Powerful policy tools for new policy problems

GEN Conference, 9 November 2018

Te Papa Museum, Wellington

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It's a pleasure to be here and to be invited to make this address. I'm a big fan of GEN and of the work of the network. The conference title – "Improving people's lives through effective policy" captures exactly what we are all about. We don't need to look very far, either through history, or across countries, to spot the difference that effective policy - delivered through effective governance vehicles - makes to the lives of people.

In his introductory comments, Minister Robertson emphasised his commitment to setting his government's policies within the well-being framework being developed by the Treasury. At the Productivity Commission, we are watching the development of the Treasury's well-being work with close interest. The Act which established the Commission eight years ago expresses our purpose in well-being terms as follows:

"The principal purpose of the Commission is to provide advice to the Government on improving productivity in a way that is directed to supporting the overall well-being of New Zealanders, having regard to the wide range of communities of interest and population groups in New Zealand society."

My comments today will reflect on both the reconceptualization of the objectives of public policy and the rapidly changing context within with public policy is developed and advice proffered.

It has become almost received wisdom in some quarters that the world has fundamentally changed – or is rapidly doing so – and that we therefore need new ways of thinking and new policy tools and institutions to respond effectively to new challenges. These claims are often made in the context of debates around such challenges as climate change, the impact of disruptive technologies, the growing possibilities of artificial intelligence or renewed emphasis on social equity and opportunity.

According to Harvard psychologist Steven Pinker we're hard-wired to respond to fears of apocalyptic doom - such as the fear that one day robots will take over our jobs…. or our lives…

While we should always be open to new and innovative ways of conceptualising and responding to the future, what I'd like to argue today is that the disciplines of economics and policy analysis remain powerful tools for unpicking and responding to the challenges of today and tomorrow.

I will outline six lessons that I think are important when designing policy in the face of change and uncertainty:

- The future may be unknowable, but it's examinable
- Institutions and incentives matter - still

- Put a premium on flexibility
- Make sure there actually is a problem
- Beware of public sector over-reach
- Know your territory

The future may be unknowable, but it's examinable

A primary challenge in making policies to meet the future is, of course, that we can't be sure what the future will look like. But there are some tried and tested mechanisms for identifying the key choices and trade-offs to be faced, and for designing robust policy solutions in uncertain times.

One is scenario-setting. Scenarios allow you to explore hypotheses about possible futures, assess their impacts on different groups, and identify desirable responses. The Productivity Commission used scenarios and modelling in its *Low-emissions economy* report to assess whether New Zealand could feasibly achieve a low or net zero emissions economy by 2050 and assess the different impacts of different pathways that might emerge.

The pathways we explored differed in terms of the emissions target envisaged, the speed of technological change, and the nature of that change, in particular, how disruptive it might be to existing industries. They also differed in terms of their impacts. For example, if technological progress is slow or strengthens the position of existing industries, then higher emissions prices will be needed to shift New Zealand towards lower-emissions production. Higher emissions prices have widespread implications, but hold particular risks for lower-income households, and for trade-exposed sectors.

Building these scenarios helped the Commission to better understand the key levers for lowering emissions and for priority actions. In particular:

- Under every scenario, early action to reduce emissions reduces the need for very high emissions prices later on.
- Technology plays a critical role in determining the pace, reach and disruption of the transition to a low-emissions economy.
- Forestry provides an important backstop for New Zealand, buying us time to make progress in reducing gross emissions in industry, households, transport and agriculture. Afforestation is not a permanent solution. But the extra time and flexibility it provides eases the adjustment efficiently.

These insights led us to prioritise early action, recommending prompt adjustments in key sectors such as transport and industry and to stress the importance of having a vigorous innovation system that is able to absorb and adopt new technologies from overseas and to develop solutions to New Zealand's specific challenges.

Turning to a new inquiry, scenarios may offer a useful way to think about emerging technology and its impact on the future of work. For example, fast-paced and wide-reaching technological disruption would likely require a different set of policy responses compared to slower or more narrowly-focused technological change that only affected a small set of sectors or occupations. More on this will emerge as we get into this inquiry in the new year.

Institutions and incentives matter

Another way to think about the future is look at the current rules of the game, and ask: 'what sorts of behaviour do they reward or punish?' and 'will these behaviours be beneficial or harmful for future generations?'

In the context of our recent low emissions inquiry, we were led to reflect on the long-term nature of the emissions-reduction task, transcending multiple election cycles, and on the high costs of policy instability. The existing policy and legislative framework lacks credible and durable targets and has few robust reporting and accountability mechanisms to encourage a stable longer-term commitment to the low emissions objective. Given that a successful, efficient transition requires the private sector to invest in new, low-emissions technology in long-lived plant and equipment, credible and durable policies are essential.

Of course, issues of policy credibility and time inconsistency are not specific to climate change policy. Nor are they new. New Zealand has plenty of experience of dealing with them in other contexts. In the past, both monetary and fiscal policy were plagued by the familiar problem of successive governments lacking the incentive to wear short-term political pain in the interest of the longer-term public benefit of price stability and fiscal sustainability. Both problems were resolved by strengthening obligations on decision-makers to set clear long-term targets, requiring regular reporting on progress against those targets, and high degrees of transparency on process and progress.

The Commission applied a similar institutional framework to the issue of reducing greenhouse gas emissions. We recommended setting a medium to longer term quantitative target for emissions reductions in legislation to clearly and credibly signal the end goal to industry and investors and provide a 'commitment device' for future governments. Transparency and accountability would be provided by an independent Climate Change Commission, which would recommend 'emissions budgets' spelling out the maximum amount of greenhouse gases that could be emitted if New Zealand were to meet its legislative target. If accepted by the government, the 'emissions budgets' would act as constraints within which policy would have to be set, forcing trade-offs and prioritising efforts in favour of lower-emitting activities. Each government would have the freedom to make different trade-offs and priorities but would still need to make concerted efforts towards the longer-term goal.

Institutional analyses can also be useful for identifying the underlying causes of problems. The Commission saw this most vividly in our tertiary education inquiry. The government had been surprised by the relative lack of innovation within the sector and tasked us with providing advice on 'new models of tertiary education'. In essence, Ministers were asking whether our tertiary education institutions were equipped to respond effectively to emerging challenges such as demographics indicating a future decline in student numbers, increasing international competition for students, new technologies for teaching and learning, and the changing needs of the workplace.

When the Commission explored the incentives facing tertiary education providers, a key reason for the inertia became clear. Tertiary providers are subjected to very high degrees of central control, which have accreted over time as governments have sought to manage fiscal pressure, political risks and quality concerns. Stability is being clearly prioritised – leading, unsurprisingly, to a dearth of innovation. One submitter, within the tertiary system, wittily summarised the nature of the regulatory regime, saying:

"…the Government only controls the number of students, the amount of funding available, the level of fees and what you can teach. Everything else is up to you!"

The Commission reached similar conclusions regarding productivity in the public sector. Here we found that the incentives faced by decision makers in government agencies tend to act against innovation and other changes that could increase the effectiveness and efficiency of public services. Responding to pressures by adding more people is generally much easier than redesigning systems, substituting capital or otherwise innovating to boost effectiveness and efficiency.

Moreover, as our work on *Better Social Services* highlighted, very tight prescription of service models and equally tight compliance regimes left service providers with little scope to respond promptly to the needs of the clients they are contracted to assist. Time and time again, we found the service innovators in that sector were the renegades and rule breakers – those who felt they often had to break the rules in order to meet the obvious needs of their patients or clients…. and were prepared to do so.

Put a premium on flexibility and responsiveness

But, even with well-targeted scenarios and institutional analyses, you're never going to cover all possible futures and issues. Any policy advisor making recommendations about the future needs to approach the task with due humility.

Those of you who've done a bit of reading around our new inquiry topic on technological change, disruption and the future of work will know that there are widely diverging predictions about the impact of technology on work. At one end are the likes of MacAfee and Brynjolfsson who argue that "technological progress is going to leave behind some people, perhaps even a lot of people, as it races ahead" and Frey and Osborne, who argued that 47% of total US employment was at risk of being replaced by computers. Others, such as David Autor, think that 'unbundling' automatable tasks from jobs will not be easy, and that "a significant stratum of middle-skills jobs combining specific vocational skills with foundational middle-skills levels of literacy, numeracy, adaptability, problem solving, and common sense will persist in coming decades."

Obviously, we will need to consider what different speeds, spreads and types of technological change will mean in terms of their impacts on workers, firms, sectors and regions. But a single answer will almost certainly be wrong and probably won't be much use to current or future ministers.

Given that we can't know the future, it's important not to close off potentially beneficial choices or technologies. Locking the community into one set of choices, rules or technologies now may lead to higher costs and lower wellbeing in the future. In addition, closing off choices can have undesirable distributional effects, reducing opportunities for people on lower incomes or with fewer skills.

This has a few implications. The first is that regulatory and policy systems should, as far as possible, be neutral towards technologies. Productivity is, more than anything else, dependent on innovation. It follows that we won't achieve productivity gains unless our systems facilitate, even encourage, innovation. The Commission applied this approach as much as we could in the low emissions inquiry. By placing emissions pricing at centre of our policy recommendations we were

seeking to ensure the influence of a powerful and pervasive incentive to reduce emissions at the least cost and with the flexibility to meet the circumstances of individual firms and households.

The second is that regulation and regulators will either have to run fast or get out of the way in an increasingly digital world.

We've already seen regulation stumble over new, technology-driven business models, both here and overseas. Perhaps the highest-profile example in recent years has been Uber, where regulatory systems designed for taxi businesses struggled to cope with app-based ridesharing services. Several European countries have banned or tightly restricted Uber, and the Northern Territory government in Australia refused for several years to change its laws to recognise ridesharing services.

New Zealand has not taken such an onerous approach, and its refresh of transport regulation in response to ridesharing provided an opportunity to ditch wider requirements that no longer made sense or imposed excessive costs, such as area knowledge tests and some other provisions. However, it took over a year to update its rules, despite the fact that the Uber app has been available in New Zealand since 2014 and the company has been in business – and growing rapidly – since 2011.

Our regulatory system will struggle to cope with rapidly emerging new business models. Already we see examples of companies that recognise the regulatory lag and quite deliberately set out to exploit it – aiming to get themselves established before regulators can respond.

A regulatory rethink will soon be required in other areas. The electricity sector is one example we have looked at recently. Under the current model, large generators compete to supply the bulk market, feeding their energy into the natural monopoly of the central grid, with local monopoly lines companies supplying local distribution companies who service businesses and households. The Commerce Commission regulates the prices and quality of lines companies to ensure they do not exercise market power, and the Electricity Authority regulates the wholesale and retail markets to enable entry and exit and ensure security of supply and reasonable prices. These regulatory regimes abut, quite awkwardly at times.

That model is coming under increasing pressure as the cost of batteries and distributed generation systems (e.g, small-scale solar and wind power) fall. Households will increasingly not just be consumers of power; they may also be producers, selling excess electricity back into the grid when their domestic systems are generating more than they can use or store. In addition, as batteries and electric vehicles become more pervasive, people will have more options to manage the timing of their draw from the grid. Regulation may end up focusing increasingly on setting the conditions of access to the grid as a form of "club good" and on the best ways of paying for its maintenance and development. The regulatory demands of this change are both widespread and subtle. A number of countries have already made costly mistakes in regulating for distributed generation, always with the best of intentions, but too often resulting in serious and costly damage to the viability of the core electricity network or grid.

Flexibility also becomes more obviously important as service providers attempt to tailor services to take greater account of differences in individual client circumstances. Our inquiry into new models of tertiary education highlighted this. If the predictions of widespread technological disruption to existing jobs and sectors come true, then retraining and upskilling will become increasingly

important tools for assisting people to adjust. This will be especially critical to people who have been in the workforce for some time and face devaluation of their current skills and human capital.

People already in the workforce have different needs from the traditional school leaver cohort – they are more likely to have children and perhaps parents to care for, mortgages or rent to pay, and jobs to hold down. Flexible study options are clearly important here. Yet, as the Commission discovered in its tertiary inquiry, current funding and regulatory incentives are driving provision increasingly towards young full-time students and away from part-time and extramural learning.

The government's income support system might also need a rethink. If the predictions of significant technological disruption to work prove true, then a wider range of people may need temporary assistance as they transition into new types of work. Designing such support mechanisms to support change rather than resist it will likely deliver best long-term outcomes for workers and employers.

Make sure there is actually a problem - and if there is a problem – are you thinking about it in the right way?

Something that's gained a lot of attention recently – that could be genuinely described as a "new-ish" – are the issues that arise from the ability to store, use, copy, and sell data generated in a digital environment. Is it a problem and should we care about it? Well, it depends. It's not clear cut. Information about our habits, preferences, movements and purchases can be used to profile us. There are times when we might want firms to be able to target and use information about the products and services that might be of interest to us. But we might not be so happy about public or private agencies tracking similar personal information in order to infer judgements about, for example, our health risk for the purposes of setting health insurance premiums.

The issue may *look* new, but economists have long had conceptual tools and frameworks for thinking about such matters. Economists have long grappled with the problems of non-rivalness and non-excludability. It's just that these issues have come to the fore in an age where data can be consumed by many without loss of fidelity, where the costs of storage have plummeted, where ownership is opaque, and prescribing who can access data can difficult to enforce.

Economics also helps us think about the role of private contracts - when they work, when they don't and when regulation might be needed. Contracts don't work so well where there are many potential parties to a contract, where there aren't trusted intermediaries or institutions between the parties, or when there is contractual incompleteness, like when the potential future uses of your data are unknown.

But the issue about the use of your data also strikes at the heart of what some consider to be a fundamental right – the right to privacy. Indeed, the European Union has enacted a General Data Protection Right (GDPR) which emphasises the individual's right to anonymity including the "right to be forgotten".

Rights-based frameworks aren't very good for thinking about trade-offs – for example the trade-off between the loss of privacy – i.e., others knowing where I am – and the benefit to me of Google telling me that the road ahead is congested. Economics on the other hand gives us very powerful tools for thinking about trade-offs but it isn't very good in thinking about bottom lines – when does society think that a breach of privacy is unacceptable? Good policy making however can do both –

have a framework for thinking about bottom lines and acknowledge that there are trade-offs (both costs and benefits) in the use of data in the digital era.

Beware of public sector over-reach

My fifth message is to beware of public sector over-reach. There is a tendency, particularly in social policy, to push the public sector into areas for which it is not well-suited. We saw this most dramatically in our *social services* inquiry, where we uncovered a long history of attempts to integrate services for people with complex or multiple needs. A former Children's Commissioner described these as "a succession of new cooperative initiatives with aspirational programmes and even more aspirational names". The rapid turnover and churn of initiatives suggests that few solved the problems they sought to fix.

The fact that public sector organisations may struggle to deliver timely and tailored services and coordinate themselves efficiently should not be surprising to economists. Many public service organisations have become highly specialised to take advantage of economies of scale. Such specialisation tends to work against the coordination of services across organisations. Large, centralised organisations are also likely to lack the information necessary to identify and respond appropriately to individual and complex needs.

Of course, in most cases, public agencies are monopoly providers and are effectively immortal. They do not face pressure to improve services from clients moving to competitors, nor do they free up resources for allocation to more productive organisations by closing. They are likely to be looking up – to manage political and institutional risk – more than out in terms of focusing on how best to meet the needs of clients

In New Zealand, we run a highly centralised government system – the scope of responsibilities for local government is amongst the narrowest in the OECD. But for the more vexing and complicated matters, especially those in social policy such as entrenched disadvantage, I suspect we need to look to more decentralised models – not necessarily to local government, but to local community groups, iwi and others close to those in need of assistance. Such models are more likely to be close to clients, face less intense political pressure towards risk aversion, and produce diverse approaches that respond to local issues.

Of course, there are trade-offs. Decentralised delivery models may entail higher risks. But if they can deliver better results to the intended recipients of the services concerned, and to the communities within which those recipients live, then let's set about creatively considering, and designing ways to manage, those risks.

Know your territory

That brings me to my last point about the policy analysis/policy making process. While there has been a renewed and welcome focus on 'stewardship' in the public sector, too much work seems to be *politically* reactive rather than *policy* reactive. Some commentators have suggested that the Productivity Commission fills this strategic policy gap, acting as "an outsourcing resource … for hard questions." We're happy to play this role where it helps, but we don't pretend to be a substitute for agencies knowing their sectors and industries in detail and having a clear sense of the emerging issues. If the public service isn't thinking deeply about the big issues now, we're going to find it hard to respond effectively in the future.

So, I'd like to finish with some questions for you to ponder. What are the big questions in your policy area? At the Productivity Commission we have most of our resource devoted to the "deep dive" policy inquiries that the Government directs to us. But we retain some of resources which is devoted to researching the big questions about New Zealand's productivity performance. At our establishment in 2011, we quickly recognised that there was much we didn't know about the character and scope of New Zealand's productivity performance over the past few decades. In many areas, there had been little significant research done in years. That led to the creation of the Productivity Hub. Through that mechanism, we've joined with other interested agencies, drawn up a forward-looking research agenda (FLARE) and commissioned an integrated programme of research to help illuminate the weakest spots in our knowledge and understanding of New Zealand's productivity performance. This mechanism has given us a much more substantial and energised research programme than we could have managed with our own resources. It has also enabled the agencies and researchers involved to join forces, share ideas and build an engaged community of interest with respect to productivity issues.

We see agencies around town also taking their stewardship obligations seriously and addressing the big questions within their portfolios. For example, the Ministry for Women has commissioned important work on the gender pay gap in New Zealand and the effect of parenthood on labour market outcomes.

I've been around Wellington policy issues now for longer than I usually care to admit. My sense is that, across the public sector, we now devote proportionately less resource to researching the big issues in our respective portfolios that we once did. Where are the substantial teams of big brains with the time and resource to explore the issues of the future, with an eye to informing the policy development of the future? This is thinking that runs beyond the political issues of the day and effectively connects emerging policy issues with the wider social, economic, environmental and cultural context – rigorously evidence-based and research-informed. Importantly, this is thinking that the Ministers of the day should not need to feel responsible for either defending or even accepting.

GEN, with its focus on capability building and on providing a platform for ideas and debate has a key role to play in helping to equip the public service with the skills and capacities to understand our future challenges and to conceptualise the sorts of policy responses that can deliver improved well-being for New Zealanders today and into our uncertain future. As the Chair of the New Zealand Productivity Commission, our incentives are very much aligned.

I wish you a very successful conference.