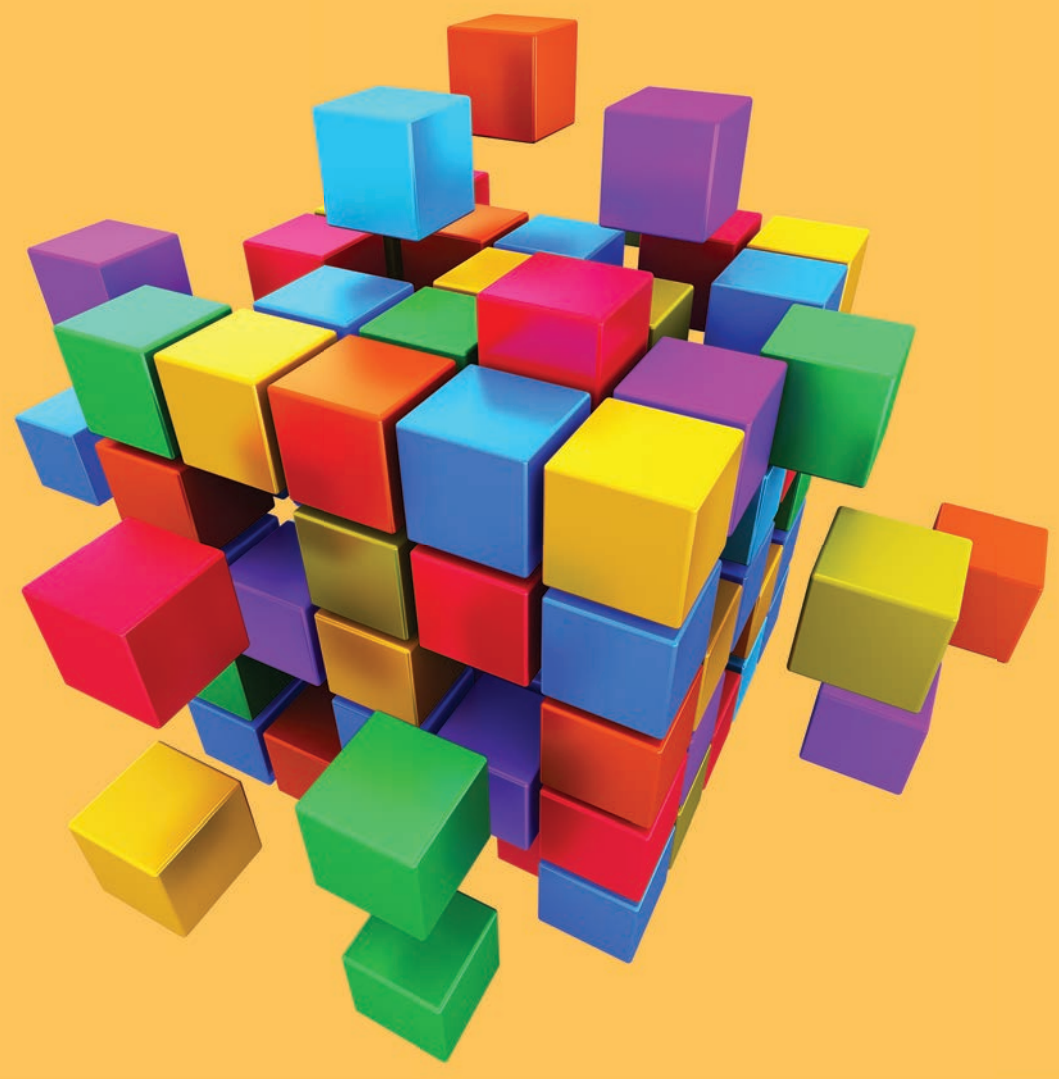
Small, Medium, Strong

TRENDS IN SME PERFORMANCE AND BUSINESS CONDITIONS



OECD

Small, Medium, Strong. Trends in SME Performance and Business Conditions

BETTER POLICIES FOR BETTER LIVES

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Foreword

Governments around the world recognise the important role of small and medium-sized enterprises (SMEs) for economic prosperity and social well-being. SMEs contribute to these goals through numerous channels. In the OECD area, SMEs account for 60% of total employment and generate 50% to 60% of value added on average. Across countries, new and small businesses are often a driving force of innovation and knowledge diffusion, respond to new or niched demands and social needs, and contribute to the empowerment and inclusion of marginalised groups.

The vital role of SMEs for achieving inclusive growth has become even more evident since the 2008-09 global financial crisis. In many countries, the disproportionate impact of the crisis on SMEs and potential entrepreneurs has contributed to persistently high levels of unemployment. With the ongoing recovery in most countries, conditions in local and global markets have evolved rapidly. Enabling SMEs to adapt and thrive in a more open environment and participate more actively in the digital transformation is essential for boosting economic growth and delivering a more inclusive globalisation.

Identifying the policy approaches that stimulate SMEs and entrepreneurship is a priority for OECD governments, emerging economies and developing countries alike, and has been the object of increasing attention by national governments, international fora, such as the G20, and a growing number of organisations and communities bringing together SME representatives. However, the SME space is complex, comprising framework conditions and targeted policies, and cutting across the boundaries of ministries and government agencies, as well as across levels of governments. In addition, the monitoring and benchmarking of SME policies are often limited by a lack of evidence.

This publication responds to the growing demand by governments for tools to monitor the SME business environment and benchmark the effectiveness of policies in creating the appropriate conditions for them to prosper. It documents the key role of SMEs in the OECD area, but also the large heterogeneity in the structure, performance and dynamics of the SME population within and across OECD countries. The report reveals an increasing labour productivity divide between SMEs and large firms in the post-crisis period, with micro-enterprises lagging behind in a large number of countries.

The report also reveals significant cross-country diversity in the business environment for SMEs, in the institutional and regulatory framework and in the conditions for accessing markets and strategic resources in the knowledge-based economy, such as finance, skills, knowledge and innovation networks. These dimensions are particularly relevant for SMEs, which are disproportionately affected by barriers and inefficiencies in the business environment and market failures in the economy. They are also more dependent than large enterprises on public investments in education and training, innovation and infrastructure.

The report illustrates that, over the last decade, governments in the OECD area have adopted common measures to enhance the business environment for SMEs. These include reducing administrative burdens and cutting red tape, improving contract enforcement mechanisms, simplifying tax regimes, strengthening physical and digital infrastructures and enhancing transparency and effectiveness in public governance, such as through digital tools. At the same time, OECD countries have adopted a range of policy approaches to foster SME investment, innovation and growth. These include a broad range of measures to enhance SME access to appropriate forms of finance, diverse strategies to foster management capacities and skills development in SMEs, direct public funding and tax incentives to boost SME investments, networking services, mentoring and coaching to improve SME growth prospects.

This report represents an important building block in a long-term agenda to shed light on the multiple contributions of SMEs to the economy and society, and enhance understanding of the links between SME performance, business environment conditions and policies. The OECD will continue to advance this agenda and to support policymakers in designing and implementing better policies for stronger SME performance.

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Acknowledgements

The present study was undertaken in the framework of the 2015-16 Programme of Work of the OECD Working Party on SMEs and Entrepreneurship (WPSMEE). As such, it greatly benefited from inputs and comments by delegates to the WPSMEE. Useful comments and guidance were also provided by delegates to the OECD Committee on Industry, Innovation and Entrepreneurship (CIIE). The work benefited in particular from contributions by four pilot countries, Canada, Israel, Portugal and the United Kingdom, which provided targeted inputs and feedback at key stages of the project. The financial contribution of the United Kingdom is gratefully acknowledged.

The report was prepared in the OECD Centre for Entrepreneurship, SMEs, Local Development and Tourism (CFE) by Lucia Cusmano, under the guidance of Miriam Koreen and with contributions from Humberto Lopez Rizzo for research and analysis, Lora Pissareva, François Iglesias and Beatriz Jambrina Canseco for editorial work, and Soňa Fazikova for technical support. Patrik Pruzinsky and Edo Omic from the OECD Global Relations Secretariat (GRS) provided useful input.

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Chapter 1, "SME trends in a globalised economy", was prepared in the Trade and Competitiveness Division of the OECD Statistics Directorate (STD) by Gueram Sargysan, Liliana Suchodolska and Belen Zinni, in the framework of the 2015-16 Programme of Work of the Committee on Statistics and Statistical Policy (CSSP).

The project also benefited from inputs and suggestions from a broad network of OECD Directorates, in particular: Nick Johnstone and Alessandra Colecchia (Directorate for Science, Technology and Innovation), Iza Lejarraga and Martin Wermelinger (Directorate for Financial and Enterprise Affairs), Michelle Harding (Centre for Tax Policy and Administration), Faisal Naru (Directorate for Public Governance and Territorial Development), Annalisa Primi (Development Centre), Kris Boschmans, Marco Marchese and Jonathan Potter (CFE), Jorge Galvez Mendez, Anton Leis Garcia, Anita Richter and Anna Wiersma (GRS).

A Steering Group for the project was constituted to provide feedback and inputs on the conceptual framework and the methodology, comment on the consistency and relevance of indicators and policy information, and weigh in on the relevance of project results to policy making. The Steering Group was composed of representatives from the four pilot countries and other interested countries, including Evan Holley (The Treasury, Australia), Jim Valerio (Innovation, Science and Economic Development Canada), Tomás Felipe Campero (Ministry of Economy, Development and Tourism, Chile), Friederike Welter (Institut für Mittelstandsforschung, Germany), Nir Ben Aharon (Small and Medium Business Agency, Israel), Luís Canha Campo and Jorge Silva (Ministry of Economy, Portugal), Björn Falkenhall (Swedish Agency for Growth Policy Analysis),

and Andrew Ledger (Department for Business, Energy and Industrial Strategy, United Kingdom).

The project also benefited from inputs by an expert group, which met in January 2016 to discuss the conceptual and methodological framework of the work. Participants included Steering Group members, OECD staff and experts from academia and government. In particular, thanks are due to Gioacchino Garofoli (Insubria University and Pavia University), Francis Greene (Birmingham University), Stefan Kapferer (former Deputy Secretary-General, OECD), Huib van der Kroon (Ministry of Economic Development, The Netherlands), Nadine Levratto (CNRS and Paris Ouest Nanterre), Martin Mueller (European Commission), and David Purdy (Kingston University). Salvatore Zecchini (University of Rome Tor Vergata), former Chair of the WPSMEE, participated in the Steering Group and expert group and contributed with advice and comments throughout the project.

Table of contents

Tables

Figures

Figures *(continued)*

Figures *(continued)*

Reader's guide

Background

This publication brings together for the first time the vast array of OECD data pertaining to business environment conditions for small and medium-sized enterprises (SMEs). It is the outcome of a pilot project undertaken in 2015-16 by the OECD Working Party on SMEs and Entrepreneurship (WPSMEE), with the aim to analyse SME performance, business environment conditions and SME policy approaches in OECD countries.

Methodological approach

The *indicators of business environment conditions* are sourced from exercises with established methodologies for data collection and harmonisation, aimed at enhancing the cross-country comparability of information in specific policy areas. In the case of OECD sources, the methodology was discussed and approved by OECD committees and working parties. Nevertheless, in some cases, differences in definitions, coverage and data collection frameworks remain, which require caution when making cross-country comparisons for a given indicator. Moreover, since some indicators are expressed as a share of GDP, differences in the size of the country should be considered in cross-country comparisons.

The *statistics on the structure and performance of the SME sector* are drawn from the OECD Structural and Demographic Business Statistics database, OECD Trade by Enterprise Characteristics database, and OECD National Accounts Statistics database, which all contain official statistics provided by national statistical offices of members and partner countries.

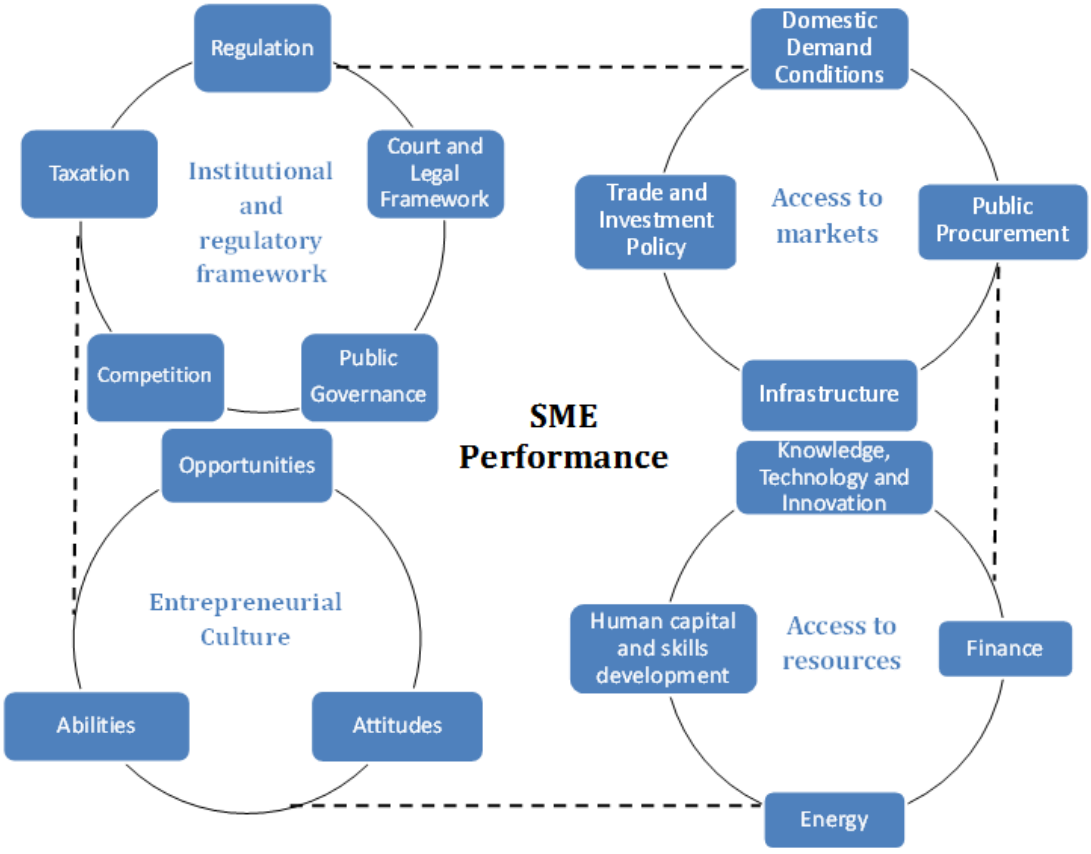
The analysis of SME structure and performance variables, presented in Chapter 1, takes into account the multi-dimensionality of SME policy objectives and seeks to reflect the large heterogeneity of the SME population within and across countries, as well as key differences in relation to large firms. The analysis also unveils performance patterns since the global financial crisis, and where possible, over a longer period. It leverages work conducted since 2006 under the OECD-Eurostat Entrepreneurship Indicators Programme (EIP), which develops multiple measures of entrepreneurship and entrepreneurial performance, also disseminated in the annual publication *OECD Entrepreneurship at a Glance*.

Chapters 2 to 5 of the publication provide comparative evidence about the diversity of opportunities and challenges in the business environment for SMEs across OECD countries. The selection of indicators and the collection of policy information are based on a conceptual framework (Figure 1) that brings together hard and soft elements of the

business environment, including the institutional and regulatory framework (Chapter 2), access to markets (Chapter 3), access to resources (Chapter 4), and entrepreneurial culture (Chapter 5).

The conceptual framework draws on established OECD tools, which consider the environment for business creation, investment and growth. In particular, the holistic approaches developed by the OECD-Eurostat Entrepreneurship Indicators Programme (EIP) and the OECD Policy Framework for Investment (PFI) offer insights for characterising the SME business environment and conceptualising the links between the business eco-system and SME performance. The proposed framework adapts these sources to reflect diverse SME policy objectives, as well as the empirical evidence on high impact dimensions for SMEs, based on academic literature, policy reports, SME surveys and other empirical evidence.

Figure 1. **SME business environment: A conceptual framework**



Within this framework, business environment indicators were selected taking into account their *relevance* for SME performance and policy making, according to theoretical and empirical literature; their *usefulness* to provide guidance to policy makers for formulating or adjusting policies and programmes; their *availability* for a large number of OECD countries; their *reliability* and cross-country *comparability*, as assessed and tested

in the relevant OECD exercises; as well as their *timeliness* and the *periodicity* of data collection.

Annex A provides further details about definitions of indicators, coverage, periodicity, and data sources.

Finally, it should be noted that a standard international definition of SME does not exist. SMEs are defined differently in the legislation across countries, in particular because the dimension "small" and "medium" of a firm are relative to the size of the domestic economy. For statistical purposes, the OECD refers to SMEs as firms employing up to 249 persons, with the following breakdown: micro (1 to 9), small (10 to 49) and medium (50-249).

Executive summary

SMEs play a key role in OECD countries, representing almost the totality of the business population, and accounting for large shares of employment and value added. In 2013, SMEs in the non-financial business sector of the OECD area accounted for 99.7% of all enterprises and for 60% of total employment, and generated between 50% and 60% of value added on average. In all countries, micro-enterprises dominate the business landscape, accounting for 70% to 95% of all firms. However, there is a large heterogeneity in the structure and contributions of SMEs within and across OECD countries.

The contribution of SMEs to the economy is higher in services, where they typically account for around 65% or more of total employment and value added. With some exceptions, SME contribution in manufacturing is generally lower, in large part reflecting increasing returns to scale from more capital-intensive production, as well as entry barriers related to investment.

SME contribution tends to decrease the higher the R&D intensity of sectors. At the same time, evidence points to a relatively more important role of SMEs to value added and job creation in high and medium-high R&D-intensity services, than in high R&D-intensity manufacturing sectors. ICT services are an exception in this regard: although SMEs account for 60% or more of total employment, they contribute less than half of the total value added, potentially reflecting entry barriers, both to tangible and intangible, knowledge-based capital.

In most countries, the 2007-08 global crisis hit SMEs disproportionately and the pace of recovery has varied significantly across countries. Total employment in SMEs decreased in most countries, reflecting the interplay of changes in the number of enterprises and in average firm size. Only in a few countries did a sizeable increase in the number of enterprises contribute to a rise in employment in the SME population. In most countries, the average size also dropped for newly created firms, especially in the industry sector.

Value added in both SMEs and larger enterprises was significantly affected by the crisis, and the pace of recovery has varied significantly across countries. While over 2000-07, labour productivity grew at a comparable rate in both SMEs and large firms in all countries, trends in productivity growth have diverged over the post-crisis period in most cases, with SMEs faring less well on average, and micro-enterprises lagging behind in a large number of countries.

By benchmarking framework conditions and trends, this publication reveals a large cross-country diversity in the opportunities and challenges for SMEs to access markets and resources, including finance, skills, energy, technology, innovation and knowledge, as well as in the institutional and regulatory framework, and in citizens' perceptions of entrepreneurial opportunities and capabilities.

Across OECD countries, notable and persistent differences are observed in the regulatory and institutional framework, such as in the burden of regulations, effectiveness of court and legal frameworks, and public governance. In many countries, important regulatory reforms have been introduced in recent years to ease business creation and reduce administrative burdens on businesses, but significant challenges remain, including the complexity of regulatory and insolvency procedures, the burden of tax compliance, as well as the time and cost for enforcing contracts. Moreover, in many OECD countries, the evaluation of policies and regulations has become an institutionalised practice, but *ex post* evaluation remains relatively under-developed in most cases.

Conditions for accessing international and public markets have generally improved for SMEs in recent years, due to improvements in physical and ICT infrastructure, as well as specific policy developments aimed at increasing SME access to information, easing procedures, or offering financial support to small businesses. Explicit barriers to trade and investment have been reduced significantly in the OECD area in recent decades, but other less explicit barriers, such as measures discriminating against foreign suppliers, remain in place in a large number of countries. With the exception of a few countries, barriers to entry and foreign investment are particularly high in the services sector, namely in professional services.

Access to finance, skills, technology and knowledge are essential for business activity in general, and for innovation and expansion in particular. For SMEs, access to financial resources was severely affected by the 2008-09 global financial crisis. Conditions have improved in recent years in most countries, although the recovery has been uneven. Furthermore, differences remain in the OECD area, such as in the real cost of credit, as well as in the development of financial instruments alternative to straight debt. Increasingly, governments are implementing measures to support the diversification of financing instruments available to SMEs, which may contribute to reducing the current cross-country gaps in financing opportunities for innovation and growth.

Some variance across OECD countries is also observed in the levels of educational attainment and in the development of work-related skills, which have implications on SME productivity and competitiveness. Investments in knowledge-based capital have grown rapidly over the last decade, representing, in some OECD countries, the main form of business capital investment. However, cross-country differences persist, including in the relative SME contribution to knowledge-based investments. Furthermore, notable cross-country differences are observed in firms' investment in training and lifelong learning. In recent years, public measures in this area significantly extended beyond R&D and technological innovation, to address broad economic and social challenges, enhance school-work transition, favour on-the-job learning, and encourage innovation in business models.

Recognition of entrepreneurial opportunities varies broadly across OECD countries, although a common post-crisis pattern is observed with an increased share of the population indicating fear of failure as an impediment to starting a business. On the other hand, perceptions about capability (i.e. skills and knowledge) to start a business appear to be relatively constant over time, suggesting a relation with underlying structural elements, such as education and training systems.

Chapter 1

SME trends in a globalised economy

This chapter provides an overview of the SME population across OECD countries and of trends in their performance relative to larger firms. The analysis considers different performance indicators to reflect the multi-dimensionality of SME policy objectives. The analysis highlights the heterogeneity of the SME population within and across countries, reveals performance patterns since the global financial crisis, and where possible, over a longer period, and describes the performance of SMEs in global markets.

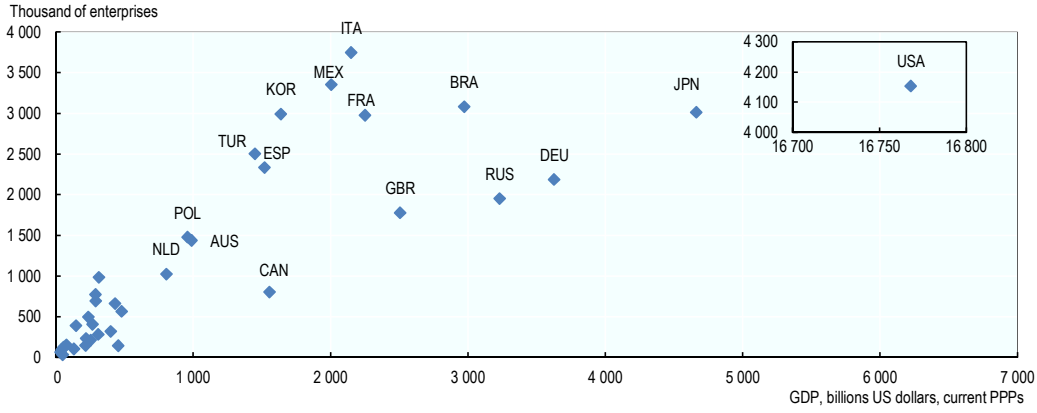
Note: The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

A heterogeneous world of SMEs

The size of the business population in a country is generally associated with the size of the economy. Still, differences exist also among countries of comparable size; for example, France and Italy have disproportionally more businesses relative to their economic size than Germany (Figure 1.1). In all economies, however, SMEs represent almost the totality of the business population and account for large shares of employment. In 2013, SMEs in the non-financial business sector of the OECD area accounted for 60% of total employment and for 99.7 % of all enterprises.

Figure 1.1. **Number of enterprises and GDP**

2013 or latest available year



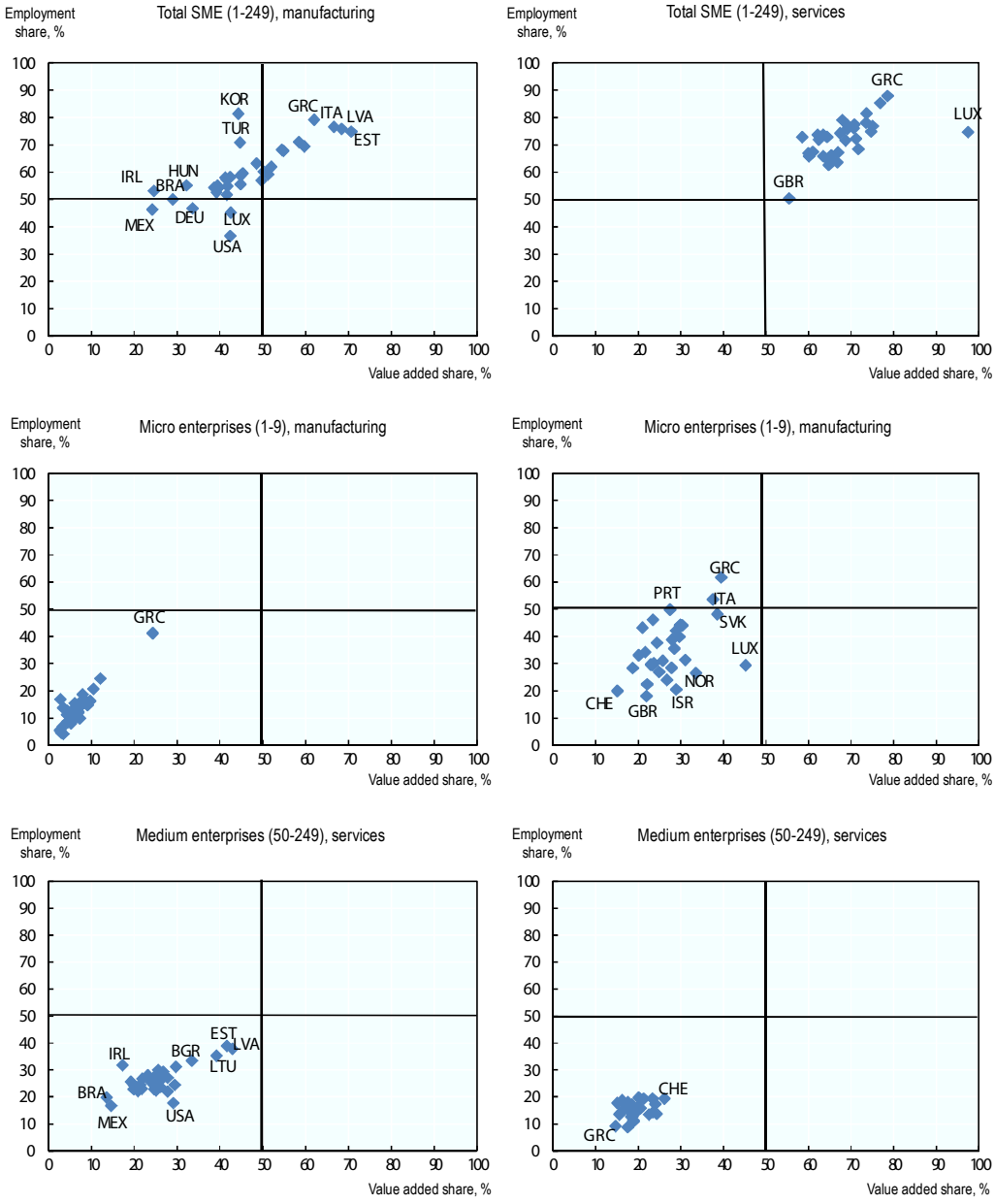
Note: For CAN, CHE, USA and RUS data do not include non-employers. For KOR and MEX data refer to establishments. GBR data exclude an estimate of 2.6 million small unregistered businesses that are below the threshold for the VAT or PAYE regimes and incorporated businesses with one employee, as the latter are likely to be owners/workers in the business.

Source: OECD (2016a), *Entrepreneurship at a Glance 2016,* http://dx.doi.org/10.1787/888933403646

However, looking only at the whole economy picture can mask underlying structural issues concerning SME performance in services as opposed to manufacturing. In the latter for example, although relatively few in numbers, large firms provide a substantial contribution to employment and value added, in large part reflecting increasing returns to scale from more capital-intensive production, as well as entry cost barriers related to investment. This is particularly the case in countries with large manufacturing groups, for instance Germany. However, this is not universally true. In fact, the share of SMEs in employment and value added in manufacturing tends to be higher in small economies, such as Latvia and Estonia, as well as in countries, where small and medium firms have traditionally dominated the business landscape, and have been able to develop comparative advantages through specialisation or through more mature SME networks, such as Italy or Greece (Figure 1.2).

Figure 1.2. **SME contribution to employment and value added**

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

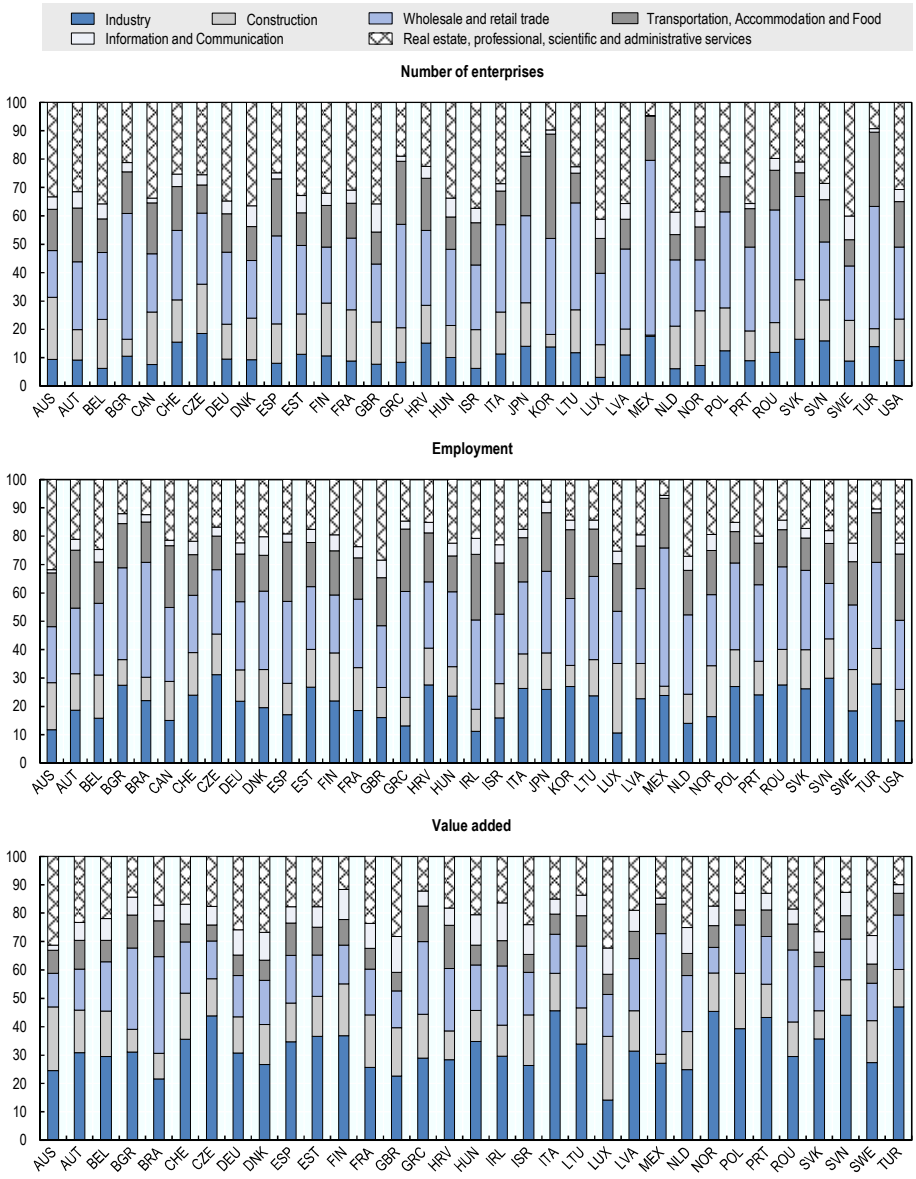


Source: OECD (2016c), Structural and Demographic Business Statistics (database), http://dx.doi.org/10.1787/sdbs-data-en.

In services, however, SMEs dominate in nearly all countries, where they typically account for around 65% or more of total employment and total value added. The contribution of SMEs to employment and value added is particularly important in four services sectors, namely wholesale and retail trade, accommodation and food, real estate activities, and professional, scientific and technical activities (Figure 1.3).

Figure 1.3. **Number of SMEs, employment and value added by sector**

Percentage of each sector in total business economy, 2013 or latest available year



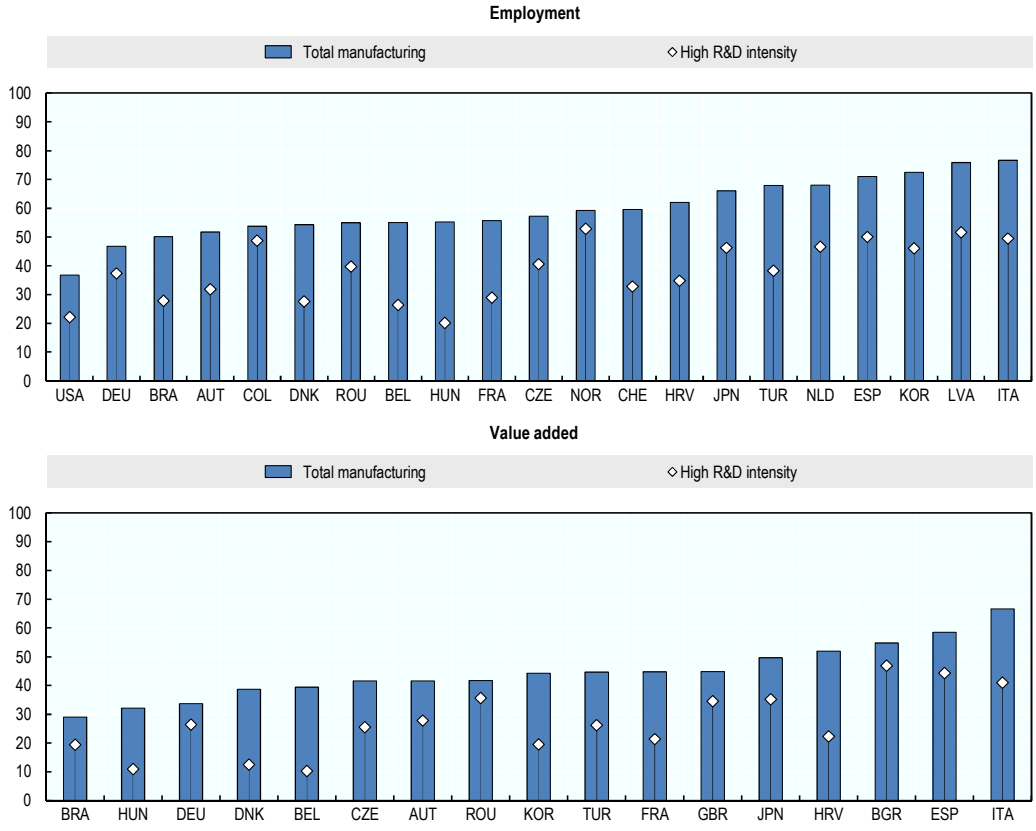
Note: Data for CAN, CHE and USA do not include non-employers. GBR data exclude an estimate of 2.6 million small unregistered businesses that are below the threshold for the VAT or PAYE regimes and incorporated businesses with one employee, as the latter are likely to be owners/workers in the business.

Source: OECD (2016a), *Entrepreneurship at a Glance 2016*, http://dx.doi.org/10.1787/888933403662

There are, however, some service sectors where SMEs fare less well, potentially reflecting entry barriers, both to tangible capital but also intangible, knowledge-based capital. In ICT services for example, although SMEs account for 60% or more of total employment, they contribute less than half of the total value added. In fact, ICT services comprise activities such as publishing, TV and cinema, and telecommunications that require significant fixed costs in order to achieve economies of scale. Similarly, in most countries the contribution of SMEs to value-added in higher R&D intensity sectors is typically lower than for the services sector as a whole, with the notable exceptions of Belgium and the United Kingdom (Figure 1.5). The same holds true, and to a greater extent, for high R&D manufacturing sectors (Figure 1.4).

Figure 1.4. **SME employment and value added in high R&D manufacturing sectors**

Percentage of number of persons employed and value added, 2013

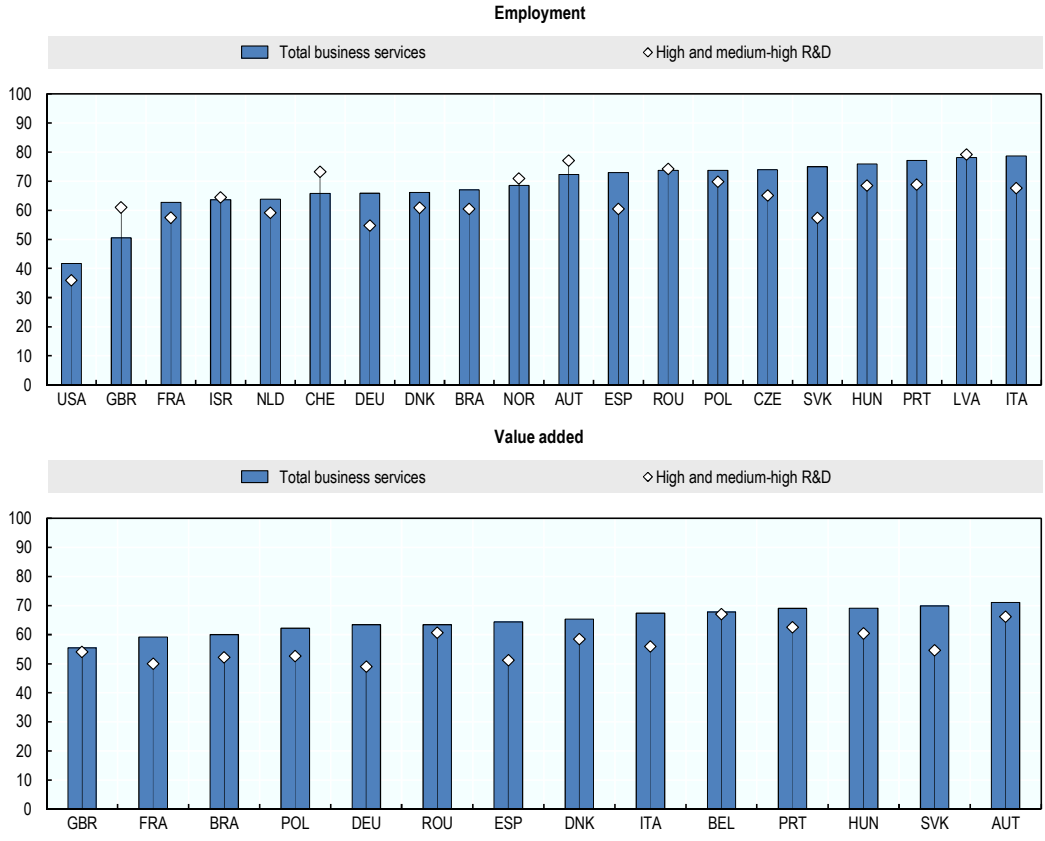


Note: R&D intensity groups are based on Galindo-Rueda and Verger (2015). "The R&D intensity of economic activities in OECD countries: Proposal for a new classification for industry and services". Total manufacturing refers to 10-33 of ISIC Rev.4. *High R&D intensity* refers to the following manufacturing sectors: 21 (Basic pharmaceutical products and pharmaceutical preparations), 26 (Computer, electronic and optical products). CHE and USA data refer to employees only.

Source: OECD (2016c), Structural and Demographic Business Statistics (database), http://dx.doi.org/10.1787/sdbs-data-en.

Figure 1.5. **SME employment and value added in high and medium-high R&D services sectors**

Percentage of number of persons employed and value added over total for the business economy, 2013



Note: R&D intensity groups are based on Galindo-Rueda and Verger (2015). Total services refers to 45-82 excluding 64-66 (Financial and insurance activities) of ISIC Rev.4. *High and medium-high R&D intensity* include the following services sectors: 58 (Publishing activities) and 62 (Computer programming, consultancy and related activities), 63 (Information service activities), 72 (Scientific research and development). For employment: R&D intensity: BRA, CZE, DEU, HUN, ITA, KOR, POL, PRT exclude sector 72, LTU, NLD exclude 63; Data for CHE, CAN, KOR and USA do not include non-employers.

Source: OECD (2016c), Structural and Demographic Business Statistics (database), http://dx.doi.org/10.1787/sdbs-data-en.

Box 1.1. **Beyond SME average values**

The SME shares of employment and value added mask significant cross-country differences with regard to the specific contributions of micro (1 to 9 employed persons), small (10 to 49) or medium enterprises (50 to 249) to the average value.

For example, in *professional and scientific services*, Italian micro firms account for almost 66% of the total value added, while in Denmark, Luxembourg, and Norway micro firms are responsible for 30% or less; in the *wholesale and retail trade sector*, the share of micro firms in value added is around 20% in Denmark, Germany and Sweden, but 40% in Luxembourg, Italy and the Slovak Republic; in *accommodation and food services*, micro firms generate around 50% of the value added in France and 24% in Germany.

In *ICT services*, the differences across countries are less pronounced, with micro firms accounting for less than 10% in all countries, and large firms contributing for more than 50% in most.

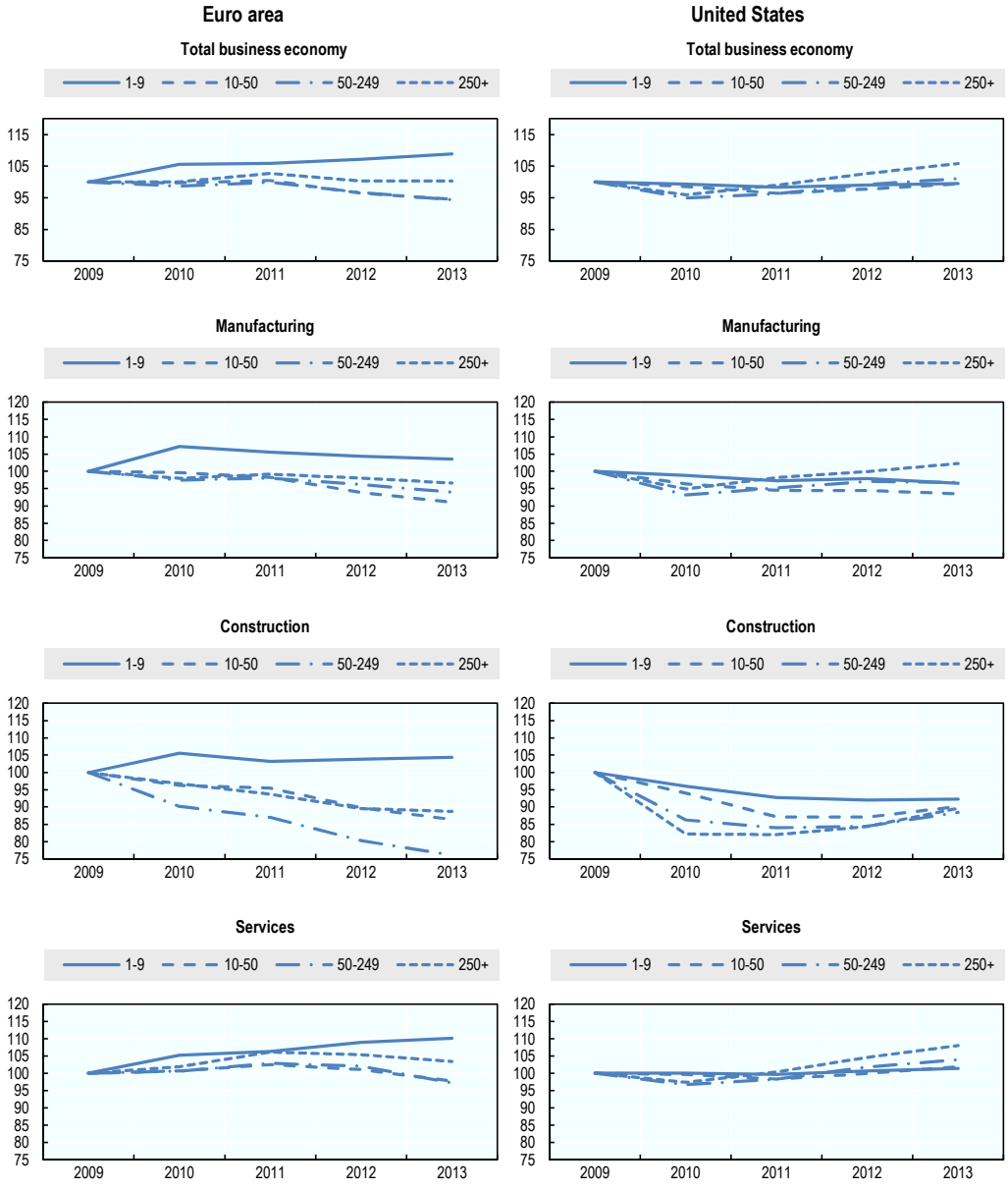
Trends since the global crisis

Enterprise population and employment

Since the global crisis, there have been some important and divergent dynamics in the performance of SMEs relative to large firms across OECD economies. For instance, between 2008 and 2013, the overall number of SMEs in the total economy declined slightly 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; in addition, the manufacturing sector saw a decrease in the number of large enterprises contrary to the services sector, where it increased (Figure 1.6).

Figure 1.6. **Number of enterprises by size, euro area and the United States**

Index 2009=100



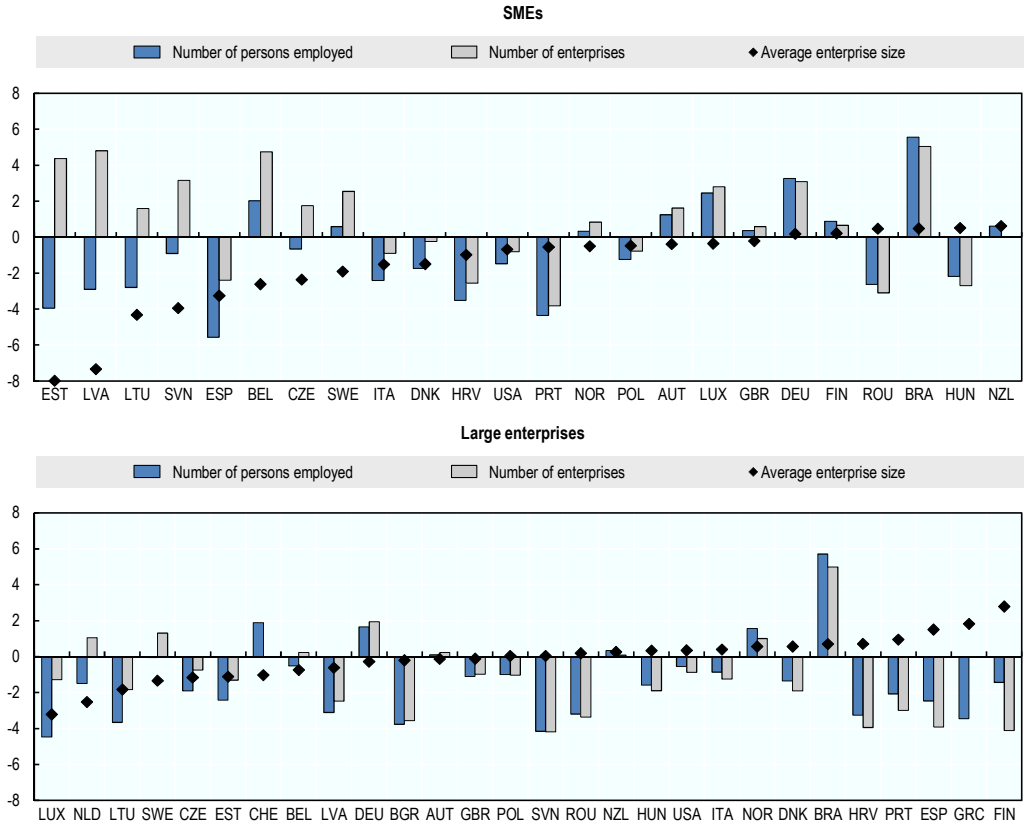
Note: Data for the United States do not include non-employers.

Source: OECD (2016c), Structural and Demographic Business Statistics (database), http://dx.doi.org/10.1787/sdbs-data-en.

In addition, over the same period, the average size of SMEs decreased in many OECD countries, especially in the Baltic States, where an increase in the number of SMEs was coupled with a decrease in overall SME employment (3% to 4% on average). Indeed, it was only in Germany, New Zealand and Brazil that the average size of SMEs increased, and employment and the number of SMEs rose, too (Figure 1.7).

Figure 1.7. **Change in the total number of enterprises, their employment and average size, total business economy**

Average annual percentage change between 2008 and 2013



Note: United States data do not include non-employers. CHE, GRC and TUR: 2009 refer to 2008.

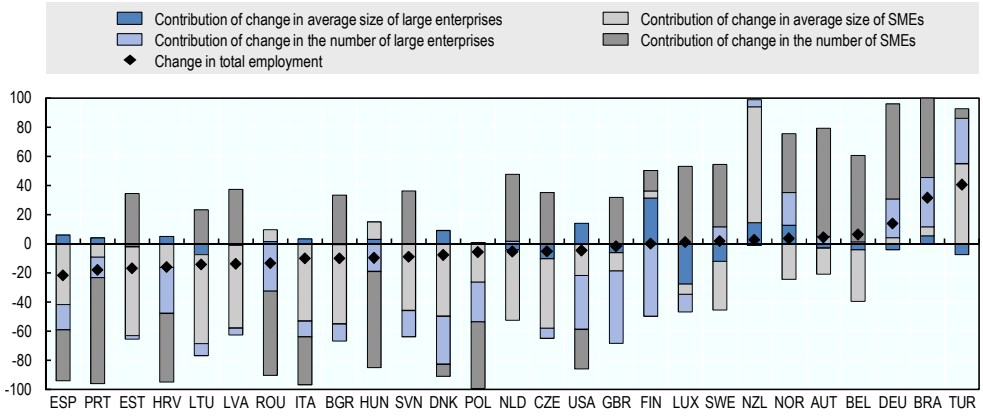
Source: OECD (2016c), Structural and Demographic Business Statistics (database), http://dx.doi.org/10.1787/sdbs-data-en.

Total employment was affected significantly by the financial crisis and subsequent economic downturn in many OECD countries. The Baltic States, Portugal and Spain are among the countries, where the decrease in employment in the business sector was highest, e.g. the total number of persons employed in 2013 was between 15% and 20% lower than in 2008.

Changes in total employment reflect the interplay of changes in the number of enterprises and changes in average firm size. In Portugal, for instance, 70% of the fall was explained by the decline in the number of SMEs, while in Spain both the reduced average size of SMEs and their lower number accounted for 75% of total employment contraction. In many countries, especially Belgium, the Czech Republic, Estonia, Latvia, the Netherlands and the United Kingdom, increases in the number of SMEs were the sole positive contribution to changes in total employment, thus attenuating the downfall in the total number of persons employed. On the contrary, in Germany, the total number of persons employed was 14% higher in 2013 than in the midst of the crisis, while in Brazil and Turkey, it was 30% and 40% higher, respectively (Figure 1.8).

Figure 1.8. **Contributions to changes in total employment, total business economy**

Percentage change between 2008 and 2013

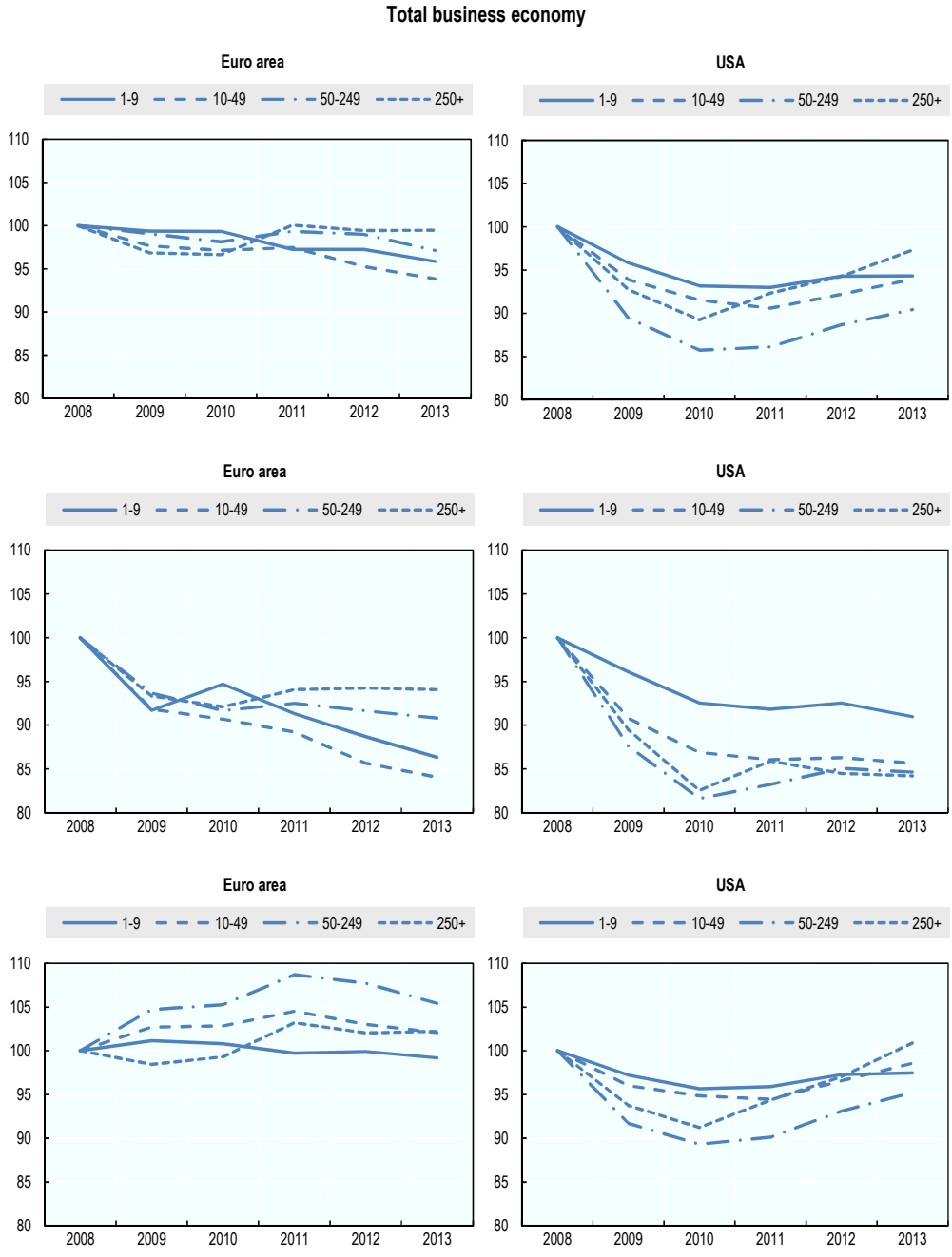


Notes: Contribution of change in the number of SMEs is calculated as a product of the difference in the number of SMEs between 2013 and 2008 and the average SMEs size in 2008. Contribution of change in average size of SMEs is calculated as the product of the difference of the average size of SMEs between 2013 and 2008 and the number of SMEs in 2013. The same indicators are calculated for large enterprises. Finally, a share of each contribution is calculated by dividing each contribution by the sum of the absolute values of all contributions for all sizes (SMEs and large) and multiplying by 100. Data for the United States refer to employees only. GBR data exclude an estimate of 2.6 million small unregistered businesses; these are both self-employed without VAT or PAYE administrative basis and incorporated businesses with one employee, as the latter are likely to be owners/workers in the business. 2013 data for FIN and PRT present a break in series.

Source: OECD (2016a), *Entrepreneurship at a Glance 2016,* http://dx.doi.org/10.1787/888933403744

Figure 1.9. **Employment by enterprise size, euro area and United States**

Persons employed, index 2008=100



Note: Euro area excludes the Slovak Republic. United States: data exclude non-employer enterprises.

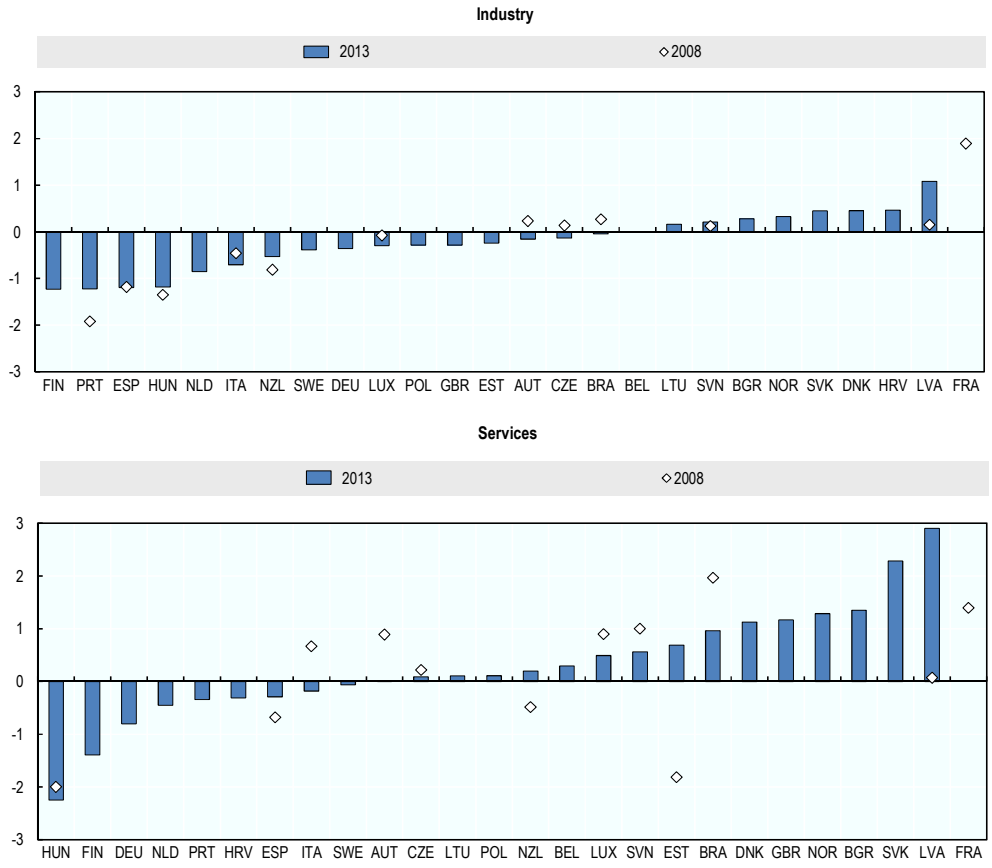
Source: OECD (2016a), *Entrepreneurship at a Glance 2016,* http://dx.doi.org/10.1787/888933403696

Further insights on the evolution of employment in the business sector are provided by the analysis of business dynamics, which points specifically to the impact of enterprise births and deaths on employment, as distinct from the overall effects of all active enterprises. In 2013, for the total economy, the difference between the job creation and destruction by employer enterprises (i.e. with at least one employee) was negative in larger European economies. Net job destruction was notable in the industry sector (covering manufacturing, mining and utilities), and to a lesser extent in the services sector (Figure 1.10). This reflected, in particular, a decline in the average size of newly created firms as compared to 2008, especially in the industry sector (Figure 1.11).

In general, the rates of employment creation and destruction by employer enterprise births and deaths vary widely across countries, each of them, however, rarely exceeding more than 6% of total employment. For instance, the rate of employment creation by employer enterprise births was around 1% in Belgium and Germany in 2013, and around 4% in the Slovak Republic and the United Kingdom. Typically, the rates of employment creation and destruction are closely correlated, although there are exceptions.

Figure 1.10. **Net employment creation due to employer enterprise births and deaths**

Percentage of total sector employment in employer enterprises

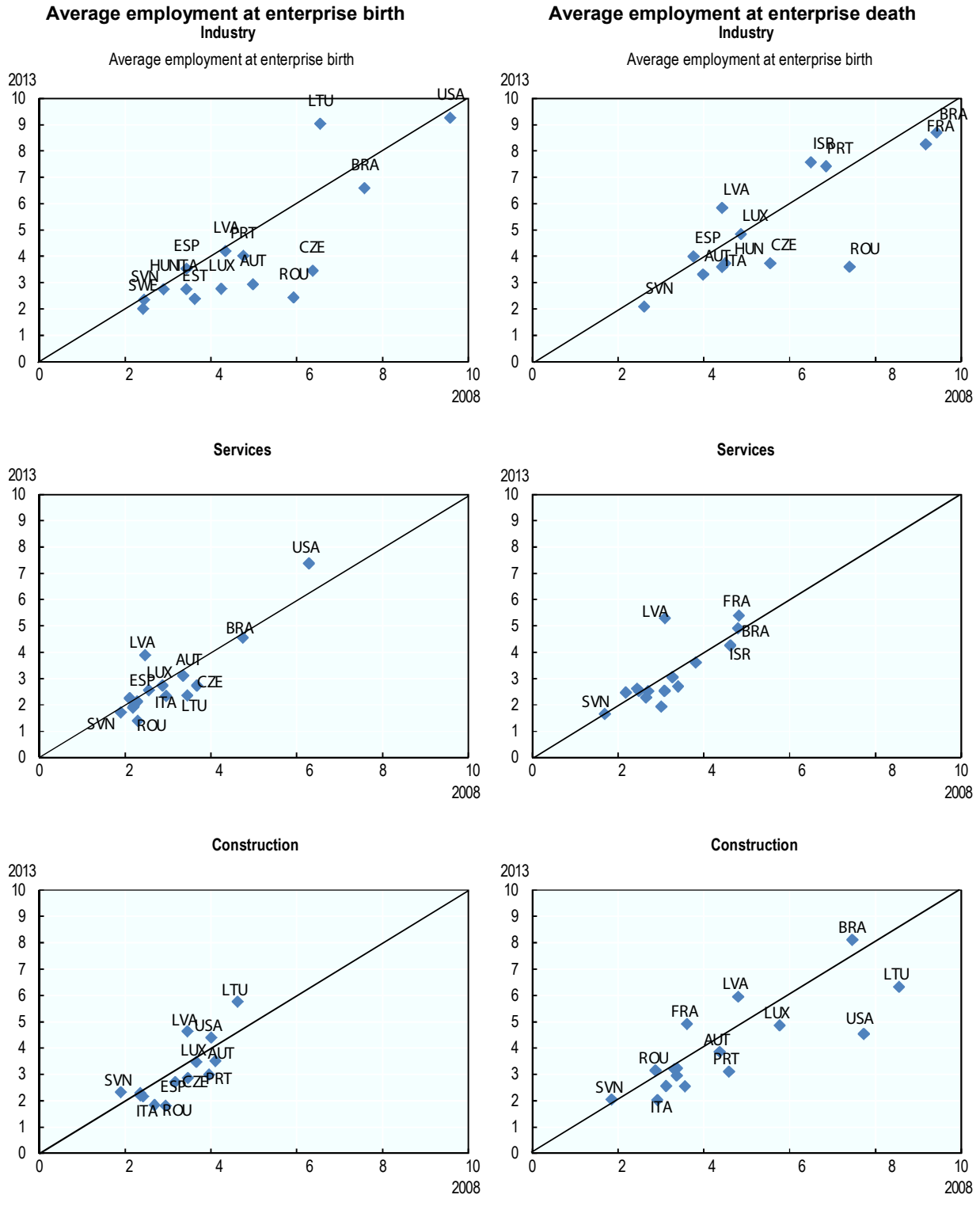


Note: Data reflect the difference between employment in employer enterprise births and deaths in t. 2013 data for DNK, EST, FIN, NLD, PRT present a break in series. Industry: data for BRA, POL, and ISR refer to 2012; Services: data for BRA, LTU and POL refer to 2012.

Source: OECD (2016a), *Entrepreneurship at a Glance 2016,* http://dx.doi.org/10.1787/888933404179

Figure 1.11. **Average employment in employer enterprises at birth and death, by main sector**

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



Note: 2013 data for ISR refer to 2012. 2013 data for DNK, EST, FIN, NLD and PRT present a break in series.

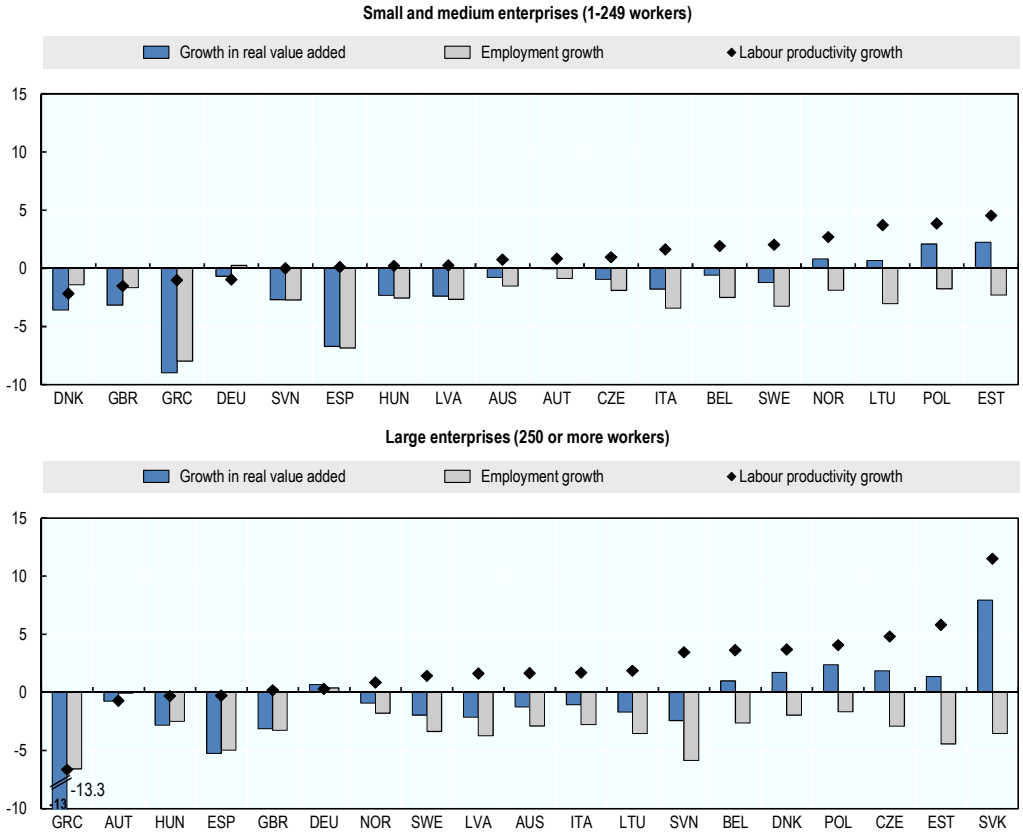
Source: OECD (2016a), *Entrepreneurship at a Glance 2016*, http://dx.doi.org/10.1787/888933404181

Value added and productivity

Value added in both, SMEs and large enterprises, was significantly affected by the crisis, and the pace of recovery has varied significantly across countries (Figure 1.12). In most, but not all countries, the trend in value added in manufacturing SMEs was similar to those of large enterprises. In particular, in the post-crisis period, SME value added growth has been negative in Denmark and Ireland, contrasting with the stronger growth of value added in large firms; in the case of Ireland, this was, at least in part, driven by strong growth in the large foreign affiliates or Irish registered MNEs, generating significant value-added through, in particular, high intellectual property content activities or high brand activities. In Spain and Greece, SME value added dropped significantly over the period.

Figure 1.12. **Growth in real value added and employment by enterprise size, manufacturing**

Average annual rate, percentage, 2008-13



Source: OECD (2016a), *Entrepreneurship at a Glance 2016,* http://dx.doi.org/10.1787/888933403957

Relative to large companies, differences in the evolution of SME employment and value added across countries reflect a number of factors, both supply and demand driven, including, amongst others, the scale of integration into global value chains, either directly or indirectly, as well as the distribution of trading partners.

Similar diverging trends across countries were observed for labour productivity growth; overall, however, in the post-crisis years, labour productivity growth in SMEs has been weaker than in large enterprises (Figure 1.13).

Generally, in the post-crisis years, labour productivity growth in both, SMEs and large enterprises, has been weaker than prior to the crisis. Between 2000 and 2007, labour productivity grew at a comparable rate in both, SMEs and large firms in all countries. In the post-crisis period, however, in some countries, in particular the Czech Republic, Germany, Latvia and Slovenia, labour productivity growth in SMEs has been weaker than in large firms. By contrast, in Austria and Norway, manufacturing SMEs outperformed larger firms in terms of labour productivity growth. While in most countries, SME labour productivity in 2013 reached or exceeded 2007 levels, in Latvia and Germany it has not yet fully recovered and underperformed labour productivity evolution in large firms.

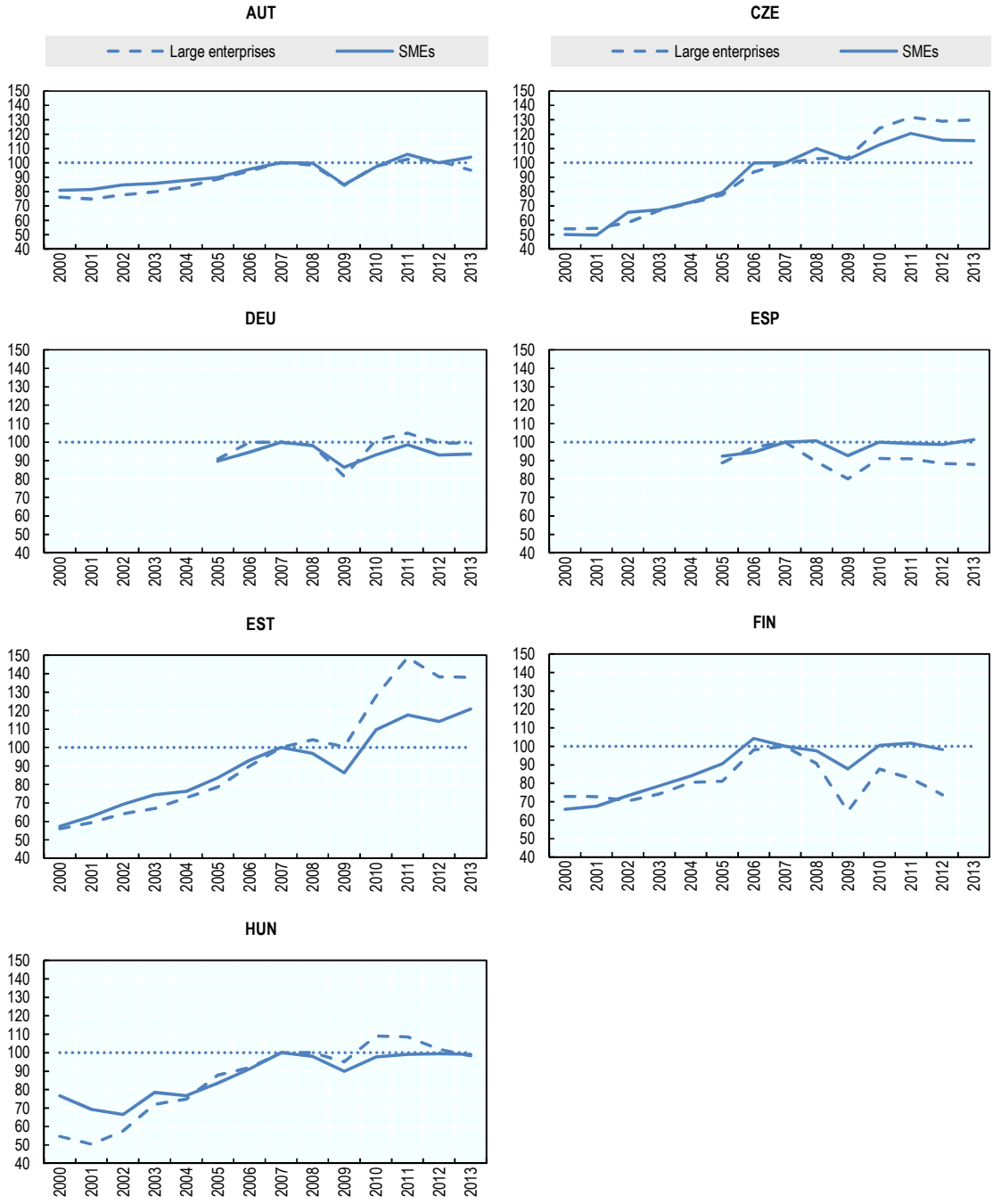
Firm size matters for productivity. Larger firms are on average more productive than smaller ones, particularly in the manufacturing sector, partly reflecting gains from increasing returns to scale through more capital-intensive production (Figure 1.14). But smaller firms in some manufacturing sectors and countries often outperform larger enterprises, pointing to competitive advantages in niche, high brand or high intellectual property content activities.

Differences in productivity across size classes are, however, relatively smaller in the market services sector in countries, where SMEs dominate the overall activity. In fact, in many countries, medium-sized services firms outperformed larger firms, partly reflecting the intensive use of affordable information and communication technologies (ICT), particularly if the firms are part of an MNE group. In addition, higher productivity levels in smaller-sized enterprises may also point to firm growth dynamics, by which more productive firms expand and displace lower productivity firms.

Over the 2000-13 period, the gap in labour productivity of micro enterprises with respect to large enterprises followed different trends across countries (Figure 1.15). The gaps in Hungary, Lithuania, Poland and Portugal have been much higher than in other countries, with the productivity of micro enterprises below 30% of that of large firms. While in Austria and Norway, the productivity gap has increased steadily, partly reflecting the low performance of micro enterprises, in Estonia and, more recently, in the Czech Republic and Slovenia, the increasing gap mainly reflects stronger labour productivity growth in large enterprises. In Finland, on the other hand, the decreasing gap may result from the underperformance of large enterprises.

Figure 1.13. **Labour productivity growth, manufacturing**

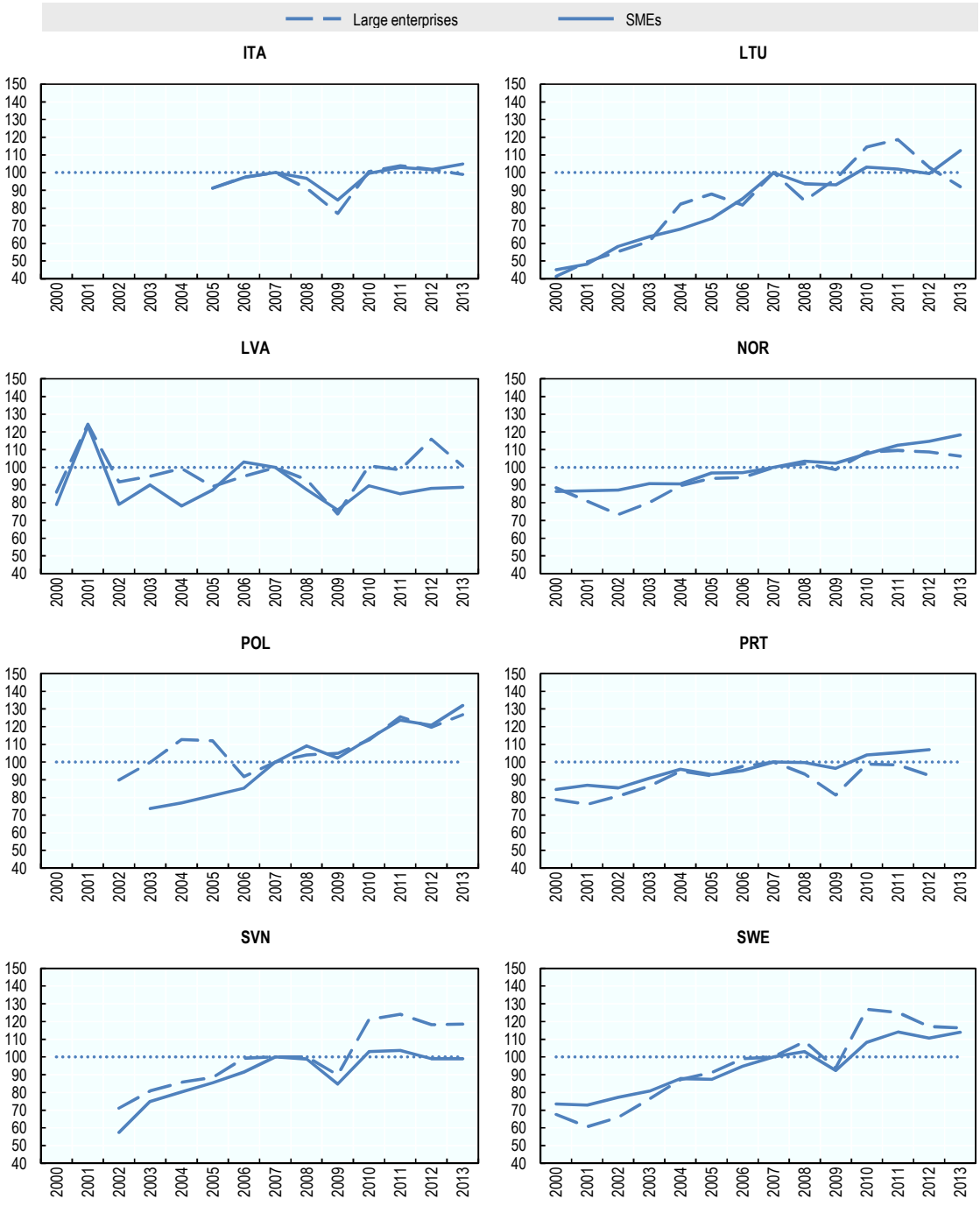
Real value added per person employed, index 2007=100



Source: OECD (2016c), Structural and Demographic Business Statistics (database), http://dx.doi.org/10.1787/sdbs-data-en; OECD (2016b), OECD National Accounts statistics (database), http://dx.doi.org/10.1787/na-data-en.

Figure 1.13. **Labour productivity growth, manufacturing (cont.)**

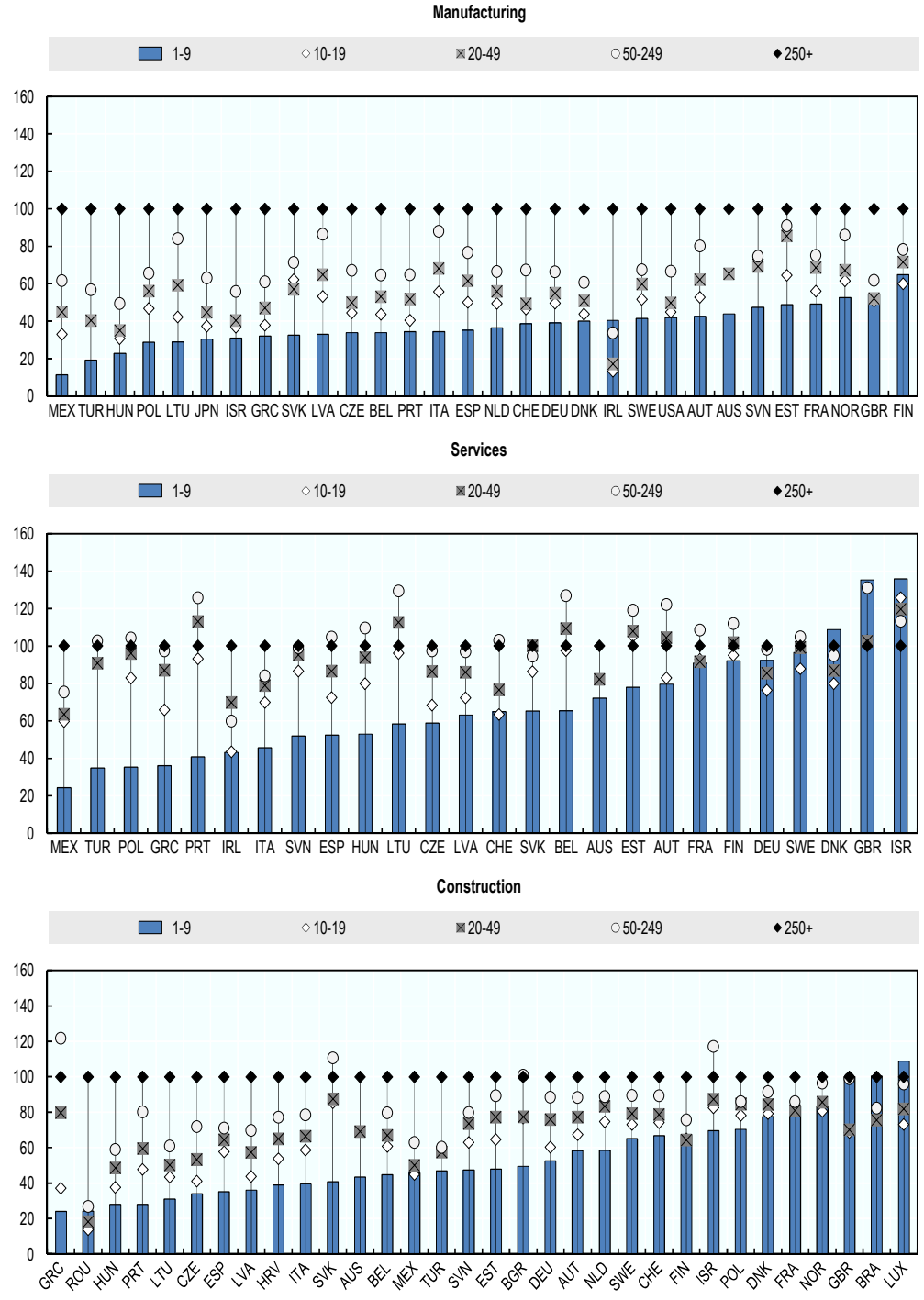
Real value added per person employed, index 2007=100



Source: OECD (2016c), Structural and Demographic Business Statistics (database), http://dx.doi.org/10.1787/sdbs-data-en; OECD (2016b), OECD National Accounts statistics (database), http://dx.doi.org/10.1787/na-data-en.

Figure 1.14. **Labour productivity by enterprise size and by main sector**

Value added per person employed, index 250+=100; 2012 or latest available year

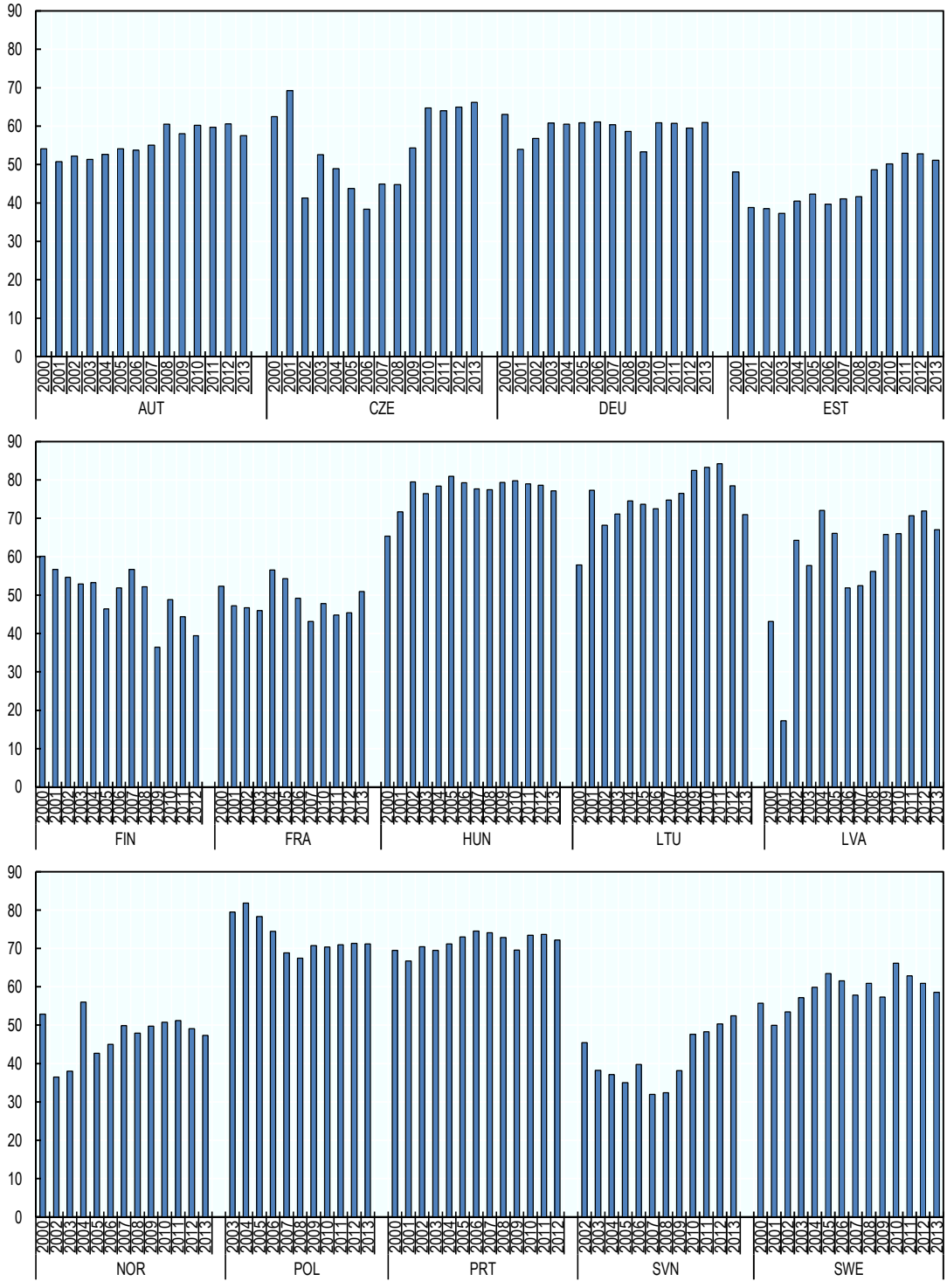


MEX: data refer to 2014, ISR: 2012

Source: OECD (2016c), Structural and Demographic Business Statistics (database), http://dx.doi.org/10.1787/sdbs-data-en; OECD (2016b), OECD National Accounts statistics (database), http://dx.doi.org/10.1787/na-data-en.

Figure 1.15. **Labour productivity gap of micro firms compared to large enterprises, manufacturing**

Difference between large and micro enterprises as a percentage of labour productivity of large enterprises



Source: OECD (2016c), Structural and Demographic Business Statistics (database), http://dx.doi.org/10.1787/sdbs-data-en; OECD (2016b), OECD National Accounts statistics (database), http://dx.doi.org/10.1787/na-data-en.

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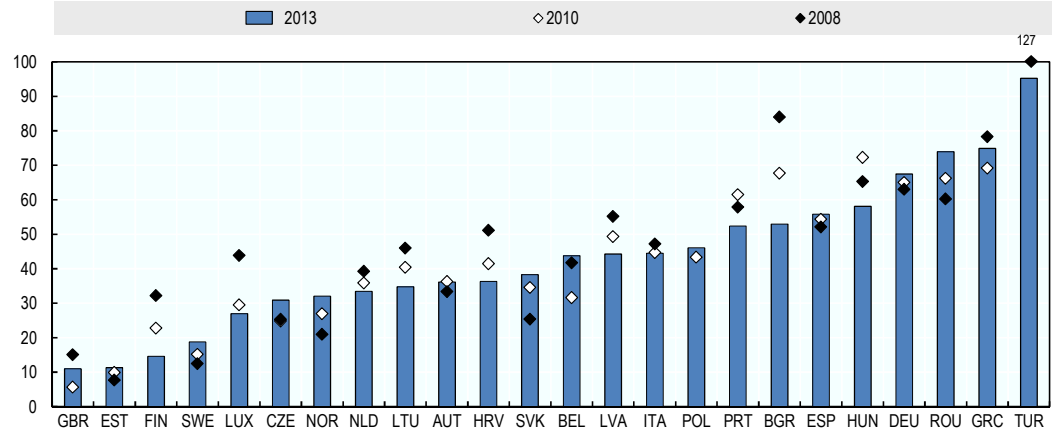
Labour productivity differences across firms are expected to align with wage differentials. Indeed, large enterprises tend to pay higher wages than small and medium-sized firms, as larger firms manage to employ more skilled workers. However there are significant differences in wage premiums across OECD countries. This may partly reflect comparability issues, and further work will be necessary to investigate the potential impact these may have on intra-country (i.e. comparisons of data on SMEs, particularly micro firms versus larger firms), and cross-country comparability; certainly this may help to explain the United Kingdom's findings in Figure 1.17. Assuming, however, that the data do conform to international standards and are internally coherent, in 2013, average hourly wage premiums paid by large manufacturing firms varied significantly across countries, ranging from around 10% in Estonia and the United Kingdom, to more than 90% in Turkey. Since 2008, Luxembourg, Finland, Bulgaria and Croatia saw the gap between large enterprises and SMEs close considerably, whereas in Norway, the Slovak Republic and Romania this gap has been increasing (Figure 1.16).

Figure 1.16. **Large enterprise wage premium, manufacturing**

Gap between large firms and SMEs in average wage per hour worked, percentage, 2013



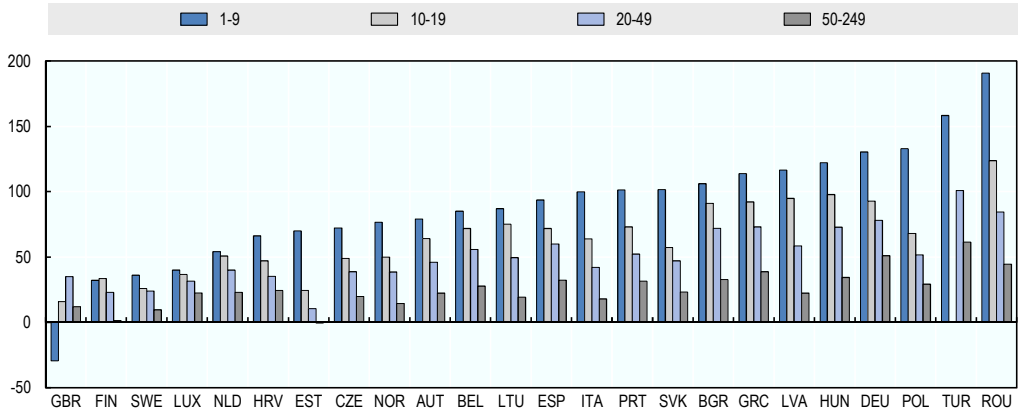
Note: GBR data exclude an estimate of 2.6 million small unregistered businesses that are below the threshold for the VAT or PAYE regimes and incorporated businesses with one employee, as the latter are likely to be owners/workers in the business.

Source: OECD (2016c), Structural and Demographic Business Statistics (database), http://dx.doi.org/10.1787/sdbs-data-en.

In most countries, wage premiums tend to increase with firm size, as the average wage per hour worked paid in medium-sized enterprises is higher than in small and micro enterprises (Figure 1.17). Moreover, the gaps vary across different manufacturing sectors and tend to be relatively larger in low-R&D intensity sectors, such as manufacturing of food products and manufacturing of paper and paper products, than in high- or medium-high R&D intensity sectors, such as manufacturing of computer, electronic and optical products and manufacture of electrical equipment, partly reflecting higher workers' skills and advanced technology adoption in high- and medium-high R&D intensity sectors, irrespective of firm size (Figure 1.18).

Figure 1.17. **Large enterprise wage premium by firm size, manufacturing**

Gap between large firms and SMEs in average wage per hour worked, percentage, 2013

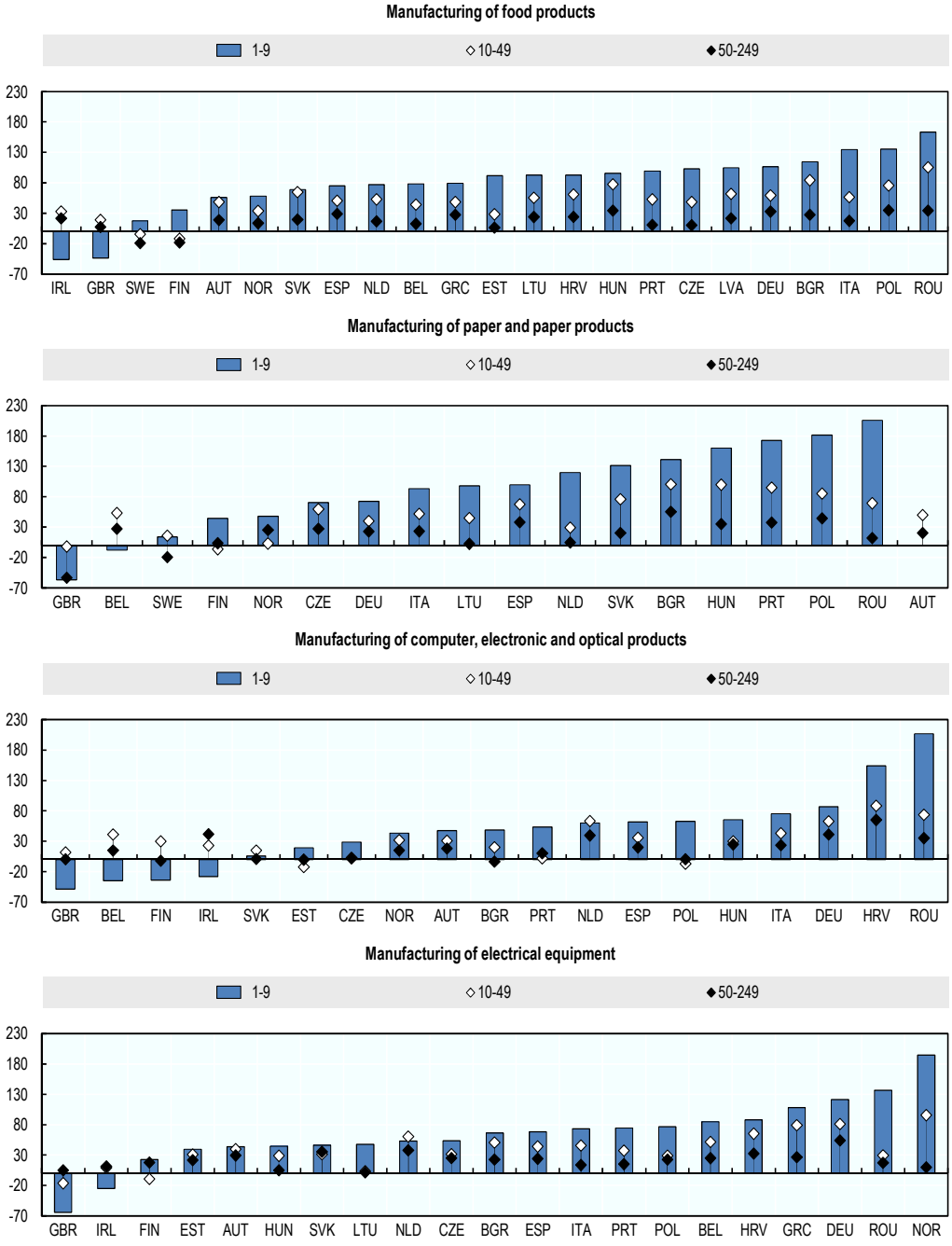


Note: GBR data exclude an estimate of 2.6 million small unregistered businesses that are below the threshold for the VAT or PAYE regimes and incorporated businesses with one employee, as the latter are likely to be owners/workers in the business. TUR: size class 1-9 refers to 1-19.

Source: OECD (2016c), Structural and Demographic Business Statistics (database), http://dx.doi.org/10.1787/sdbs-data-en.

Figure 1.18. **Large enterprise wage premium, selected manufacturing sectors**

Gap between large firms and SMEs in average wage per hour worked, percentage, 2013



Source: OECD (2016c), Structural and Demographic Business Statistics (database), http://dx.doi.org/10.1787/sdbs-data-en.

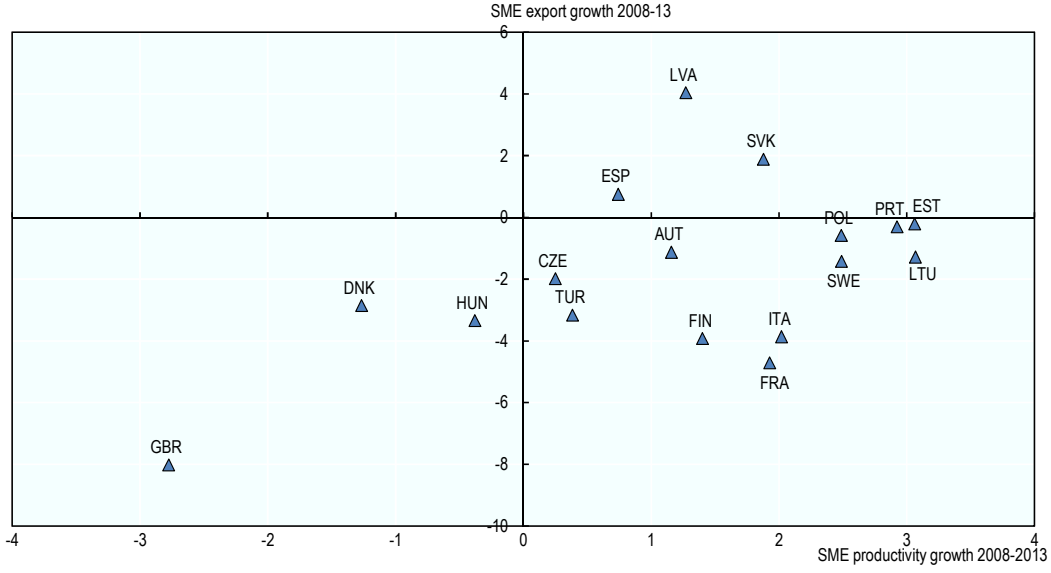
SMEs and globalisation

Empirical studies conducted in different countries generally find that exporters are more productive than non-exporters. The literature points to two mechanisms to explain the positive correlation between the export status of a firm and its productivity: "self-selection" and "learning by exporting". The self-selection hypothesis considers that only the more productive firms engage in export activities, as they are more likely to afford the costs associated to internationalisation. This suggests the existence of *ex ante* productivity differentials between exporters and non-exporters, as only the more productive firms find it profitable to enter international markets (see for instance Melitz, 2003; Bernard et al., 2007). The 'learning-by-exporting' mechanism postulates instead that once firms engage in trade, they benefit from knowledge exchange and technical spillovers, which leads to improved efficiency levels. The state-of-the art evidence in this domain tends to confirm the self-selection process (in particular for small firms; Máñez Castillejo et al., 2010), but also documents post-entry productivity changes, i.e. firms experience productivity increases after entering the export market.

As predicted, a positive correlation is observed between labour productivity growth in SMEs and growth in SME exports (Figure 1.19).

Figure 1.19. **SME labour productivity and SME exports, industry**

Cumulative average annual percentage change, 2008-13

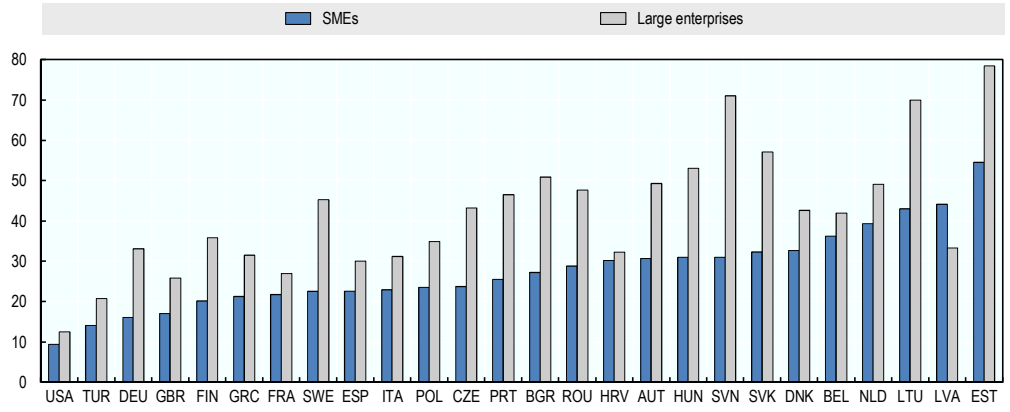


Source: OECD (2016c), Structural and Demographic Business Statistics (database), http://dx.doi.org/10.1787/sdbs-data-en; OECD (2016d), Trade by enterprise characteristics (database), http://dx.doi.org/10.1787/glob-enterp-data-en.

Comprehensive cross-country data on exporters and non-exporters are currently being developed, which will allow this analysis to be deepened in the future. Nevertheless, it is already a known fact that few SMEs export, and for those that are active in trade, exports typically represent a lower share of turnover than in larger firms; in smaller economies, however, and not surprisingly given the evidence on SME share of value-added in the overall economy, the ratio of SME exports to SMEs' total turnover tends to be relatively higher (Figure 1.20).

Figure 1.20. **Export value to turnover ratio by enterprise size, industry**

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



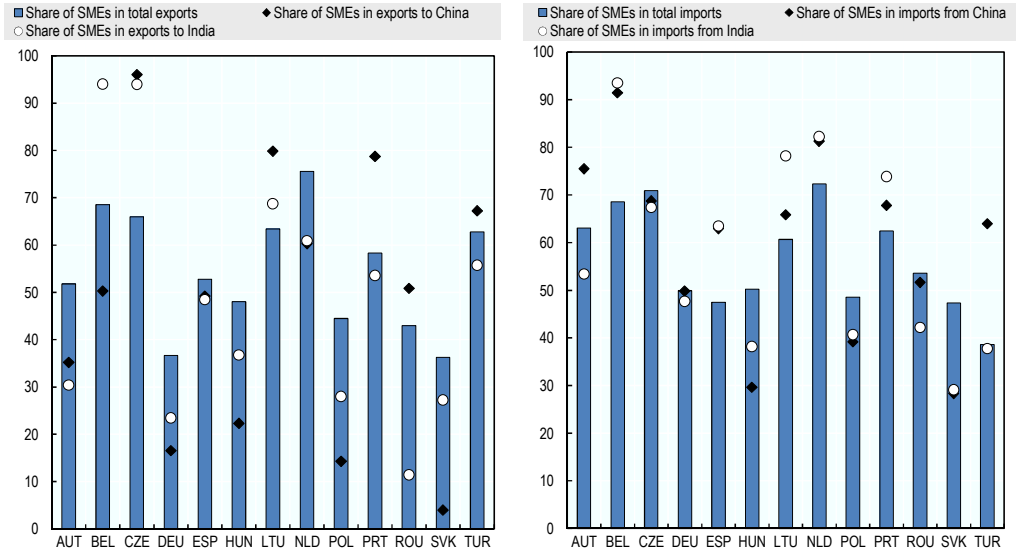
Source: OECD (2016a), *Entrepreneurship at a Glance 2016,* http://dx.doi.org/10.1787/888933404364

In all countries, micro and small firms are responsible for a limited share of the value of total exports, usually between 10% and 15%, even if they represent the majority of exporting enterprises. The distribution of imports by enterprise size mostly reflects export patterns, with large firms accounting for shares of total imports between 50% and 80%.

In addition, SMEs typically export disproportionally more to neighbouring countries than large firms. Although in some countries, there is evidence of SME export penetration into emerging economies (Figure 1.21), which may in part reflect niche activities or indeed foreign investment relationships (and where further work will need to be undertaken). However, in general, in most countries SMEs are less likely to export the further away the market, reflecting in part the higher fixed entry costs small firms face to break through.

Figure 1.21. **SME share of trade with China and India, total economy**

Percentage, 2013 or latest available year



Source: OECD (2016a), *Entrepreneurship at a Glance 2016,* http://dx.doi.org/10.1787/888933404443

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Máñez-Castillejo, J.A., M.E. Rochina-Barrachina and J.A. Sanchis-Llopis (2010), *Self-selection into exports: productivity and/or innovation?*, Universitat de València and ERI-CES.

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OECD (2016c), *Structural and Demographic Business Statistics* (database), http://dx.doi.org/10.1787/sdbs-data-en.

OECD (2016d), *Trade by enterprise characteristics* (database), http://dx.doi.org/10.1787/glob-enterp-data-en.

Chapter 2

Institutional and regulatory framework conditions for SMEs

This chapter discusses enabling conditions and barriers for SMEs stemming from the institutional and regulatory environment. It documents and benchmarks across OECD countries business framework conditions in the areas of regulation, court and legal framework, taxation, competition and public governance. The chapter also provides a description of recent policy trends to improve the institutional and regulatory framework for SMEs.

Note: The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

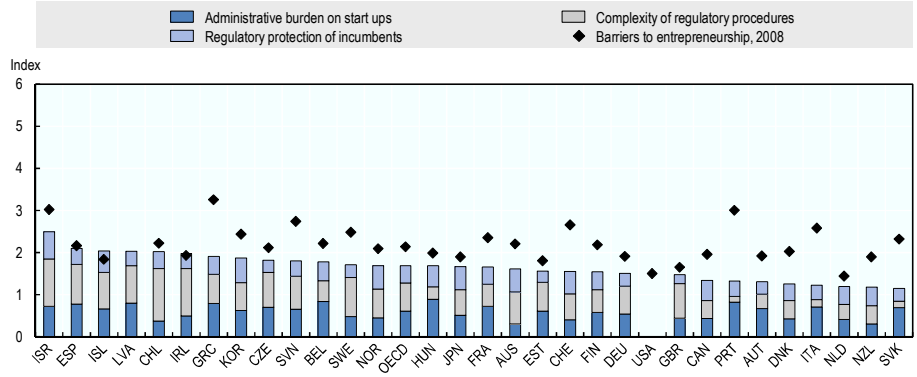
Regulation

An effective and transparent regulatory environment is key for entrepreneurship and SME development at all stages of the business cycle, including entry, investment and expansion, transfer and exit. Conditions for regulatory compliance are especially important for SMEs. Since SMEs are typically less efficient than large firms in screening the regulatory environment and dealing with the relevant norms, unnecessary regulatory burdens affect them disproportionately (OECD, 2014a).

Across OECD countries, regulatory barriers to entrepreneurship have been declining over time (Figure 2.1). However, when considering the sub-components for this indicator, such as complexity of regulatory procedures, administrative burdens on start-ups, and regulatory protection of incumbents, significant differences emerge. In most countries, the complexity of regulatory procedures remains the main obstacle to entrepreneurial activity. This is largely related to tangled license and permit systems, whereas important progress has been made in the communication and simplification of rules and procedures (Figure 2.2). Over 2008-13, some progress was also observed in the reduction of administrative burdens on start-ups, although entry barriers remain particularly sizeable in the services sector (Figure 2.3). With regard to regulatory protection of incumbents, over the last two decades, the evidence points to a cross-country convergence towards lowered legal barriers to entry, antitrust exemptions and barriers in network sectors, although most of the progress occurred over 1998-2008 and conditions remained relatively stable thereafter (see Figure 2.13 in the section on competition below).

Figure 2.1. **Barriers to entrepreneurship, 2008 and 2013**

Scores from 0 (least restrictive) to 6 (most restrictive)

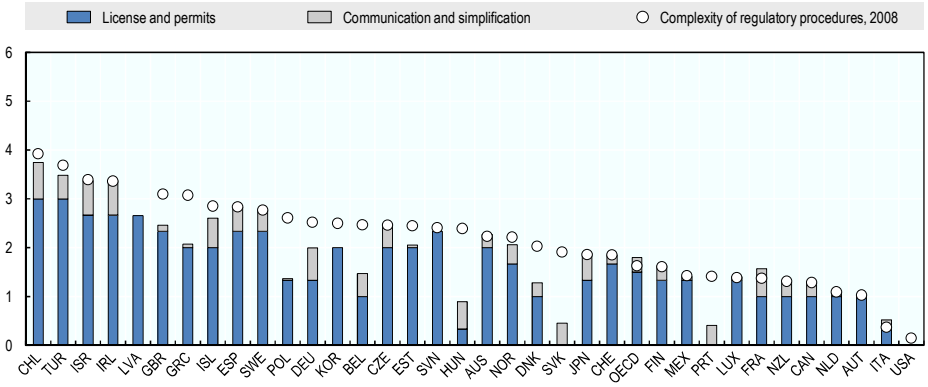


Note: The year 2008 refers to the situation in 2007 for all countries with the exception of Chile, Estonia, Israel and Slovenia (2008). For Latvia, the 2008 observation is not available. For the United States, the 2013 observation is not available.

Source: OECD (2014b), OECD Product Market Regulation Statistics (database), http://dx.doi.org/10.1787/pmr-data-en.

Figure 2.2. **Complexity of regulatory procedures, 2008 and 2013**

Scores from 0 (least restrictive) to 6 (most restrictive)

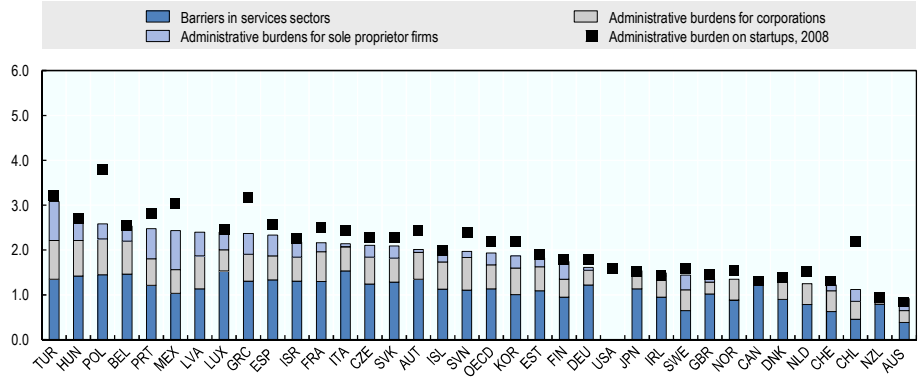


Note: This is a low-level indicator of the Barriers to entrepreneurship index. Given normalisation of underlying data, it has a scale of zero to six. The year 2008 refers to the situation in 2007 for all countries with the exception of Chile, Estonia, Israel and Slovenia (2008). For Latvia, the 2008 observation is not available. For the United States, the 2013 observation is not available.

Source: OECD (2014b), OECD Product Market Regulation Statistics (database), http://dx.doi.org/10.1787/pmr-data-en.

Figure 2.3. **Administrative burdens on start-ups, 2008 and 2013**

Scores from 0 (least restrictive) to 6 (most restrictive)



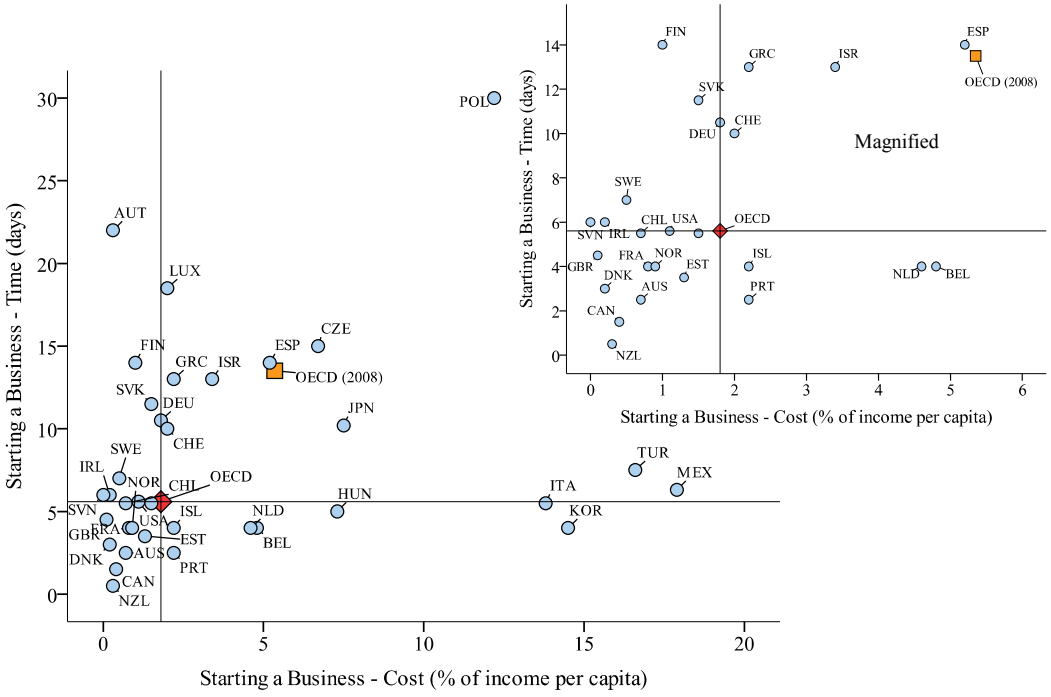
Note: This is a low-level indicator of the Barriers to entrepreneurship index. Given normalisation of underlying data, it has a scale of zero to six. The year 2008 refers to the situation in 2007 for all countries with the exception of Chile, Estonia, Israel and Slovenia (2008). For Latvia, the 2008 observation is not available. For the United States, the 2013 observation is not available.

Source: OECD (2014b), OECD Product Market Regulation Statistics (database), http://dx.doi.org/10.1787/pmr-data-en.http://dx.doi.org/ 10.1787/pmr-data-en

In the OECD area, the days and cost required to start a business (median value) decreased over the last decade, from 14 days and 5% of income per capita in 2008, to less than 6 days and 2% of income per capita in 2016. However, sizeable cross-country differences remain, especially in the cost incurred by entrepreneurs to start their company, which ranges from 0% of income per capita in Slovenia to 17.9% in Mexico (Figure 2.4). Indeed, time and cost do not appear to be correlated, suggesting that measures introduced to speed up procedures to legally start and operate a business do not automatically result in lower costs for completing such procedures.

A clear positive correlation is observed between the time and cost for resolving insolvency. In terms of OECD median values, over 2008-16, the time needed to resolve insolvency decreased from 1.65 to 1.5 years, while the cost remained stable at 9% of the estate's value, with large cross-country differences (Figure 2.5).

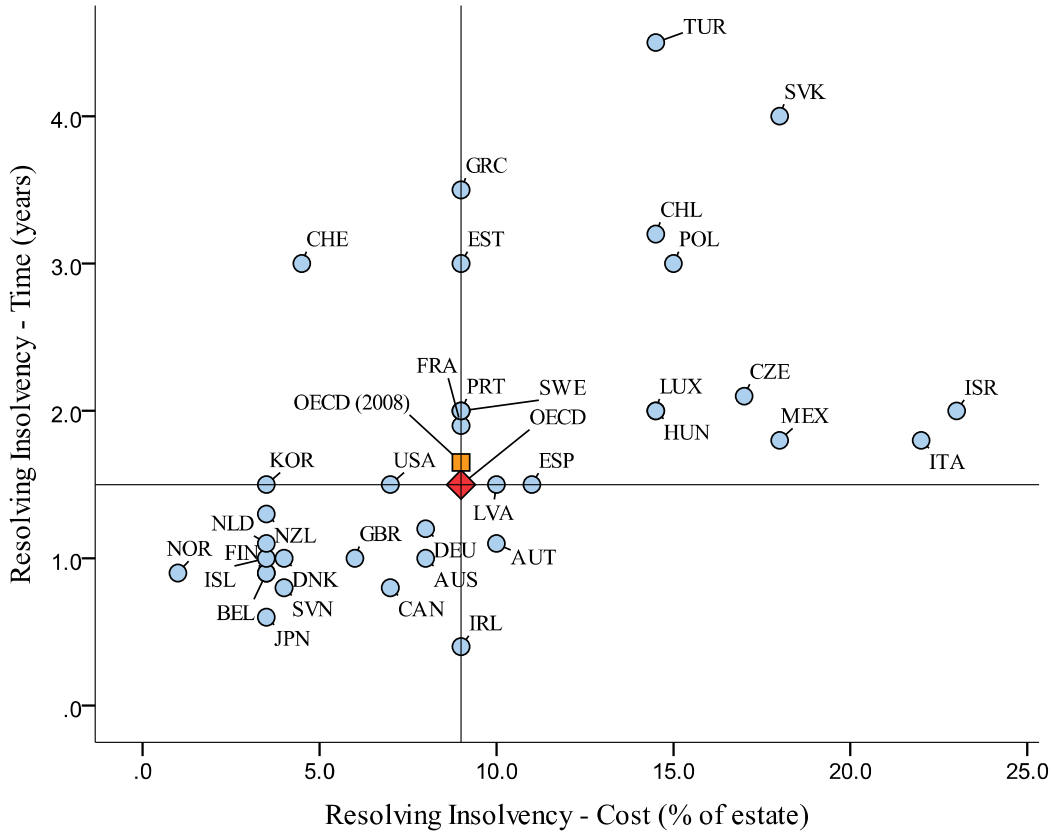
Figure 2.4. **Starting a business: time (days) and cost (% income per capita), 2016**



Note: To calculate the OECD median in 2008, for Japan, Mexico and the United States, data for a representative city was considered (i.e. Mexico City, Tokyo and New York City).

Source: World Bank Group (2016), Doing Business Indicators, http://www.doingbusiness.org/data.

Figure 2.5. **Resolving insolvency: Time (years) and cost (% estate's value), 2016**



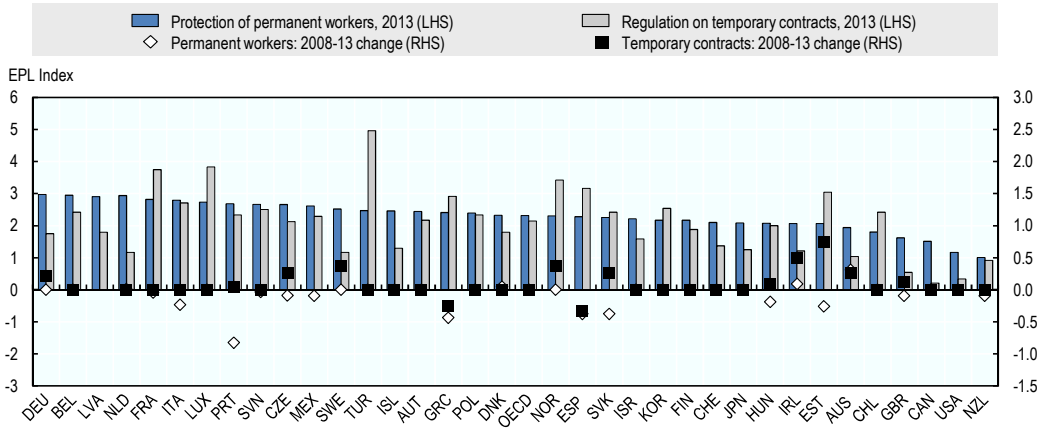
Note: To calculate the OECD median in 2008, for Japan, Mexico and the United States, data for a representative city was considered (i.e. Mexico City, Tokyo and New York City).

Source: World Bank Group (2016), Doing Business Indicators, http://www.doingbusiness.org/data.

Dealing with employment protection norms can be especially challenging for small businesses, for which the hiring and firing costs are larger relative to total labour costs than in large enterprises. In the OECD area, over 2008-13, a tendency towards deregulation was observed, particularly for regulations on either individual or collective dismissals of permanent workers. With regard to temporary contracts, after the broad deregulation of the earlier decades, a relative stability or even tightening was observed over 2008-13, with some notable exceptions, such as Greece and Spain, which loosened regulation significantly in this area (Figure 2.6).

Figure 2.6. **Employment Protection Legislation Index for permanent and temporary work contracts, 2013 and 2008-13 change**

Scores from 0 (least restrictive) to 6 (most restrictive)



Note: Observations for Latvia start from 2012.

Source: OECD (2013), *OECD Indicators of Employment Protection* (database), http://dx.doi.org/10.1787/lfs-epl-data-en.

Table 2.1. **Reducing regulatory burden for businesses: Policy developments**

Policy approaches	Examples	
Public consultation with the business sector	**Denmark**	***Business Forum for Simpler Rules***: mechanism for identifying business regulation, that firms perceive as most burdensome and propose simplification, based on a comply-or-explain principle (since 2012). ***Burden Hunters Programme***: engagement of civil servants with businesses for improving understanding on business experience with regulation and for developing smart regulation that can remove red tape (since 2007).
	United Kingdom	***Red Tape Challenge***: website promoting open discussion on how the aims of existing regulation can be fulfilled in the least burdensome way possible, feeding government's reform package to cut red tape (2011-13).
Measuring compliance costs for firms	**Canada**	***Economic Plan of Canada 2012***: survey to measure costs of compliance with regulations for SMEs, in order to reduce regulatory burden.
	Germany	***Bureaucracy Cost Index (BKI)***: index that depicts how new federal legislative regulations affect businesses by bureaucracy cost and support monitoring for reducing administrative burdens (since 2012).
One-for-One rule	**Canada**	***Red Tape Reduction Action Plan***: requirement to regulators that a regulation is removed each time a new one is introduced that imposes new administrative burdens on business (since 2012).
	United Kingdom	***One-in, One-out system***: requirement to assess the net cost to business of complying with any proposed regulation; ensure that the net cost to business is validated by the independent Regulatory Policy Committee; and find a deregulatory measure which relieves business of the same net cost (since 2010).
Regulatory Impact Analysis (RIA)	**Canada**	***Small Business Lens***: requirement to regulators to consider flexible regulatory options that reduce costs to small businesses, without compromising health, environment, safety and security (since 2012).

Table 2.1. **Reducing regulatory burden for businesses: Policy developments** *(continued)*

Policy approaches	Examples	
Regulatory Impact Analysis (RIA)	**European Commission**	***SME Test***: assessment of possible effects of EU legislative proposals on SMEs through: i) consultation of SME stakeholders; ii) identification of affected businesses; iii) cost-benefit analysis; iv) evaluation of alternative mechanisms and mitigating measures (since 2009).
One-stop-shops, single points of contact	**Portugal**	***Entrepreneur Desk****:* digital single point of contact allowing access to a broad range of services and certificates to start and expand a business (since 2009). The *strategy for the reorganisation of public administration support services* aims to improve access to the physical network of the contact points.
	Slovak Republic	***Single contact point****:* internet platform to handle notifications and licenses, to simplify the process of opening and operating a business.
Reduced redundancy in requests by the public administration	**Norway**	***ALTINN***: online platform with information and services, including the possibility to submit information once that is then shared among different government offices.
Simplification of licensing procedures	**Greece**	***Simplification of licensing requirements for business activities****:* 2014 law establishing the general principle of "free", unlimited conduct of economic activity, with the only obligation to abide tax and social security norms. Exceptions to the general principle based on risk assessment. As a result, for 103 business activities, obligation to ask for an operation license was removed.
	Israel	***Law to uniform licensing requirements****:* norm that makes it more difficult for municipalities to add extra local requirements on top of national ones and reduces waiting periods for trade with no environmental risk (2015).
	Portugal	***Zero licensing***: simplified scheme for the creation, modification and closure of businesses. Licenses, permits, surveys and other conditions are replaced by retrospective control and mechanisms for effective accountability.
Reforms in bankruptcy regulation	**Austria**	***Automatic discharge****:* discharge takes place at the payment of the quota agreed upon in the enterprise insolvency proceeding, with no need for an additional court decision.
	Poland	***New Bankruptcy Law****:* new procedure in which the sale of a whole enterprise, an organised part thereof, or some of its high-value assets is agreed in advance of the debtor declaring its insolvency and the sale is completed shortly thereafter (since 2016).

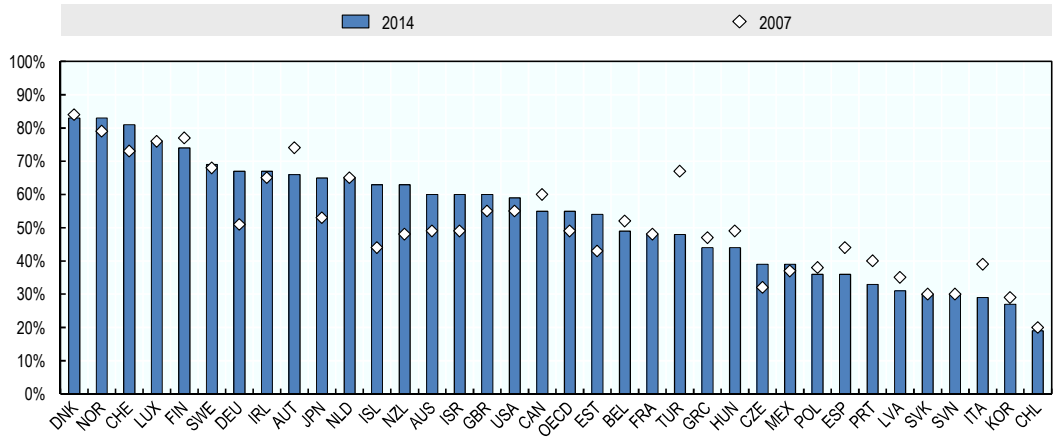
Court and legal framework

Securing property rights and enforcing contracts are crucial for business creation, investment and growth. The efficiency of the judicial system affects confidence in the integrity of markets, as well as costs and length for enforcing contracts. The efficiency of the court and legal system is particularly important for SMEs, which typically need to divert a higher share of resources than large firms to resolving disputes.

Across OECD countries, citizens' confidence in their country's judicial system and courts varies largely, and gaps have widened over the last decade, with confidence decreasing in most countries characterised by scores that are below the OECD median (Figure 2.7).

Figure 2.7. **Citizens' confidence in the judicial system, 2007 and 2014**

As a percentage

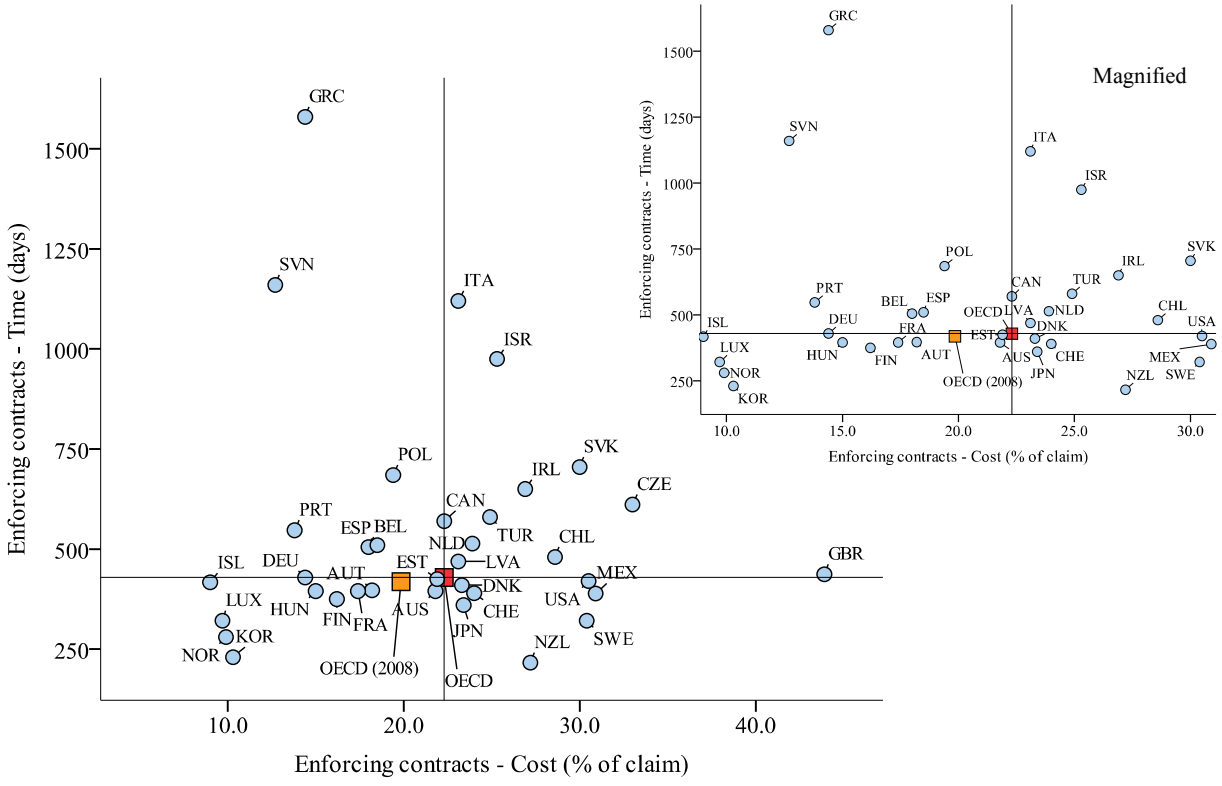


Note: Data for Austria, Finland, Ireland, Norway, Portugal, the Slovak Republic, Slovenia and Switzerland are for 2006. Data for Iceland and Luxembourg are for 2008. Data for Australia, Canada, Chile, Hungary, Iceland, Japan and Korea are for 2013.

Source: OECD (2015b), *Government at a Glance 2015*, http://dx.doi.org/10.1787/888933249375

Lengthy trials impose heavy costs on business and undermine certainty of transactions and investment returns. In the OECD area, the median length of first-instance proceedings to resolve commercial disputes is around 427 days, but in some countries, such as Greece, it may take almost four times as many days (Figure 2.8). Over-2008-16, the median length of trials across OECD countries did not change significantly, while the median cost associated with resolving disputes increased slightly, from 19.8% of claim to 22.1%. It is to be noted that cost and time do not exhibit a clear correlation, at least in the first instance. Indeed, the cost is highest in some countries with a dispute length below the OECD median, such as Mexico (30.9%), Sweden (30.4%) and the United Kingdom (43.9%). On the other hand, in Korea, Luxembourg and Norway, rapidity is also matched by relatively low enforcement costs.

Figure 2.8. **Enforcing contracts: time and cost for resolving a commercial dispute through a local first-instance court, 2016**



Source: World Bank Group (2016), Doing Business Indicators, http://www.doingbusiness.org/data.

Table 2.2. **Improving contract enforcement mechanisms: Policy developments**

Policy approaches	Examples	
Enhanced efficiency of court system through ICT	**Australia**	***Electronic case and court management system**:* use of ICT to automate and support case management within courts, including administrative, logistics, procedural and content management, and ease transfer of information through the judicial system.
	Austria, Czech Republic, Estonia, Finland, Israel, Portugal	***Online communication with parties and citizens**:* possibility of electronic submission of claims in all courts and online follow-up of cases by lawyers in civil proceedings
	European Union	***European Small Claims Procedure**:* electronic processing for claims whose value does not exceed EUR 2 000. Its main features include strict time limits for the conduct of the proceedings, the absence of a requirement of legal representation, the use of standardised forms for procedural acts, and the abolition of the intermediary procedure for declaration of enforceability of the judgment (since 2009).
Simplification of proceedings	**Portugal**	***New code of civil procedures**:* new code aimed at reducing case backlogs, streamlining court procedures, enhancing the role of judges and speeding up the resolution of standard civil and commercial disputes (since 2013).
	Italy	***Reform of civil procedure**:* reform aimed at reducing backlog and speeding up civil proceedings, including the possibility for a judge to authorise switching from ordinary to 'summary' proceedings, a simplified trial procedure (since 2014).

Table 2.2. **Improving contract enforcement mechanisms: Policy developments** *(continued)*

Policy approaches	Examples	
Increased expertise in courts for commercial disputes	**Italy**	***IPR litigation specialised sections**:* specific expertise on industrial protection introduced in the court system, through specialised sections for IPR litigation in ordinary and appellate course (since 2002).
	United Kingdom	***Intellectual Property Enterprise Court (IPEC)**:* following reconstitution of the earlier Patents County Court (PCC), it can handle IPR cases of all kinds with limit on damages up to GBP 500 000. A fast track for claims up to GBP 10 0000 is available (since 2013).
Alternative dispute resolution	**Belgium**	***BelgianMediation (Belmed)**:* on-line platform set up by the Federal Ministry of Economy, SMEs, Self-employment and Energy, to settle B2B and B2C disputes out-of-court with the help of an independent mediator. This is either an ADR body notified to the European Commission by the Ministry or a mediator registered with the Federal mediation commission.
	European Union	***Mediation meets Judges**:* large-scale project launched in 2014 by the European Union and Eurochambers to promote mediation in civil and commercial dispute and increase judicial referral to mediation, including through a practical tool to be used when referring parties to mediation.
	France	***Pre-insolvency amicable proceedings***: 2014 reform to make out-of-court settlements more attractive, including the ability in conciliation proceedings to prepare a pre-pack sale of all or part of business and an accelerated safeguard procedure for implementing a restructuring plan agreed by affected majority creditors in conciliation.
	Italy	***Assisted negotiation***: procedure handled directly by the parties' lawyers to reach a conciliatory agreement, which has the value of an enforceable title. It represents an obligation before filing the judicial claim in case the disputes concern payments up to EUR 50 000. It does not apply to disputes related to inalienable rights and employment matters (since 2015).

Taxation

Tax policy and tax administration arrangements have a direct impact on the appropriability of private returns by businesses. They affect incentives for individuals to enter self-employment, the legal form of the venture and whether to incorporate, and, for established firms, the scope of activities, their location and time frame, the form of distribution of the business income, as well as decisions to hire, undertake investments and expansion. Taxation is critical for a level playing field for SMEs. Certain features of the tax system, such as the asymmetric treatment of profits and losses, may inadvertently disadvantage young and small firms relative to large enterprises. Furthermore, as capital and labour tend to be taxed differently, firms with different levels of capital intensity in their production process may face different tax burdens. Taxation also has important effects on the financial resources the firm can access, impacting the relative costs of different forms of financing, or the expected net return for financiers.

In most OECD countries, the tax system provides incentives to incorporate and to distribute income in the form of capital, particularly as capital gains. In fact, for a SME owner at the top marginal rate, the income that is taxed the least is the income distributed through a double-taxed entity in the form of capital gains. Estonia and the Slovak Republic are the only exceptions to this (Table 2.3). Furthermore, in many countries, tax preferences exist for capital gains on SME shares, which further increase the attractiveness of this option. Dividend income is typically the second lowest taxed. On the other hand, labour income, whether received as an employee of the SME or as sole-proprietor income, is typically the highest taxed form of income for a top-rate taxpayer who owns a SME. This provides a tax driven incentive to incorporate, when the firm is in a profit making position (OECD, 2015a).

On the other hand, for relatively low levels of business income, the average personal tax rate on business income is below the basic corporate tax rate in most countries. In this case, incorporation may lead to a higher combined tax rate on SME income, making it a less attractive option for small proprietorships and partnerships (OECD, 2015a).

The relevance of taxation to SMEs and entrepreneurs stems also from the administrative burden and costs that complying with tax requirements may impose. Tax compliance costs typically have a significant fixed component, which implies a relatively higher burden on SMEs than on large firms, as a percentage of income or sales. In recent years, while electronic filing and changes in the payment system have generally reduced the number of payments required by businesses, time to comply has remained stable in most countries. Over 2009-15, the most significant progress was observed in the countries with longest compliance time, such as the Czech Republic and Mexico, and in the area of labour taxes, although these still account for the greatest compliance burden in most countries. In 2015, at the median, compliance with labour taxes demanded 61 hours, down from 80 hours in 2009, whereas paying corporate income and consumption taxes requested 41 and 44 hours, respectively (Figure 2.9).

Table 2.3. **Marginal tax rates on different forms of business income, 2014**

	Single-level taxation		Double-level taxation (typically, for incorporated SMEs)		
Nature of income	Labour or business		Dividends	Capital gains	Labour
Corporate tax	None		Basic or small business rates		Deductible against corporate income
Personal tax	Labour (at 100% AW)	Labour (at top marginal rate threshold)[1]	Dividend, incl. integration (at top marginal rate)	Capital gains,[2] incl. integration (at top marginal rate)	Labour (at top marginal rate)
SSCs	Self-employed (at 100% AW)	Self-employed (at top marginal rate threshold)	None		Employee
Australia	34	47	46	42	47
Austria	49	50	44	39	50
Belgium	64	67	44	25	59
Canada	40	50	49	30	50
Chile	0	40	40	21	40
Czech Republic	30	30	31	19	26
Denmark	34	56	56	48	56
Estonia	54	54	21	33	23
Finland	53	62	42	39	57
France	58	54	52	40	55
Germany	41	47	49	44	47
Greece	35	46	33	26	46
Hungary	62	62	24	10	35
Iceland	38	44	36	32	44
Ireland	52	55	55	44	55
Israel	33	50	49	38	50
Italy[3]	54	48	46	42	48
Japan	27	51	39	29	51
Korea	17	39	43	11	43
Luxembourg	53	44	43	28	45
Mexico	25	35	42	30	35
Netherlands[4]	39	39	40	35	53
New Zealand	30	33	33	28	33
Norway	47	50	47	37	47
Poland	36	44	34	31	39
Portugal	32	50	51	44	61
Slovak Republic[5]	30	22	33	33	35
Slovenia	21	39	38	20	61
Spain	50	52	45	40	52
Sweden	47	69	45	40	57
Switzerland	30	42	37	21	42
Turkey	18	36	34	20	36
United Kingdom	39	47	44	37	47
United States	45	49	60	48	49
Unweighted mean	**40**	**53**	**42**	**33**	**49**
Median	**39**	**56**	**43**	**33**	**50**

1. This is the marginal rate at the earnings level where the top statutory personal income tax rate first applies.

2. Personal tax rates on capital gains have been reduced by 25% to approximate the impact of deferral of taxation until realisation.

3. In Italy, the taxation of non-qualified dividends and capital gains at the personal level was increased from 20% to 26% from 1 July 2014. The combined rates shown here include the new rate of 26%.

4. Figures for the Netherlands include the impact of the SME profit exemption (which exempts 14% of the profits of single-taxed entities from taxation).

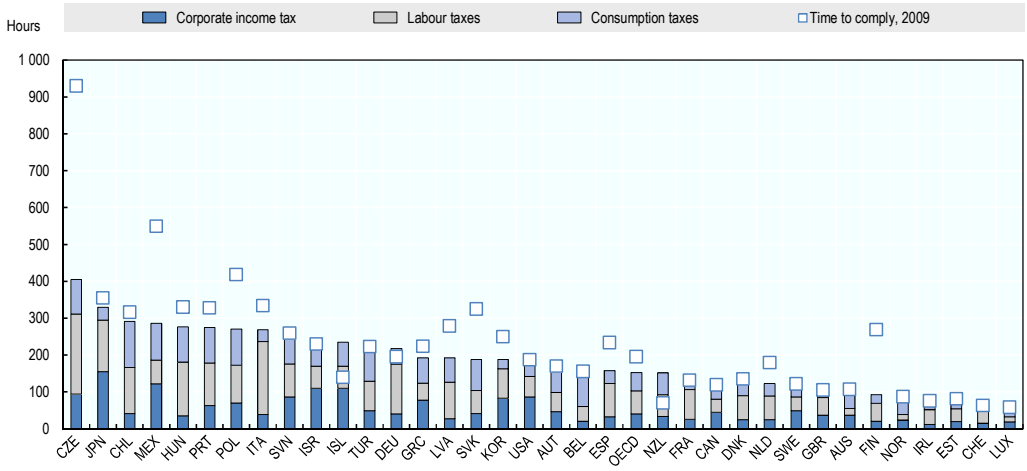
5. The combined statutory rate on dividends in the Slovak Republic includes health contributions of 14% which are levied at the personal level, but the maximum effective assessment base is not taken into account.

Note: Calculations based on the OECD Tax Database. Capital gains rates are for long-held dividends and were taken from Harding (2013) and from information provided by national governments.

Source: OECD (2015a), *Taxation of SMEs in OECD and G20 countries*, http://dx.doi.org/10.1787/9789264243507-en.

Figure 2.9. **Paying taxes: time to comply, 2009 and 2016**

Number of hours



Source: World Bank Group and PwC (2016 and 2009), www.pwc.com/gx/en/paying-taxes/assets/paying-taxes-2009.pdf; www.pwc.com/gx/en/paying-taxes-2016/paying-taxes-2016.pdf.

Table 2.4. **Improving the tax environment for SMEs: Policy developments**

Policy approaches	Examples	
Tax preferences		***Accelerated depreciation***
	France	***Rural development zones**:* accelerated depreciation for the acquisition of leased property at the end of the leased period and for buildings for commercial and industrial use.
	Japan	***Low value assets**:* when purchased by SMEs, can be immediately expensed up to JPY 3 million per year.
	Korea	***Facility investment**:* 50% rate applying to investment by SMEs, against 25% rate for other entities.
		Deductions on new hires
	Hungary	***Incentives for micro firms**:* for firms with less than five employees, reduction in pre-tax profit, equal to the average wage paid on the first day of the tax year by the increase in the number of employees relative to the previous year.
		Allowance for corporate equity
	Belgium	***Increased notional deduction**:* notional deduction for SME equity that is 0.5% higher than the general rate and applies to an adjusted equity base rather than on its net increase.
	Italy	***Deduction on equity net increase**:* deduction equal to the net increase in SME equity multiplied by a rate yearly determined by the government (4.5% in FY 2015 and 4.75% in FY 2016).
		Preferences for direct investments in SMEs
	Italy	***Tax incentives for innovative start-ups**:* provided the investment is maintained for at least 2 years, personal income taxpayers receive a credit equal to 19% of the amount invested (up to EUR 500 000). For corporate taxpayers a 20% tax allowance rate applies (up to EUR 1.8 million).
	Sweden	***Tax deduction**:* applying to investors in SMEs, against their capital income, it reduces tax payments by 15% of the invested amount. The deduction is limited to SEK 195,000 per year and to maximum investment of SEK 20 million per firm
		Benefits for productive investments
	Portugal	***New Investment Tax Code**:* adopted in 2014, it grants tax incentives for investments of at least EUR 3 million that are considered relevant for the development of the Portuguese economy, the reduction of regional asymmetries and the creation of jobs. Tax benefits may be granted up to 10 years and the promoter is required to maintain the investment for at least 3 to 5 years after completion.

Table 2.4. **Improving the tax environment for SMEs: Policy developments** *(continued)*

Policy approaches	Examples	
Tax preferences		***R&D tax credits***
	Australia	***Refunding:*** if in a loss position, SMEs can receive their unused R&D tax credits in monetary terms. The credit applies to entities with at least AUD 20 000 notional R&D deductions, up to a limit of AUD 100 million.
	France	***Prototypes:*** tax credit for SMEs equal to 20% of costs for prototypes or pilot trials of new products, up to EUR 400 000 per year of eligible expenses. Any unused credit can be carried over for up to three years or refunded under certain conditions.
	United Kingdom	***Additional deduction:*** compared to other businesses, SMEs qualify for an additional R&D deduction of 130%, i.e. they can get a total deduction of 230% of qualifying expenditures
		Flexible treatment on losses
	Korea	***Carry back:*** SMEs can carry back losses to apply against income in the previous year.
	Portugal	***New regime on carry forward:*** since 2014, loss carry-forward period increased from 5 to 12 years, limited to 70% of taxable income. A significant change in company's activity or corporate purpose does not entail forfeiture of the right to loss carry-forward.
	Spain	***Carry forward***: entities with turnover of less than EUR 6.01 million can use all losses in previous periods to offset future tax liabilities.
Simplification measures	Chile	***Electronic Invoicing System:*** it allows business taxpayers to issue and receive invoices that are immediately available to the revenue body. It provides, free of charge, a simplified and complete accounting system.
	Mexico	***Simplified tax scheme (Regimen de Incorporacion Fiscal - RIF):*** income calculated on a cash-flow basis, simplified reporting, tax exemptions over ten years, full deductibility of investments in the year they are made. For individuals that do not require a professional graduate degree and with annual income of less than MXN 2 million.

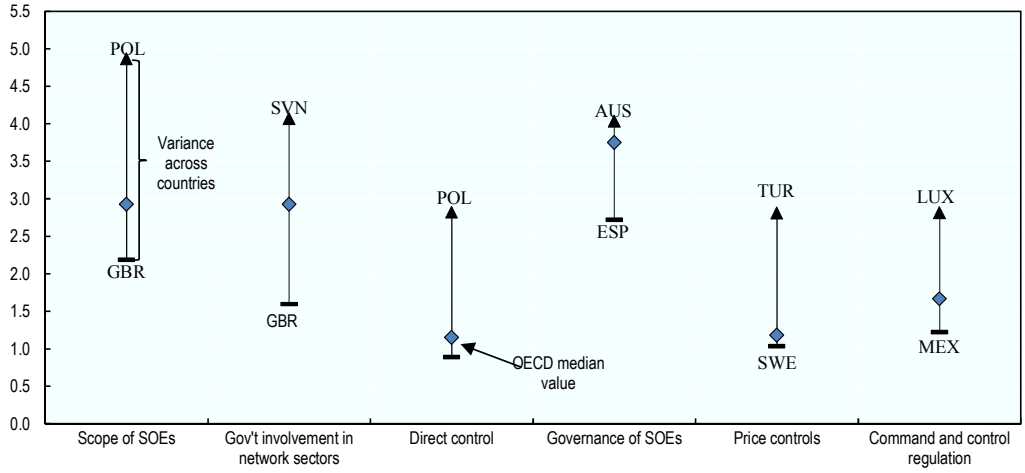
Competition

Competitive conditions are key determinants of entrepreneurial investment and economic growth. In a competitive market, new and more efficient firms can challenge incumbents, allowing for productivity growth and permitting the exit of inefficient and low-productivity firms. On the other hand, anti-competitive practices, such as market power abuse by incumbents and predatory pricing behaviour, can discourage market entry by new firms and innovation. Transparency and consistency of rulings are important for the effectiveness of competition policy. Non-discriminatory implementation, predictability and manageability of procedures and costs for protecting rights are especially important for new firms and SMEs, which typically face greater constraints than large firms in seeking legal redress when a competitor breaches antitrust or trade practices law (Ncube and Paremoer, 2009).

In terms of state control of the economy, conditions remain relatively restrictive in most OECD countries. This is especially related to public ownership of economic activities, including the scope and governance of state-owned enterprises (SOEs) and government involvement in network sectors (Figure 2.10).

Figure 2.10. **Public ownership, 2013**

Scores from 0 (least restrictive) to 6 (most restrictive)



Note: The year 2008 refers to the situation in 2007 for all countries with the exception of Chile, Estonia, Israel and Slovenia (2008). For Latvia, the 2008 observation is not available. For the United States, the 2013 observation is not available.

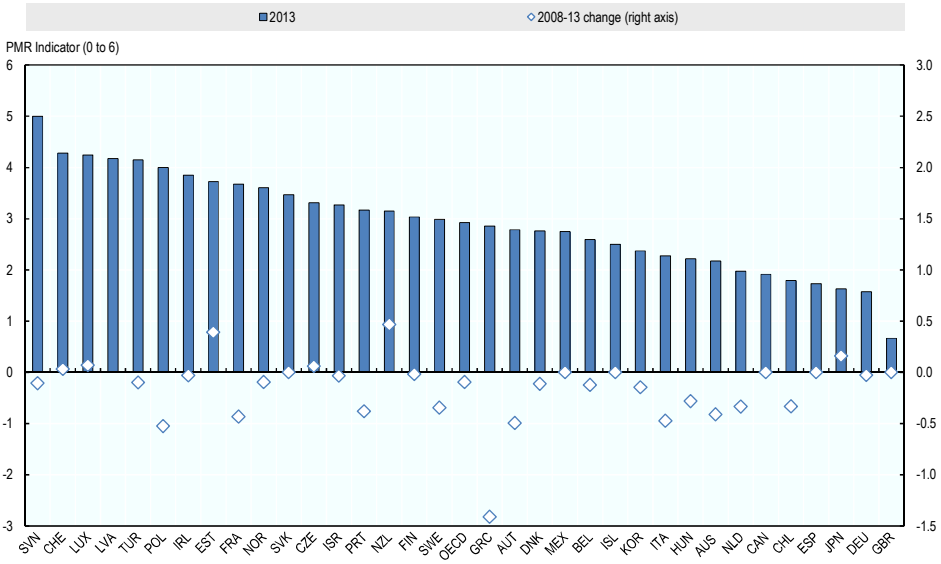
Source: OECD (2014b), OECD Product Market Regulation Statistics (database), http://dx.doi.org/10.1787/pmr-data-en.

In most countries, the change observed in public participation in network industries over 2008-13 was negligible (Figure 2.11). In a few countries, such as Estonia and New Zealand, government engagement even increased. Competition appears to be particularly limited in electricity, gas and rail transport, while telecom, road and air transport are generally more open to competition. Greece was a notable exception to this trend, as a result of the comparatively large reforms introduced over the period.

On the other hand, in most OECD countries, less restrictive conditions were observed over 2008-13 in terms of other forms of state involvement in business operations, such as price controls in competitive sectors and command and control regulation (Figure 2.12). Belgium, Hungary and Luxembourg were the only countries in which a significant increase in government engagement was observed, whereas governments decreased their involvement in some countries that had some of the most restrictive conditions in 2008, such as Greece, Italy, Portugal and Spain, although they still rank above the OECD median.

Figure 2.11. **Public ownership: government involvement in network sectors, 2013 and 2008-13 change**

Scores from 0 (least restrictive) to 6 (most restrictive)

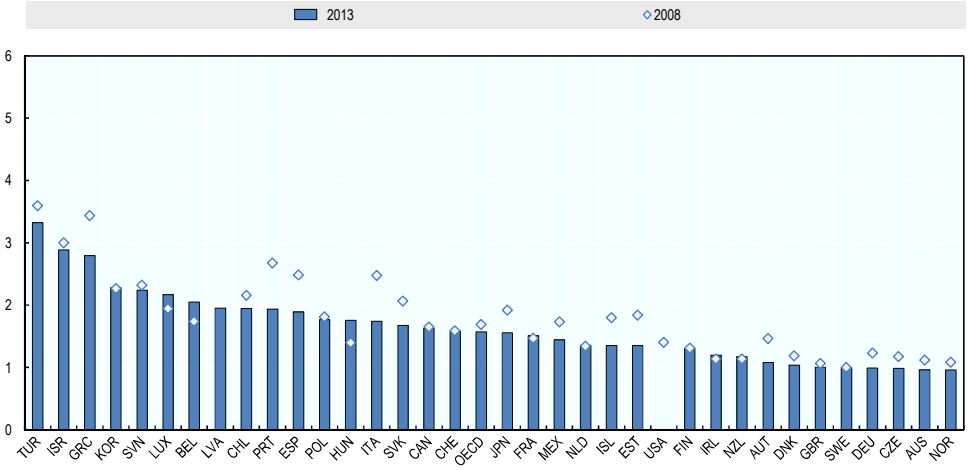


Note: The year 2008 refers to the situation in 2007 for all countries with the exception of Chile, Estonia, Israel and Slovenia (2008). For Latvia, the 2008 observation is not available. For the United States, the 2013 observation is not available.

Source: OECD (2014b), OECD Product Market Regulation Statistics (database), http://dx.doi.org/10.1787/pmr-data-en.

Figure 2.12. **Involvement in business operations, 2008 and 2013**

Scores from 0 (least restrictive) to 6 (most restrictive)



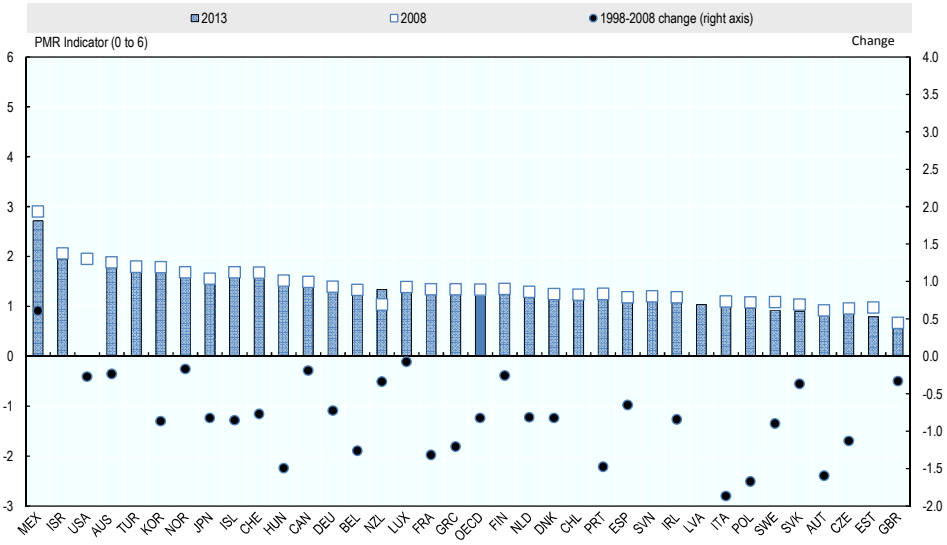
Note: The year 2008 refers to the situation in 2007 for all countries with the exception of Chile, Estonia, Israel and Slovenia (2008). For Latvia, the 2008 observation is not available. For the United States, the 2013 observation is not available.

Source: OECD (2014b), OECD Product Market Regulation Statistics (database), http://dx.doi.org/10.1787/pmr-data-en.

Barriers to entrepreneurship in the form of regulatory protection of incumbents remained rather stable over 2008-13. However, this is an area in which significant progress was observed since 1998, with cross-country convergence to lowered legal barriers to entry, antitrust exemptions and barriers in network sectors (Figure 2.13). At the same time, OECD work on competition law and policy highlights that, while competition regimes have become broadly similar across jurisdictions, greater variability exists in the enforcement of competition laws (Alemani et al., 2013).

Figure 2.13. **Regulatory protection of incumbents, 2008, 2013 and 1998-2008 change**

Scores from 0 (least restrictive) to 6 (most restrictive)



Note: This is a low-level indicator of the Barriers to entrepreneurship index. Given normalisation of underlying data, it has a scale of zero to six. The year 2008 refers to the situation in 2007 for all countries with the exception of Chile, Estonia, Israel and Slovenia (2008). The following observations are not available: 1998 for Chile, Estonia, Israel, Latvia and Slovenia; 2008 for Latvia; 2013 for the United States.

Source: OECD (2014b), OECD Product Market Regulation Statistics (database), http://dx.doi.org/10.1787/pmr-data-en.

Table 2.5. **Promoting competitive conditions in markets: Policy developments**

Policy approaches	Examples	
Reduction in the level of state control of the economy	**Portugal**	***Removing "golden shares"***: elimination of special voting rights held by the State in energy and telecommunication firms (since 2011).
Strengthening anti-trust frameworks	**Chile**	***New competition bill***: 2016 reform to strengthen the sanctions for cartels, improving the effectiveness and transparency of the merger control regime and grant the competition authority formal powers to perform market studies.
	Denmark	***Increased penalties for cartels***: penalties for individuals and businesses that are members of cartels have been raised significantly (since 2013).
	Finland	***Increased budget for the competition authority***: the resources of the competition authority have been significantly increased to ensure that it can fulfil its mandate (since 2013).
	Ireland	***Reform of the competition framework***: merge of the Competition Authority and the National Consumer Agency into the Competition and Consumer Protection Commission (CCPC), which has been given new powers (since 2014).
	Mexico	***New Competition Law***: legal framework that strengthens the powers of the Competition Commission (since 2013).

Table 2.5. **Promoting competitive conditions in markets: Policy developments** *(continued)*

Policy approaches	Examples	
Reforms in network sectors	Belgium	***Easing the switching of suppliers**:* reduction of costs for switching gas and electricity suppliers and abolition of contract termination penalties (since 2013).
	Canada	***Capping wireless costs**:* wireless' operators wholesale roaming rates capped at the levels charged on average to retail customers (since 2014).
Reforms in service sectors regulation	**France**	***Loi pour la croissance, l'activité et l'égalité des chances économiques**:* for six legal professions, access conditions eased and restrictions related to shareholding and voting rights relaxed to favour investments and cross-profession practices (since 2015).
	Luxembourg	***Abolition of reference prices**:* the Competition Council initiated procedures to abolish reference prices in some professional services (i.e. architects, health and safety co-ordinators, chamber of experts)
	Poland	***Deregulation process**:* regulation scaled back for a large number of professional services (142 professions) and entry procedures eased (since 2013).
Provisions targeted or especially relevant to SMEs	**Australia**	***"Birdsville amendment"**:* 2007 amendment to the Trade Practices Act to prohibit predatory pricing by corporations with large market shares.
	Germany	***Amendment to the Act against Restraints on Competition**:* 2013 amendment that provides SMEs with tools to shield themselves against aggressive competition and hard bargaining from larger firms.
	Japan	***Abuse of Superior Bargaining Position**:* 2009 amendment of the Antimonopoly Act, imposing sanctions on a party which uses its superior bargaining position over other parties to create a disadvantage, unjustly in light of normal business practices.

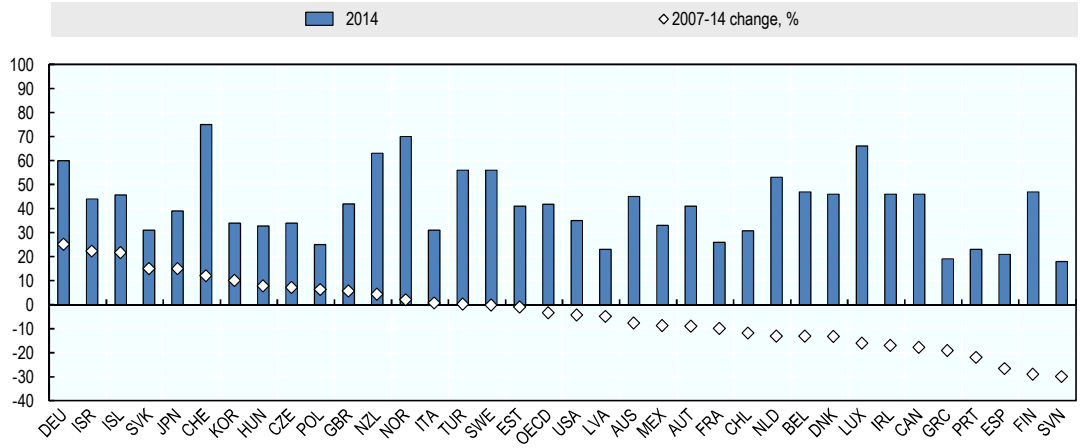
Public governance

The rule of law, public sector integrity, effectiveness, transparency and quality of public services are critical for the confidence of entrepreneurs in institutions and policies, affecting their short-term business plans, as well as long-term investment strategies. While lack of transparency, unpredictability of regulation and corruption are detrimental to all businesses, they pose particular problems for SMEs, which often lack the capacity to navigate uncertain regulatory environments, cope with an opaque public sector, design and implement anti-corruption strategies, and lobby for their needs in the absence of an established framework for broad participation in public decision making (OECD, 2006; UNIDO, 2007).

Across OECD countries, confidence in national governments declined on average since the 2008-09 global financial and economic crisis. However, significant cross-country variance is observed, with the steepest declines in Canada, Finland, Ireland, Portugal, Slovenia and Spain, and sizeable increases in confidence in Germany, Iceland and Israel (Figure 2.14).

Evidence suggests that trust in government largely reflects citizens' approval of their country's leadership and perceptions about the government's efficiency, i.e. its capacity to establish predictability in the institutional and policy environment, and respond to citizens' needs (UNIDO, 2007; OECD, 2015b). Trust is also negatively correlated with the perceived level of corruption. While the distribution of countries along this scale has been relatively stable over time, it should be noted that, in recent years, the public sentiment about corruption levels has improved in some countries that are below the OECD median, including the Czech Republic, Greece, Hungary, Italy, Latvia, Mexico and the Slovak Republic (Figure 2.15).

Figure 2.14. **Confidence in national government, 2014 and 2007-14 change**

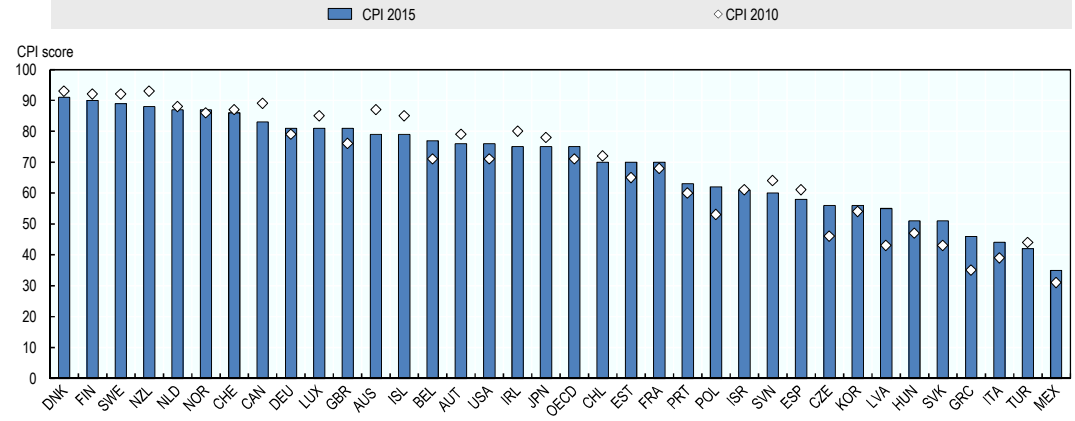


Note: Percentage of "yes" answers to the question "Do you have confidence in national government?". Data for Chile, Hungary and Ireland refer to 2013.

Source: OECD (2015b), *Government at a Glance 2015*, http://dx.doi.org/10.1787/888933249225

Figure 2.15. **Corruption Perception Index, 2010 and 2015**

Scores from 100 –least corrupted – to 0 – most corrupted



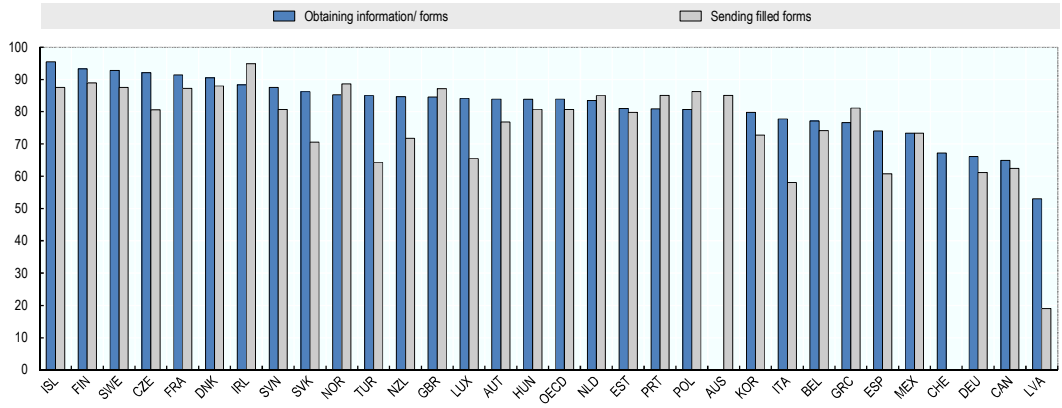
Source: Transparency International (2015 and 2010).

The use of government portals to provide information and access to public services can improve transparency in public measures and ease the interaction of citizens and businesses with the government and public administration. Across OECD countries, the use of e-government services by businesses is higher than the uptake for individuals, due also to the mandatory use for businesses of digital channels in many countries. On average, in 2013, 83% of businesses in the OECD area reported having used the internet to obtain information/forms from their public authorities, and 78% had returned a filled form online. For both type of services, the highest level of uptake is recorded in the

Nordic countries, France and Ireland. On the other hand, businesses' active use of e-services to submit information is relatively less common in Canada, Germany, Italy and Spain.

Figure 2.16. **Digital government: Use of the internet by businesses to interact with public authorities, 2013**

Percentage of firms, use over the past 12 months



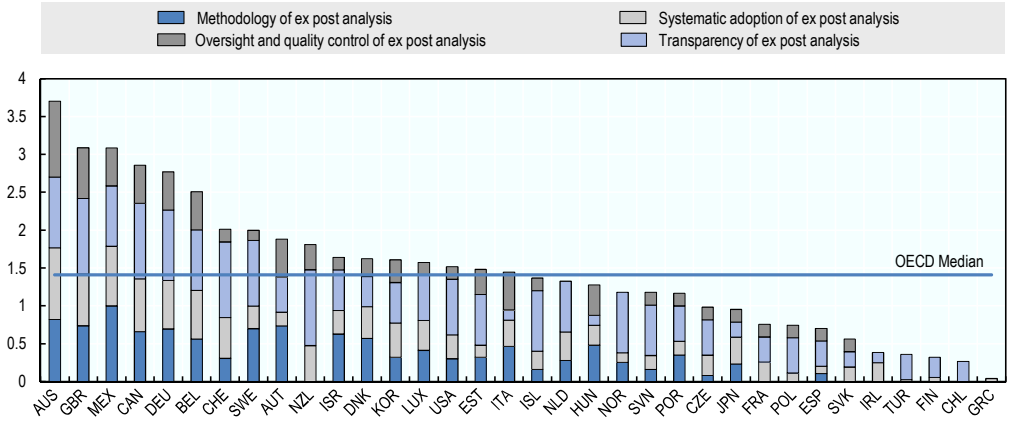
Note: Data are not available for Chile, Israel, Japan and the United States.

Source: OECD (2015b), *Government at a Glance 2015*, http://dx.doi.org/10.1787/888933249202

In most OECD countries, the evaluation of policies and regulations has become an institutionalised practice. However, evaluation is mainly carried out *ex ante*. *Ex post* evaluation remains the least developed of the regulatory tools. Many counties still lack an agreed methodology, as well as oversight and quality control. Australia, Germany, Mexico and the United Kingdom are the countries with the most developed approach to *ex-post* evaluation for primary regulation (Figure 2.17).

Figure 2.17. ***Ex post* evaluation for primary laws, 2014**

Scores from 0 (low) to 4 (high)



Note: The vertical axis represents the total aggregate score across the four separate categories of the composite indicators. The maximum score for each category is one, and the maximum aggregate score for the composite indicator is four. Observation for Latvia is not available.

Source: OECD (2014c), 2014 Regulatory Indicators Survey results, www.oecd.org/gov/regulatory-policy/measuring-regulatory-performance.htm.

Table 2.6. **Enhancing public governance: Policy developments**

Policy approaches	Examples	
Strengthened stakeholder consultation	**Canada**	***Guide for Effective Regulatory Consultation**:* guidelines issued by the government to provide information on the components of effective regulatory consultation, including checklists on ongoing, constructive, and professional relationship with stakeholders, consultation plan and conducting consultations (since 2009).
	Finland	***Stakeholder engagement platform**:* on-line civic forum for the public to comment on legislative reforms and the administration of new and existing government projects, it allows for interactive stakeholder engagement during the early stages of the project or legislative development
Establishing systematic ex post evaluation	**Australia**	***"Process failure" post implementation review (PIR)**: ex post* evaluation performed on any regulation that would have required an *ex ante* impact assessment, with the aim to ensure that regulations made in haste or without sufficient assessment can be re-assessed before they have been in place too long. **Ex post *review requirements in new regulation**:* regulators outline how the regulation in question will be subsequently evaluated. Also used where elements of the regulation are transitional in nature.
	Germany	***Committee of State Secretaries Resolution for the Reduction of Bureaucracy***: commitment to carry out systematic *ex post* evaluation, three to five years after the entering into force of regulations for which annual compliance costs exceed: i) EUR 1 million citizens' material costs or 100 000 hours' time expenditure; or ii) EUR 1 million in the business sector; or; ii) EUR 1 million for public authorities.
Implementation of Open Government Data	**Estonia**	***Online regulatory database***: replacement of the printed State Gazette with an online version, with search engine for original regulations and consolidated texts, and possibility of automatic notifications of legislative changes (since 2010).
	United Kingdom	***Open Data Strategy**:* 2012 Open Data White Paper by the government and Open Data strategy published by every government department, setting out a plan for information release and ways to stimulate a market for its use.
	United States	***Regulations.gov**:* portal that provides public users access to federal regulatory content and a tool for commenting and influencing the regulatory process.
Improved transparency for lobbying activities	**Austria**	***Transparency Act for Lobbying and Interest Representation**:* establishment of a lobbying register and explicit prohibition of acting as a lobbyist for public officials and politicians (since 2013).
	Canada	***Lobbying Act**:* establishment of the Commissioner for Lobbying, and independent officer of Parliament, with mandate on education for lobbyists, their clients and public officers, broad investigatory power and some enforcement measures (since 2008).
Fighting corruption	**Austria**	***Public Interest Disclosure Act***: facilitating disclosure and investigation of wrongdoing and maladministration in the public sector (since 2013).
	Japan	***Whistleblower Protection Act**:* prohibition of dismissal or disadvantageous treatment on the basis of whistleblowing (since 2004).
	United Kingdom	***Anti-Corruption Plan**:* 2014 cross government plan, backed by co-ordinated resources, defining priorities and main areas for action. It will be reviewed on a regular basis, in the framework of the Open Government Partnership, with new actions developed in collaboration with civil society.

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Chapter 3

SME access to markets

This chapter discusses the challenges faced by SMEs in accessing global and public markets and presents comparative evidence across OECD countries on trade and investment conditions, infrastructure investment and development, and public procurement approaches. The chapter also describes recent policy developments to enhance conditions for SMEs to access markets.

Note: The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

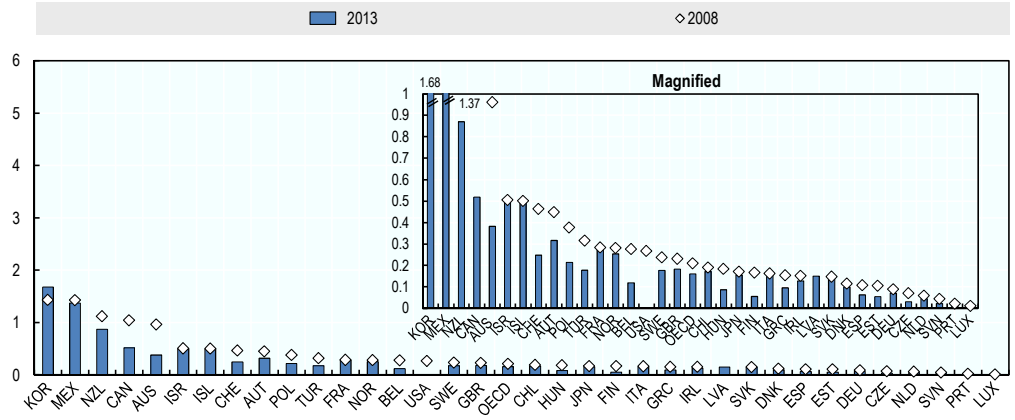
Trade and investment policy

SMEs engaged in foreign trade are typically confronted with a large number of regimes and procedures. While most of these intend to promote trade and protect consumers (in the form of technical standards and regulations), they may in some cases act as barriers to trade, in particular when their application is not transparent, or aimed at protecting domestic producers versus foreign suppliers. A fair, transparent, clear and predictable regulatory framework for investment is an important driver of cross-border investment, especially in the case of SMEs, which may have greater difficulties than large firms in navigating the regulatory environment. Furthermore, investment regulation and policies affect SMEs to the degree at which they impact foreign direct investments and their linkages with local suppliers and competitors.

Explicit barriers to trade and investment, such as tariff barriers and barriers to FDI, have been significantly reduced in the OECD area over the last decades. In 2008-13, Korea was the only OECD country in which tariff barriers increased slightly (Figure 3.1). In most countries, other less explicit barriers to trade and investment, including differential treatment of foreign suppliers, as well as barriers to trade facilitation (i.e. barriers to recognition of foreign regulations, use of international standards and international transparency of domestic regulation) remain more stringent (Figure 3.2).

Figure 3.1. **Explicit barriers to trade and investments, 2008 and 2013**

Scores from 0 –least restrictive – to 6 – most restrictive

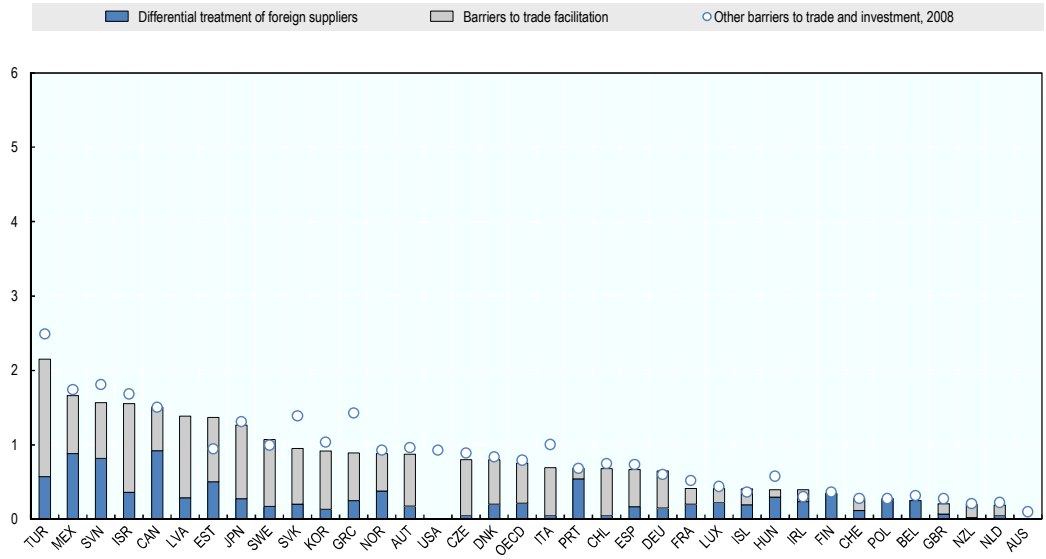


Note: For Latvia, the 2008 observation is not available. For the United States, the 2013 observation is not available.

Source: OECD (2014a), OECD Product Market Regulation Statistics (database), http://dx.doi.org/10.1787/pmr-data-en.

Figure 3.2. **Other barriers to trade and investments, 2008 and 2013**

Scores from 0 – least restrictive – to 6 – most restrictive



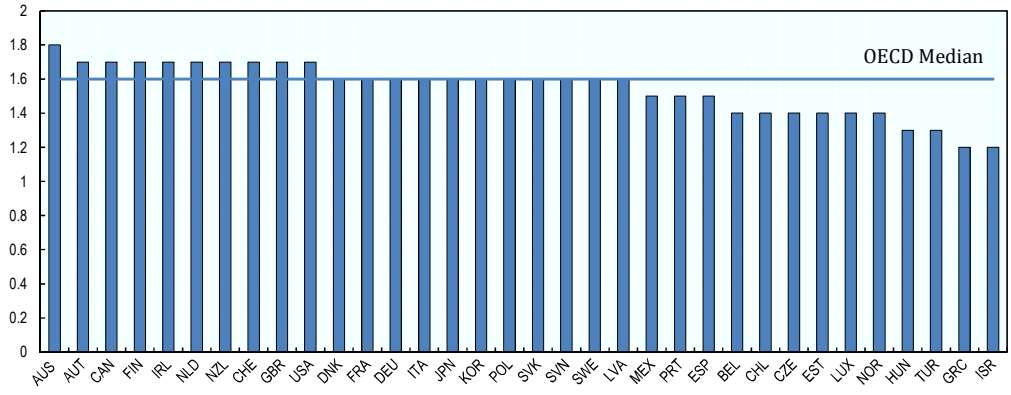
Note: For Latvia, the 2008 observation is not available. For the United States, the 2013 observation is not available.

Source: OECD (2014a), OECD Product Market Regulation Statistics (database), http://dx.doi.org/10.1787/pmr-data-en.

Fast and efficient customs and port procedures are essential to facilitate cross-border delivery and to reduce the cost of international transactions, including those related to the operation of Global Value Chains (GVCs). Transparent and efficient customs procedures are particularly important for limiting administrative and financial burdens on SMEs. In most OECD countries, in recent years, progress was observed with regard to advance rulings, appeal procedures, as well as information availability and simplification of documents. However, some cross-country differences persist in trade facilitation indicators (Figure 3.3), related in particular to differences in the streamlining of border procedures, fees and charges imposed on imports and exports, co-ordination of external border agencies, and the governance and impartiality in customs functioning.

Figure 3.3. **Trade facilitation indicators (average performance), 2015**

Scores from 0 – worst – to 2 – best performance that can be achieved

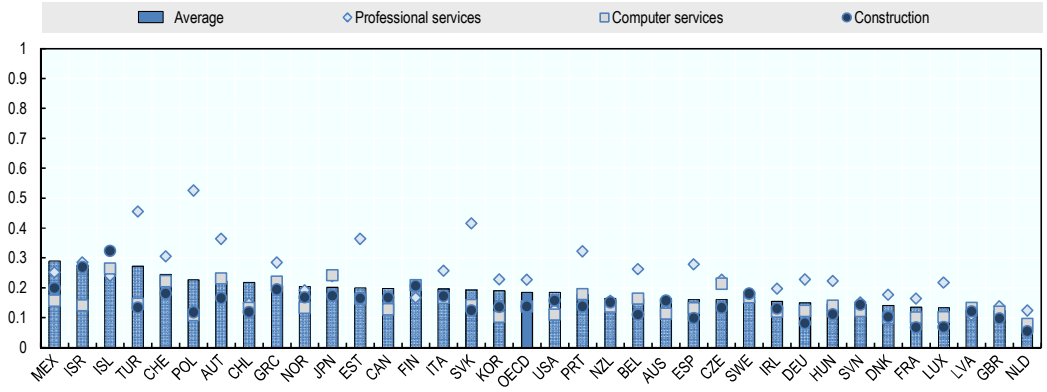


Source: OECD (2015a), OECD Trade Facilitation Indicators, http://www.oecd.org/tad/facilitation/indicators.htm

Service sectors are characterised by barriers to entry and foreign investment in most OECD countries. However, there is significant variance in trade restrictiveness across sectors, with computer services and construction generally more open to competition than services on average, and, on the other hand, professional services exhibiting greater restrictiveness (Figure 3.4). Notable exceptions are Mexico, Iceland and Israel, which have the most restrictive services sector on average, but in which professional services are relatively more open to competition than other services.

Figure 3.4. **Service Trade Restrictiveness Index, 2015**

From 0 (least restricted) to 1 (most restricted)



Source: OECD (2015b), OECD Services Trade Restrictiveness Index Regulatory Database, http://qdd.oecd.org/subject.aspx?Subject=STRI

Table 3.1. **Reducing barriers to trade and investments: Policy developments**

Policy approaches	Examples	
Investment liberalisation, promotion and facilitation	**Canada**	***Investment after-care programme***: regular follows up by Invest Canada with investors throughout the duration of their investment projects, including 'back-to-back outcalls' to targeted investors, to discuss project status and needs for other services and support, and visits to local subsidiaries, to maintain dialogue and a good relationship with investing companies.
	Korea	***Foreign Investment Promotion Act***: amendment of the 1998 Act, to improve the foreign investment system and promote foreign investment in the service sector, including through expansion of foreign investment zones for high value-added industries.
	Ireland	***Measuring performance in investments promotion***: creation by IDA Ireland, the Irish investment promotion agency, of a broad and sophisticated set of indicators on agency performance, which assess the impact of investment on national economic and development objectives.
Strengthening FDI-SME linkages	**Japan**	***Promotion of Global Alliances for Japanese Mid-ranking Companies and SMEs***: support scheme by the Ministry of Economy, Trade and Industry (METI) to boost investment alliances between foreign companies and Japanese mid-ranking companies and SMEs, in order to leverage technologies owned by Japanese companies and promote their global expansion (since 2015).
Reducing trade transaction costs and delays	**New Zealand**	***Trade Single Window (TSW) Online Registrations***: electronic system for submitting and managing applications for importer, exporter, importer/exporter codes and supplier codes (since 2015).
	United States	***International Trade Data System (ITDS):*** system allowing businesses to submit the data required by U.S. Customs and Border Protection and its Partner Government Agencies (PGAs) to import or export cargo through a "Single Window" concept (completion and government-wide utilization of the ITDS by December 2016).
Consultative mechanisms to include business interests in trade policies	**European Union**	***SME Envoys network***: EU-level and national SME envoys whose main role is to enhance communication between the European Commission, SMEs, and their representative organisations, and to promote SME needs and perspectives in government policies, including on trade issues.
	United States	***Industry Trade Advisory Committee on Small and Minority Business***: it provides for formal SME groups to solicit specific trade policy advice.

Infrastructure

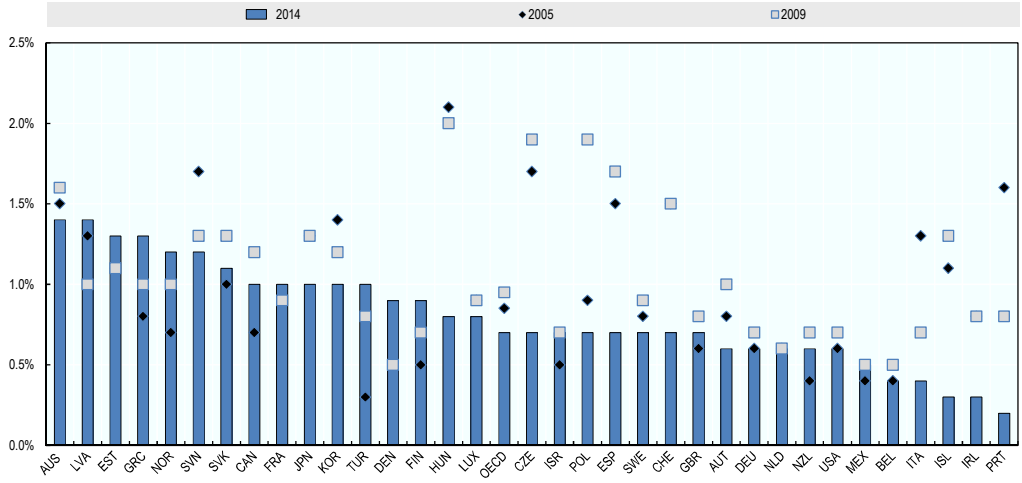
The quality of physical infrastructure, such as roads, ports, and airports, as well as the efficiency of the procedures followed in the operation of these facilities, affect SME competitiveness and are especially relevant for SMEs' successful entry into distant markets and engagement in GVCs. A lack of proper infrastructure prevents SMEs from operating efficiently and accessing international markets at competitive costs. In a world in which just-in-time delivery is the standard and in which transit is rapid and storage expensive, time is a crucial driver of competitiveness. In fact, for a broad range of products, from electronics (which can quickly become obsolete) to fruits and vegetables (which are perishable) to apparel (which is seasonal and subject to the whims of fashion), a day's delay is equivalent to a tariff of 1% or more (OECD, WTO and World Bank Group, 2014).

Investments in transport infrastructure and maintenance spending have direct and positive impact on its quality. Yet, evidence on gross fixed capital formation (investment) in inland transport infrastructure (road, rail and inland waterways) as a percentage of GDP show a declining trend for the OECD as a whole since 2005 (Figure 3.5). The countries that were severely hit by the economic crisis, such as Spain and Portugal, have lowered their transport infrastructure investments most rapidly. Investments in 2014 varied from 1.4% of GDP in Australia to 0.2% in Portugal. However, it should be noted

that, in spite of declining investment rates, the perceived quality of trade and transport-related infrastructure (e.g. ports, railroads, roads, information technology) was relatively stable in most countries over 2007-14 (Figure 3.6). This reflects especially progress in ICT infrastructure, warehousing and trans-loading, and airports. By contrast, in most countries the lowest degree of satisfaction is expressed with regard to rail infrastructure (World Bank, 2016).

Figure 3.5. **Transport infrastructure investment and maintenance spending, 2014**

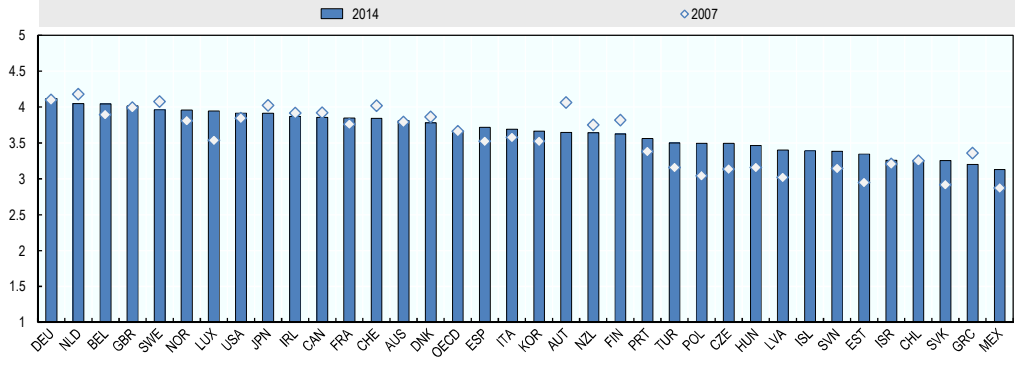
As a percentage of GDP



Source: OECD (2015c), OECD (2015c), *OECD Transport Statistics* (database), http://dx.doi.org/10.1787/8dacf707-en

Figure 3.6. **Logistics Performance Index: quality of trade and transport-related infrastructure, 2014**

Scores from 1 (low) to 5 (high)

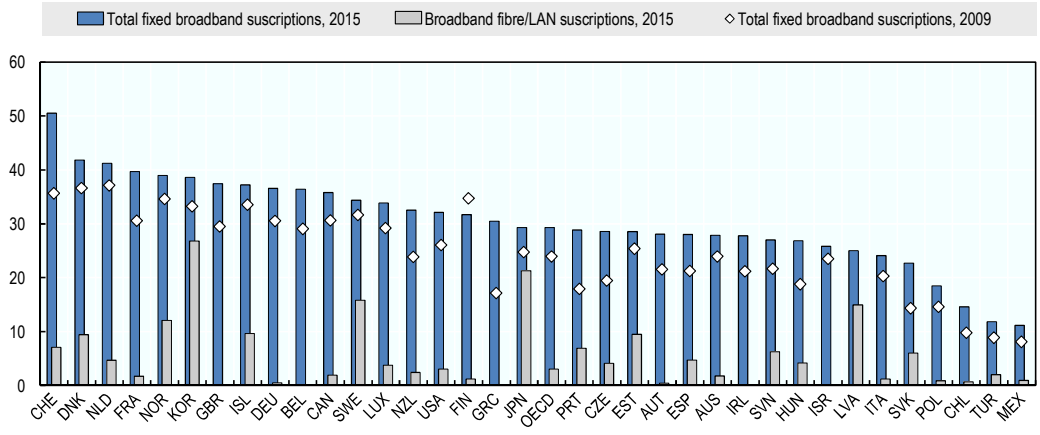


Source: World Bank (2014), *Logistics Performance Index 2014* (dataset), http://lpi.worldbank.org/international/global.

An efficient ICT infrastructure is increasingly important for accessing global markets. Access to low cost technologies (e.g. internet, mobile phones) and efficient logistics services, which rely on ICT, can offer SMEs greater access to global information sources and facilitate participation in e-commerce platforms, as well as interaction with supply chain partners. As high-speed communication networks increasingly represent an indispensable element of infrastructure, the penetration rate of fixed broadband diffusion has significantly increased across OECD countries. At the median, the number of subscriptions per 100 inhabitants increased from 24 in 2009, to 29 in 2014. Nevertheless, connectivity remains uneven across countries, particularly in the case of fibre connections, which are highest in Korea (26.8% penetration rate) and lowest in Belgium, Greece and Ireland (less than 0.1%) (Figure 3.7).

Figure 3.7. **Fixed broadband penetration, 2009 and 2015**

Subscriptions per 100 inhabitants



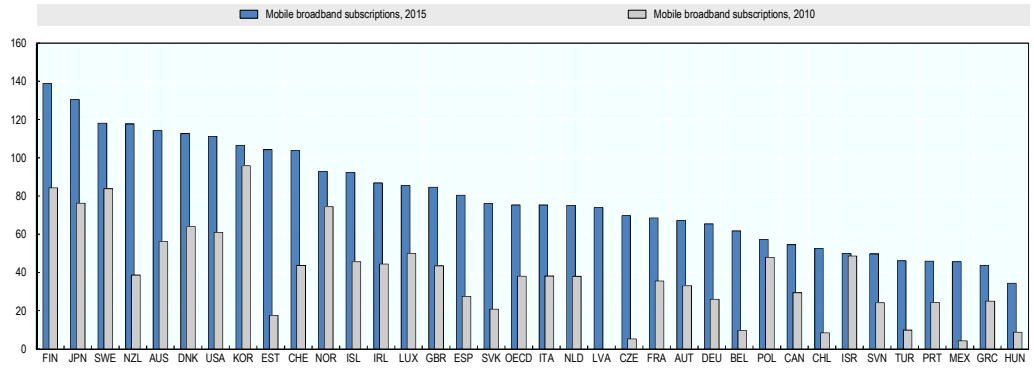
Note: 2009 data on total fixed broadband subscriptions not available for Latvia. Data on broadband fibre/LAN subscriptions not available for Israel and the United Kingdom.,

Source: OECD (2014b), OECD Science, Technology and Industry Outlook 2014 (database), http://dx.doi.org/10.1787/139a90c6-en; OECD (2014c), OECD Broadband (database), http://dx.doi.org/10.1787/tel_int-data-en.

Mobile broadband penetration has progressed at a faster rate across all OECD countries, from a median rate of 38% in 2010, to 75% in 2015, but cross-country gaps remain. In some countries, such as Australia, Denmark, Estonia, Finland, Japan, Korea, New Zealand, Sweden, Switzerland and the United States, penetration rates are over 100% (i.e. the number of subscriptions is higher than the number of inhabitants), whereas in Hungary, Greece, Mexico, Portugal, Slovenia and Turkey the rates are below 50% (Figure 3.8).

Figure 3.8. **Mobile broadband penetration, 2010 and 2015**

Subscriptions per 100 inhabitants



Source: OECD (2014b), OECD Science, Technology and Industry Outlook 2014 (database), http://dx.doi.org/10.1787/139a90c6-en; OECD (2014c), OECD Broadband (database), http://dx.doi.org/10.1787/tel_int-data-en.

Table 3.2. **Strengthening physical and ICT infrastructure: Policy developments**

Policy approaches	Examples	
Increasing private sector participation in infrastructure development	**Australia**	***National PPP Policy Framework and Guidelines****:* endorsed by the Council of Australian Governments (COAG) in 2008, it encourages the Australian, State and Territory governments to consider a Public Private Partnership for any project with a capital cost in excess of AUS 50 million.
	Mexico	***Law of Public-Private Partnership (PPP)***: enacted in 2012, it simplifies the regulatory framework for PPPs, defining and enabling a new type of long-term contract for private infrastructure development; facilitates contract adjustments when and if these are necessary for issues that adversely affect the project; reinforces creditors' rights; and ensures that projects are structured according to the principle of reasonable project-risk allocation.
	United Kingdom	***Pensions Infrastructure Platform****:* collaborative effort between the National Association of Pension Funds (NAPF) and the Pension Protection Fund (PPF) to explore ways pension funds could invest in UK infrastructure.
Strengthening the digital infrastructure	**European Union**	***Digital Agenda for Europe***: including 132 "actions" grouped around seven priority areas: (i) achieving the digital single market; (ii) enhancing interoperability and standards; (iii) strengthening online trust and security; (iv) promoting fast and ultra-fast Internet access for all; (v) investing in research and innovation; (vi) promoting digital literacy, skills and inclusion; and (vii) promoting ICT enabled benefits for EU society. ***European Fund for Strategic Investments (EFSI)****:* launched jointly by the European Commission and the EIB Group and earmarked to finance high speed broadband roll-out and other digital networks in 2014-2020, including rural areas.
	Germany	***Digital Agenda 2014-17****:* aim to use an efficient mix of technologies to provide ubiquitous broadband infrastructure delivering download speeds of at least 50 Mb per second by 2018.
	Italy	***Strategy for High Speed Broadband****:* part of the national Digital Agenda, it aims to increase coverage of high speed broadband to 85% of the population by 2020, through simplification of the regulatory framework, creation of new growth drivers, tax incentives and reduction of installation costs.
	Korea	***National Informatisation Master Plan***: it foresees investments in mobile platform technologies worth KRW 35 billion (USD 32 million) over 2013-17.
	Portugal	***Digital Agenda****:* it aims to strengthen the use of ICT and the development of the digital economy, particularly in SMEs. Objective include developing infrastructure for broadband, creating the conditions for e-commerce to develop, strengthening e-government, and expanding ICT exports

Table 3.2. **Strengthening physical and ICT infrastructure: Policy developments** *(continued)*

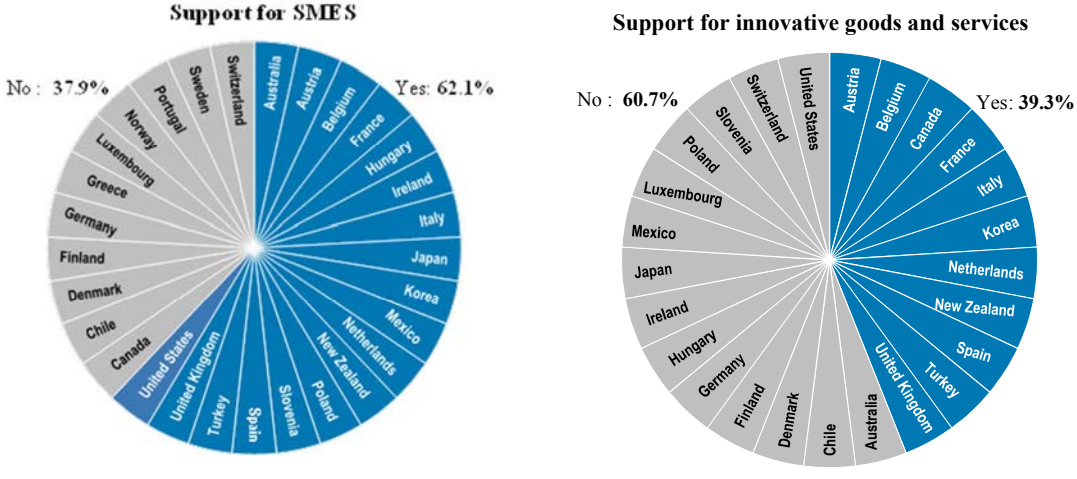
Policy approaches	Examples	
Strengthening the digital infrastructure	**New Zealand**	***Ultra-Fast Broadband initiative***: the project aims to connect 75% of citizens to ultra-fast broadband by 2020, and schools, hospitals and 90% of businesses by 2015. The initiative will enable download speeds of up to 100 Mbit/s and upload speeds up to 50 Mbit/s.
Improving SME broadband connectivity	**United Kingdom**	***Broadband Connection Voucher Scheme***: GBP 60 million government-funded project that provided GBP 100 - 3 000 vouchers to SMEs to cover installation costs of a faster and better broadband service (from December 2013 to October 2015).

Public procurement

Public procurement generates a sizeable market in OECD countries. In 2013, spending on public procurement represented an average of 12.1% of GDP (OECD, 2015d). Access to public procurement is generally more difficult for SMEs than for large firms. Barriers include lack of information on public procurement opportunities, large volumes and broad capabilities requested, restricted access to certain contracts, disproportionately high technical and financial qualification levels demanded, short time limits to submit tenders, costs of submission, financial guarantees required, administrative burdens, and finding bidding partners (EC, 2014).

According to the 2014 *OECD Survey on Public Procurement*, most OECD countries use public procurement as a tool to implement policies or strategies to foster secondary policy objectives, including SME development. Only two countries – Estonia and the Slovak Republic – have never developed a public procurement strategy, or a policy to address secondary policy objectives at the central level. However, only 60% of countries report measuring the results of their procurement strategies to achieve broader SME policy objectives, and an even smaller number (40%) conducts assessment on the effectiveness of procurement in supporting innovative goods and services (OECD, 2015d).

Figure 3.9. **Measuring results of strategic public procurement's policies, 2014**

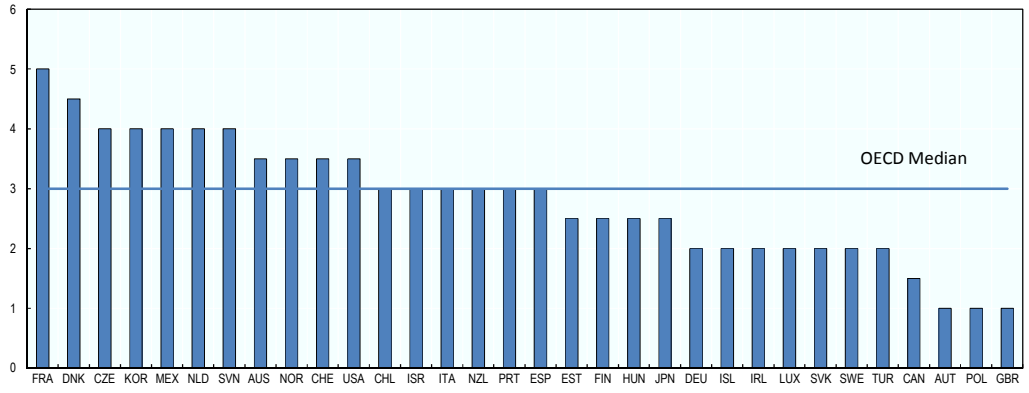


Source: OECD (2015d), *Government at a Glance 2015*, http://dx.doi.org/10.1787/888933249069

In order to facilitate business access to public tenders, increase competition and decrease administrative burdens, many countries have developed innovative procurement tools, including digital platforms and services. In most OECD countries, it is now mandated by law to announce tenders through the internet, and e-functionalities have become common practice at the beginning of the procurement cycle, including publishing of procurement plans (84%), electronic submission of bids (84%) and e-tendering (84%). On the other hand, e-services are less common at the end of the procurement cycle such as e-auctions (63%), ordering (66%), electronic submission of invoices (56%), and *ex post* contract management (41%) (OECD, 2015d).

Figure 3.10. **Functionalities provided in e-procurement systems, 2014**

Number



Note: The indicator takes into account announcing tenders, electronic submission of bids, e-tendering, notification of awards, electronic submission of invoices and ex post contract management. Data unavailable for the Czech Republic, Israel and Latvia.

Source: Adapted from OECD (2015d), *Government at a Glance 2015*, http://dx.doi.org/10.1787/888933249077.

Table 3.3. **Enhancing business access to public procurement: Policy developments**

Policy approaches	Examples	
Increasing transparency in information and procedures	**Canada**	***Procurement Ombudsman***: it reviews procurement practices to assess their fairness, openness and transparency, any complaint respecting the award of a contract for the acquisition of goods below the value of CAN 25 000 and services below the value of CAN 100 000, any complaint respecting the administration of a contract for the acquisition of materials or services, regardless of dollar value. It ensures an alternative dispute resolution process is provided, if all parties to the contract agree to participate
	United Kingdom	***Statement of principles***: setting out Government policy on the availability and accuracy of information about the delivery of public services that are publicly funded (March 2015).
Developing e-procurement	**Korea**	***Korea ON-line E-Procurement System (KONEPS)***: Single window for comprehensive information on procurement of all public organizations, dealing with whole procurement process including acquisition of all the information on the national procurement projects, procurement request, bids, contracting and payment.
	Ireland	***National Procurement Service (NPS)***: established in 2009 to reform the public procurement function, including by managing the national public procurement website (www.etenders.gov.ie) and developing appropriate and cost effective eProcurement measures.
	Mexico	***CompraNet 5.0***: electronic procurement platform that functions as a database of open public tenders, providing a range of information for suppliers and reducing transaction costs.

Table 3.3. **Enhancing business access to public procurement: Policy developments** *(continued)*

Policy approaches	Examples	
Enhancing access	**United Kingdom**	***Procurement reforms***: including abolition of a pre-qualification stage for procurements below the EU thresholds, requirement for contracting authorities to insert provisions in all public contracts to ensure prompt payment through the supply chain, requirement to advertise as many public sector opportunities in one place (Contracts Finder).
Specific provisions for SMEs	**Mexico**	***PEMEX regional development project (Tabasco)****:* launched in 2013 to increase public purchases in the oil sector from domestic suppliers by: creating a single corporate procurement and supply management department, cataloguing projected demand for goods and services, identifying items whose purchase can be shifted from foreign to local suppliers, creating a list of SMEs with the potential to deliver the good or service, offering SMEs a free consultation and advising on the areas needing to be scaled-up, providing a letter of assessment to ease SMEs' access bank loans to invest in relevant assets.
	Korea	***Multiple Award Schedule (MAS) for SMEs***: simplified process for procurement of recurring, high volume purchases at more competitive pricing, associated with volume buying through use of indefinite delivery contracts. *"SME Excellent Government Supply Products" award program:* high quality performance and innovative technology products provided by SMEs are included in the KONEPS product catalogue accessed by government suppliers of goods, works and consulting services.
	United States	***Small Business Act****:* requiring each federal agency to have an annual goal that represents "the maximum practicable opportunity for small business concerns […] to participate in the performance of contracts let by that agency". Adoptions of set-asides for SMEs, i.e. contracts are reserved that are to be awarded solely to SMEs, with a target of 23% of direct contracts and 40% of subcontracts.
Preferential financial treatment for SMEs	**Korea**	***Advanced payment***: the Korean Public Procurement Service Authority (PPS) allows for advanced payments to SMEs, up to 70% of the purchase price. *SME network loan program*: SMEs that qualify for the PPS Surrogate Payment Program can obtain bank loans for up to 80% of the relevant contract price to cover the costs of contract execution.

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Chapter 4

SME access to resources

This chapter discusses access to strategic resources by SMEs, including finance, human resources and skills, knowledge, technology and innovation, and energy. It comments on the relevance of these resources for small business creation and growth, highlights key challenges for SMEs' effective access and use, and presents comparative evidence on SME access and conditions for use across OECD countries. The chapter also provides a description of recent policy trends to enhance SME access to finance, skills development, innovation and energy efficiency.

Note: The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

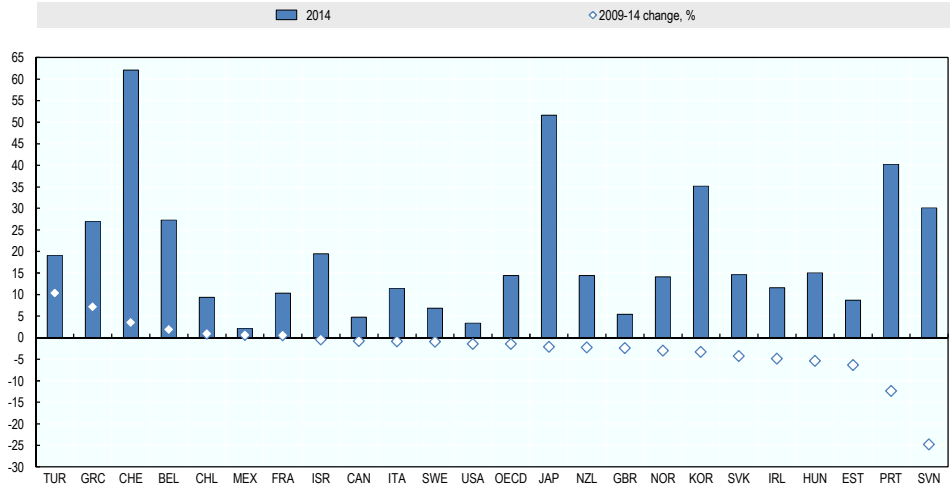
Access to finance

Access to finance is critical for SMEs to fulfil their potential to innovate, grow and create jobs. The lack of finance in appropriate forms has been a long-standing hurdle limiting SME growth in many countries. SMEs are typically at disadvantage with respect to large firms in accessing debt finance, due to under-collateralisation, limited credit history and, often, lack of expertise needed to produce sophisticated financial statements. The financing constraints can be especially severe in the case of start-ups or small businesses that rely on intangibles in their business model. Furthermore, young, innovative and high-growth firms often have limitations in accessing financing sources alternative to traditional debt, which may be better suited for their innovation and expansion needs (OECD 2006, 2015a).

In terms of GDP share, the weight of SME bank financing (i.e. loan stock) varies largely across countries, from above 50% in Switzerland and Japan to less than 5% in Mexico and the United States. These differences reflect to some degree the different weight of SMEs in countries' value added, but also the availability of alternative sources of finance for SMEs, as well as the extent to which large enterprises access bank credit. In the wake of the 2008-09 global financial crisis and during the uneven recovery, at a time of GDP contraction or slow growth, in many countries, credit to SMEs followed a similar pattern or contracted even more sharply, with the exception of some emerging economies, like Turkey, where business loans expanded at a sustained rate.

Figure 4.1. **SME loan shares, 2014**

As a percentage of GDP



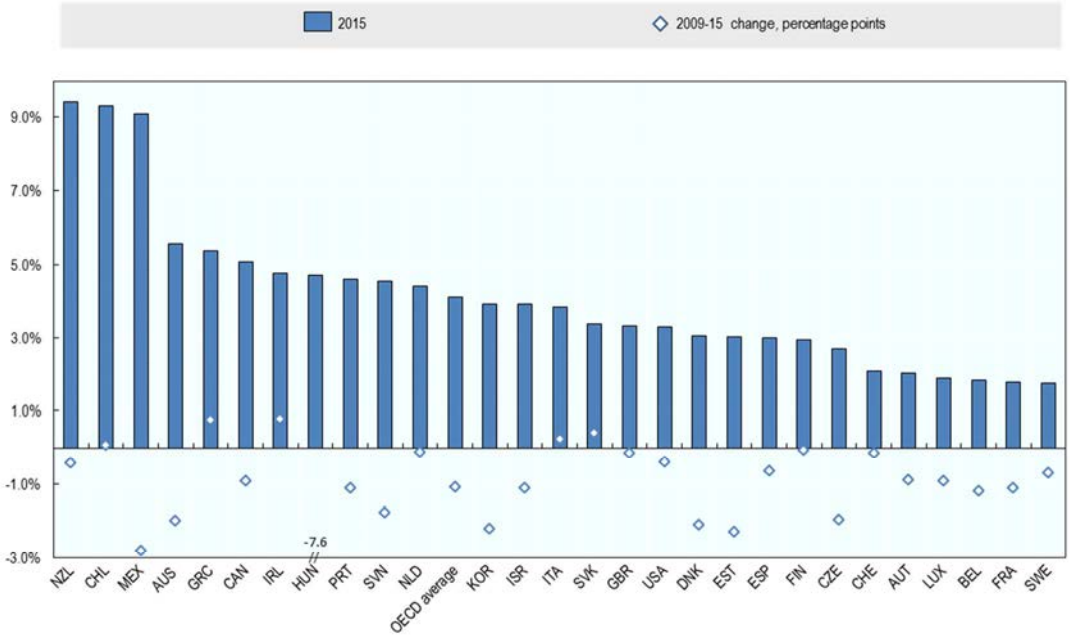
Source: OECD (2016a), Financing SMEs and Entrepreneurs 2016: An OECD Scoreboard, http://dx.doi.org/10.1787/fin_sme_ent-2016-en

Significant cross-country differences exist with regard to SME financing costs. In 2015, the real interest rate for SMEs ranged from 9.41% in New Zealand to 1.75% in Sweden. In the aftermath of the global financial crisis, in most countries, SMEs faced

more severe credit conditions than large enterprises, in the form of higher interest rates, shortened maturities, and increased request for collateral (OECD, 2017). Over 2009-15, SME average interest rates increased in some countries, particularly in Greece and Ireland (by 0.76 and 0.79 percentage points, respectively). On the other hand, a non-negligible decrease in the average interest rate for SMEs was observed in Hungary (-7.61 percentage points), Mexico (-2.80) and Estonia (-2.28).

Figure 4.2. **SME average interest rates, 2015**

In percent



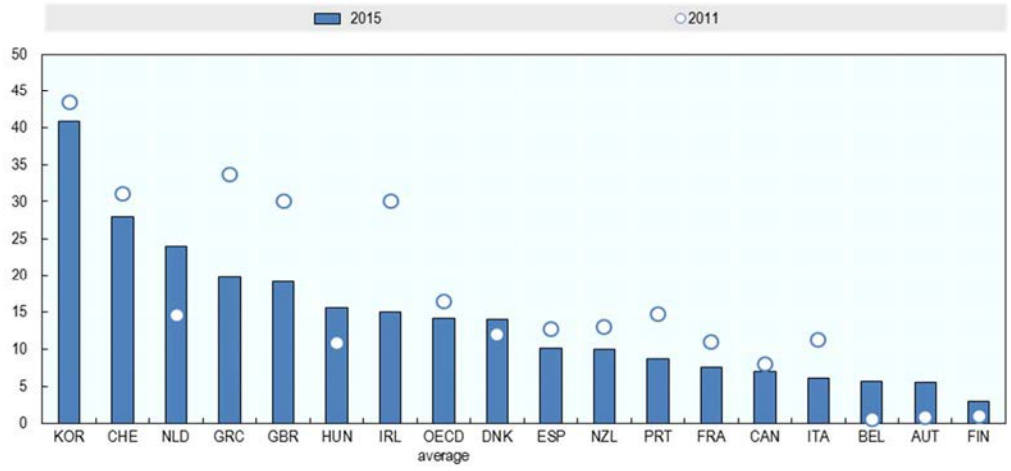
Note: Chile and Israel refer to 2010 instead of 2009.

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

Loan rejection rates increased steeply over 2008-10, and started to decline in most countries in 2011-12. However, while some loosening in credit conditions is discernible in recent years, large cross-country differences persist in the share of firms that experience full or partial rejection of their credit demand, which, in 2015, ranged from 40.9% in Korea, to 3% in Finland (Figure 4.3).

Figure 4.3. **SME loan rejection rates, 2011 and 2015**

As a percentage



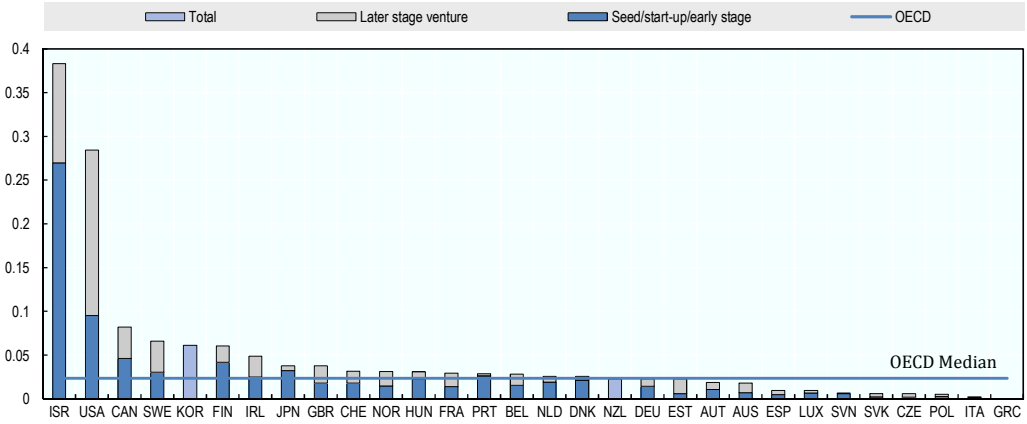
Note: Data from New Zealand refer to 2013 and from Switzerland and Denmark to 2014, instead of 2015. Data from the Netherlands and Hungary refer to 2013 instead of 2011; from France to 2012 instead of 2011; and from Denmark to 2010 instead of 2011.

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

In most OECD countries, venture capital investments account for a tiny share of GDP, well below 0.1%, and contracted severely in the aftermath of the 2008-09 financial crisis. Exceptions to this are Israel and the United States, where the venture capital industry accounted for 0.38% (2014) and 0.33% (2015) of GDP, respectively, and had recovered to or surpassed pre-crisis levels. At the same time, in these two countries, a rather different distribution of investment by stages is observed, with a greater focus of the Israeli VC market on seed/start-up/early stage investment (Figure 4.4).

Figure 4.4. **Venture capital investments**

As a percentage of GDP, 2015 or latest available year



Source: OECD (2016b), *Entrepreneurship at a Glance 2016*, http://dx.doi.org/10.1787/888933404662

Table 4.1. **Enhancing SME access to finance: Policy developments**

Policy approaches	Examples	
Improve SME access to credit		***Credit guarantees***
	Italy	***Central Credit Guarantee Fund****:* main government instrument to support SME finance, since 2009 increased endowment, eligibility criteria expanded, introduction of a government backstop guarantee, ensuring a more favourable prudential treatment of guarantees and relieving banks from capital charges for loans covered by the Fund.
		Credit risk information infrastructure
	Japan	***Credit Risk Database****:* it processes information on more than 2 million SME debtors, for assessing the credibility of individual SMEs. Information made available to public and private financial institutions.
		Credit mediation/ codes of conduct
	France	***Mediateur du Credit****:* assisted by departmental mediators from the Central Bank, it helps SMEs in addressing liquidity problems by maintaining or obtaining bank credit (since 2008)
	Ireland	*Code of Conduct for Business Lending to SMEs*: it requires that lenders design and implement specific procedures for dealing with customers in financial difficulties (since 2009, revised in 2011 and again in 2015).
		Preferential conditions
	Portugal	***"SME Invest and SME Growth"****:* Credit lines to support SME fixed investment and working capital, with long-term maturities, preferential conditions, partially subsidised interest rates and public guarantees.
		Incentives for banks to lend
	United Kingdom	***Funding for Lending****:* funding provided to banks and building societies for an extended period, with both the price and quantity of funding provided linked to their lending performance.
Broaden the range of financing instruments	**Austria**	***AWS' Guarantees for Mezzanine Investments****:* guarantees of mezzanine investments in SMEs aimed to modernization, expansion or other company's acquisition.
	Chile	***Chilean Commodities Exchange****:* Public market for receivables regulated by law and supervised by the Securities and Insurance Commission, it offers public auction platforms for the trading of commodities, contracts, receivables and their derivatives (since 2005).
	European Union	***COSME - Equity Facility for Growth****:* window of the Single EU Equity Financial Instrument which supports SMEs' growth, research and innovation, through investment in venture capital and mezzanine finance funds.
	France	***Crowdfunding framework regulation****:* regulation of P2P lending and equity crowdfunding, establishing limitations on funding per project, minimum requirements for contracts and disclosure obligations for platforms
	Italy	***Mini-bonds***: 2012 regulation for new debt security instrument, which can be issued by non-listed SMEs, under certain conditions.
	The Netherlands	***Techno-Partners Seed Facility****:* co-investment funding in seed and early stage ventures, matching funds from venture capital firms and business angels syndicates.
	Portugal	***New Line of Business Angels***: EUR 15 million funding launched in 2014, to attract private investors. The scheme provides public funding of up to 65 % of the total amount invested.
	United States	***SBA CAPLines Programme****:* asset-based revolving lines of credit to help SMEs meet short-term and cyclical working capital needs. ***Transaction Reporting and Compliance Engine (TRACE)****:* reporting requirements to bond dealers, increasing market transparency and reducing trading costs.
Strengthen the role of public financial institutions	**France**	***Bpifrance****:* Public development bank created in 2013 through the fusion of several public operators (OSEO, CDC Entreprises, Fonds stratégique d'investissement), it manages government support for innovation and a broad range of services and financial instruments for SMEs, including guarantees, co-financing, direct loans, and equity funds.
	United Kingdom	***British Business Bank****:* operational since 2014, with the aim to support competition and diversity in SME finance markets, including through by providing support to smaller banks and alternative finance providers, Credit Reference Agencies and Finance Platform Referrals to help SMEs access finance on the market.

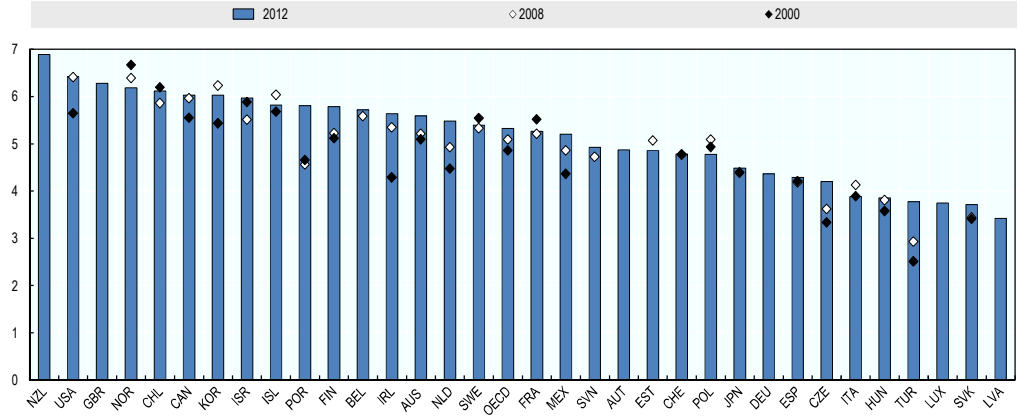
Human capital and skill development

In the knowledge-based economy, competitiveness cannot be achieved without significant investment in people and development of appropriate skills. There is evidence that SMEs have higher skills deficiencies than large firms and SME training effort is on average significantly weaker per employee than in larger firms (OECD, 2013a). SMEs often face challenges in attracting and retaining staff with relevant skills, and have greater difficulties in identifying workers with sought-after skills in the labour market. Furthermore, SMEs appear to be relatively behind in the use of company-level learning strategies, i.e. the use of managerial practices and methods that promote learning and autonomy (OECD, 2015c). Low workforce skill levels, limited training and problems in recruitment and retaining impact particularly on the ability of SMEs to effectively engage in knowledge networks and innovation processes.

Education and training are important facets of developing a skilled workforce and since the 1980s, most OECD countries have worked to increase the proportion of students who complete secondary education and move on to post-secondary and higher education. Public expenditure as a share of GDP provides an indication of how a country prioritises education in relation to its overall allocation of resources. Since 2000, the relative expenditure increased in the OECD area, from a median level of 4.9% in 2000, to 5.3% in 2012, although some contraction was observed in some countries over 2008-12 (Figure 4.5). Nevertheless, large cross-country differences remain in the share of adults (35-44 years) who attained upper secondary and tertiary education. In 2012, this share ranged from about 75% in the Czech Republic to 20% in Spain (upper secondary), and from 60% in Canada to about 15% in Italy (tertiary) (Figure 4.6).

Figure 4.5. **Education expenditure, primary to tertiary education institutions, 2000, 2008 and 2012**

As a percentage of GDP

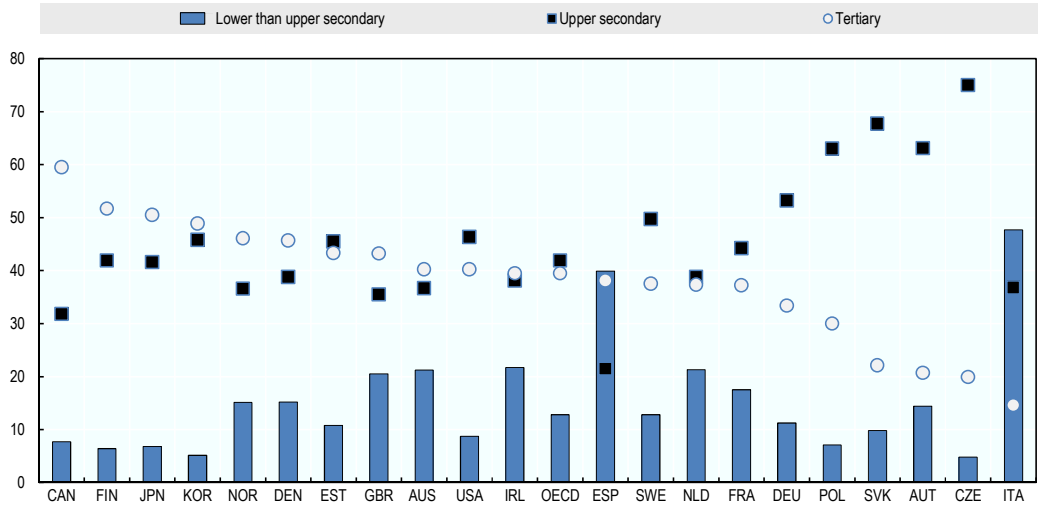


Note: Public expenditure only (for Switzerland, in tertiary education only; for Norway, in primary, secondary and post-secondary non-tertiary education only). Countries are ranked in descending order of expenditure from both public and private sources on educational institutions in 2012. Observation for 2000 and 2008 for Latvia is not available.

Source: OECD (2015b), OECD Education Statistics, Education at a Glance (database), http://dx.doi.org/10.1787/eag-data-en

Figure 4.6. **Level of educational attainment among adults (35-44 years old), 2012**

As a percentage

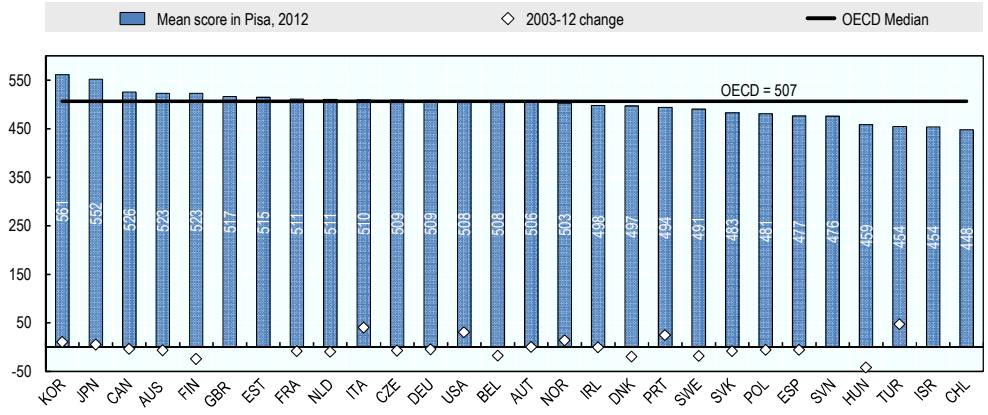


Note: Lower than upper secondary includes ISCED 1, 2 and 3C short. Upper secondary education includes ISCED 3A, 3B, 3C long and 4. Tertiary includes ISCED 5A, 5B and 6. Where possible, foreign qualifications are included as per their closest correspondence to the respective national education systems. The total of the proportions by level of educational attainment for each age group may not sum up to 100% due to the existence of missing data.

Source: OECD (2013b), *OECD Skills Outlook 2013,* http://dx.doi.org/10.1787/888932899358

The evidence on education performance also suggests some variance across OECD countries in the development of work-related skills, which may impact on SME productivity and competitiveness. This is the case of problem-solving skills, which the OECD PISA survey measures for 15 year old students (Figure 4.7). On average, across OECD countries, about one in five students is able to solve only straightforward problems, if any, provided that they refer to familiar situations (OECD, 2014b). Korea and Japan rank highest in this area, but over 2003-12, it was in Italy, Portugal, Turkey and the United States, that the most sizeable relative progress was observed in mean student performance.

Figure 4.7. **Students' performance in problem solving: Mean score in PISA, 2012**

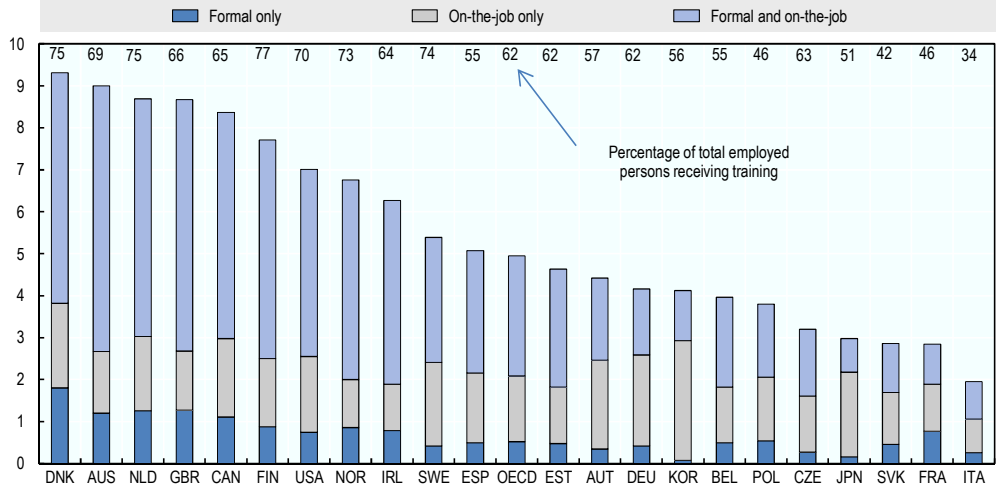


Source: OECD (2012), PISA 2012 (database), www.oecd.org/pisa/data/pisa2012database-downloadabledata.htm.

Firm investments in training and lifelong learning are essential to upgrade workforce skills and ensure competences are developed that match firms' needs. According to the OECD PIAAC survey, in the countries covered, 61% of workers on average underwent formal and/or on-the-job training at least once in 2011-12, with significant cross-country differences, from 77% (Finland) to 34% (Italy). Remarkable differences are also observed in the share of value added devoted to training, which ranged between about 10% (Denmark) and 2% (Italy). Some cross-country variance is also evident from the assessment of adults' problem solving skills, which is highest in Japan and lowest in Poland (Figure 4.9).

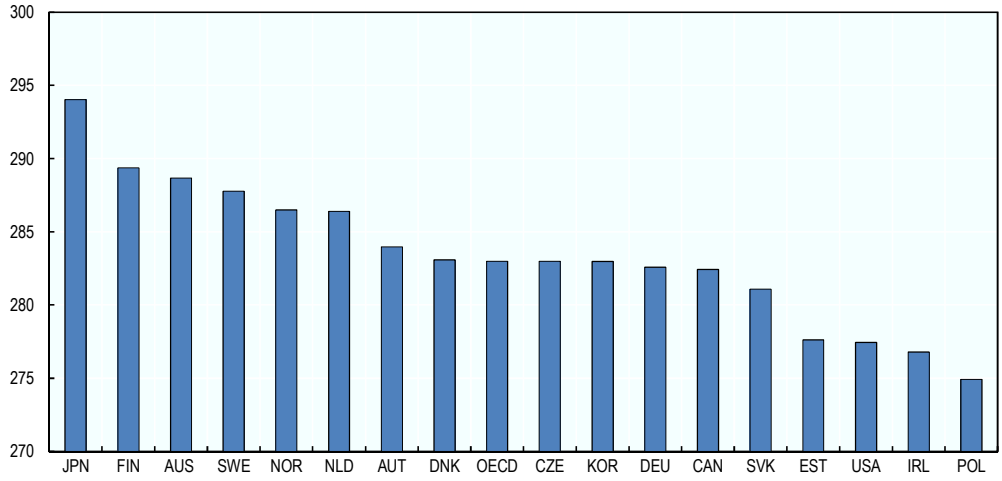
Figure 4.8. **Firm-specific training: Employment and investment by type, 2011-12**

As a percentage of total employed persons and gross value added



Source: OECD (2015d), *OECD Science, Technology and Industry Scoreboard 2015:* http://dx.doi.org/10.1787/888933273718

Figure 4.9. **Adults' performance in problem solving: Mean score in PIAAC, 2012**

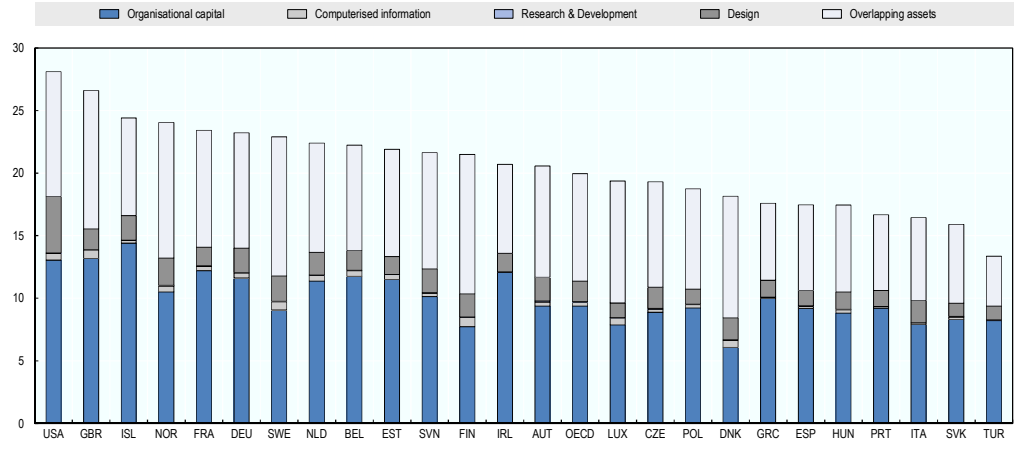


Source: OECD (2013b), *OECD Skills Outlook 2013,* http://dx.doi.org/10.1787/9789264204256-en

Evidence on workers related to knowledge-based capital (KBC) can provide insights on the application of skills in firms, and the degree at which they contribute to knowledge and innovation (Figure 4.10). KBC-related workers account for between 13% (Turkey) and 28% (United States) of total employment in many OECD countries. The proportion of KBC-related employment varies more widely in manufacturing than in service industries, with the United States exhibiting the most KBC-intensive manufacturing industry, and the Nordic countries the most KBC-intensive services (OECD, 2013c).

Figure 4.10. **Knowledge-based capital related workers, 2012**

As a percentage of total employed persons



Source: OECD (2013c), *OECD Science, Technology and Industry Scoreboard 2013,* http://dx.doi.org/10.1787/sti_scoreboard-2013-en, based on United States Occupational Information Network Database, US Current Population Survey and European Union Labour Force Survey, June 2013.

Table 4.2. **Enhancing human capital and skill development: Policy developments**

Policy approaches	Examples	
Changes to school curricula	**Korea**	***Creative experiential learning activities**:* 2009 amendment of the national curriculum introducing activities to strengthen creativity and character education in the elementary and secondary curricula.
Reducing school dropout	**The Netherlands**	***Qualification requirements**:* for all youth aged 16-23 without a degree from secondary qualification, obligation to attend school until graduation. *Regional report and co-ordination centres (RMCs):* established to support youth in continuing their education and guiding their school-to-work transition
	Norway	***Follow-up service**:* acting as a safety net, it follows up all early school leavers and other young people aged 16-21 who are neither in the education system nor at work. It provides information, guidance and practical assistance to direct youth into an activity that may lead to matriculation, formal vocational qualification or partial qualification that can improve access to the labour market.
Enhancing school-work transition	**Austria**	***Apprenticeship**:* Dual vocational training composed of an enterprise-based part (~80%), providing job-specific knowledge and skills, and education at part-time vocational school (~20%), focused on the provision of basic subject-related theory and extension of general education. Placements abroad (up to 6 months a year) can be recognised as part of the apprenticeship training if skills and knowledge acquired abroad correspond with the apprenticeship trade.
	Belgium	***Service learning**:* in the Flemish Community, students in part-time VET programmes participate in voluntary work, usually in non-profit organizations, providing a service while benefiting from a learning opportunity.
	Canada	***Job shadowing:*** ninth-grade students "shadow" an adult in real-life work setting to learn about the job and explore possible careers.
	Finland	***Training by apprenticeship**:* offered in all vocational qualifications and sectors, it consists of studies arranged in the workplace in connection with practical work assignments, which are supplemented with theoretical training provided in the vocational institution. In some cases, tailor-made training programmes for a specific job are available, which do not aim at any official qualification.
	Germany	***Dual vocational training***: The practical training takes place in recognized learning companies on the basis of national training regulations and is supervised by the chambers of skilled crafts and chambers of industry and commerce The theoretical training takes place in vocational schools. Provided in about 340 recognized occupations, the duration of the training varies from 2 to 3.5 years. Placements abroad are possible up to 9 months.
	Italy	***Simulated learning enterprises**:* Vocational and training (VET) secondary schools team up with local enterprises on school premises, simulating enterprise work, to encourage students to acquire the skills needed by those enterprises.
	Portugal	***Inov Contacto***: programme run by the national development agency, providing to young graduates 6 to 9 month internship opportunities in multinational enterprises abroad, in markets of strategic interest for Portugal, and an informal networking platform for current and past participants to share experience and knowledge. ***Programa** +Superior*: scholarship programme for Universities in disadvantaged regions, aimed at attracting students, encouraging them to stay in these regions and contribute to their development.

Knowledge, technology and innovation

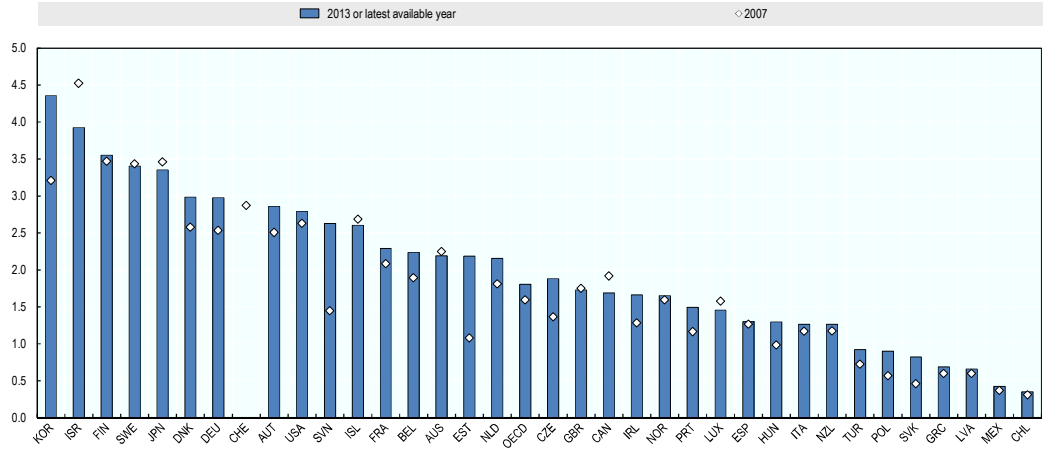
The main feature of the knowledge-based economy is the increased importance of knowledge as a factor of production. Innovation by SMEs is largely influenced by knowledge spillovers and networks they can access, as well as by the broad innovation system in which they are embedded. SMEs and new firms mainly innovate in collaboration with other players, such as customers, suppliers, competitors, universities and research centres. As such, a key challenge for SMEs is to identify and connect to appropriate knowledge networks at the local, national and global level. In this regard, a highly dense and well-connected innovation system may offer a variety of learning and

knowledge exchange opportunities to entrepreneurs, including access to global networks and value chains.

The share of GDP devoted to R&D activities varies widely across OECD countries, from above 4% in Korea to below 1% in Chile, Greece, Latvia, Mexico, Poland, Slovak Republic and Turkey (Figure 4.11). The contribution of SMEs to business R&D (BERD) also differs across the OECD area, from 74.2% in Israel to 4.7% in Japan, reflecting to some degree the weight of SMEs in the economy, but also their sectoral distribution, engagement in formal R&D, as well as linkages with other players in the innovation system. The share of government-funded BERD that is directed to SMEs does not appear to be directly correlated with their weight in the national R&D system. For instance, while SMEs account for 11% of BERD in Germany, they are recipient of 35% of government-funded BERD. On the other hand, in the United Kingdom, SMEs account for 27.5% of BERD but receive 11.9% of government funds to private R&D investments.

Figure 4.11. **Gross domestic expenditure on R&D, 2013 and 2007**

As a share of GDP

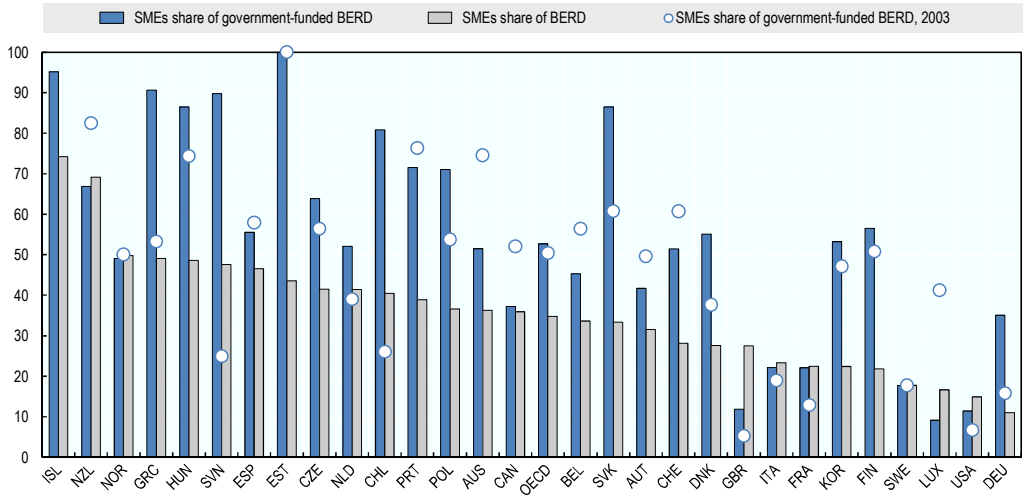


Note: No 2013 data available for Switzerland.

Source: OECD (2014a), OECD Science, Technology and Industry Outlook 2014 (database), http://dx.doi.org/10.1787/139a90c6-en

Figure 4.12. **SME share of business R&D and government support, 2013 and 2003**

As a percentage



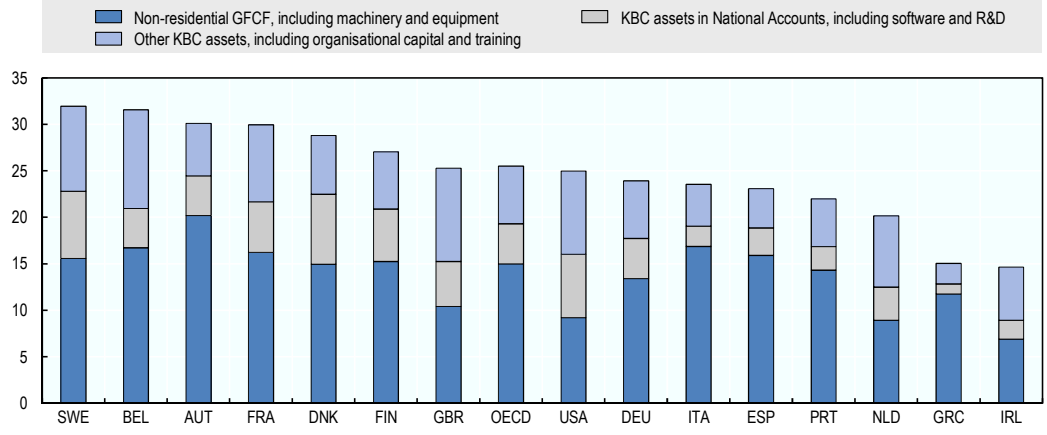
Note: For a number of countries, methodological improvements were adopted over the period 2003-13, which may hinder data comparisons over time.

Source: OECD (2015d), *OECD Science, Technology and Industry Scoreboard 2015*, http://dx.doi.org/10.1787/888933274115

Business investment in knowledge-based capital, of which R&D represents a typology, has grown rapidly over the last decade in the OECD area and, in some countries, such as Sweden, the United Kingdom and the United States, it is higher than the investment in fixed assets. On the other hand, in countries like Greece, Italy, Portugal and Spain, expenditures in fixed capital, including machinery and equipment, still account for most of business capital investment.

Figure 4.13. **Business investment in fixed and knowledge-based capital, selected economies, 2013**

As a percentage of business sectors' gross value added

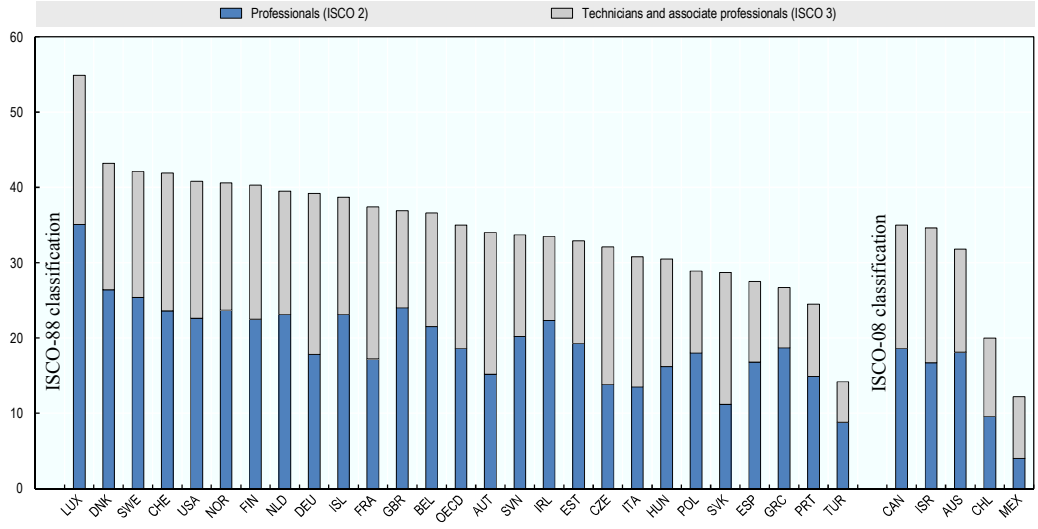


Source: OECD (2015d), *OECD Science, Technology and Industry Scoreboard 2015*, http://dx.doi.org/10.1787/888933273011

Scientific, technical and managerial skills are central to the capacity of firms to produce, absorb and use new knowledge. This capacity depends on the profile of firms' workforce, as well as on the learning practices within organisations. In the OECD area, at the median, professionals and technicians account for 35% of total employment, but the share and composition vary significantly across countries, from 12% in Mexico, with a prevalence of technicians and associate professionals, to 55% in Luxembourg, with a majority of professionals.

Figure 4.14. **Professionals and technicians, 2012**

As a percentage of total employment

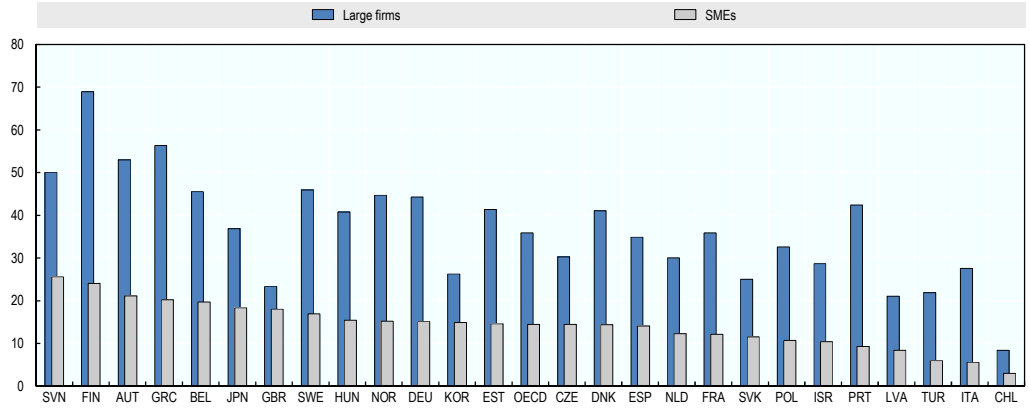


Source: OECD (2013c), *OECD Science, Technology and Industry Scoreboard 2013*, OECD Publishing, Paris, http://dx.doi.org/10.1787/sti_scoreboard-2013-en.

Innovation collaboration rates vary widely across OECD countries, particularly with regard to collaboration between firms and higher education or public research institutions, which typically concern large firms to a much greater extent than SMEs. The share of innovative SMEs that engage in co-operation with research institutions ranges from about 25% in Slovenia to less than 3% in Chile (Figure 4.15).

Figure 4.15. **Firms collaborating on innovation with higher education or public research institutions, by firm size, 2010-12**

As a percentage of product and/ or process innovative firms in each size category



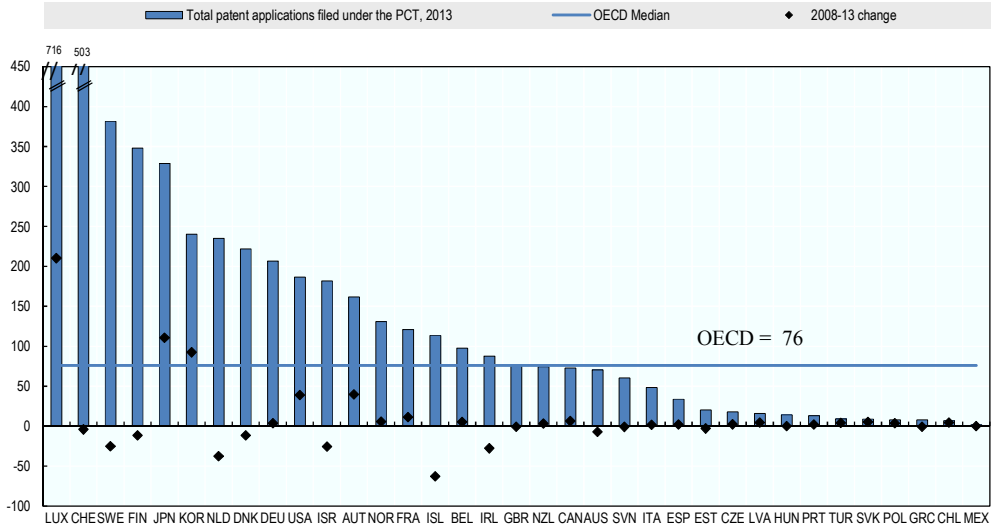
Note: International comparability may be limited due to differences in innovation survey methodologies and country-specific response patterns. European countries follow harmonised survey guidelines with the Community Innovation Survey. Please see www.oecd.org/sti/inno-stats.htm and chapter notes for more details.

Source: OECD (2015d), *OECD Science, Technology and Industry Scoreboard 2015*, http://dx.doi.org/10.1787/888933274074

Innovation output, as measured by the number of patent applications filed under the Patent Cooperation Treaty per million inhabitants, varies largely in the OECD area, ranging from above 500 (Luxembourg and Switzerland) to less than 10 (Chile, Greece, Mexico, the Slovak Republic and Turkey) (Figure 4.16). Although the patent metrics presents many limitations for assessing SME innovation performance - reflecting diverse regulatory frameworks, differences in specialisation, patenting strategies and locational choices of innovation-oriented large groups, among others – the chart illustrates the persistence of remarkable cross-country differences in innovation-driven competition and potential for knowledge spillovers to businesses.

Figure 4.16. **Total patent applications filed under the PCT, 2008 and 2013**

Per million inhabitants



Source: OECD (2014a), OECD Science, Technology and Industry Outlook 2014 (database), http://dx.doi.org/10.1787/139a90c6-en

Table 4.3. **Supporting business innovation: Policy developments**

Policy approaches	Examples	
Direct equity funding	**Poland**	***Polish Growth Fund**:* launched in 2013 in co-operation with the European Investment Fund (EIF), to stimulate equity investments into growth-focused enterprises.
	United Kingdom	***UK Future Technologies Fund**:* technology focused fund-of-funds, launched in 2010 in co-operation with the EIF to invest in venture capital funds in the ICT, life sciences and advanced manufacturing sectors.
Support to investment in innovative start-ups and SMEs	**Italy**	***Equity crowdfunding for innovative-start-ups and SMEs**:* 2015 law that allows equity investments through crowdfunding portals in SMEs which have i) 3% of either sales or costs attributable to R&D activities; or ii) one third of employees with a degree or one fifth doing or having undertaken a PhD; or iii) a patent. The law broadens earlier criteria, which restricted equity crowdfunding to innovative start-ups.
	Turkey	***Incentives for seed and early-stage investors***: venture capital funds can be deducted from the income of investors, when not exceeding 10% of the taxpayer's declared income. Business angels are allowed to deduct 75% of investments in early stage companies against individual income, with the ratio increasing to 100% for companies with projects that fall within the scope of programmes determined by the Science, Industry and Technology Ministry, the Scientific and Technological Research Council and the Small and Medium Enterprises Development Organization.
Tax incentives for SME innovative investments	**Canada**	***Scientific Research and Experimental Development Programme**:* enhanced R&D tax credit for small Canadian-controlled private corporations (CCPCs) at 35% rate on the first CAD 3 million of eligible expenditures rather than at the general 15% rate.
	France	***Innovation tax credit**:* tax credit for SMEs, covering non-R&D expenditures, such as design prototypes and pilot plants for new products.
	Portugal	***2014-20 R&D tax credit**:* provided for R&D expenditures undertaken between 2014 and 2020, with a basic deduction rate of 47.5% for SMEs and 32.5% to firms in general.

Table 4.3. **Supporting business innovation: Policy developments** *(continued)*

Policy approaches	Examples	
Support to R&D commercialisation	**Israel**	***Technology transfer***: development of private or for-profit models for Technology Transfer Offices (TTOs), often in the form of limited liability companies. Internet platforms are supported that provide a market for academic inventions.
	Norway	***Commercialising R&D results (FORNY2020)***: it supports the commercialisation of R&D results generated by researchers and students alike, which may have their origin in publicly-funded research institutions alone or in collaborative projects involving trade and industry.
Support to innovation addressing social challenges	**Chile**	***Social Innovation and Entrepreneurship Programme***: it supports organisations that promote innovation in social enterprises, covering costs related to business plan development, proof of concept, certification, patenting and commercialization, among others.
	European Union	***Active and Assisted Living Programme***: funding of cross-national projects that involve SMEs, research bodies and user's organisations to address the challenges arising from demographic change, including through innovative ICT-based products, services and systems for ageing well at home, in the community, and at work.
	Portugal	***Portugal Social Innovation Initiative***: launched in 2014, it provides EUR 150 million funding for projects related to innovation and social entrepreneurship. It operates through a Fund for Social Innovation, a Fund for Social Impact Bonds, Partnerships for the Impact (non-reimbursable matchmaking financing for early-stage initiatives) and enablement vouchers for the beneficiaries of the above funds.
	United Kingdom	***UK Centre for Challenge Prizes***: established at the National Endowment for Science Technology and the Arts (NESTA) in 2012 to increase practical evidence and understanding about challenge prizes so they can be used effectively by governments, charities and businesses to have a tangible positive impact on society.

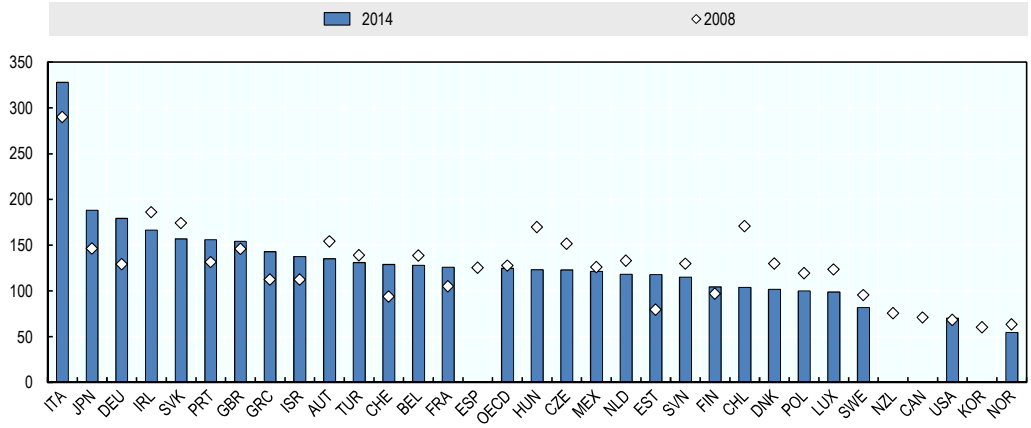
Energy

Energy costs account for a comparatively small share of small businesses' overall costs. However, they are of crucial importance as they are multiplied in the production chain and have a considerable impact on the return on sales (Schwartz and Braun, 2013). Yet, far fewer SMEs than large firms adopt practices for a more efficient use of energy, such as energy audits or the implementation of energy-saving practices. In particular, SMEs and entrepreneurs often lack adequate skills and financial resources to adopt integrated and systematic methods to improve energy performance.

In the OECD area, significant cross-country differences in electricity prices for industry are observed. In 2014, the lowest price was recorded in Norway (54 USD /MWh), while the highest price was observed in Italy (328 USD /MWh). The price level in OECD countries doubled over 2000-08, but the growth trends came to a halt with the 2008-09 global economic crisis, followed by a period of lower demand. Since 2009, electricity prices recorded a modest increase, reaching again pre-crisis level in 2013. The most significant price increase was observed in countries that already exhibited above-average electricity costs, including Italy, Japan and Germany.

Figure 4.17. **Electricity prices for industry, 2014 and 2008**

In USD, PPP/ MWh = Megawatt hour



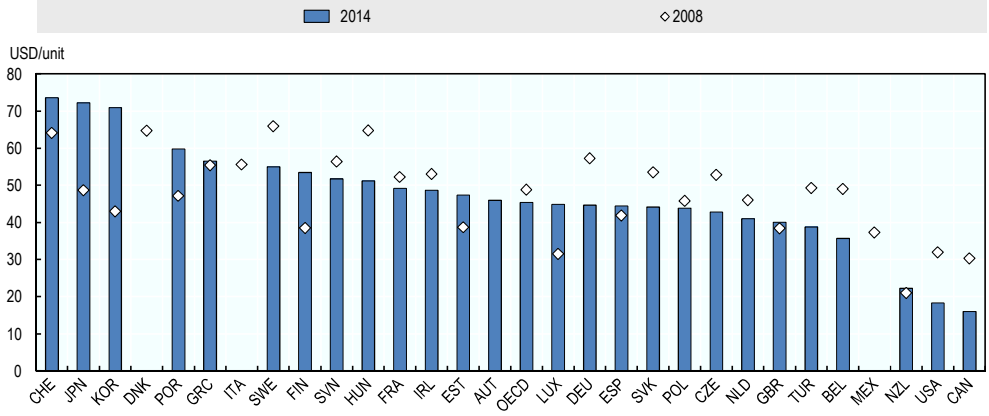
Note: No 2014 data available for Canada, Korea, New Zealand and Spain.

Source: OECD (2016c), IEA Energy Prices and Taxes Statistics (database), http://dx.doi.org/10.1787/eneprice-data-en

Over 2008-14, natural gas prices for industry exhibited an overall negative trend in the OECD area, from 48.8 USD per unit to 45.4 at the median. However, while the drop was significant in some countries that were characterised by a relatively high price level, such as Germany, Hungary and Sweden, a few countries recorded a remarkable price increase between 2008-14, such as a 49% increase in Japan, and even a 65% increase in Korea.

Figure 4.18. **Natural gas prices for industry, 2014 and 2008**

In USD, PPP/ MWh = Megawatt hour



Note: Data for Denmark and Japan is from 2009. No 2014 data available for Denmark, Italy and Mexico.

Source: OECD (2016c), IEA Energy Prices and Taxes Statistics (database), http://dx.doi.org/10.1787/eneprice-data-en

Table 4.4. **Improving business energy efficiency: Policy developments**

Policy approaches	Examples	
Dedicated credit lines and allowances	**Korea**	***Preferential loans***: preferential long-term and low-interest rate loans to encourage the installation of energy-efficient equipment in industry.
	Turkey	***Sustainable Energy Financing Facilities (TurSEFF)***: EBRD-funded credit line, specifically dedicated for on-lending to SME sized industrial companies and commercial enterprises, for the implementation of energy efficiency and/or renewable energy investment opportunities.
	United Kingdom	***Action Energy Loans***: programme by the UK Carbon Trust to help small businesses make investments in energy efficiency through interest-free energy loans to fund the cost of buying energy equipment. ***Enhanced Capital Allowance Scheme***: it enables businesses to claim 100% first year capital allowances on investments in energy saving technologies and products.
Support to energy audits	**Japan**	***Subsidies to energy audits***: provided by Ministry of Economy, Trade and Industry (METI) for businesses with an annual energy use exceeding 1 500 kilolitres in crude oil equivalent. The audits are carried out by the non-profit Energy Conservation Centre of Japan (ECCJ), which has no links to equipment or service providers.
	Sweden	***Energy edit vouchers***: offered by the Energy Agency to SMEs, covering 50% of energy audit costs.
	United States	***Free audits by Universities***: sponsoring by the US Department of Energy to Universities that participate in the Office of Industrial Technologies (OIT)'s *Industrial Assessment Center Program*, to offer free energy, waste and productivity audits to qualifying facilities. Assessments are conducted by local teams of engineering faculty and students.
Advisory services	**Ireland**	***Energy efficiency programme for SMEs***: run since 2007 by the Sustainable Energy Authority of Ireland (SEAI), it provides assessment, advice and training.
	Sweden	***Energy and climate advisors***: operating in all municipalities, they provide energy efficiency guidance to SMEs and households.
	United Kingdom	***Action Energy Programme***: it provides businesses, industries and public sector organisations with free, practical and impartial help and advice on how to cut their energy costs.
Dedicated business networks	**Japan**	***Energy conservation neighbourhood association model***: developed by the Hokkaido and Kanto Bureaus of Economy, Trade and Industry, it promotes energy efficiency via the establishment of industry groups within the same sector or within the same geographical location to share information and experiences.
	Italy	***"Corrente" programme***: launched in 2010 by the Management Authority for Energy Services and the Ministry of Economic Development, it provides SMEs with information and specialised knowledge, and encourages collaboration and aggregation among firms, including through "network contracts", which allow two or more companies, on a purely contractual basis, to jointly perform one or more activities to increase their potentials for innovation and competitiveness.
	Sweden	***ENIG***: energy efficiency network targeting SMEs in the manufacturing sector. Since 2009, it creates, collects and disseminates information on energy efficiency technologies, practices and methods. The network enables cross-industry collaboration in areas of common interest, such as ventilation, compressed air and lighting.
	Switzerland	***Energy Efficiency Network (EEN)***: established in 1987, it enables 10-15 regionally based large companies and SMEs from different sectors to share their experiences in moderated meetings. After a company survey, participants decide on a joint energy efficiency and CO2 reduction target over three to four years.
National strategies to improve resource management in industry	**Portugal**	***Commitment to Green Growth***: national strategic plan devised by the Green Growth Coalition, representing around 100 organisations. It comprises the development of eco-industrial parks and Responsible Business Zones to optimise the flow of resources between industries and the promotion of cogeneration systems.

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Chapter 5

Entrepreneurial culture

This chapter discusses the relevance of entrepreneurial attitudes, opportunities and capabilities for SMEs, and presents comparative evidence across OECD countries. It comments on recent patterns, networking opportunities for entrepreneurship in a digitalised economy, and access to entrepreneurship training. The chapter also provides a description of recent policy trends to promote an entrepreneurial culture.

Note: The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

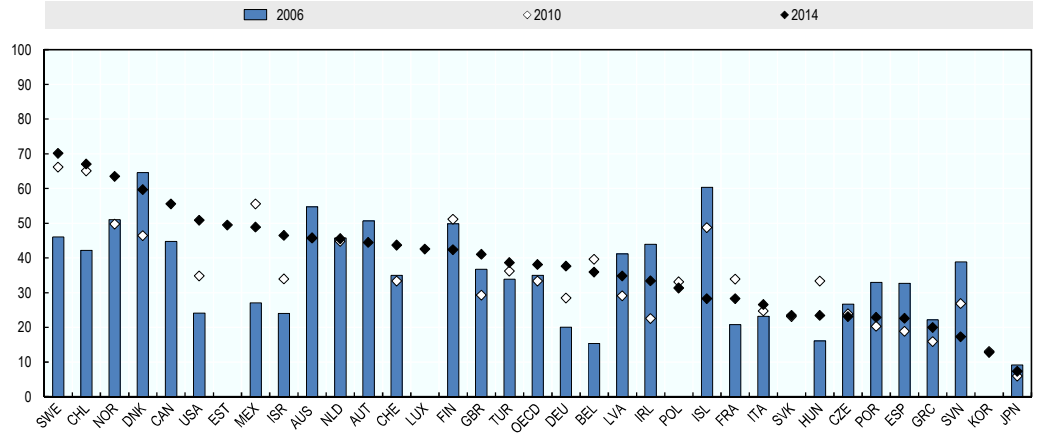
The entrepreneurial function is a vital component in the process of economic growth (Baumol, 1968). The business environment context regulates opportunities, feasibility and desirability considerations for entrepreneurial action, as well as its outcomes. Culture, here intended as shared practices and values (House et al., 2004), has an influence on risk-taking and tolerance of failure (attitudes), but also affects the individual's conjectures about the desirability of the entrepreneurial action (opportunities). At the same time, entrepreneurial skills and abilities affect the propensity of individuals to become entrepreneurs, as well as the likelihood of their success (Acs et al., 2014).

Recognition of entrepreneurial opportunities varies broadly across OECD countries. According to GEM data, in 2014, about 70% of adults in Sweden saw good opportunities to start a business, against less than 20% in Japan, Korea and Slovenia (Figure 5.1). The survey evidence shows that in countries which were severely hit by the 2008-09 global crisis, such as Iceland, Ireland, Portugal and Spain, in 2014, perceived opportunities for entrepreneurs were still below the pre-crisis level. In several other countries (e.g. Canada, Chile, Germany, Israel, Mexico, Norway, Sweden, United States), in 2014, a significantly higher share of the adult population expressed positive views about entrepreneurial opportunities than in 2006.

Networking is a powerful instrument for potential and active entrepreneurs to identify business opportunities, as well as to access and mobilise resources. Digitalisation, internet usage in particular, can enhance social networking and the perception of entrepreneurial opportunities (Acs et al., 2014). Networking potential in the digital economy, as measured by the share of the population who knows personally at least one start-upper (i.e. an entrepreneur who started a business within two years), weighted with the number of internet users per 100 inhabitants, is highest in the Nordic countries and lowest in Belgium, Greece, Italy, Japan and Turkey (Figure 5.2).

Figure 5.1. **Perceived opportunities for entrepreneurship (2006, 2010 and 2014)**

Percentage of 18-64 year-old population, who sees good opportunities to start a firm in the area where they live

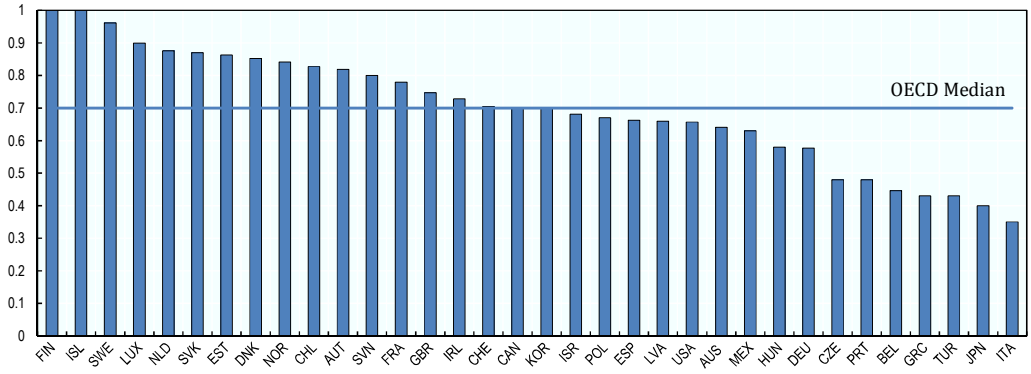


Note: New Zealand refer to 2005 instead of 2006; Austria, Israel, Portugal and Switzerland refer to 2007 instead of 2006; Czech Republic, Poland and Slovak Republic refer to 2011 instead of 2010; Czech Republic, Israel, Korea, Latvia and Turkey refer to 2013 instead of 2014. No 2006 data available for Estonia, Korea, Luxembourg, Poland and the Slovak Republic.

Source: GEM (Global Entrepreneurship Monitor) (2015), *Entrepreneurial Behaviour and Attitudes* (database), www.gemconsortium.org/data/key-aps

Figure 5.2. **Networking potential, 2016**

Scores from 0 (low) to 1 (high)



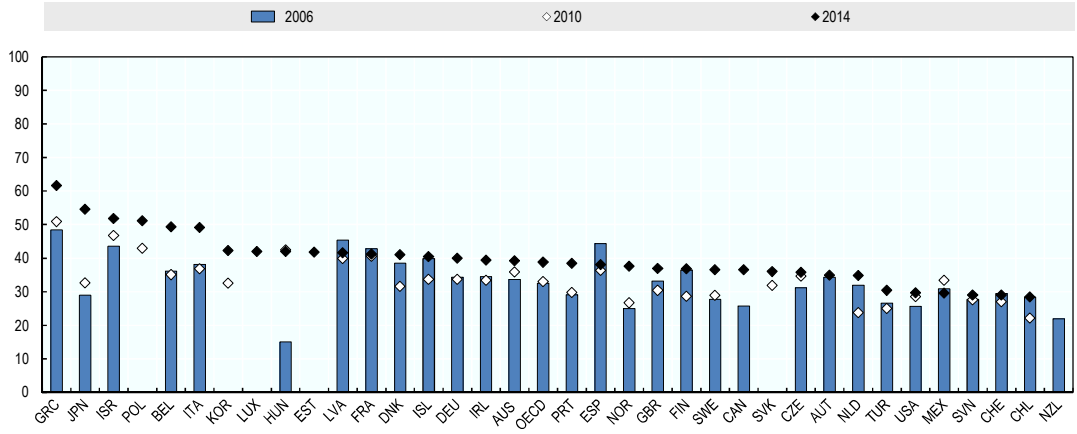
Source: GEDI (Global Entrepreneurship and Development Index) (2016), *2016 Global Entrepreneurship Index* (database), http://thegedi.org/tool/.

A common pre-post crisis pattern is observed in the share of the population indicating fear of failure as an impediment for starting a business. Over 2006-14, with the exception of Latvia and Spain, the share increased in all the countries being monitored (Figure 5.3). In most cases, the overall change was also determined by an increase during the uneven and slow recovery (2010-14), at a time of increased business failures in many countries.

In most countries, perceptions about capabilities (i.e. skills and knowledge) to start a business remained consistent over 2006-14, suggesting a relatively minor impact of changes in macroeconomic conditions, and a rather relation with underlying structural elements (Figure 5.4).

Figure 5.3. **Fear of failure, 2006, 2010 and 2014**

Percentage of 18-64 year-old population, who indicates that fear of failure would prevent them from setting up a business

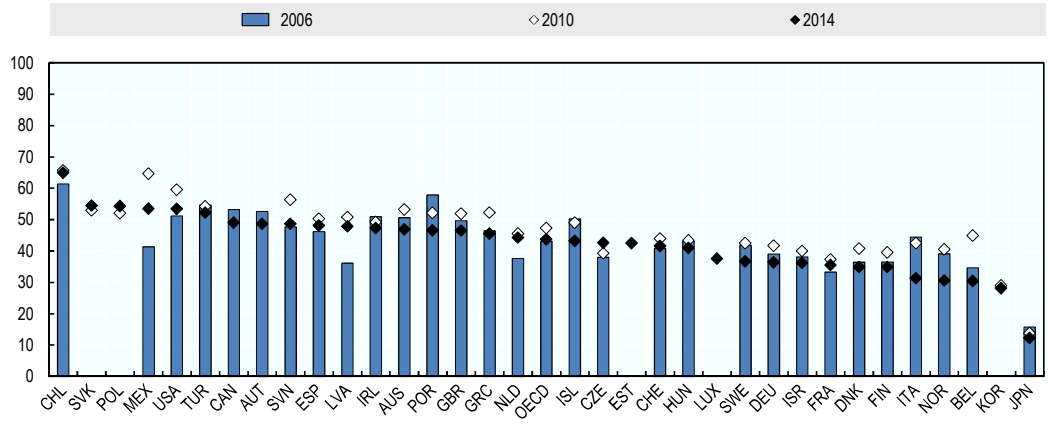


Note: New Zealand data refers to 2005 instead of 2006; Austria, Israel, Portugal and Switzerland data refer to 2007 instead of 2006; Czech Republic, Poland and Slovak Republic data refer to 2011 instead of 2010; Czech Republic, Israel, Korea, Latvia and Turkey data refer to 2013 instead of 2014. No 2006 data available for Estonia, Korea, Luxembourg, Poland and the Slovak Republic.

Source: GEM (Global Entrepreneurship Monitor) (2015), *Entrepreneurial Behaviour and Attitudes* (database), www.gemconsortium.org/data/key-aps

Figure 5.4. **Perceived capabilities for entrepreneurship, 2006, 2010 and 2014**

Percentage of 18-64 year-old population, who believes they have the required skills and knowledge to start a business



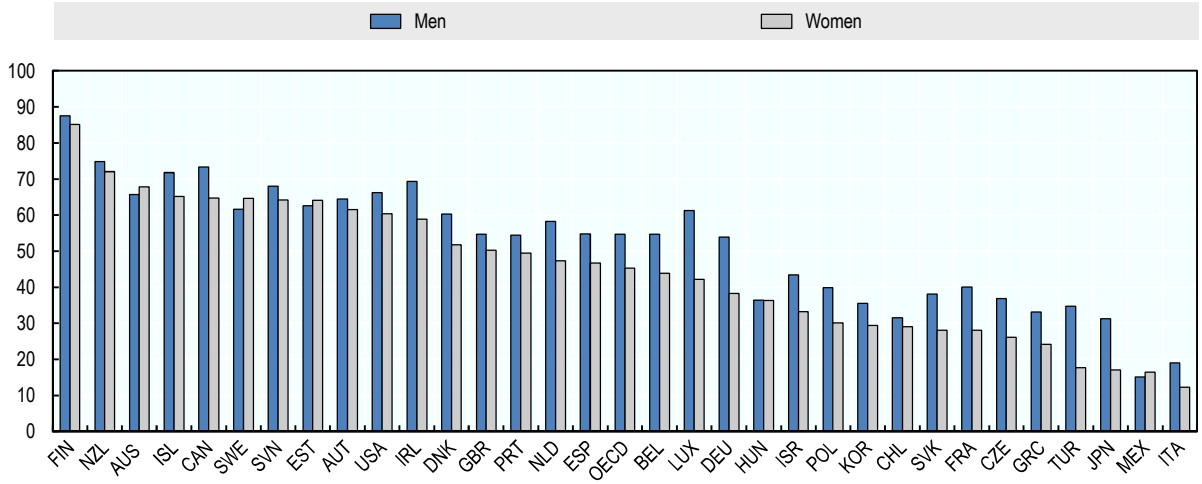
Note: New Zealand data refers to 2005 instead of 2006; Austria, Israel, Portugal and Switzerland data refer to 2007 instead of 2006; Czech Republic, Poland and Slovak Republic data refer to 2011 instead of 2010; Czech Republic, Israel, Korea, Latvia and Turkey data refer to 2013 instead of 2014. No 2006 data available for Estonia, Korea, Luxembourg, Poland and the Slovak Republic.

Source: GEM (Global Entrepreneurship Monitor) (2015), *Entrepreneurial Behaviour and Attitudes* (database), www.gemconsortium.org/data/key-aps

According to a 2013 Gallup survey, accessibility of formal and informal training on how to start or grow a business varies largely across OECD countries (Figure 5.5). While in Finland, 87.5% of men and 85.1% of women consider they have access to training, the shares drop to less than 20% in Italy and Mexico. Typically, the perception of training opportunities is higher for men than for women, with the exception of Australia, Estonia, Mexico and Sweden, where more women than men indicate access to training. Across the OECD area, the median value of the gender gap is 9.4%, but the difference between men and women is especially high (more than 15%) in Germany, Luxembourg and Turkey. The gap may be lower when considering the gender-distribution of participants to entrepreneurship training programmes. In Turkey, for instance, over 2011-16, women accounted on average for 46% of participants to entrepreneurship training programmes provided and approved by the SME Development and Support Agency (KOSGEB).

Figure 5.5. **Access to training on how to start or grow a business, 2013**

Percentage of individuals who consider they have access to formal or informal training on how to start or grow a business



Source: OECD (2016), OECD Gender Data Portal, http://www.oecd.org/gender/data/, based on Gallup.

Table 5.1. **Promoting an entrepreneurial culture: Policy developments**

Policy approaches	Examples	
Entrepreneurship education	**Denmark**	***Danish Foundation for Entrepreneurship**:* created in 2011, following partnership between different ministries, it aims to create a coherent national commitment to education and training in entrepreneurship and become a national knowledge centre for entrepreneurship education and training.
	European Union	***European Commission's support to entrepreneurship education**:* diverse set of actions, including funding to European projects that will create reference models for further exploitation; promoting exchanges of good practice and experiences at the EU level; organising workshops for policy makers and practitioners; helping policy makers and other stakeholders network; publishing guidelines based on existing good practice in Europe; releasing studies, indicators, and data collection.
	Finland	***Educational strategy**:* the five-year development plan for education and research (2011-2016) includes the objective to promote entrepreneurship at all levels and to improve the co-operation between education and work life.
	The Netherlands	***Education and Entrepreneurship Action Programme**:* launched in 2007, to promote entrepreneurship in education, and to bring the education sector and the business community closer together. *Education Networks Enterprise*: set up in 2009 as a subsidy scheme to help educational institutions integrate entrepreneurship education into their policies, organisation and curricula.
	Portugal	***Strategic Programme for Entrepreneurship and Innovation 2011-2015:*** it has introduced entrepreneurship as a transversal competence in school teaching programmes, including non-formal training. This includes the *'INOVA! Ideas'* contest, which provides young people with the opportunity to develop ideas that can contribute to the resolution of issues in their local communities.
Information, advice, coaching and mentoring	**Canada**	***Expert Panel on Championing and Mentorship for Women Entrepreneurs**:* set up in the framework of the Economic Action Plan 2014, it aims to consult with business leaders and entrepreneurs and advise the Minister of Status of Women on best practices for mentorship and championing to support women entrepreneurs.
	France	***Entreprendre au feminine**:* national plan to develop women entrepreneurship, launched in 2013, it includes initiatives that sustain entrepreneurship education and raise awareness among female students about the opportunities from the entrepreneurial career.

Policy approaches	Examples	
Information, advice, coaching and mentoring	**Portugal**	***Passport to Entrepreneurship****:* part of the Strategic Programme for Entrepreneurship and Innovation 2011-2015, the scheme has provided comprehensive and gradual support to aspiring young entrepreneurs, such as business incubation services, technical assistance, access to a network of mentors and to external financing.
	Slovenia	***"Entrepreneurially into the world of business"****:* project implemented in 2013, targeted to unemployed individuals under the age of 35, with higher education, using a combination of mentoring and training to help participants to acquire the core skills to launch and develop their business ideas.
Second chance	**European Union**	***Second chance for honest entrepreneurs****:* in order to address the stigma and consequences of business failures, the "Small Business Act for Europe" calls on the Commission to promote a second chance policy by supporting action and facilitating exchanges of best practice between Member States, including on promoting a positive attitude in society towards giving entrepreneurs a fresh start, enabling the completion of all legal procedures to wind up a business, in the case of non-fraudulent bankruptcy, within a year, ensuring that re-starters are treated on an equal footing with new start-ups.
	Portugal	***"Revitalise programme"(Programa Revitalizar)****:* it makes it easier to save businesses which are economically sound but facing insolvency, through financial instruments, development of an out-of-court credit restructuring system and improvements in the legal framework. The *"Insolvency and Corporate Recovery Code"* introduces an early warning mechanism that aims to facilitate timely signalling of financial difficulties. ***New "pre-executive extrajudicial procedure"****:* it gives creditors prior knowledge about the attachable assets of debtors, thus enabling better decisions to be taken on further action.

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Annex A

Indicators on SME business environment conditions

Table A1. **Indicators on regulation**

Indicator	Description	Firm size	Periodicity	Country coverage	Time coverage	Data sources
OECD sources						
Product Market Regulation (PMR): Barriers to entrepreneurship	Composite index covering "Complexity of regulatory procedures", "Administrative burdens on start-ups" and "Regulatory protection of incumbents".	No	Quinquennial	35 countries	1998, 2003, 2008, 2013	OECD Product Market Regulation Indicators
Product Market Regulation (PMR): Licenses and permits systems	Subcomponent of the composite index "Complexity of regulatory procedures". It measures the use of 'one-stop-shops' and the 'silence is consent' rule for issuing licenses and accepting notifications. *Scores from 0 – least restrictive – to 6 – most restrictive.*	No	Quinquennial	35 countries	1998, 2003, 2008, 2013	OECD Product Market Regulation Indicators
Product Market Regulation (PMR): Communication and simplification of rules and procedures	Subcomponent of the composite index "Complexity of regulatory procedures". It captures the government's communication strategy and efforts to reduce and simplify the administrative burden of interacting with the government. *Scores from 0 – least restrictive – to 6 – most restrictive.*	No	Quinquennial	35 countries	1998, 2003, 2008, 2013	OECD Product Market Regulation Indicators
Product Market Regulation (PMR): Administrative burdens for corporations	Subcomponent of the composite index "Administrative burdens on start-ups". It measures the administrative burdens on creating a public limited company. *Scores from 0 – least restrictive – to 6 – most restrictive.*	No	Quinquennial	35 countries	1998, 2003, 2008, 2013	OECD Product Market Regulation Indicators

Table A1. **Indicators on regulation** *(continued)*

Indicator	Description	Firm size	Periodicity	Country coverage	Time coverage	Data sources
Product Market Regulation (PMR): Administrative burdens for sole proprietor firms	Subcomponent of the composite index "Administrative burdens on start-ups". It captures the administrative burdens on creating an individual enterprise. *Scores from 0 – least restrictive – to 6 – most restrictive.*	No	Quinquennial	35 countries	1998, 2003, 2008, 2013	OECD Product Market Regulation Indicators
Product Market Regulation (PMR): Barriers in services sectors	Subcomponent of the composite index "Administrative burdens on start-ups". It covers the entry barriers in professional services, freight transport services ntage of product and/or p *Scores from 0 – least restrictive – to 6 – most restrictive*	No	Quinquennial	35 countries	1998, 2003, 2008, 2013	OECD Product Market Regulation Indicators
Employment Protection Indicators (EPL): Protection of permanent workers against dismissals	Captures the degree of protection of permanent workers against dismissals. *Scores from 0 – least restrictive – to 6 – most restrictive.*	No	Annual	35 countries	1998-2013	OECD Measuring Regulatory Performance
Employment Protection Indicators (EPL): Regulation on temporary labour contracts	Captures the degree of regulation on temporary labour contracts. *Scores from 0 – least restrictive – to 6 – most restrictive.*	No	Annual	35 countries	1998-2013	OECD Measuring Regulatory Performance
Non-OECD sources						
Business Entry Indicators: Starting a business (time in days)	Captures the time (in number of days) required for starting a business, registering property and to prepare, file and pay taxes.	No	Annual	35 countries	2004-2016	Doing Business Indicators (World Bank)
Business Entry Indicators: Starting a business (cost in % of income per capita)	Captures the cost (in % of income per capita) for starting a business, registering property and to prepare, file and pay taxes.	No	Annual	35 countries	2004-2016	Doing Business Indicators (World Bank)
Business Exit Indicators: Resolving insolvency (time in years)	Captures the actual time (in years) required to close a business.	No	Annual	35 countries	2004-2016	Doing Business Indicators (World Bank)
Business Exit Indicators: Resolving insolvency (cost, % of estate)	Captures the actual cost (in % of estate) to close a business.	No	Annual	35 countries	2004-2016	Doing Business Indicators (World Bank)

Table A2. **Indicators on court and legal framework**

Indicator	Description	Firm size	Periodicity	Country coverage	Time coverage	Data sources
OECD sources						
Citizens' confidence with the judicial system	Measures the percentage of people who answered "Yes" to the question: "In this country, do you have confidence in each of the following, or not? How about the judicial system and courts?"	No	Annual	35 countries	2007, 2014	OECD-Gallup World Poll
Non-OECD sources						
Enforcing contracts (number of days)	Measures the resources required to enforce contracts, in number of days.	No	Annual	35 countries	2004-2016	Doing Business Indicators (World Bank)
Enforcing contracts (cost in % of claim)	Measures the resources required to enforce contracts, in terms of costs in % of claim.	No	Annual	35 countries	2004-2016	Doing Business Indicators (World Bank)

Table A3. **Indicators on taxation**

Indicator	Description	Firm size	Periodicity	Country coverage	Time coverage	Data sources
OECD sources						
Marginal tax rates on SMEs	Marginal tax rates on different forms of business income: single-level taxation and double-level taxation (typically for incorporated SMEs).	Yes	Annual	34 countries	2015	Taxation of SMEs in OECD & G20 countries (OECD; 2015), calculations based on OECD Tax Database
Non-OECD sources						
Complexity of tax system compliance: Time to comply	Captures the time to comply (hours per year required) with corporate income tax, labour taxes and mandatory contributions and VAT or sales tax) for a standardised medium-size domestic company.	No	Annual	35 countries	2007-2015	Paying Taxes; Source: World Bank Group and PwC

Table A4. **Indicators on competition**

Indicator	Description	Firm size	Periodicity	Country coverage	Time coverage	Data sources
OECD sources						
Product Market Regulation (PMR): Public ownership	Component of the composite index "State control". Public ownership covers: 1) Scope of SOEs, 2) Government involvement in network sectors, 3) Direct control over enterprises and 4) Governance of SOEs. *Scores from 0 – least restrictive – to 6 – most restrictive.*	No	Quinquennial	35 countries	1998, 2003, 2008, 2013	OECD Product Market Regulation Indicators
Product Market Regulation (PMR): Involvement in business operations	Component of the composite index "State control". Involvement in business operations covers: 1) Price controls and 2) Command and control regulation. *Scores from 0 – least restrictive – to 6 – most restrictive.*	No	Quinquennial	35 countries	1998, 2003, 2008, 2013	OECD Product Market Regulation Indicators
Product Market Regulation (PMR): Regulatory protection of incumbents	Component of the composite index "Barriers to entrepreneurship". Regulatory protection of incumbents covers: 1) Legal barriers to entry, 2) Antitrust exemptions and 3) Barriers in network sectors. *Scores from 0 – least restrictive – to 6 – most restrictive.*	No	Quinquennial	35 countries	1998, 2003, 2008, 2013	OECD Product Market Regulation Indicators
Product Market Regulation (PMR): Government involvement in network sectors	Component of the composite index "State control". Public ownership covers: 1) Scope of SOEs, 2) Government involvement in network sectors, 3) Direct control over enterprises and 4) Governance of SOEs. *Scores from 0 – least restrictive – to 6 – most restrictive.*	No	Quinquennial	35 countries	1998, 2003, 2008, 2013	OECD Product Market Regulation Indicators

Table A5. **Indicators on public governance**

Indicator	Description	Firm size	Periodicity	Country coverage	Time coverage	Data sources
OECD sources						
Trust in Government	Captures the confidence of citizens and businesses in the actions of governments to do what is right and perceived as fair. *Scores from 0 to 100.*	No	Biennial	35 countries	2009, 2012, 2014	OECD Government at a Glance - Gallup World Poll
Use of e-government services by businesses: Obtaining information or forms	Measures the percentage of businesses using the e-government services by obtaining information or forms online.	No	Biennial	31 countries	2008, 2010, 2013-2014	OECD Government at a Glance
Use of e-government services by businesses: Sending filled forms (information)	Measures the percentage of businesses using the e-government services by sending filled forms online.	No	Biennial	31 countries	2008, 2010, 2013-2014	OECD Government at a Glance
Ex post evaluation for subordinate regulations	Composite indicator covering the following areas: 1) methodology of ex post analysis, 2) systematic adoption of ex post analysis, 3) transparency of ex post analysis, and 4) oversight and quality control of ex post analysis. *Scores from -0 (low) to 4 (high).*	No	Biennial	33 countries	2014	OECD Regulatory Indicators Survey
Non-OECD sources						
Corruption Perception Index (CPI)	Composite index that draws on multiple expert opinion surveys that poll perceptions of public sector corruption. *Scores from 0 (highly corrupt) to 100 (very clean).*	No	Annual	35 countries	1995-2015	Transparency International

Table A6. **Indicators on trade policy and investment**

Indicator	Description	Firm size	Periodicity	Country coverage	Time coverage	Data sources
OECD sources						
Services Trade Restrictiveness Index (STRI): Average	Composite index that quantifies restrictions on trade in services across five standard categories: 1) restrictions on foreign entry, 2) restrictions on the movement of people, 3) barriers to competition, 4) regulatory transparency, and 5) other discriminatory measures. *Scores from 0 – completely open – to 1 – completely closed.*	No	Annual	34 countries	2014-2015	STRI Database (OECD; 2014, 2015)
Services Trade Restrictiveness Index (STRI): Professional services	Composite index that quantifies restrictions on trade in services in the professional services sector across five standard categories: 1) restrictions on foreign entry, 2) restrictions on the movement of people, 3) barriers to competition, 4) regulatory transparency, and 5) other discriminatory measures. *Scores from 0 – completely open – to 1 – completely closed.*	No	Annual	34 countries	2014-2015	STRI Database (OECD; 2014, 2015)
Services Trade Restrictiveness Index (STRI): Computer services	Composite index that quantifies restrictions on trade in services in the computer services sector across five standard categories: 1) restrictions on foreign entry, 2) restrictions on the movement of people, 3) barriers to competition, 4) regulatory transparency, and 5) other discriminatory measures. *Scores from 0 – completely open – to 1 – completely closed.*	No	Annual	34 countries	2014-2015	STRI Database (OECD; 2014, 2015)

Table A6. **Indicators on trade policy and investment** *(continued)*

Indicator	Description	Firm size	Periodicity	Country coverage	Time coverage	Data sources
Services Trade Restrictiveness Index (STRI): Construction	Composite index that quantifies restrictions on trade in services in the construction sector across five standard categories: 1) restrictions on foreign entry, 2) restrictions on the movement of people, 3) barriers to competition, 4) regulatory transparency, and 5) other discriminatory measures. *Scores from 0 – completely open – to 1 – completely closed.*	No	Annual	34 countries	2014-2015	STRI Database (OECD; 2014, 2015)
Product Market Regulation (PMR): Explicit barriers to trade and investment	Composite indicator covering the barriers to foreign direct investment (FDI) and the tariff barriers (measured by simple cross-product average of effectively applied tariffs). *Scores from 0 – least restrictive – to 6 – most restrictive.*	No	Quinquennial	34 countries	1998, 2003, 2008, 2013	OECD Product Market Regulation Indicators
Product Market Regulation (PMR): Other barriers to trade and investment: Differential treatment of foreign suppliers	Captures the discrimination of foreign firms with respect to taxes and subsidies, public procurement, entry regulation and appeal procedures. *Scores from 0 – least restrictive – to 6 – most restrictive.*	No	Quinquennial	35 countries	1998, 2003, 2008, 2013	OECD Product Market Regulation Indicators
Product Market Regulation (PMR): Other barriers to trade and investment: Barriers to trade facilitation	Captures the recognition of foreign regulations, use of international standards and international transparency of domestic regulation. *Scores from 0 – least restrictive – to 6 – most restrictive.*	No	Quinquennial	35 countries	1998, 2003, 2008, 2013	OECD Product Market Regulation Indicators

Table A6. **Indicators on trade policy and investment** *(continued)*

Indicator	Description	Firm size	Periodicity	Country coverage	Time coverage	Data sources
Trade facilitation performance	Captures the average trade facilitation performance covering the following areas: 1) information availability, 2) involvement of the trade community, 3) advance rulings, 4) appeal procedures, 5) Fees and charges, 6) formalities (documents), 7) formalities (automation), 8) formalities (procedures), 9) internal border agency co-operation, 10) external border agency co-operation and 11) governance and impartiality. *Scores from 0 – low performance – to 2 – high performance.*	No	Updated regularly	34 countries	2015	OECD Trade Facilitation Indicators

Table A7. **Indicators on infrastructure**

Indicator	Description	Firm size	Periodicity	Country coverage	Time coverage	Data sources
OECD sources						
Transport infrastructure investment and maintenance spending	The International Transport Forum (ITF) collects data on investment and maintenance spending on transport infrastructures. The variables collected are investment and maintenance expenditures for road, rail, inland waterways, maritime ports and airports. *Measured as a % of the GDP.*	No	Annual	32 countries	1995-2013	OECD - International Transport Forum Database
Total fixed broadband subscriptions (per 100 inhabitants)	Measures the total and fibre/LAN subscriptions (per 100 inhabitants) of fixed broadband.	No	Biennial	35 countries	2008, 2010, 2013,	OECD STI Scoreboard (OECD Broadband Portal)
Mobile broadband subscriptions (per 100 inhabitants)	Measures the standard mobile broadband and dedicated mobile data subscriptions (per 100 inhabitants)	No	Biennial	35 countries	2008, 2010, 2013,	OECD STI Scoreboard (OECD Broadband Portal)

Table A7. **Indicators on infrastructure** *(continued)*

Indicator	Description	Firm size	Periodicity	Country coverage	Time coverage	Data sources
Non-OECD sources						
Logistics performance index: Total value	Captures the evaluation of eight markets on six core dimensions: 1) efficiency of the clearance process by border control agencies; 2) quality of trade and transport related infrastructure; 3) ease of arranging competitively priced shipments; 4) competence and quality of logistics services; 5) ability to track and trace consignments; 6) timeliness of shipments in reaching destination within the scheduled or expected delivery time. The markets are chosen based on the most important export and import markets of the respondent's country, random selection, and, for landlocked countries, neighbouring countries that connect them with international markets. *Scores from -1 (low) to 5 (high).*	No	Biennial	35 countries	2007, 2010, 2012, 2014	Logistic Performance Index Surveys (World Bank and Turku School of Economics)

Table A8. **Indicators on public procurement**

Indicator	Description	Firm size	Periodicity	Country coverage	Time coverage	Data sources
OECD sources						
Functionalities provided in e-procurement systems index	Composite indicator covering the following areas: 1) Announcing tenders, 2) Electronic submission of bids (excluding by e-mails), 3) e-tendering, 4) Notification of award, 5) Electronic submission of invoices (excluding e-mails), 6) *Ex post* contract management. *Scores from -0 (low) to 6 (high).*	No	Biennial	32 countries	2008, 2010, 2012, 2014	OECD Survey on Public Procurement

Table A9. **Indicators on access to finance**

Indicator	Description	Firm size	Periodicity	Country coverage	Time coverage	Data sources
OECD sources						
SME real interest rate	Captures the real interest rate paid by SMEs considering the impact of the inflation rate. Measured in percentage.	Yes	Annual	19 countries	2007-2014	OECD Scoreboard on SME and entrepreneurship finance
Venture capital	Measures venture capital investments (seed/start-up/early stage and later stage venture) as a percentage of GDP.	No	Annual	30 countries	2009, 2012-2014	OECD Entrepreneurship Financing Database
SMEs loan rejection rates	Measures the relative number of SME credit applications who have not received the requested amount in full.	Yes	Annual	15 countries	2007-2014	OECD Scoreboard on SME and entrepreneurship finance

Table A10. **Indicators on human capital and skills development**

Indicator	Description	Firm size	Periodicity	Country coverage	Time coverage	Data sources
OECD sources						
Expenditure on primary to tertiary education institutions	Measures the expenditure on primary to tertiary education institutions as a percentage of GDP.	No	Annual	33 countries	1998-2012	OECD Education Database - UNESCO
Adults graduates from tertiary education	Measures the percentage of adult population (35-44 years) having completed the highest level of education.	No	Annual	33 countries	1998-2013	OECD Education Database - UNESCO
Knowledge-based capital related workers	Captures the knowledge-based capital related workers as a *percentage of total employment.* The occupations are selected on the basis of the tasks workers perform on the job, the skills they apply, and the level of knowledge of the subject area they rely on.	Yes	Biennial	25 countries	2012	OECD STI Scoreboard (based on United States Occupational Information Network Database, US Current Population Survey and European Union Labour Force Survey, June 2013

Table A10. **Indicators on human capital and skills development** *(continued)*

Indicator	Description	Firm size	Periodicity	Country coverage	Time coverage	Data sources
Students performance in problem solving	Captures the capacity of students (15 years old) to engage in cognitive processing to understand and resolve problem situations where a method of solution is not immediately obvious. *Scores from 0 (worst performance) to 600 (best performance).*	No	Triennial	28 countries	2000, 2003, 2006, 2009, 2012	OECD Pisa (Programme for International Student Assessment)
Adult problem solving capacity	Captures the capacity of adults (16-65 years old) to problem solving in technology-rich environments. *Scores over 5 levels, from equal or below 176 points (level 1 – worst performance) to equal or above 376 points (level 5-best performance).*	No	Conducted in three rounds	17 countries	2008-2013	OECD (PIAAC) Survey of Adult Skills (2008-2013; 2012-2016; 2014-2018)
Employed adults receiving training	Measures the extent to which persons from 16 to 65 years are engaged in training at the enterprise, as a percentage of total employed persons.	No	Conducted in three rounds	22 countries	2008-2013	OECD (PIAAC) Survey of Adult Skills (2008-2013; 2012-2016; 2014-2018)

Table A11. **Indicators on knowledge, technology and innovation**

Indicator	Description	Firm size	Periodicity	Country coverage	Time coverage	Data sources
OECD sources						
Investments						
Expenditures on R&D as a percentage of GDP	Measures gross domestic expenditures on R&D, as a percentage of GDP	No	Biennial	34 countries	2008, 2010, 2012	OECD STI Scoreboard (Main Science and Technology Indicators Database)
SME share of BERD (Business enterprises expenditure on R&D)	Measures the share of SMEs expenditure on R&D, as a percentage of GDP.	Yes	Biennial	30 countries	2005-2008, 2010, 2012	OECD STI Scoreboard (Main Science and Technology Indicators Database)

Table A11. **Indicators on knowledge, technology and innovation** *(continued)*

Indicator	Description	Firm size	Periodicity	Country coverage	Time coverage	Data sources
Business investment in physical and knowledge-based capital (KBC)	Measures investment in physical and knowledge-based capital (KBC), as a percentage of value added of the business sector. KBC comprises non-residential physical assets, R&D and other intellectual property products, software and databases, brand equity, firm-specific human capital, organisational capital),	No	Biennial	15 countries	2013	OECD STI Scoreboard (OECD Annual National Accounts (SNA) and INTAN-Invest Database)
Skills for innovation						
Professionals and technicians	Measures the share of human resources in science and technology, as a percentage of total employment	No	Biennial	31 countries	2006, 2008, 2010, 2012	OECD STI Scoreboard (based on European Labour Force Surveys, Eurostat; ILO Laborsta Database; and national sources)
Collaboration on innovation						
SMEs collaborating on innovation with higher education or public research institutions	Captures the existence of some sort of collaboration with research institutions, as a percentage of product and/or process innovating SMEs.	Yes	Biennial	30 countries	2006, 2008, 2010, 2012	OECD STI Scoreboard (Main Science and Technology Indicators Database)
SMEs collaborating on innovation with clients and suppliers	Captures the existence of some sort of collaboration with clients and suppliers, as a percentage of product and/or process-innovating SMEs.	Yes	Biennial	30 countries	2006, 2008, 2010, 2012	OECD STI Scoreboard (Main Science and Technology Indicators Database)
Innovation output						
Patent applications under the PCT (per million inhabitants)	Patent applications filed under the PCT (per million inhabitants) by applicant(s)'s country(ies) of residence.	No	Annual	34 countries	2000-2013	OECD STI Database

Table A12. **Indicators on energy**

Indicator	Description	Firm size	Periodicity	Country coverage	Time coverage	Data sources
OECD sources						
Electricity prices for industry	Price per MWh of energy supply (electricity) in industry in US dollars	No	Quarterly	34 countries	2000-2014	OECD - IEA Energy Prices and Taxes Statistics
Natural gas prices for industry	Price per MWh of energy supply (natural gas) in US dollars	No	Quarterly	33 countries	2000-2014	OECD - IEA Energy Prices and Taxes Statistics

Table A13. **Indicators on opportunities for entrepreneurship**

Indicator	Description	Firm size	Periodicity	Country coverage	Time coverage	Data sources
Non-OECD sources						
Perceived opportunities	Percentage of 18-64 population (individuals involved in any stage of entrepreneurial activity excluded), who see good opportunities to start a firm in the area where they live. Scoring from 0 (low) to 100 (high).	No	Annual	29 countries	2007-2015	Global Entrepreneur-ship Monitor (GEM) – Adult Population Survey
Networking potential	Combines an entrepreneur's personal knowledge with their ability to use internet for business purposes. Networking potential of a possible entrepreneur is measured by the percentage of the population who personally know an entrepreneur who started a business within two years (Know Entrepreneurs). However, connecting through cyberspace with the rest of the world adds another dimension to networking and opens up much greater opportunities than before (Internet Usage). Scoring from 0 (low) to 1 (high).	No	Annual	35 countries	2014-2016	Global Entrepreneur-ship Index (GEDI)

Table A14. **Indicators on attitudes towards entrepreneurship**

Indicator	Description	Firm size	Periodicity	Country coverage	Time coverage	Data sources
Non-OECD sources						
Perceived Capabilities	Percentage of 18-64 population (individuals involved in any stage of entrepreneurial activity excluded), who believe they have the required skills and knowledge to start a business. Scoring from 0 (low) to 100 (high)	No	Annual	29 countries	2001-2015	Global Entrepreneur-ship Monitor (GEM) – Adult Population Survey
Fear of Failure Rate	Percentage of 18-64 population (individuals involved in any stage of entrepreneurial activity excluded), who indicate that fear of failure would prevent them from setting up a business. Scoring from 0 (low) to 100 (high)	No	Annual	29 countries	2001-2015	Global Entrepreneur-ship Monitor (GEM) – Adult Population Survey

Table A15. **Indicators on abilities for entrepreneurship**

Indicator	Description	Firm size	Periodicity	Country coverage	Time coverage	Data sources
OECD sources						
Non-OECD sources						
Access to training on how to start a business: Men	Percentage of men who consider they have access to formal or informal training on how to start or grow a business.	No	Annual	34 countries	2013	OECD Gender Initiative Database / Gallup
Access to training on how to start a business: Women	Percentage of women who consider they have access to formal or informal training on how to start or grow a business.	No	Annual	34 countries	2013	OECD Gender Initiative Database / Gallup

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