

Going Digital in a Multilateral World

An Interim Report to Ministers: Executive Summary

Meeting of the Council at Ministerial Level, 30-31 May 2018

In January 2017, the OECD launched Going Digital: Making the Transformation Work for Growth and Well-being (the Going Digital project). The project aims to help policymakers better understand the digital transformation that is taking place and create a policy environment that enables their economies and societies to prosper in a world that is increasingly digital and data-driven. An interim report – presented at the 2018 OECD Meeting of the Council at Ministerial Level – provides preliminary results from the Going Digital project. A final synthesis report, based on an integrated policy framework, will be released at a high-level conference on 11-12 March 2019, following the completion of all of the work under the Going Digital umbrella.

Economies, governments and societies across the globe are going digital

Almost half of the world's population is now connected to the Internet, up from only 4% in 1995. In 2016, 83% of adults in the OECD area accessed the Internet and 95% of firms in OECD countries had a high-speed Internet connection. As of June 2017 there were almost 102 mobile broadband subscriptions per 100 inhabitants in the OECD area, on average more than 1 per person. In OECD countries, digital transformation is now characterised by almost universal connectivity, but also by ubiquitous computing, and draws on the generation and use of vast amounts of data.

Today, the world is at critical point in the ongoing digital transformation. Technologies continue to develop rapidly and are combining in novel and innovative ways, pushing digital transformation in new and often unpredictable directions. Policy making under uncertainty requires a consideration of several possible future scenarios, including the various uncertainties that underpin them, to ensure that policies put in place today remain resilient to the changes to follow. Together, governments and stakeholders must shape a common digital future that makes the most of the immense opportunities that digital transformation holds to improve people's lives and boost economic growth for countries at all levels of development, while ensuring that nobody is left behind.

Governments – at the local, regional and national levels – have an opportunity to be remade by digital transformation as they use digital technologies to improve efficiency and targeting, enable innovative policy design and rigorous impact evaluation, and expand citizen and stakeholder engagement.

Digital transformation is transversal, and the policy response must be holistic

Digital transformation affects all aspects of the economy and society in complex and interrelated ways, challenging existing policies in many areas. As a result, silos of all types are disintegrating, and hard borders are becoming less relevant. This means that stronger co-operation and collaboration domestically are critical, as well as a re-think about how policy is developed and implemented. In particular, a flexible, forward-looking and integrated policy framework that cuts across policy silos is essential to ensuring a coherent and cohesive whole-of-government approach to fully realise the potential of digital transformation and address its challenges. To support policy making in the digital age, better measurement of digital transformation and its impacts is critical, including in areas such as national accounts, data and data flows, citizen trust, and digital trade. Such data may not necessarily come from traditional statistical sources.

At the same time, the Internet cuts across national borders and changes conventional notions of location, distance, and jurisdiction, requiring stronger international and multi-stakeholder co-operation which are critical factors in effective and multilateral action in many areas. For example, digital transformation offers both opportunities to tax administrations (e.g. to increase efficiency and raise tax compliance) as well as challenges (e.g. the use of distributed ledger technologies and crypto-currencies for illicit purposes), requiring now more than ever co-operation and co-ordination across jurisdictions.

Data and data flows are key enablers of digital transformation

Data are a foundational driver of digital transformation as well as an enabler. Data analytics, data-driven innovation, and other data-intensive activities, including machine learning and artificial intelligence (AI), benefit from open and interconnected information systems and networks that enable efficient, flexible and cheap data flows among potentially unlimited actors. Enhancing access to data can maximise the social and economic value of data, provided that all stakeholders have sufficient evidence to assess the possible trade-offs of data utilisation.

Data are also essential for trade and investment. Reaping the benefits of digital trade requires international dialogue on regulatory approaches that ensure the interoperability of differing regulatory regimes, for data or other transversal issues. Emerging measures impacting cross-border data flows raise concerns for business activity and the ability to benefit from digital trade; on the other hand, important public policy objectives, such as the protection of privacy, security and intellectual property rights (IPRs), must be taken into account.

As the world of work changes, a well-designed policy package can smooth the transition

Addressing the impacts of the digital transformation on jobs and skills is also key to an inclusive and people-driven outcome. Effective social dialogue should be combined with innovative approaches to addressing worker transition, including the use of technology to identify skills needs or to link skills to available opportunities, as well as public-private partnerships (PPPs) to develop new initiatives to facilitate worker transition. More data are also needed to enable the development of more effective policy approaches (for example, a better understanding of the challenges involved in worker redeployment, life-long training, and longitudinal data on skills/jobs development).

New OECD estimates suggest that on average 14% of jobs are at a high risk of automation in the next 15-20 years. Another 31% of jobs are at risk of significant change in terms of task content as a result of automation. However, new jobs will be created too, and there is no evidence that, to date, technological change has been associated with net job losses overall.

But new jobs are not the same as those that are lost and polarisation in the labour market is a concern. High-skilled workers have thus far tended to benefit relatively more from technological change, while the share of employment in middle-skilled jobs has decreased. Going forward, low-skilled workers are most at risk of losing their jobs and being left behind.

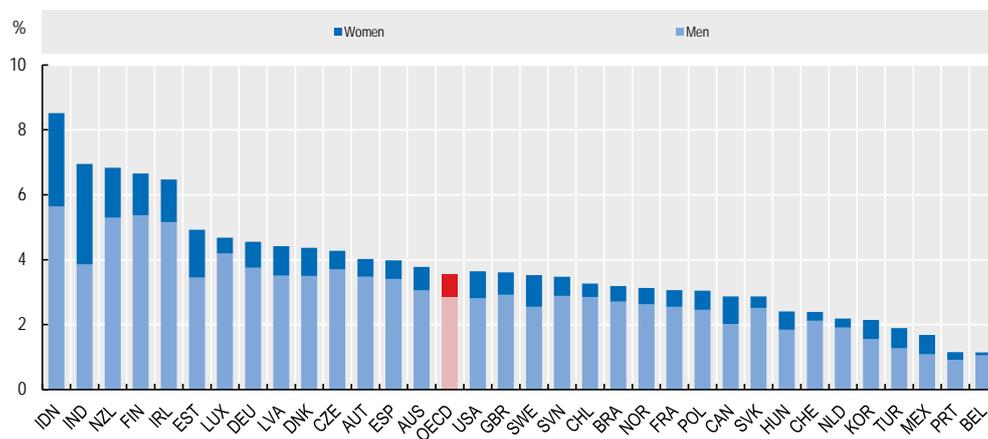
Ensuring a smooth and fair transition for all workers requires a comprehensive package of co-ordinated policies, including facilitating worker redeployment, investing in skills, education and training, providing social protection and adequate employment protection to all forms of work, strengthening social protection, forward-looking labour market regulation, fostering social dialogue, and prioritising resources that can support the transition process.

Putting people at the centre is essential for an inclusive digital economy and society

A people-driven and inclusive approach to policy making is essential, as also highlighted in the OECD's 2018 Ministerial report on Inclusive Growth. If we lose sight of the individual and the need for all individuals to be engaged and benefit from digital transformation, the transformation cannot be positive and inclusive. Ensuring connectivity and affordable access for all, as well as the protection of individual's privacy and consumer rights, are key elements of an inclusive and people-driven approach.

While assuring the transition for workers, digital divides by age, education, gender, income, degree of disability, and geography persist across and within countries and must be reduced. Addressing these divides, e.g. by broadband policies aimed at providing affordable access and services to all, is crucial to ensuring a positive and inclusive transformation.

Figure 1. Tertiary graduates in information and communication technologies, by gender, 2015
As a percentage of all tertiary graduates



Note: Notes to this figure are available at <http://dx.doi.org/10.1787/888933618422>.

Source: OECD (2017), OECD Science, Technology and Industry Scoreboard 2017, <http://dx.doi.org/10.1787/9789264268821-en>.

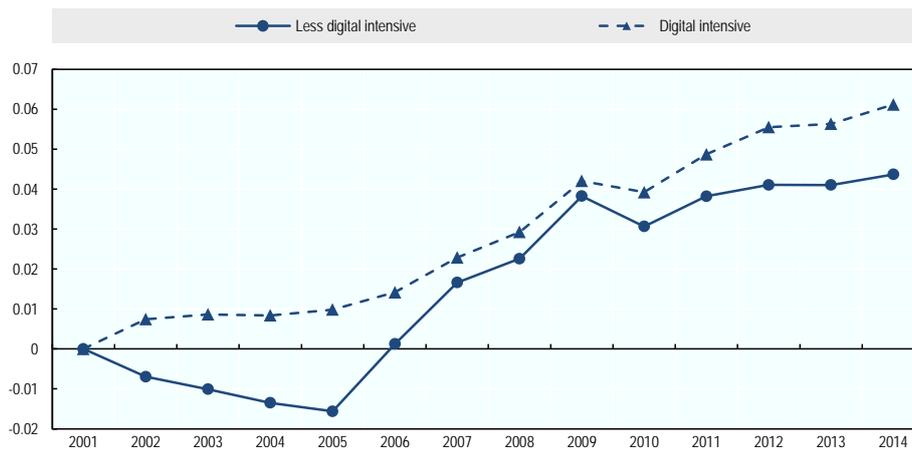
The impacts of digital transformation on well-being must be better understood and measured. Digital transformation may have both positive and negative impacts, and there may be heterogeneous effects across population groups, depending on age, gender, income level or skillset. Placing people at the core of the design and delivery of policies and services, enabling new mechanisms for engagement and collaboration in policy making and service delivery, and making access and use of digital services more relevant and simple, is an imperative to fully seize the opportunities offered by digital transformation to improve people's well-being.

The diffusion of digital technologies transforms markets and fosters productivity

Policy makers can also help translate digital transformation into growth and productivity. Technologies – in particular frontier technologies – and related business models and organisational practices aren't diffusing as well as they need to. The diffusion of digital technologies is more advanced in sectors in which firm dynamism is higher. Harnessing digital transformation for firms requires policies that foster business dynamism and efficient resource reallocation, strengthening technology and knowledge diffusion, fostering investment in tangible and intangible capital, helping small and medium-sized enterprises (SMEs) engage with digital transformation, facilitating structural adjustment to enable the growth of digitally-intensive firms, and ensuring sound competition.

Digital transformation enables firms to improve market intelligence and access global markets and knowledge networks at relatively low cost, opening up new opportunities that require complementary investments in organisational changes, process innovation, new systems and new business models (as well as skills). The scale and complexity of these complementary investments is growing, which makes digital transformation difficult for firms lacking key capabilities, such as traditional SMEs. Comprehensive national digital strategies that take into account SMEs (including by providing them with practical guidance and incentives to adopt good practices), policies that facilitate access to finance, knowledge networks and skills, and SME engagement with competency centres and/or technology extension services, can be helpful.

The competitive environment is changing in digitally-intensive sectors. For example, mark-ups – the wedge between the price a firm charges for its output on the market and the cost the firm incurs to produce one extra unit of output – have been increasing on average across firms and countries, especially for firms at the top of the mark-up distribution and those in digitally-intensive sectors. Mergers and acquisitions are growing too, in particular in digitally-intensive sectors.

Figure 2. Mark-up growth over time (2001-14) in digital-intensive vs less digital intensive sectors

Note: The distinction between digital intensive sectors (resp. less digital intensive sectors) rank above (resp. below) the median sector by digital intensity, as calculated jointly over all indicators of digitalisation in Calvino et al. (forthcoming), "Business dynamics and digitalisation: A progress report". This graph fixes the ranking of sectors to the initial period (2001-03), and shows only mark-ups estimated assuming a Cobb-Douglas production function.

Source: Calligaris, S., C. Criscuolo and L. Marcolin (2018), "Mark-ups in the digital era", <http://dx.doi.org/10.1787/4efe2d25-en>.

These changes may not necessarily be a source of concern, as they may be inherent to the nature of digital transformation, but they should be further examined and considered by policymakers. For instance, competition frameworks designed for traditional products may not be suitable for a global digital economy. Governments may also need to enhance co-operation across national competition agencies to address competition issues that are increasingly transnational in scope or involve global firms.

Digital security and privacy protection requires a multi-faceted strategy

As all sectors of the economy go digital, it is essential to encourage good digital security risk management practices by taking into account cross-border and cross-sector interdependencies and fostering trust with and among private operators to enable information sharing about threats, vulnerabilities and incidents, including for SMEs. To do so, responsibilities for digital security must be shared among individuals, business and governments.

As digital transformation progresses, individuals are increasingly asking what personal data is stored, how it is subsequently used and whether they can access their data, on the job and at home. Technological advances can help increase trust through "privacy by design" processes whereby privacy preferences are embedded or coded in technologies from the start. For example, encryption can play an important role for privacy as mobile devices and the Internet of Things (IoT) expand.

At the same time, privacy in an increasingly data-driven economy requires a multifaceted strategy, reflecting a whole-of-society vision, and supported at the highest levels of government. Such strategies need to strike the right balance between the social and economic benefits of enhanced reuse and sharing of data and analytics, and individuals' and organisations' concerns about such openness, including the protection of privacy and intellectual property rights. Co-ordinated privacy strategies at the national level would enhance privacy protection in an increasingly data-driven environment.

Further reading

The full paper will be available at www.oecd.org/mcm.

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