

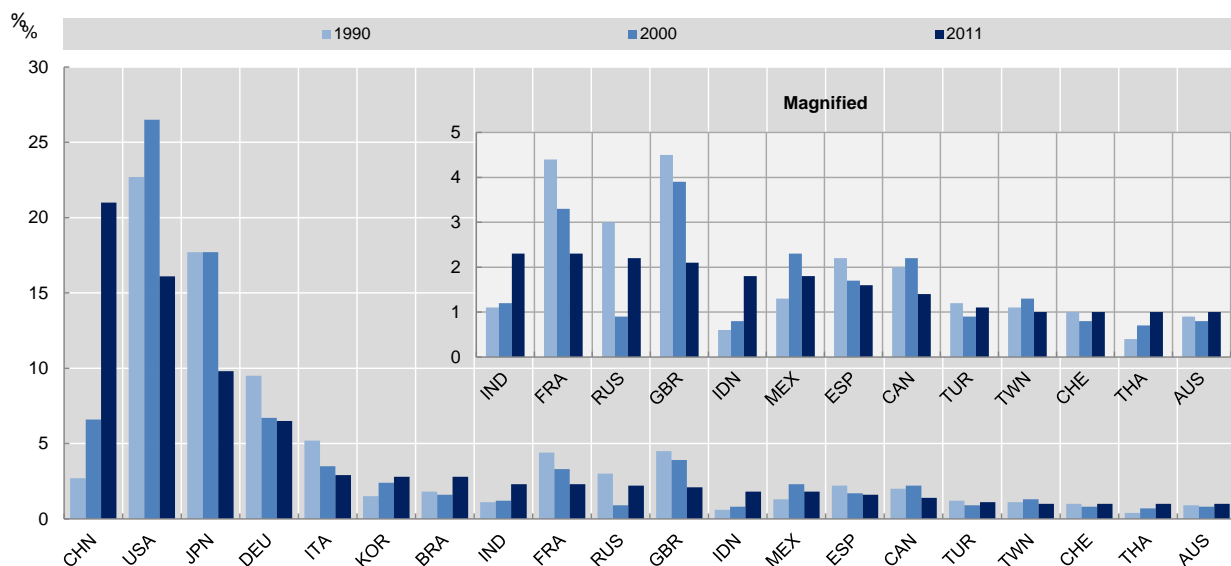
OECD Science, Technology and Industry Scoreboard 2013

ITALY HIGHLIGHTS

- Italy is the seventh exporting economy and the fifth manufacturer in the world. Its economy is diversified and has a comparative advantage in sectors such as machinery and equipment. However, productivity growth has stagnated over the past decade.
- Among the structural factors that contribute to Italy's weak productivity performance with respect to its main competitors is the low share of medium-sized and large firms. Compared with other countries, Italian firms grow only little after their entry into the market.
- Italy is lagging other countries in the uptake of ICTs, as well as in investments in higher education, knowledge based capital (KBC), and research and development (R&D). Nonetheless, R&D performing firms appear to be more innovative than their counterparts in other economies. Italy also has some areas of strength, for example, it is among the world leaders in transport design.

Italy is the seventh largest exporting economy in the world in terms of gross exports, and is also the fifth largest manufacturing producer in the world, although over the past 20 years its share has been eroded by the growth of emerging economies (Figure 1).

Figure 1. Top manufacturers in the last 20 years, 1990, 2000 and 2011
Percentage share of total world manufacturing value added

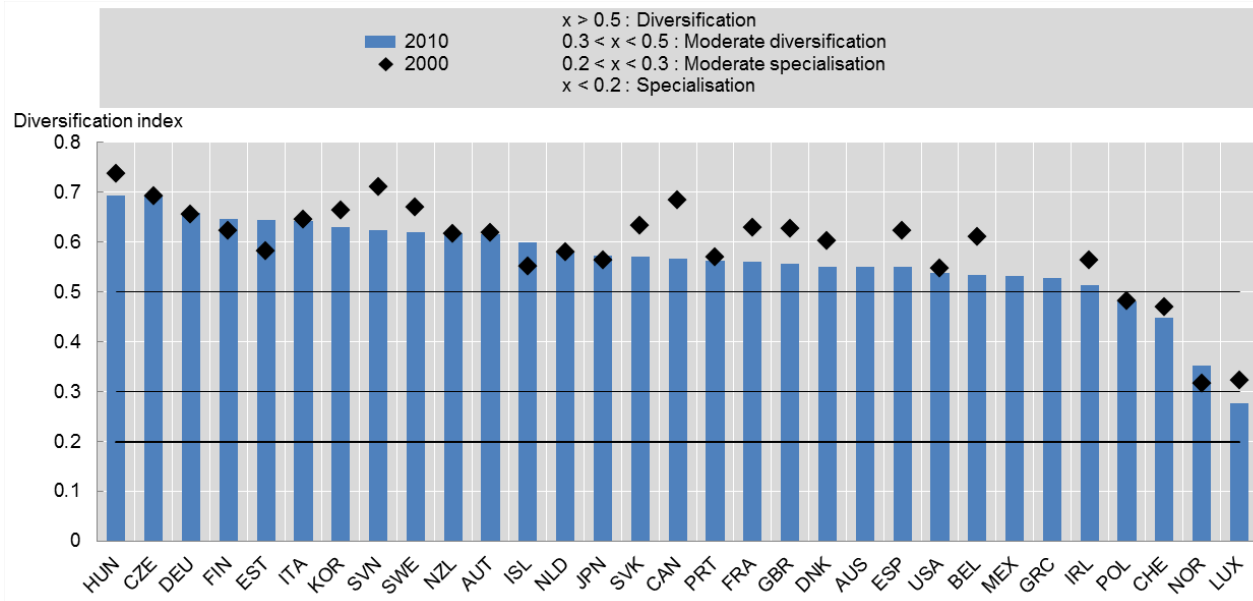


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Source: OECD (2013), *OECD Science, Technology and Industry Scoreboard 2013: Innovation for Growth*, OECD Publishing, www.oecd.org/sti/scoreboard.htm.

Compared with several other EU countries, Italy has a diversified industrial structure (Figure 2), which implies that a wide range of industries account for a relatively small share of its economy. Industry diversification may reduce the risks linked to idiosyncratic shocks, but may also reflect a lack of specialisation in the economy.

Figure 2. Industrial specialisation, 2000 and 2010
Hannah-Kay index, calculated for theta equal to 2

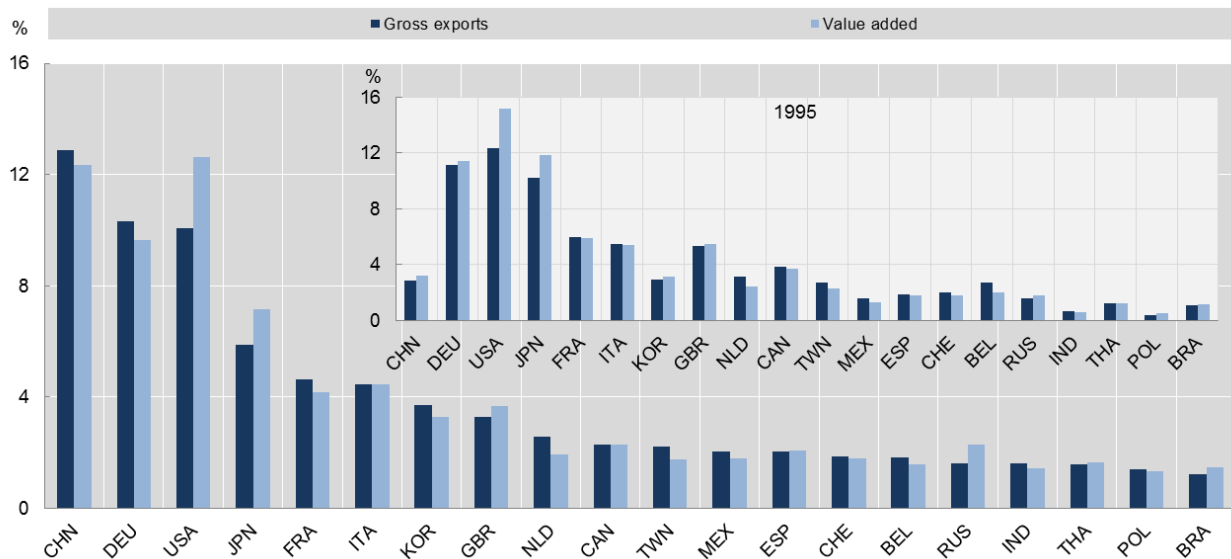


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Source: OECD (2013), *OECD Science, Technology and Industry Scoreboard 2013: Innovation for Growth*, OECD Publishing, www.oecd.org/sti/scoreboard.htm.

New indicators of revealed comparative advantage (RCA) in value added terms, developed from the new OECD-WTO Trade in Value Added (TiVA) Database, can provide additional evidence on Italy's export performance, as compared to measures based on gross exports. For instance, Italy's gross manufacturing exports in 2009 were lower than those of France, but above France in value added terms, thanks to the comparatively high value added content of its gross exports, which also includes services (Figure 3).

Figure 3. Top 20 exporters of manufactured goods in gross and value added terms, 1995 and 2009
Percentage shares of total world manufacturing goods

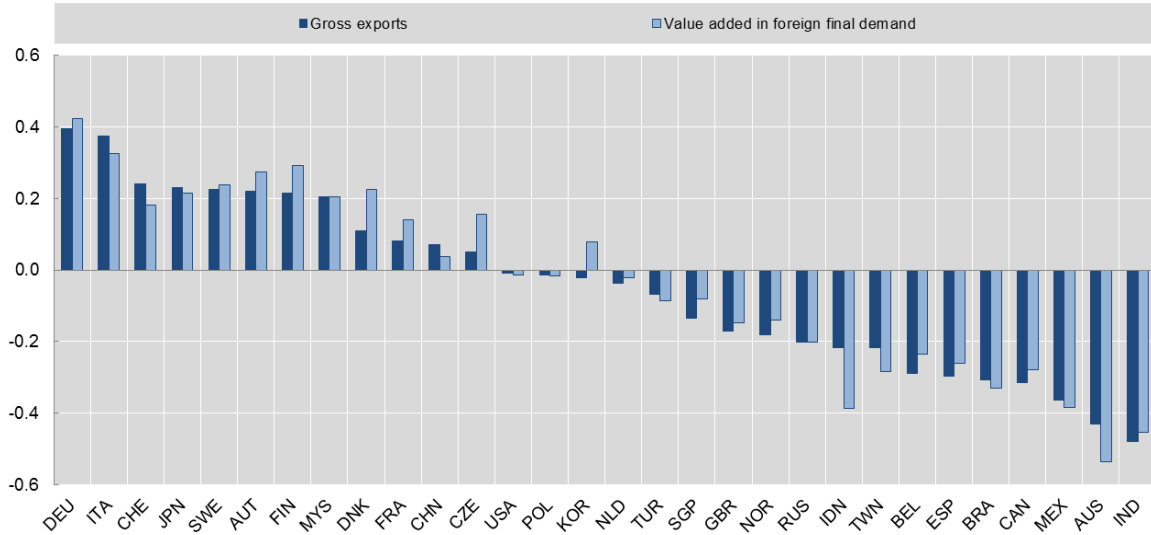


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Source: OECD (2013), *OECD Science, Technology and Industry Scoreboard 2013: Innovation for Growth*, OECD Publishing, www.oecd.org/sti/scoreboard.htm.

Italy also has a strong comparative advantage in exports of machinery and equipment (Figure 4). However in this sector its comparative advantage is weaker once expressed in value added terms, suggesting that Italian gross exports have a relatively higher share of foreign content than in Germany, Sweden, Austria and Finland.

Figure 4. Revealed comparative advantage in exports of machinery and equipment, 2009
Top 30 exporters

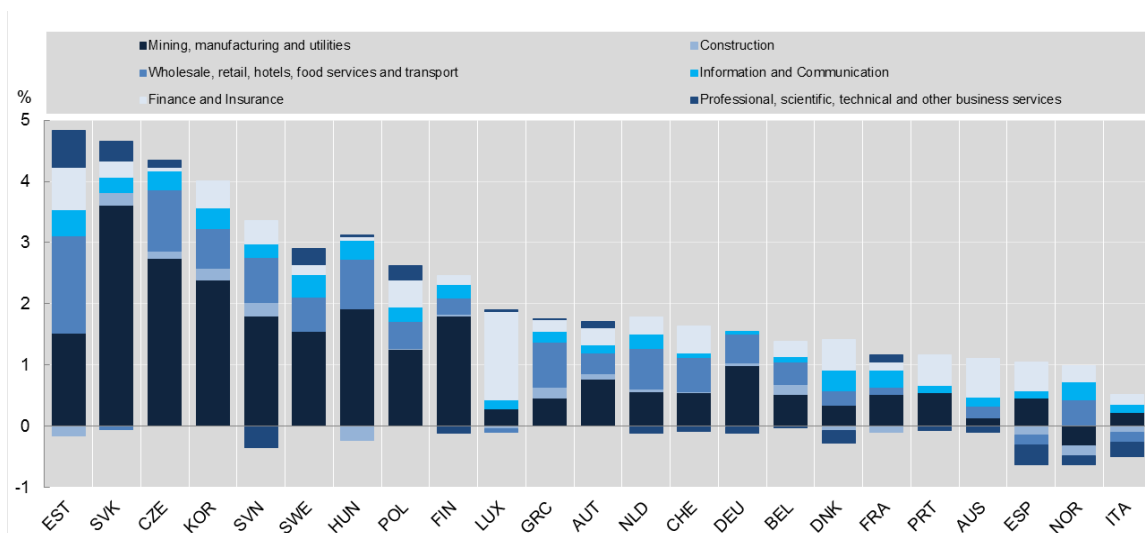


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Source: OECD (2013), *OECD Science, Technology and Industry Scoreboard 2013: Innovation for Growth*, OECD Publishing, www.oecd.org/sti/scoreboard.htm.

Italy's position as a leader in world exports is being challenged by an ongoing loss in competitiveness. Its economy has been seriously hit by the international financial crisis and has shown a very slow recovery since. Moreover, Italy's weak performance predates the crisis: between 2001 and 2007, Italy experienced very low productivity growth (Figure 5), especially in the services sector (excluding ICT).

Figure 5. Labour productivity growth in non-agricultural business sector before the crisis, 2001-07
Contribution to average annual percentage change by industry



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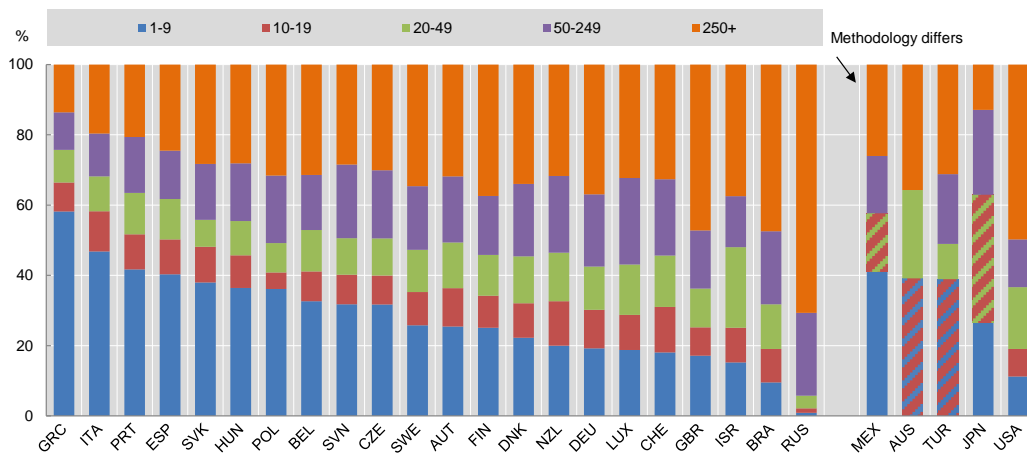
Source: OECD (2013), *OECD Science, Technology and Industry Scoreboard 2013: Innovation for Growth*, OECD Publishing, www.oecd.org/sti/scoreboard.htm.

Sluggish productivity growth in pre-crisis years reflects employment growth in low-productivity activities such as construction and personal services, as well as the low productivity growth in the manufacturing sector. Part of the explanation also rests in important structural differences with other leading economies in the OECD. In particular, Italy

has a very low share of medium and large firms (Figure 6). Small firm size can be an obstacle for innovation and internationalisation, due to the importance of economies of scale and scope in these activities. Moreover, small firms are generally less productive than large firms. Firms below 20 employees represent 58% of total employment in Italy (Figure 6), but account for only 40% of total value added (Figure 7); this is considerably higher than in most other OECD countries.

Since young firms are generally small, the overrepresentation of micro and small firms in Italy might be partly explained by a relatively high level of firm births (especially in manufacturing; Figure 8). However, international comparisons show that, while the average size of start-ups is similar to other countries, firms above 10 years of age are on average significantly smaller in Italy than in other countries (Figure 9). This reflects the difficulties that young Italian firms face in fully unleashing their growth potential.

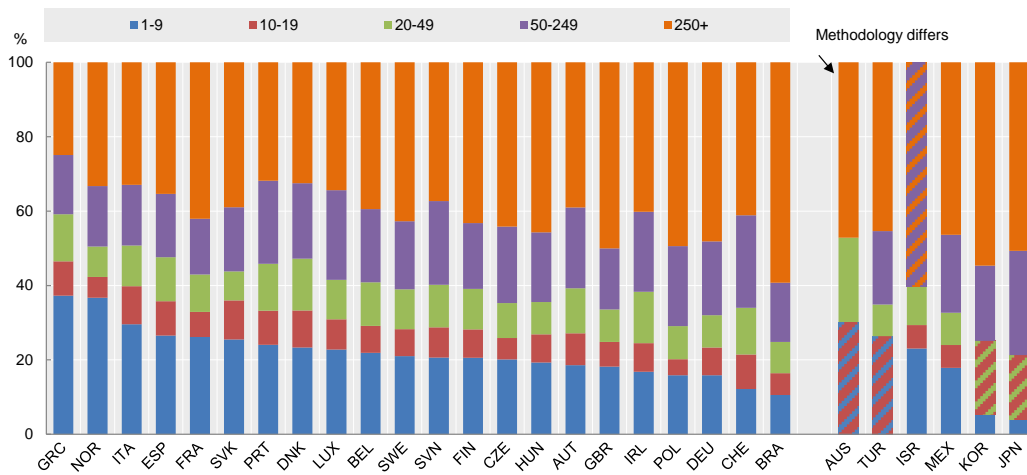
Figure 6. Employment by enterprise by size class, 2010
As a percentage of total employment



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Source: OECD (2013), *Entrepreneurship at a Glance 2013*, OECD Publishing.

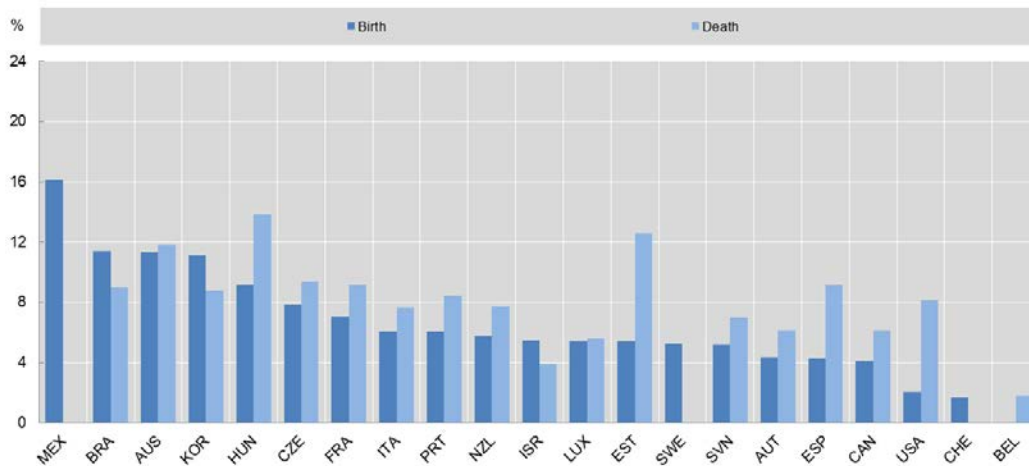
Figure 7. Value added by enterprise by size class, 2010
As a percentage of total value added



StatLink : <http://dx.doi.org/10.1787/888932904222>

Source: OECD (2013), OECD (2013), *Entrepreneurship at a Glance 2013*, OECD Publishing.

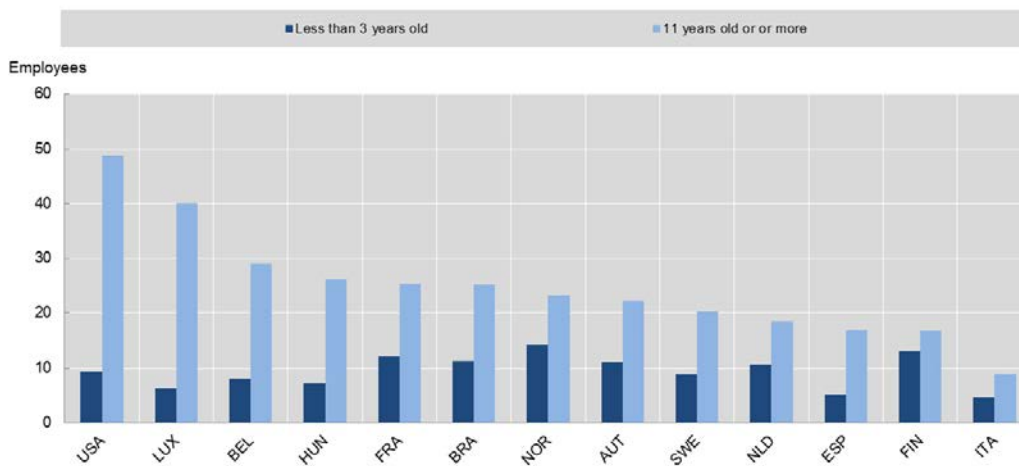
Figure 8. Employer enterprise birth and death rates in the manufacturing sector, 2010
As a percentage of the population of active enterprises with at least one employee



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Source: OECD (2013), *Entrepreneurship at a Glance 2013*, OECD Publishing.

Figure 9. Average size of firms less than 3 years old and 11 years old or more, 2001-10
Non-financial business sector, reference cohorts 2001, 2004 and 2007

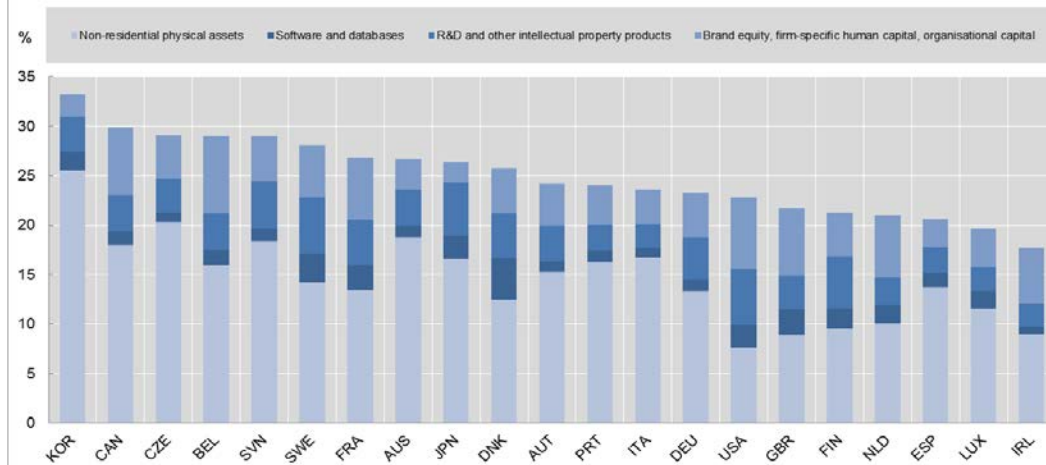


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Source: OECD (2013), *OECD Science, Technology and Industry Scoreboard 2013: Innovation for Growth*, OECD Publishing, www.oecd.org/sti/scoreboard.htm.

Another critical factor to compete in the global economy is investment in knowledge based capital (KBC). Investment in KBC has been rising in many OECD economies, often at a faster pace than investment in physical capital. KBC can be the source of increasing returns to scale in production, and some of the knowledge created by assets such as R&D, design and new business processes can spill over into other parts of the economy, spurring growth. In Denmark, Finland, France, the Netherlands, the United Kingdom and the United States, investments in KBC exceeded investment in physical assets such as machinery and equipment and structures in 2010. In Italy, however, investments in KBC account for only a small share of business value added compared to investment in physical capital (Figure 10).

Figure 10. Investment in physical and knowledge-based capital, 2010
As a percentage of value added of the business sector



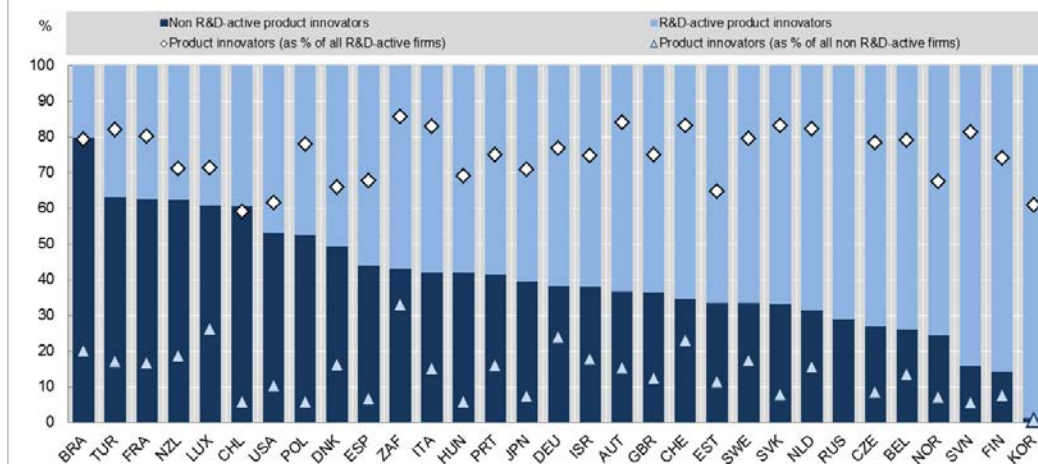
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Source: OECD (2013), *OECD Science, Technology and Industry Scoreboard 2013: Innovation for Growth*, OECD Publishing, www.oecd.org/sti/scoreboard.htm.

Italy has also a lower level of research and development (R&D) expenditure, both public and private, compared to other OECD economies. However, among the limited number of firms that invest in R&D, product innovators are more frequent than in many other OECD economies (Figure 11).

Human capital is key for innovation and growth. The recently released OECD Survey of Adult Skills has highlighted how investing in human capital should be a priority for Italy. Italy also has low levels of investment in higher education, however, as compared to other OECD and emerging economies (Figure 12).

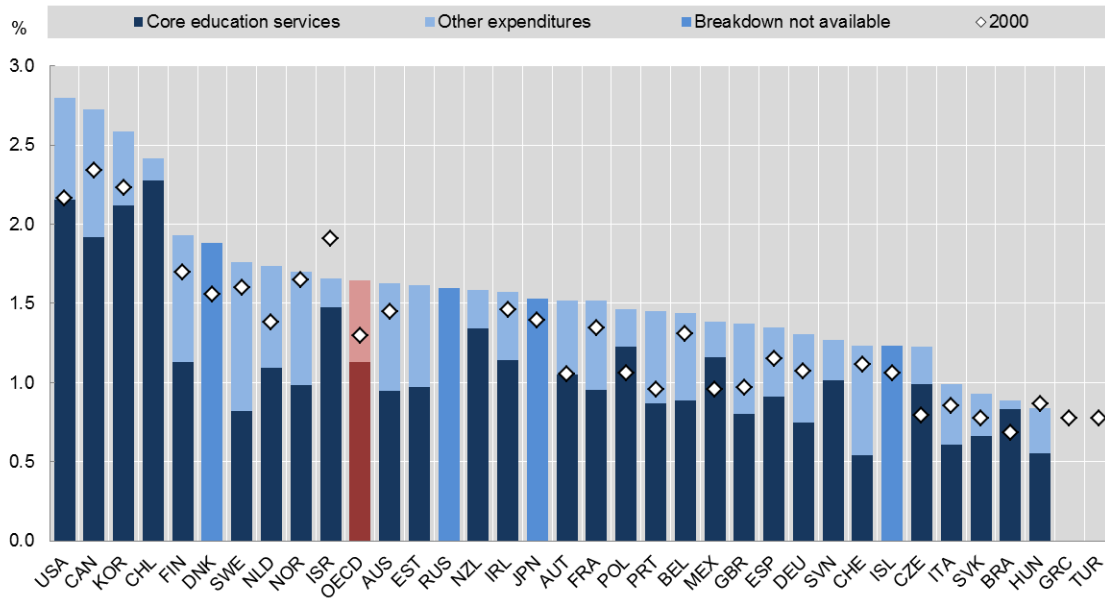
Figure 11. Product innovation, by R&D status, 2008-10
OECD, based on Eurostat (CIS-2010) and national data sources, June 2013



StatLink : <http://dx.doi.org/10.1787/888932892480>

Source: OECD (2013), *OECD Science, Technology and Industry Scoreboard 2013: Innovation for Growth*, OECD Publishing, www.oecd.org/sti/scoreboard.htm.

Figure 12. Spending on higher education, 2000 and 2010
As a percentage of GDP

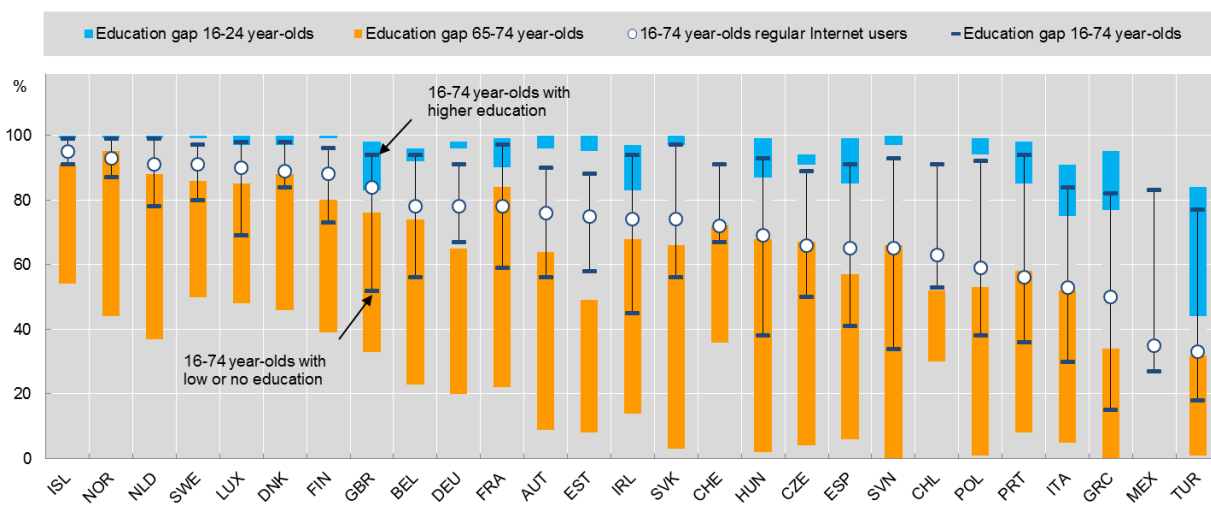


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Source: OECD (2013), *OECD Science, Technology and Industry Scoreboard 2013: Innovation for Growth*, OECD Publishing, www.oecd.org/sti/scoreboard.htm.

Low levels of investment in human capital are mirrored in comparatively low levels of diffusion of ICT technologies among individuals (Figure 13) and enterprises, in the latter case aggravated by the prevalence of micro-enterprises (Figure 14).

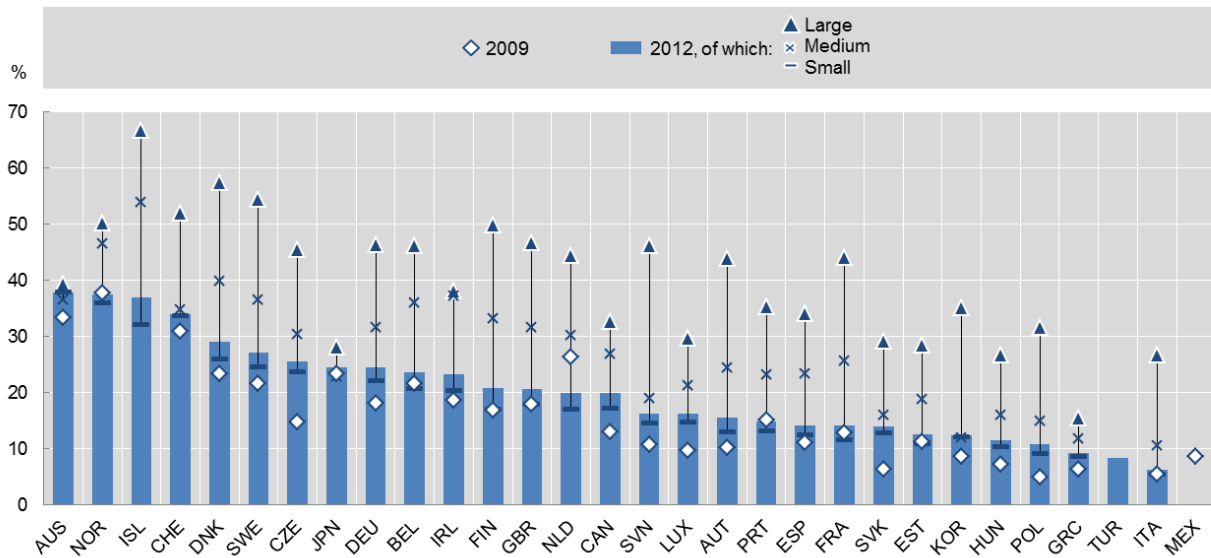
Figure 13. Regular Internet users by educational attainment and age, 2012
As a percentage of the population with the same educational attainment in each age group



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Source: OECD (2013), *OECD Science, Technology and Industry Scoreboard 2013: Innovation for Growth*, OECD Publishing, www.oecd.org/sti/scoreboard.htm.

Figure 14. Enterprises selling on line, by size, 2009 and 2012
As a percentage of enterprises in the same size category

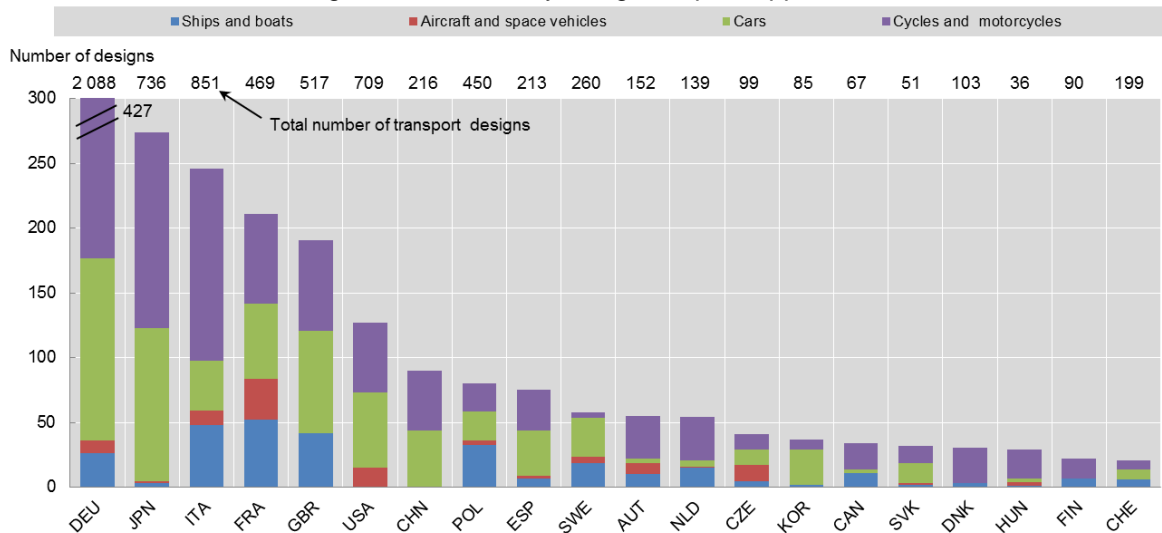


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Source: OECD (2013), *OECD Science, Technology and Industry Scoreboard 2013: Innovation for Growth*, OECD Publishing, www.oecd.org/sti/scoreboard.htm.

Italy, however, has some important strengths in specific niche areas. Identifying these niches and investing in them can be instrumental in fostering Italian competitiveness. For instance, Italy is very active in design and trademark applications, notably in the textile sector. Italy is also one of the world leaders in the field of transport-related designs (intellectual property rights granted to protect the ornamental or aesthetic aspects of an article or of its parts), especially in the field of ships and boats, and cycles and motorcycles (Figure 15).

Figure 15. Transport-related designs, 2010-2012
Registered community designs, top 20 applicants



StatLink : <http://dx.doi.org/10.1787/888932892765>

Source: OECD (2013), *OECD Science, Technology and Industry Scoreboard 2013: Innovation for Growth*, OECD Publishing, www.oecd.org/sti/scoreboard.htm.

Note: The information included in this note is based on the October 2013 release of the OECD Science, Technology and Industry Scoreboard. The data can be accessed from www.oecd.org/sti/scoreboard.

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OECD Directorate for Science, Technology and Industry
STI.contact@oecd.org

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