

Promoting digitalisation

HARNESSING DIGITAL TRANSFORMATION FOR JAPAN'S ECONOMY AND SOCIETY

- ▶ Digital transformation offers countries a range of social and economic opportunities. Japan recognises this potential, as indicated by its championing of digital issues at the G20 and G7, and the commitment of the Japanese government to harness data for Society 5.0.
- ▶ Japan is a world leader in some aspects of digital infrastructure and has a strong diffusion of advanced technologies, such as cloud computing.
- ▶ However, to improve the uptake of new technologies for the benefit of society, Japan must ensure that all workers have the skills they need for jobs in the digital era, and close divides based on gender or age.
- ▶ To boost the economic dividends from the digital transformation, Japan must also pursue policies to improve business dynamism and the ability of firms of all sizes to adopt and leverage digital technologies for innovation, productivity and job creation.

What's the issue?

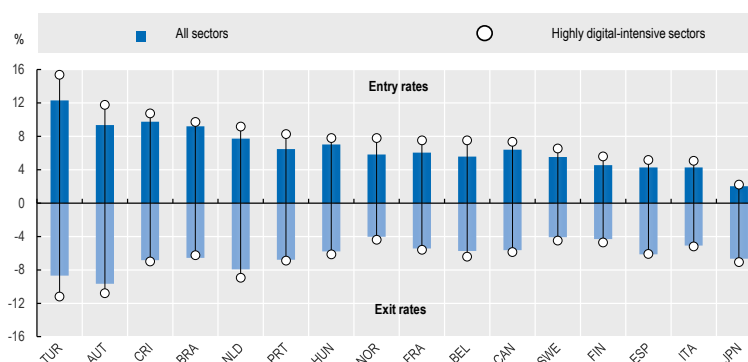
Digital transformation holds great potential to spur innovation, generate efficiencies, improve goods and services, enable trade and investment, and push out the productivity frontier. Japan has championed discussions on digital transformation in the G7 and G20, especially noting the promise of human-centred artificial intelligence and of data for driving economic and social progress

Realising this potential, and ensuring it is broadly shared for the benefit of all in society, requires coherent

policy action to enhance access to digital technologies, increase effective use, unleash innovation, ensure good jobs for all, promote social prosperity, strengthen trust and foster market openness. Japan already performs well in a number of these areas. It leads the OECD on mobile broadband connectivity (with 168 subscriptions per 100 inhabitants) and has the second highest share of fibre connections in fixed broadband (77%). Japan is second only to Korea in robot density in manufacturing and around 47% of firms use cloud computing. It invests over 6% of GDP in ICT equipment, computer software

Business dynamism in highly digital-intensive and all sectors could be higher

Average entry and exit rates, 1998-2015



Source: OECD (2019), *Measuring the Digital Transformation: A Roadmap for the Future*, based on OECD calculations based on OECD, DynEmp3 (database).
<http://oe.cd/dynemp>. Statlink <https://doi.org/10.1787/888933930345>

and databases, R&D and other intellectual property, which can help in driving and adapting to the digital transformation. Japan has also started to take steps to encourage digital innovation, including offering and expanding financial support to SMEs which want to invest in new technologies and using public procurement to boost innovation in SMEs, whose share of R&D spending is very low (5%) compared to the OECD average (30%).

However, there is further scope for people and firms to benefit from digital applications and services. Low business dynamism in all sectors, including highly-digital ones, may be impeding the creation of innovative firms and the uptake of new technologies. Even for large firms, for instance, only 32% are engaged in sales via e-commerce (compared to an OECD average of 43%), and a relatively low share of workers are employed in ICT task-intensive occupations (a figure that has changed little since 2011). Skills gaps may accentuate this issue, with only 46% of 16-25 year-olds (and less than 10% of 55-65 year-olds) showing proficiency in problem-solving in technology-rich environments (compared to over 60% in Finland, Korea and Sweden for the younger age group), and just 30% of low-skilled workers receiving firm-based training that could help them navigate the digital transformation. Further addressing gender bias and stereotypes throughout education and careers is essential – among new entrants to doctorate programmes, only 9% of women chose natural sciences, mathematics and statistics in 2016 (compared to an OECD average of 20%), the gender wage gap is high including in digital-intensive industries, and Japan lags the G20 average for ICT patents invented by women and involvement in international teams of inventors

Why is this important for Japan?

Positioning more strongly to harness the digital transformation could help Japan boost business dynamism and productivity, spur innovation and new jobs, and offer new ways of addressing its societal challenges including ageing and low women's labour participation.

OECD analysis shows that uneven diffusion and uptake of digital technologies play an important role in explaining the significant gap in productivity performance between frontier and laggard firms in many OECD countries. Declining business dynamism and a lack of investment in complementary assets such as skills, managerial capability and data can contribute to low diffusion and can limit the ability of all firms to transform their processes and production models, access new markets and innovate. OECD analysis also shows that people need the right mix of skills to use digital technologies effectively in life and at work. Individuals with sound cognitive skills, notably numeracy, literacy and problem-solving skills in technology-rich environments are most likely to perform more diversified and sophisticated activities in the digital world and will be more able to engage in high-performance work practices. Divides by gender, age and educational attainment reduce digital inclusion and stifle the full benefits digital transformation can yield.

What should policy makers do?

- ▶ Boost the adoption, diffusion and effective use of advanced digital tools that drive productivity in firms today, particularly among SMEs, for example by facilitating the adoption of tools that are particularly beneficial to SMEs, such as cloud computing.
- ▶ Foster business dynamism and structural change, by enabling the experimentation with new ideas, technologies and business models, and by avoiding implicitly or explicitly favouring incumbents.
- ▶ Promote foundational skills for all and ensure all people develop the skills they need to succeed in the digital world of work. Boost access to and use of training systems for adults throughout their working life and tackle age-based digital divides.
- ▶ Work to close the digital gender gap to further harness the potential of women in the Japanese labour market.



Further reading

OECD (2019), *Going Digital: Shaping Policies, Improving Lives*, OECD Publishing, Paris, <https://doi.org/10.1787/9789264312012-en>

OECD (2019), *Measuring the Digital Transformation: A Roadmap for the Future*, OECD Publishing, Paris, <https://doi.org/10.1787/9789264311992-en>

OECD (2018), "Bridging the Digital Gender Divide: Include, Upskill, Innovate", OECD, Paris. <http://www.oecd.org/going-digital/bridging-the-digital-gender-divide.pdf>