

Crying poor? The affordability of defence expenditure

by Mark Thomson

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The next Defence White Paper will tell us how much money the government plans to spend on defence. But because the life cycle of defence assets routinely extends to three or four decades, the resulting plan will entail (explicit or otherwise) assumptions about defence expenditure decades hence. For this reason, the long-term ability of the economy to sustain the envisaged levels of defence expenditure needs to be confirmed.

Conventional wisdom holds that Australia faces daunting fiscal pressures in the decades ahead due to its aging population and the rising cost of health care and other social services. The general argument appears in the 2003, 2007 and 2010 Intergenerational Reports (IGR)¹ produced by the Treasury and its potential implications for defence spending were outlined by the then Treasury Secretary in 2005². However, it's argued below that IGR-style fiscal analyses are a poor basis—even on their own terms—for constraining defence spending. More importantly, it's further argued that any analysis that focuses primarily on fiscal matters must, by its very nature, fail to address the more important question of making efficient use of taxpayer dollars.

The fiscal argument

In its three successive intergenerational reports, the Treasury has combined long-term demographic and economic projections to estimate the federal government's fiscal balance out 40 years—that is, the difference between projected Commonwealth revenues and expenditure. The specific results vary from version to version as a result of revised parameters and policy changes in the intervening periods. For present purposes, what matters are the broad results and overarching assumptions embedded in the approach. These are surveyed below in terms of the most recent IGR.

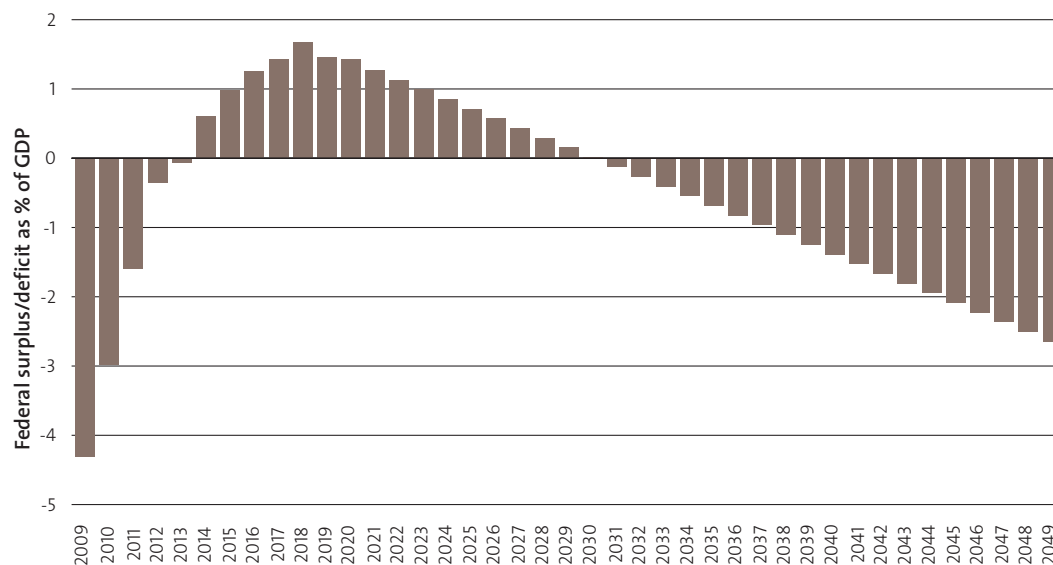
Like its predecessors, the 2010 IGR projected the cost of maintaining existing government policies for the subsequent forty years. Due to shifts in the demand for services (due to demographics) and real cost increases in some areas (particularly health), the 2010 IGR projected that federal expenditure will grow from 22.6 to 27.1% of GDP between 2014 and 2049 (the choice of 2014 as base year allows the transitory effects of the Global Financial Crisis to be avoided). On the assumption that future federal governments maintain a tax-to-GDP ratio of 23.5% (the historical average since the introduction of

the GST), the 2010 IGR then calculated the projected fiscal gap each year between 2009 and 2049. The result appears in Figure 1.

Specific factors that are expected to drive the fiscal balance into deficit post-2030 include a rise in health expenditure from 3.9 to 7.1% of GDP between 2014 and 2049; a rise in aged care spending from 0.8 to 1.8%; a rise in payments to individuals from 6.5 to 6.9%; and a rise in education expenditure from 1.7 to 1.9%. In Treasury's modelling, defence spending is assumed to remain around 2% of GDP.

Whatever the causes, a prolonged period with a steadily rising fiscal deficit like that projected by the IGR is undesirable. Even though many of the additional costs associated with an aging population will eventually pass as the cohort dies away, the accumulated debt and ongoing interest payments will impose a burden on future taxpayers. The clear implication of the IGR analysis is that we should be exploring alternative policies to alleviate the projected fiscal imbalance. It is beyond the scope of this short paper to explore the full range of options for doing so, except to note that spending reductions, tax increases and microeconomic reform (to boost productivity and/or participation) all have the potential to play a part, as might a sovereign wealth fund to carry forward medium-term surpluses to cover long-term costs.

Figure 1: Federal budget projections 2009–2049



Source: 2010 IGR, Chart 3. Note: 2009 = 2009–10 etc

Let us assume for the moment that, for whatever reason, the assumption of a fixed tax-to-GDP ratio represents sound policy. And let us further assume that options to enhance economic growth have been fully exhausted and yet a structural deficit remains. This would leave spending reductions as the only means available to restore fiscal balance. Faced with such a situation, defence spending would warrant special consideration; not because it is intrinsically more important than other areas of expenditure, but because it is one of the very few areas of spending which delivers something close to a public good.

Public goods (such as national defence and fresh air) are by definition non-excludable; once they are provided, no one can be excluded from enjoying them. For this reason, they are unlikely to be provided by the private sector apart from through acts of social responsibility. To understand why this matters, consider what happens if the government cuts expenditure in one of the many areas where

it provides private goods such as health or education to individuals. For every dollar withdrawn by the government, individuals will spend some of their own money to at least partially restore the level of service previously provided (with the added benefit of more discerning consumption and probably more efficient provision of those services). In contrast, every dollar withdrawn from defence results in exactly one dollar's worth less defence because individuals are unable to purchase defence from private sources.

Irrespective of the peculiarities of defence as a public good, the underlying assumption of a fixed tax-to-GDP ratio warrants attention. As it happens, Australia's tax-to-GDP ratio including all levels of government (which is what matters economically) is low (27.1%) by international standards, ranking 28th out of 33 OECD countries³. Moreover, many countries manage to maintain competitive economies and high standards of living with much higher levels, including Denmark (48.2%), Sweden (46.4%) and Finland (43.1%). Especially if we adopted reforms that made our tax system more efficient (i.e. reduced its excess burden), it would not be an economic catastrophe if taxes were to rise. In fact, in 1965 Australia's tax-to-GDP ratio was just below 21% but has risen roughly in tandem with the growth of our economy since then⁴.

Part of the explanation for the wide variation in tax-to-GDP ratios is that it depends on the demarcation between the public and private provision of services to individuals. Around the world, countries choose to draw the line between the public and private provision of services differently—not just in areas such as health and education, but also in terms of retirement income and aged care. The relative economic efficiency of the different arrangements depends as much on the details of implementation (including the regulatory schemes applied to private provision of services) as it does on the public-private demarcation. It makes no sense to pick a particular tax-to-GDP ratio and assign to it a privileged position.

The reality is that future Australians will, on average, be much better off than we are today and therefore able to sustain public goods (such as defence) and social services (such as health and education) with relatively less acute opportunity costs to their own private consumption. This is true irrespective of the extent to which the latter are delivered by the government. The 2010 IGR estimated the future size of Australia's economy by combining projections of population, participation rate and labour productivity out to the mid-century. Despite an anticipated fall in labour participation, expected strong population growth and steady productivity increases are projected to deliver an almost 3-fold increase in real GDP between 2009 and 2049. In terms of per-capita—a rough measure of individual prosperity—the result is a 79% real increase from \$59,986 in 2009 to \$107,344 in 2049 (both figures are expressed in 2009–10 dollars). Curiously, the IGR is shy about revealing this good news, preferring instead to talk about economic growth in terms of average annual changes, with graphs of cumulative changes reserved for conveying the rise in the cost of social services. There is no doubt that, throughout the period covered by the IGR, Australians will be able to enjoy an expanded combination of private consumption, social services and public goods. We simply have to decide how we are going to take advantage of our prosperity.

Even from a narrow fiscal perspective, Australia is better placed than almost any other developed economy to move into the decades ahead. We have very modest public debt by international standards, relatively more favourable demographics than any country apart from the United States, and we were early adopters of self-funded retirement thereby avoiding the massive unfunded pension liabilities that many other countries have. The faux fiscal crisis presented by the IGR is confected by fixing the tax-to-GDP ratio and downplaying the latitude to shift expenditure from public to private provision of private goods.

Of course, all other things being equal, it would be better to have lower levels of taxation than otherwise. Taxation distorts the efficient allocation of resources and reduces the total wealth available. In effect, each dollar taken by the government in taxation imposes a cost. So why do countries maintain tax-to-GDP ratios far in excess of that necessary for delivering public goods which, as we've seen, cannot practically be provided otherwise? It's because they assess that there are benefits to be had which outweigh the costs. While it is undeniable that these benefits sometimes accrue to narrow vested interests of various sorts, it is also true that taxation (and the government spending it enables) often delivers widely dispersed benefits that are valued by society as a whole. And this brings us to the essential point about the 'affordability' of defence spending based around fiscal considerations; it misses the point entirely.

It matters not at all whether spending on defence can be shoehorned within some arbitrarily chosen tax-to-GDP ratio. The proper question is whether spending on defence delivers greater benefit than the alternatives—be the alternatives better social services, greater private consumption through reduced taxation, or symphony orchestras on every street corner.

The economic argument

In economic terms, the criterion for the efficient level of defence spending is as easy to state in principle as it is difficult to determine in practice. Spending on defence should be set to the point where the marginal benefits of additional spending equal the marginal costs, that is, the opportunity cost of using those resources for other purposes⁵. Or, in plain English, we should spend only so much on defence as delivers us a net benefit greater than the alternative uses of the money. Think of it this way; government spending amounts to a series of investments into such things as defence, education, health, arts and infrastructure. The goal should be to allocate resources across these competing alternatives so as to maximise the return on investment (i.e. to gain as much benefit as possible). Such an allocation is said to be efficient.

This is not to suggest that fiscal considerations are irrelevant, they are not. Rather, factors such as the deadweight effect of taxation, and even the impost of servicing debt, are costs that need to be taken into account in assessing the benefits promised by defence expenditure. Provided that the benefits outweigh the costs, there is room for higher defence expenditure; equally, if the costs of current defence spending exceed the benefits, then defence spending should be cut.

Setting arbitrary boundaries on the allocation of resources—by, for example, adopting a fixed tax-to-GDP ratio—constrains the range of possible solutions to such a narrow set as to make it all but inevitable that a large number of more efficient allocations are excluded. Moreover, even were such an arbitrary boundary adopted, the underlying principle should be the same: defence spending should be increased if its marginal benefit exceeds its marginal cost (which now includes the foregone opportunity to spend that fixed volume of tax dollars on things other than defence) and only reduced if its benefits at the margin fall short of its costs⁶.

Equally, approaching defence expenditure as an entirely demand-driven exercise is unlikely to deliver an efficient outcome. It is sometimes argued that defence planning is a matter of determining what it takes militarily to defend Australia and its interests and passing the bill along to the taxpayer who then pays in full. Unless the benefits of defence clearly outweigh all possible alternative uses of the resources so allocated, the result will be inefficient.

Sometimes, in the past at least, it has been a reasonable working assumption that the benefits of defence are sufficiently high for such an assumption to be accepted.

That's why in 1942, at the height of WWII, Australia diverted 37% of its gross national expenditure into its military effort, severely restricting private investment and constraining private consumption⁷. But with the advent of nuclear weapons rendering a return to industrial-age total war so unlikely as to be safely ignored, defence expenditure must be set on the basis of a careful balancing of benefits and costs.

Reaching a judgment on the efficient level of defence spending for Australia given its present circumstances and outlook is a question for another day and a topic for a longer paper. Instead, we conclude with some overarching comments about the nature of the problem.

The benefits of defence expenditure come in the form of avoiding possible future costs, either by reducing the likelihood of armed conflict through deterrence or by reducing the cost of conflict should it occur—armed conflicts impose costs on both sides with the vanquished typically (though not always) incurring a higher final cost.

Thought about this way, the benefit of a given level of defence expenditure is the difference between the costs incurred with and without that level of spending. As a result, the question to be asked about defence spending is: would an additional dollar spent on defence save us more than a dollar in present value of added costs in future, taking account of risks? Given that indicative levels of defence spending are around 1.5 to 2.0% of GDP per annum (equivalent to roughly \$22 to \$30 billion) this is a demanding criterion.

There is no good reason why the explicit likelihood and consequences cannot be estimated for the range of contingencies upon which defence plans are based. While such an approach would not enable the efficient level of defence spending to be 'calculated', it would impose a robust discipline on discussions about the costs and benefits of alternative roles (and consequent force structures) for the ADF and the net benefits that may or may not accrue as a result. What, for example, are the envisaged marginal benefits of an additional six submarines? In what sort of possible contingencies will the cost of six additional submarines be manifested in a reduced net cost, i.e. a benefit? What future costs, in terms of possible contingencies, are forestalled by maintaining eight rather than six infantry battalions? Are the forestalled costs greater or less than the cost of the additional two infantry battalions?

To not ask these sorts of questions is to abandon the allocation of billions of dollars to the heuristic judgements of advisors with vested personal and institutional interests.

Conclusion

Australia is and will remain a prosperous country. The absolute affordability of defence expenditure at the levels proposed by even the most hawkish advocates is not an issue. But prosperity is not an excuse for profligacy, each and every dollar allocated to defence should be justified on the basis of providing superior benefit to the available alternatives.

Notes

- 1 Department of the Treasury, *Intergenerational Report*, Australian Government Canberra, 2003, 2007 and 2010.
- 2 Ken Henry, 'Australia's defence to 2045: The macro-economic outlook', *Defender*, p.19-24, Spring, 2005. See also, Mark Thomson, 'Guns or butter', *Defender*, p.18, Summer, 2005-06.

- 3 As reported in the 2011-12 *OECD Factbook*. Note, however, that some of the gap is an artefact of the way in which superannuation is accounted due to differing national approaches.
- 4 Tables accompanying the 2007 *OECD Factbook*.
- 5 There is nothing new or novel about this approach. The efficient allocation of resources through cost-benefit analysis was first championed by the Treasury in the mid-1960s. See Greg Whitwell, 'Defence Expenditure and efficient resource allocation 1963-67', Chapter 6, *The Treasury Line*, Allen & Unwin, Sydney, 1986.
- 6 If the government is budget constrained, so that it cannot undertake all projects whose benefits exceed their costs, then there are two possible approaches. (1) It can undertake all projects whose net benefits per unit of outlay exceed a threshold set so as to exhaust the budget (note however this assumes all projects are divisible; if they are not, the optimisation is more complex, because you have integer constraints); or (2) increase the discount rate to reflect the higher opportunity cost of outlays (though this tends to penalise long lived as compared to quick pay back programs).
- 7 S.J. Butlin and C.B. Schedvin, *Australia in the War of 1939-45: War Economy 1942-1945*, Australian War Memorial, Canberra, 1977, p.340.

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