Productivity Commission: Inquiry into Technology and the Future of Work

Response to the Issues Paper

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Background on respondents:
The named respondents above are all members of the Digital Economy and Digital Inclusion Ministerial Advisory Group (DEDIMAG) - **we are however responding as a group of individuals** and note this response was not undertaken as part of our DEDIMAG work and has not been shared with Ministers or officials. We also note the diverse perspectives on the digital economy and digital inclusion our group bring to this topic as representatives of local Government, Non-Governmental Organisations, Māoridom, industry, and community groups with specific expertise in building the economy and closing digital divides.

Summary:
We would like to thank the Productivity Commission for the opportunity to respond to the issues paper on technology and the future of work. The paper raises profound and challenging questions about the future direction of the New Zealand economy and workforce, and addresses some of the same topics which DEDIMAG has been established to consider. Accordingly, we are pleased to provide some input below on each of the two critical questions asked by the issues paper.

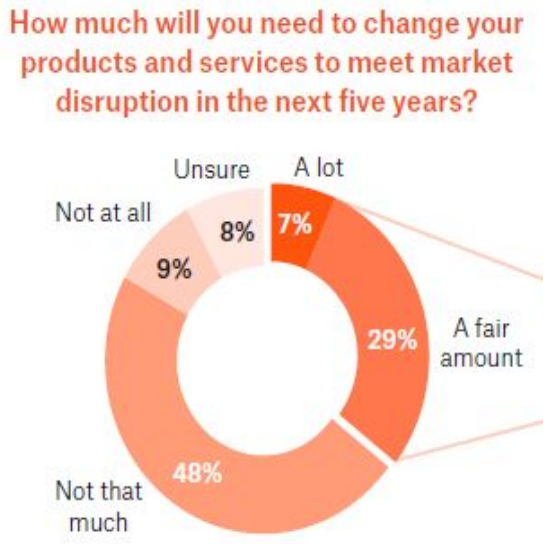
The questions are:

- What are the current and likely future impacts of technological change and disruption on the future of work, the workforce, labour markets, productivity and wellbeing?
- How can the Government better position New Zealand and New Zealanders to take advantage of innovation and technological change in terms of productivity, labour-market participation and the nature of work?

Context:
New Zealand is a nation of Small and Medium Enterprises (**SMEs**), and the productivity of these firms is critical to our future economic success. However, Information & Communications Technology (**ICT**) capability varies widely across SMEs, with some major industries such as tourism, retail and construction having a wide spread of ICT capability between "early adopters" and "laggards".

Many New Zealand SMEs are rather complacent[1] about the risks of "digital disruption". 2018 research shows 78% of businesses said they are "fairly confident" or "very confident" about their ability to withstand potential future disruption. Just 36% said they need to make major or a fair amount of changes to their products & services over the next 5 years (Figure 1). This is despite 59% of businesses saying they expect major disruption from digital platforms over the next five years (Figure 2).

[1] https://www.suncorp.co.nz/documents/2018-business-success-index-report.pdf



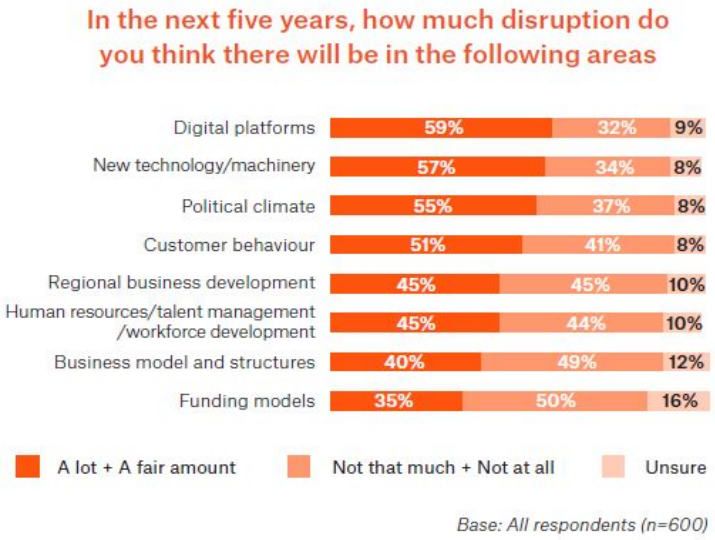


Figure 1: How much change is needed to meet disruption
Source: Suncorp Business Success Index, June 2018.

Figure 2: Amount of disruption expected

According to MBIE research released in May 2019[2], small businesses tend to rely upon trusted advisers (or "intermediaries") for advice on technology uptake. Such parties can include accountants, economic development agencies and industry bodies. However the same research describes those intermediaries as often lacking their own sources of impartial expert advice on digital technologies (see Figure 3).

Figure 3: MBIE research on shortage of providers of digital advice.

Of the four scenarios posed by the Commission, we see Scenario 1 ("*more tech and more jobs*") as clearly delivering the best outcomes for New Zealand. The Commission has identified that technology adoption drives growth in productivity and living standards and we agree with this viewpoint. This scenario would offer us a high productivity economy with a net increase in jobs which are highly skilled. It would help NZ maximise economic output while minimising physical labour. Unemployment/ underemployment would

[2] See https://www.mbie.govt.nz/business-and-employment/economic-development/digital-economy/digital-economy-work/digital-business/business-uptake-of-ict-project/

decrease, and New Zealand's national competitiveness would be closer to major trading partners such as Australia and well-developed Western countries such as the Netherlands.

Accordingly, our comments in response to the Commission's two critical questions use Scenario 1 as the desired future state.

We see Scenario 1 as a continuation, and perhaps acceleration, of an existing trend - rather than something new or unique. New Zealanders have been enthusiastic adopters of new technologies for decades. The difference we see in the present age is that the rate of change (technological and economic) appears to be accelerating. This implies that the opportunities to be realised are greater than previously, but also that the risks of not doing so have increased too.

The World Economic Forum's Networked Readiness Index provides a useful means of comparing New Zealand's performance with peer nations. The most recent index, published in 2017, has NZ at 17th overall. DEDIMAG would suggest an aspirational target for NZ of reaching the top 10 by 2025, noting that this means surpassing high productivity countries such as Germany, Canada, and Japan.

NZ rated highly on its regulatory environment (3rd overall) and Infrastructure (10th) - the latter being a figure which may well improve in the near future as NZ's uptake of ultra fast broadband increases.

NZ rated poorly on only two measures - business usage of ICT (20th), economic impacts of ICT (25th) and affordability of ICT (97th). DEDIMAG sees these areas as the critical ones which need attention, from the perspective of both growing the digital economy and reducing digital exclusion.

As telecommunications prices are falling in NZ by around 6% per annum according to the Commerce Commission, we may expect that affordability is improving in this part of the ICT landscape. Further focus may be needed on the affordability of other parts of the ICT "stack", such as hardware (devices), software and services.

Scenario 1 is consistent with New Zealand fulfilling its potential as a top 10 country for ICT usage as described by the World Economic Forum.

<u>Question 1:</u> What are the current and likely future impacts of technological change and disruption on the future of work, the workforce, labour markets, productivity and wellbeing?

We believe there are current and likely future impacts across a range of sectors and in a range of ways presenting opportunity to those businesses that embrace the change, and threat to those who don't. These include:

i. More automation of manual and low-skill tasks, across all sectors.

ii. More virtualisation. Higher share of value will come from intangible / non-physical assets. E.g. service rather than product; information/ data rather than service.

iii. Likelihood of disruption caused by specific, high impact technologies. While we do not know which disruptive tech will cross the threshold to mainstream use, it is not unreasonable to assume whole industry segments or "profit pools" will be disrupted in the near future in the same way digital advertising disrupted traditional media, Uber disrupted taxis etc. We are concerned that the primary sector could be particularly vulnerable to such disruption.

iv. More online delivery of services and online fulfilment of physical goods.

v. More e-Government including procurement, information, revenue and service delivery (such as education and the long-neglected area of e-health).

vi. More network economics.

vii. Improved decision making thanks to the availability of more data (e.g. from sensor networks and automatic collection of data on interactions between people and machines), and greatly improved analytics through the application of ever-greater computing power combined with machine learning.

viii. Lower carbon. Driven by improved transparency of emissions and new regulatory framework including ZCB and ETS reforms.

ix. Continued "hollowing out" of some industries in terms of jobs required, offset by growth in other industries.

x. Workers need to constantly refresh their skills. A job for life is long gone. Instead we may in future think of the education process as "learning to learn" at a young age (as well as some core skills) followed by continual "lifelong learning" as requirements change over time.

xi. More flexibility – with both positive and negative implications for workers.

Question 2: How can the Government better position New Zealand and New Zealanders to take advantage of innovation and technological change in terms of productivity, labour-market participation and the nature of work?

There are many ways in which Government can help New Zealand to take full advantage of innovation and technological change. These include:

i. Design for inclusion at the outset;

ii. Promote and support innovation;

iii. Encourage investment in "sunrise" industries such as clean energy and ICT;

iv. As Government, be a leader and not a follower in embracing technology and new ways of working.

v. Actively engage industries most affected supporting them to uplift their capability to take advantage of the opportunities;

vi. Actively support employees in categories most likely to be negatively impacted by technology change. Some may be able to make the transition. Others may retrain for other forms of work. Some may retire rather than do either.

vii. Support an educational ethos where we "learn to learn" and encourage a framework to develop where continual lifelong learning of new skills and interests, including for those in full-time work, is possible – for example through recognition of training in micro-credentials of just a few hours.