

Reflections on Productivity, Public Policy, and Challenges Associated with Closing the Gap

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Michael Brennan, Chair, Productivity Commission

It's a great privilege to be here at the National Press Club.

I would like to acknowledge the Ngunnawal people as the traditional custodians of this land. I acknowledge and respect their continuing culture and the contribution to the life of this city and this region.

As I am come to the end of my term as Productivity Commission Chair, there is more talk than ever (it seems) about productivity.

Less of the thing itself.

But today I wanted to give you a few reflections on the nature of economic progress arising from our productivity work, and also our recent draft report on Closing the Gap.

So, I start with a question: how many minutes does it take to make a loaf of bread?

Of course, it's a trick question – in case your mind had turned to how long you would spend kneading dough and baking it in the oven.

In fact, the answer is: for the average person in Australia today – around four minutes.

It is four minutes because that is the amount of time required by someone working at today's average wage to have enough money to buy a standard loaf.

It is a measure of how effective our economy has become at the task of bread making.

And by bread making I don't just mean the process of kneading and baking the dough. It's the whole bit: ploughing the field, planting the seeds, building fences, harvesting the wheat, milling it and transporting it; producing the yeast; even mining the metal to then manufacture the oven.

All that for four minutes of work – doing whatever an individual worker does best. They can effectively command all those resources and have those processes co-ordinated on their behalf.

By contrast, in 1901 in Australia, it took 18 minutes of the average worker's time to afford a loaf of bread.

Back then, agriculture employed one quarter of the Australian workforce, whereas today it employs just 5%.

But wheat production has risen from 1 million tonnes in 1900 to 25 million today. Each tonne of wheat is produced with less land and vastly less labour.

It is a story of replacing human labour with machinery; horses with tractors; and the application of science – new crop types, fertilizer, pesticides.

Combined with the similar productivity improvement in manufacturing and transport, it's all 'baked in' to the humble loaf of bread.

That is productivity. And that story of reducing real cost (measured in the labour of the average worker) has been the pattern of productivity growth over much of the last century.

I start with that example because for many today, productivity as a concept and its link to progress and prosperity has become abstract and not practically relevant.

As recently as the 1950s, half of the Australian workforce was employed in agriculture, manufacturing, or mining – all industries where the concept of productivity growth, for workers and managers, was fairly intuitive.

Today 90% of the economy is in services.

So, what does productivity really mean for someone working in health or disability or finance?

The bread example helps highlight the link between productivity and real wages: over the medium term, productivity growth means each hour of work (whatever your industry) can allow you to purchase more things.

But it also gets you thinking about how not everything is like that.

There are many goods and services that haven't become much cheaper, but they have gotten a lot better.

Take health: how many minutes of the average workers' time would be required to pay for a visit to a GP in 1901 vs today?

The answer is that there is unlikely to have been much change. If a GP earns (say) twice the average wage then and now, a half-hour consultation would cost an hour of the average worker's time, whether today or in 1901.

Hence no visible real cost reduction (unlike the loaf of bread).

What has changed is the quality: the doctor's ability to understand, diagnose and prescribe has been transformed by medical advance.

That has made us vastly better off; lengthened lives and made them more satisfying.

But it has not reduced the cost of medicine. Quite the contrary. And this is true for many services, partly because the labour content that is embedded in the value of a service is significant and has proven hard to replace or automate (at least to date).

There is even a leisure dimension.

After all, today the average Australian, having obtained their bread, has 14 minutes more to spend working towards something else – a smart phone, holiday – or they could decide to work a bit less.

In fact, average working hours in Australia have fallen by around 30% (or 13 hours per week) since 1900. Though notably, workforce participation as a share of the adult population has increased substantially.

These are all forms of economic progress, broadly conceived.

Not all of them are officially counted in our statistics, but they all matter.

When working on the 5-year productivity review, one of my consistent admonitions was that we should talk less about abstract macro aggregates like GDP per hour worked, capital deepening and multi-factor productivity and more about these concrete instances of what productivity growth really means and how it differs in specific cases.

It's partly because GDP is an imperfect measure of overall living standards.

Also, because understanding the quality dimension might be increasingly important in a modern services dominated economy, just as real cost reductions ruled the goods sector of the 20th century.

It is important to realise that we need both.

But talking about a smooth overall annual productivity growth rate obscures a bigger reality.

Productivity growth is not smooth, rarely evenly distributed and almost never predictable.

There is, for example, the remarkable fact that nearly all of the improvement in average living standards achieved over the last 10,000 years of human history took place since the late 18th century – the proverbial blink of an eye – and only in certain countries.

And it is lumpy and uneven. Productivity growth consists of a series of new technologies and business innovations that come in waves.

Almost all are characterised by the familiar S-curve of adoption: the take up of a new invention starts slowly, then accelerates dramatically and eventually plateaus.

One example: the rise of the motor car.

In 1900, the average Australian travelled 2,500 kms a year: roughly 40% walking and cycling, 40% via train or tram and 20% by horse.

The rise of the motor car followed the S-curve: it started slowly but accelerated after the second world war. By the 1990s it had reduced all other modes to just 15% of the transport task.

Over that period, the average Australian went from traveling 2,500 kms a year on land to traveling over 13,000 kms a year. The car unleashed a revolution in mobility, spawning new suburbs, factories on the urban fringe and big cost reductions in freight and logistics. With a big productivity dividend attached.

And then, in the last 20 years, that trend just plateaued. We are no more mobile today than in the late 1990s. The cost of moving people and goods around stopped falling, and urban congestion got worse.

So, the quest now turns to new sources of cost reduction and supply side growth. As it happens, the cost of moving information (as distinct from people) has fallen dramatically in the last 30 years – spawning new models like online commerce, telehealth and remote work.

Congestion, on roads and mass transit, can – if we are prepared to grasp the opportunity – now be addressed in part through technology-enabled real-time information and also pricing models, which were not available to us via the fuel excise or paper tickets.

The point is that a successful economy is one that catches those successive waves – that can move from one transformational source of productivity growth to the next – one that will look and feel different, and call forth different policy responses.

That is a story of adaptability and dynamism, and that is what we are trying to get at via productivity policy.

We know that it's getting harder.

The last decade had the slowest aggregate productivity growth in 60 years.

This is a fairly common phenomenon across the developed world.

Whatever the reason, as a society, we have been slower at generating and spreading new ideas about how to produce goods and services that are cheaper, better or entirely novel.

Admittedly, the technological inventions from the late 19th century through to the mid-20th, were a hard act to follow.

As economist Robert Gordon put it, these inventions replaced the 'unremitting daily grind' of painful manual labour, household drudgery, darkness, isolation and early death with safer jobs in air-conditioned environments, electric appliances to perform household tasks and electric light at the flick of a switch. Isolation replaced by fast travel, colour TV and the telephone.

And average life expectancy at birth rose from around 45 years to over 70.

Those changes were nothing short of miraculous, but they can only happen once.

The question isn't whether we can replicate that pace of transformation, it's what do we need to do to give ourselves the best possible chance?

It requires that we have maximum adaptive capacity: to do that we need many things, but I will focus on three: improved human capital, shifting the emphasis of innovation policy and a culture of innovation and entrepreneurship within government.

People spend longer in formal education today than ever in human history.

In the past, agriculture and manufacturing created high paying jobs for people with relatively low level of formal education.

The services sector is less forgiving. When labour makes up the bulk of the value, the quality of that labour really matters.

We have derived productivity gains from higher levels of educational attainment (like more years spent at school, and increasingly in post-school education)

And they are still flowing through.

But like everything, that too will level off. Those gains plateau at the top of the S-curve.

There are limits to the future gains we can make just by having young people spend more years in formal education.

We have to achieve a quality dividend – that is to say, a productivity improvement in the education system itself: better results for the resources (including years of a student's life) that we put in.

Despite a lot of economic change over the last 70 years, our basic models of education have changed very little in that time.

Our challenge is to achieve the sort of transformation in education that we achieved in medicine over the last 150 years.

Just think about what even 1.2 % annual productivity growth (the reduced assumption in the IGR) would mean if we applied it to schools.

That would imply – in 20 years – we could teach the same number of students to the same standard, with a 22% reduction in the workforce.

That would be the real cost reduction route.

Or there is the quality route – a similar workforce, but student outcomes lifting by about 25%.

Hard to measure – but it would imply big gains in PISA and NAPLAN and students' readiness for post school study.

One source of potential gain could come from a better understanding of cognitive science, and a stronger link between the science of learning and classroom practice.

We could be on the cusp of huge technological transformation in education – both digital communications to expand access to the best teaching and instruction, and artificial intelligence to provide real time assessment and guide students and teachers as to where additional effort could be focused.

To augment the role of qualified teachers, not replace it.

But we have to be prepared to embrace that change.

Other countries almost certainly will – particularly those that have traditionally lacked access to high quality teaching, and who will see technology as their big chance to catch up to or leapfrog developed economies in terms of human capital development.

We will also need a renewed focus on lifelong learning.

Our current model focuses significant public subsidy on the initial acquisition of skills but none on those that come from subsequent mid-career study.

The rise of short form credentials suggest the emergence of a greater culture of lifelong learning.

By way of example, our own work has suggested that levels of management capability could be a factor in holding back firm performance and overall productivity in Australia.

A more nimble system of lifelong education and recognition of qualifications is likely to be important in encouraging mobility of labour across jobs and firms.

That is an important channel by which new ideas spread across the economy.

That brings us to innovation.

We often think of innovation policy in terms of stimulating new research and cutting-edge invention.

The traditional policy tools include R&D tax concessions, intellectual property, efforts to commercialise university research, and supporting our public research bodies.

These are important levers, but there is a forgotten side to innovation policy – namely that of diffusion – the way new technology and business innovations spread across firms in the economy.

98% of Australian firms are not new-to-the-world innovators. They are adopters, adapters, tinkerers with existing technology.

Lifting the performance of these firms is the main game in productivity policy.

In agriculture, we used extension services – to spread the results of publicly funded R&D out to farmers. We have not really addressed the issue of what the innovation eco-system might look like in the growing services sector.

Our report made a start, but we have to keep developing our thinking on this issue.

The role for government isn't always straightforward, but there is some role: for example, the public sector's attitude to technology can play a key role in accelerating adoption by small firms.

The most effective diffuser of knowledge is a dynamic, competitive economy.

The evolutionary forces by which good ideas are rewarded, and by which resources flow to more productive firms, are what drives the economy forward towards higher levels of prosperity.

Only two weeks ago, The Economist magazine pointed out that the pace of diffusion of new technology across firms seems to be slowing across the developed world.

And it's not just the technology itself that matters.

One lesson we can learn from the past is that the biggest productivity gains don't just come from the simple adoption of a new technology but from complementary business innovation.

That was the story of electricity – invented in the 1870s but not fully exploited by manufacturing businesses until well into the 20th century.

The gains came not from replacing a steam-based source of power with an electric motor, but from the changes to the production line which were made possible by having multiple machines powered by electricity, rather than a single steam-based engine in the factory.

Technology is important, but often it is the entirely new business model – the uber or Netflix – that drives the big gains.

So we need regulatory systems that look kindly on new business models; a tax system that promotes new firm entry.

We also need to think more about policies that could promote a healthy risk appetite among investors and would-be entrepreneurs.

This brings us to the non-market sector – those services mainly funded and delivered by government, like health, education, community safety, child care, aged care and disability.

Areas where we have settled on some very labour-intensive business models, and where innovation is not always encouraged, and diffusion of good ideas is not always easy.

They are a big and growing share of the economy – too big to be exempt from potential productivity gains.

But what do these look like?

In some cases, it's finding lower cost settings for service delivery: health care in the community rather than the hospital, aged care in the home, and alternatives to costly incarceration.

Technology like AI, digital communications or robotics can also play a role, but their effectiveness will be blunted if rigid rules hamper their uptake.

Again, it's as much the business model as it is the technology itself.

Health is a sector with remarkable technological uptake when it comes to medical innovation (new drugs, diagnostic equipment or surgical procedures).

But a laggard when it comes to the use of general technology to improve the quality of service to patients or reduce costs.

In our work on mental health, we saw the positive impact of moderated online services, to improve quality and convenience and reduce costs. But the challenge is that the MBS enshrines the one-on-one, real time physical consultation as the staple of the system – effectively a hard barrier to any real cost reduction.

Other areas of service delivery explicitly enshrine staff ratios.

If we had staff ratios on the farm or in the factory, then the average worker would still be toiling for 18 minutes for a loaf of bread, instead of four.

And then there is the question as to whether the very structures of government can adapt when needed to deliver better outcomes.

That question is at the heart of the National Agreement on Closing the Gap – the last area I wish to cover today.

Arguably no one sees the limitations and inefficiency of government quite like Aboriginal and Torres Strait Islander people. The fragmentation, red tape and one-size-fits-all approach.

The National Agreement on Closing the Gap, signed in 2020, had two key features. First, it was explicitly an agreement between all governments and a Coalition of Peak Aboriginal and Torres Strait Islander organisations. Second, in addition to setting out 17 socio economic targets – it set out four priority reforms that governments would undertake to help meet those outcomes.

Only 4 of the 17 targets set out in the Agreement are on track to be met at this early stage.

Others are going in the wrong direction, like the rate of incarceration of Aboriginal and Torres Strait Islander people.

That rate steadily increased over the 10 years prior to the Agreement and since.

It was never clear what governments felt they were putting in place that would reverse this trend.

This is where the 4 priority reforms become relevant.

The Agreement commits governments:

- To establish more formal shared decision making between governments and Aboriginal and Torres Strait Islander people.
- To strengthen the Aboriginal and Torres Strait Islander community-controlled sector.
- To transform government entities to be more responsive in achieving the desired outcomes.
- To share relevant data.

They sound fairly basic, but in reality – for traditional processes of government – they are radical.

They require a move away from the traditional ‘upwards’ accountabilities in favour of accountability to the people actually impacted by policy and service delivery, with some ‘letting go’ or power and service specifications.

The progress against these reforms is, so far, limited.

Granted, governments are busy – in the implementation plans put forward by our 9 jurisdictions there are over 2,000 actions identified which purport to be contributing to Closing the Gap.

But this busy-ness is, in many ways, just business as usual.

Governments have taken tentative steps in the right direction, with some examples of good practice. And, yes, we are just three COVID-affected years into the life of this Agreement.

But the priority reforms are not new in substance – they had been talked about and sought by Aboriginal and Torres Strait Islander people for many years.

And the Agreement promised transformation. That is the ambition against which we judge it.

Most jurisdictions have put in place some form of formal partnership arrangements, but feedback suggests the engagement is still often late, formulaic and opaque.

There is some shift of funding towards the community-controlled sector, but largely within what we refer to as the ‘lift and shift’ model – where contract specifications remain with government agencies, while ACCOs are left to cobble together multiple small, time limited grants in order to keep the show on the road.

Meanwhile decisions get made in other policy areas – like criminal justice – that most likely will worsen performance against a key Closing the Gap target.

It is not clear how the Agreement is influencing those deliberations to the extent it should.

All this leaves the impression that governments have not lived up to – and perhaps not fully understood – the extent of the transformation they promised in 2020.

These issues go to that broader question: can government change its fundamental business model when that is what is required to deliver better outcomes?

Because, let’s face it, there are any number of complex issues – like the more general problem of entrenched, locational and multi-faceted disadvantage, where the traditional siloed approach of government service delivery has largely failed to make a dent.

Government has to be able to countenance radical options, including devolving responsibility; parting with top-down power; allowing localised entrepreneurship and giving front line workers a wide remit for practical problem solving.

All those things run counter to public sector culture and system inertia.

But if we want continued economic progress, particularly for the most marginalised, we have to face up to this challenge.

I see this work as a natural fit for the Productivity Commission. But that's not to say it's business as usual for us.

For the last four years, we have been on a significant journey.

We have been doing more and more work in Aboriginal and Torres Strait Islander policy, starting with our report on child and family programs in the Northern Territory, the Indigenous Evaluation Strategy and more recently a report into inauthentic Indigenous arts.

This is in addition to our regular work on the Overcoming Indigenous Disadvantage report.

That was pretty new for us. It has meant change.

We have had to embark on the very transformation that priority reform 3 asks of all government entities.

It was not enough to simply be the PC of old – for all the institution's historic strengths. We had to be that, and something more.

So, we have had to build our cultural capability, we have hired new Aboriginal and Torres Strait Islander staff – of whom I am immensely proud.

We had to cultivate new relationships. We have changed our models of engagement to be more reciprocal and less transactional.

We have had to broaden our thinking.

And we are not done.

When the Coalition of Peaks agreed to embed the role of the Productivity Commission into the Closing the Gap Agreement in 2020, they did not do it on the basis of our track record.

They did it on faith.

And I said to Pat Turner at the time that we would work hard to repay that faith.

No one has contributed more to that commitment than Romlie Mokak – our inaugural Indigenous Policy Commissioner. Supported by a team effort, involving many staff, our previous Social Policy Commissioner Richard Spencer, and our new(ish) one Natalie Siegel Brown, who recently presented our report at Garma.

I emphasise this as an example of the extent to which the PC has evolved over time. On this dimension, we have changed substantially in the last four years.

There are other examples, including our work in water policy, education, health, aged care and disability.

But economic progress means adaptation and change.

And that evolution will go on. I am very positive about the PC's future and very supportive of Chris Barrett's appointment.

Knowing that the PC will bring its traditional strengths to new, and important areas, as we have been asked to do on Closing the Gap.

Our capability has to be broad because economic progress is a broad concept.

Whether it is cheaper bread, better health or closing the gap in partnership with Aboriginal and Torres Strait Islander people, there is a common principle: finding new ways to deliver something better, supporting and rewarding our innovators and spreading that knowledge quickly and widely across the community.

How well we do that – as an economy, as a Federation, as a society – will determine our growth in living standards in the decades to come.