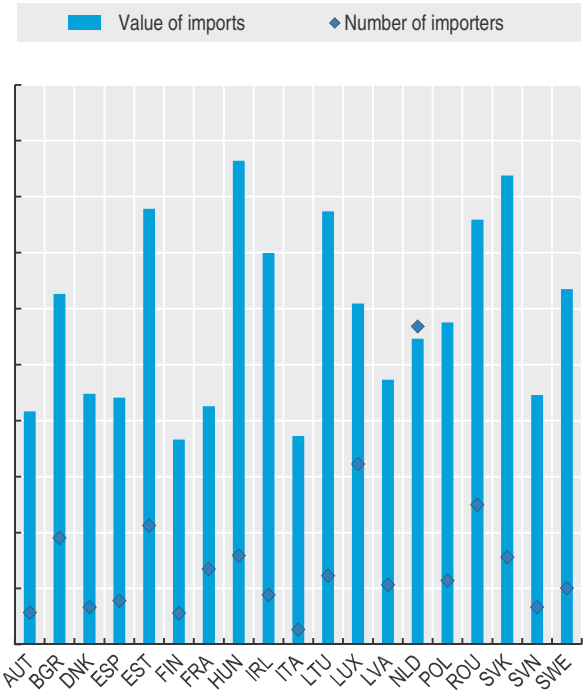
Percentage, 2013, or latest available year



StatLink http://dx.doi.org/10.1787/888933404466

Figure 6.21. **Share of importers and import value, foreign-owned enterprises, industry**

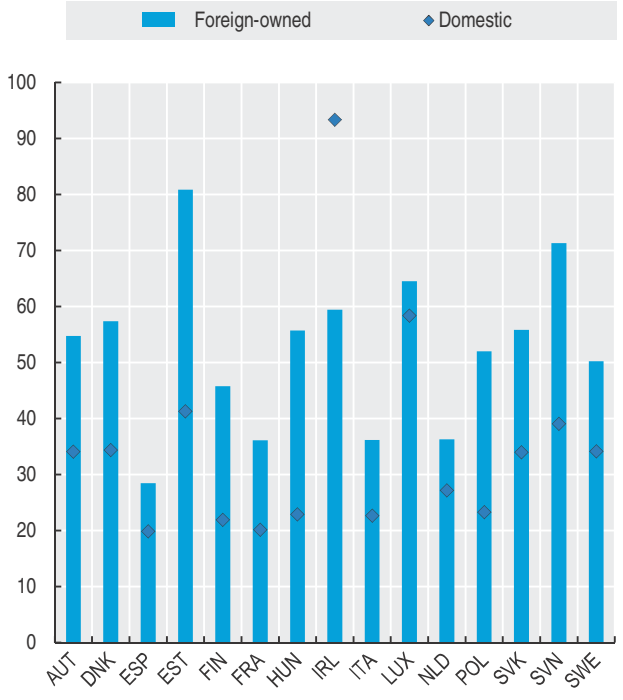
Percentage, 2013, or latest available year



StatLink http://dx.doi.org/10.1787/888933404470

Figure 6.22. **Export to turnover ratio by enterprise ownership, industry**

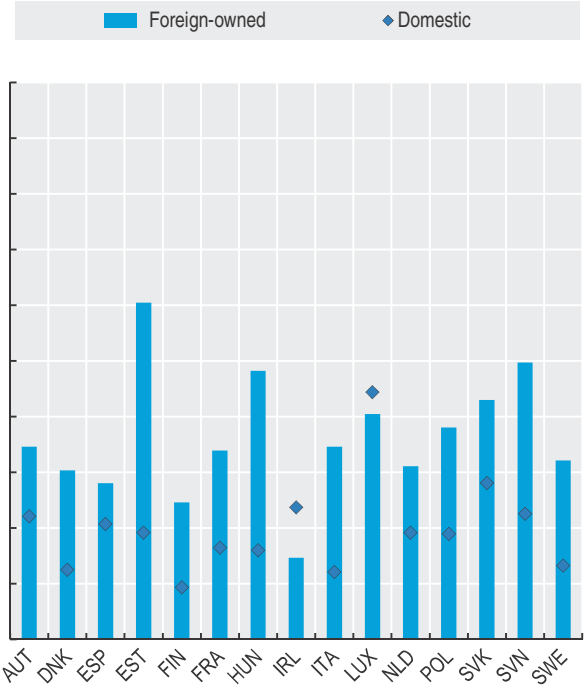
Percentage, 2013, or latest available year



StatLink http://dx.doi.org/10.1787/888933404486

Figure 6.23. **Import to turnover ratio by enterprise ownership, industry**

Percentage, 2013, or latest available year



StatLink http://dx.doi.org/10.1787/888933404491

7. THE PROFILE OF THE ENTREPRENEUR

Gender differences in self-employment rates

Self-employment among the youth

Earnings from self-employment

Inventors by gender

Perception of entrepreneurial risk

Gender differences in self-employment rates

Key facts

- In OECD economies, one in ten employed women is self-employed, almost half the rate of self-employed men (18%). 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 and Turkey.
- Self-employed men are two and a half times more likely to employ others than self-employed women, and work on average eight hours per week more than self-employed women. Both self-employed men and women tend to work more than employees, especially those self-employed who are employers.
- In a majority of countries, 70% or more of self-employed women work in the services sector, while the share for men is around 50%.
- The share of employees who have a second job as self-employed is very low, but virtually always higher for men than for women.

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.

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.

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.

The average number of weekly hours worked corresponds to the number of hours the 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).

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 Australia, 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. Figures 7.3 and 7.4 are based on Labour Force Surveys data; services include sectors 45-98 of ISIC Rev. 4.

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.

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

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

Chile: *Encuesta Nacional del Empleo*, *www.ine.cl/boletines/detalle.php?id=2&lang=*.

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

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

Mexico: *Encuesta National de Empleo*, *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, *www.ibge.gov.br/english/estatistica/populacao/trabalhoerendimento/pnad2008/default.shtm#brasil*.

South Africa: Labour Force Survey, *http://interactive.statssa.gov.za:8282/webview/*.

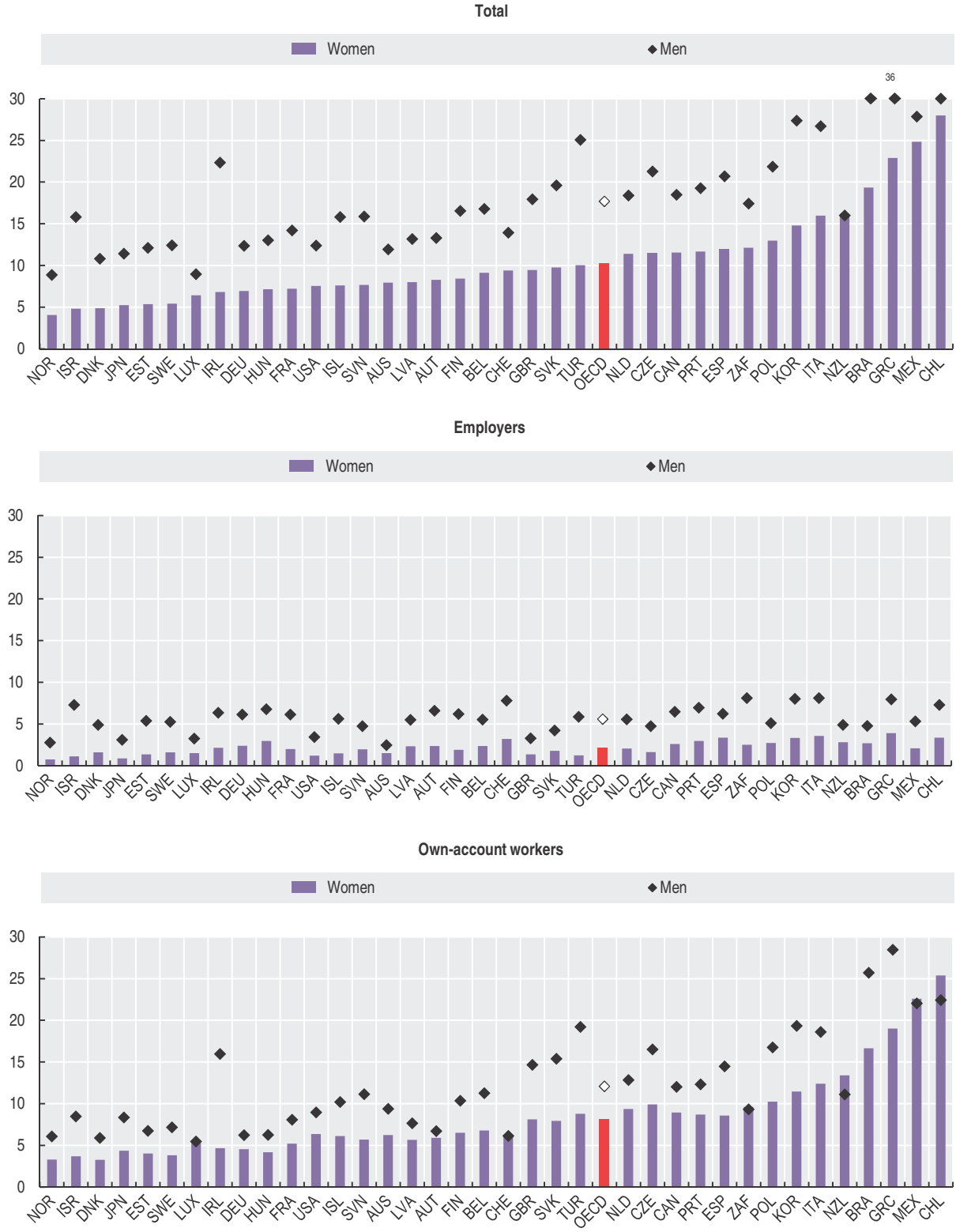
Further reading

OECD (2016), *OECD Report to G7 Leaders on Women and Entrepreneurship: A summary of recent data and policy developments in G7 countries*, *www.oecd.org/gender/OECD-Report%20-to-G7-Leaders-on-Women-and-Entrepreneurship.pdf*.

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

Figure 7.1. **Share of self-employed by gender**

Percentage of total employment, 2014 or latest available year



StatLink http://dx.doi.org/10.1787/888933404508

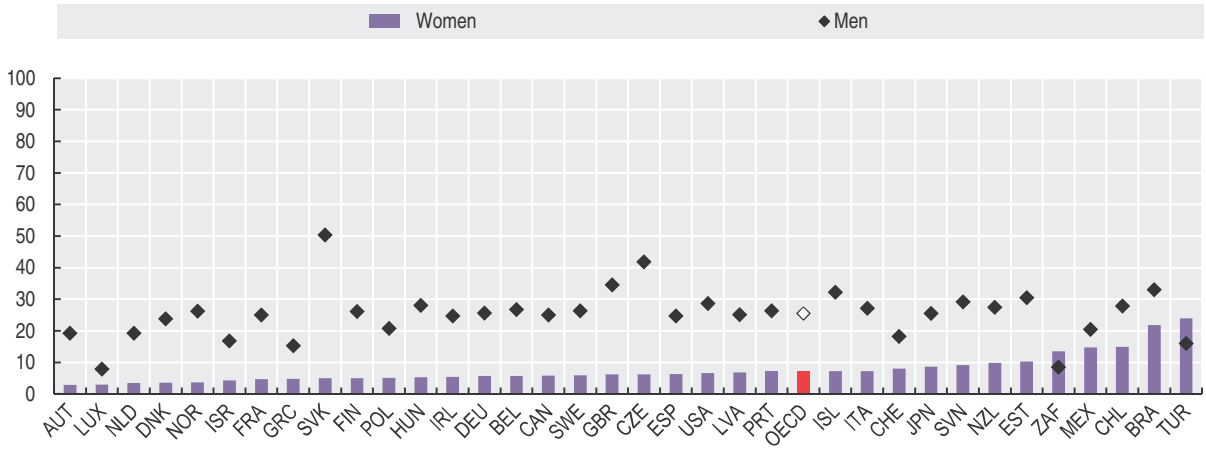
Figure 7.2. **Gender gap in self-employment rates**

Percentage point difference

StatLink http://dx.doi.org/10.1787/888933404518

Figure 7.3. **Self-employed whose activity is in manufacturing and construction**

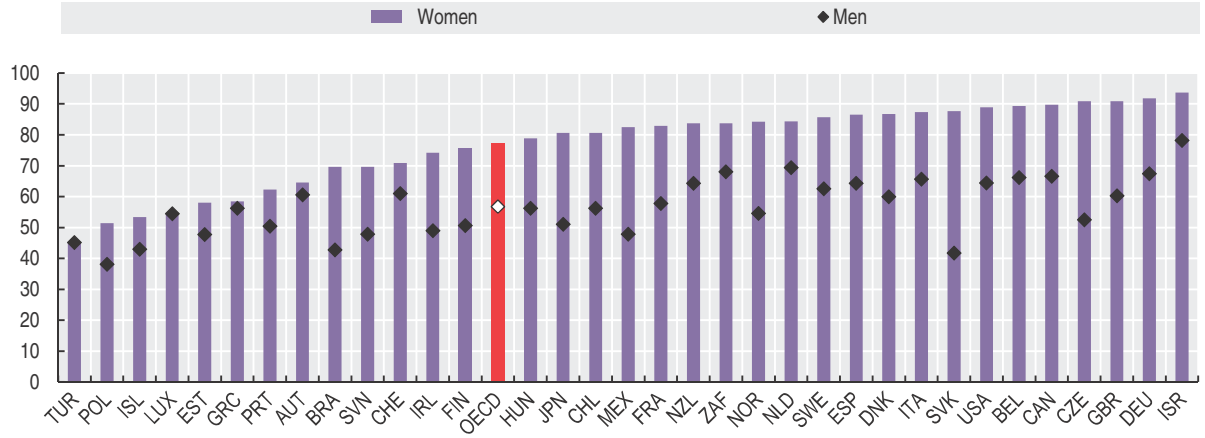
Percentage of total self-employed by gender, 2014-5 average



StatLink http://dx.doi.org/10.1787/888933404522

Figure 7.4. **Self-employed whose activity is in services**

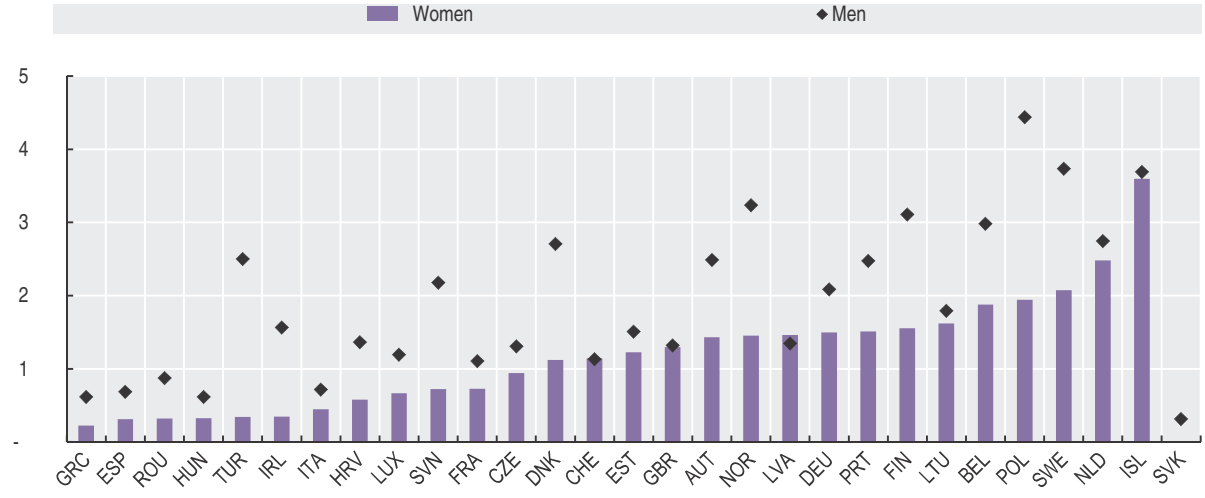
Percentage of total self-employed by gender, 2014-5 average



StatLink http://dx.doi.org/10.1787/888933404536

Figure 7.5. **Share of employees having a second job as self-employed, by gender**

Percentage of all employees by gender, 2015



StatLink http://dx.doi.org/10.1787/888933404549

Figure 7.6. **Average weekly hours of work in main job, by gender**

Number of hours per week, 2015

StatLink http://dx.doi.org/10.1787/888933404552

Self-employment among the youth

Key facts

- The gender difference in self-employment is generally visible across all age groups. In all observed OECD countries except Luxembourg, men have consistently higher self-employment rates than women for the age groups 15-24, 25-34, and 55+. For employed persons aged between 35 and 54, by contrast, the female self-employment rate exceeds the male self-employment rate in a number of countries. Though on average the self-employment rate is higher for men in this age group as well, the relative average gender difference between self-employment rates is the smallest of all age groups.
- In a slight majority of countries, the female self-employed population is younger than the male self-employed population. The share of self-employed women under 25 in these countries is larger than the share of self-employed men under 25. This reflects a more general observation, namely that in the OECD area the gender difference in self-employment is by far largest in the age group 55+. In this age group, on average, the male self-employment rate is almost twice the female self-employment rate.
- Self-employment increases with age. For both men and women, self-employment rates are higher in older age groups in almost all countries. On average, 5.1% of employed men aged 15-24 are self-employed while 29.2% of employed men aged 55+ are self-employed; on average, 3.6% of employed women aged 15-24 are self-employed while 15.9% of employed women aged 55+ are self-employed.

Relevance

The youth was hit especially hard by the recent crisis. Entrepreneurship and self-employment offer pathways for young people to emerge from unemployment, and also to develop a spirit of entrepreneurship and skills such as initiative, confidence and creativity that help them in their work life and ability to adapt and innovate.

Definitions

The *self-employment rate by age group and gender* is the share of employed people in each age group who are self-employed and not working in agriculture.

The proportion of self-employed women (men) who are below 25 is calculated by dividing the number of self-employed women (men) between 15 and 25 years old by the number of all self-employed women (men).

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

Comparability

Self-employment rates for people who are less than 25 years old are very low in several countries. Comparability issues can be generated by the different treatment of incorporated self-employed, who are considered employees in Japan and Norway. As the young are less likely to have incorporated their business, youth self-employment rates may be lower in countries that restrict the self-employed to those owning unincorporated businesses.

The age group 15-24 refers to 14-24 for Mexico.

Sources

Canada: Labour Force Survey, *www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&SDDS=3701*.

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

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

Mexico: *Encuesta National de Empleo*, *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, *www.ibge.gov.br/home/estatistica/indicadores/trabalhoerendimento/pnad_continua/analise02.shtm*.

South Africa: Labour Force Survey, *http://interactive.statssa. gov.za:8282/webview/*.

Further reading

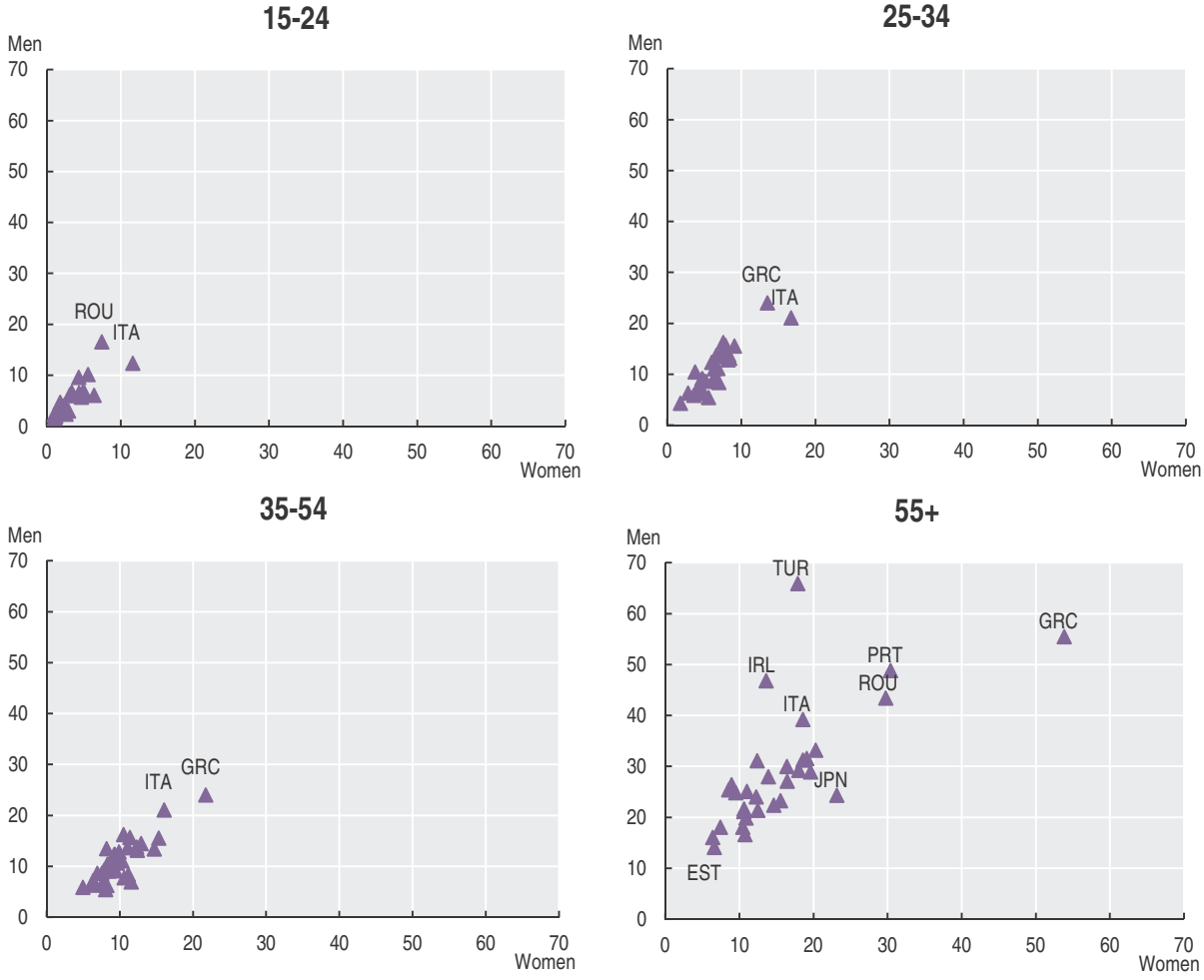
Hipple, S. and L. Hammond (2016), "Self-employment in the United States", Spotlight on Statistics, US Bureau Of Labor Statistics, March.

OECD (2016), *OECD Report to G7 Leaders on Women and Entrepreneurship: A summary of recent data and policy developments in G7 countries*, *www.oecd.org/gender/OECD-Report%20-to-G7-Leaders-on-Women-and-Entrepreneurship.pdf*.

OECD (2012), "Policy Brief on Youth Entrepreneurship", *www.oecd.org/cfe/leed/Youth%20entrepreneurship%20policy%20brief%20EN_FINAL.pdf*.

Figure 7.7. **Self-employment rates by age group and gender**

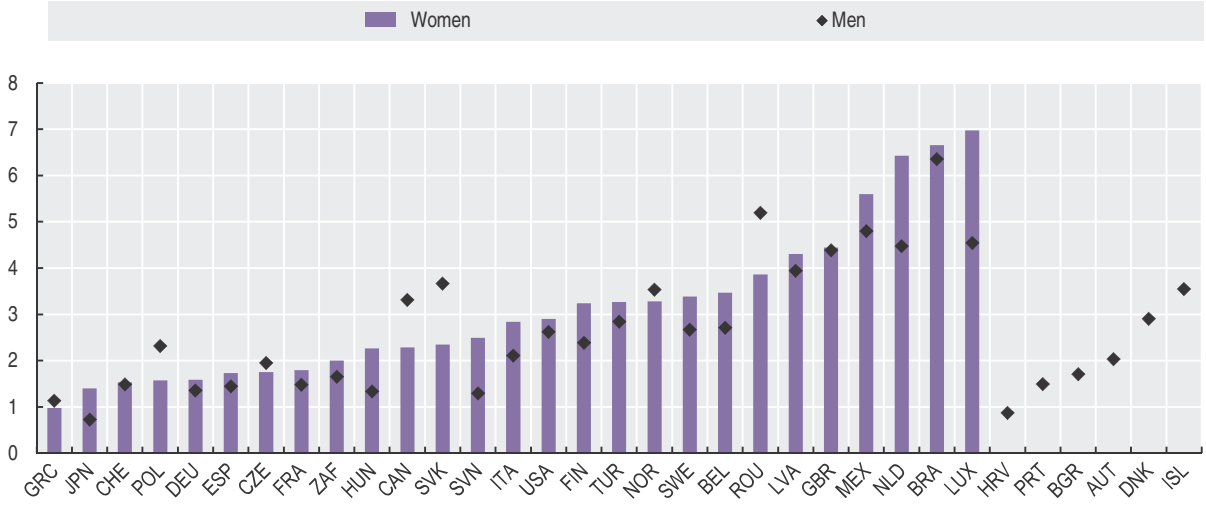
Percentage of total age-group employment, by gender, 2015



StatLink http://dx.doi.org/10.1787/888933404563

Figure 7.8. **Proportion of self-employed below 25, by gender**

Percentage of total self-employed by gender, 2015, or latest available year



StatLink http://dx.doi.org/10.1787/888933404574

Earnings from self-employment

Key facts

- In 2013, self-employed women earned between 13% and 60% less than men in the OECD area, with the smallest gap observed in Sweden and the largest gap observed in Poland.
- Over the period 2006 to 2013, the earnings gap decreased considerably in Luxembourg, the Netherlands, Spain, Norway, Belgium, and Portugal. Over the same period, the earnings gap increased by more than five percentage points in Denmark, the Slovak Republic, Italy and Poland.

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. 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.

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

Comparability

There are still methodological hurdles that hamper the comparability of 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 self-employed.

Source/online databases

Canada: Canadian Income Survey (CIS), 2012-13.

Europe: European Union Statistics on Income and Living Conditions (EU-SILC), 2014 wave.

New Zealand: Income Survey, 2014.

United States: Current Population Survey (CPS), American Community Survey (ACS), Survey of Income and Program Participation (SIPP), 2014 wave.

For further reading

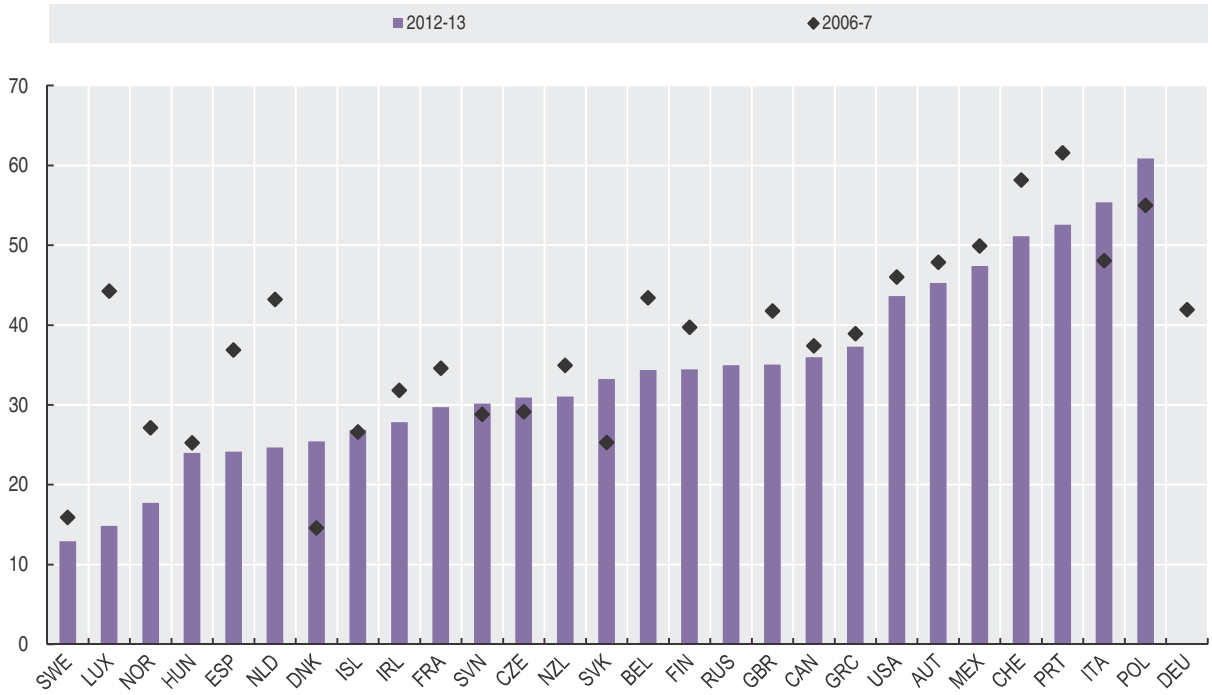
Hamilton, B.H. (2000), "Does Entrepreneurship Pay? An Empirical Analysis of the Returns to Self-Employment", *Journal of Political Economy*, University of Chicago Press, Vol. 108(3), pp. 604-631, June.

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 7.9. **Gender gap in self-employment earnings**

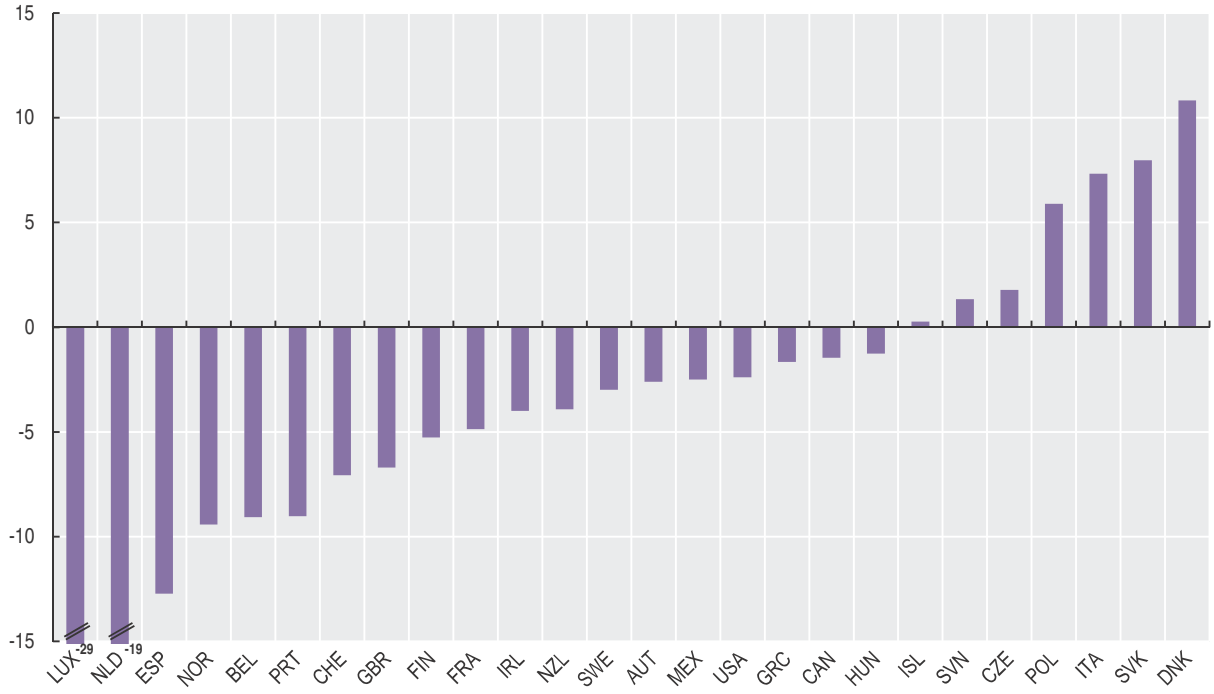
Difference between male and female earnings as percentage of male earnings



StatLink http://dx.doi.org/10.1787/888933404589

Figure 7.10. **Changes in gender gap in self-employment earnings**

Percentage points, change between 2006-7 and 2012-13



StatLink http://dx.doi.org/10.1787/888933404593

Inventors by gender

Key facts

- The share of female inventors among all inventors has increased steadily and significantly in the past few decades, but still remains a low 8% in the OECD area.
- The share of self-employed among employed persons with tertiary education varies considerably across countries, but is higher for men in all countries. High shares are observed in Italy with 32% for men and 21% for women, compared with 7% and 4% respectively in Norway.

Relevance

Scientists, engineers and inventors play a vital role for growth in today's increasingly knowledge-based economies. Women represent a growing share of the scientific and technological workforce, although their participation in creating firms that bring these solutions to the market is still low.

Definitions

Share of women inventors is calculated as the share of females among all inventors. Inventors are defined as those who submitted their patent applications to the European Patent Office (EPO) or the US Patent and Trademark Office (USPTO).

Share of self-employed women (men) among all employed with tertiary education is calculated as the share of self-employed women (men) with tertiary education diploma divided by the total number of women (men) in employment having a tertiary education diploma. Tertiary education corresponds to levels 5-8 of the International Standard Classification of Education (ISCED 2011).

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

Comparability

Data on inventors come from the OECD Patent Database, which includes information on patent applicants' names and surnames by country. The gender of the inventor is identified based on a large list of male and female first names. Annual smoothed estimates have been computed using three-year centred moving averages of shares of women inventors. For the first and last year of a country series, a two-year moving average has been used.

Data on tertiary education for the United States refer to associate's degree, bachelor's degree and advanced degree. Canadian data refer to university: bachelor's degree and higher. For all the other countries data refer to levels 5-8 of ISCED 2011.

Importantly, data on tertiary education presented in Figure 7.13 cover all disciplines and not only education in science, technology, engineering and mathematics (STEM).

Sources

OECD-PATSTAT database, *www.oecd-ilibrary.org/science-and-technology/data/oecd-patent-statistics_patent-data-en*.

Canada: Labour Force Survey, *www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&SDDS=3701*.

Chile: *Encuesta Nacional del Empleo*, *www.ine.cl/boletines/detalle.php?id=2&lang=*.

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

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

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

Further reading

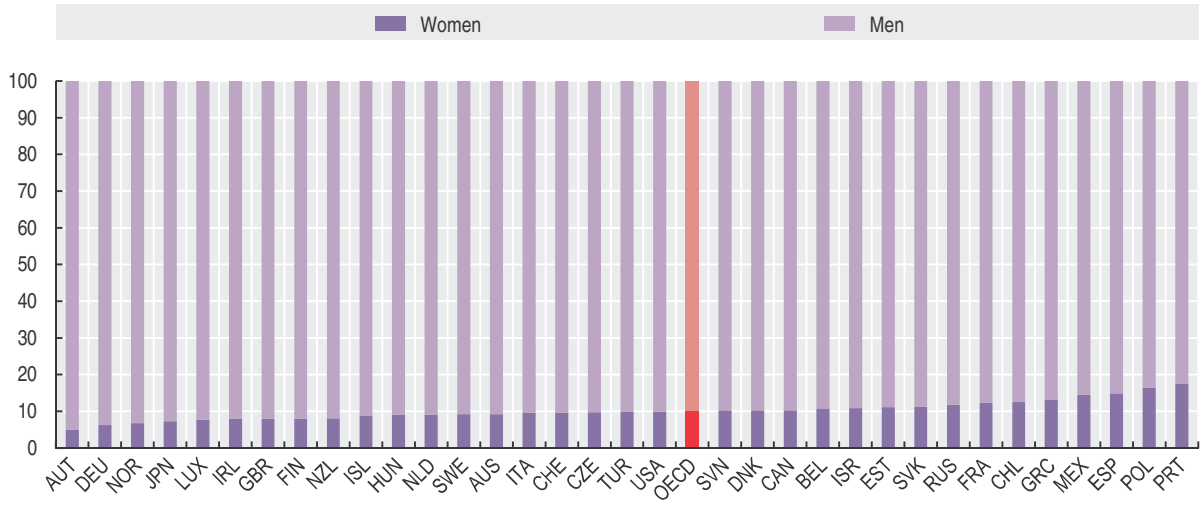
OECD (2015), *The ABC of Gender Equality in Education: Aptitude, Behaviour, Confidence*, PISA, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264229945-en*.

OECD (2009), *Patent Statistics Manual*, OECD Publishing, Paris, *www.oecd.org/sti/inno/oecdpatentstatisticsmanual.htm*.

OECD (2008), *Entrepreneurship and Higher Education*, OECD Publishing, Paris, *https://one.oecd.org/document/36247/en/pdf*.

Figure 7.11. **Inventors by gender**

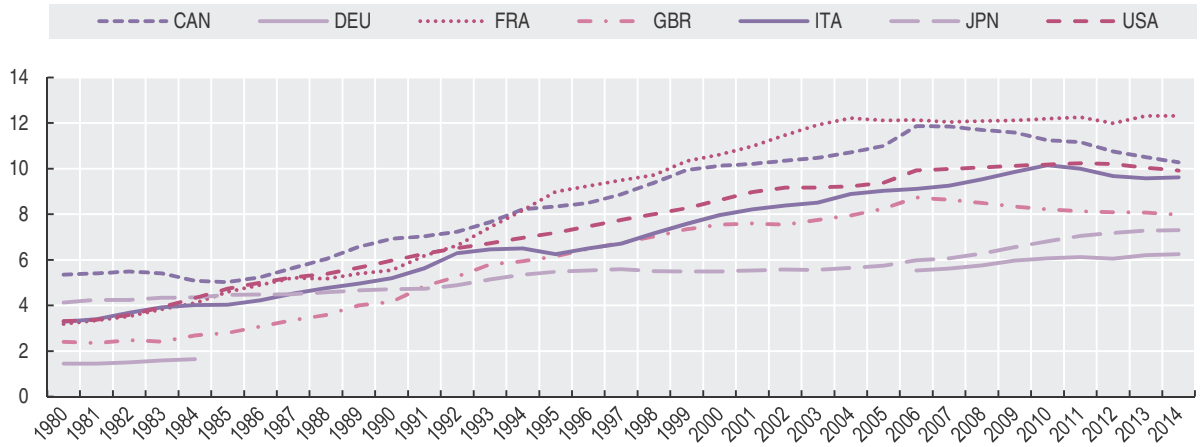
Percentage of all inventors, 2014



StatLink http://dx.doi.org/10.1787/888933404603

Figure 7.12. **Share of women inventors among all inventors in G7 countries**

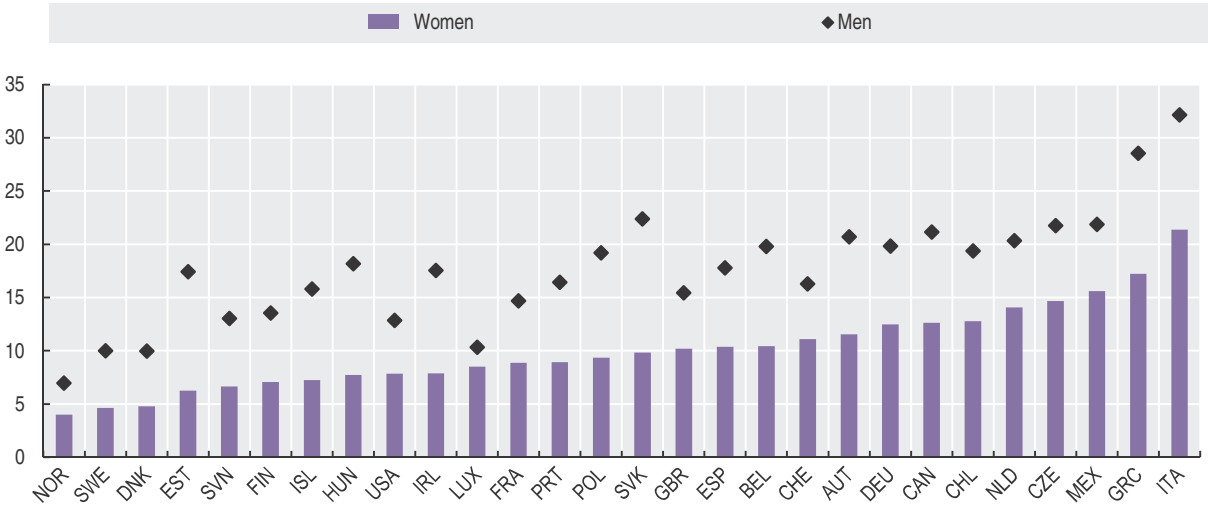
Percentage of all inventors



StatLink http://dx.doi.org/10.1787/888933404615

Figure 7.13. **Share of self-employed among all employed with tertiary education, by gender**

Percentage of employed persons with tertiary education, by gender, average 2013-14



StatLink http://dx.doi.org/10.1787/888933404621

Perception of entrepreneurial risk

Key facts

- Most countries in the OECD area exhibit a gender gap with regard to access to entrepreneurship finance to create and grow a start-up; on average, only 27% of women compared to 34% of men declare that they would have access to money to set up a business.
- Similar gender gaps exist with regard to access to training, although the OECD average of individuals who consider that they would have access is higher for both men (51%) and women (44%). There are, however, important differences across countries: in Finland, the share is above 80% for men and women, while in Italy and Mexico the share is below 20%.
- Women's perception on access to entrepreneurial finance and training to create and grow a business seem to be affected by a higher level of educational attainment by women in a country.

Definitions

Access to entrepreneurship financing: The percentage of individuals, by gender, who answered "yes" to the question *Do you have access to the money you would need if you wanted to start or grow a business?* Financing could come from personal savings, loans, or any other source.

Access to entrepreneurial training: The percentage of individuals, by gender, who answered "yes" to the question *Do you have access to training on how to start or grow a business, or not?* Training can include any formal or informal means to learn about starting or growing a business.

Share of women with tertiary education is calculated as the share of women with tertiary education divided by the total population of women. Tertiary education corresponds to levels 5-8 of the International Standard Classification of Education (ISCED 2011).

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

Relevance

An important determinant of entrepreneurship relates to the assessment of risk involved in creating a new business. This assessment is to a large extent determined by the risk of failure but also reflects other factors, such as social security safety nets, access to finance, access to child-care, and indeed potential rewards; which helps to explain the significant differences across countries on how entrepreneurial risk is perceived.

Comparability

Data are drawn from Gallup Worldwide Research, which surveys residents in more than 150 countries, using randomly selected, nationally representative samples. The sample typically consists of 1000 individuals, aged 15 and older, in each country. Telephone interviews and face-to-face interviews are used.

Samples cover the resident population in the entire country, including rural areas. Exceptions include areas where the safety of interviewing staff is threatened, scarcely populated islands in some countries, and areas that are particularly difficult to access. In order to ensure a nationally-representative sample for each country, data weighting is used and applied for calculations within a country.

Sources

Gallup World Poll, *www.gallup.com/services/170945/world-poll.aspx*.

OECD Education at a Glance Indicators.

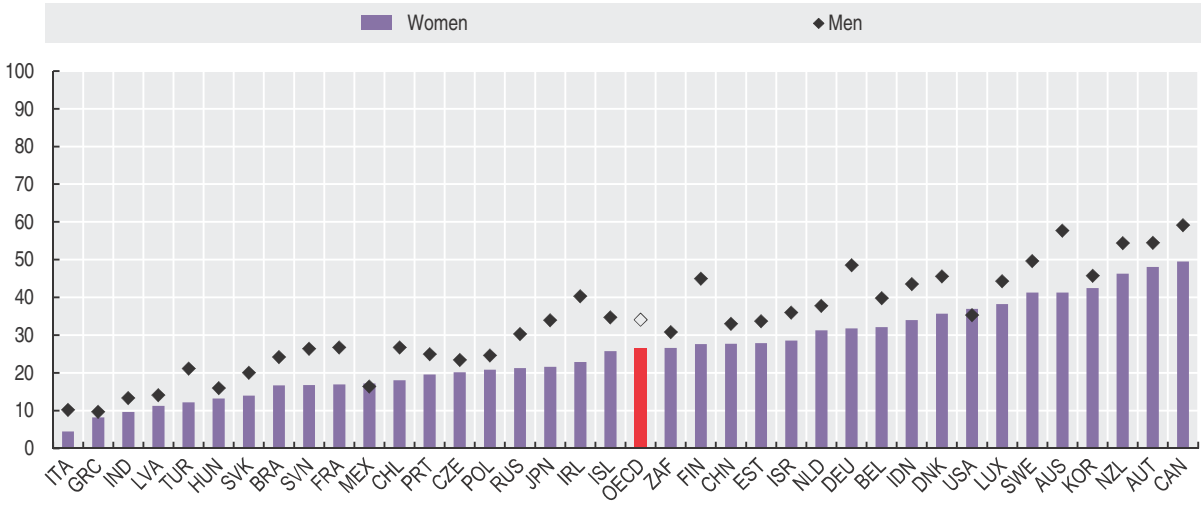
Further readings

OECD (2016), *OECD Report to G7 Leaders on Women and Entrepreneurship. A summary of recent data and policy developments in G7 countries*, *www.oecd.org/gender/OECD-Report%20-to-G7-Leaders-on-Women-and-Entrepreneurship.pdf*.

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

Figure 7.14. **Perception on access to entrepreneurship financing**

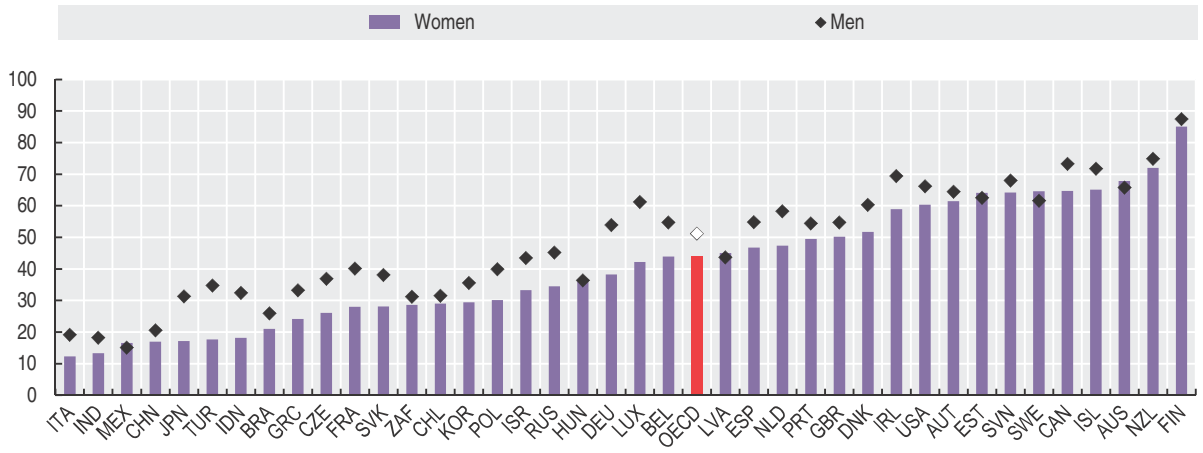
Percentage of persons who declare having access, by gender, 2013



StatLink http://dx.doi.org/10.1787/888933404636

Figure 7.15. **Perception on access to entrepreneurial training**

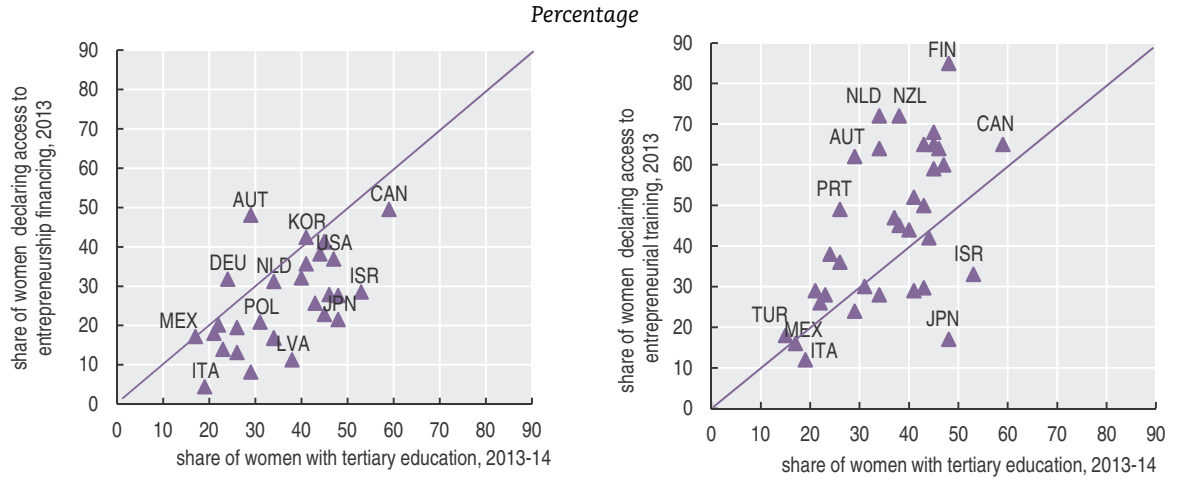
Percentage of persons who declare having access, by gender, 2013



StatLink http://dx.doi.org/10.1787/888933404641

Figure 7.16. **Share of women with tertiary education and women's perception on access to entrepreneurship money and training**

Percentage



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8. DETERMINANTS OF ENTREPRENEURSHIP: VENTURE CAPITAL

Venture capital investments

Venture capital investments by investee company

Venture capital investments by sector

Venture capital investments

Key facts

- In 2015, venture capital investments in the United States amounted to USD 59.7 billion and accounted for 85% of total venture capital investments in the OECD. Venture capital investments in Europe amounted to USD 4.2 billion.
- In the majority of countries, venture capital represents 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 and represents 0.38% and 0.33% of GDP, respectively.
- Venture capital investments collapsed in nearly all countries at the height of the crisis and remain below pre-crisis levels in most countries. By contrast, in Hungary, the United States and South Africa, the recovery has been strong, with 2015 levels nearly twice those of 2007.

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 and/or complements traditional bank finance. The development of the venture capital industry is considered an important framework condition to stimulate innovative entrepreneurship.

Comparability

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

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, formerly European Private Equity and Venture Capital Association – EVCA).

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

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.

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, Korea and Japan 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 Australia and New Zealand refer to the fiscal year.

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.2 (Annex C) shows the correspondence between original data and OECD harmonised data for venture capital investments by stage.

Source

OECD Entrepreneurship Financing Database.

Further reading

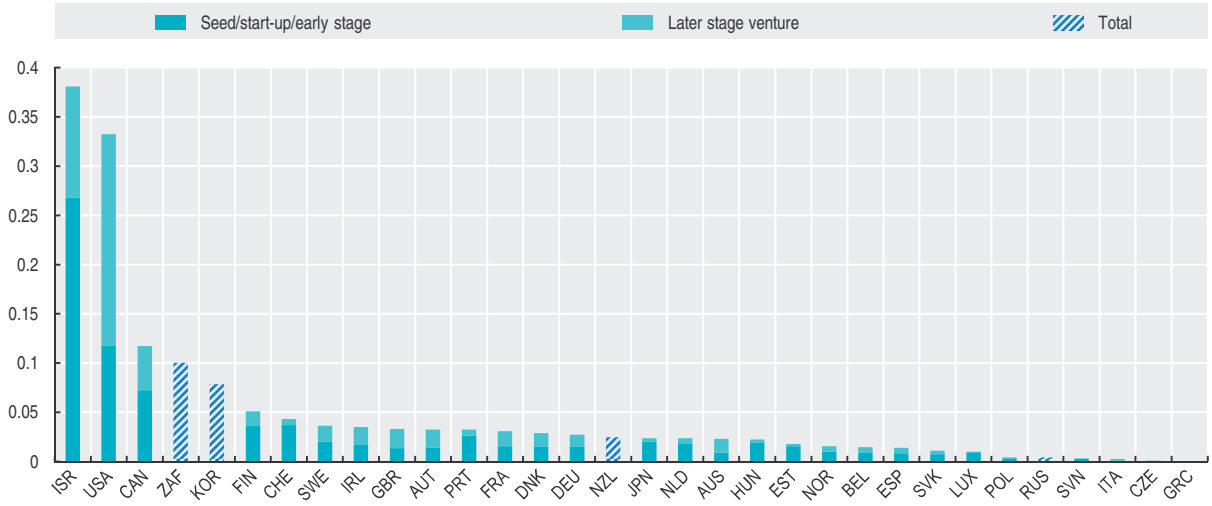
OECD (2016), *Financing SMEs and Entrepreneurs 2016: An OECD Scoreboard*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/fin_sme_ent-2016-en*.

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*.

Wilson, K.E. (2015), "Policy Lessons from Financing Innovative Firms", *OECD Science, Technology and Industry Policy Papers*, No. 24, OECD Publishing, Paris, *http://dx.doi.org/10.1787/5js03z8zrh9p-en*.

Figure 8.1. **Venture capital investments as a percentage of GDP**

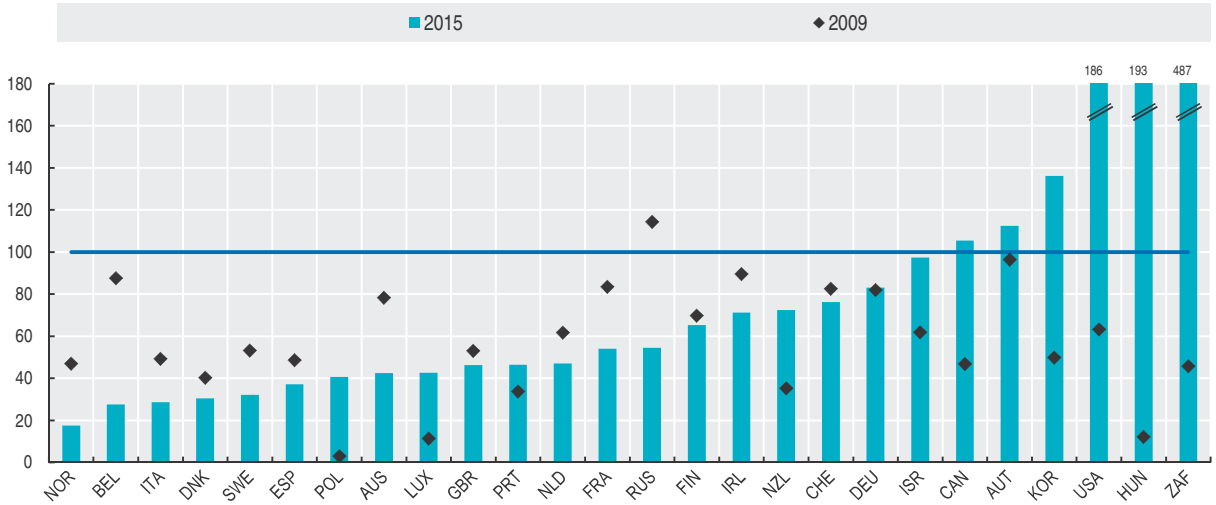
Percentage, 2015, or latest available year



StatLink http://dx.doi.org/10.1787/888933404662

Figure 8.2. **Trends in venture capital investments**

Index 2007=100



StatLink http://dx.doi.org/10.1787/888933404677

Table 8.1. **Venture capital investments**

Million US dollars, 2015, or latest available year

Greece	0.00	Norway	62.20	Switzerland	289.29
Slovenia	1.50	Portugal	65.08	South Africa (2014)	352.72
Czech Republic	1.85	Belgium	68.30	France	757.86
Estonia	4.12	Ireland	84.03	Germany	928.47
Luxembourg	5.94	Denmark	86.34	United Kingdom	951.93
Slovak Republic	9.91	Finland	118.19	Korea	1 087.46
Poland	21.72	Austria	122.87	Japan (2014)	1 105.29
Hungary	27.67	Spain	173.55	Israel (2014)	1 165.00
New Zealand	43.59	Netherlands	180.50	Canada	1 825.63
Italy	51.33	Sweden	180.84	Total Europe	4 220.13
Russian Federation	59.00	Australia	288.49	United States	59 698.50

StatLink http://dx.doi.org/10.1787/888933404685

Venture capital investments by investee company

Key facts

- Only a very small number of companies are backed by venture capital. Only in Belgium, Finland, Sweden and the United States do venture capital-backed companies represent over 1% of total enterprise births.
- In the majority of countries, the average investment per company has declined compared to the level in 2007. But in Israel and the United States, the average investment per company in 2015 was significantly above the 2007 average, and the highest among OECD countries.
- In Europe, companies with 20 to 99 employees attracted the highest amount of venture capital investments, around USD 2 billion.
- In 2015, in the United States a significant percentage (45%) of venture-backed deals related to later stage financing. This was similarly the case in Spain, France and the United Kingdom, where respectively 48%, 40% and 37% of all investee companies attracted later stage financing. In contrast, in Sweden almost 90% of venture-backed companies received start-up and early stage financing, and in Austria more than 60% of investee companies attracted seed financing.

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 and/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. Table C.2, Annex C, presents the breakdown of venture capital by stage from selected Venture Capital associations and OECD).

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 the breakdown of venture capital investments by stage of development. 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.

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, Korea and Japan where data refer to the location of the investing venture capital firms.

Data for the United States refer to the number of deals instead of the number of investee companies. Data for Israel refer only to venture capital-backed high-tech companies. Data for Australia and New Zealand refer to the fiscal year.

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.2 (Annex C) shows the correspondence between original data and OECD harmonised data for venture capital investments by stage.

Source

OECD Entrepreneurship Financing Database.

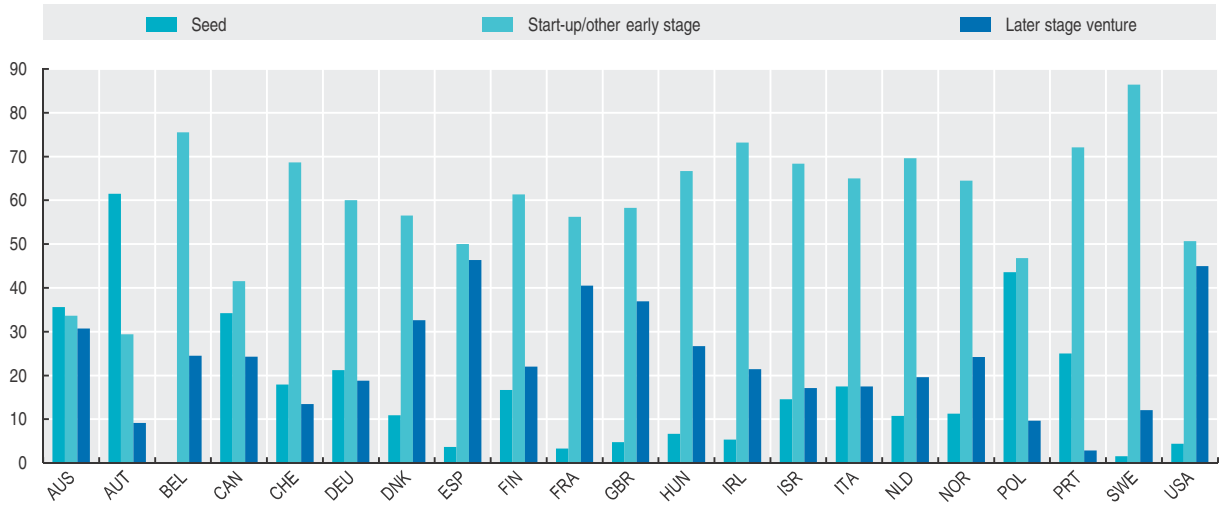
Further reading

OECD (2016), *Financing SMEs and Entrepreneurs 2016: An OECD Scoreboard*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/fin_sme_ent-2016-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 8.3. **Venture capital-backed companies by development stage**

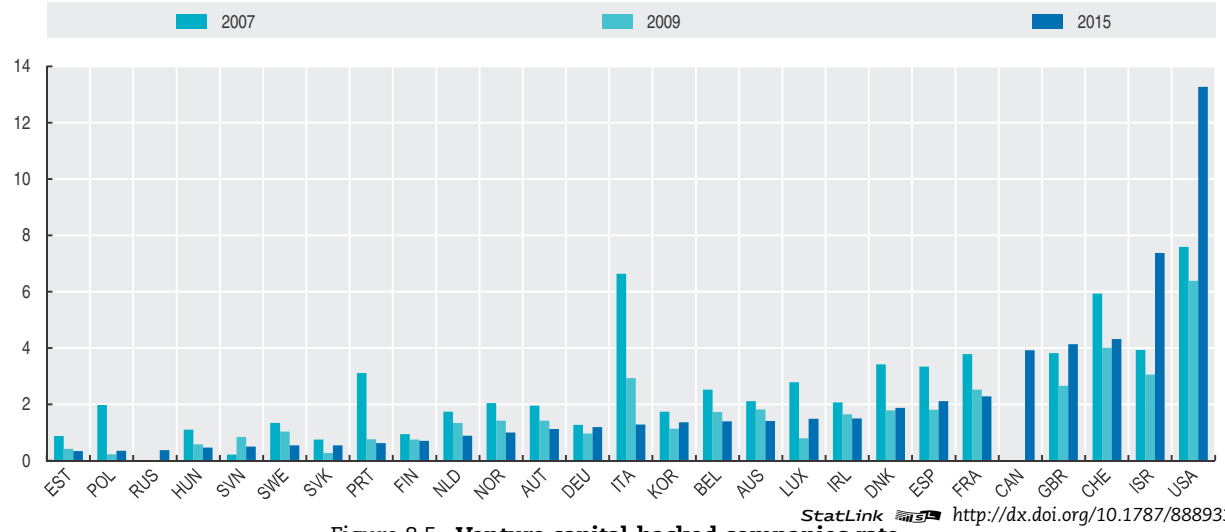
Percentage, 2015, or latest available year



StatLink http://dx.doi.org/10.1787/888933404693

Figure 8.4. **Average venture-capital investments per company**

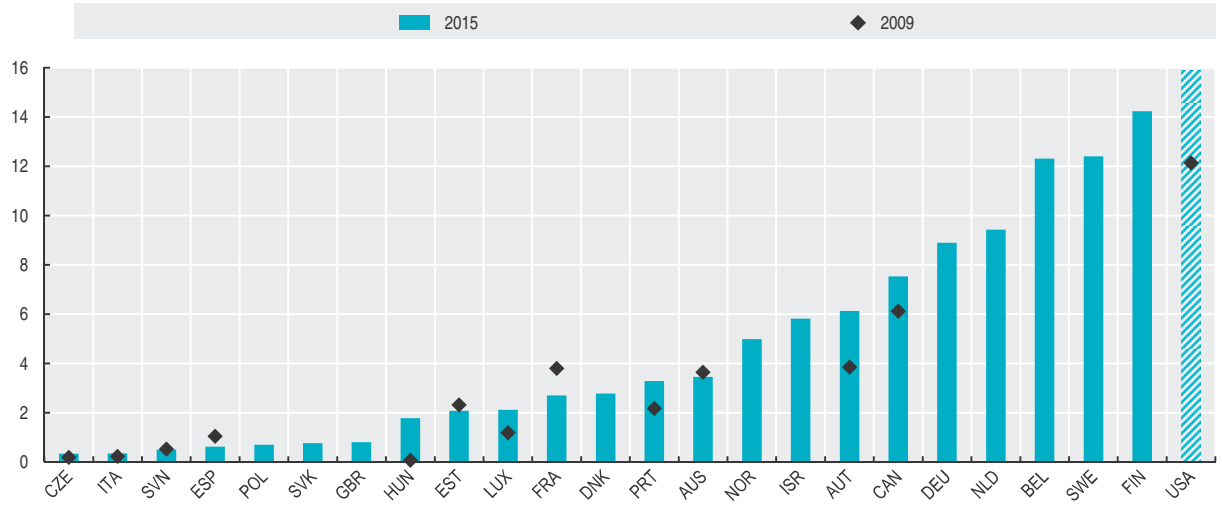
Million US dollars



StatLink http://dx.doi.org/10.1787/888933404708

Figure 8.5. **Venture capital-backed companies rate**

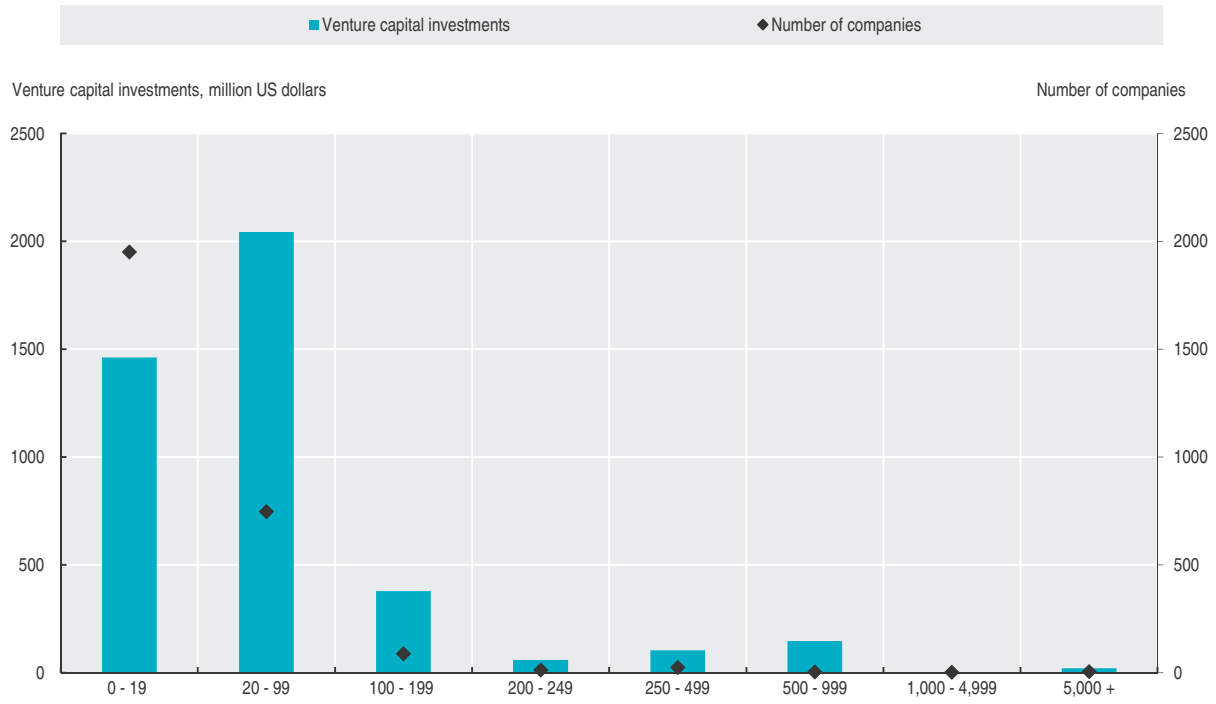
Per 1000 employer enterprise births



StatLink http://dx.doi.org/10.1787/888933404712

Figure 8.6. **Venture capital investments by size of venture-backed companies, Europe**

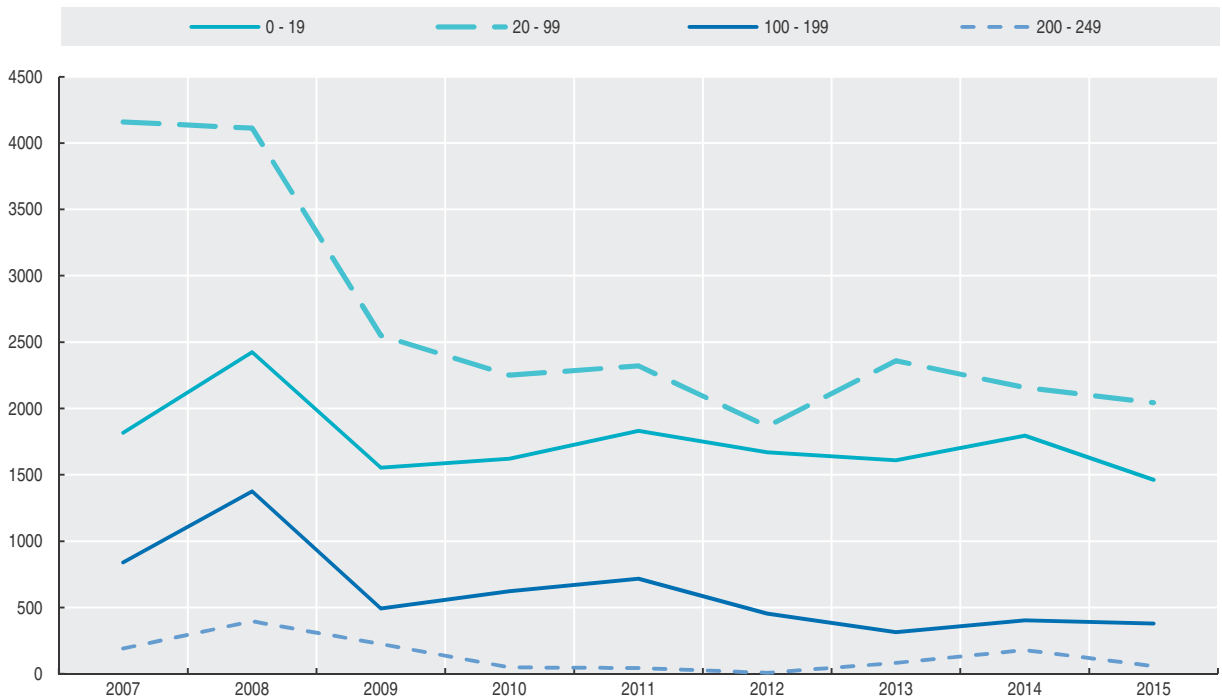
Million US dollars, 2015, number of companies



StatLink http://dx.doi.org/10.1787/888933404722

Figure 8.7. **Trends of venture capital investments, by size of venture-backed company, Europe**

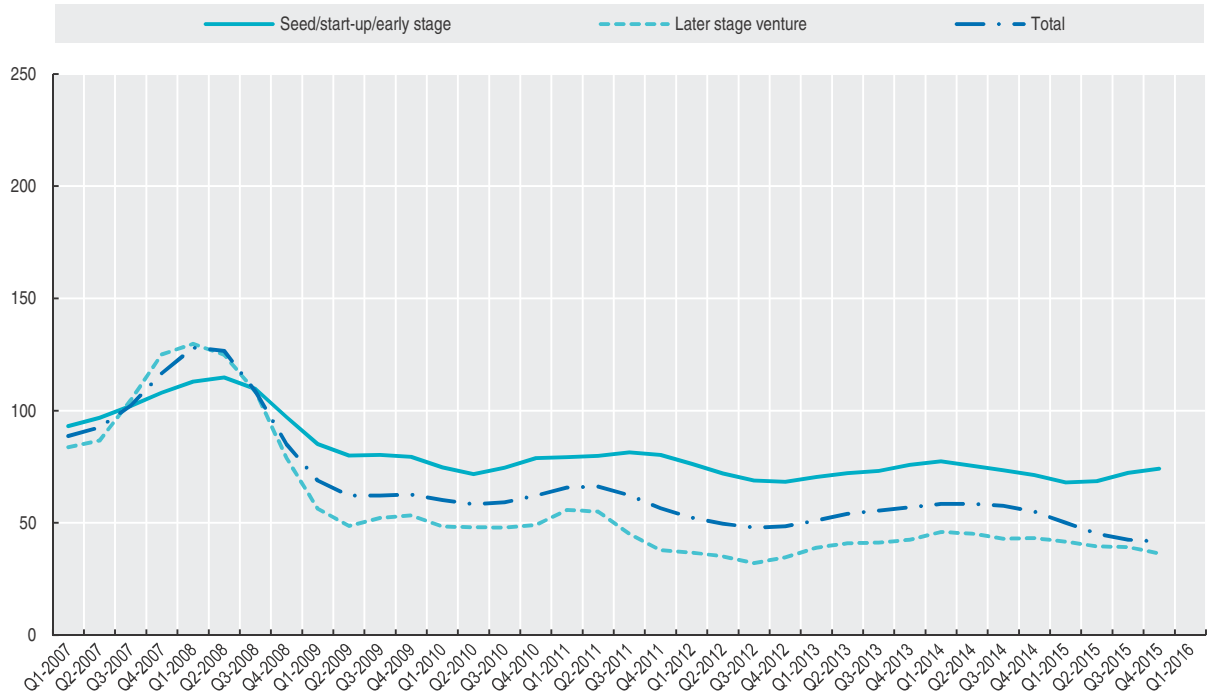
Million US dollars



StatLink http://dx.doi.org/10.1787/888933404730

Figure 8.8. **Venture capital investments, Europe**

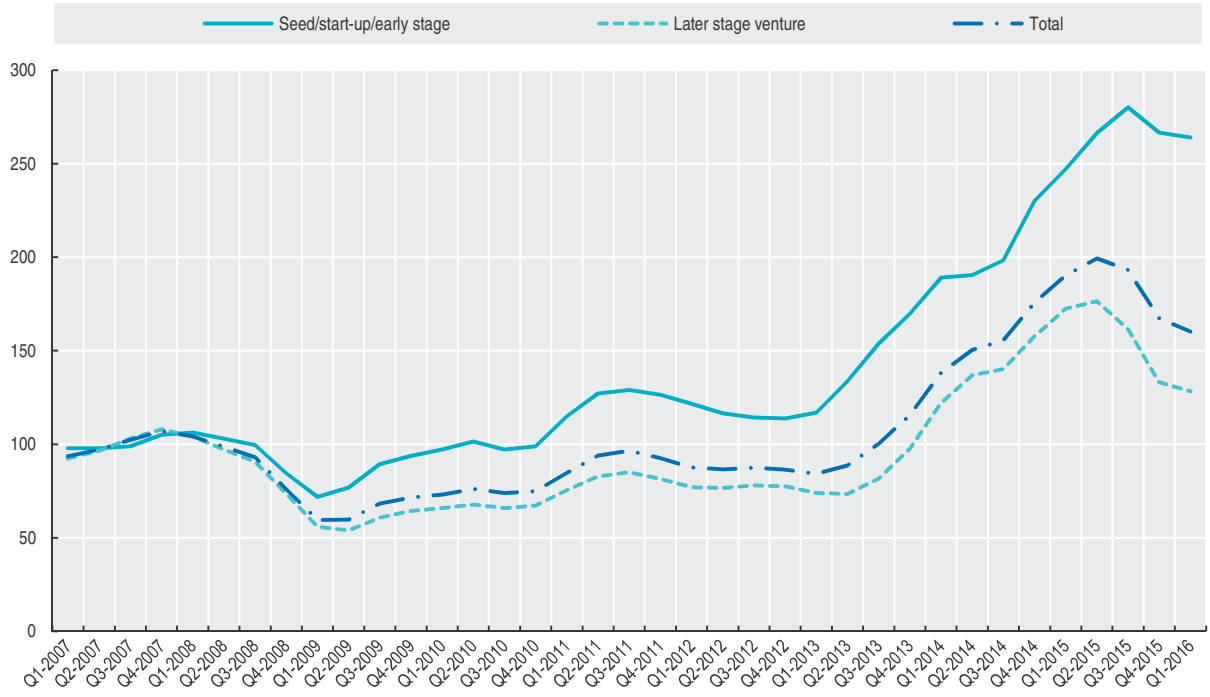
Trend-cycle, 2007=100



StatLink http://dx.doi.org/10.1787/888933404740

Figure 8.9. **Venture capital investments, United States**

Trend-cycle, 2007=100



StatLink http://dx.doi.org/10.1787/888933404751

Venture capital investments by sector

Key facts

- Significant regional differences exist in the types of firms attracting venture capital. In 2015, in the United States the computer and consumer electronics attracted 43.3% of the total, followed by life sciences (19%) and communications (16.5%). In Europe, life sciences was the sector with the highest venture capital investments (34% of the total), followed by computer and consumer electronics (20%) and communications (18.6%).
- Between 2007 and 2015, 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 and/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.

Comparability

There are no standard international definitions of either venture capital or the breakdown of venture capital investments by stage of development. 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.

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) shows the correspondence between original data and OECD harmonised data for venture capital investments by sector.

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, formerly European Private Equity and Venture Capital Association – EVCA).

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

Sources

OECD Entrepreneurship Financing Database, drawing from:

Invest Europe (formerly European Private Equity and Venture Capital Association – EVCA), Invest Europe Yearbook – 2015 European Private Equity Activity, *www.investeurope.eu/knowledgecenter/statisticsdetail.aspx?id=6392*.

NVCA (National Venture Capital Association, United States), Thomson Reuters data, *www.nvca.org/*.

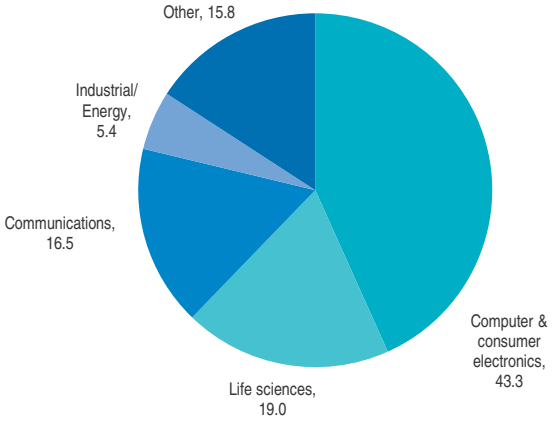
Further reading

OECD (2016), *Financing SMEs and Entrepreneurs 2016: An OECD Scoreboard*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/fin_sme_ent-2016-en*.

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

Figure 8.10. **Venture capital investments in the United States, by sector**

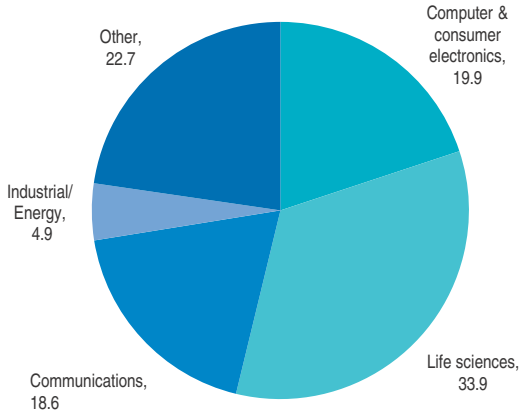
Percentage, 2015



StatLink http://dx.doi.org/10.1787/888933404762

Figure 8.11. **Venture capital investments in Europe, by sector**

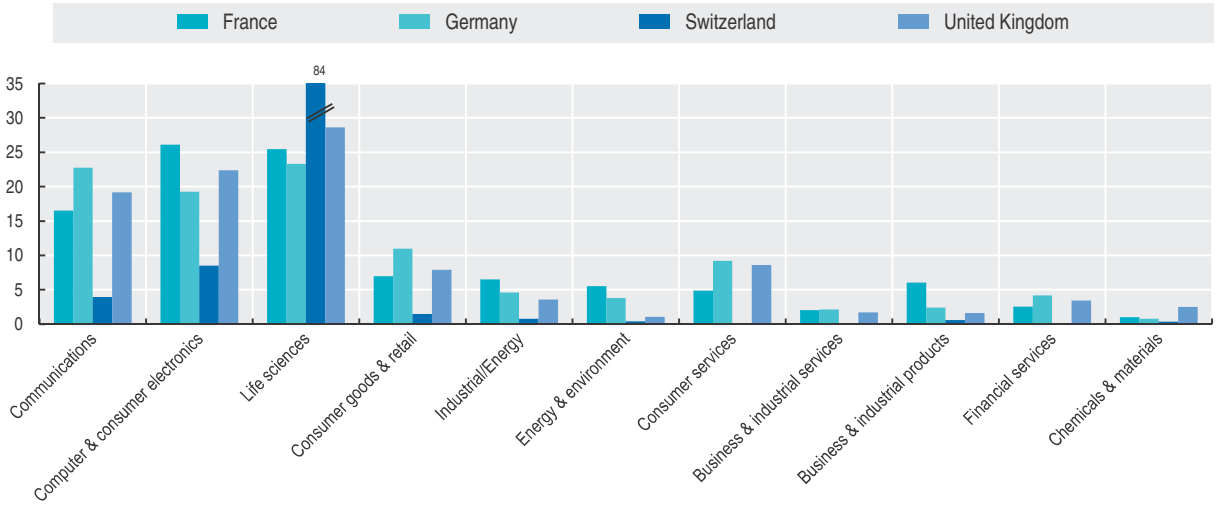
Percentage, 2015



StatLink http://dx.doi.org/10.1787/888933404779

Figure 8.12. **Venture capital investments by sector, selected European countries**

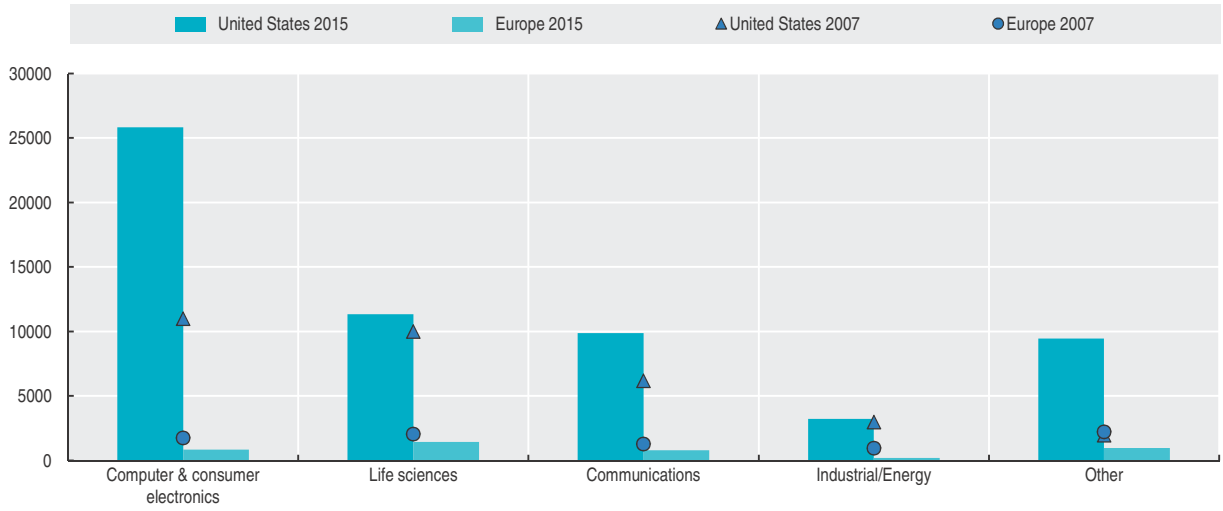
Percentage, 2015



StatLink http://dx.doi.org/10.1787/888933404786

Figure 8.13. **Venture capital investments by sector**

Million US dollars



StatLink http://dx.doi.org/10.1787/888933404792

ANNEX A

Sources of data on timely indicators of entrepreneurship

This Annex presents the sources and definitions used to develop the *OECD Timely Indicators of Entrepreneurship* database; three separate tables refer to enterprise creations, exits and bankruptcies respectively. The database is available on *http://stats.oecd.org//Index.aspx?QueryId=72208*.

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

	Sources and definitions of enterprise creation
Australia	*Source:* Australian Securities and Investments Commission (ASIC). New company registrations. Monthly data. Data cover all enterprises. *www.asic.gov.au*
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. *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". *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/*

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

	Sources and definitions of enterprise creation
Germany	*Source:* Statistiches Bundesamt – Destatis. Monthly data. Number of new establishments (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*
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. *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. *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. *www.gks.ru/bgd/regl/b13_01/IssWWW.exe/Stg/d10/2-3-2.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/*
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 exits**

	Sources and definitions of exits
Canada	*Source:* Statistics Canada. Quarterly data. Series are constructed from the payroll account deductions (PD7). The annual firm exit statistics are produced using the Longitudinal Employment Analysis Program (LEAP), which is created from the statements of remuneration paid (T4 slips). LEAP uses the T4 data as it includes information on both employers and employees, making it possible to track individuals as they move between businesses, to limit false deaths. Exits are enterprises with no employment in the future year and with employment for the last time in the listed quarter of the current year. The business sector covers all industrial sectors except educational services, health care and social assistance, and public administration. Exits in 2014 are projected using data on business closings and entries. A closing is a business with employment in the current quarter and no employment in the future quarter. Exits in 2015 are projected using data on entries only. *www.statcan.gc.ca/*
Finland	*Source:* Statistics Finland. Quarterly data. The statistics for closures are based on Statistics Finland's Business Register and the Tax Administration for source data for the Registry's registration information. The statistics cover companies that have business license or assignment of the property subject to the tax or act as employers. Excluded are foundations, non-profit associations, public authorities and religious communities. The numbers include changes in enterprises resulting from incorporations and mergers, for example. Breakdown by legal form is available. The time series of the statistics presents a break: enterprise closures for the first quarter of 2014 can only be compared with the number of enterprise closures in 2013, but not with data for preceding periods. *www.stat.fi/til/aly/2014/aly_2014_2015-10-29_tie_001_en.html*
Germany	*Source:* Statistiches Bundesamt – Destatis. Monthly data. Deregistratons include also relocations to another district reporting, changes of legal form, transfers, successions, sales, and leases. *www.destatis.de*
Italy	*Source:* InfoCamere, Movimprese – Business register of Italian Chambers of Commerce. Quarterly data. Data refer to cessations of activity, total economy including agriculture. *www.infocamere.it*
New Zealand	*Source:* New Zealand Companies Office. Quarterly data. Data refer to incorporated companies only that were struck off from the register.
Portugal	*Source:* Statistics Portugal. Monthly data. Data are relative to dissolutions filed by the Ministry of Justice and refer to total economy, including agriculture. Sole proprietorships are excluded. *www.ine.pt*
Russian Federation	*Source:* Federal State Statistics Service. Monthly data. Exits correspond to liquidations. Data refer to total economy, including agriculture. *www.gks.ru/*
Turkey	*Source:* The union of Chambers and Commodity Exchanges of Turkey Monthly data. Data refer to legal entities including collective companies, limited partnerships, joint-stock companies, limited liabilities, cooperatives. *http://tobb.org.tr/BilgiErisimMudurlugu/Sayfalar/Eng/KurulanKapananSirketistatistikleri.php*
United Kingdom	*Source:* Companies House. Monthly data. Data refer to dissolutions (struck off the register) of incorporated companies only (company types included: public limited; private limited; private limited by guarantee/ no share capital; private limited by guarantee/no share capital (exempt); private limited; private unlimited; private unlimited/ no share capital companies). From 2009 on data include Northern Ireland. *www.gov.uk/government/statistics*
United States	*Source:* Bureau of Labor Statistics (BLS) – Business Employment Dynamics (BED). Quarterly data. Data refer to deaths of establishments of all sizes operating in goods producing and service providing sectors. These are units with no employment or zero employment reported in the third month of four consecutive quarters following the last quarter with positive employment. Deaths are a subset of closings not including temporary shutdowns of seasonal businesses. A unit that closed during the quarter is observed for three consecutive quarters in order to determine whether it was a permanent closing or a temporary shutdown. *www.bls.gov/data/*

Table A.3. **National sources and definitions of bankruptcies**

	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. *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 USD 10 million 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*

Table A.3. **National sources and definitions of bankruptcies** *(cont.)*

	Sources and definitions of bankruptcies
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*
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. *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
	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. *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. *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. *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. *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. *www.doingbusiness.org/data/exploretopics/dealing-with-construction-permits*	World Bank, *Doing Business*

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

Category of determinants	Definition	Data sources
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. *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. *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. *www.doingbusiness.org/data/exploretopics/registering-property*	World Bank, *Doing Business*
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. *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. *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. *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. *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. *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. *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. *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. *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. *www.doingbusiness.org/data/exploretopics/labor-market-regulation#difficultyFiring*	World Bank, *Doing Business*

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

Category of determinants	Definition	Data sources
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. *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. *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*
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*

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

Category of determinants	Definition	Data sources
	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. *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. *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. *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. *www.freetheworld.com/2015/economic-freedom-of-the-world-2015-dataset.xlsx*	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*
	ACCESS TO FINANCE	
Access to debt financing		
Country credit rating	The indicator is based on an assessment by the *Institutional Investor Magazine Ranking*. *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. *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. *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. *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. *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). *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). *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. *www.world-exchanges.org/home/index.php/statistics/ipo-database*	World Federation of Exchanges
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

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

Category of determinants	Definition	Data sources
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
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://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=isoc_bde15ee&lang=en*	Eurostat, *Information Society Statistics*
ICT expenditure	Expenditure for ICT equipment, software and 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)
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)
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). 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. *www.oecd.org/els/mig/databaseonimmigrantsinoecdcountriesdioc.htm*	Database on immigrants in OECD countries (DIOC)
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. *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. *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

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

Category of determinants	Definition	Data sources
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. *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 the language; 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 by stage (Table C.2); the breakdown of venture capital 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 (formerly European Private Equity and Venture Capital Association – EVCA), *Invest Europe Yearbook*.

KVCA – Korean Venture Capital Association.

NVCA – National Venture Capital Association, United States, Thomson Reuters data.

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 (formerly European Private Equity and Venture Capital Association, EVCA)	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)	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 new 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	PwC Money Tree – Israel	ABS – Australia	CVCA	VEC	KVCA	NZVCA	RVCA	SAVCA	OECD
Private equity	**Venture capital**				Pre-seed							**Pre-seed/ Seed**
		Seed	Seed	Seed/ Start-up	Seed	Seed	Seed	Early stage	Seed/ Start-up	Seed/ Start-up	Seed	
		Start-up	Early stage		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	Expansion/ Later stage	Later Stage	Early expansion	Expansion	Later		Expansion			**Later stage venture**
	Other Private Equity	Growth/ Rescue/ Turnaround Replacement, Buyout	Buy-outs 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 Later stage	Replacement, Buyout	

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	Europe – Invest Europe (formerly EVCA)
Computer and consumer electronics	Software Semiconductors Electronics/Instrumentation Networking and Equipment Computers and Peripherals	Computer and consumer electronics
Communications	Media and Entertainment IT Services Telecommunications	Communications
Life sciences	Medical Devices and Equipment Healthcare Services	Life sciences
Industrial/Energy	Industrial/Energy	Energy and environment Chemicals and materials
Other	Consumer Products and Services Retailing/Distribution Business Products and Services Financial Services Other	Consumer goods and retail Consumer services Business and industrial products Business and industrial services Financial services Agriculture Real estate Construction Transportation Unknown

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 (formerly EVCA)	Census of European PE and VC firms identified by EVCA and partner associations. Firms are surveyed on a quarterly basis; firms that did not provide quarterly surveys are invited to fill in an annual questionnaire, available on the PEREP website (PEREP_Analytics is a non-commercial pan-European private equity database with its own staff and resources). Throughout the data-collection period, PEREP analysts and co-operating national PE and VC associations contact non-respondents to encourage participation in the survey. Information is 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	MoneyTree™ Report: Quarterly study of venture capital investment activity in the United States, produced by NVCA in cooperation with PricewaterhouseCoopers (PwC). 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 Thomson Reuters. 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; see above NVCA.
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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