

Technological change and the future of work

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The Government has asked the Productivity Commission to undertake an inquiry into technological change, disruption and the future of work. The Government wants to know

- what the current and likely future impacts of technological change will be on the future of work, the workforce, labour markets, productivity and wellbeing, and
- how the Government can best position New Zealand to take advantage of innovation and technological change?

Technology matters for productivity and wellbeing

Technology drives long-run productivity growth. Much of the improvements in human wellbeing that have been achieved over the past two centuries – higher incomes, longer lives, more leisure, more choice, safer work, healthier cities and environments – are the result of technology evolving and being applied.

Technology has many impacts on work

Some people worry about the potential for new technologies to replace jobs. There are certainly many examples in history of technology taking over tasks that were traditionally carried out by humans. But technology has many effects on work and the labour market, many of which are positive. By making goods and services cheaper, technology can increase the demand for the labour that produces them. Cheaper goods and services free up more disposable income for people, creating demand for labour elsewhere in the economy. Technology can also make existing jobs and workers more productive. Predictions that technology will inevitably replace labour on a large scale are unreliable and out of step with historical experience.

Technological change seems to be slowing, not speeding up

Recent advances in technologies such as artificial intelligence and robotics can give the impression that the current pace of technological change is accelerating. It is difficult to directly measure the speed of technological change. But we can try to measure technological change by looking at indicators from the wider economy and labour market, where technology might be expected to have an impact. These indicators include productivity growth, business start-up rates, average job tenure and occupational churn. Across the developed world, these indicators consistently point to static or slowing technological change. This does not rule out future increases in the speed of technological change, but for the time being, there is little sign of imminent disruption to work.

New Zealand needs more technology, not less

New Zealand's productivity and income growth rates have been disappointing for some time. Much of this poor performance has been due to low rates of technological adoption and diffusion in the New Zealand economy. If we are to attain higher incomes in the future, New Zealand needs more technology. Rather than treating technology as a threat, New Zealand should embrace technology and take steps to encourage more adoption, diffusion and innovation, while looking after the people who are adversely affected or less well-equipped to adapt.

Retain New Zealand's strengths and address weaknesses

Many factors and conditions matter for the adoption of technology – a population welcoming of technological change, a dynamic business environment in which resources (ie, capital, labour) move to more productive firms, a labour market that adapts to change, a well-educated population, and policy settings that promote openness.

Many strengths...

New Zealand performs well on a number of these conditions. For example,

- New Zealand has a flexible labour market that has historically adapted well to economic change, while also creating an abundance of employment opportunities,
- New Zealand adults have internationally high levels of literacy, numeracy and problem-solving skills and take part in training at high levels, and
- Policy settings – with a few notable exceptions (eg, foreign direct investment) – generally support openness to the flow of goods, services, capital, skills, data, ideas and technologies.

These strengths should be retained and, where possible, built upon.

...but also areas of weakness

However, New Zealand also has several areas of weakness that may either limit our ability to adopt technology in the future or make it harder for some people to successfully adapt to technological change. These need to be addressed.

- New Zealand students' core skill levels (eg, reading, mathematics, science) have been dropping over time, and the schooling system produces persistently poor outcomes for some young people, especially children from socio-economically disadvantaged communities, and Māori and Pasifika students.
- High house prices in cities make it harder for some people to move to areas where there are more jobs and better matches with their skills.
- New Zealand's business environment lacks dynamism, with many resources stuck in low-productivity firms.
- By international standards, New Zealanders seem less positive about the social and economic impact of emerging technologies.

Maximising New Zealand's potential to benefit from technology

There are many steps that the Government can take to improve the ability of New Zealanders to take advantage of the opportunities that may arise from technological change.

Keep a close eye on trends

The Government should develop appropriate measures and closely monitor local and international economic and labour market trends. If some job-disrupting technology does emerge, there will be enough time to see it coming and prepare.

Make training more flexible and more accessible

Although New Zealand adults participate in training at relatively high levels, some people have better access than others. If technological change does pick up in the future, training will be one important way in which people can adapt, by gaining new skills and upgrading their existing skills. Current funding rules and regulations unhelpfully limit access to training. Rules restricting the funding, design and delivery of micro-credentials should be lifted, as should those that require adults to enrol in full qualifications before they can qualify for public subsidies. Limits on the ability of people to borrow through the Student Loan Scheme for short course tuition fees should be removed.

Improve and expand careers advice and employment support

Careers advice and guidance is another way of helping people to adapt to labour market change and find new opportunities. The Tertiary Education Commission has the responsibility for developing a careers system strategy, but many stakeholders have expressed concern about the pace of progress. Work on delivering better and more accessible careers services should be given greater priority. The Government should also extend eligibility for Ministry of Social Development (MSD) employment services to all displaced, about-to-be displaced and underemployed workers, provided MSD continues to target these services according to their effectiveness in improving workers' long-term social and work outcomes.

Urgently address the performance of the schooling system

A schooling system that continues to deliver declining core skills and large achievement gaps, particularly by ethnicity, will leave many young New Zealanders ill-prepared for the future of work. The Government should take urgent steps to lift school performance.

Update employment law to target harms, not technology

The emergence of work mediated through digital platforms has raised concerns that traditional forms of employment may be undermined, or that workers will face greater risks of exploitation. There is little evidence that digital platforms are disrupting standard employment. So-called 'gig' work makes up a very small share of total employment and most people who carry out work through platforms do so for short periods of time, and to supplement other sources of income.

Nor is it obvious that digital platforms create more risks of exploitation in New Zealand. Issues of abuse are broader in nature and are not specific to any particular technology. Digital platforms create many benefits for users and workers, including the creation of work opportunities for people who are often marginalised from the

labour market. Protections against worker exploitation should be effectively enforced, while retaining these benefits.

Employment laws should be updated to better recognise forms of work emerging through digital platforms and other types of technological change and to target the laws more clearly on circumstances that can contribute to abuse. The legal tests governing who qualifies as an “employee” and a “contractor” should be reformed to focus on the essential nature of the work relationship, rather than on questions of whether specific tasks are “fundamental” or “supplementary” to a firm’s business. Where there are high levels of employer control, little worker autonomy and choice, and people are “locked in” to working for a specific organisation, workers should be classed as employees, not contractors.

The Government should also consider creating a regulatory “safe harbour” for platforms that would offer greater certainty against having workers reclassified as employees, provided the platforms meet higher, specified standards. Such a ‘safe harbour’ could encourage platforms to compete on quality and conditions of work.

Provide greater income smoothing for displaced workers

Unlike most other OECD countries, New Zealand does not have a public unemployment insurance system which provides income assistance that is linked to a worker’s prior income. Eligibility for unemployment benefits in New Zealand is assessed against household incomes, meaning that people who lose their jobs but have employed partners may receive no financial support at all. As a result, some New Zealanders can face large falls in income upon displacement. There are several options that could be pursued to offer greater income smoothing, including changes to existing benefits and tax credits, introduction of an unemployment insurance scheme, and portable individual redundancy accounts. Further analysis is needed to identify the best option and investigate likely spillover effects.

Refresh regulation to keep pace with technology and support worker mobility

There are instances where regulatory regimes may be unnecessarily inhibiting technology adoption or the development of a more dynamic labour market. For example,

- competition policy should be reviewed to ensure its can effectively deal with issues created by digital technologies,
- controls on the use of genetic modification technologies should be reviewed to ensure they are proportionate and up-to-date,
- work on developing data access and consumer data rights should be accelerated to help create new markets and more business dynamism, and
- less restrictive land use regulation should be adopted, to ease upward pressures on house prices and lift barriers on the ability of firms to grow.

Read the full version of the report and other inquiry material at www.productivity.govt.nz/inquiries/technology-and-the-future-of-work/.

The New Zealand Productivity Commission is an independent Crown Entity. It conducts in-depth inquiries on topics selected by the Government, carries out productivity-related research, and promotes understanding of productivity issues.