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# Game-changers: Economic reform priorities for Australia

John Daley



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## Overview

If Australian governments are serious about raising rates of economic growth, they must reform the tax mix and increase the workforce participation rates of women and older people. This could contribute over \$70 billion per year to economic growth in the next decade. There's nothing else big enough to change the game. Australia opened its economy in the 1980s, and privatised and deregulated in the 1990s, leaving comprehensive reform of tax and welfare as the major opportunity for increasing Australian economic growth.

This report aims to identify economic reforms that would produce the biggest returns and that would be supported by most policy specialists as both desirable and workable. It identifies areas where policy research should focus because there is potential for substantial economic reform, but not enough evidence to be sure. The report also aims to start a discussion about the importance of prioritising reform.

Prioritisation is essential because major reform is hard. It takes time to design and implement good policy and in government, resources are scarce. Political capital is finite, funding is limited and so is the senior leadership time required to see major reforms through. When governments try to do too much at once, they tend to achieve the small reforms and mishandle the major ones.

In the current political climate, with a 24-hour news cycle, and little money to 'buy reform' by paying off the losers, major economic reform may seem a low priority. But it's equally possible to see this moment as an opportunity. Australia faces great and growing challenges in the next 20 years. These include the need to manage the mining boom and its impacts on the larger economy; the rise of a billion-strong Asian middle class; an underperforming

education system; an ageing population; and the need to address climate change. Bold leadership is needed.

Of course, growing GDP is not the only goal of government. Well-being and happiness matter most, and individuals and families make decisions on that basis. However, this paper focuses on economic reforms because their impact can be broadly measured, and their economic contribution enables social, environmental and distributional reforms that improve people's lives.

A wide range of potential economic reforms were assessed according to two criteria: the *size* of the opportunity over the next decade, and *confidence* in specific policy solutions. That confidence matters: Australian governments achieved their most lasting reforms — such as the post-war immigration program, and the economic reforms of the 1980s — when policy specialists broadly agreed on an evidence-based rationale for change.

These criteria identify a small number of reforms that can change the game over the next decade. We should broaden the GST to cover education, health and food, but reduce income and corporate taxes. We should reduce the disincentives to paid work for women with young children by changing benefits. And we should increase the age at which people can access their superannuation and the aged pension.

Better teacher training and performance management, and better allocation of health resources, will yield large benefits in the longer run. But for now, only three reforms — tax mix reform, female and older people's workforce participation — can change the game. They should be the core economic reform priorities for Australian governments.

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## 1 The importance of prioritisation

### 1.1 Why reform is hard

Major reform is hard, both to formulate and to implement. In the past 40 years, Australia has arguably introduced only nine big economic policy reforms: Medicare, floating the dollar, tariff reduction, government enterprise privatisation, setting interest rates independently through the Reserve Bank, national competition policy, superannuation, broadening the income tax base, the GST, and changes to the structure and funding of the higher education sector.<sup>1</sup> None of these reforms was easy or straightforward.<sup>2</sup> On past performance, one major reform every four years is better than average.

Big economic reforms are inherently difficult because:

- Good policy takes time to design, advocate for, legislate, and implement.
- Significant economic issues often cross the borders of government departments and of state and Commonwealth responsibility. Commonwealth-state cooperation has a chequered history.
- The cost of reform is often immediate, while the payoff takes time to emerge.<sup>3</sup>

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<sup>1</sup> Kelly (2008)

<sup>2</sup> Parkinson (2011)

<sup>3</sup> See, for example, Megalogenis (2012)

- Those who stand to lose from reform tend to campaign harder than those who stand to win. People tend to value current losses more highly than future gains. Often losses are borne by special-interest groups that can organise opposition more efficiently than the more diffuse beneficiaries of reform can voice support.<sup>4</sup>
- Governments often have insufficient information and evidence-based research to formulate reforms properly<sup>5</sup> and to build a case strong enough to resist the campaigns of special-interest groups.

The current political climate creates additional challenges.

- The 24-hour news cycle makes it harder to mount a sustained, reasoned public campaign for change.<sup>6</sup>
- When there is no immediate crisis — real or perceived — it is hard to motivate the public to undergo the short-term pain of change.<sup>7</sup>
- There is little money to ‘buy reform’ by paying off the losers. Both Commonwealth and state governments face difficult

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<sup>4</sup> Olson (1982)

<sup>5</sup> For a review of how often policy-making falls short of best practice, see Howard (2012)

<sup>6</sup> See, for example, Megalogenis (2010)

<sup>7</sup> See, for example, Banks (2011)

budgets for several years: revenues are contracting due to tax cuts in boom years, a slower global economy, and ageing populations that will both pay less tax and increase health costs.

Each of these factors makes reform difficult. However, as Treasury Secretary Martin Parkinson said in 2011:

*It is all too easy to justify why now might not be the right time for reform...[but] it is exactly because the economy is undergoing a structural shift, because it is being affected by long term forces, that we need to continue our ongoing efforts to deliver...structural reforms.*<sup>8</sup>

One can, in fact, see today's situation as an opportunity. Tightening budgets mean that only substantial economic reform will enable government to fund both rising health costs, and widely supported measures such as disability insurance and superannuation increases. Tactically, governments may be more inclined to face down special interest groups by arguing hard for the merits of reform when there is no money to pay off the losers.

However, the first step is to build some degree of consensus about which big reforms matter most and what direction they should take.<sup>9</sup> Of course, in the end, reform needs more than this to succeed.

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<sup>8</sup> Parkinson (2011)

<sup>9</sup> Henry (2011)

## 1.2 Why we care about economic reform

*I've been rich and I've been poor. Rich is better.*<sup>10</sup>

Economic reform matters. Done well, it is the only way to sustainably improve the well-being of citizens in the long run. Greater economic growth both increases individuals' material living standards, and enables societies to invest in many of the non-material factors that improve people's lives.<sup>11</sup>

Australia faces great and growing challenges in the next 20 years — which also present opportunities. These include the need to manage the mining boom and its impacts on the larger economy; the rise of a billion-strong Asian middle class; an underperforming education system; an ageing population; and the need to address climate change. Bold leadership is needed.<sup>12</sup>

Economic growth, appropriately managed, expands the range of options open to individuals and government. It can free individuals and communities to make choices about their lives, support businesses and shareholders to prosper, buffer the Australian economy against a potential future end to the mining boom, and provide the resources to support other major policy reforms — such as mitigation of climate change, and better care for an ageing population.

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<sup>10</sup> Beatrice Kaufman (1937). Commonly attributed to Sophie Tucker, Mae West, and many others.

<sup>11</sup> Eslake and Walsh (2011), pp.4-5

<sup>12</sup> Wesley (2011)

### 1.3 Why prioritisation matters

In government, resources are scarce and significant reforms usually cost money. But often a government's scarcest resources are political capital and time — the time senior politicians and bureaucrats need to negotiate the reform process.

Political capital is important because a government can only afford to cross major interest groups on a certain number of high-profile issues before it risks being seen as 'out of touch' in public debate. A sustained period of unpopularity can fatally undermine government leadership, although — ironically — governments are often rewarded in the medium term when they expend political capital on a reform ultimately recognised as significant.

Senior leadership time is scarce in any large organisation. Difficult reform requires senior leaders to put in the time to drive through change: to win over stakeholders, clear competing obstacles, and reallocate resources. However well supported senior leaders are, there are limits to how much time they can devote to any one reform. Spread too thin, their personal influence will have limited impact.

At the same time, there are always immense pressures for governments to act on a wide variety of policy areas. In a plural society, every issue has a lobby group. Most ministers are keen to pursue reforms in their portfolio because reform opportunities in their area of responsibility seem more important, and many want to leave a legacy. The public, too, increasingly expects that government can resolve every social ill.

However, if governments try to do too much at once, they tend to either implement only insignificant reforms, or fumble important ones. As Treasury Secretary Martin Parkinson put it:

*Prosecuting reform on too many fronts risks losing focus and/or spreading efforts too thinly to deliver on the reforms, as well as fracturing any community consensus for reform.<sup>13</sup>*

Without prioritisation, there is a risk that governments progress only the urgent but trivial issues, leaving the reforms that will make the most difference for future governments. To repeat, significant reform is rarely easy.

Furthermore, policies designed and implemented in rushed and poorly resourced conditions are more likely to contain flaws and errors that could have been avoided with better planning and evaluation.

There are many instances where a government's failure to prioritise has produced poor policy. In the early months of 2010 the federal government was preparing the budget and was also committed to health reform, a response to the Henry Tax Review, and a new emissions reduction scheme. As one commentator wrote:

*Each was a massive operation. Each required months of parliamentary and public battle. It was like trying to land four*

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<sup>13</sup> Parkinson (2011)

*jumbo jets at once on the same runway... As a result, policy was neither properly prepared nor argued.*<sup>14</sup>

Policy reforms given insufficient time and focus are also more susceptible to the influence of interest groups. The mining tax, for example, is widely cited as an important reform. Yet it was announced with little warning and in a form that had significant flaws. It failed to win either expert or public support, and was attacked by affected interests. The result was a tax that was narrower than it should have been.

To implement significant reforms successfully, governments must limit the agenda to a manageable number of reforms.

Meaningful prioritisation does not mean simply nominating a couple of broad objectives without specific mechanisms to achieve them. For example, governments around the world have declared 'jobs' a top priority,<sup>15</sup> often without concrete policy proposals to increase employment. Government interventions to promote regional development and invest in infrastructure, for example, are unlikely to have substantial impacts on long-run employment or productivity.<sup>16</sup> Similarly, declaring 'productivity growth' a priority identifies a problem, but does not identify the difficult concrete steps required to tackle it.<sup>17</sup>

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<sup>14</sup> Button (2012)

<sup>15</sup> See, for example, Giddings (2012)

<sup>16</sup> Daley and Lancy (2011)

<sup>17</sup> Eslake and Walsh (2011)

## 1.4 How to choose priorities

How should Australian governments choose among all the reforms they *could* pursue?

Prioritising reforms is itself inherently controversial. It involves leaving some issues out and so disappointing those whose interests are at stake. Interest groups tend to favour policy changes that further their own interests but these may not be priorities in the public interest. Similarly, ministers and departments will tend to prioritise issues in their own portfolio. The task of rigorous prioritisation may be avoided precisely because it involves disappointment. In Westminster systems, Cabinet is the only official body with the effective opportunity to set a government's priorities.

Prescriptive lists of government priorities can seem arbitrary unless there are guiding principles to determine which reforms are in or out.<sup>18</sup> These are not easy to identify. It is not obvious how to choose the most important reforms for improving social outcomes, or protecting the environment, or improving fairness of distribution throughout the community.

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<sup>18</sup> For example, in the lead up to the last Federal election, Hetherington and Soutphommasane (2010) recommended a wide range of reforms, including new markets in everything from individual health accounts to carbon pricing and school performance, nation building through unspecified reforms to public institutions, regional development through unspecified reforms to grow populations away from the large capital cities, pricing carbon and promoting renewable energy, tax reform along the lines of the Henry Review, the creation of a sovereign wealth fund, ending negative gearing, and introducing a national service scheme. Davis and Lyons (2010) recommended an even wider range.



Potential economic reforms, however, can be compared by their impact on the level of economic activity — broadly measured by Gross Domestic Product. This is an imperfect measure,<sup>19</sup> but it nonetheless provides a reasonable approximation of the total resources available to the community.

Still, even where criteria for comparing reforms have been identified, it may not be possible to apply them. A criterion such as impact on GDP cannot be applied unless potential government interventions are clearly articulated, with good evidence about their likely impact.

Governments often have limited information about the nature of issues and the viability or impact of proposed interventions. For example, the costs of the health system or alcohol abuse have complex causes and it may not be clear which policy interventions — if any — will improve matters. In many important policy areas, including industry policy, healthcare regulation, and managing oligopolies, there is limited evidence about which interventions will substantially increase economic growth. Without such evidence, it is difficult to justify prioritising government intervention in these areas. However, they must be high priorities for further research and policy development, and more ‘business as usual’ incremental reform should not necessarily be stopped.

### 1.5 How this report might help

In this report, we aim to provide a framework that other policy actors can use as a tool for prioritising potential reforms.

Using this framework, we also provide our view about *what* to prioritise. We believe we have identified a small number of key reforms where there is significant agreement between many experts on the way forward. Unlike any other reforms identified in current debates, there is reasonable evidence they can change the game for Australia’s economic performance over the next decade.

We also highlight areas that should be priorities for further research and policy development. These are areas where policy reform might well have a substantial impact, but where high-quality analysis of how government might intervene — or what the potential impact might be — is not available.

Prioritisation is inherently dynamic. As more information becomes available, priorities should change. Further work by others may lead to better conclusions than ours. We hope this report will serve as a platform for others to build upon.

Above all, we hope this report will increase focus on the importance of consciously prioritising potential reforms. Without rigorous prioritisation, it is likely that the urgent will continue to take priority over the important.

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<sup>19</sup> See Stiglitz, *et al.* (2009)

## 2 Economic reform priorities for Australia

This paper focuses on domestic policy reforms that might contribute significantly to Australia's economic growth. While social, environmental and distributional reforms also matter, the scope of this paper is limited to economic issues because they provide the resources to enable other types of reform, and because straightforward and comparable metrics are available.

As a result, policies designed primarily to distribute resources and opportunities more fairly,<sup>20</sup> to improve relationships,<sup>21</sup> or to improve the environment,<sup>22</sup> and issues that are primarily enablers of reform rather than ends in themselves,<sup>23</sup> have been excluded.

Reforms that have already been enacted or are 'in the pipeline' are also excluded, as we are looking for additional contributions to growth.

In considering where the greatest growth opportunities lie, potential priorities have been considered against two criteria:

- The size of the opportunity presented — measured in terms of its economic impact, expressed as the additional Gross Domestic Product in the year 2022, expressed in 2010 real dollars. We have tried to use the best publicly available modelling. But because we are primarily looking to prioritise

'big' from 'small', we were also prepared to use more approximate estimates. These are not substitutes for detailed economic modeling. However, they are likely to give fair estimates of the magnitude of the economic and non-economic returns, which provides a good basis for ranking potential reforms.

- The level of confidence that identified policy remedies can achieve change. Confidence will only be high if concrete policy changes have been identified, there is good evidence that this will have positive economic benefits, and there is reasonable evidence about the size of the economic benefit.

For each issue, we have also considered what we don't know about the issue that might well change our conclusions.

The approach has not assessed the *political* feasibility of reform. The starting point of this report is that almost any worthwhile economic reform will evoke substantial opposition, or it would probably have happened already. Instead we use the criteria of size and confidence to pinpoint the reforms capable of making the biggest difference. This in itself might then generate momentum to overcome political obstacles.

Further detail on the methodology is in Appendix A.

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<sup>20</sup> For example, disadvantage, indigenous social outcomes, housing affordability, and disability.

<sup>21</sup> For example, levels of social trust and citizen engagement.

<sup>22</sup> For example, the Murray-Darling Basin and carbon pricing reforms

<sup>23</sup> For example, public sector reform.

## 2.1 Issues considered

A wide range of issues were considered in developing this paper, based on a top-down analysis of the various drivers of the economy. A range of people from both public and private sector reviewed this list, and we incorporated their suggestions. We hope that the result distils contemporary wisdom about important potential economic reforms. Where people can identify other potential reforms, they are encouraged to use the methodology outlined above to assess their place relative to other priorities.

### Economic structures

#### Industry Policy

- Industry and regional policy
- Innovation policy

#### Productivity

- Immigration policy reform
- Industrial relations reform
- Oligopoly regulation
- Business deregulation
- Foreign investment regulation

#### Participation

- Older people's workforce participation
- Female workforce participation
- Youth workforce participation

### Transfer systems

- Tax mix reform
- Federal financial relations reform

### Infrastructure

- Road congestion
- Transport infrastructure
- Land freight
- Urban water management
- Electricity network costs

### Services

#### Education

- Early childhood development for children in need
- School system performance
- Vocational education and training system performance
- Higher education system performance

#### Health

- Disease prevention
- Health system reform
- Ageing population health care reform

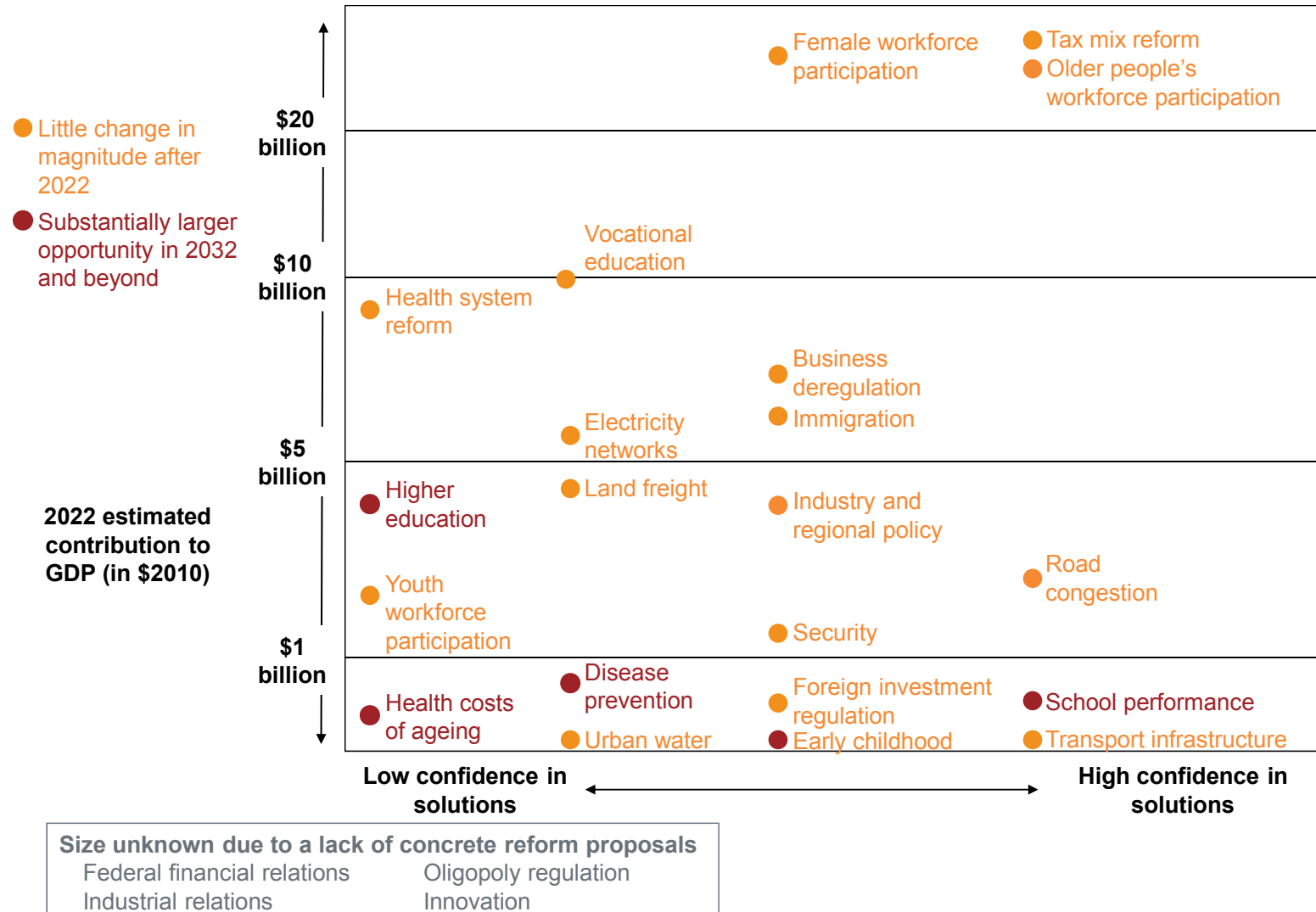
#### Security

- Security spending

## 2.2 Summary of findings

Our assessment of each of these issues using the criteria outlined above is illustrated in Figure 2.1. The analysis that underpins this assessment is in the *Supporting Analysis* document, published as a companion to this report, and available from the Grattan Institute website.

Figure 2.1: Reform priorities for 2022



Note: 'Land freight' placement amended from initial publication following further analysis.

## 2.3 Results

The results of the analysis are summarised in Figure 2.1. There are three big opportunities for increasing Australian economic growth (women's and older workers' participation, and tax mix reform) that are much larger than any others over the next decade. A few other reforms (in areas such as education and health) could be large, but it will take much longer to realise the gains. In some reform areas we do not know enough: there is either little evidence of which reforms will work (innovation, industry policy and oligopoly regulation), or little evidence of the size of potential gains relative to the social costs of reform (industrial relations). Some reforms (transport infrastructure) appear to have much smaller economic opportunities than the claims often made about them.

### 2.3.1 The big three reforms

As shown in Figure 2.1, there are three big opportunities. Each could increase the size of the Australian economy by around \$25 billion — more than one per cent of Australian GDP. We have not identified any other opportunity big enough to change the game for Australia's economic prosperity. We do not see how an Australian government could be serious about increasing the size of the economy within the next decade unless it acts on at least one of these opportunities.

These large opportunities are:

- tax mix reform

- female workforce participation, and
- older people's workforce participation.

These reforms all directly affect capital and labour, which matter to every aspect of the economy. It is not surprising that we have not identified sector-specific reforms. A sector-specific reform could only change the game for Australian GDP if it were a large sector, and if at the same time the reform increased the sector's efficiency very substantially. There are a few historical examples of this. The deregulation and privatisation of Australian electricity halved the number of people employed in the sector between 1985 and 2000.<sup>24</sup> This affected around 176,000 employees — over one per cent of the Australian workforce — most of whom were redeployed into more productive roles elsewhere in the economy. However, after the extensive deregulation and privatisations of the last three decades, the largest such opportunities seem to have been captured.

Our confidence in the reform opportunities presented by the big three is relatively high. Tax mix reform has been extensively studied in Australia and overseas with consistent findings about the key features of reform and the substantial economic benefits. There is good evidence that lifting the age of eligibility for the old age pension and access to superannuation would substantially lift older age workforce participation, and that this has substantial economic benefits. There is also good evidence that women would participate more in the paid workforce if their earnings were reasonable after tax, welfare and childcare costs net of benefits.

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<sup>24</sup> ABS (2012b)

However, while the direction of reform is clear, fiscally manageable reforms have not yet been costed.

Given the size of the three big reform opportunities identified here, it would be worth pursuing any of them on purely economic grounds, quite apart from any additional social benefits they may provide. For the other twenty-two issues, the economic benefits are so similar in size (given inherent margins of error) that their respective priority also depends on their non-economic benefits.

The three large opportunities are explored in detail in Chapters 3 (tax mix reform), 4 (female workforce participation) and 5 (older age workforce participation).

### 2.3.2 Longer-term reforms

Several opportunities do not provide particularly large benefits within a ten-year timeframe, but would in the longer term. School, higher education and early childhood reforms are powerful levers for economic growth, but it takes decades before a generation of better-educated — and more productive — students become a large proportion of the workforce.<sup>25</sup> Reform of healthcare management for an ageing population does not have a big economic impact in 2022 because the absolute number of people in their eighties and close to the end of life will still be relatively small. By 2032, however, more baby boomers will be close to the end of their lives, putting much greater strains on the health budget.<sup>26</sup>

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<sup>25</sup> Jensen (2010)

<sup>26</sup> Productivity Commission (2005), XXVI

If governments do not take opportunities that pay off within ten years, it is unlikely that they will expend political capital on reforms that take much longer to pay off. Nevertheless, the sooner governments start acting on these long term issues, the sooner the longer-term gains will be realised. The case for acting now is particularly strong for school reform, where there is a relatively high level of confidence in the policy remedy.

### School system performance

There is a substantial opportunity to increase Australian economic growth by improving teacher effectiveness, and hence student learning. Better teacher feedback and appraisal systems make a big difference to the quality of teaching, and thus how much students learn. The quality of school education is the dominant driver of economic productivity in the long run, and it also contributes to many other social outcomes.

Unfortunately, Australian student outcomes are falling behind those of the world's top-performing school systems. The latest results from the OECD's Program for International Student Assessment (PISA) show that Australian students have slipped back in reading and maths.<sup>27</sup> This is despite a real increase in education expenditure by governments of 44 per cent between 2000 and 2009.<sup>28</sup> This trend is long-term. Between 1964 and 2003, real per-child spending in Australian school education increased by 258 per cent, while numeracy test results fell.<sup>29</sup>

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<sup>27</sup> OECD (2010c)

<sup>28</sup> Jensen *et al.* (2012), p.10

<sup>29</sup> Leigh and Ryan (2010)

For Australian school education systems to rank among the world's best, students would need to learn approximately 5 per cent more in each year of schooling.<sup>30</sup> Estimates suggest that a 10 per cent increase in teacher effectiveness would accomplish this shift in learning. This is eminently achievable.<sup>31</sup> Better appraisal and feedback systems alone have been estimated to improve teacher effectiveness by 20-30 per cent.<sup>32</sup> Australia undoubtedly has plenty of scope for improvement: OECD Teaching and Learning Internal Survey (TALIS) data show that teacher appraisal and feedback in Australia is the least effective in all but two of the 23 countries participating in the TALIS program.<sup>33</sup>

Improvements in education have an enormous impact on economic growth. While estimates vary, a conservative estimate is that increasing international test scores by one standard deviation can lift GDP growth by 1 per cent.<sup>34</sup> However, school education reform takes time to affect economic growth. It takes time to implement system-wide reform, and the benefit only flows as better educated students become a significant proportion of the workforce.

That is why the boost to GDP in 2022 from Australia reforming its teaching to catch up to the best PISA performers is negligible. By 2050, though, it could be over \$90 billion.<sup>35</sup>

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<sup>30</sup> Daley and Jensen (2010)

<sup>31</sup> Jensen (2010) p.11

<sup>32</sup> Jensen and Reichl (2011)

<sup>33</sup> OECD (2009a)

<sup>34</sup> Jensen (2010)

<sup>35</sup> Ibid.

### Ageing population health care reform

The ageing of the Australian population is likely to increase health care costs substantially over the next thirty years. The Treasury's Intergenerational Report 2010 notes that the proportion of the population over 65 is expected to reach 25 per cent by 2050, up from just 8 per cent in 1971. The health care costs for those over 65 are, on average, around four times as high as for people under 65, and end-of-life care costs are even higher.<sup>36</sup>

Treasury estimates that in 2021-22, government health expenditure will be \$26 billion higher than today, with \$19 billion of this due to ageing and population pressures.<sup>37</sup> In 2049-50, total expenditure is projected at \$257 billion, with \$129 billion of this due to ageing and population effects, as illustrated in Figure 2.2

Improving health care efficiency and allocation to reduce these projected cost increases by 20 per cent could add \$15 billion a year to economic output and the budget bottom line by 2049-50. However, medium-term savings are considerably smaller, which is why reforming aged health care costs has relatively little impact within our ten-year time frame.

Clearly, reforms today might reduce these costs in the longer term. However, there is little consensus about how to achieve these reductions. Australian health care costs and outcomes are among the best in the world.<sup>38</sup> Health care costs are high because substantially better outcomes often require complex

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<sup>36</sup> Productivity Commission (2005)

<sup>37</sup> Treasury (2010b)

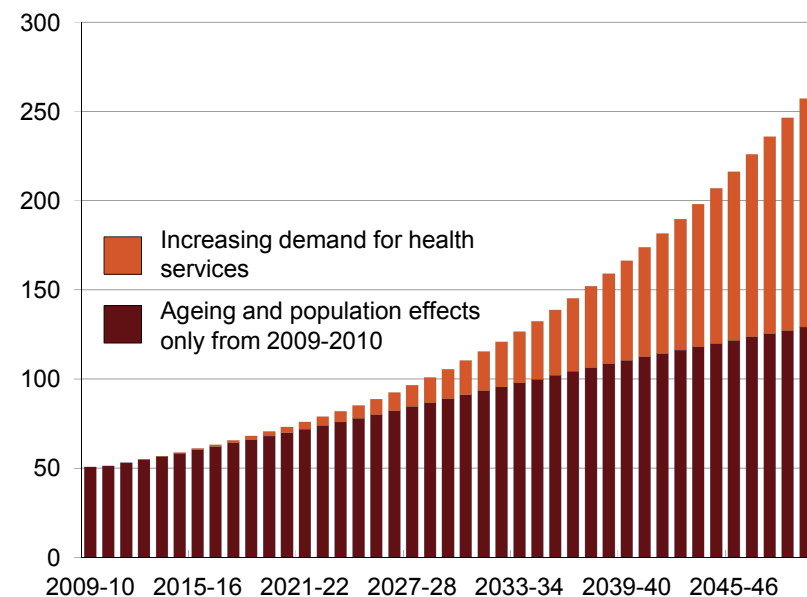
<sup>38</sup> OECD (2011c)



care, and the system to deliver this is often itself complex.<sup>39</sup> Achieving substantial improvement in health care system costs is unlikely to be a simple process.

Consequently, ageing health care costs is an issue where there is substantial long-term potential, but little confidence about what to do to make a big difference.

**Figure 2.2: Australian government health expenditure**  
\$ billion



Note: Figures in 2009-10\$. Source: Treasury (2010b).

<sup>39</sup> See Gawande (2007)

### 2.3.3 The 'known unknowns'

In several policy areas we are not confident that proposed reforms will make a substantial difference. These areas inherently matter to economic growth but there is little consensus about which specific policy reforms will work. The most prominent examples are innovation policy, industry policy, and competition policy. In addition, in industrial relations it is possible to identify potential reforms but it is difficult to be confident about the size of the potential economic benefits against which other aims must be traded off.

The remainder of this section assesses these four 'known unknown' reforms.

#### Innovation policy

Innovation has been aptly described as 'ideas, successfully applied.'<sup>40</sup> The OECD defines innovation as:

*the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organisational method in business practices, workplace organisation or external relations.*<sup>41</sup>

On this broad definition 'innovation' is inherently the dominant driver of labour productivity growth and thus long-run economic growth.<sup>42</sup> So defined, calls for greater innovation ultimately

<sup>40</sup> Dodgson and Gann (2010)

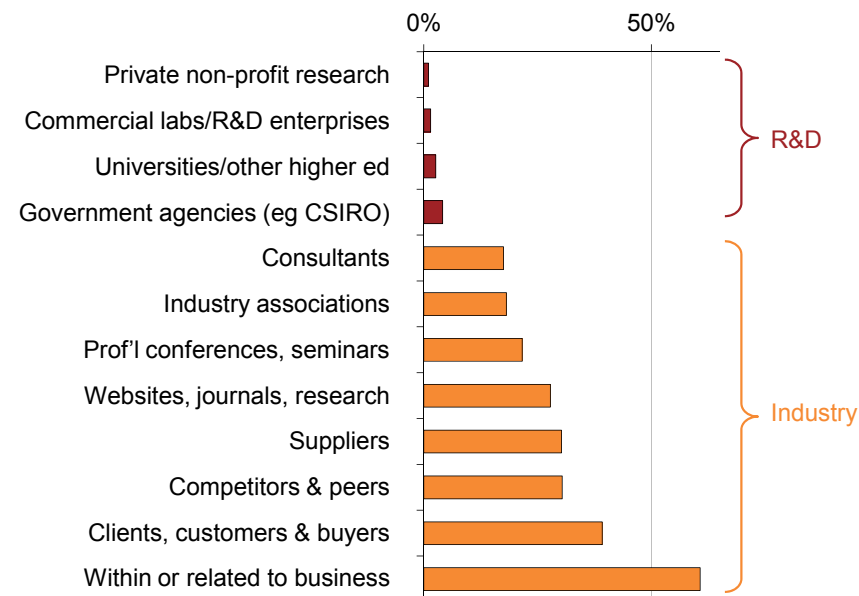
<sup>41</sup> OECD and Eurostat (2005)

<sup>42</sup> Department of Innovation Industry Science and Research (2009), p. 9

amount to calls for higher productivity. However, this broad definition merely restates the aim of increasing productivity growth rather than providing directions about which policies might improve outcomes.

Productivity-enhancing innovation in Australia is evenly divided between new forms of organisation, marketing, operations and goods and services.<sup>43</sup> Also, most innovations result from businesses interacting with their suppliers, customers and competitors, as illustrated in Figure 2.3.

**Figure 2.3: Sources of innovation for Australian businesses**  
Percentage of innovative business citing source



Source: Australian Bureau of Statistics (2010, Cat. No. 8158.0)

This is consistent with an industry-level study in the United States showing that most innovations to enhance productivity were a result of *applying* new technology, spurred by high or increased levels of competition.<sup>44</sup> On this basis, there is relatively little that government can do to encourage productivity-improving innovation, apart from promoting competition to spur innovation (discussed further below), creating sound economic frameworks

<sup>43</sup> ABS (2010c)

<sup>44</sup> McKinsey Global Institute (2001)

such as efficient regulation and macro-stability, and promoting high quality education.

A narrower definition of innovation focuses on *inventions* that are ‘new to world’, particularly those that are protected through intellectual property. Relatively few firms are at the leading edge of their industry globally; even fewer compete in high technology industries, which are a small proportion of both the Australian and global economies.<sup>45</sup> As a result, new to world innovations are a relatively small subset of productivity-improving innovation.

Nevertheless, much of the literature on ‘innovation’ implicitly focuses on this narrower definition, such as the widely cited rankings of innovation such as the ‘innovation pillar’ of the World Economic Forum’s Global Competitiveness Index and INSEAD’s Global Innovation Index.<sup>46</sup>

Most government ‘innovation policy’ tends to focus on this narrower definition. For example, the federal government’s current 10-year innovation strategy, laid out in 2009, outlined seven innovation priorities.<sup>47</sup> The first three of these were focused on new to world invention: promoting public research, a base of researchers, and commercialisation of research and development.

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<sup>45</sup> Manyika *et al.* (2010) p.12

<sup>46</sup> The “Innovation pillar” of the World Economic Forum’s Global Competitiveness Index looks at corporate acquisition of “technology”, government procurement to foster technological innovation, scientific research institutions, availability of scientists and engineers, R&D spending, university-industry collaboration on R&D, and patenting rates: Schwab (2011). Similarly, INSEAD’s Global Innovation Index puts substantial weight on university research, intellectual property activity, and trade in high-technology products: Dutta (2011)

<sup>47</sup> Department of Innovation Industry Science and Research (2009)

Australian firms innovate less often in ways that are new to the international market.<sup>48</sup> However, it is unclear which government policies can make a big difference to this new to world innovation. A broad stocktake of innovation policies and their relative levels of effectiveness was undertaken in 2009 for the OECD.<sup>49</sup> Policies in place in Australia, and throughout much of the OECD, include business R&D subsidies and grants, government financing for venture capital, public procurement for advanced technology (such as defence spending), and fostering industry-university linkages. However, as the stocktake found, “evaluation of specific government support policies and their impacts on innovation is generally sparse.” While the Australian “innovation system” suffers from relatively little venture capital<sup>50</sup> and Australian businesses spend relatively little on research and development,<sup>51</sup> government policies are already in place aimed at these issues,<sup>52</sup> although the evidence is weak as to whether these or similar policies materially improve economic outcomes.<sup>53</sup> Given the relative unimportance of new to world innovations for the Australian economy, it is also unclear that government action to

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<sup>48</sup> Department of Innovation Industry Science and Research (2011), p.23

<sup>49</sup> Box (2009)

<sup>50</sup> Australian Institute for Commercialisation (2004) consistently with Australia ranking 13<sup>th</sup> in the OECD for availability of seed-stage venture capital: OECD (2010c)

<sup>51</sup> Australia ranked 15<sup>th</sup> in the OECD in 2009 for business spending on R&D as a percentage of GDP: OECD (2012) p.47, up from 22<sup>nd</sup> in 2000.

<sup>52</sup> Commercialisation Australia provides over \$50m per year as capital support for innovative businesses and the R&D Tax Incentive provides tax concessions for R&D expenditures — a similar program that it replaced cost the budget about \$640m. Crean (2012) pp.157, 159.

<sup>53</sup> Box (2009) pp.25-26

promote invention would make a big difference to Australian economic growth.

Thus substantially more work is required to establish whether there are specific government policies that can successfully promote innovation more broadly, whether there are specific government policies that can successfully promote new to world invention, and whether this form of invention would be material to Australian economic growth.

### Industry policy

Australia's economy is rapidly changing shape. Labour and capital are flowing into services and mining and out of manufacturing. In part, this is a result of the minerals boom; and partly a consequence of a long term trend that an increasingly well-off population spends more money on services.<sup>54</sup>

These changes are top of mind for Australian businesses. They are driving fundamental strategic decisions to enter and exit industries. Australian businesses are spending much more time worrying about these changes than governments are — which arguably is a *success* of public policy.

However, many worry that Australia is putting all its eggs into one export basket. The structure of our economy — skewed to mining exports and domestic services — is becoming an increasingly leveraged bet on Chinese, and then Indian, construction. The strong dollar, the growth of Asian economies and the transfer of many manufacturing jobs offshore have all contributed to a less

diverse set of export industries that are more exposed to single-event risk. To become more economically resilient, Australia would need to develop more internationally competitive industries alongside mining.

A few industries are emerging. Australia's machinery, professional services, and engineering and architecture exports are growing rapidly despite the high Australian dollar, as shown in Figure 2.4. However, at \$17 billion per year, they remain a small fraction of Australia's total exports of \$313 billion per year.

However, it is not obvious that government promotion has contributed greatly to the success of these industries. Leading players in an industry do tend to cluster in a particular location.<sup>55</sup> But governments do not seem to be able to create clusters out of nothing. Historically, government support for developing industries has not paid off after taking into account the costs of possible failure.<sup>56</sup> Indeed, a large study of identified clusters around the world found that of 186 clusters with available data, only one (the Taiwanese electronics cluster) was a result of deliberate government action to create it. And of the successful clusters, government intervention to support the cluster was relatively unimportant.<sup>57</sup>

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<sup>54</sup> Lowe (2010)

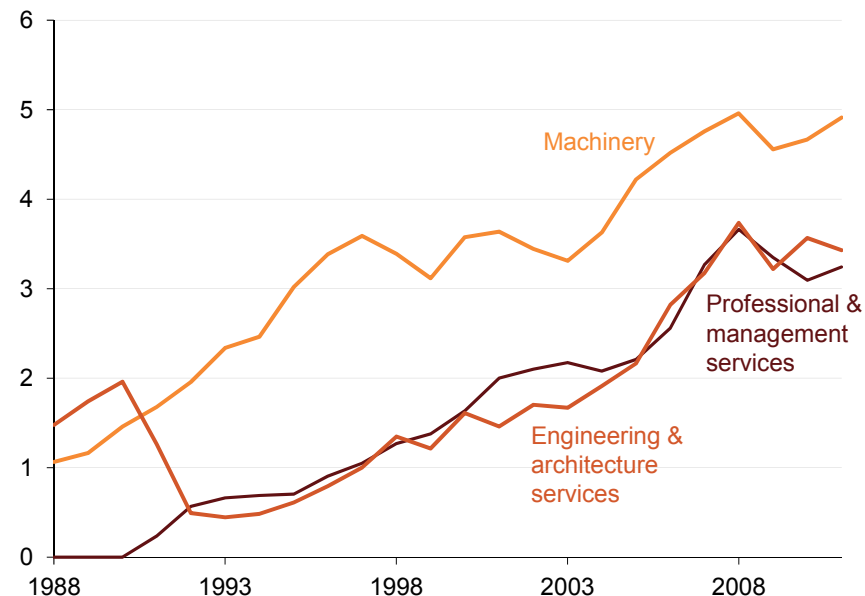
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<sup>55</sup> Porter (2000); Box (2009); Muro and Katz (2010), p. 32

<sup>56</sup> Manyika (2010) p.15

<sup>57</sup> Van der Linde (2002)

**Figure 2.4: Machinery and professional services exports**  
\$ billion



Source: Productivity Commission (2012b) ABS (2012e), Table 11a, Table 12a

Of course, governments can contribute by dealing with shortcomings in local R&D or local workforce skills once a cluster with plausible long-term advantage is already emerging.<sup>58</sup> Similar findings emerge from the regional development literature: governments do not usually succeed if they try to ‘build’ an industry that is not already emerging on its own feet.<sup>59</sup>

<sup>58</sup> Muro and Katz (2010) pp.33-34; Box (2009) pp.33-34

<sup>59</sup> Daley and Lancy (2011); OECD (2009b)

There is little consensus on specific industry policies that would promote growth. Nevertheless, Australian governments continue to spend almost \$14 billion per year on industry support, as documented by the Productivity Commission.<sup>60</sup> There is little consensus or evidence that this industry support contributes to productivity growth.

As set out in Table 2-1, assistance to industry from the Commonwealth government is over \$9.7 billion (net, 2010-11);<sup>61</sup> the States and Territories provide another \$4 billion (2008-09).<sup>62</sup> Regional support is around \$2 billion a year on top of that.<sup>63</sup> Very little of this industry assistance is evaluated to assess its impact,<sup>64</sup> and redirecting it could free funds for investment elsewhere that could boost economic growth. If all Commonwealth industry support save for research and development and small business assistance were eliminated, it would free up over \$3.7 billion per year. Greater savings would be possible if state and regional support were also reduced.

Some policy makers believe any government involvement amounts to ‘picking winners’. Others feel that strategic support for industries that are temporarily uncompetitive because of the high Australian dollar (such as agriculture, tourism or education) may be warranted. Another proposed approach is to *wind back* industry support, and assist businesses and employees in transition by reinvesting the money in retraining and relocation.

<sup>60</sup> Productivity Commission (2012b)

<sup>61</sup> Productivity Commission (2012b)

<sup>62</sup> Daley and Lancy (2011); Productivity Commission (2011a)

<sup>63</sup> Daley and Lancy (2011)

<sup>64</sup> Productivity Commission (2011a)

**Table 2-1 - Summary of Commonwealth government industry assistance, 2010-11**

Category	Net support (\$billion)	Major focus
Tariffs	0.8	Major beneficiaries are manufacturing of food and beverages, metal products, and motor vehicles
Research and development	2.4	R&D tax concessions, as well as CSIRO, CRCs and rural R&D corporations
Industry-specific assistance	1.5	Major beneficiaries are automotive; textile, clothing and footwear; film.
Sectoral assistance	0.7	Mostly drought relief
Small business	3.6	Mostly tax concessions
Other	0.8	Includes export assistance, investment assistance, and other non-specified
<b>Total assistance</b>	<b>9.8</b>	

Source: *Productivity Commission (2012b)*

A lack of expert consensus on the best way forward makes it difficult to measure the potential gains from industry policy reform. At the very least, however, there are large potential savings from reducing or eliminating assistance where evaluation shows it does not deliver a strong economic or social return.

Gathering further evidence to support or refute reform proposals in these areas should be a matter of urgency for the policy community. This is particularly so given the strong vested interests in the status quo that make reasoned debate in this area

especially challenging.

### Oligopoly regulation

Vigorous competition is a spur to innovation and thus productivity. Competition drives innovation. Australian businesses that have more competitors and lower margins, and compete as exporters, are more likely to innovate.<sup>65</sup> And although the correlation is weaker, innovating firms are more likely to be more productive. This is consistent with industry-level studies of US productivity, which found that firms were more likely to innovate and become more productive if they faced more intense competition.<sup>66</sup>

Many Australian industries do not face vigorous international competition. Many do not face vigorous local competition either, which compounds the problem. The Australian economy contains a large number of industries where there are only a few players, as illustrated in Figure 2.5.

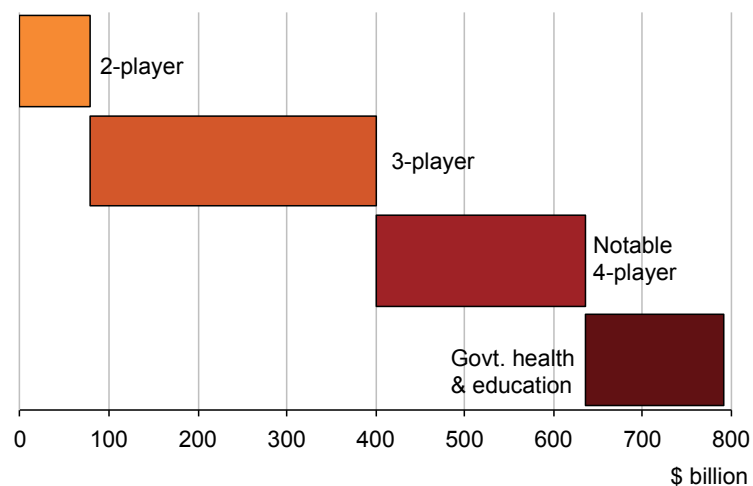
Two-player and three-player markets in Australia have over \$400 billion of revenue. They including mining, metal manufacturing, industrial product manufacture (such as industrial gas, bricks, explosives, steel, and concrete), petroleum refining, telecommunications and television, manufacturing of a wide range of food products, domestic airlines, and many gambling industries. As well, notable four-player markets include banking, supermarkets and retail petrol. The sum of these industries' revenues cannot be compared directly to GDP, as many of these industries provide inputs to each other. Nevertheless, relative to

<sup>65</sup> Soames and Brunker (2011)

<sup>66</sup> McKinsey Global Institute (2001)

an economy of \$1.3 trillion, oligopoly industries are a large part of the Australian economy. Where these oligopolies do not face vigorous international competition, they are likely to gather ‘oligopoly rents’ — profits in excess of a reasonable return on capital — and to have higher costs. And they are less likely to be under pressure to innovate and improve their productivity.

**Figure 2.5: Oligopoly industry revenues in Australia**  
(Markets where more than 80% controlled by a few players)



Source: Grattan Institute analysis based on IBISWorld (2011)

These industry structures are a feature of Australia’s geography. Australia is a relatively small market, distant from other developed economies. Entering the Australian market is usually a relatively low priority for efficient international players. There is often only

room for a few players with minimum efficient scale.

As a result, it is difficult to identify government policies that can spur oligopoly competition. Close supervision of mergers does little to promote competition as firms are usually allowed to merge to achieve minimum efficient scale when this will deliver substantial efficiency gains. This often results in the dominance of a small number of firms.

The alternative to preventing market concentration in a small number of firms is to regulate oligopolies to encourage more vigorous competition among them. This is inherently difficult, and some of the answers are counterintuitive. For example, competition is usually promoted if oligopoly firms have *less* visibility of each others’ prices as it increases the tendency to offer ‘secret’ discounts.

This mode of thinking about oligopoly regulation needs a great deal more work. The prize for encouraging more vigorous oligopoly competition would be substantial. However, few policies have been identified that would achieve this.

### Industrial relations reform

Many see industrial relations policy as a means to boost economic growth.<sup>67</sup> Because industrial relations affect labour in every sector of the economy, reform might have a large overall impact.

<sup>67</sup> Nasser (2012); Business Council of Australia (2012); Australian Chamber of Commerce and Industry (2009); Business Council of Australia (2012).

A number of those in the debate have an institutional interest in the effect of industrial relations on business profitability or union power. However, the impact of reform on economic growth may be much less than the impact on profit. Thus it is important to distinguish between the different impacts of industrial relations.

- Regulations may primarily affect **how revenue is shared** between workers and business owners. Higher wages, for example, reduce business profit, but increase worker prosperity. These measures can have indirect effects on growth when higher wages reduce the absolute level of capital investment, or increase capital investment in existing businesses as a substitute for labour.
- Regulations may primarily affect **how work is performed**, which affects productivity and worker job satisfaction, but has limited impact on how much workers are paid. Nurse:patient ratios, for example, inevitably affect productivity and nurse job satisfaction, but have little impact on nurses' pay.
- Regulations may affect the **power of unions as institutions**, particularly the extent to which they become involved in labour relations. Union rights to be represented in disputes and to enter workplaces, for example, may substantially affect union membership, but have relatively limited direct impact on economic growth.
- Industrial relations can impose **deadweight costs**, either through time lost in industrial action, or through the costs of participating in industrial relations processes.

Aspects of industrial relations can have multiple impacts. Penalty rates, for example, both reduce productivity (because they discourage weekend and holiday opening, thus reducing the productivity of the assets and employment at those times), and also increase the incomes of those who *do* work.

There have been numerous attempts to demonstrate the link between industrial relations regulation and economic outcomes. Does more centralised regulation of workplaces lead to higher productivity (because uniform and high wages force firms to innovate), or lower productivity (because it is harder to implement changed workplace arrangements)? Do unions entrench an 'us and them' mentality, or do they create an efficient channel for employees to raise issues that might otherwise sap productivity?<sup>68</sup>

Direct attempts to correlate historic changes in industrial relations regimes with economic outcomes are either inconclusive or unconvincing. Most of these studies try to correlate industrial relations reforms with changes in labour productivity. However, as illustrated in Figure 2.6, too many other things affect labour productivity — particularly micro-economic reform, education, technology, and infrastructure. These factors usually swamp the impact of industrial relations on Australian labour productivity.<sup>69</sup> International studies also provide contradictory results.<sup>70</sup>

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<sup>68</sup> See the examples in Hancock, *et al.* (2007), p. 9

<sup>69</sup> For a survey of this literature see Wooden (2002); Hancock, *et al.* (2007); Sloan (2011). See also Eslake and Walsh (2011).

<sup>70</sup> See Storm and Naastepad (2009) arguing that more rigid industrial relations systems increase productivity, and Perry (2007) arguing that New Zealand productivity outcomes reflect industrial relations deregulation.



Industry-level analysis in Australia is also equivocal. Unionised firms in similar industries tend to have higher labour productivity, probably because unionised firms hire higher-value employees (because they tend to be higher-cost and use more capital), and because unions focus their organizing efforts at more productive firms (where there tends to be more ‘surplus’ to share with workers).<sup>71</sup> The Australian Workplace Relations Act in 1996 effectively reduced the power of unions. So if union involvement is in fact a drag on productivity, one would expect that labour productivity would have accelerated in unionised firms relative to non-unionised firms. However, a detailed study did not find a consistent trend across sectors and firm sizes.<sup>72</sup> The productivity increase in medium sized unionized mining-manufacturing-construction-transport firms that was identified did not lead these firms to increase production or to expand exports.<sup>73</sup> Overall, the study did not find a ‘smoking gun’ to link the industrial relations reforms of the Workplace Relations Act with economy-wide improvements in productivity that can lead to economic growth.

In the absence of a clear historical correlation we cannot be confident that industrial relations reform is capable of delivering large gains.

**Figure 2.6: Productivity growth and industrial relations reform**  
% change year on year.



Note: Selected sectors are as detailed in Eslake and Walsh (2011), p.14 Source: ABS (2012d).

Many businesses and business groups have argued that industrial relations reforms would reduce deadweight costs.<sup>74</sup> They provide many examples of how the Fair Work Act has increased deadweight costs through the bargaining process such as multiple representation, and late intervention. However, these deadweight

<sup>71</sup> See Farmakis-Gamboni and Prentice (2011), p. 605

<sup>72</sup> Ibid., p.613

<sup>73</sup> Ibid., p.612

<sup>74</sup> Australian Chamber of Commerce and Industry (2009); Australian Chamber of Commerce and Industry (2010); Business Council of Australia (2012); Nasser (2012)

costs of industrial relations appear to be relatively small. Industrial disputes in Australia have declined so that about 200,000 person days of work are now lost to industrial disputes every year, as shown in Figure 2.7. This is equivalent to about 1,000 person years of work — a tiny fraction (about 0.01%) of hours worked in Australia.

Business groups also provide numerous examples of how the Fair Work Act has substantially increased union power in practice. Presumably this transfers surplus from corporations to unions and workers, but it does not necessarily reduce productivity.

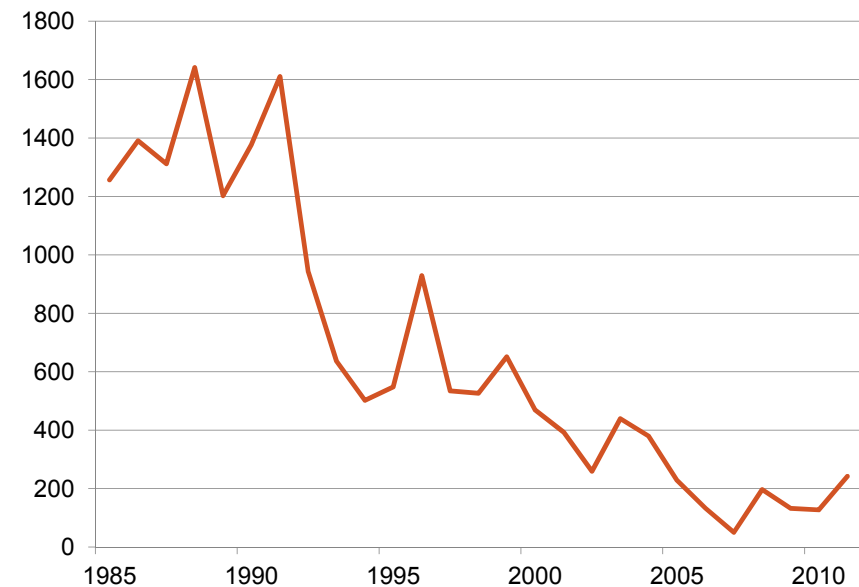
Most relevantly, business groups have provided examples of how increased union power has slowed business change, led to less productive employee rosters, discouraged the use of contractors, delayed and increased the cost of greenfields operations, and made it difficult for some businesses to introduce change while bargaining is underway.<sup>75</sup> Greater protections against ‘unfair dismissal’ and adverse action also reduce productivity and increase deadweight costs.<sup>76</sup> It is likely that these effects are reducing economic growth. However these provisions were also intended to serve the fairness objectives of the Fair Work Act.<sup>77</sup> There is no evidence that *quantifies* these economic drags. To what extent are these isolated issues, and to what extent do they alter the productivity of firms across the economy in practice? As discussed above, there is no historic evidence that the aggregate effects of industrial relations reforms are large relative to other major reforms.

<sup>75</sup> Business Council of Australia (2012), p.36

<sup>76</sup> Sloan (2010)

<sup>77</sup> Australian Council of Trade Unions (2012)

**Figure 2.7: Days lost per year to industrial disputes**  
Thousands per year



Source: ABS (2011d)

A significant priority for research, therefore, is to quantify the economic impact of industrial relations on workplace flexibility and thus economic growth. Without this assessment, it is impossible to judge whether industrial relations arrangements strike an acceptable balance between employer and employee interests, at a reasonable economic cost.

### 2.3.3 Surprisingly small issues

#### Transport infrastructure

Some issues might be expected to feature as game-changing reforms, but don't appear among this report's proposals. The prime example is transport infrastructure.

It is often claimed that Australia's infrastructure is poor and declining, and under-investment is holding back economic growth. However, investing faster in Australian infrastructure is unlikely to substantially increase the size of the economy over the next decade. Australian infrastructure spending is already at historic highs. Theoretical work on infrastructure over the last few years casts doubt on claims that infrastructure spending has a major impact on growth of a developed economy. Project-by-project analysis by Infrastructure Australia reveals relatively few projects ready to proceed, and most have modest net benefits.

Of course, much infrastructure has non-economic benefits, including public amenity, social cohesion, and environmental impacts. On these grounds alone, individual projects may well be worth pursuing. But in strictly economic terms, infrastructure does not have economic impacts large enough to change the game of Australia's economic growth.

Many have decried the state of Australia's infrastructure. Engineers Australia has estimated a \$700 billion shortfall. It rated much of the nation's infrastructure as needing major changes to be fit for current and future purposes.<sup>78</sup> While its assessment

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<sup>78</sup> Engineers Australia (2010)

identified changes that would make the infrastructure "fit for purpose", costs would exceed the economic benefit of many of these improvements. The World Economic Forum rated Australia as 24<sup>th</sup> of 142 countries for its infrastructure,<sup>79</sup> although this ranking was largely driven by the self-assessment of surveyed Australian executives.<sup>80</sup> Similarly, the OECD concluded that "Australia has an important infrastructure deficit."<sup>81</sup>

Despite — or perhaps because of — these claims, Australian government spending on infrastructure has increased rapidly over the last decade, as shown in Figure 2.8. And of course given the mining boom, private sector spending on infrastructure has increased even further.

Obviously, infrastructure *can* significantly increase economic growth, particularly if it facilitates trade. Although work from 1989 suggested very high economic returns,<sup>82</sup> more recent analysis suggests that the benefits are smaller, so that a 10 per cent increase in the stock of infrastructure increases GDP by 1 per cent.<sup>83</sup> Such multipliers must take into account the opportunity cost of the government funds involved — including the value generated by taxes that are lower because infrastructure spending is less.

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<sup>79</sup> Schwab (2011), pp.102-3

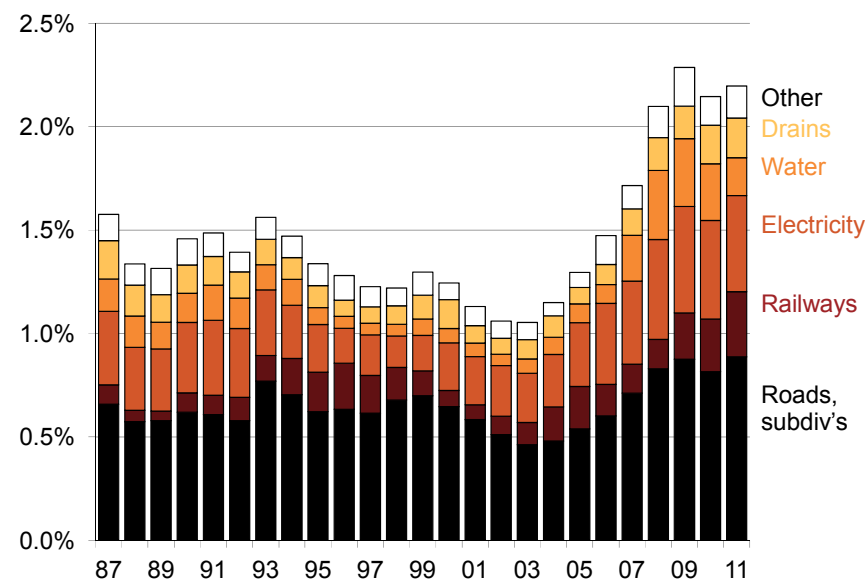
<sup>80</sup> Ibid., pp.412-420

<sup>81</sup> OECD (2010d), p.91

<sup>82</sup> Aschauer (1989)

<sup>83</sup> Calderon, *et al.* (2011). See also Henckel, *et al.* (2010); Shanks and Barnes (2008)

**Figure 2.8: Engineering construction work for public sector**  
% of GDP, calendar year



Note: Excludes telecommunications which is insignificant after Telstra sale  
Source: ABS (2012c), Table 11.

Even if infrastructure is productive *on average*, it is only economically productive if it is “the *right* infrastructure, in the *right* place at the time and accessible at *sensible* prices”.<sup>84</sup> Simply spending money on infrastructure is not enough to get a return if the cost benefit case is not there.

<sup>84</sup> Eslake (2010). See also Henry (2010)

Australia has improved the rigour of infrastructure project assessment through Infrastructure Australia, whose assessments have become an important part of Commonwealth government spending allocations. Their assessments between 2009 and 2012 suggest that it is unlikely that more than \$10 billion of new positive cost benefit projects will be sufficiently prepared to proceed each year. Between 2009 and 2011, Infrastructure Australia identified \$42.2 billion of ‘new’ projects that were at least on the threshold of being ready to proceed; \$25.5 billion has been allocated to fund most of these projects over the last three years. Only two projects, costing \$7.4 billion, remain in the pipeline as “ready to proceed” but unfunded.<sup>85</sup> It is doubtful that these projects are in fact “ready to proceed”: the \$5.9 billion Managed Motorways project depends on a pilot program now underway, and the \$1.4 billion Melbourne Metro 1 project depends on the outcome of design and pre-construction work.

Based on the published cost benefit analysis of 1.5 for the 2010-2011 projects (excluding the technologically unproven Managed Motorway project), the net forecast economic benefit of completing \$10 billion projects would be around \$5 billion. This includes consideration of the “wider economic benefits” such as increased agglomeration economies and greater labour supply, which are inherently difficult to quantify.<sup>86</sup>

Spending of \$10 billion per year on new major transport infrastructure projects is already built into government spending

<sup>85</sup> Based on Grattan Institute analysis of Infrastructure Australia (2009); Infrastructure Australia (2010); Infrastructure Australia (2011b) and project websites.

<sup>86</sup> Ergas and Robson (2009)

plans, with the ABS reporting public construction work in the pipeline as close to record highs. Multiples of this investment would be needed to result in an increase in net economic growth — assuming such projects could be found.

The realised benefits are likely to be substantially lower. A large survey of infrastructure projects across the world found that project costs are typically at least 20 per cent higher than forecasts, and benefits (particularly for rail) substantially lower.<sup>87</sup> Even if the project costs and benefits are realised, the net benefit of \$5 billion per year is much smaller than the game-changing opportunities to increase economic growth identified elsewhere in this report.

In the next three chapters, we assess each of the game-changers in turn.

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<sup>87</sup> Flyvbjerg (2009)

### 3 Tax mix reform

If Australian governments collected more revenue from efficient taxes, and less from inefficient, distortionary ones, GDP could increase by \$25 billion per year.

The Goods and Services Tax (GST) could be broadened to cover all consumption. The existing GST excludes 40 per cent of consumption, notably education, health and fresh food.<sup>88</sup> Removing these exemptions would increase GDP by \$20 billion per year. At the same time, income taxes and corporate taxes could be reduced. These changes could be managed so there would be no net revenue impact on the Commonwealth budget.

Second, state and local taxes could be rebalanced by reducing transaction taxes and increasing property taxes. However, the economic payoff is much lower, only increasing GDP by about \$5 billion per year. Stamp duties and a range of other inefficient state taxes would be reduced, while property rates increased. There would be no change in the total tax collected by state and local governments.

#### 3.1 Inefficiencies of current tax mix

All taxes distort choices. Inevitably, raising revenue results in more of the activities that are not taxed, and less of the activities that are taxed.

On the other hand, as Oliver Wendell Holmes remarked, “taxes are what we pay for civilized society”.<sup>89</sup> They enable investment in public goods, infrastructure and services that we value.

Some taxes cost more to collect, or distort choices more than others, and so reduce prosperity. In general, taxes on immovable property are less distorting than taxes on transactions. Taxes on consumption are less distorting than taxes on incomes, and they also encourage saving and investment that leads to higher long-term prosperity. Income taxes are generally associated with lower economic growth than taxes on consumption and property. Obviously they are not the *only* determinants of economic growth — Germany and Scandinavian countries have both relatively high incomes and high income taxes. But all other things being equal, shifting towards consumption-based taxes substantially increases the incentives for economic growth.<sup>90</sup>

Unfortunately, Australian governments generally collect more of the most distortionary taxes. The Commonwealth collects three times more personal income and corporate tax than GST, even though the GST imposes much less economic drag, as shown in Figure 3.1. Output would increase if the tax mix shifted towards taxes that are more efficient and less distortionary.

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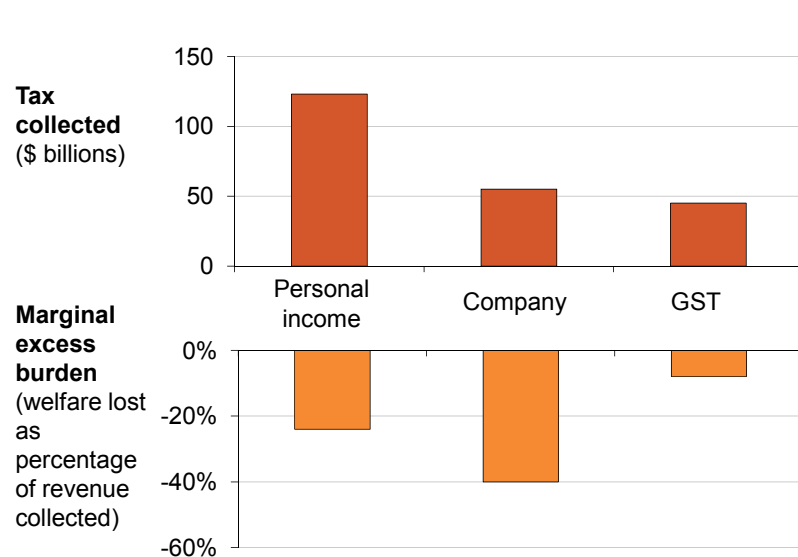
<sup>88</sup> Eslake (2011), p.4

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<sup>89</sup> United States (1927), p.100

<sup>90</sup> Arnold (2008)

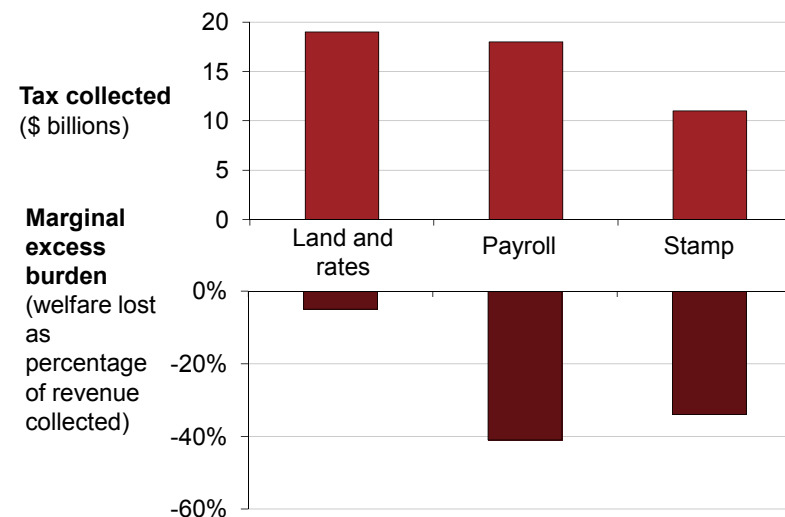
Figure 3.1: Commonwealth tax collection and efficiency



Source: Treasury (2010a) p.12-13; KPMG Econtech (2010)

Similarly, state governments and local councils collect more from stamp duties and payroll taxes than from property taxes (which includes land taxes and council rates), even though property taxes are less distortionary, as shown in Figure 3.2.

Figure 3.2: State tax collection and efficiency



Source: Treasury (2010a) p.12-13; KPMG Econtech (2010)

### 3.2 Commonwealth tax policy changes

Substantial economic benefits would flow from broadening the base of the GST to fund a reduction in personal income and corporate tax rates. A number of sources converge on the estimate that such a shift in Commonwealth taxes could increase GDP by around \$20 billion per year. The OECD found that if 1 per cent of tax revenue was shifted from income and corporate taxes to consumption taxes, this could increase GDP in the long run by 0.74 per cent, as shown in Table 3-1. On this basis, broadening the GST base (raising about \$31 billion, 8.5 per cent of

government revenue) by 2022 would increase GDP by 1 per cent, or \$20 billion in 2010 dollars.

**Table 3-1 – Impact on GDP/capita of revenue neutral shift of 1% in tax revenues**

Shift in tax mix	Estimated change in GDP (%)
From income tax to consumption taxes	+ 0.74%
From income tax to land tax	+2.47%
From personal income taxes to consumption and land taxes	+1.13%
From corporate income taxes to consumption and land taxes	+2.01%

Source: Johansson et al. (2008)

Grattan Institute modelling has produced similar conclusions, that such a change in tax mix would conservatively boost GDP by around \$20 billion.<sup>91</sup>

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<sup>91</sup> The core assumption of this modelling is that investment elasticity to corporate tax rate is -0.2 – i.e. a 1% decrease in corporate taxes increases private gross fixed capital formation by 0.2%. See Djankov (2010). The modelling conservatively assumes no labour-force participation effects, no corporate activity changes (apart from their investment), and that with GST increases, consumers spend the same quantum, consume fewer goods, and save any income tax. The modelling makes the neutral assumptions that there are no external balance effects (because the effects are ambiguous); no change in savings rates (because there is no time-trend for these); no change in government spending (and multipliers); and consumption increases proportionally to the increase in income. 2022 GDP follows the Commonwealth Government’s carbon tax plan modelling for ‘Strong Growth, Low Pollution’, as this factors in the post-July 2012 carbon tax changes, which the Intergenerational Report does not.

These changes can be set to be revenue neutral. Broadening the GST to all non-residential consumption would increase revenue by about \$31 billion. This revenue would then be available to reduce personal income taxes, reduce corporate taxes or — importantly — increase welfare payments. Without increases in welfare payments the tax mix changes proposed would be regressive, increasing the burden on low income earners who would not gain much from tax cuts, but would face higher expenses due to a broader GST.

Economic output would benefit most if all the additional GST revenue were used to reduce corporate taxation. As shown in Table 3-1 and Figure 3.1, corporate taxes tend to drag more on economic activity because they discourage investment in productive businesses. In particular, they disadvantage domestic businesses relative to international competitors, leading to lower investment and thus lower real wages in Australia.<sup>92</sup>

Increasing consumer taxes to reduce business taxes is unlikely to be popular. Inevitably, there will be claims that resources are being transferred from individual Australians (particularly the less wealthy who don’t own many shares) to companies and to their relatively affluent shareholders, particularly those who do not live in Australia. To some extent this confuses who *is liable for* a tax with who ultimately *pays*. In competitive industries, any reduction in corporate tax will probably be competed away, so that goods and services are ultimately cheaper for consumers — an increase in the real wage. However, in oligopolised industries, particularly where import competition effectively sets prices, shareholders may capture many of the benefits of lower corporate taxes. Some

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<sup>92</sup> Gentry (2007)



of these may be passed back through income tax due to dividend imputation. However, shareholders will capture much of the benefit if there are capital gains, or the shareholder is on a low tax rate (such as a superannuation fund), or is a foreign shareholder.

However, the point of reducing corporate taxes is to make investments profitable that otherwise wouldn't be. Although foreign owners will be better off, Australians will also benefit because of increased economic activity.

These considerations suggest that revenue from a broader GST should be shared between reducing corporate taxes, and reducing personal income taxes. This report suggests — somewhat arbitrarily — that the additional GST revenue be split evenly: half to reduce the corporate tax rate, and half to increase personal incomes through lower personal income taxes and higher welfare payments.

On this basis, corporate taxes could be reduced from about 30 per cent, to about 23 per cent.<sup>93</sup>

Reducing personal income tax increases the incentives to work, discourages tax evasion (which is a deadweight economic cost), and, at the margin, encourages highly skilled workers in

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<sup>93</sup> Broadening GST as suggested would increase tax revenue by \$31 billion. \$57 billion was collected as corporate income tax in 2010-2011. Reducing this by \$14 billion implies a reduction in corporate tax from 30% to 23%. This ignores the likely increase in the corporate tax base because the tax rate change encourages more corporate investment and thus more taxable economic activity. This increased corporate investment is ultimately the policy aim of lower corporate tax rates.

occupations like banking, IT and entertainment to live in Australia.<sup>94</sup>

The reduction in income tax might be delivered as a higher tax-free threshold. However, this threshold was recently increased to \$18,200 as part of the Clean Energy package, and is now not far from the threshold of \$25,000 recommended in the Henry review.<sup>95</sup> Further work is required to identify a package that reduces income taxes, as well as increasing welfare payments in a way that minimises the impact of increased consumption taxes on low income earners.

Broadening GST would have some collateral benefits. It would increase the proportion of the tax base that is likely to grow over time (reducing pressure to increase inefficient taxes in future), and reduce complexity in GST administration.

Significant sectors are exempt from GST including fresh food, health and education. These GST-free sectors are growing faster than the rest of the Australian economy, so that GST revenues are growing slower than nominal GDP.<sup>96</sup> This squeezes state budgets, which rely on GST income. To keep pace with voter expectations for health, education and public transport, state governments are then tempted to increase more inefficient taxes.<sup>97</sup>

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<sup>94</sup> Mercante and Dandie (2007)

<sup>95</sup> Technically, including the low income tax offset (LITO), people will not pay until their income reaches \$20,542. Department of Climate Change and Energy Efficiency (2012); Treasury (2010a), Ch 4, p.29

<sup>96</sup> Commonwealth of Australia (2011), pp. 5-15; Eslake (2011), p.5

<sup>97</sup> Eslake (2011), p.5

Furthermore, the exemption of some classes of goods and services from GST creates definitional problems that add to the deadweight costs of compliance and administration.

Some may argue that imposing a GST on education and health discourages spending on 'capital goods' that will ultimately increase productivity. However, point of a GST is not that it imposes *no* distortions; rather it distorts choices *less* than the alternative of taxes on corporate and personal incomes, and is less prone to avoidance that incurs dead-weight costs.

It is also commonly believed that increases in GST would be highly regressive, imposing a greater burden on low income households. However, any inequities as a result of the GST are better dealt with through welfare transfers rather than tax selection.<sup>98</sup>

We estimate that about \$3 billion of the \$31 billion in additional revenue would need to be returned to welfare recipients to minimise the regressive effects of broadening the GST. Currently the bottom quintile earns around 4 per cent of total earnings<sup>99</sup>. However, members of this quintile consume more than this: their median net worth was over \$300,000 in 2009-10, reflecting that it include many age-pension recipients who use assets to pay for more consumption than they earn. Assuming this group makes up 10 per cent of total consumption, then they should be compensated equivalently. If this group is paid increased benefits to entirely offset higher prices, a little more than \$3 billion of additional welfare would be needed.

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<sup>98</sup> See Henry (2011)

<sup>99</sup> ABS (2010b)

Of course, there would still be winners and losers. If a principle is adopted of no losers at all, then the cost of compensation is bound to swamp the value of the reform. However, such a principle is not a logically defensible basis for tax reform. There is *no a priori* reason why the current distribution of tax revenue is more fair than the alternative. If inequity does not worsen, and the change facilitates economic growth, it is ultimately in the national interest, even if the distribution of the tax burden changes at the margins.

### 3.3 State tax policy changes

A shift in state taxes from stamp duties and insurance taxes to rates could increase GDP by around \$5 billion per year, based on KPMG's 2009 estimates of the excess burden of various taxes.<sup>100</sup>

Currently, stamp duty revenue is roughly equivalent to rates revenue. Doubling rates would thus be sufficient to abolish stamp duties. Increasing rates by a factor of four would be enough to abolish stamp duty, land tax, payroll tax, insurance tax, and some other minor state taxes.

Stamp duty is a relatively inefficient tax. As the Henry Review noted, it discourages people from buying and selling land, so that land owners often use the land less well than potential purchasers. Stamp duty also discourages people from moving house as their careers and responsibilities change, so they remain in houses that do not suit their needs. It discourages people from taking a new job they might have to move for, which reduces labour market flexibility. This is a particular concern as

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<sup>100</sup> KPMG Econtech (2010)

the mining boom brings structural changes to the Australian economy: stamp duty makes workers reluctant to move quickly towards the emerging jobs. Stamp duty is also unfair because those who do move more frequently pay stamp duties more often, regardless of their wealth.<sup>101</sup>

The primary advantage of stamp duty is that it is generally less salient for taxpayers. Stamp duty is levied when a seller has received payment for a property. If the buyer is refinancing a purchase, then stamp duty can be capitalised into the purchase price.

By contrast, taxes on property are usually payable regularly from recurrent income. But they are also relatively efficient economically. Because the stock of land is fixed, higher land taxes simply reduce the price that people are prepared to pay for it, without distorting their choices.<sup>102</sup>

State and local governments already levy two types of property taxes: land tax, which usually exempts family homes, and properties under a threshold value, and council rates, which usually have very few exemptions. Although rates are set and collected by councils, they are ultimately levied under the authority of state government legislation.

Property taxes should be increased by raising rates rather than land taxes, as rates tax a much broader base. In practice this could be achieved by a state government setting a state-wide rate, with the council rate as an additional charge that varies by

council. In practice, this would probably lead to rates being collected centrally by a state government, which would potentially reduce the costs of collection compared to current systems where each council has its own rate collection machinery.

Reducing stamp duties and increasing rates raises a number of implementation issues. Those who have just bought property and paid stamp duty may be treated unfairly if they must immediately start paying the higher rates as well. To minimise this concern, the reform could be implemented by progressively reducing stamp duty and increasing rates over a period of years.

Higher rates also cause issues for people who are asset-rich but income-poor. This is a particular concern for retirees who have limited incomes, but still live in their family home. Exempting such taxpayers would be unfair to younger taxpayers. However, the substantial problem could be avoided by allowing asset-rich, income-poor retirees to capitalise some or all of their rates against the eventual sale of their property. Government payment would be assured through a charge over the property that must be paid at the settlement of any sale.

Other state taxes are also inefficient relative to land taxes. Insurance taxes and payroll taxes impose significant costs. Insurance taxes can lead to underinsurance — often paid by the rest of the community when a disaster occurs. Payroll tax can lead to businesses delaying growth so that they remain under the threshold of payroll tax liability, and to workers disproportionately

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<sup>101</sup> Treasury (2010a), Vol 1, p.49

<sup>102</sup> Ibid. Overview, p.48; Vol 1, p.247

working for businesses exempt from payroll tax.<sup>103</sup> Ideally rates would be increased to replace all of these inefficient taxes.

### 3.4 Federal tax reform

The reforms proposed could be neutral in the distribution of tax revenue between the Commonwealth and states. This increases the chances of successful reform, since a government is unlikely to incur the political costs of tax reform if another level of government captures most of the benefit.

It might be objected that the GST is a 'state tax', given its creation as part of a series of federal reforms, reflected in the Commonwealth legislation that creates the GST. This agreement shared the GST revenue between the states. However, reform in this area could theoretically leave the states better off if, for example, the Commonwealth preserved the real value of the states's share. Under such an arrangement, the states would be able to benefit from the fast growing health and education sectors.

However, it is also possible to justify different arrangements that would effectively increase the tax collected by the states relative to the Commonwealth. In the Australian federation, the states collect far less revenue than they spend, and this mismatch is much worse than in comparable federations.<sup>104</sup> While this mismatch may create accountability issues because taxing and spending decisions are made at different levels of government, it can take advantage of economies of scale to reduce the cost of

tax collection, and provides scope to equalise standards of government resources for Australians living in different states.<sup>105</sup>

If the GST were increased as suggested, it would be possible for the Commonwealth to reduce general-purpose and specific-purpose payments to the states accordingly. This would reduce the mismatch between state revenue and spending, without changing the total tax collected in Australia.

Further alternatives include the Commonwealth reducing the mismatch between state revenue and spending, but tying this change to states implementing their own economy-boosting reforms such as state tax mix reform.

### 3.5 Fairness

Some people would be relatively worse off under the proposed reforms. A family could be worse off if, for example, it has bought a house, has no plans to move, and pays substantial tuition fees for children in independent schools. By contrast, a couple could be relatively better off if they have savings held in shares, have not yet bought a house but plan to do so, have completed their education and have no dependents.

Tax reform inevitably creates winners and losers. However, reform should still proceed. The current distribution is not inherently more 'right' or 'fair' than any other arrangement. The reforms proposed have the advantage that they are likely to 'grow the pie' because they distort decisions less. However, because people tend to value what they currently have more than any

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<sup>103</sup> Ibid., Vol 1, pp.294-297

<sup>104</sup> Twomey and Withers (2007)

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<sup>105</sup> Treasury (2010a)

potential gain,<sup>106</sup> tax reform, however efficient, is always politically difficult.

Even if an efficient tax reform does increase unfairness, it is usually better to redress the unfairness through direct targeted transfers rather than trying to ensure that all taxes are themselves progressive.

In rough terms, these transfers should be affordable without undermining the reforms. We calculate that welfare transfers of 0.2 per cent of GDP would substantially compensate these households,<sup>107</sup> which is much less than the expected increase economic growth of approximately 1.5 per cent of GDP.

### 3.6 Other tax reforms

Many other worthwhile tax reforms have been suggested, although none appear to have the same economic impact as the two major reforms identified. The Henry Review report made 138 recommendations for tax reform, backed by detailed analysis and evidence. However, many of these reforms are likely to have only a small impact. For example, the Review pointed to the costs of complexity, manifested in three-quarters of Australian tax payers

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<sup>106</sup> Tversky and Kahneman (1991)

<sup>107</sup> A GST of 10% on 40% of expenditure would increase households' costs by 4%, assuming that households supported by government benefits consume the economy-wide proportions of food, health and education — in fact they may spend much less on out of pocket health and education, such as independent school fees. Approximately 10% of households in Australia are primarily dependent on Commonwealth benefits. These households earn about half of average weekly earnings, such that they probably account for about 5% of the economy. Thus welfare transfers are thus required for about 4% of income for about 5% of all household spending.

seeking the assistance of tax agents to complete their returns.<sup>108</sup> However, a substantial reduction in this complexity would only increase underlying productivity by around \$2 to \$3 billion.<sup>109</sup> Obviously, this is potentially valuable reform, but it is an order of magnitude smaller than the reforms identified.

### 3.7 What don't we know?

A number of important questions remain. The case for reform could be strengthened with better evidence about the long-run impact of Australia imposing a higher corporate tax rate than our Asian neighbours. Broadening the GST should be coupled with increased transfers to low income earners. Work is required to determine whether the transaction costs and welfare traps of these transfers would offset the increased efficiency of higher GST and lower corporate taxes.

There are also a number of implementation issues. Work is required to define an acceptable phasing for stamp duty and rates increases so as not to distort the timing of sale decisions and to ensure fairness. Other work is required to determine how to implement the changes to income tax and welfare payments so that they increase, rather than reduce, the incentives for women to do paid work, as discussed in Chapter 4.

A number of other potentially major reforms have not been sufficiently explored to form a view about their potential value. It may be, for example that the rate of GST should be substantially

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<sup>108</sup> Treasury (2010a), Overview p.5

<sup>109</sup> Assumes one quarter of Australian taxpayers ceased to use tax agents, that these are generally the less complex returns, and that the average cost of a tax agent for a less complex return is \$1000.

increased to make way for even deeper corporate and income tax cuts. Replacing existing taxes with further mineral resource rent tax may increase economic efficiency. The economic cost of negative gearing, and its distortion of capital investment towards property needs to be determined.<sup>110</sup>

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<sup>110</sup> Eslake (2011), p.7

## 4 Female workforce participation

Removing disincentives for women to enter the paid workforce would increase the size of the Australian economy by about \$25 billion per year. The most important policy change is to alter access to Family Tax Benefit and Childcare Benefit and Rebate so that the second income earner in a family — usually, but not always, a mother — takes home more income after tax, welfare and childcare costs.

### 4.1 Size of opportunity

#### 4.1.1 Relatively low female workforce participation

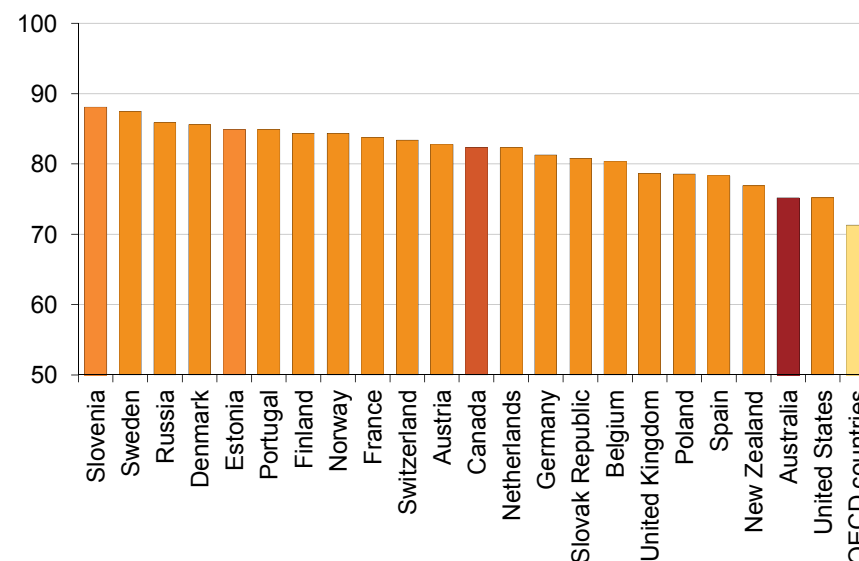
Only 67 per cent of women aged 15-64 are currently in paid work, compared with 78 per cent of men.<sup>111</sup> While 55 per cent of employed women work full time, 85 per cent of employed men do, with the remainder working part time.<sup>112</sup> These rates are substantially lower than in many other OECD countries, as shown in Figure 4.1. While Australia is just above the OECD average, the average includes countries with very low participation rates, such as Greece.

Some of these are northern European countries with a distinct social compact which may not be easily replicated in Australia. However, female workforce participation is also substantially higher in Canada, a country that is culturally, economically and institutionally similar to Australia.

<sup>111</sup> ABS (2012a) ABS (2012b) – this excludes those looking for work, and is different to the ‘participation rate’ of 82.3% for men and 70.4% for women.

<sup>112</sup> ABS (2012a)

Figure 4.1 –Selected participation rates, women aged 25-54  
Percent



Source: OECD (2010b).

Childbirth and childcare have a big impact on female workforce participation. As illustrated in Figure 1.2, the vast majority of women who do not do paid work, or who work part-time, have children. Female workforce participation can only change significantly if more mothers have jobs.

Before they have children, young women are as likely as young men to do paid work. However, most women have children in their 20s or 30s, and thereafter are much less likely to do paid work.<sup>113</sup> Those who continue in the workforce tend to work for shorter hours over the rest of their lives, as shown in Figure 4.2.<sup>114</sup>

As Figure 4.2 shows, there are some women without children who do not work,<sup>115</sup> but they are a relatively small proportion of the potential workforce.

Female workforce participation has increased substantially in Australia, as illustrated in Figure 5.4, particularly amongst older workers. This change has been driven primarily by improved health, higher levels of education, and partners also working later in life.<sup>116</sup> However, participation of 35-44 year olds has barely changed since 1990.

#### 4.1.2 Economic impact of higher participation

Increasing female workforce participation would have a substantial impact on the Australian economy. If Australian women did as much paid work as women in Canada – implying an extra 6 per cent of women in the workforce — Australia’s GDP would be about \$25 billion higher. On both Productivity Commission and Grattan Institute calculations, such increases in female workforce participation and economic productivity are

<sup>113</sup> Women *without* children also participate less in full time work from their 30s onwards: ABS (2006a) However, this is a comparatively small group, as figure 4.2 shows; there are also probably cohort effects at work here.

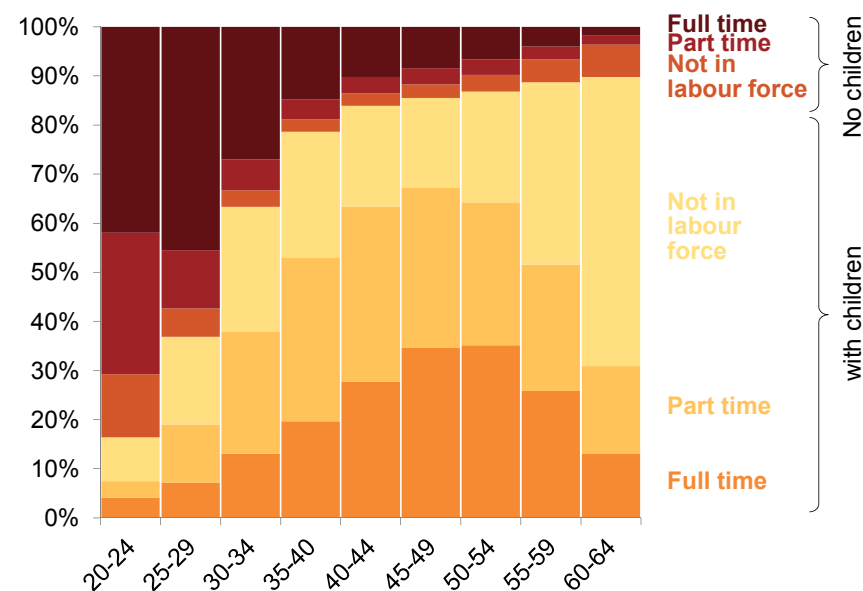
<sup>114</sup> Apps (2010)

<sup>115</sup> ABS (2006b)

<sup>116</sup> Headey, *et al.* (2010), pp.104-120

feasible in Australia.<sup>117</sup> There would also be substantial benefits to government budgets as the number of income tax payers increased.

**Figure 4.2: Female workforce participation**  
Percent of age cohort



*Note: Refers to women who have ever had children. Women who are unemployed and looking for fulltime or part time work are included in the FT and PT figures. Those who were employed but did not state their hours have been included here as a proportion of FT and PT work for their age bracket.*

Source: ABS (2006a)

<sup>117</sup> See also Abhayaratna and Lattimore (2006)



Improving female workforce participation would also mean a better return on Australia's investment in higher education. Women now make up 58 per cent of Australia's tertiary education enrolment.<sup>118</sup> If these tertiary graduates do not work, Australia loses their substantial potential economic contribution.

Some might be concerned about where all the jobs will come from for additional women moving into the workforce. It is sometimes assumed that an increase in labour force participation would mean higher unemployment. However this concern, known in economics as the 'lump of labour fallacy', is misplaced. There is no fixed amount of work available in an economy. When someone enters paid work, the demand of their household tends to increase, resulting in higher market demand overall and the creation of more jobs. Nor do those moving into the workforce depress wages. With more labour, the returns to capital are higher. This induces investment which in turn increases capital stock, increasing the demand for labour, and restoring wages to their original level.

#### 4.1.3 Intangible impacts of female workforce participation

The unpaid work of women is an extremely large social and economic contribution to Australia.<sup>119</sup> While it is not generally included in economic statistics, this work would have a very substantial economic value if paid at market rates. In 1997, the Australian Bureau of Statistics put the total value of unpaid

household work at \$237 billion, and estimated that women did 65 per cent of it.<sup>120</sup>

Despite increased participation in the workforce, women still do significantly more unpaid domestic work than men, even in couples where both partners work similar hours.<sup>121</sup> Interestingly, in Canada where women do more paid work, men have been spending more time on housework over the last three generations, and Gen-Y men do roughly the same amount of household work as their partners.<sup>122</sup>

It is unclear whether non-parental child care substantially affects children's well-being and development, despite extensive study.<sup>123</sup> Studies differ on whether non-parental or parental care is better for cognitive and emotional development, social skills and academic performance.<sup>124</sup> The weight of evidence is that parental care for a child's first 6 months results in better development outcomes, but beyond 12 months there are fewer clear developmental benefits to parental care (although this depends

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<sup>118</sup> Norton (2012)

<sup>119</sup> Manne (2008)

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<sup>120</sup> Putting a dollar figure on unpaid work is very difficult due to conceptual and measurement issues in defining what is and isn't unpaid work. The 1997 ABS report compared the 'market replacement cost' with what it would cost to hire someone to provide childcare/cooking/cleaning etc with the 'opportunity cost' - what an unpaid worker would earn if they were spending the same amount of time in paid work as they were on unpaid activities. See Trewin (1997).

<sup>121</sup> In other words, working mothers in couple families are likely to simply add paid work to the significant unpaid work they already do, a phenomenon that has been described as a 'second shift' by some researchers. Smith (2007); Chesters, *et al.* (2009)

<sup>122</sup> Marshall (2011)

<sup>123</sup> For children from disadvantaged backgrounds, there is significant evidence that quality early child care can make a positive difference in their development. Burger (2010)

<sup>124</sup> Barnett and Ackerman (2006); Shpancer (2006)

heavily on the measurements used).<sup>125</sup> Either way, formal childcare has little impact relative to other factors such as quality of parental care and level of socio-economic advantage.

Some might be concerned that higher female workforce participation might lead to lower volunteering rates in the community. However, on a simple comparison, volunteering rates are *higher* for women in paid work than for those not working, as shown in Figure 4.3. More thorough regression analysis — taking into account education levels, socio-economic status, having children and income — suggests that, on average, a woman who works full time does about one hour of volunteering less per week than a woman who doesn't work at all.<sup>126</sup>

Working mothers are likely to have significantly less free time and leisure time than mothers who don't work. Reforming the current tax-transfer system so mothers can profit more from paid work would not compel mothers to give up leisure time, but simply give them more choices.

#### Box 4-1: GDP gains and child care.

It is sometimes assumed that when women return to paid work, they transfer unpaid work (like home child care) to paid work in the workforce, and therefore there is no real gain in output.

However, the GDP effect of increasing women's participation is not simply a switch from unpaid work to paid work. The economic value of a parent's paid work is usually higher than the economic value of childcare — captured in the fact that hourly wages are usually substantially higher than the hourly cost of childcare. Non-parental childcare offers efficiencies of scale and specialisation, so that net productivity usually increases with higher rates of female participation. Unpaid care (for instance, by relatives or friends) also has a positive GDP effect if it frees up the labour supply of parents who are then able to work.

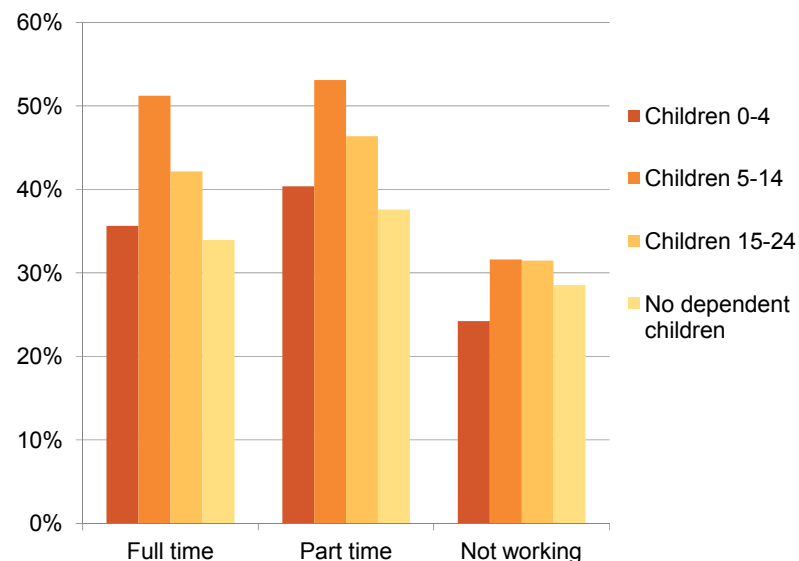
However, this strictly economic analysis does not take into account the intangible benefits of caring for a child within the family. Views differ on the value of those benefits. The choice is usually left as a matter of personal preference, though Australia's current tax and benefit system implicitly puts a very high value on parental care — particularly for women who would otherwise be in lower paid work.

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<sup>125</sup> Productivity Commission (2009)

<sup>126</sup> Grattan Institute regression analysis of determinants of volunteering, available on request.

**Figure 4.3: Female volunteers by work status and children**



Source: ABS (2010a)

On the other hand, discouraging women from working when they have children creates substantial inequalities later in life. After several years of working part time, or not working at all, many women are either discouraged from returning to work where their previous colleagues are substantially further advanced, or lack confidence to re-engage with demanding roles. Women who do not work for several years often find it difficult to find meaningful work again.<sup>127</sup> They may then miss out on both the benefits of

<sup>127</sup> OECD (2011a)

meaningful workplace interaction, and financial independence, particularly in retirement.<sup>128</sup>

Clearly there are trade-offs between work hours, parental child care, unpaid and volunteer work, and time spent on leisure and personal activities. However, the current system strongly discourages mothers from paid work. As a result, policy settings significantly distort the choices that women make about benefits and disadvantages of paid work. As the next section shows, without these distortions, it is likely that many more women would elect to work, a choice that would reflect their preferences, *and* contribute to substantial economic growth.

## 4.2 Policy interventions

Reducing high effective tax rates and the net cost of childcare are the principal means for changing the number of Australian women with children in the paid workforce.

These barriers could be substantially reduced by treating Family Tax Benefit as income in the hands of the family's first wage-earner, and treating child care as a deduction in calculating tax and eligibility for welfare benefits. However, more work is required to identify tax and welfare changes that would reduce barriers at an acceptable cost to the budget, after taking into account increased income tax collection as a result of higher participation.

<sup>128</sup> Women on average forgo 31% of their lifetime earnings when they have one child, an additional 13% for two children and a further 9% if they have three. This is more pronounced for less educated women. See Breusch and Gray (2004) Women across all age groups have lower superannuation balances than their male counterparts. See ABS (2011b)

While marginal tax, welfare and childcare costs are the chief barriers to female workforce participation, individual circumstances vary enormously with levels of education, earnings, family circumstances and values. All these affect workforce participation. A married, tertiary-educated woman returning to work for an accounting firm faces very different issues to a single woman without tertiary qualifications seeking casual work in a supermarket. In identifying key levers for reform, we have tried to focus on those issues that appear to affect the largest number of women.

It should also be noted that current arrangements are highly regressive: women with lower earning capacity are more strongly discouraged from work. They take home a smaller *proportion* of any money they do earn — and a much smaller dollar amount. This may discourage them from workforce participation for several years, reducing their opportunities later in life.

#### 4.2.1 Tax, welfare and childcare barriers to participation

A number of recent international studies show that the major influences on female workforce participation are marginal tax rates and the net costs of childcare.<sup>129</sup> In Canada, female workforce participation increased substantially above trend levels when marginal taxes and the net costs of childcare were reduced, as discussed in Box 4-2.

This is not surprising: mothers face a high opportunity cost in seeing less of their children and in dealing with the stress of juggling work and family responsibilities.<sup>130</sup> The net financial

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<sup>129</sup>Tsounta (2006); Schwarz (2012)

<sup>130</sup> Losoncz and Bortolotto (2009); Losoncz (2011)

return of working, including the impact of tax, welfare, childcare costs and childcare benefits, matters to them.

Paid parental leave also influences female workforce participation, although international experience suggests that government support for childcare has about double the impact of spending on parental leave.<sup>131</sup> Education levels are important too, though already more women than men go to university in Australia.<sup>132</sup> Governments have less control over other factors that influence female workforce participation, such as overall unemployment rates, security of employment and social attitudes.<sup>133</sup>

Australian experience seems consistent with international trends. Australian women with children change their behaviour depending on effective marginal tax rates.<sup>134</sup> And caring for children is the major reason why Australian women between 25 and 44 who work part time do not work full time, as shown in Figure 4.4.

Why are Australian women choosing not to work after they have children? While it is intuitive that childcare-related issues are probably involved, few Australian studies distinguish whether the issue is the *cost* of childcare, the *availability* of childcare, or a preference for the *quality* of childcare provided by a child's family.

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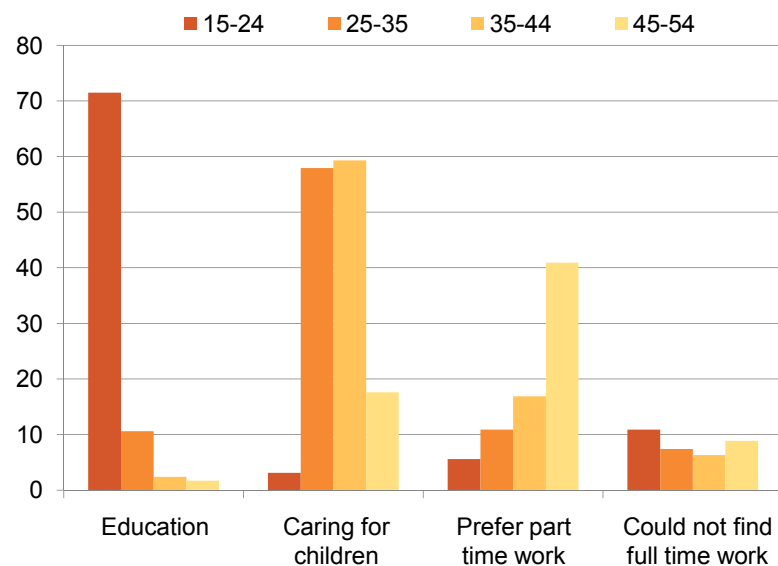
<sup>131</sup> Schwarz (2012) p.24

<sup>132</sup> Norton (2012), p. 25

<sup>133</sup> Tsounta (2006); security of employment was proxied using union membership rates, and social attitudes were proxied using female parliamentary representation and government political ideology.

<sup>134</sup> Apps (2006); Kalb and Thoresen (2007)

**Figure 4.4: Reasons why women working part-time do not seek full-time work (%)**



Source: Abhayaratna et al. (2008)

*Availability* does not appear to be a major issue in Australia. In the last ABS survey, only 2 per cent of families with preschool children were “currently looking” for additional preschool or formal care primarily for work-related reasons.<sup>135</sup> There is little data on the effects of *quality* of child care on parents’ decisions to use care.<sup>136</sup>

<sup>135</sup> ABS (2011c)

<sup>136</sup> For a survey of child care attitudes see Rush (2006)

International evidence suggests that the *costs* of childcare are a major disincentive for many mothers who would otherwise seek work. Experience in Canada — where female workforce participation is substantially higher than in Australia — suggests that affordable childcare is crucial to participation rates (see Box 4-2).

It is most plausible that household choices are influenced by the cumulative effects on net take-home income of income tax, foregone welfare benefits, child care costs, and child care benefits. Take-home income, net of these effects, amounts to the financial incentive to work relative to staying at home.

Many Australian second income earners have limited financial incentives to work, or to work full time, as demonstrated by analysis of net take-home income conducted for Grattan Institute by the National Centre for Social and Economic Modelling.<sup>137</sup>

<sup>137</sup> This modeling is based on income tax and welfare rates as expected to take effect on 1 July 2012, based on the law and government announcements in April 2012, including the changes to marginal tax rates as part of the Clean Energy package. The modeling takes into account income tax, welfare benefits, the Medicare Levy, Low Income Tax Offsets, Childcare Benefit, and Childcare Rebate. It assumes that childcare is required for 25% more hours than are worked (i.e. if working an 8 hour day, then childcare is required for 10 hours), and that childcare costs \$8/hour/child. This modeling does not take into consideration the increases to the FTB announced in the 2012-13 federal budget for 1 July 2013. However, because these benefits are means tested, they are likely to reduce the financial incentive to work.

**Box 4-2: Women in Canada's workforce**

Canada's experience shows that lower effective tax rates and subsidised child care lead to more women in paid work.<sup>138</sup>

Female participation grew rapidly in Canada from the mid-1970s and is well ahead of Australia. Female workforce participation (aged 25-54) rose from 53.1 per cent in 1976 to 82 per cent in 2012.<sup>139</sup> In this age group, over 80 per cent of female workers are employed full-time.<sup>140</sup> In 2009, 64 per cent of mothers with children under 3 do some paid work.<sup>141</sup>

In Canada, a range of reforms reduced the disincentives to work. Around 1997, tax cuts for low and middle income families reduced effective tax rates for second income earners.<sup>142</sup> At about the same time, Canadian governments committed to improving the accessibility and quality of childcare, including subsidising the cost. Quebec reduced childcare cost to \$5 per day,<sup>143</sup> and other provinces also have substantial subsidies. In 2000 employment insurance scheme for parental and maternity leave was extended so that parents could take 50 weeks leave with partial salary.<sup>144</sup>

<sup>138</sup> Tsounta (2006)

<sup>139</sup> Statistics Canada (2012)

<sup>140</sup> Ibid.

<sup>141</sup> Statistics Canada (2011)

<sup>142</sup> Tsounta (2006), p.9

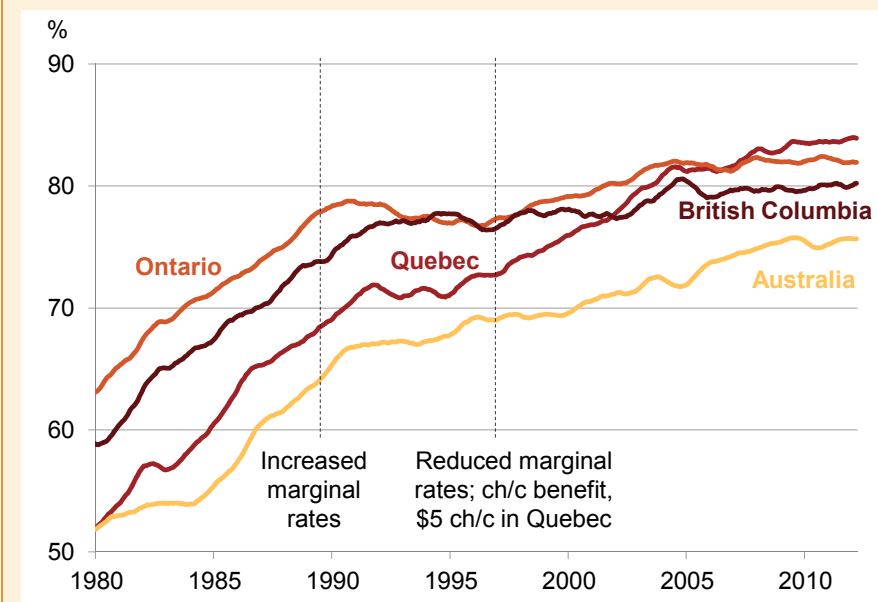
<sup>143</sup> Ibid., p.11; Baker, *et al.* (2005)

<sup>144</sup> Human Resources and Skills Development Canada (2001)

As a result, after limited increases in the early 1990s, female workforce participation rose steeply from about 1997, particularly in Quebec, as shown in Figure 4.5.

Female workforce participation also increased in Australia over this period, presumably because tertiary participation increased. However, participation in Canada remains much higher than in Australia, and with more women working full-time.

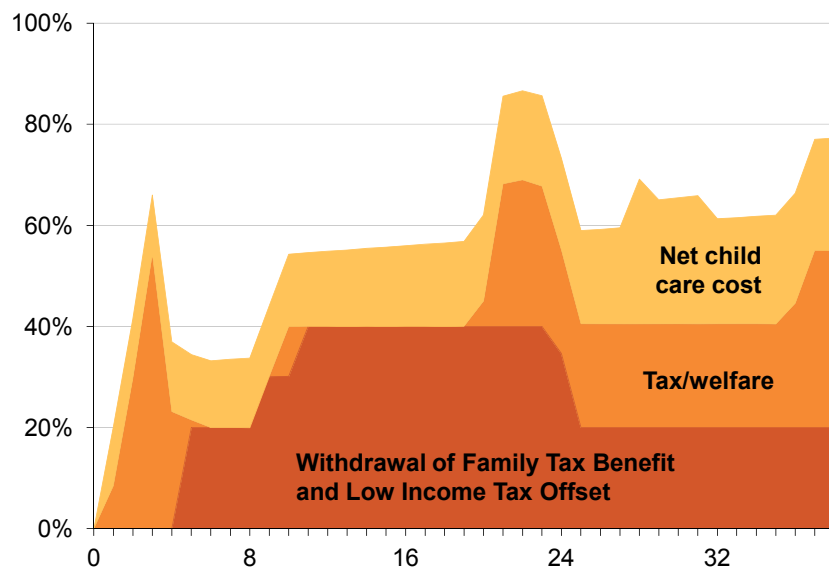
**Figure 4.5: Female participation rates, 25-54 year olds, selected Canadian provinces, 1980-2012**



Note: 12 month trailing averages. Participation rate includes those who are unemployed and looking for work. Source: Statistics Canada (2012); ABS (2012b).

For example, a family of two parents earning \$40,000 each per year, with one child in long day care, take home only around half of the second worker's earnings – \$320 more per week – if the second income earner (typically the mother) chooses to work full-time, as shown in Figure 4.6.<sup>145</sup>

**Figure 4.6: Reductions to take home pay of second income earner earning \$40k, one child aged 2**

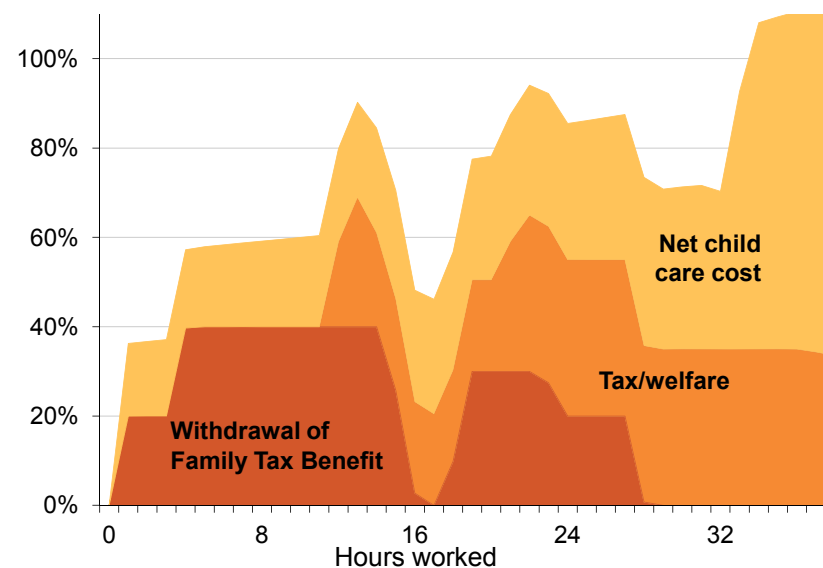


Source: NATSEM modelling for Grattan Institute . Note: this was updated on 5 December 2012 to correct an error in the previously published modelling.

<sup>145</sup> Note: these figures were updated on 5 December 2012, to correct an error in the previously published modelling.

The problem is worse for families with two children. In a family where the first wage earner earns \$70,000, and the second wage earner would earn \$70,000 if working full time, and there are two children in long day care, then the family only takes home 20 cents in each dollar earned by the second wage earner when working more than two days per week, as shown in Figure 4.7.

**Figure 4.7: Reductions to take home pay of second income earner earning \$70k, two children aged 2 and 4**



Source: NATSEM modelling for Grattan Institute

Childcare costs (modelled here at \$8/hour for long day care) are so significant in these charts because in addition to paying the net

costs of care after the Child Care Benefit and Rebate, a mother’s increasing additional income as she works more hours reduces her access to these benefits.

These problems apply in a wide variety of scenarios, as summarised in Table 4-1.

**Table 4-1 – Second income earner income after tax, welfare and childcare**

Income per partner	No. of children	From the first 3 days worked		From the 4 <sup>th</sup> and 5 <sup>th</sup> days worked	
		Take home income/wk	Take home income as % of earnings	Take home income/wk	Take home income as % of earnings
\$40,000	1	\$218	53%	\$99	56%
\$40,000	2	\$156	35%	\$49	17%
\$70,000	1	\$458	54%	\$193	39%
\$70,000	2	\$284	37%	\$57	10%
\$100,000	1	\$735	61%	\$338	48%
\$100,000	2	\$565	47%	\$224	32%
\$150,000	1	\$1,077	55%	\$624	52%
\$150,000	2	\$1,040	48%	\$428	40%

*Note: Assumes that the primary income earner works full time for the income listed, and the second earner would receive the same income if they work full time. This table was updated on 5 December 2012. Source: NATSEM modelling for Grattan Institute.*

Even when families use little or no childcare — whether because their children are older, or they have informal care arrangements — effective take-home income can be relatively low. For low income earners, even without childcare costs, effective rates of

take-home pay are still less than 60 cents in the dollar due to the impacts of Family Tax Benefit, tax, and welfare withdrawal as illustrated in Figure 4.6.

### Other issues

Working women clearly face a wide variety of circumstances that may affect their decision to seek work. However, no single issue appears to affect the choice to work as directly as the marginal costs of tax, welfare and childcare.

The provision of maternity leave pay, particularly if it is at levels relatively similar to previous earnings, can encourage women to return to paid work after having children.<sup>146</sup>

Women might also be more prepared to work if their hours were more flexible. While this issue is frequently raised in the debate about women’s participation, it is not clear how much of a difference it would make. Very large numbers of women are already working in part-time or casual jobs, but whether these are genuinely flexible in a way that meets the needs of women caring for children, or mostly structured for the benefit of the employer, is difficult to tell.<sup>147</sup>

Anecdotally, at least, the length of the school holidays in Australia also appears to be an issue. Many parents and employers

<sup>146</sup> See discussion in Productivity Commission (2009), Ch 5, pp. 26-38. After controlling for industry and education levels this may not be a particularly strong effect — see Buddelmeyer and Fok (2007), p.5 and cross-country studies suggesting that it has half the impact of government spending on childcare in Schwarz (2012) p.24

<sup>147</sup> Abhayaratna, *et al.* (2008)



acknowledge that even when part-time work is available with flexible hours and reasonable pay, many parents face substantial logistical challenges in covering up to 15 weeks of school holidays per year. There is some evidence of demand for more vacation programs for school-aged children.<sup>148</sup> However, there is no rigorous data on the impact of the length of school holidays — it has not been included in major Australian surveys about barriers to workforce participation.

Social attitudes can be important, too, but their effects are unknown. It is likely that high marginal tax rates, welfare and childcare costs have the greatest material impact on decisions to work. It seems likely that if these were changed, resulting in more women choosing to work, social attitudes would also gradually change.

#### 4.2.2 Increasing incentives to participate

Reducing barriers to participation by reducing marginal tax and welfare rates is a challenge for government budgets. A substantial issue is the net impact of withdrawing means-tested benefits as incomes increase.

Reducing benefits themselves would be effective, but is likely to be seen as unfair. Reducing benefits over a wider range of income (sometimes described as ‘increasing the taper’) would increase effective take-home income, but at a cost to the budget. Means testing all benefits on the basis of the household’s higher income earner would reduce the disincentives for a second income earner,<sup>149</sup> but there would be winners and losers amongst

existing households. Any budget impacts need to take into account the additional revenue as participation rates increase.

Modelling these alternatives to determine the fiscal impacts, and the winners and losers of change, is beyond the scope of this paper. However, the policy direction is clear, and it is hard to believe that the very high effective take-home income rates, particularly for lower income households, are an optimal policy solution. Identifying changes that remove disincentives, are fiscally acceptable, and fair to low-income households should be a high priority given both the economic benefits and the social advantages.

#### 4.3 What don’t we know?

We are confident that more women would do paid work if governments reduced effective tax, welfare, and childcare costs. However, there are many other issues on which further work would be valuable.

There is no rigorous study in Australia of the value of unpaid work by women, and how this might compare to the economic and social value of paid work. Many will remain unconvinced that the incentives to work should be increased until this issue is resolved.

The fiscal impacts of the policy changes suggested have not been calculated. The changes canvassed here would reduce some tax revenues and increase some welfare payments in the short term. But increased participation is likely to *increase* government revenues overall since it results in more taxpayers. Governments will want to know how these budgetary effects interact over time.

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<sup>148</sup> Newspoll (2008)

<sup>149</sup> See Apps (2010)

The equity impacts of the policy changes suggested also need to be calculated. Who will be the winners and losers of the changes? Again this will depend on the precise parameters chosen.

As indicated above, research into the impact of school holidays would help policy makers understand whether or not this is a genuine obstacle to female workforce participation.

Nevertheless, there appears to be compelling evidence that the cost of childcare after tax and welfare benefits is a substantial barrier to higher female workforce participation in Australia, and there are clear policy levers that can change it.

## 5 Older people's workforce participation

Increasing the workforce participation rate of older people would mean that Australia's GDP would be about \$25 billion higher by 2022. The key policy change is to increase the ages at which people become eligible for the aged pension and eligible to access their superannuation. Implementing these changes promptly would also reduce intergenerational unfairness.

### 5.1 Size of opportunity

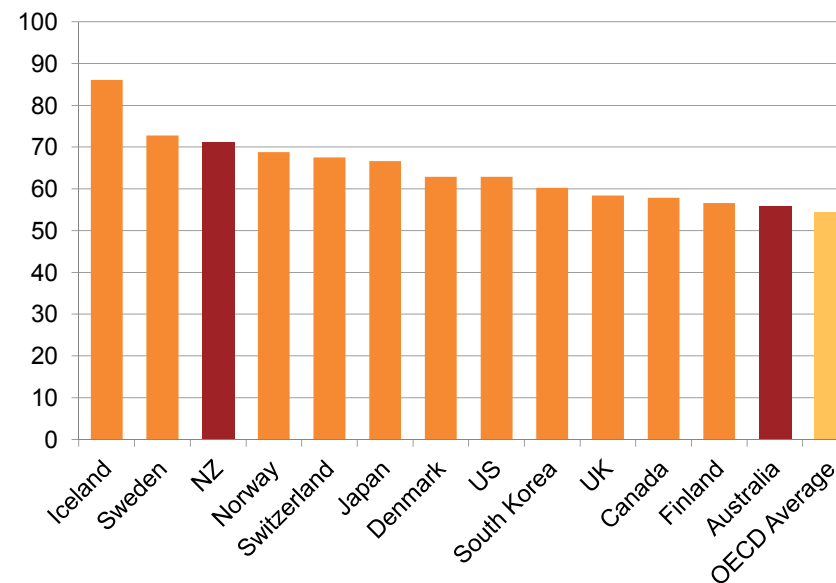
#### 5.1.1 Relatively low older people's workforce participation

Fewer older people work in Australia than in many other comparable countries, as shown in Figure 5.1. Fewer 55 to 64 year olds work in Australia than in the US, UK, Canada and New Zealand.<sup>150</sup> While Australia is just above the OECD average, the average includes countries with very low participation rates, such as Greece.

Fifteen per cent more of the 55-64 year old cohort work in New Zealand than in Australia, despite the close similarities in culture and social policy. This may be partly explained by New Zealand's substantially less generous approach to pensions and lack of a strong superannuation policy.

There are also comparatively low rates of participation for Australians not yet at pension age.<sup>151</sup> Australia is not making the most of the skills and experience of its older workers.

**Figure 5.1: 55-64 year old workforce participation rates**  
Percent of cohort



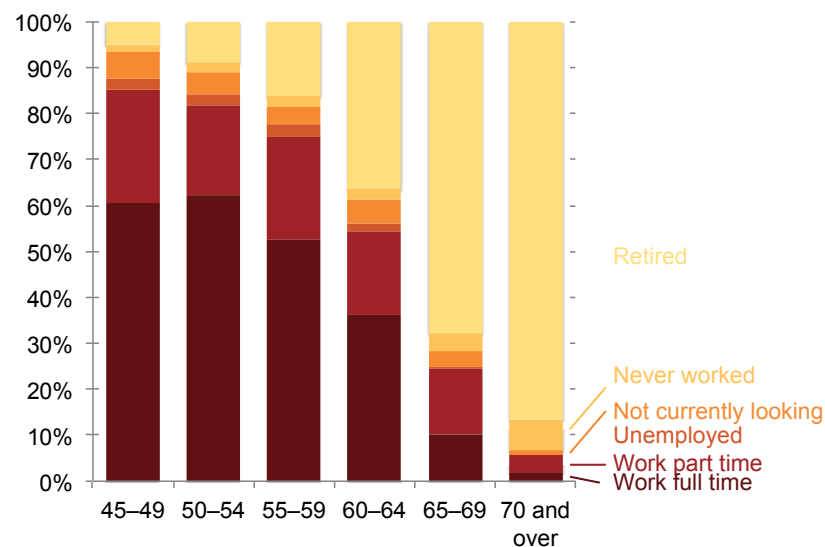
Source: Abhayaratna and Lattimore (2006)

<sup>150</sup> Treasury (2010b)

<sup>151</sup> Productivity Commission (2007a), Chapter 13 – Work Incentives, Appendix G

These low participation rates reflect a substantial number of Australians who retire between 60 and 69, as shown in Figure 5.2.

**Figure 5.2: Australian employment status by age**



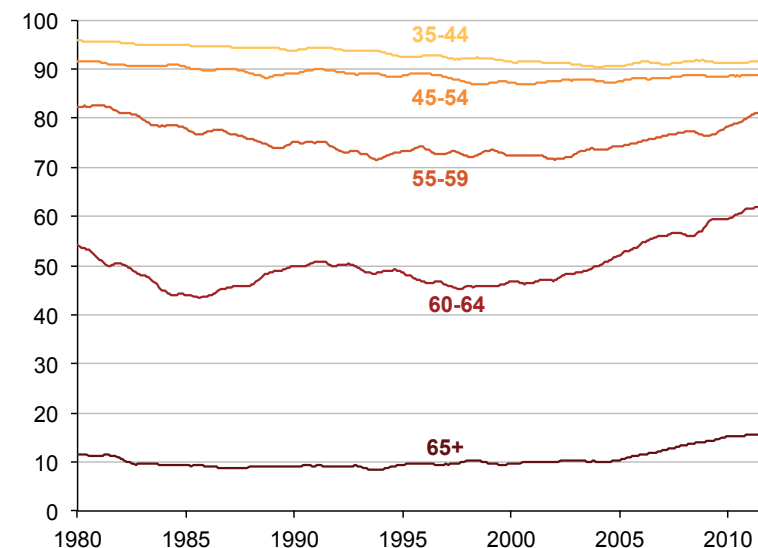
Source: ABS (2011g)

However, participation rates for men aged between 55 and 64 have been improving steadily since about 2000, as shown in Figure 5.3. These changes have been driven primarily by improved health, education levels, and having partners also working longer.<sup>152</sup>

<sup>152</sup> Headey, *et al.* (2010), pp.104-120

Participation rates for men aged 65 and over started to increase — from a very low base — in about 2005. There has not been any noticeable shift in trend as a result of the global financial crisis. Although Australian workforce participation has increased by 2011 to about 68 per cent,<sup>153</sup> other countries are also likely to have improved in the intervening five years: New Zealand, for example, improved by about 5 percentage points to 76 per cent participation for 55-64 year olds in 2011.<sup>154</sup>

**Figure 5.3: Male workforce participation by age group**  
% of cohort



Note: 12 month trailing average. Source: ABS 6291.0.55.001 Labour Force, Australia;

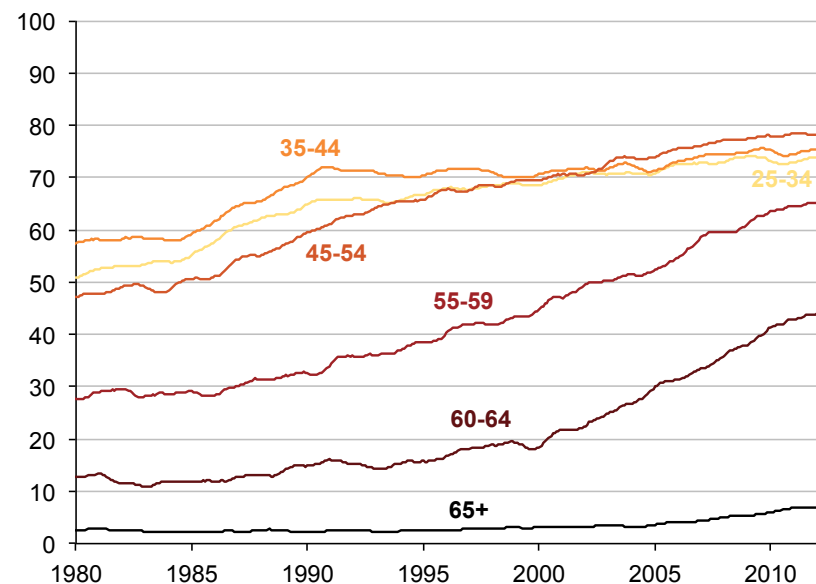
<sup>153</sup> ABS (2011g)

<sup>154</sup> Statistics New Zealand (2012)

These trends will probably continue as men enter the traditional retirement years in better health and with greater ability to work than previous generations.

Trends for women are similar, as shown in Figure 5.4, although as noted in Chapter 4, they participate in paid work less than men.

**Figure 5.4: Female workforce participation by age group**  
% of cohort



Note: 12 month trailing average Source: ABS (2012b)

### 5.1.2 Impact of improved participation

The gap between Australia’s rate of older people’s workforce participation and that of comparable countries suggests that there is ample scope to increase the participation of older Australians in the workforce, particularly those aged over 60.

This would have a significant economic impact. A 7 per cent increase in mature age labour force participation rate (still less than New Zealand) would raise GDP in 2022 by about 1.4 per cent, or \$25 billion in 2010 dollars.<sup>155</sup>

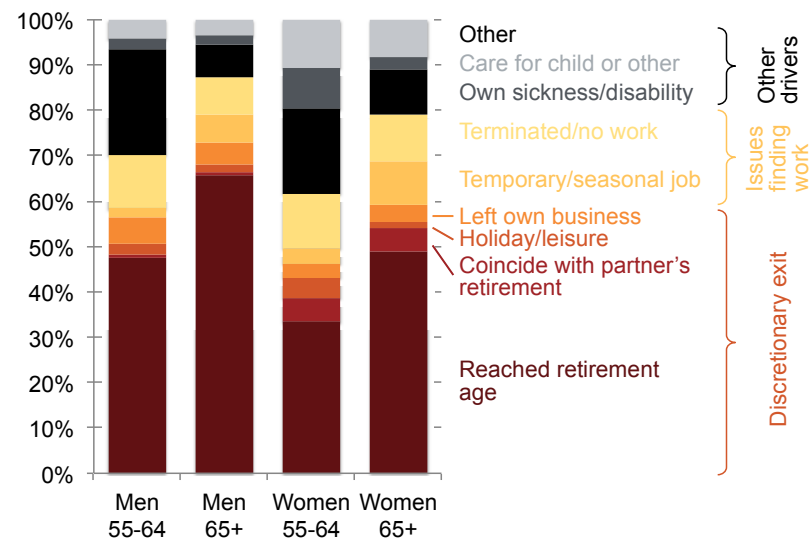
### 5.2 Policy interventions

Aligning incentives for older people to stay in work seems to be more important than helping them find it. Measures to encourage people to work for longer in life are likely to have the greatest impact on older age workforce participation.

Older people generally stop working for discretionary reasons, such as opting to retire once they reach ‘retirement age’, rather than because of difficulty finding work, or barriers such as disability, as shown in Figure 5.5.

<sup>155</sup> Grattan analysis based on Treasury (2010b); Productivity Commission (2007a); Headey, *et al.* (2010). Heady (2010) provides the basis for the calibration of our model; though they do not model exactly the same policy position as us, they do provide some guidance about the likely effects of pushing back retirement and superannuation preservation ages.

Figure 5.5: Reasons for retirement



Source: ABS (2011g)

### 5.2.1 Increasing the pension and preservation age

This suggests that older people’s workforce participation would increase if governments increased the pension age (the age at which people can qualify for the age pension — currently 65 for men and 64 for women, to rise to 65 for both sexes by 2014) and the preservation age (the age at which a worker can access their superannuation — currently 55). These legislative measures would create stronger incentives to continue to work for longer, and might themselves alter social expectations about what is an ‘appropriate’ retirement age.

This is supported by international evidence that:

*financial incentives embedded in both public pensions and in other formal and informal early retirement schemes play an important role in determining retirement decisions.[...] These decisions will be influenced by the age at which (early) retirement benefits can be first accessed.*<sup>156</sup>

For example, the New Zealand government announced in 1991 that it would increase the pension eligibility age to 65 by 2001. Workforce participation by men aged 60-64 rose by nearly 20 percentage points from 1990 to 1997, and participation also increased for 55-59 year olds of both sexes.<sup>157</sup>

In 2009 the Commonwealth Government announced that it would raise both the pension age and the preservation age. In 2017, the pension age will increase to 65.5, and continue to increase by six months every two years until, in 2023, it reaches 67.<sup>158</sup> The preservation age is also rising, to 60 in 2024.<sup>159</sup>

These changes are in the right direction, but they missed an opportunity for much more substantial reform, and by setting long-term timetables for change, may have made future change more difficult.

It might be argued that since many Australians retire before they’re eligible for the pension, changes to the pension age will not substantially affect retirement decisions. However, under the

<sup>156</sup> OECD (2006), p.53

<sup>157</sup> Johnson (2000)

<sup>158</sup> Centrelink (2012)

<sup>159</sup> Australian Taxation Office (2012)

current regime, people can retire at any age after 55 and live on their superannuation and savings until they qualify for the Age Pension at 65. A later pension age would effectively encourage many to work for longer, even if they formally retire before the pension age.

Raising the age at which workers can access their superannuation to the pension age would also increase older age workforce participation.<sup>160</sup> Many workers retire before reaching the pension age and start using their superannuation. According to the Henry Review, approximately a third of superannuation savings are withdrawn before the age of 65.<sup>161</sup> The ability to use superannuation like this weakens the incentive to continue to work until the pension age.

Permitting workers to access their superannuation before the pension age also undermines its original purpose. The justification for the generous tax concessions for superannuation is that it reduces governments' pension liabilities. However, superannuation spent before the pension age has no impact on governments' long-run pension liabilities. Even workers who have saved superannuation throughout their working lives will often run out of superannuation within twenty years of retirement, unless they take a very substantial cut in earnings as they retire. Early access to superannuation effectively just brings forward the date at which they begin to draw the age pension.

Given political resistance to delaying people's access to their superannuation money, 'second best' alternatives might be

considered. These might include quarantining a significant proportion of superannuation balances until pension age, or only allowing withdrawal of a limited income stream (rather than a lump sum before reaching the pension age). A proposal that would match the policy issue would allow unreserved withdrawal of superannuation benefits before the pension age — but only if the tax concessions for superannuation were paid out on any money withdrawn early.

Increasing the preservation age to 70 to match the pension age would have a substantial impact on participation rates. About 8 per cent of the cohort retire five to ten years before the pension age, and another 20 per cent retire five years or less before the pension age, as illustrated in Figure 5.3 and Figure 5.4.

We estimate that increasing the pension age by three years to age 70, and lifting the preservation age to 70, would increase total participation rates by an additional 1.4 per cent, increasing economic growth by around \$25 billion.<sup>162</sup> The precise magnitude of the change would depend on how the legislative change affects individuals' retirement decisions. Although further work might model the economic outcome more precisely, it is clear that the economic impact would be very substantial.

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<sup>160</sup> As recommended by Harmer (2009)

<sup>161</sup> Treasury (2010a)

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<sup>162</sup> Based on modelling using HILDA data in Headey, *et al.* (2010), pp.92, 98; see Table A-1 on page 65. Headey *et al.* note that their estimates are in line with cross-OECD analysis. It is also consistent with rough analysis: a one-year increase in pension and preservation age results in a one-year delay in retirement for about half of the 55% of the age group whose decisions might be affected by changes in retirement age. (The remaining 45% currently retire either substantially before the preservation age, or substantially after the age pension age.)

Whatever the precise magnitude of change and its impact, it would seem prudent to copy the design of the 2009 reforms by phasing in the change over a decade.

Obviously reforms would need to be designed to ensure that those over 55 who cannot work due to disability are able to access a pension equivalent to the aged pension, and have unfettered access to their superannuation.

### 5.2.2 Attitudes to older workers

The most significant increase in older workforce participation is likely to come from existing workers remaining in the workforce longer. Measures to encourage businesses to employ older workers, such as the Commonwealth Government's recently announced Jobs Bonus and related initiatives,<sup>163</sup> are likely to have a relatively limited effect on older age participation.

A shortage of jobs for older workers does not appear to be the primary obstacle to participation. There are some older workers prepared to work, but unable to find suitable work — most often (they believe) because they are considered 'too old by [their] employer'.<sup>164</sup> However, there are only 112,000 people in this category aged 55 and over.<sup>165</sup> Even if every one of them found a job — which is unlikely given that, on average, this cohort will

have fewer skills than those who remain in employment — the impact would be less than \$7 billion per year.<sup>166</sup> Ensuring older people have the chance to maintain or update skills may contribute to their employability.<sup>167</sup> There is some international evidence that targeted support programs can be effective in assisting older workers who are unemployed to re-enter the workforce.<sup>168</sup> Such programs also keep public and policy attention focused on the issue.<sup>169</sup>

Legal and structural barriers may also encourage discrimination against older workers, such as age-related licensing restrictions and age restrictions on workers' compensation.<sup>170</sup> Tackling these would make it easier to lift participation. However, recent survey data suggests that workers over 55 already in the workforce do not report an increased likelihood of being overlooked for professional opportunities or ostracised in the workplace, compared with workers under 55.<sup>171</sup>

In any case, it is not clear that governments can do much to alter employer perceptions.<sup>172</sup> It may be that increasing the pension and preservation ages would do more than anything else to change both employer and employee expectations.

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<sup>163</sup> Swan and Butler (2012)

<sup>164</sup> ABS (2011g), Table 7

<sup>165</sup> 61,000 people between 55 and 64 are unemployed ABS (2012b). Another 45,000 are available to start, but discouraged from looking because suitable work is unavailable. (ABS (2011f), Table 7). A small number (probably less than 6,000) are available to start, looking for work, but not classified as unemployed (ABS (2011f), Table 1.) Another 130,000 are available to start, but are not looking for work for reasons not specified.

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<sup>166</sup> Assuming an average salary of \$60,000 for 112,000 workers.

<sup>167</sup> Advisory Panel on the Economic Potential of Senior Australians (2011)

<sup>168</sup> Atkinson (2001)

<sup>169</sup> Disney and Hawkes (2003)

<sup>170</sup> Australian Human Rights Commission (2010)

<sup>171</sup> Taylor (2012)

<sup>172</sup> Participation Review Taskforce (2008)



### 5.2.3 Fairness

A challenge in implementing these reforms will be the claim that raising the pension age would be ‘unfair’ to those who have worked for many years expecting to qualify for an aged pension aged 65 (or 67 from 2023).

However, the male pension age was set at 65 in 1909,<sup>173</sup> when male life expectancy was around 55 at birth, and a 65 year old male could expect to live to 76.<sup>174</sup> Men aged 65 are now expected to live to 84, an increase of six years over the last three decades, as shown in Figure 5.6. Life expectancy for women has risen similarly.

Although the economy and government budgets will bear the costs of this greater longevity, policy settings have not been changed so that the economy and government budgets reap some of the benefits.

Without increases in participation of older workers, the taxes of younger people will fund the pension and health costs of an increasingly long-lived population. The earlier people retire, the greater this burden will be.<sup>175</sup> In 2050 it is estimated that there will be 2.7 people aged between 15 and 65 for each person aged 65 and over, compared with 5 people in 2010.<sup>176</sup> The inability of superannuation to deal with all of this issue is reflected by current

<sup>173</sup> ABS (1988)

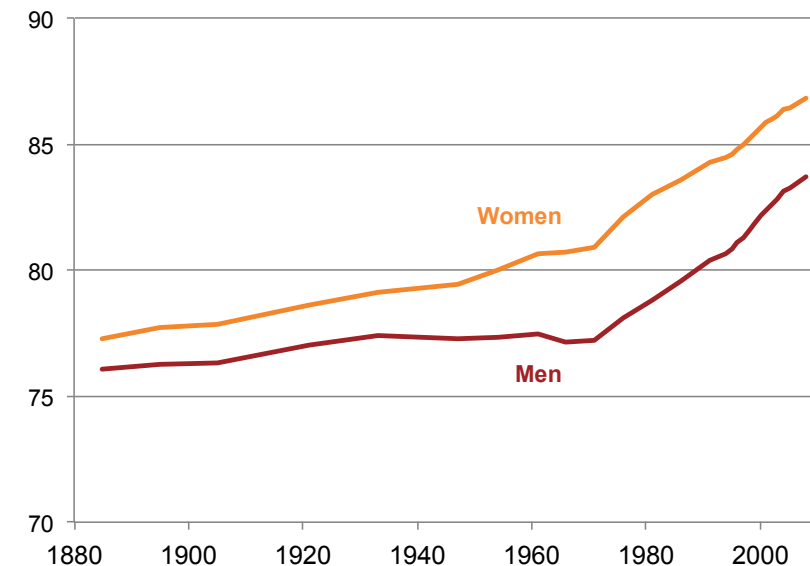
<sup>174</sup> ABS (2008)

<sup>175</sup> Treasury (2010a)

<sup>176</sup> Wong (2011), p. 5

projections that spending on aged pensions will increase from 2.7 per cent of GDP in 2010 to 3.9 per cent of GDP in 2050.<sup>177</sup>

Figure 5.6: Life expectancy for individuals aged 65 (years)



Source: ABS (2008), Table 7.6; Grattan analysis

Those retiring today have benefited from an ‘unexpected’ increase in longevity, and it is reasonable that in enjoying this benefit, they share some of the costs that it imposes. The only generation that is ‘unfairly’ treated by increases in the pension age is the cohort

<sup>177</sup> Treasury (2010b), p. 59

that has already retired. Younger people will have to work to any increased retirement age as well.

A higher pension age and preservation age would potentially cause hardship for those in careers involving manual labour, who may be physically unable to work into their 60s. This issue could be managed by allowing older workers in this situation to qualify for the aged pension or access to superannuation if they had worked in a nominated industry, or if they meet the conditions required for access to the Disability Support Pensions.

In any case, this issue may decline in importance over time. About 25 per cent of those who retire do so because of illness or disability, as shown in Figure 5.5. However, the proportion of the workforce in the most physically demanding sectors (agriculture, construction, and manufacturing) has dropped from about 28 per cent to 20 per cent in the last two decades, and these trends are likely to continue.<sup>178</sup>

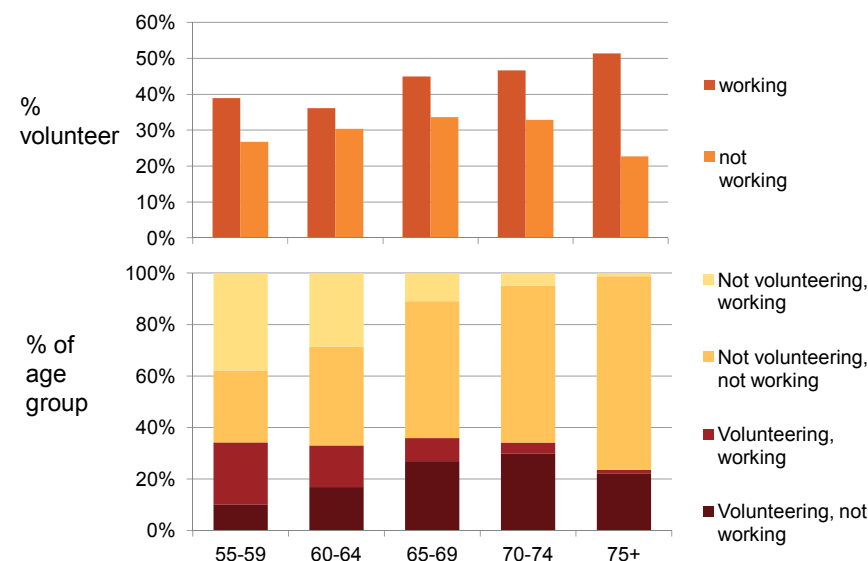
### 5.2.4 Costs of older people's workforce participation

Like all major policy change, increasing older people's workforce participation will impose some costs as well as bringing economic benefits.

It is sometimes assumed that working for longer will reduce the volunteer work contributed by retirees, since working people have less time to volunteer. However, the evidence shows that older people who work are more likely to volunteer, as shown in Figure

5.7. In any case, the cost is not likely to be large relative to the economic benefit of participation.

Figure 5.7: Volunteer rates for the over 55s



Note: Volunteers refer to all volunteers (even those who may only volunteer a few times a year). Work refers to a minimum of one hour a week.

Source: Grattan analysis based on ABS (2010a)

Working for longer may reduce life satisfaction. Retirees do tend to have higher life satisfaction than those who are working, although this data may be distorted by age and is highly variable between individuals.<sup>179</sup> Overall, the differences are not particularly

<sup>178</sup> Lowe (2010)

<sup>179</sup> Barrett and Kecmanovic (2011). See also Beaton (2009)

significant, and must be balanced against the additional costs that retirement imposes on younger taxpayers.

### 5.3 What don't we know?

The impact on retirement decisions of increasing the pension and preservation age could be more rigorously quantified, although local and international evidence strongly indicates that it is significant. Although difficult to abstract from the increase in participation that is being driven by other social trends, rigorous analysis of the drivers of retirement decisions will enable better estimation of the value of these policy changes.

There is comparatively little data on the 65+ demographic. The ABS often groups 'over 65' into a single category,<sup>180</sup> which makes more nuanced analysis difficult. Understanding the attitudes of this age group is important, as much of the shift in participation rates in future is likely to be a result of people working between the ages of 65 and 74.

Older workers may be attracted to jobs that provide meaningful part-time and flexible work, and initiatives similar to those aimed at women may be worth considering.<sup>181</sup>

Given the increasing number of older Australians who provide childcare for their grandchildren,<sup>182</sup> the interaction between rates of older worker participation and female workforce participation should be explored further.

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<sup>180</sup> ABS (2012b). *Persons not in the labour force* is a recent exception that provides some labour force data specifically on the 65-69 age group.

<sup>181</sup> Advisory Panel on the Economic Potential of Senior Australians (2011)

<sup>182</sup> Australian Institute of Health and Welfare (2007) p.32

## 6 What's next?

### 6.1 Implications for government

The findings of this report reinforce the need for governments to prioritise their reform efforts so that they concentrate limited resources where they can make the biggest difference.

This report has investigated where the greatest economic reform opportunities may lie. Taking significant action on the top three issues identified here — reforming the tax mix, and increasing the workforce participation rates of women and older people — has the potential to have much greater impact than tackling a grab-bag of smaller reforms.

There may well be other economic priorities that government should pursue that are beyond the scope of this work. Governments should, for instance, consider prioritising issues that will have a significant payoff in the longer run, in areas such as school system performance and vocational and educational training. However, taking on too many reforms at once can dilute effort, resulting in half-baked reforms or reforms that are not achieved at all.

There are undoubted political sensitivities surrounding all of the major policy reforms identified. Substantial policy changes are never easy, but history suggests that when governments take a leadership role and devote time and energy to explaining them, major reforms can be achieved.

#### Box 6-1 – What can state and territory governments do?

Most of the 'big three' reforms are in policy areas largely controlled by the federal government.

However, our analysis suggests that there are a number of economic reforms that State governments should prioritise, such as:

- Improving teacher effectiveness
- Cutting wasteful industry and regional policy spending; and
- Considering reform options for the health system to increase efficiency and long-term productivity.

### 6.2 Implications for research

Preparing this report has highlighted a number of policy areas where the information required for effective prioritisation is not available.

#### 6.2.1 Measurement

There are two threshold issues for any analysis that seeks to go beyond purely economic metrics:

- We do not have sophisticated **measures of individual or national well-being** that go beyond economic measures such as GDP. There are a number of projects underway to remedy

this, from the Australian Bureau of Statistics' work on Mapping Australia's Progress<sup>183</sup> to a range of OECD activities.<sup>184</sup> How should these evolving measures be connected back to policy analysis and decisions?

- We do not have robust **measures for 'distributional' and 'relational' reform** challenges (such as disadvantage, or social trust) in which the focus is on how the benefits of growth are shared, and consequently we do not have tools to prioritise them relative to each other. Nor do we have the metrics we'd need to compare the priority of these policy issues with those covered in this paper. How should such measures be designed?
- We lack a more comprehensive measure of educational performance that goes beyond test scores (whether from PISA or NAPLAN) to include the multiple outcomes — not just academic results — that we expect schools to achieve. Similarly, comprehensive measures of teacher effectiveness have not yet been developed, although work in this area is progressing.

### 6.2.2 Potentially large new opportunities

Then there are policy areas in which there is an abundance of opinion, but a lack of the rigorous, independent data and analysis necessary to identify the size and direction of reform opportunities. Innovation, industry policy, oligopoly regulation, and industrial relations are all examples discussed in Chapter 2. The

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<sup>183</sup> ABS (2010d)

<sup>184</sup> For instance OECD (2011b)

possibility of very large payoffs raises questions in the following reform areas:

- Are there **industry policies** that could successfully lead to the growth of new export industries, without incurring unreasonable costs? And should some of the existing industry policies be discontinued if they do not serve this object?
- Are there **innovation policies** that can reliably improve innovation at a reasonable cost? Again, should some of the existing programs be discontinued given how difficult it is to show their impact?
- How can governments **intensify competition**, particularly amongst the large sections of the Australian economy that are dominated by two or three large companies?
- Are there **industrial relations reform** that would lead to substantial economic growth? Are there reforms that could preserve the fairness objectives of industrial relations but substantially relieve any constraints on productivity improvements? Given the partisan nature of debates on the topic, how can a better evidence base be developed?
- Although it has a relatively strong starting position, what **health care reforms** could change the game, and reliably increase efficiency in an inherently complex system, while ensuring a good level of care?
- How can substantially **more vocational and educational training** be encouraged and provided while retaining control over the quality of the rapidly expanding output?

Implicit in our methodology is that reform in these areas should take priority once there is solid evidence that there are substantial, well-defined opportunities worth \$20 billion or more to economic growth.

### 6.2.3 Better defining the important reforms

There are also important information gaps within policy areas identified as priorities for reform. Some exist largely because of the complex and multidimensional nature of a given issue: for example, predicting the effects of changes to the tax system on workforce participation is necessarily an imprecise science. Interactions between major policy areas tend to magnify the problem. For instance, there is a question as to whether increased female workforce participation might lead to reduced fertility rates — and therefore contribute to the challenges presented by an ageing population — but we do not have the data necessary to answer it. Information gaps like this will probably never be fully filled in, but work towards reducing them should proceed nonetheless.

This report's accompanying publication, *Supporting analysis*, contains a more detailed assessment of information gaps for particular policy issues.

### 6.3 Implications for Grattan Institute

Think tanks like Grattan Institute can contribute to research and policy development, particularly in areas where political sensitivities make it difficult for government to lead a conversation. Accordingly, Grattan Institute will consider how the

issues covered in this paper should influence its future work program.

Ultimately, this paper is intended to encourage discussion of what is important, rather than urgent, for Australian governments. We hope that this will build determination to tackle the small number of difficult issues that can truly change the game for Australian economic growth. We hope it will be a fertile conversation.

## Appendix A: Methodology

### A.1 Scope

This paper focuses on domestic policy reforms that might contribute significantly to Australia's economic growth. While social, environmental and distributional reforms also matter, the scope is limited to economic issues because:

- Economic growth provides the resources to enable other types of reform.
- There are straightforward and comparable metrics — such as changes to GDP.
- The number of issues is manageable for realistic comparison.
- It aligns with Grattan Institute's current expertise and past work.

As a result, we have excluded:

- Policies that primarily aim to distribute resources and opportunities more fairly<sup>185</sup>, to improve relationships<sup>186</sup>, or to improve the environment<sup>187</sup>.
- Issues of foreign policy, trade, and defence.

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<sup>185</sup> For example, disadvantage, indigenous social outcomes, housing affordability, and disability.

<sup>186</sup> For example, levels of social trust and citizen engagement.

<sup>187</sup> For example, the Murray-Darling Basin, and managing climate change.

- Issues that are primarily enablers of reform rather than ends in themselves, such as public sector reform.
- Issues that, on preliminary analysis, were substantially smaller than all of the policies included.

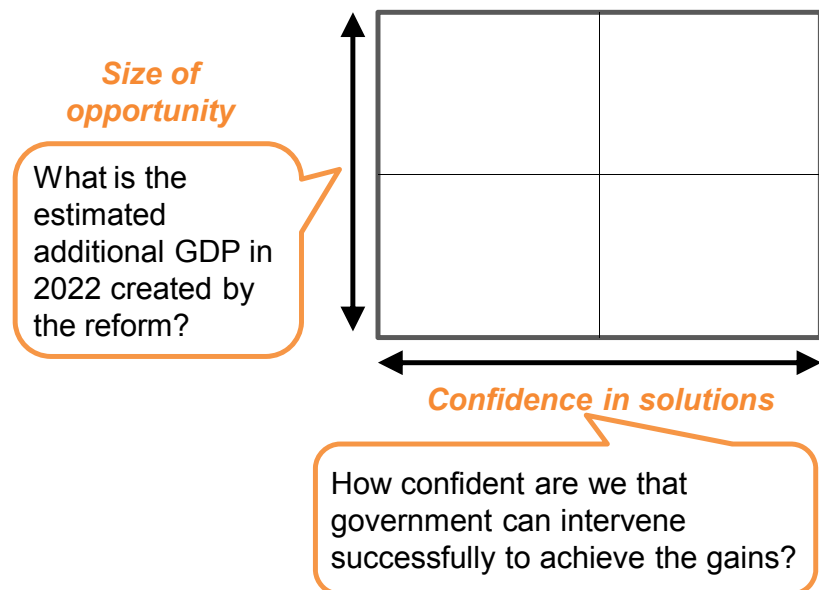
We have framed each issue as a specific reform opportunity, rather than a statement of a problem. There are a handful of issues that might be expected to appear in a discussion of economic growth that do not appear here. For example, 'slow productivity growth' and 'preparing for the Asian century' are challenges and opportunities which require careful attention from the policy community, but are not reform opportunities in themselves.

### A.2 Criteria for prioritisation

In considering where the greatest growth opportunities lie, we have assessed potential priorities by considering two criteria

1. How big is the opportunity presented?
2. How confident are we that change can be achieved?

**Figure A.1: Framework for prioritising economic reform**



### A.2.1 Size of opportunity

We have sought to measure the size of each opportunity in terms of its economic impact, expressed as the additional Gross Domestic Product in the year 2022, expressed in 2010 real dollars.

We are looking at impact in 2022 because 10 years is about as long as most Australian governments can expect to remain in office. As discussed below, some opportunities, particularly in

health and education policy, may be substantially larger beyond 2022. However, while governments fail to pursue reforms that pay off substantially within 10 years, it is optimistic to hope that governments will vigorously pursue difficult reforms that will take even longer to pay off.

While it would be more intellectually rigorous to look at the discounted payback in each year over the next 20 years, this approach adds substantially to the complexity of analysis, and is unlikely to materially change the relative ranking of reforms.

We have assessed size using Gross Domestic Product rather than a more holistic measure such as well-being. Measurement of overall well-being, though a subject of great interest, is in its infancy,<sup>188</sup> and there is even less evidence linking particular policy reforms to changes in well-being. Gross Domestic Product may not be a perfect metric for welfare, but it is a reasonable approximation. Ultimately it measures the resources available to the community for both fulfilling individual choices, and for government to provide services and benefits.

### A.2.2 Confidence in the policy solution

For each potential reform we have also assessed qualitatively our confidence that government can intervene successfully to achieve the quantified benefits. Confidence will only be high if concrete policy changes have been identified, there is good evidence that

<sup>188</sup> Measuring outcomes beyond GDP has been an area of major focus for a number of years both in Australia and internationally. Examples include Australia's Measuring Australia's Progress ABS (2010d), the OECD's Better Life Index OECD (2011b) and the UN-led System of Environmental-Economic Accounting United Nations (2012).



this will have positive economic benefits, and there is reasonable evidence about the size of the economic benefit.

We use confidence in the policy solution because governments are more likely to pursue reform successfully if there is good evidence for the reform. Where this evidence exists, it usually leads to substantial consensus within the policy community. If there is bona fide disagreement about the desirability of reform, it is relatively easy for special interest groups to block reform by arguing that their sectional interest is also in the public interest.

In making this qualitative assessment, we have used five categories:

- considerable expert consensus on detailed solutions;
- considerable expert consensus on the direction of reform, but detailed solutions are not proven;
- considerable expert consensus on the direction of reform, but solutions are poorly characterised;
- little consensus on the direction of reform, or on whether there are any gains to be made from reform; and
- inadequate evidence-base to define problem or determine direction of reform.

For each issue, we have also considered what we don't know about the issue that might well change our conclusions.

### A.3 Simplifying assumptions

These dimensions are obviously reductive. Many other considerations matter — including sequencing of reform, inter-linkages, and the tractability of political barriers. However, this simplification helps to focus the discussion.

In developing a feasible approach, we have used the best available sources of information, acknowledging that there are many data gaps. These gaps are considered in more detail in the *Supporting Analysis* publication.

The approach has not assessed the political feasibility of reform. Our starting point is that almost any worthwhile economic reform will evoke substantial opposition — or it would probably have happened already. We hope that focusing on size and confidence effectively identifies those reforms that will make the most difference. Identifying problems clearly might in itself help generate momentum to overcome political obstacles.

### A.4 Costing methodology

We arrive at our estimates of changes in 2022 GDP using several different methodologies. These are not additive, and so one cannot assume that by pursuing all reforms the boost to GDP would be equivalent to the sum of the increases owing to each individual policy.

The general method used here is to assume that each policy has a once-off effect on the size of GDP, after which it returns to the growth rate implied by population growth plus the growth rate of labour augmenting technical progress. This method is rooted in the exogenous-growth literature, and so has reasonable

theoretical and empirical founding. Importantly, we do not generally consider the case where these reforms alter the rate of technological progress (endogenous growth). We do, however, model an endogenous shift in the growth rate for lower education reforms, as this is where the strongest evidence for endogenous growth exists.

We have used the 2022 GDP projection published in *Strong Growth, Low Pollution*<sup>189</sup>, which incorporates likely changes to GDP owing to the carbon price and other climate policies.

To estimate potential upsides due to changes in participation rates and taxes, we have modelled the changes, and cross-checked against publicly available projections where available.

For many of the reforms, existing research on the potential upside of the reforms expresses gains not in terms of GDP or productivity, but in terms of savings to government or households. Also, some of these savings are expressed as a deadweight loss, rather than a dollar savings to an institution. An example is the potential gain from efficient congestion pricing. Some of the benefits from reduced travel times would accrue to people engaging in economic activity (and so productivity would improve), while other benefits would accrue to households in terms of saved time. These savings to households are ascribed a value in the modelling, typically equivalent to the opportunity cost of household members' time (that is, their wage), although they would not be formally counted in the GDP statistics.

For those reforms expected to deliver savings to government, we assume that over the medium term, government completely crowds out the private economy, and government's value added is the same before and after reform. Though a strong assumption, this allows us to compare the likely magnitude of reforms that fundamentally work in different ways. We also consider where there is a marginal excess burden (the cost of taxation) greater than zero. Estimates of the marginal excess burden or the related concept of the marginal cost of funds are in the order of 0.2.<sup>190</sup> This enables us to estimate the GDP impact of the savings.

We are aware that none of these methods are substitutes for detailed economic modelling. However, they are likely to give fair estimates of the likely magnitude of the economic and non-economic returns, which provides a good basis for ranking potential reforms.

A summary of the costing methodology applied to each reform is set out in [Table A-1](#); further detail is in the accompanying publication *Supporting Analysis*.

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<sup>189</sup>Treasury (2011)

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<sup>190</sup>Campbell and Bond (1997); KPMG Econtech (2010b)

Table A-1 - Summary of costing methodology for each issue

	Issue	Method	Impact on GDP in 2022 (in \$2010)
1	Industry and regional policy	We model a \$3.7 billion decrease in Commonwealth government industry support with no appreciable effects on long-run economic output, and deliver the savings as income tax cuts.	\$4 billion
2	Innovation policy	Not applicable	Not applicable
3	Immigration policy reform	We model a 50 per cent increase in skilled immigration, using estimates of the per-capita increase in GDP from the Productivity Commission. <sup>191</sup> As an increase in skilled immigration will both increase the GDP for those here and for those who would arrive, we express the GDP shift only for non-immigrants, in order to make the change comparable with other reforms. Thus, the shift is the change in GDP per capita, multiplied by GDP.	\$6 billion
4	Industrial relations reform	Not applicable	Not applicable
5	Oligopoly regulation	Not applicable	Not applicable
6	Business deregulation	We take the Productivity Commission's estimate of the potential impact of the National Reform Agenda's seamless national economy reform, <sup>192</sup> less the Commission's estimate of the impact of those already implemented, <sup>193</sup> and assume that half these gains could be achieved. We add half of the available savings from the reforms identified by the Taskforce on Reducing Regulatory Burdens on Business <sup>194</sup> to estimate the potential gains from Commonwealth regulatory reform.	\$7 billion
7	Foreign investment regulation	There is no compelling evidence that Australia's foreign investment regulation regime is preventing significant investment in practice. <sup>195</sup> In any case, given international interest rates, any project which would be viable for foreigners to invest in would also be profitable for Australians to invest in. The only projects which would not be viable for Australians but viable for foreigners occurs when foreigners have subsidised capital costs, in which case competitive neutrality issues arise. Therefore there are no foreseeable productivity gains to be made from regulatory changes.	Nil

<sup>191</sup> Productivity Commission (2006a)

<sup>192</sup> Productivity Commission (2007b)

<sup>193</sup> Productivity Commission (2012a)

<sup>194</sup> Taskforce on Reducing Regulatory Burdens on Business (2006)

<sup>195</sup> Scissors (2012)

	Issue	Method	Impact on GDP in 2022 (in \$2010)
8	Older people's workforce participation	We model 2% to 3% less of each working cohort between 60 and 70 choose to retire each year as a result of lifting the access to superannuation age, and 20% less of the working cohort retire each year between the legislated pension age of 67, and the proposed pension age of 70. <sup>196</sup> We model the GDP per hour worked for this cohort as being only 0.9 of the productivity of the economy as a whole. This is equivalent to increasing the labour supply by 1.33 per cent though depressing the productivity of these additional workers by 10 per cent. This results in a 7 per cent increase in labour force participation rate for the 60 to 69 cohort.	\$25 billion
9	Female workforce participation	We model an increase in the female labour force participation rate from Australia's current level to that of Canada (62.4 per cent). We account for long-run trends on hours worked, part-time rates, and GDP per hour, and allow for female workers working in jobs with less productivity growth.	\$25 billion
10	Youth workforce participation	We model an increase in labour force participation in the 20-24 year old cohort of 9 per cent and an increase for the 15-19 year old cohort of 5 per cent. This would close the gap in participation rates between the 20-24 year old cohort and the workforce as a whole, and halve the gap between the 15-19 year old cohort and the whole workforce. We account for the lower productivity of younger workers compared to older workers.	\$2 billion
11	Tax mix reform	We model: <ul style="list-style-type: none"> <li>• \$31 billion in additional revenue raised from broadened GST coverage, with \$14 billion returned as increases in the tax-free threshold for income tax; \$14 billion returned as a decrease the corporate tax rate; and a \$3.2 billion increase in welfare payments. The income tax and welfare payments changes offset the negative welfare effects of a broader GST. As the GST is a more efficient tax than income and corporate taxes,<sup>197</sup> the result is a GDP increase of \$20 billion.</li> <li>• Replacing stamp duty with land tax. We take the average excess burden of stamp duty (0.31) less the marginal excess burden of land tax (0.08)<sup>198</sup> and multiply it by projected stamp-duty collections of \$20.3 billion.<sup>199</sup> The result is a GDP increase of \$5 billion.</li> </ul>	\$25 billion
12	Federal financial arrangements reform	Not applicable	Not applicable

<sup>196</sup> Headey, *et al.* (2010) provides the basis for the calibration of our model; though they do not model exactly the same policy position as us, they do provide some guidance about the likely effects of pushing back retirement and superannuation preservation ages.

<sup>197</sup> KPMG Econtech (2010)

<sup>198</sup> Ibid.

<sup>199</sup> Based on Treasury (2010a)

	Issue	Method	Impact on GDP in 2022 (in \$2010)
13	Road congestion	Road congestion has not increased since 2005. We assume no increase in congestion from 2005 to 2022, and model a reduction in avoidable congestion by 20 per cent, based on the experience of Stockholm. <sup>200</sup> The 2005 cost of avoidable congestion <sup>201</sup> is converted into 2010 dollars using GDP deflator. <sup>202</sup>	\$2 billion
14	Transport infrastructure	Infrastructure Australia assessments between 2009 and 2012 suggest that it is unlikely that more than \$10 billion of new positive cost benefit projects will be sufficiently prepared to proceed each year; <sup>203</sup> given that roughly this amount is already being funded, there is no foreseeable productivity improvement from further investment.	Nil
15	Land freight	We model a 5 per cent improvement in road transport productivity arising from a direct user charging system for heavy vehicles, leading to a 0.25 per cent increase in GDP. <sup>204</sup>	\$5 billion
16	Urban water management	Most productivity improvements for water come from the ratio of sales to capital. As there have been very large recent investments in capital infrastructure, and the long-run future policy challenge is to reduce demand for urban water, there is no significant scope for policy-induced productivity improvements before 2022. Pricing and governance reforms will not provide significant productivity increases.	Nil
17	Electricity network costs	We model a one-third reduction in network costs as (assumed) non-productive investment for next 10 years with no effect on output. <sup>205</sup> We assume this leads to increased investment elsewhere or an improved external position, and so more productive capital (or less debt). We use a perpetual inventory model with depreciation rate of 5 per cent to calculate the increase in productive capital, then multiply this by the long-run output-capital ratio (constructed from the ABS's Modellers' Database <sup>206</sup> ), which exhibits no time trend.	\$6 billion
18	Early childhood development for children in need	Children under five in 2012 will not be in the labour force by 2022, so no productivity gain can be expected from improved early childhood education and care.	Nil

<sup>200</sup> Daley (2011)

<sup>201</sup> Bureau of Infrastructure, Transport and Regional Economics (2007)

<sup>202</sup> ABS (2011e)

<sup>203</sup> Based on Grattan Institute analysis of Infrastructure Australia (2009); Infrastructure Australia (2010); Infrastructure Australia (2011a) and project websites

<sup>204</sup> Productivity Commission (2006b)

<sup>205</sup> See Australian Energy Regulator (2011), p. 62

<sup>206</sup> ABS (2011a)

	Issue	Method	Impact on GDP in 2022 (in \$2010)
19	School system performance	We model a long-run improvement in Australian average PISA scores to the same level as Shanghai, assuming this takes 20 years in total, and that a 1-standard deviation (100 point) improvement to average PISA scores improves the long-run growth rate of the economy by 1.74 per cent. <sup>207</sup> However, as reforms take a long time to roll out, and as only a few students who benefit from reforms will be in the labour force in 2022, the total effects in 2022 are small.	Under \$1 billion
20	Vocational education and training system reform	The Productivity Commission projects that recent policy changes will increase in Australia's VET qualification profile by 62,500 qualifications per year at Certificate III and above, which is above the historical trend. We model new policy settings, doubling this projected rate of increase from 2014 (to 125,000 additional qualifications per year), and determine the GDP impact of an additional 375,000 qualifications by 2020 beyond those projected to be achieved from current policy settings, based on Productivity Commission assumptions. <sup>208</sup>	\$10 billion
21	Higher education system performance	We model a reduction in government subsidies to the higher education system by 20 per cent with no effects on output, with savings delivered as income tax cuts. We also model the effects of improving teaching quality by 10 per cent by analogy to school teaching quality reforms, assuming full pass-through to worker productivity.	\$4 billion
22	Disease prevention	A comprehensive study of potential preventative health measures <sup>209</sup> found that the most cost-effective reforms would save \$0.75 billion in 2022 via a combination of reduced intervention costs and health cost offsets. We model delivering these savings as income tax cuts. Other potential savings from disease prevention, such as reducing the economic impact of obesity, may have large long-run effects but will not significantly change GDP in 2022.	Under \$1 billion
23	Health system reform	Improving the efficiency of the Australian health system to match the best in the world would provide savings equivalent to 0.5 per cent of GDP. <sup>210</sup> We model this improvement as a simple un-doing of the inefficiencies identified. As it is unclear whether the inefficiencies are in the private or public systems, we do not model them as tax-cuts, presenting instead only the savings as potential GDP increases.	\$9 billion
24	Ageing population health care reform	By 2022, the effect of the demographic shifts of ageing (as distinct to the cost shifts due to improvements in medical technology or population) will account for about 5 per cent of health spending. <sup>211</sup> We model improving efficiency in this marginal health-care provision by 20 per cent, and delivering the savings as income tax cuts.	Under \$1 billion

<sup>207</sup> This is an adapted version of the model used in Jensen (2010)

<sup>208</sup> Productivity Commission (2012a)

<sup>209</sup> Vos *et al.* (2010)

<sup>210</sup> OECD (2010a)

<sup>211</sup> Treasury (2010b)

	<b>Issue</b>	<b>Method</b>	<b>Impact on GDP in 2022 (in \$2010)</b>
25	Security spending	We model a 20 percent reduction in non-defence security spending (currently approximately \$1 billion p.a. <sup>212</sup> ) with no effect on security outcomes. We add reduced time at airports of 15 minutes per passenger costed at a GDP of \$76 per hour (2010 dollars) for 56 million air passengers per year (current passenger numbers <sup>213</sup> grown at current growth rate).	\$1 billion

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<sup>212</sup> Yates (2012)

<sup>213</sup> Bureau of Infrastructure, Transport and Regional Economics (2012)

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