Promoting innovation in established SMEs
Parallel session 4
Background information

This paper was prepared as a background document to the OECD Ministerial Conference on Small and Medium-sized Enterprises, taking place on 22-23 February 2018 in Mexico. It sets a basis for reflection and discussion.

About the Ministerial Conference

The 2018 OECD Ministerial Conference on Strengthening SMEs and Entrepreneurship for Productivity and Inclusive Growth is part of the OECD Bologna Process on SME and Entrepreneurship Policies. The Conference will provide a platform for a high-level Ministerial dialogue on current key issues related to SMEs and entrepreneurship. It will seek to advance the global agenda on how governments can help strengthen SME contributions to productivity and inclusive growth; how SMEs can help address major trends and challenges in the economy and society; and how the OECD the support governments in designing and implementing effective SME policies.

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Policy note
Summary

- Innovation is a key determinant of productivity and long-term growth. Supporting innovation in established SMEs can foster inclusive growth by reducing productivity gaps and wage gaps between SMEs and large companies.
- SMEs are, on average, less innovative than large enterprises. However, some small enterprises are highly innovative and can reach productivity levels above those of large companies. Companies which develop and use their internal strategic resources effectively (e.g. managerial and workforce skills, ICT, R&D, etc.), and collaborate with external partners in the innovation system, have better innovation performance.
- Governments can support innovation in SMEs by fostering a sound business environment, helping SMEs to develop and use their internal strategic resources effectively, and building an innovation system that is effective in the commercialisation of research and inclusive of a large range of SMEs.

Questions for discussion

- What are the key policy mechanisms that have proven successful to encourage innovation in SMEs? What new approaches are needed?
- How can such policies be addressed to SMEs with differences in terms of industry, size, age and growth performance?
- How can policy help SMEs to harness the most recent advances in digital technologies?

Why does it matter?

Innovation is a key driver of productivity and long-term growth and can help solve social challenges at the lowest possible cost (OECD, 2015a). Innovation in small and medium-sized enterprises (SMEs) is at the core of inclusive growth strategies: more innovative SMEs are more productive SMEs that can pay better wages and offer better working conditions to their workers, thus helping reduce inequalities. Furthermore, recent developments in markets and technologies offer new opportunities for SMEs to innovate and grow. Digitalisation accelerates the diffusion of knowledge and is enabling the emergence of new business models, which may enable firms to scale very quickly, often with few employees, tangible assets or a geographic footprint (OECD, 2017c).

What are current trends and challenges?

SMEs are, on average, less innovative than large companies. For example, across OECD countries, the median value in the national SME share of business R&D is 35%. Moreover, small firms (10-49 employees) are approximately only half as likely as large firms to have a business website allowing for online ordering and only one-third as likely as large firms to be using Enterprise Resource Planning (ERP), a software platform that integrates core business processes in real-time (Figure 1).
However, aggregate figures conceal an extremely heterogeneous reality (OECD, 2017a). Survey data show that a significant proportion of SMEs engage in all forms of innovation, especially in higher-income countries (Figure 2) and that even the smallest employer enterprises (i.e. less than 10 workers) can reach productivity levels above the large-company average (OECD, 2017b).

The contribution of SMEs to innovation has increased in recent decades thanks to changes in the way innovation takes place in the economy (OECD, 2017d). Enterprise innovation is no longer limited to corporate R&D labs, and is often the outcome of collaborative efforts in which businesses interact and exchange knowledge and
information with other partners as part of broader innovation systems. This shift towards an ‘open innovation’ paradigm has reduced the need for innovation-related capital investments, making business innovation more accessible to SMEs (OECD, 2010a). Furthermore, especially in science-driven sectors (e.g. biotech and nanotech), small businesses are often the source of radical innovations, thanks to their flexibility and to their ability of working outside of dominant knowledge paradigms; for example, SMEs account for about 20% of patents in biotechnology-related fields in Europe (OECD, 2017d). SMEs also constitute the bulk of high-growth firms, which are quintessentially “innovative” enterprises able to grow fast over a short period of time thanks to disruptive changes in their ‘business as usual’ practices (OECD 2010b; OECD, forthcoming).

**Differences in SME performance and growth orientation result from how internal strategic resources are leveraged** to invest in in-house innovation and to collaborate with external partners. Evidence points to a strong link between better managerial skills and formal management practices (e.g. HRM, standards and certifications, accounting, etc.) on the one hand and productivity growth on the other (OECD, 2017b). By way of example, process innovation often involves cost-reduction strategies, whose success depends on the capabilities of the company management. Similarly, the adoption of Industry 4.0, which involves the use of automation and digitalisation in manufacturing, requires strong managerial skills in SMEs.

Many governments have supported the upgrading of managerial skills in SMEs, both in low-tech and high-tech industries. Canada’s Operational Efficiency Programme, for example, strengthens operational efficiency in manufacturing SMEs by enabling participating companies to benchmark and monitor their operational performance against the industry average. The objective is to eliminate causes of waste in the production process and to make the business process more productive. Mexico has delivered a large-scale six-hour management training course for micro business owners in traditional sectors (e.g. retail trade). As part of this programme, low-skilled entrepreneurs receive an electronic tablet which embeds the management training software programme and enables customer electronic payments.

**Workforce skills are also important**, especially in small businesses where a larger proportion of workers than in large companies are involved in the implementation of business innovation on the ‘shop floor’. In this respect, there is evidence that SMEs that provide employees with opportunities to develop problem-solving skills and to make use of their knowledge are more likely than others to succeed in developing new products or processes (OECD, 2015b). Governments in OECD countries support workforce training in SMEs through policies which encourage the formation of business training groups. Examples include Germany’s Inter-company Vocational Training Centres, Australia’s Group Training Organizations, and Korea’s Training Consortia. This approach has important benefits both for the government and for small businesses: governments can reach a larger number of companies through a single policy intervention, while small businesses gain access to better trainers at lower costs and learn from their peers in the same training group.

**The adoption and effective use of ICT hardware and software is a form of business innovation, but also a prerequisite and further driver of other forms of business innovation.** Certain management software (e.g. customer relationship management or enterprise resource planning) can support the professionalisation of small business management, but may require upstream improvements in managerial skills through training and consulting (see Box 1). Some digital technologies are more relevant than
others for SMEs. For example, cloud computing can enable businesses to rent computing infrastructure and software services from a third party provider without upfront investment in ICT capital (OECD, 2017c; OECD 2014). It can also alleviate the need for on-site IT staff, and can enable SMEs to make use of other relevant digital technologies such as data analytics, i.e. the use of raw “big data” for business purposes after adequate cleaning and processing. Policies which support investment in ICT should take into consideration the level of development, technology needs and managerial skills of the targeted companies.

Box 1. Upgrading managerial skills through ICT in SMEs: A review of government programmes

A recent OECD comparative analysis of government programmes aimed at improving managerial skills in small enterprises, mostly from traditional sectors of the economy (e.g. retail trade and low-tech manufacturing), finds that combining management training and consulting with support in ICT use is a common approach to boosting innovation in small low-tech enterprises. This combined offer tends to improve the performance of participating companies through, among others, a better understanding of local markets, benchmarking their performance against the local industry average and sourcing inputs at lower cost. However, similar programmes need to have simple rules and low per-recipient costs if they want to reach low-skilled entrepreneurs. Moreover, drawing on private-sector trainers and advisors in the implementation phase helps these programmes have a stronger impact.


The large majority of SMEs do not have an IPR strategy in place, nor do they integrate IPRs into their overall business strategy or model, which is mostly the result of lack of knowledge and expertise in SMEs. Obstacles to the use of IPR become particularly acute when SMEs operate internationally and may involve legal overheads, multiple filings, regulatory and technical differences across countries, and the robustness of local IP enforcement (OECD, 2011). Supporting the development of managerial skills is also important to spread the use of IPRs in SMEs.

SMEs are also often unaware of the close link between business innovation and business survival and growth, or may not be cognisant of how to engage in innovation; for example, small enterprise owners are often unaware of the extent to which digitalisation can improve their business (OECD, 2017e).

Small businesses may also be discouraged to innovate if large (international) players have dominant market positions, which may well be the case in an economy where technology leaders increasingly capture most market shares due to “winner-takes-all” dynamics (OECD, 2015c).

Globalisation has increased the importance of cross-border collaboration in innovation, but SMEs find it difficult to identify and connect to appropriate knowledge partners and networks at the local, national and global levels (OECD, 2013).
Finally, government innovation policy may not be suited to the way SMEs innovate. For example, R&D tax credits, one of the most common forms of innovation policy, often uninten dedly favour large firms because R&D activity is highly concentrated in a few, mostly large, firms, and because of their administrative complexity. Some OECD countries have put in place special provisions to spur SMEs to use R&D tax credits, such as enhanced investment tax credit rates (e.g. Australia, Canada, Japan, Korea, Norway, Poland and United Kingdom). Other innovation policies, such as pre-commercialisation public procurement, may not take account of the collaborative approach to innovation that is typical of SMEs.

What are key areas for policy to consider?

Governments can foster innovation in established SMEs, in co-operation with the other main stakeholders of the national innovation ecosystem, by providing a business environment that is conducive to growth; and supporting the development of strategic assets and resources at the firm level (skills, ICT, access to finance, etc.).

- **Upgrading workforce skills in SMEs.** Improving workforce skills supports both the generation of new in-house innovation and the absorption of new knowledge sourced through collaborations with external partners.

- **Helping SMEs adopt ICT and adapt to the digital revolution.** It is important not only to support SMEs in adopting and effectively using ICT hardware and software which can professionalise business management, but also open up SMEs to the new opportunities of the ongoing digital revolution (e.g. cloud computing, data analytics, etc.).

- **Ensuring that R&D policy is inclusive of SMEs.** R&D grants are typically more likely than tax credits to reach SMEs, as they can directly be targeted at small enterprises or at activities in which small enterprises are more likely to be involved (e.g. collaborative innovation). Governments can also design existing R&D tax credit programmes so that they better serve the needs of SMEs, including through enhanced investment tax credit rates for SMEs and simpler operational rules.

- **Fostering IP use among SMEs.** It is also important to encourage the use of IP by SMEs by raising awareness about the different types of IPRs, increasing IPR-related skills in SMEs through education and training, and making the overall IP system friendlier to SMEs by streamlining procedures, adequately structuring fees and costs, and improving litigation and enforcement mechanisms (OECD, 2011).

- **Developing an effective and inclusive national innovation system.** National governments have an important role to play in building national innovation systems that are effective in knowledge commercialisation and inclusive of SMEs of different sizes and from different sectors. This primarily involves strengthening collaborations and knowledge flows among the main players of the innovation system (e.g. enterprises, business service providers, universities, government organisations, financers) through policies such as technology extension services, industry-university collaborative research, business accelerators, and business clusters (OECD, 2010a).
Further reading


OECD (2017c), “Going Digital: Making the Transformation Work for Growth and Well-Being”, Meeting of the Council at Ministerial Level, 7-8 June 2017


