

Is a lack of Infrastructure Investment a form of *Intergenerational Theft?*

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Executive Summary

After more than a quarter of a century of uninterrupted economic growth, Australia has developed an enviable international economic record. We have an economy that has been growing for 26+ years - healthy GDP growth and low unemployment.

But like many other countries that record is not unblemished. There is the stubborn issue of inequalities of income and wealth, of education and health outcomes and access to social infrastructure. Thomas Picketty and others have shone a light on some of inequality's structural causes, and they make the case that without concerted public policy action, growing inequality is a more or less inevitable outcome of market processes, including the very processes that produce economic growth. These inequalities are not just bad economically because we don't get to use all of our talents and capacities. They also create political tensions and tear at the fabric of our social order.

Another problem, and the subject of this paper is the emergence of a large and growing infrastructure deficit. One sector where our economy has not grown in balance is an under-investment in the future and in particular in infrastructure. Despite the many economic positives, we appear to be investing less and less. Why is this so? How is it that we became scared of building for the future?

One reason is that public policy and debates about fiscal and infrastructure policy in particular have become a prisoner of meeting targets based on an out-dated accounting category - reducing the government debt and the budget deficit. The budget balance (deficit or surplus) is an accounting number with little economic meaning. Leading economists now refer to the budget balance as little more than 'a number in search of a concept'. One pernicious effect of this is that the really important issues associated with taxing and spending, including education, health care, housing and infrastructure get shifted off main stage. There are signs that this may be changing internationally. But unfortunately, public policy in Australia

seems to be taking this deficit fetishism to its (il)logical *reductio ad absurdum*. To use a term our younger, and more geeky, colleagues would understand the annual budget balance forecasts are a fiscal version of ‘*that’s numberwang*’, so arbitrary it could almost be compared to the Microsoft Excel *Goalseek* function, that lets you adjust values used in a formula to achieve any specific target number.

Under-investment in social and public infrastructure is one of the results of this sort of public discourse. That under-investment is becoming so serious that it raises intergenerational efficiency and equity issues. This paper seeks to contribute to changing public policy discourse to re-engage in the ‘forward-thinking’ so necessary to sustain our lifestyle. Just as with inequalities that the French political economist Thomas Picketty raises, it has become clear that unless we change public policy and discourse to focus on social and economic infrastructure, we will pass existing inequalities into the next generation and perhaps make them worse. The paper frames this by way of a provocation. It asks whether, because of an inability to make the necessary investments in the future, we are engaging in intergenerational theft?

Where has the investment in the future and the ambitious ideals for future generations gone? Today, despite being wealthier than any time in our history, there is general agreement that perhaps AU\$1 trillion or more is required to build the infrastructure that our nation so desperately needs and future-proof our growth, as well as ensuring social cohesion and fairness.

Infrastructure in Australia is predominately funded by the public. ‘Funding’ in this context refers to how debt or equity is raised to deliver and operate a project, but also how it is funded longer term by taxes or by user charges, with or without Public Private Partnerships (PPPs). Although we are finding it difficult to fund necessary infrastructure, the paper suggests it isn’t a funding problem at all but a conceptual one.

This situation needs to be addressed for the sake of our future.

If we don't address the situation, the world will move ahead of us in terms of their infrastructure needs whilst Australia lags behind. We must change our thinking and address this anomaly. It is not enough to simply be the "lucky country", rather we ought to invest, plan and become the forward-thinking nation that the 21st century demands.

Our forefathers, whilst not perfect, (they did a bit of generational theft themselves but we are getting much more efficient at it) were in fact more successful in investing for the future. Think Harbour Bridge and Snowy Hydro Scheme. So how do we arrest this problem?

There are several ways of helping change the course of this negative trajectory, but there is no 'silver bullet'. Indeed, we will probably have to re-purpose some of the options that have brought us to the situation we now find ourselves in. This paper attempts to address the situation with some, but not all, possible solutions including:

1. Government Borrowing and Building;
2. Superannuation funds, Asset Recycling and investment; and
3. Financing including Islamic Finance Investment.

As a country we need to have an answer, or several partial answers. What is clear is that we cannot continue to pass the buck, blame it on someone else, or say it's just too hard. The status quo cannot be the answer.

This Issues Paper engages that challenge in the hope that public policy and discourse can more fully embrace its mission of nudging the debate in the direction of nation building.

1. Introduction

This paper is about the problems that have arisen because important aspects of Australian public policy and political discourse have fallen victim to populism, short-termism and a lack of vision. The paper joins a growing body of research that finds that, because of the long-term failure to meet the demands of maintaining and improving Australia's public infrastructure, we have accumulated a large infrastructure deficit. That deficit, if not addressed will negatively impact on our future capabilities and opportunities, and likely feed social tensions that Australia has largely avoided. We have framed this problem by way of a provocation – Australia's infrastructure deficit being akin to intergenerational theft. We use it to both get attention to the issue and invert the current usage of that term that seeks to employ it in the name of austerity.

We want to claim a role for the future, for planning and for investing in the future that is optimistic, positive and egalitarian. We want a future that is about building capabilities and creating opportunities. The argument being developed is that investing in our future can help us answer some of the most important problems and challenges facing us, and that if we can do this it would be the sort of generational achievement Australia has been lacking in recent political and economic history.

The paper makes the case that, apart from important historical exceptions like the response to the GFC, these problems have prevented recent successive governments from making the steady and systematic investments in public infrastructure, to keep up with the needs of a growing population, the demands of a modern economy and the challenges of providing social cohesion and opportunity.

Before doing so, there is a need to sharpen what we mean by short-termism and lack of vision. The paper will develop the case more fully, but for now, we need to confront an apparent paradox. We are claiming short-termism, and even deploy

the term intergenerational theft, but these are terms being deployed by those who we suggest are getting it wrong. And there is surely evidence that fiscal policy is developing a longer-term horizon.

The annual Federal Budget has just been handed down and it was notable for the fact that it sought to make a case for tax and spending policy with a time horizon that exceeded even the Forward Estimates (a rolling three-year system of financial estimates of the revenues and costs of ongoing government policy decisions). Also, in 2015, the government released its fourth Intergenerational Report¹. We are not here suggesting by short-termism that public policy isn't interested in the future – what we are seeking to challenge is the way those estimates are being used to inform public policy. We are identifying that an obsession with what is now seen as the crowning bipartisan achievement of public policy - a path back to budget surplus – is not only bad economics and fiscal policy – it is helping to produce an under-investment in the future. Developments in Australian budgeting over the last decade and a half may have been attempts to think about longer term, including intergenerational, issues. Unfortunately, they have evolved in ways that have been captured by populist discourse (the debt and deficits discourse) and do not take into account public infrastructure and social capability. Indeed, they have become tied largely to the accounting-driven idea of a looming fiscal crisis.

The paper will show that it might be one thing to look a bit further ahead in conventional fiscal policy terms, but it is another to develop a more expansive longer-term vision. More specifically, the paper makes the case that one of the key problems with the way our public policy dialogue has developed (or rather deteriorated) is that in looking forward we have grown to fear the future rather than embrace it.

¹ The Intergenerational Report is, according to the Treasury website:

“Every five years, the Australian Government is required to produce an Intergenerational Report. These reports assess the long-term sustainability of current Government policies and how changes to Australia’s population size and age profile may impact economic growth, workforce and public finances over the following 40 years.”

Downloaded from:

<https://treasury.gov.au/publication/2015-intergenerational-report/what-is-the-intergenerational-report/>

We are not the first to use the term ‘intergenerational theft’. However, those who have so far used it in fiscal policy debates have used it quite differently. As the economic journalist Greg Jericho has noted, it has become part of a moralistic attempt to change our social contract. As Jericho noted back in 2015:

“Intergenerational theft” has become a bit of a go-to phrase with members of the government these past few weeks as it tries to convince voters of the need for budget cuts. But the sense that government debt steals from future generations is a simplistic notion that ignores the long-term benefits of government expenditure and instead cares more about selling the political line that debt and deficits are always bad. (The Guardian 19 Feb 2015)

We would go further than Jericho. It is not just simplistic to say that debt and deficits are always bad – it is flawed economics and a dangerous and self-defeating way to frame public policy.

The narrative about the overwhelming need to focus on reducing debt and deficits in fiscal policy works not so much as economic analysis but as a morality tale, to encourage the average citizen to concede to changes in our social contract – to accept forms of austerity and inequality - that would not be so easily swallowed if this story was seen for what it is: populist political fiction. The way this futurist narrative is deployed also helps to shift attention from real existing inequalities - intra-generational inequality – to a hypothesised future, as if by calling forth the future into the present current inequalities and inequities are not being baked into that future.

It’s time to recognise this is not good economics or social policy, and call this for what it is – a highly politicised discourse. As the French political economist, Bruno Tinel has recently observed:

“... we must understand that today's obsession with deleveraging is both absurd and dangerous, because it actually organizes the decline in the well-

being of those who will come after and the rise of inequalities and social divisions, for lack of necessary collective investments. (2017, p173 translation provided by the author)²

What Tinel calls an absurd and dangerous obsession, and what we have called a populist ‘morality tale’ - one that often passes for serious public economic analysis in Australia - has now become a burden on our public discourse and is an important part of the reason we are where we are today. There are signs that this is changing internationally, and while later sections will note some of these, an important example is the G20, which has established a Global Infrastructure Hub, which provides annual infrastructure trends, needs, and gaps up to 2040 for 7 sectors, 50 countries, 5 regions and the world in total. In Australia, there are currently few signs of change in public discourse.

One area where there has been change has been at the pinnacles of economic policy. For instance, Glenn Stevens, then RBA Governor, made a case for greater investment in infrastructure, including the following observations:

“The impediments to this outcome (greater investment in infrastructure in order that “amenity would be improved for millions of ordinary citizens”) are not financial. The funding would be available, with long term interest rates the lowest we have ever seen or are likely to. (And it is perfectly sensible for some public debt to be used to fund infrastructure that will earn a return...). The impediments are in our decision-making processes and, it seems, in our inability to find political agreement on how to proceed. (2015)³”

² Bruno Tinel (2016) *Dette publique: sortir du catastrophisme*, Raisons D’Agir editions, Paris, April.

³ Glenn Stevens ‘break infrastructure deadlock to create long-term growth’ June 2. <https://www.themandarin.com.au/38747-glenn-stevens-creating-economic-upside/>

His successor at the RBA, Philip Lowe, reiterated this position and tellingly observed that:

*I suspect that one reason that the public sector has been a bit reluctant to play an even larger role is an **aversion to public debt**. In many important respects, this aversion to public debt has served Australia very well, but it has also limited the appetite to borrow to build public infrastructure. (‘Productivity and Infrastructure’, Speech to the IARIW-UNSW Conference on Productivity Measurement, Drivers and Trends, Sydney – 26 November 2013, downloaded from: <https://www.rba.gov.au/speeches/2013/sp-dg-261113.html>)*

The clear problem is that this change of thinking is not yet translating to public debate and political discourse, where debt and deficits continue to crowd out discussion.

If we want to fix some of our problems with infrastructure and social policy we need to engage the future with more optimism, seriousness and balance. One of the current stumbling blocks with our public discourse is how we measure and account for the future impacts of our decisions. **We will show that the deficit is largely an empty accounting residual, which to paraphrase the US public economist, Laurence Kotlikof, is mostly 'a number in search of a concept'.**

It may be that in order to embrace the future we will need to do more than challenge those forms of measurement, valuation and accounting. But that is not a bad starting point. Fortunately, Australia is not the only country facing these problems and the paper will discuss how these developments are shaping up in the United States and other western countries.

2. What is intergenerational equity and theft?

Recent references to intergenerational issues have typically been applied to two main areas: **fiscal** and **environmental** policy. Where it has been used, reference to intergenerational issues have normally had two main dimensions:

1. It is a challenge to, indeed a **critique** of, the way we measure and record activity. The public finance academic, Laurence Kotlikoff, famously called the budget balance figure (deficit/surplus) “a number in search of a concept”. The main argument here is that current (annual) measurement and accounting not only omits to consider the longer-term impact of annual activities (for Kotlikoff this is mainly the tax burden), because the measurement is flawed, decisions are being made as if they are accurate, so that flawed measurement feeds into bad decision making.
2. It is also a **call to change measurement and decision making** to take more account of longer-term issues. In short, the argument from point 1. is to replace (obsolete) current accounting and measurement with those that give higher priority to longer term measurement issues. Following from the critique of the current incoherence and arbitrariness of current measurement, a range of possible alternative measurement models present themselves.

In **fiscal policy** intergenerational accounting is best known from the writings of Alan Auerbach, and especially Laurence Kotlikoff. They have suggested that the accounting framework affects the way the annual budgeting is conducted and does not allow us to see the longer-term effects of annual spending and taxing policy. In terms of measurement, Kotlikoff has, for instance, argued:

“A century ago, everyone thought time and distance were well-defined physical concepts. But neither proved absolute. Instead, measures/reports of time and distance were found to depend on one’s reference point, specifically

one's direction and speed of travel, making our apparent physical reality, in Einstein's words, "merely an illusion."

"Like time and distance, standard fiscal measures, including deficits, taxes, and transfer payments, depend on one's reference point/reporting procedure/language/labels. As such, they too represent numbers in search of concepts that provide the illusion of meaning where none exists. (Green and Kotlikoff 2006)⁴"

In **environmental** debates, the popular users of the term include people like Tim Flannery, whose 1994 *The Future Eaters: An Ecological History of the Australasian Lands and People*, is especially well-known for developing this argument. As Flannery wrote on the book's cover:

*"Since the first person left the great Afro-Asian homeland to cross the first island on the long chain to Australia, human beings have **consumed the resources that they would need in future**. The first Australasians were the world's first **future eaters**. Today, future eating is a universal occupation."*
(emphasis added)

Moving from popular claims about the longer-term effects of human activity on the environment, the Wentworth Group of Concerned Scientists has used the intergenerational arguments to propose alternative long-term measurement of

⁴ <https://www.kotlikoff.net/research>

More references on Intergenerational Fiscal Accounting:

<https://www.aeaweb.org/articles?id=10.1257/jep.8.1.73>

<https://scholarship.law.georgetown.edu/facpub/917/>

Judith C. Bessant, Michael Emslie and Rob Watts, Accounting for Future Generations: Intergenerational Equity in Australia, *Australian Journal of Public Administration*, **70**, 2, (143-155), (2011).

Mel Miller and Ian Siggins, A framework for intergenerational planning, *Foresight*, **5**, 6, (18), (2003).

Gregory Coombs and Brian Dollery, An Analysis Of The Debate On Intergenerational Equity And Fiscal Sustainability In Australia, *Australian Journal of Social Issues*, **37**, 4, (363), (2002).

https://www.une.edu.au/_data/assets/pdf_file/0005/67928/econ-2004-01.pdf

human impacts on the environment, that they have called an Accounting for Nature⁵.

To date, however, while the calls for a greater focus on intergenerational issues – both fiscal and environmental - has had some impact, there has been less change in measurement and accounting to give effect to that. It turns out that it is one thing to land a critique of existing accounting and measurement, but another to offer a robust alternative.

In both cases also, what unites fiscal and environmental scholars and policy makers is that they generally use the concept to frame a proposition about current **over-consumption**. In fiscal policy, it is often used to frame a story that current generations are making tax and expenditure decisions that result in over-consumption, thus passing on tax burdens to future generations. In environmental policy, a similar story of current over-consumption emerges, but this time bounded by a notion of finite environmental resources.

Kotlikof has used intergenerational accounting to try to show that current fiscal policy is too expansionary, puts upward pressure on the future tax burden and that this is unfair to future generations. Flannery wants us to accept that we are using up too many natural resources and that this is affecting the availability of these resources for future generations of humans and for the environment more generally.

The over-consumption thesis is interesting but not one pursued in this paper because we think that it has the paradoxical effect of shutting down consideration of how we might build both long-term wealth and capacities.

We concur with the over-consumptionists that public policy, and fiscal policy in particular, has become a prisoner of meeting targets based on an out-dated

⁵ 'Accounting for Nature: A Common Currency for Measuring the Condition of Our Environment' <http://wentworthgroup.org/2013/08/initial-observations-of-regional-environmental-accounts-proof-of-concept-trial/2013/>

accounting category – reducing the budget deficit. But even if we accept that the yearly deficit or surplus figure is an accounting residual – that it is ‘a number in search of a concept’, it still leaves open what happens next.

The fiscal over-consumptionists generally want to emphasise intergenerational issues in terms of its links to the future tax burden. But a pernicious effect of this link is that the really important issues associated with taxing and spending, including education, health care, housing and infrastructure get shifted off main stage. Indeed, because budget accounting treats education and health expenditures as annual recurrent costs, their long-term effects are effectively considered to have no residual value⁶. In an era when the productivity and future wealthy of societies is so closely tied to the skills and capacities of its population, this sort accounting is no longer benign. If it is used to prioritise a budget balance, when some annual costs are actually investments in the future productive powers of society then it produces a systematic bias toward under-investment.

There is an important parallel here in economic history. Mercantilists used to consider that the only form of real national wealth in societies came from hoarding gold. All trade and public policy was considered in terms of the net effects on the national hoard of gold. Trade policy stressed surpluses because it meant that the stockpile of gold would increase. This approach was not anything but benign. Bernard Mandeville, for instance, considered that education was unnecessary for working people and poverty was functional for national (ie aristocratic) wealth because it meant that working people made a lower claim on that wealth.

It took Adam Smith to revolutionise the concept of wealth, how it was produced and how to measure it. He opens the *Wealth of Nations* with the bold observation that wealth in a modern society comes from the productive powers of its workforce, which he illustrates by the productivity effects of the division of labour in a pin factory. It took Adam Smith to challenge the concept of national wealth

⁶ The obvious exception here is of course tertiary education where fees attach to access to university education and technical training, with the obvious conclusion that these education services are an investment in what is called ‘human capital’, which generate additional future labour income, and for which the government seeks some repayment once students graduate.

and the importance of labour's productivity as its source. But fiscal policy has been largely anchored in its own mercantilist-like concepts, so that a fiscal surplus is considered axiomatically good for national wealth and a deficit bad⁷. There are signs this is changing in other countries.

Unfortunately, public policy in Australia seems to be taking this deficit fetishism and debt reduction to its (il)logical *reductio ad absurdum*. Under-investment in social and public infrastructure is one of the direct results of this sort of public discourse. This position is becoming received wisdom in mainstream economics internationally⁸.

There is, however, another way to think about intergenerational deficits, and it is one anchored in the longer lineage of economic analysis. It is the one we want to be given more prominence – it is in terms of the generational effects of **under-investment**.

A common way of building this term into current debates is in terms of the issue of Australia's **infrastructure deficit**. The point of the term here is to suggest that we are not investing enough to maintain the public capital stock, or to meet growing demands for public capital.

So, what are we to make of intergenerational concepts and issues?

The intergenerational concept certainly works as a critique of current accounting and measurement. In this sense they are important and open up new ways of

⁷ In fact, it has only been in the last 20-30 years when this deficit fetishism has been so powerful.

⁸ RBA Governor, Glen Stevens (2014), noted the accounting problem in this way

*More generally, **better balance sheet accounting** by the public sector would also be helpful. Borrowing to build assets can be thought of quite differently from borrowing to finance current expenditure provided – and this is important – that one can have a degree of confidence that the asset will deliver a reasonable return. (emphasis added)*

(‘Investing in a Low Interest Rate World’ Address to the Commonwealth Bank of Australia’s 7th Annual Australasian Fixed Income Conference, Sydney, 21 October, downloaded from <https://www.rba.gov.au/speeches/2014/sp-dg-211014.html>)

thinking about how we operate, plan and make decisions. Currently, we are not very far down the road to resolving them.

Before considering the possible ways of addressing the infrastructure problems we face, it is important to work through how we got here.

3. Does Australia have an infrastructure deficit, and if so, how big is it?

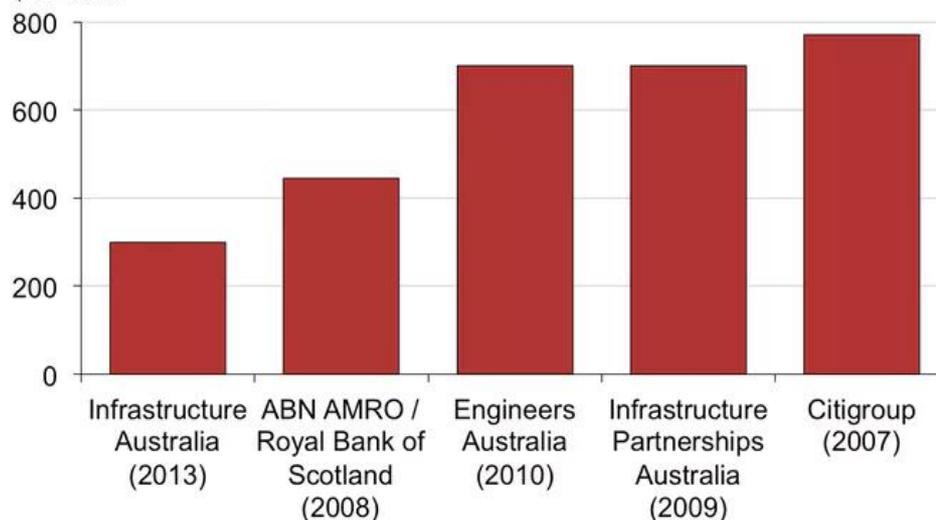
There is a general consensus (although we have to acknowledge not unanimity) that Australia has significantly under-invested in infrastructure over many years – and has accumulated an infrastructure deficit.

There are also many different estimates of the size of that deficit. The Grattan Institute reviewed these estimates. Almost all estimates suggest that a very substantial infrastructure deficit exist in Australia. In an international study, however, McKinsey estimated that Australia does not have a deficit indeed it has a surplus of infrastructure⁹.

Estimates of Australia's infrastructure deficit vary widely

GRATTAN
Institute

Estimated infrastructure deficit
\$ billions



Notes: Citigroup estimate reflects an assessment of infrastructure spending over the 10 years from 2007, in 2007 dollars; neither Infrastructure Australia or Engineers Australia specify the period over which their estimates of Australia's infrastructure deficit apply, of whether they are specified in nominal or real dollars.
Source: Infrastructure Australia, (2013), p.6; Engineers Australia (2010), p.6; Infrastructure Partnerships Australia (2007); Infrastructure Partnerships Australia (2009); Citigroup (2007).

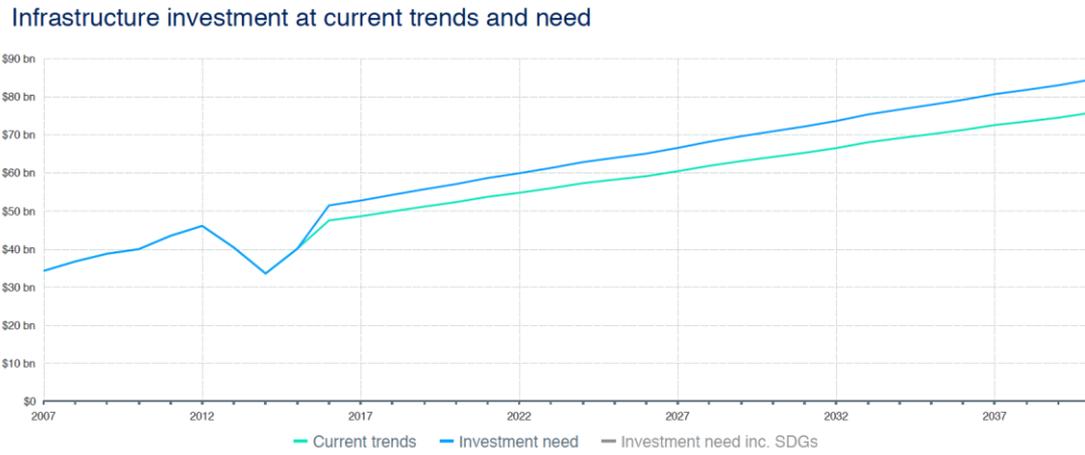
⁹ Budget explainer: does Australia really have an infrastructure deficit?

<https://theconversation.com/budget-explainer-does-australia-really-have-an-infrastructure-deficit-57549>

<http://www.afr.com/opinion/the-australian-infrastructure-deficit-that-isnt-20160307-gnd36n>

<https://www.aquenta.com.au/news/australian-infrastructure-deficit/>

More importantly, a G20's Global Infrastructure Hub estimate shows that not only is there a deficit, even on an optimistic investment assumption, the deficit will not be reduced.



Source: G20 Global Investment Hub <https://www.gihub.org/>

4. How did we get here?

Before getting to the options for dealing with the infrastructure deficit, we need to examine how we got to this position. To paraphrase 'Talking Heads' we need to ask: "How did we get here?"

The answer is a crash course in the recent political economy of Australia. The paper has already noted how the public discourse on debt and deficits has had a corrosive effect on economic policy making - public policy has developed a short-term and an anti-government bias. As our colleague Bruno Tinel has noted,

"The frontiers of public debt are linked to the frontiers of public administration: The Simplest way of getting rid of the public debt is to turn it into private debt, by privatizing public action." (2017, translation provided by author)

The point here is that basing economic policy on simplistic anti-government positions does not resolve the needs for public goods and services, it just privatises them.

Related to that anti-government pro-privatisation bias is another feature of Australian political economy. It is that privatisation has proven to be a very mixed blessing. It may have reduced public debt (although because of non-compete and take-or-pay clauses in PPP agreements it may have actually increased contingent liabilities) but it has also permitted leading financial institutions to build a business model on privatising state assets, loading them with debt and lucrative management contracts, and then flipping them to institutions like pension funds at massive profits¹⁰. Those privatised entities have also then often been operated like un-restrained monopolists.

¹⁰ Jefferis, C., and Stilwell, F., (2006) 'Private finance for public infrastructure: the case of Macquarie Bank', *Journal of Australian Political Economy*, 58, 44–61.

Indeed, if we were to make an Australian 21st century version of the board game *Monopoly*, the once boring utilities would be the star assets – the Mayfair and Park Lane of the Australian monopoly board. All the while, infrastructure investment rather than the trading in infrastructure assets has been suffering.

We have sold off public infrastructure to the highest bidder, on the basis that it will pay off lots of public debt, but then virtually given the owner unrestrained ability to use market power to maximise profits. Indeed, because many privatised firms are subject to regulated prices, we have baked in higher prices because the regulated prices build in capital costs and structure into prices.

It has reached the point where many leading economists and regulators are rethinking the merits of privatisation on competition and efficiency grounds. For instance, Rod Simms, the head of Australia's competition regulator, the ACCC, has noted that the revenue of Australia's top 100 listed companies had surged from 27 per cent of GDP in 1993 to nearly 50 per cent GDP in 2015¹¹. And he has added that privatisation has fed into these anti-competitive trends

"I've been a very strong advocate of privatisation for probably 30 years; I believe it enhances economic efficiency. I'm now almost at the point of opposing privatisation because it's been done to boost proceeds, it's been done to boost asset sales and I think it's severely damaging our economy."¹²

A further problem that feeds the infrastructure problem is that capital markets have developed a structural short-termism. The Bank of England's Chief Economist, Andrew Haldane, has produced a report that found that short-termism has become a significant problem in capital markets. Despite the fact that a key role of capital markets is to transfer savings today into investment and growth in

¹¹ Cited in Philip Lasker 'ACCC's Rod Sims says big company domination is leaving Australian consumers 'worse off,' ABC Online, <http://www.abc.net.au/news/2016-10-27/market-concentration-concern-acc/7970502>

¹² Cited in Patrick Hatch 'Privatisation has damaged the economy, says ACCC chief' *Australian Financial Review* 26 July 2016, <https://www.smh.com.au/business/privatisation-has-damaged-the-economy-says-acc-20160726-gqe2c2.html>

the future:

“...there is statistically significant evidence of short-termism in the pricing of companies’ equities. This is true across all industrial sectors. Moreover, there is evidence of short-termism having increased over the recent past. Myopia is mounting...

This is a market failure. It would tend to result in investment being too low and in long-duration projects suffering disproportionately. This might include projects with high build or sunk costs, including infrastructure and high-tech investments. These projects are often felt to yield the highest long-term (private and social) returns and hence offer the biggest boost to future growth. That makes short-termism a public policy issue.¹³”

As we have seen from the current Royal Commission into Misconduct in the Banking, Superannuation and Financial Services Industry, the finance sector in Australia has many problems, and it is unlikely that business as usual will be a sufficient answer for any of these problems. The question is whether in addressing Australia’s infrastructure problems, the industry wants to shift from short-termism to investing in the future, from risk shifting to risk management, and from clipping to stewardship?

We think this is one of the defining challenges facing the finance industry.

¹³ Andrew Haldane (2011) ‘The Short Long’ – speech given at the 29th Société Universitaire Européenne de Recherches Financières Colloquium: New Paradigms in Money and Finance?, Brussels. Available at: <https://www.bankofengland.co.uk/speech/2011/the-short-long-speech-by-andy-haldane>, May.

5. What can be done?

By now it should be obvious that there are no silver bullets to solve the infrastructure problems that have accumulated in Australia. And it may seem rather contradictory, but the main options for solving the problems are the ones that have got us here. But let's see how by rethinking the logics of the way infrastructure can be funded, built and maintained can present the options in a different way.

A. Government Borrowing and Building

Until recently, it was not common for mainstream economists to talk up the importance of the role of governments in funding and building physical and social infrastructure. That has been changing, especially outside of Australia. We have already noted the G20's Global Investment Hub initiative¹⁴.

One of the most interesting examples is former US Treasury Secretary and Harvard economist Larry Summers. Last year at a conference hosted by the Brookings Institute, titled *From Bridges To Education: Best Bets For Public Investment*¹⁵, Summers made the following points about the benefits of government infrastructure spending:

1. Improved infrastructure has benefits that go well beyond what is picked up in standard rate of return on investment calculations.
2. There is a particularly compelling case for maintenance investment.
3. There are important new infrastructure investment projects that almost certainly have high rates of return.

¹⁴ See also for instance, J.W. Mason and A. Jayadev, "The Evolution of State-Local Balance Sheets in the US, 1953–2013," February 20, 2017, <http://jwmason.org/wp-content/uploads/2015/05/Mason-Jayadev-state-local-balance-sheets-v2.pdf>.

¹⁵ Speech to the Brookings Institution, Washington, D.C. Monday, January 9, 2017, *see also* <http://larrysummers.com/2015/04/01/on-secular-stagnation-a-response-to-bernanke/>

4. Better infrastructure investment is as important as more infrastructure investment. Quality is as important as quantity.
5. While the case for expanded infrastructure investment does not depend on Keynesian stimulus or aggregate demand considerations, secular stagnation risks reinforce the argument for increased public investment.

After reviewing all the issues and problems with infrastructure in the US including economic evaluation, funding and so on Summers concluded that:

“I think there is a strong case for a substantially more ambitious national infrastructure investment program, perhaps on the order of one percent of GDP each year going forward.”

Clearly, for this to happen, the public sector will have to re-build capacity in project evaluation, engineering and project management, but that is surely a technical rather than conceptual problem.

B. Superannuation Funds: A case for Investing in Australia’s Future

Another important way of funding infrastructure is using our superannuation fund monies to invest in Australian infrastructure in ways that benefits Australia and on a for profit basis. One of the big issues facing the superannuation funds is the uncertainty and lack of quality investments. As mentioned, we have one of the most vibrant and fastest growing superannuation pools globally.

Why not incentivise and encourage more of this superannuation money to invest in Australian infrastructure? What do we need to do to make local infrastructure attractive when comparing to global infrastructure? Do we need to convince our superannuation funds that it is possible to invest on a “for-profit” basis in Australian infrastructure? This may well require a change in thinking from all participants in the infrastructure market.

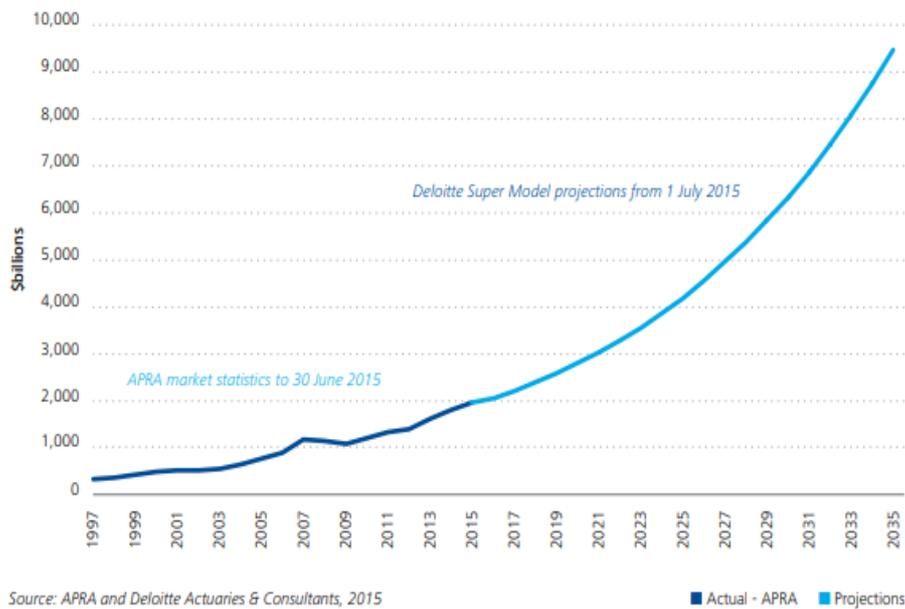
Another discussion point is the requirement to invest in superannuation fund members' best interests. While the Superannuation Legislation Amendment (Trustee Obligations and Prudential Standards) Act 2012 (Cth) (the TOPS Act) contains a "best interest" covenant, it does not prescribe what those "best interest(s)" are.

In fact, the covenant describes the best interests in the following terms

"to perform the trustee's duties and exercise the trustee's powers in the best interests of the beneficiaries."

Isn't improved infrastructure in the best interests of superannuation fund beneficiaries?

Figure 1: Projected superannuation assets (All amounts are in future nominal dollars).



Asset Recycling

One alternative that is currently in favour is the so-called 'asset recycling' concept.

Here, governments identify and build infrastructure – they take on completion and greenfield risks. Then the asset can be sold to the private sector, which can then manage the operational risks. But this still leaves us with the Rod Simms problem – what stops the privatised operators from literally capitalising purchase costs into higher consumer prices, and from using market power to maximise profits? And if the government has taken all the key risks and can access capital at a much lower rate than private firms, what are the advantages to citizens of asset recycling?

To return to the Australian monopoly game, how do we make utilities safe, boring assets? One answer of course is that their return structures need to revert to something more like a government bond than a leveraged up private equity or hedge fund structure. In short, infrastructure can't be caught up in the search for yield. It can't be the answer to a portfolio manager's low return problems.

Hybrid Limited Partnership Structure

Another potential solution could be very simple, that is set up a hybrid Limited Partnership structure, where government and super funds, take the risks that they are best placed to. That is government invests seed funds and underwrites the project but super funds then syndicate investments.

One of the issues regularly touted by the superannuation industry is the lack of quality infrastructure investments in terms of risk and return. Perhaps the solution could be as simple as setting up a hybrid Limited Partnership structure, where government and superannuation funds take the risks that each respectively is best placed to take. For example, the Federal Government can provide seed funding and underwriting of projects while the superannuation funds syndicate the investments. Of course financial markets have innovated lots of solutions to

risk sharing and pricing, like derivatives and there are lots of possible ways that infrastructure risks could be unbundled, priced and traded.

Are there other channels available to encourage foreign investment in local infrastructure? Are there markets or regions of the world that, by the nature of our investment structures, we are excluding from potentially being a funding source? Perhaps there is a means of opening up the local market to access alternative financing vehicles, including the growing Islamic Finance Investment market.

C. Islamic Finance Investment: A Real Possibility in Australia

Alternative financing is an important consideration both from a pricing and diversification perspective. An alternative source of potential funding, that is often overlooked, is the growing regional and global Islamic finance market.

But what is Islamic finance?

Eddy S. Fang has stated that Islamic finance “is” (or should be) characterised as a

“...large extent polarised between proponents and sceptics..., which makes it quite difficult to produce a ‘nuanced or empirically grounded understanding of Islamic finance.’¹⁶ “

At one end of the spectrum are contributions that promote Shariah-based finance as desirable and are mainly geared towards discussing the implementation of its moral–religious precepts in the modern economy at the local or international level.

¹⁶ “Islamic finance in global markets: Materialism, ideas and the construction of financial knowledge,” by Eddy S. Fang, *Review of International Political Economy*, Volume 21, Issue 6, 2014, 1170-1202, 1171.

Kamal Munir ¹⁷, associate professor of strategy and policy at Cambridge University's Judge Business School, writes in his essay that Islamic finance's emphasis on equity and investment in the real economy provides "a stable and productive banking sector".

"Rather than providing a lucrative financial alternative to investing in the real economy, Islamic banking complements and strengthens the latter," Munir says. "It ensures that financial capital does not lead to artificially bloated asset prices. Instead, it is made to work in the real economy, on real projects."

By contrast, "at the other end of the spectrum, [Islamic Finance] is examined with the heuristic tools of 'conventional' finance and classical economic theory. The religious and normative nature of Islamic economic precepts, however, does not fit well with classical economics' assumptions of purely profit-maximising agents. As a result, studies examining whether and how Islamic Finance fits into the global financial system are often criticised for prematurely discarding the viability and social desirability of alternative financial instruments based on Islam."

To view Islamic finance more conventionally, its principles and values align with moderate risk and return expectations over the long period because it values asset-based long-term investment that contributes to the public good. In other words, money itself has no value. It is only a way of defining the value of something. Therefore, money isn't allowed to generate more money by being put into a bank account or lent to someone else.

Islamic finance has a great deal of scale. According to Deloitte¹⁸, **Islamic banking assets could reach about US\$3.4 trillion globally this year**. Only a very small fraction of this would be needed to provide Australian infrastructure with the life blood it needs.

¹⁷ Kamal Munir, associate professor of strategy and policy at Cambridge University's Judge Business School, Explainer: how does Islamic finance work? (October 30, 2013) <https://theconversation.com/explainer-how-does-islamic-finance-work-19670>

¹⁸ The International Islamic Financial Market <https://www2.deloitte.com/lu/en/pages/islamic-finance/articles/islamic-finance-niche-mainstream-market.html#>

Islamic finance can fund projects via equity and Islamic debt, as long as the project follows the principles of Accounting and Auditing Organisation for Islamic Financial Institutions¹⁹. This essentially means using slightly different structures that mimic conventional debt and equity.

Equity is used as a preference, given the good rates of return in Australia and relatively lower risk. However, debt structures also comply with Islamic finance principles. The Sukuk uses the concept of asset monetisation. What this means is the cash flows arising from a pool of reference assets are distributed periodically to closely replicate the concept of a coupon payment on the conventional bond. Whereas Western bonds offer to pay bondholders a rate of interest over a set period of time, Sukuks offer a fixed rate of profit.

In 2014, **the United Kingdom**²⁰ became the first western country to issue an Islamic bond, otherwise known as sukuk, raising GBP£200 million from a five-year deal that was 10 times oversubscribed – in fact the investor demand exceeded GBP£2.3 billion. This oversubscription is not surprising as the profit rate on the Sukuk was set at 2.036% - in line with the yield on gilts of similar maturity. The sukuk was underpinned by three UK government properties.

When the bond matures in 2019, ownership of the properties will pass back to the UK government.

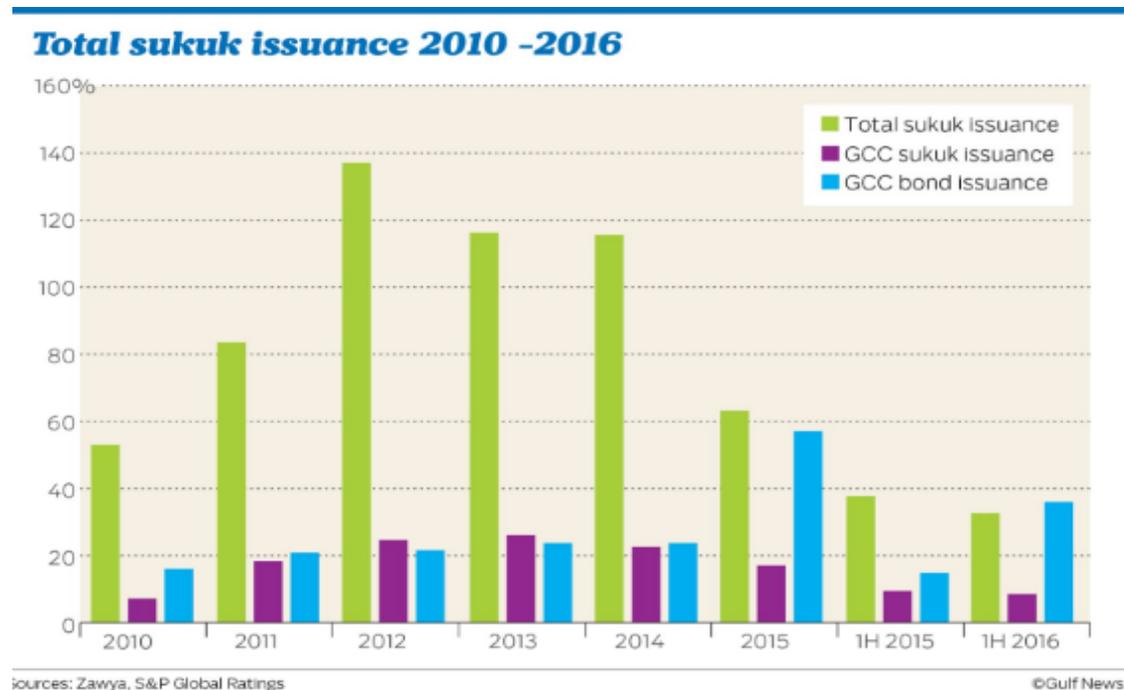
If Western governments can issue sukuk to underpin properties, they can also do so to underpin the infrastructure shortfall.

¹⁹ Sharia'a Standards <http://aaoifi.com/shariaa-standards/?lang=en>

²⁰ Government issues first Islamic bond (25 June 2014)

<https://www.gov.uk/government/news/government-issues-first-islamic-bond>

In April 2017, **Saudi Arabia**²¹ issued its largest ever Sharia-compliant bond on the **Irish Stock Exchange**. The two US\$4.5 billion dual tranche listings, or Sukuk, was wildly oversubscribed, attracting more than US\$33 billion in orders.



Saudi Arabia’s record-breaking sukuk was split into two tranches: a five-year bond paying investors 2.89%, and a 10-year bond paying a profit rate of 3.63%.

It is also worth noting that our close neighbour in the region, **Malaysia**, has been utilising the sukuk market to support its infrastructure push for a prolonged period²². **Malaysian data suggests up to 60% of the US\$31 billion raised via debt from Malaysia and other Southeast Asian countries last year came through the Islamic finance market.**

So, it is evident western society is very open to bond issuance outside the conventional norms and is welcoming Islamic finance and sukuk’s not only for their return capability but equally for their diversification benefits. This welcome,

²¹ ISE lists world's largest ever sukuk issuance with \$9bn Saudi Arabia bonds (26 April 2017) [http://www.ise.ie/Media/News-and-Events/2017/ISE-lists-world-s-largest-ever-sukuk-issuance-with-\\$9bn-Saudi-Arabia-bonds.html](http://www.ise.ie/Media/News-and-Events/2017/ISE-lists-world-s-largest-ever-sukuk-issuance-with-$9bn-Saudi-Arabia-bonds.html)

²² Nikkei Asian Review, 2018. <https://asia.nikkei.com/Economy/Malaysia-s-infrastructure-push-to-keep-sukuk-issues-steady>

leading to growth in sukuk's popularity, is traceable back to the global financial crisis of 2008.

The **Australian Government is equally well placed**, and possibly even better placed by geography, to issue such sukuk to assist in the funding of our infrastructure. Local financial institutions, such as **National Australia Bank** and **Crescent Wealth** have expertise in building compliant Islamic debt structures and could be used in these funding initiatives.

For Australian infrastructure, if our burgeoning superannuation industry can't or won't invest in infrastructure for Australia's future, Islamic finance should be seriously considered. Australia will need to reach out to the global Islamic Investment funds that could reach its current potential of US\$3.4 trillion.

6. Conclusion

The issues paper opened with the dilemma identified by Picketty and others that the very processes that produce growth, are also producing inequality. It noted that without concerted public effort, leadership and authentic efforts to overcome this inertia those inequalities tend to widen.

The paper also identified what now seems like a related problem of short-termism and a fear of the future in public policy discourse. It argued that a focus on misleading accounting residuals like the annual budget balance means that we are getting it wrong about debt and deficits. One effect of these problems is that we are under-investing in public infrastructure and reducing our ability to create capacities and opportunities for the future. This is undermining our capacity to continue to grow and become more productive, and is accentuating problems of inequality.

Graham and Martin (2001) referred to problems with inadequate urban infrastructure as creating a 'splintering urbanism', but at a broader level we can call it a problem of 'splintering societies'²³

That we have accumulated an infrastructure deficit in a wealthy society awash with capital is a dubious achievement. If we continue risking an accumulation of that deficit; this would be an historic policy failure.

As Francis Fukuyama and his colleagues recently noted leading countries in the West have not only failed to meet their own infrastructure needs, they now risk surrendering global infrastructure development.

And they note that the problem is not financial but conceptual and institutional.

²³ Graham, S. and Marvin, S., (2001) *Splintering Urbanism*, Routledge, London.

This issues paper started with a provocation, asking whether because of a failure to invest in the future, we engaging in intergenerational theft? After the provocation it has sought to lay out that challenge and consider some possible solutions. The solutions identified are by no means conclusive and some sharper minds might consider other risk adjusted solutions.

Intergenerational theft is indeed a problem and challenge certainly worthy of focused and deep consideration by all those interested in the future of Australia.