

# Submission to the Senate Inquiry into Productivity

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Productivity submission

# Summary

Productivity has to do with output per unit of input. Most definitions refer to output/s per unit/s of input/s. This sounds rather simple and suggests we should be able to say some sensible things about productivity. However, the first complication is that we are rarely interested in productivity itself but how it has changed over time, productivity *growth* is what the debate has really been interested in.

In this submission we make many observations. Our early themes have to do with the meaning of productivity and the problems with its measurement. Our general warning is that productivity is something that should be handled with care. When GDP is the output measure we need to be aware that GDP is dominated by services in which output itself is hard to define, let alone productivity itself.

Discussions of productivity in Australia are impossible without mentioning the Productivity Commission. This body has made a major contribution to economic policy in Australia, but we have a number of major concerns about its work. In particular the Productivity Commission uses an implicit or explicit economic model which usually comes out in favour of leaving it to the market. However, economic theory is pretty clear in specifying that the conditions necessary to say that the market solution is optimal are very restrictive. Almost no industry passes the first necessary condition, that there are a large number of producers. Moreover, their economics is based on comparative static movements from one equilibrium to another, a method particularly ill-suited to the dynamic events which may influence productivity.

We discuss waste in the public sector. Just as we all have a stake in the improvement in living standards that can come about as a result of investments etc which lift output per head so we have an interest in anything that detracts from output per head. Waste includes those investments that turn sour and also includes increases in unproductive labour such as sales and marketing efforts that try to switch customers from one provider to another for non-price reasons. Large middle managements that do not reflect best practice come into that category.

We also discuss public infrastructure which can be highly productive without being commercially rewarding in which case resource constrained state governments may under provide.

Wages and productivity are a major theme of our submission. The conventional wisdom seems to be that productivity has to increase before wages can increase. We contend that this puts the cart before the horse. Productivity improvement is really just another way of saying "labour saving". If we ask why a business would invest in labour saving we would look

at the incentive to do so. Mainstream economics makes it clear that the factor proportions (labour and capital) in production will reflect the relative costs of labour versus capital. The higher are wages then the bigger incentive to replace labour with capital. Yet business interests who say they favour productivity growth insist that wages should not increase – the very thing that would drive them to invest in labour savings. Business groups mention the difficulty in meeting higher wage costs, but that is the very thing that will drive productivity growth.

Another feature that is ignored in most Australian discussion is the role of aggregate demand. Strong aggregate demand is associated with strong productivity growth, especially in manufacturing. This has come to be known as Verdoorn's law.

Company tax has been raised a lot in the productivity debate with many of the participants arguing that lower company taxes raise investment and higher investment raises productivity.

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# Introduction

On 4 November 2025, the Senate resolved that the Select Committee on Productivity in Australia be established with submissions by 20 February 2026. The terms of reference were:

That a select committee, to be known as the Select Committee on Productivity in Australia, be established to inquire into and report on:

- a. the history of productivity growth in Australia in both multifactor and labour terms;
- b. objectives for a multi-decade national settlement strategy to achieve a more balanced distribution of population between cities and regional Australia, with a view to enhancing economic resilience, productivity and social cohesion;
- c. the current position and opportunities to gain productivity growth;
- d. conflicts of interest and structural barriers to sustainable growth;
- e. the efficacy of federal competition law;
- f. opportunities for the states and territories to drive growth;
- g. the impact of regulatory tax burdens on productivity growth;
- h. the impact and opportunity of technology;
- i. priority opportunities in the market and non-market sectors for productivity growth;
- j. Australia's competitiveness and benchmarking against similar nations; and
- k. any other related matters.

We are pleased to make a submission to the Senate on these topics because we know the Senate will receive many submissions from academic and government sources that repeat the lessons of orthodox or mainstream economics. They are unlikely to point to the many failures of “neoliberalism” which is the policy response of people imbued with mainstream economics. Mainstream economics is more like an ideology than an evidence-based discipline. Faith in the teaching of mainstream economics explains why economists prefer the private market despite, to name a few high-profile examples:

- A failed history of trying market competition in banking at least since the 1844 NSW upper house inquiry into monetary confusion,

- Continued attempts by government to introduce market results in power generation despite failures of private ventures to perform since colonial times and the invention of electricity and,
- The perverse incentives toward fraud that operate when relying on private operators such as with the NDIS.

These examples and a host of others have important implications for economic activity generally and productivity in particular.

A lot of this submission will focus on the application of policies with productivity in mind. But first we should point out that the question of productivity encounters serious definitional and measurement issues. We begin with a discussion of labour productivity. Labour productivity is, or should be, the measure that most closely correlates with living standards.

Productivity is a massive topic and our submission in many ways just scratches the surface. However, we are happy to follow up this submission and are prepared to answer any questions the committee may have.

# The concept of labour productivity raises difficulties.

**Labour productivity** is a measure of output divided by the labour input. That sounds simple enough.

**Productivity growth** is a measure of the percentage increase in output divided by the percentage increase in the labour input. In practice you might measure productivity growth by the increase in output per unit of labour. This figure is published by the Australian Bureau of Statistics every quarter. However, the first definition, change in output divided by the change in labour input, reminds us that productivity growth may well conflict with other goals such as high employment growth. So when employment growth is relatively high it may drag down productivity growth. Australia's recent experience has been one of relatively high employment growth but stagnant productivity growth. Employment growth has not been sufficient to prevent unemployment drifting up, but the important thing is that productivity growth may not be an unambiguously good thing if it is at the expense of employment growth. Indeed, recently the employment growth has been concentrated in public health and other services which may be valued more than productivity itself. (Later we deal with public sector productivity growth issues.)

**Multifactor productivity (MFP) growth** has been proposed as a measure which accounts for not just labour but also capital inputs into production. We discuss this in further detail below. Suffice it to say for the moment that the MFP concept is fraught with so many problems that we are better off ignoring it.

## Measuring output

There are problems with such a simple concept as measuring output. If we cannot get that right, then we cannot put a lot of trust in any of our productivity measures.

Unfortunately, it is often difficult to measure output in such a way that we can determine if it has increased over time. We know a car today is qualitatively better than a car 50 years ago but how do we quantify that. If we just measure cars produced per unit of labour, then we just ignore quality issues. Arguably a recent Productivity Commission report that looked at houses produced per units of input did just that when it ignored the market move towards producing bigger and "posher" housing.<sup>2</sup>

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<sup>2</sup> Smee B (2025) "Australia building half as many homes for every hour worked compared with 30 years ago, Productivity Commission finds", *The Guardian*, 17 February.

Other services are even harder to measure. Consider the value added in the finance sector which is worth \$200.4 billion or 7.7% of all gross value added in Australia.<sup>3</sup> But how do we even define what it is that the finance sector produces. Output of the finance sector defies defining in any meaningful sense that provides something that can be measured. In other cases, the national accounts include outputs that are not produced such as the gross operating surplus due to the ownership of dwellings. It is nonsense to include that in output measures. On the other hand, the output fails to take account of externalities such as the negative impact on Australia's welfare due to pollution including greenhouse gas production which is a by-product of much of Australia's economic activity, including of course, household consumption.

At the industry level we could use value added as a measure of output. Value added is the value of sales minus the value of inputs (electricity, raw materials etc) used to manufacture the items sold. However, value added in an industry can reflect monopoly power. If, for example, the banking industry colluded to increase their returns without any other changes, then total profit would increase, value added would increase and so output per worker in finance would appear to increase. Putting this simply, productivity measures are influenced by market power and so cannot be a pure measure of productivity itself. Effectively productivity measures would be valid only if there were very competitive industries and we could be sure that measured productivity reflected only increases in output.

As an aside, the CEO of the National Australia Bank, Andrew Irvine, received a lot of media coverage as this was being written. He is reported as warning that "How we're living now in 2026 is, frankly, as good as it gets, unless we lift productivity."<sup>4</sup> How we are living now presumably refers to living standards or, output per capita. Productivity is output per head so in an important sense what Andrew Irvine said was trite. Unless we lift output per head output per head will not rise. He may well have had more than that in mind but all of a sudden the word "productivity" gets immediate attention and the speaker commands a certain reverence. Litter the word "productivity" in your comments and you appear much more profound. We think productivity has more importance attached to it than it should.

## Recommendations

**That the Senate note that actual measures of productivity are subject to measurement difficulties which suggests we should be suspicious of any empirical results that may be produced. Productivity measures tend to use national accounting data but that can lead to problems.**

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<sup>3</sup> ABS (2025) *Australian system of National Accounts, 2024-25*.

<sup>4</sup> Chanticleer (2026) "NAB boss warns this could be 'peak Australia'", *Financial Review*, 19 February.

## Distributional factors

Some of the discussion can be clarified with a little algebra. In a simplified economy we can write output  $O$  equal to the national wages bill  $W$  plus the gross operating surplus  $\Pi$ . So

$$1) \quad O = W + \Pi$$

The wages bill can be broken down to the wage rate times the employed labour force  $L$  so that

$$2) \quad W = wL$$

The gross operating surplus can be broken down to the rate of return on capital  $r$  and the capital stock  $K$  so that

$$3) \quad \Pi = rK$$

Now output can be written as

$$4) \quad O = wL + rK$$

Each of these things change with time and we can take the total derivative of output with respect to time as

$$5) \quad \frac{dO}{dt} = \frac{dw}{dt} \cdot L + w \cdot \frac{dL}{dt} + \frac{dr}{dt} \cdot K + \frac{dK}{dt} \cdot r$$

Now labour productivity is the proportionate change in output minus the proportionate change in the labour force, so

$$6) \quad \frac{dO}{dt} - \frac{dL}{dt} = \frac{dw}{dt} \cdot L + (w - 1) \cdot \frac{dL}{dt} + \frac{dr}{dt} \cdot K + \frac{dK}{dt} \cdot r$$

Equation 6 is the messy equation we obtain as the total derivative of output broken down into its components. But equation 6 makes it clear that measured labour productivity is made up of a number of distributional factors as well as being a function of labour and capital inputs.

So far none of this really tells us anything. It is simply a mathematical manipulation of things that are *true by definition*. The left-hand side of equation 6 is taken to be a measure of labour productivity. But the right-hand side of equation 6 shows that much more is involved. Distributional factors are important, for example. Increases in wages and increases in profit rates are also explanatory factors in equation 6. So, for example, profit push on the part of business will produce an apparent increase in productivity due to the increase in the left-hand side of equation 6.

### Recommendation

**The Senate note that productivity measures are influenced by more than just those technological factors that increase output per head. As far as we are aware Australia does not produce productivity measures that are immune from these and other contaminations.**

## Foreign ownership

An important qualification that deserves its own heading is the role of foreign investment. So far, we have assumed, subject to the earlier qualifications, that GDP is the appropriate measure of output. However, GDP measures everything produced in Australia whereas we are interested in productivity as an indication of the level of and changes in living standards for Australian residents. For that reason, we should concentrate on gross national product, (GNP) which measures the output and hence income that can be attributed to Australian residents.

### Recommendation

**The Senate note that GDP is not a good measure of Australian income/product and that GNP is a more appropriate measure of output in so much as it better reflects production and income due to Australian residents. The Senate should recommend that the ABS produce productivity estimates that use GNP and make adjustments for the various other issues we have identified.**

During this submission, we will outline a number of other problems with the concept of productivity. Also, we will discuss things that may be inhibiting productivity growth.

## PROBLEMS WITH MULTI-FACTOR PRODUCTIVITY (MFP)

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This section is based on: Richardson and Toner (2025) *Productivity: A short note*<sup>5</sup>.

Productivity is a problematic concept when it is just confined to labour productivity in the context of various goods and services produced by various categories of labour. However, the problems compound when it comes to MFP. The attached paper outlines some of those problems.

It should be added that the concept of productivity is bad enough, but the concept of multi-factor productivity compounds the problems enormously. As an example of how quality adjusted measures distort things we need only compare the national accounts measures of investment as a share of GDP.

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<sup>5</sup> Richardson D and Toner P (2025) *Productivity: A short note* at [https://www.ppesydney.net/content/uploads/2025/04/Richardson-and-Toner\\_Productivity-a-short-note.pdf](https://www.ppesydney.net/content/uploads/2025/04/Richardson-and-Toner_Productivity-a-short-note.pdf)  
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We can give an example. In 2023-24 private business investment was 12.0% of GDP using current prices and 11.9% using chain volume measures. But in 1985-86 business private investment was 13.8% using current prices and only 6.2% using chain volume measures.<sup>6</sup> The difference is easily explained as a result of technology increasing much more rapidly for investment goods, machine tools and the like, than for the other goods and services which constitute GDP as a whole. That means when we look at a particular investment in 1985-86 and value it in today's equivalent it will be heavily discounted. Valued by today's standards, a computer back then would be given a trivial value now. That is an extreme case but makes the point. By depreciating the investment and capital stock in the past we start from a much smaller capital stock base which means the capital stock appears to grow very rapidly compared with the economy as a whole. So it appears that more and more capital is needed to produce a unit of GDP. The result is that capital productivity and MFP look very low if not negative. And the reason is simply because the technology that increases productivity has already been used to adjust for the capital stock in different years leaving nothing to contribute to productivity growth. These doubts about MFP are important since business groups suggest low MFP is an excuse for low wage increases for workers. ACCI for example in one national wage review submission said: Given the weakness of MFP and labour productivity growth in recent years, with both MFP and labour productivity contracting in 2018-19 and remaining anaemic in 2019-20 and 2020-21, an undue or inflated increase in minimum and award minimum wages cannot be justified.<sup>7</sup>

On 19 February the Productivity Commission released its annual productivity report which found "capital productivity in Australia has fallen by more than 18% since 1995".<sup>8</sup> We do not believe that at all. It just goes to show our point that if you discount old capital because technology has improved then you will find capital is increasing quite rapidly with technical progress because the more recent capital stock is given a higher weight. And if the resulting capital index is used to compare output with capital input then it is no wonder you get negative capital productivity. The result in MFP terms is not a proper measure of productivity because the better capital goods have already been assumed away in the input measure.

Overall, we think that the experiment with MFP has raised more problems than it is worth and, frankly, MFP measures are worse than nothing.

## **Recommendation**

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<sup>6</sup> Figures calculated from ABS (2024) *Australian System of National Accounts, 2023-24*, 25 October. In 2022-23, the base year, both measures are equal.

<sup>7</sup> ACCI (2022) *2021-22 Annual Wage Review First Submission of the Australian Chamber of Commerce and Industry*, at <https://www.fwc.gov.au/documents/wage-reviews/2021-22/submissions/acci-sub-awr2122.pdf> p 2.

<sup>8</sup> Productivity Commission (2026) *Annual productivity bulletin 2026* at <https://assets.pc.gov.au/2026-02/productivity-bulletin-2026.pdf?VersionId=uK.movqfjt4NGeQurezDCI38rgHXsYFq>

**While acknowledging that ordinary labour productivity measures have many problems the Senate should note that the problems with multifactor productivity are infinitely worse and render the concept unfit for purpose.**

# Productivity Commission's views

It is important to note that the Productivity Commission has an almost complete monopoly of official advice on matters to do with productivity. Given its resources it is able to outgun all other sources of advice in this area.

It is worth noting that Australia once had a healthy competition among official sources of information on economic policy. We had the Industry Assistance Commission, the Economic Planning and Advisory Council, and the Bureau of Industry Economics. Now, unfortunately, economic policy advice is pretty well confined to the Productivity Commission (PC) which was formed by combining all the earlier agencies in 1998 under the Howard Government. While having a monopoly on advice the PC tends to preach competition for the rest of Australia.

It is fair to say that the thinking behind the PC's work is that, generally, competition should be relied upon to produce optimal outcomes and that a laissez faire approach involving minimal government intervention is to be preferred. The economics behind that is the neoclassical or neoliberal position that says the market can be relied upon to produce the best outcome. Customers register their interest in the production of goods and services by expressing a willingness to pay and producers attempt to meet that demand. Rip offs are avoided by competition among producers which is supposed to reduce prices and so ensure production is efficient in the cost of resources it uses. Government intervention should be confined to circumstances in which there are serious "externalities" or market failures to be addressed. Examples of externalities are goods or "bads" that affect other people but are not included in the price system. These include the benefits orchards provide to beekeepers but also may include a factory that discharges waste into a stream and so pollutes the water for downstream users. Having admitted government intervention in the case of externalities there is also the warning of government failure that might be just as bad as market failure.

One of the rare cases in which the PC (or at least its predecessor in this case) recommended an expanded role for government was its report into Research and Development which was regarded as a positive externality.<sup>9</sup> By leaving it to the market insufficient R&D was performed because the R&D sponsors could not capture all the benefits of their spending. Another example was the NDIS which was recommended to counter a major market imperfection—the absence of non-government insurance against adverse life chances that affect participation in the economic and social life enjoyed by the rest of the community.

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<sup>9</sup> Industry Commission (1995) *Research and Development, Report no. 44*.  
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The upshot is that on most issues the PC is likely to argue for a minimal role for government and the elimination of as much regulation as possible. Hence, we see recommendations to the effect that company tax should be reduced and the labour market deregulated.

Rarely do the PC spell out the conditions necessary to be able to conclude that the market gives the best outcome. We address that issue in the next section. Before doing so we should make the point that based as it is on mainstream neoclassical/neoliberal theory, the PC's arguments generally are about achieving static efficiency according to the mainstream thinking. Mainstream economics is ill suited to understanding the dynamics of markets when they are characterised by disequilibrium and an unknown future characterised by unforeseen technical progress, new products, new processes and shifting global centres of gravity.

This is an extremely important point. Mainstream economics can point out how society's resources, capital and labour in particular, can be organised to best meet the needs of consumers. Consumer is king in this theoretical world and, unless there is some shock to the system, the system will continue unchanged over time.

But the system is continuously being shocked with roughly 2% per annum increases in the labour force and continuous increases in the capital stock, not to mention such things as upheavals in raw material prices and availability. A system in continuous change and forever expanding needs a dynamic theory and appreciation of the systems approach to evolving economies. This is not the place to go into the details of alternative approaches to economics other than to note that the neoclassical/neoliberal approach is something of a dead end.

### **Recommendation**

**The Senate note that the work of the Productivity Commission relies on mainstream economic theory which is very unsuited to studying the dynamics of productivity.**

## **CONDITIONS NECESSARY FOR THE NEOCLASSICAL/NEOLIBERAL MODEL TO WORK.**

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In this section we outline the many conditions required before it can be argued that the market gives the best result. In going through this list of criteria an attempt is made to explain why each is important. It has to be clearly understood, an outsourcing and contracting out that checks out against a majority of the criteria is not sufficient. The failure to meet any one of the criteria is likely to mean that the outsourcing and contracting out should not happen.

**Controlling fraud: Fraud is a feature of the market not a bug<sup>25</sup>**

There have been massive frauds throughout history. The Australian tax office spends a small fortune on countering fraud against the tax system on the part of Australian companies. Woolworths has been the subject of a large number of actions by the Australian Competition and Consumer Commission (ACCC). Orange juice in Australia used to be poor quality as the market rushed to produce the cheapest orange juice. Since then the ACCC prescribed the qualities of juice that had to be met if the product was described as "juice". At the very least it had to contain a certain proportion of actual juice. Following that the quality improved. Clearly what had happened is that cheaper ingredients had been used to gain a competitive advantage against "real" juice. Producers could not compete if they used more expensive inputs so that "bad juice drove out the good".<sup>26</sup> Cash in hand restaurant work seems to have driven out formal employee arrangements in areas where many competing restaurants are located. The former head of the ACCC, Rod Sims, gave a speech in which he listed a large number of companies that attracted ACCC enforcement activities. He said: "There is clearly no shortage of work for the ACCC. ... the list includes well known and respected major Australian companies who have admitted, or been found, to have breached our competition and consumer laws."<sup>27</sup> He also referred to a race to the bottom as competing firms use the same or similar tactics.

As these examples show, fraud is endemic and the examples also show that fraud is not something that a few unscrupulous individuals engage in. Rather the competitive environment itself almost forces suppliers to engage in the fraudulent behaviour if they are to survive in the industry. It seems a simple proposition, but no outsourcing and contracting out should occur unless fraud can be controlled and kept to a minimum.

Fraud against the National Disability Insurance Scheme (NDIS) had been an important issue. The NDIS is an important case study because it was recommended by the PC and, as it seems, the PC failed to address the conditions necessary for the scheme to work when the chief mechanism was contracting for services from the private sector by patients on behalf of the government.

The ABC has reported that the former Minister for the National Disability Insurance Scheme, Bill Shorten, has vowed to crack down on "shonky" disability providers, telling them to "get off my scheme". The Minister talked about people making themselves "NDIS millionaires off the backs of taxpayers and people with disability".<sup>28</sup> Australian Criminal Intelligence Commission chief Michael Phelan was reported to have estimated that "up to 15-20 per cent of the NDIS expenditure is rorted".<sup>29</sup> Expenditure on the NDIS is expected to be \$31.3 billion in 2022-23 rising to \$51.8 billion in 2025-26. If Mr Phelan is correct, that means rorting is worth up to \$6.3 billion in 2022-23 rising to \$10.4 billion in 2025-26.

This seems to have caught Australians by surprise, but crime is endemic in society, whether it is called "fraud", "rorting", "embezzlement" or a number of other names. Some industry structures and other market features invite criminal behaviour. They effectively invite

criminals to self-select. Following on the heels of the NDIS revelations came the PwC matter.

### **Economic incentives for fraud and malfeasance**

People considering a crime weigh up the relative costs and benefits and as Jeremy Bentham put it in 1789: “the profit of the crime is the force which urges man to delinquency: the pain of the punishment is the force employed to restrain him from it.”<sup>30</sup> Gary Becker was one of the first economists to seriously study the economics of crime. For Becker, a criminal act occurs if the expected benefits from the crime exceed the expected costs. As Becker puts it:

The approach taken here follows the economists' usual analysis of choice and assumes that a person commits an offense if the expected utility to him exceeds the utility he could get by using his time and other resources at other activities. Some persons become "criminals," therefore, not because their basic motivation differs from that of other persons, but because their benefits and costs differ.<sup>31</sup>

The thing about this approach and the literature it spurned is that crime becomes just an ordinary economic activity and open to the same analysis as the decision to buy fruit or the other decisions people make many times everyday.

Zingales, in his Presidential Address to the American Finance Association, makes it clear that “If the most profitable line of business is to dupe investors with complex financial products, competitive pressure will induce financial firms to innovate along that dimension”.<sup>32</sup> Of course fraud is not limited to finance. Zingales makes the point that we are all prone to drive over the speed limit and park illegally when it suits us. Most people will admit to an occasion when they said nothing when a shopkeeper undercharged them. So, it should not be a surprise that NDIS providers have occasionally overcharged on their expenses and some do much worse.

Everyday there are a good many people engaged in fraudulent activities. The *Royal Commission into Misconduct in the Banking, Superannuation and Financial Services Industry* in Australia showed that problems in the finance sector were endemic. Zingales argues that “market forces cannot bring [the finance sector] in check”.<sup>33</sup> Zingales is sobering if not disheartening and he suggests that an approach that leaves things for the market to decide simply cannot work. The incentives are lined up in a way that virtually guarantees fraud is a feature. The same could be said of most industries and while we hear complaints about excessive red tape facing business but almost all of it is the result of anti-social behaviour in the past.

In the case of the NDIS, and from the anecdotes in the press, we suspect that the problem is mainly the self-employed or small business operator. It makes sense that individuals are less likely to get away with major fraud against their employer. In the case of an NDIS Productivity submission

provider, fraud tends to arise due to the provider billing the government for a service provided to a third party. The latter has no incentive to keep the provider honest unless the service itself is deficient. The patient has no reason to worry about, for example, whether the provider has overcharged for travel allowance.

All of this means that fraud can be an important consequence of outsourcing government services. The NDIS is not alone. Governments fund many aged care recipients but cannot guarantee that the purchased services are delivered. For any program to be outsourced or to remain with private providers the first issue has to be whether or not fraud can occur and whether it can be controlled.

We can leave this section with the following:

Unquestioning acceptance of market efficiency often led proponents to ignore fundamental problems with the neoliberal approach: that profit-seeking actors would try to use fraud, force, and deception to cheat people for their own gain; that markets can lead to the concentration of economic power and, as a result, undermine the very functioning of competitive markets; and that profit-seeking actors would seek to use government to benefit themselves, at the expense of taxpayers, consumers, and a competitive market. All of these neoliberal problems came home to roost at one time or another, and sometimes all at the same time.<sup>34</sup>

It is easy to assume that the players in an industry will play by the rules and compete ethically. But it is very naïve to assume the players will not cut corners or worse. So an overriding condition for outsourcing and contracting out has to be the absence of opportunities for fraud.

In developing the economic criteria for outsourcing and contracting out it is assumed that opportunities for fraud have been anticipated and controlled.

Recommendation

**That the Senate note that there are strong incentives for fraud in any economic system and that regulation, often very strong regulation, is required to ensure that people “play by the rules.”**

**PwC**

We cannot leave this section without mentioning PwC. PwC was contracted by the tax office to assist with the design of Australia’s multinational tax laws. However, PwC used the information obtained to assist its multinational clients to side-step the new laws. The Financial Review reported that “revelations in internal emails which show that, for years, dozens of PwC operatives used confidential updates on government tax plans obtained by [international tax chief] Collins to drum up new tax clients.”<sup>35</sup> PwC’s clients are now likely

to be involved in investigations and Bloomberg suggests “the scandal also could deal a big hit to PwC’s global reputation, especially in the wake of a series of scandals at Big Four accounting firms in recent years that have called their ethics and performance into question.”<sup>36</sup> A handy rule of thumb is that the white collar scandals we hear about are likely to be just the tip of the iceberg.

Given the other type of clients, the big four tend to attract, there is a large potential conflict of interest in almost any government advisory work. Wikipedia describes the big four, Deloitte, Ernst & Young (EY), KPMG, and PwC, as the four largest professional services networks in the world. For that matter, commercial businesses need to be wary of large consultants that could easily be involved in the next takeover or other action against them.

### **Recommendation**

**That the Senate note there are many arguments applied to various industries that amount to applying standard neoclassical/neoliberal models in contexts where the necessary conditions are not met for arguing that the market knows best.**

# Waste in the private sector

## FAILED INVESTMENT

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The PC has been very successful in getting Australian policy makers to associate productivity with improvements in living standards as conventionally measured.<sup>10</sup> It therefore closely examined Australia's business investment and whether or not the tax incentives may have been involved. Whatever the view on the role of tax incentives, the common proposition seems to be that successful private investment improves our common welfare or at least has the potential to do so. (Of course, public infrastructure and government services are also fundamental to increasing living standards.)

A lot of investment spending may be wasteful or even have a negative impact on living standards, such as investments in fossil fuel projects. There is a school of thought that says that private investment failures do not matter because the losses are confined to just the few investors that put up the funds for the investment. They knew the risk they were taking and were in a position to absorb the losses. This view is inconsistent with the earlier proposition that we all have a vested interest in successful investment.

This means we should be concerned at failed investment and/or socially undesirable investments. Dean Baker explains how investment errors affect us all. He said:

when companies make stupid investment decisions — as it seems Zuckerberg did with the \$77 billion he threw into Meta — it is not just a loss on their books, but also a cost to society. When Zuckerberg invested \$77 billion in Meta he was pulling software engineers away from other tasks that might have been more productive. The same is true of all the other people who worked on the planning and implementation of his Meta vision. These were all people who could have otherwise been productively employed.<sup>11</sup>

In Australia some 370,500 businesses exit the market each year,<sup>12</sup> many because of business failures, with a consequent waste of all the resources that have been put into those businesses, not to mention the cost in human suffering on the part of the business owners

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<sup>10</sup> Elsewhere in this report we argue that most often the measurement of living standards is given by people's command over supplies of goods and services in the private/market sector of the economy.

<sup>11</sup> Baker D (2026) "Did Mark Zuckerberg throw \$77 billion of our money into the toilet?" *Real World Economic Review Blog*, 2 January at <https://rwer.wordpress.com/2026/01/02/did-mark-zuckerberg-throw-77-billion-of-our-money-into-the-toilet/>

<sup>12</sup> ABS (2025) *Counts of Australian Businesses, including Entries and Exits, July 2021 - June 2025*, 26 August at <https://www.abs.gov.au/statistics/economy/business-indicators/counts-australian-businesses-including-entries-and-exits/latest-release> The 370,500 exits refers to 2024-25.

and employees who were sacked. Of the businesses operating in June 2021, 43% of non-employing business exited by June 2025 and 18% of employing businesses exited over the same period.<sup>13</sup>

It would be useful to know whether wasted investments through business failures and otherwise have increased as a share of GDP in recent decades. There may well be a partial explanation of the slowdown in productivity. We all benefit when economic activity improves either because of private or public sector initiatives. The converse is also true; we are all worse off when businesses fail to gain traction.

### **Recommendation**

**The Senate should report that we know too little about why businesses fail in Australia and what can be done to ensure new ventures are more successful. Eliminating failure would also eliminate waste and hardship and be consistent with higher productivity.**

## **WASTE IN UNCOMPETITIVE MARKETS**

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Uncompetitive markets are also associated in the literature with waste for good reason. A non-competitive company may well indulge in for example, gold plated executive bathrooms and plush boardrooms—unnecessary costs for sure but seem to be present among companies that do not experience any pressure to be a keen competitor. Some years ago this was identified and called “X-inefficiency” by Harvey Leibenstein<sup>14</sup> and it is no exaggeration to suggest he genuinely shocked the economics profession in terms of the magnitudes of waste involved. X-inefficiency is implied by the indulgences of companies in their senior executives for example. When the lack of competition allows super profits then some of that can be distributed as lavish boardrooms, corporate jets as well as excessive remuneration. It can also be reflected in inefficient producers who have little incentive to adopt best practice techniques.<sup>15</sup>

A government competition issue paper mentions non-price competition just twice when it says:

Competitive markets are characterised by various forms of price and non-price competition between businesses seeking to provide what consumers want...Non-price competition involves businesses seeking to gain an advantage over rivals by differentiating the goods, services and terms they offer to make them more

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<sup>13</sup> *ibid*

<sup>14</sup> Harvey Leibenstein, "Allocative efficiency and X-efficiency," *The American Economic Review*, 56 (1966), pp. 392-415.

<sup>15</sup> Examples on the waterfront are mentioned in Richardson D (2013) 'Corporate power in Australia' paper given to the Sydney Heterodox Economists Conference, December

attractive to buyers—a key mechanism for small and medium-sized businesses to compete with large businesses.<sup>16</sup>

One could read that paper and come away with the view that non-price competition is beneficial to consumers just like price competition. Advertising and marketing are features of non-price competition in uncompetitive markets whereby sellers try to convince us of other reasons (apart from price) why we should purchase their product.

Noam Chomsky has put it very well:

In commercial advertising as everybody knows, everybody who has ever looked at a television program, the advertising is not intended to provide information about the product, all right? I don't have to go on about that. It's obvious. The point of the advertising is to delude people with the imagery and, you know, tales of a football player, sexy actress, who you know, drives to the moon in a car or something like that. But, that's certainly not to inform people. In fact, it's to keep people uninformed.

The goal of advertising is to create uninformed consumers who will make irrational choices. Those of you who suffered through an economics course know that markets are supposed to be based on informed consumers making rational choices. But industry spends hundreds of millions of dollars a year to undermine markets and to ensure, you know, to get uninformed consumers making irrational choices.<sup>17</sup>

Advertising raises a host of issues as this passage suggests, and we begin by looking at the significance of advertising in Australia.

We can get a bit of an idea of the significance of advertising using data from the tax office that shows that in 2022-23 companies that were classified as 'advertising services' and 'market research and statistical services' had a total income of \$22.4 billion and \$2.6 billion respectively.<sup>18</sup> In addition total corporate income from 'newspaper publishing', 'radio broadcasting' and 'television broadcasting' should give a good proxy for spending on advertising in the media. That comes to a total of \$45.2 billion or roughly 1.6 per cent of GDP.<sup>19</sup> Advertising is of course involved in many other industrial classifications. For example, much of the income of the groups of companies called 'internet publishing and

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<sup>16</sup> Australian Government Competition Policy Review (2014) *Issues Paper*, p. 8

<sup>17</sup> Chomsky N (2008) 'What next? The elections, the economy, and the world', *Audio transcript*, 24 November.

<sup>18</sup> Australian Taxation Office (2025) *Taxation Statistics 2022-23*, 7 April, at <https://data.gov.au/data/dataset/taxation-statistics-2022-23/resource/2a2b576d-a59a-4889-96ff-9d03df834a6d>.

<sup>19</sup> The raw figures are \$5.8 billion, \$4.4 billion and \$10.0 billion respectively (ATO, 2025).

broadcasting', 'motion picture and video activities' and 'sound recording and music publishing' would be sales of advertising.

Of course, the fact that some advertising is providing real information does not make it immune from the Galbraith critique that advertising creates a false demand.<sup>20</sup> Boutique shops advertising their range of 'Gothic' clothing designs is hardly catering to an intrinsic human need. The point is that advertising remains part of a symbiotic part of a process that can involve engineering tastes along with product designers, R&D departments, marketing people and so on. The persuasive role of advertising may deter the entry of competitors in a market. Consumers can be reluctant to try new products and heavy advertising by the incumbent firm acts to reinforce consumer bias against new and unknown products.<sup>21</sup>

### **The problems of monopsony and oligopsony**

Australia is evidence that there comes a tipping point when these retailers reach a position of dominance. By leveraging their enormous customer bases, Coles and Woolworths have managed to turn themselves into grocery providers, newsagents, bakers, butchers, liquor stores and petrol stations. If their lobbying proves fruitful, they could soon become banks and pharmacies. Long before it became obvious, Coles and Woolworths had seized effective control of the entire supply chain. Supplier power twisted into buyer power, and the retailers began to influence the size and shape of just about every industry in Australia. This high degree of retail concentration has thrown up many challenges. Ugly, anticompetitive behaviour has been aired in Australian courtrooms, and various forms of public interest protection – litigation by the regulators, a Retail Code of Conduct, unconscionable conduct provisions – have been hurled at the retailers with limited success.<sup>22</sup>

In the US Walmart is regarded as a monopsony in certain market segments where its buying power for a specific item is a significant part of the market. In Australia Coles and Woolworths are the equivalents. Coles (a subsidiary of Westfarmers) and Woolworths, have been gradually increasing their share of the market. In 1975 Coles had 18 per cent of the market and Woolworths had 16 per cent.<sup>23</sup> Other retailers had a total of 67 per cent—two thirds of the market! Since then, Woolworths has grown to reach 46 per cent of the market while Coles has 32 per cent. Other retailers share 22 per cent of the market, of which IGA has 14 percentage points.

These examples show the inefficiency of markets even when viewed from the static perspective favoured by the PC's use of mainstream economic theory. Generally, the

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<sup>20</sup> JK Galbraith (1958) *The Affluent Society*, Harmondsworth: Penguin.

<sup>21</sup> Bagwell K (Ed)(2001) 'Introduction' *The economics of Advertising*, Cheltenham, UK: Edward Elgar.

<sup>22</sup> Fels A (2009) 'The regulation of retailing – lessons for developing countries' *Asia Pacific Business Review*, Vol. 15, No. 1, pp. 13–27, p. 25.

<sup>23</sup> Figures in this paragraph are from Australian Food and Grocery Council (AFGC) and A.T. Kearney Australia (2011) *2020: Industry at Crossroads*.

conditions for successful markets are not met so that, for example, competition takes perverse forms such as advertising which represents a massive social waste. Resources representing 1.6% of GDP are wasted in this way.

### **Recommendation**

**The waste from uncompetitive parts of the economy must be noted. Where possible governments need to intervene to eliminate waste from non-price competition in uncompetitive markets.**

## **Threat of new entry**

The PC examined competition issues in the sugar industry. Not only does the PC use static economic models as already mentioned but it refuses to admit to imperfections that would, in practice, interfere with the achievement of satisfactory market results. Hence, for example, the PC suggested that even in the Burdekin, where it admits all the sugar mills are owned by the same company (CSR), “there will be little scope for mills to exercise economic power over the longer term because of the threat of new entry.”<sup>24</sup> It spells out how that would work by continuing “[I]f mills force up crushing charges to inflate profits, they will attract new entry [on the part of other mills]. This will compete crushing charges down to competitive levels. The PC also thinks that new mills would be encouraged by abolishing the assignment system. This seems incredibly naïve.

This thinking relies on the old contestability hypothesis which said that if someone in an industry is earning abnormally high profit, others will be attracted into that industry to contest the profits of the initial producer. Competition will drive profits down to more normal levels. Further work has demonstrated that the proposition relies on very unrealistic assumptions. In particular the contestability hypothesis relies on costless entry and exit into the industry on the part of new contestants. In the case of sugar mills that would require that someone could set up a new mill, and, if the venture failed to make at least normal profits, get out of the industry again without incurring any losses on the total exercise. If costless entry and exit is not assumed, then the likelihood of failure will deter potential entrants. The assumptions only have to be stated to show their weaknesses. Existing mill owners would have more than sufficient time to recognise a potential rival in the market and take evasive action so that the rival would no longer be attracted into the industry.

GrainCorp became an issue in the lead up to the decision to refuse to allow its takeover with the Treasurer Joe Hockey prohibiting the proposed acquisition by Archer Daniels Midland Company (ADM) of GrainCorp. For many farmers GrainCorp was the only buyer. It used to be the NSW Grain Handling Authority until the latter was privatised in 1992. Deputy Prime Minister, Warren Truss, is reported to have said that “If we lose [GrainCorp] to foreign

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<sup>24</sup> Productivity Commission (1999) *Submission to the Sugar Industry Review Working Party*, August.  
Productivity submission

ownership then we will lose the potential to have an international standard agribusiness". He has also suggested that Australia would lose control of its food security. Other critics point to GrainCorp's virtual monopoly on the east coast. GrainCorp made a healthy 14.4 per cent rate of return on equity in 2012 (the latest figures available before the decision). That 14.4 becomes a 21.5 return on equity before tax, a very healthy return which is likely to reflect some market power. Adjusting for the intangible or fictitious assets the pre-tax return on equity increases to 28.3 per cent. On these figures it is clear why GrainCorp was an attractive target.

# Public infrastructure

The states are crying out for more capital spending. Think of potholes, traffic congestion, crowded public transport, the need for more health facilities, schools, public housing etc. These shortages need addressing yet we are hung up on debt, deficits and keeping taxes low.

Meanwhile there are a host of studies that show spending on infrastructure is very productive as is often mentioned by Productivity Commission reports.<sup>25</sup> One survey of the field remarked:

The economic impact of public investment in infrastructure has been at the centre of the academic and policy debate for the last two decades. Infrastructures generate positive externalities to the private sector, contributing to the well-being of households and the productivity of firms. Therefore, it is hardly surprising that in many countries development strategies have been based on infrastructure investments while in others the failure to achieve adequate growth has been attributed to a lack of adequate infrastructures. The examples are many.<sup>26</sup>

This is not the place to explore infrastructure spending in detail except to note its benefits and also to point to the ‘fear of debt’ on the part of the states and territories.<sup>27</sup> The fear of debt means valuable projects are not undertaken which, in turn, means net economic benefits to Victoria are forgone in the interests of a “sound” financial policy.

As an example, the grain industry has been arguing that infrastructure deficiencies are holding up the agriculture industry. *The Australian* reported that “the \$15bn-plus annual economic benefit of bumper harvests was being undermined by road, rail and port infrastructure bottlenecks and inconsistent state regulations.”<sup>28</sup> Rhys Turton, chair of GrainGrowers, is reported as saying: “It’s one thing growing these big quantities of grain; it’s another getting it efficiently to port. We have a lot of ageing infrastructure, particularly

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<sup>25</sup> For example, Productivity Commission 2014, *Public Infrastructure, Inquiry Report No. 71*, Canberra. <https://webarchive.nla.gov.au/awa/20140801014035/http://www.pc.gov.au/projects/inquiry/infrastructure/report>

<sup>26</sup> Pereira AM, Andraz JM (2010) “On the economic effects of public infrastructure investment: A survey of the international evidence”, *College of William and Mary Department of Economics Working Paper Number 108* at [https://economics.wm.edu/wp/cwm\\_wp108.pdf](https://economics.wm.edu/wp/cwm_wp108.pdf)

<sup>27</sup> Freebairn J and Corden M (2013) “Vision Versus Prudence: Government Debt Financing of Investment”, *Melbourne Institute Working Paper No. 30/13*.

<sup>28</sup> Denholm M (2026) “Grain drain: infrastructure bottlenecks, red-tape slash crop wealth despite bumper season”, *The Australian*, 2 January at <https://www.theaustralian.com.au/nation/grain-drain-infrastructure-bottlenecks-redtape-slash-crop-wealth-despite-bumper-season/news-story/ee6caca0ae130a0aa717112b433f8be2>

roads and many bridges, and inconsistent regulations across states. That's creating some real challenges and really big costs for Australian grain growers. This industry is just getting bigger and bigger by the year and ... our tonnages across Australia are just going to grow and grow. The biggest issue is becoming the bottlenecks around freight and infrastructure that is struggling to handle that sort of freight at both road and rail level."<sup>29</sup>

To the extent that commentators are successful in getting states to live within their means, we will all be materially worse off because we are being deprived of the benefits of state capital works that, as we saw, can be extremely productive even if they do not pass commercial criteria.

Yes, there may be debt to be repaid. Conservatives say we are all worse off when governments go into debt. What is forgotten is that the debt is taken up by others, investors, super funds etc., as a financial asset. The debt cancels itself out. The infrastructure itself is transferred as a benefit to future generations. The net financial position for the state as a whole is that debt issued by the government equals debt held by investors with the net financial position equal to zero. (There are minor complications with debt being held outside the state concerned but these are covered by swings and roundabouts.) If you insist that debt is carried on to the next generation, you have to concede that debt is also held by the next generation as a financial asset. Net effect zero. But as we said – physical assets are carried into future generations.

Given the importance of infrastructure, we think the accumulation of assets on the part of states is critical and, despite deficit finance (as presently defined), they have managed to increase government net worth even during the pandemic and its aftermath.

The federal government is completely different from the state governments in that there is very little capital spending by the federal government compared with the states which are responsible for most of the infrastructure and, accordingly, their ratios of capex to operating expenditure is much larger. (Having said that, some of the grants from the federal to state governments are for capital works which appear on the state's books. In the Commonwealth's books they appear as a current expense.)

We think the current situation is perverse. Infrastructure that would be of benefit to Australia does not go ahead because there is aversion to debt on the part of the states and the states are being starved of funding because of the rejection of state tax initiatives (Victoria's EV tax – whatever the merits of it were) and the heavy reliance of GST receipts which have been declining as a share of GDP.

## **Recommendation**

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<sup>29</sup> ibid

**The Commonwealth and the states and territories need to come up with a model that encourages infrastructure investment spending that is likely to be beneficial without the artificial constraints imposed by Australia's fiscal apparatus.**

# Productivity causes wage increases or vica versa?

A recent BCA report, *Australia's flagging competitiveness and productivity: How to turn it around*, said "High wages can only be sustained through high levels of productivity" (p 18). In a 2021 interview Jennifer Westacott, then CEO of the Business Council said: "And if money's not coming in the door and you're putting people's wages up, there's only one choice for you, employ less people...we've got to be super careful that we don't get a year or so of higher wages at the minimum wage end only to see job losses in two or three years time".<sup>30</sup>

Tania Constable, chief executive officer, Minerals Council of Australia said "We can't afford to decouple productivity from wage growth. Productivity adds to wage growth at the end of the day. Just moving the whole economy and all employees to higher wages, doesn't give you a good outcome on productivity. So, we're asking government to slow down, to consider what is being said here today."<sup>31</sup>

The PC says productivity determines real wages in the long run and points to the following graph showing 80% of the rise in living standards is due to productivity growth. , the PC insists that productivity is the source of increases in real wages over time. It says: "in the long run, almost all increases in real wages are due to labour productivity improvements."<sup>32</sup> The empirical evidence for that is given in a graph which shows a rough correlation between real wages and labour productivity going back to 1960. That graph is reproduced here as Figure 3

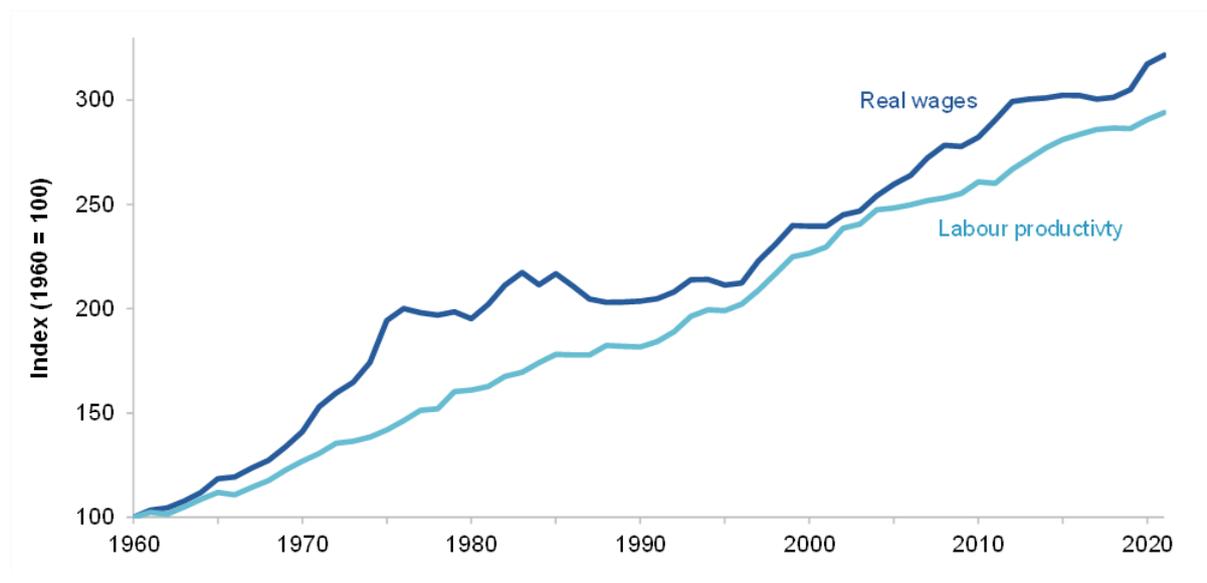
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<sup>30</sup> [https://www.bca.com.au/interview\\_with\\_ross\\_greenwood\\_business\\_weekend\\_sky\\_news](https://www.bca.com.au/interview_with_ross_greenwood_business_weekend_sky_news)

<sup>31</sup> BCA (2022) *Joint press conference with the Australian Industry Group, the Australian Chamber of Commerce and Industry and the Minerals Council of Australia*, 28 October at [https://www.bca.com.au/joint\\_press\\_conference\\_with\\_the\\_australian\\_industry\\_group\\_the\\_australian\\_chamber\\_of\\_commerce\\_and\\_industry\\_and\\_the\\_minerals\\_council\\_of\\_australia](https://www.bca.com.au/joint_press_conference_with_the_australian_industry_group_the_australian_chamber_of_commerce_and_industry_and_the_minerals_council_of_australia)

<sup>32</sup> Productivity Commission (2017) *Shifting the Dial: 5 Year Productivity Review, Report No. 84*, Canberra, p 14.

**Figure 1: Productivity Commission, Wages and productivity, 1960-2021, 1960 = 100**

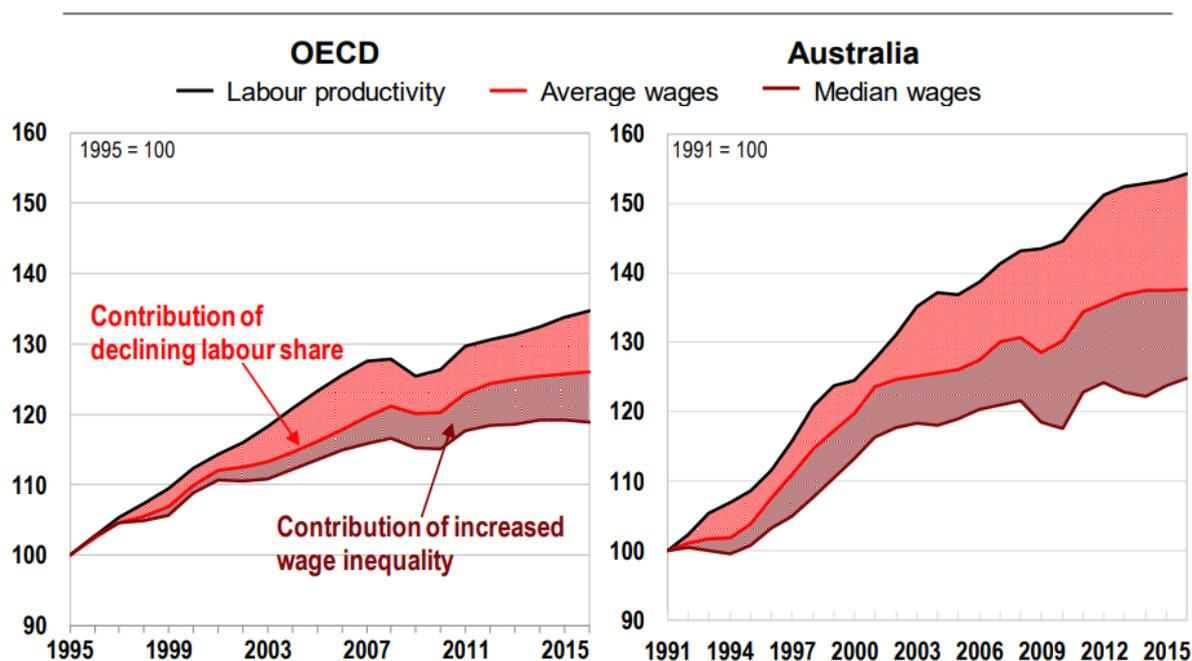


Source: Productivity Commission (2022) 5-year Productivity Inquiry: The Key to Prosperity, Interim Report, Canberra, July

The data in Figure 3 clearly shows that the association between wages and productivity is actually quite loose. Over time most economic variables tend to grow at similar rates so it is not clear what to make out of Figure 3. It is also apparent that the result is likely to be dependent on the start date. If instead of 1960 some point in the 1980s had been chosen the graph would look a lot different.

By contrast to the PC and business view is another view: around the world there has been a “decoupling” of wages from productivity, a common finding among researchers world-wide.

**Figure 2: Productivity gains no longer translate into broadly shared wage gains**



Source: Schwellnus C (2019) “Decoupling of wages from productivity”, *RBA Conference*, Sydney, 5 April.

Based on the data behind Figure 2 we see that between 1991 and 2015 labour productivity was up 54% while the average wage increased by just 37% while the median wage increased by less than half productivity at just 24%. Since 2015 productivity increased by 12.6% while average wages fell 4.6% in real terms and the median increased 7.3%.<sup>33</sup>

The decoupling of wages from productivity obviously raises questions about the legitimacy of any view that says productivity automatically leads to increases in wages. That also gives us the opportunity to explore the view that cause and effect go in the other direction, from wages to productivity.

## RELEVANT AMERICAN EXPERIENCE

We begin this section with the views of Robert Gordon as expressed in his monumental study, *The Rise and Fall of American Growth: The US Standard of Living Since the Civil War*.<sup>34</sup>

<sup>33</sup> Author’s calculations based on ABS (2024) *Employee Earnings, August 2024*, 9 December, ABS (2025) *Consumer Price Index, Australia, March Quarter 2025*, 30 April; ABS (2025) *Australian National Accounts: National Income, Expenditure and Product, December 2024*, 5 March and ABS (2025) *Average Weekly Earnings, Australia, November 2024*, 20 March.

<sup>34</sup> Gordon RJ (2016) *The Rise and Fall of American Growth: The US Standard of Living Since the Civil War*, Princeton University Press.

Gordon's objective was to explain the extraordinary growth in American productivity in the period 1920 to 1970. He says it is best to start with "elementary economics" which shows that "An increase in real wages tends to boost productivity as firms substitute capital for labour." He also shows how the "New Deal passed legislation that made it much easier for labour unions to organise.... In addition to pushing up real wages, labour unions also largely achieved their century old goal of the eight-hour day." (p 537) So in addition to higher wages there were potential shortages of labour.

Gordon continues quotation marks "in a competitive market, the marginal product of labour equals the real wage, and economists have shown that labor's [sic] marginal product under specified conditions is the share of labour in total income times output per hour". (p 541)

Gordon presents evidence to the effect that there was a strong correlation between wages and output per hour when each are measured as deviations from trend. Beginning about 1940 each deviated dramatically from their trends to peak around 1970 when wages were about 55% above trend and output per hour was a bit over 40% above trend.

Gordon says "the main upward stimulus to productivity must have come from the impetus of higher hourly wages, particularly in the late 1930s, that lead firms to economise on the use of labour. This helps us to understand the explosion of productivity during World War II" (p 543)

Gordon stresses that equipment investment rebounded strongly in the 1930s with the equipment investment to capital stock ratio (the growth in capital equipment) rising to around 16% or more. He says at least some part of this point performance of equipment investment may have represented a substitution from labour to capital that raised labour productivity. He says, "substitution from labour to capital as a result of the jump in the real wage is evident in the data on private equipment investment, which soared in 1937-41 substantially above the equipment investment:capital ratio of the late 1920s" (p 563)

incidentally, Gordon says there was virtually no economic growth for millennia until 1770 after which there was slow growth in the century before 1870. For the United States there was then rapid growth in the revolutionary century ending in 1970 followed by slower growth since then.

He says American growth slowed down after 1970 not because investors had lost their spark or were devoid of new ideas, but because the basic elements of a modern standard of living had by then already been achieved along so many dimensions, including food, clothing, housing, transportation, entertainment, communication, health, and working conditions. "The 1870 1970 century was unique: many of these inventions could only happen once, and others reached natural limits. The transition from carrying water in and out to piped running water and waste removal could only happen once, as could the transition for women from the scrub board and clothesline to the automatic washing machine and dryer." (p 641) He points out that slower growth and productivity not for want of investment in science, he says there seems to be "more investment funds than firms have chosen to use" (p 643).

We find it remarkable that the Productivity Commission and other participants in the Australian debate will frequently point to an alleged cause and effect going from productivity to wages but nothing in the opposite direction. Yet it could be argued that the whole history of economic development since the Middle Ages has been about trying to find ways of doing things using less labour. Using less labour was not intrinsically desirable for businesses, but it was usually associated with much cheaper modes of production. By substituting capital for labour, output per labour input increases which means an increase in productivity. Indeed, former head of the BCA, Jennifer Westacott comes close to admitting as much when she said “And if money's not coming in the door and you're putting people's wages up, there's only one choice for you, employ less people...we've got to be super careful that we don't get a year or so of higher wages at the minimum wage end only to see job losses in two or three years time”.<sup>35</sup>

Productivity often involves that tension between higher wages and fewer jobs. And often society might be more interested in preserving jobs than increasing productivity. since March 2019 productivity increased just 1%.<sup>36</sup> Had it increased at, say, a respectable 1.5% pa, or 9.3% over the period, then, unless demand for output also increased, unemployment may have increased by a very large amount and might now be approaching 10%. This alerts us to the likelihood that would ensuring demand increases at least in line with productivity, Jennifer Westacott’s threat becomes a reality.

Others have argued that higher wages lead to greater effort on the part of workers. These are the so-called “efficiency-wage” models.

## OTHER STUDIES LINKING WAGES PUSH WITH PRODUCTIVITY GROWTH

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The standard treatment of this issue suggests that as producers install higher productivity capital equipment then they will offer higher wages. However, it has long been suggested that cause and effect may go the other way. One such argument involves the so-called wage efficiency thesis. Janet Yellen who later became Chair of the Federal Reserve System wrote a useful survey of the efficiency wage model (Yellen 1984). According to the efficiency wage hypothesis labour productivity depends on the wage paid by the firm. At the extreme when wages are below poverty rates people may simply not be healthy enough to perform well at work. Recent work looks at other ways this effect can work. Some explanations look at the likelihood of workers shirking rather than working when they can get away with it. However, if wages are increased then there is additional incentive to work rather than shirk. Shirking with a high wage employer carries the risk of being fired and having to find a worse job. The

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<sup>35</sup> [https://www.bca.com.au/interview\\_with\\_ross\\_greenwood\\_business\\_weekend\\_sky\\_news](https://www.bca.com.au/interview_with_ross_greenwood_business_weekend_sky_news)

<sup>36</sup> Calculated from ABS National Accounts.

labour turnover model suggests simply that workers will be less inclined to quit a good job at higher wages and so the firm avoids costly turnover, the cost of training new staff and so on. The adverse selection model suggests that more productive workers will only be tempted by higher wages and lower productive workers will be inclined to go for the lower wage jobs where they have less chance of being sacked for their lower productivity. Finally, Yellen refers to the sociological models in which firms can raise group work norms by paying a higher wage.

Another argument suggests that higher minimum wages in particular will eliminate those firms that rely on low wages to remain viable and whose labour productivity is lower than their peers. As low productivity firms disappear so the average productivity increases due to the diversion of sales to the higher productivity firms. In addition, higher wages encourage firms to look for more efficient techniques of production and cut down on wasteful practices (Lavoie 2014).<sup>37</sup> Advocates of lower wages sometimes rely on a version of this argument suggesting that higher wages will drive some firms out of business. For example, our debate on penalty rates suggested some smaller companies would be forced to stay closed on weekends or leave the industry. Higher productivity necessarily means a loss of jobs to produce the same output. In passing we might ask why we should expect labour to subsidise low productivity companies. But note that while less labour is needed to produce the same output the output itself may increase as a result of the additional demand for output: a topic to which we now turn.

If we might depart from our concentration on wages for a moment, there is also evidence that labour shortages are associated with higher productivity. With scarce labour employers are going to be more motivated to substitute capital for labour which has the effect of increasing productivity and ultimately living standards. This has been evident in recent studies Bill Martin and Robert Rowthorn, of the University of Cambridge, argue that traditional thinking about productivity has cause and effect around the wrong way. Instead of productivity increases leading to higher wages the reverse happens; higher wages induce higher productivity. As they themselves say:

The UK's poor productivity is more plausibly interpreted as a symptom of a largely demand-constrained, cheaper labour economy - a condition misinterpreted by supply pessimists as a sign of structural weakness. Output is well below potential because workers, while cheaper to employ, are not working to potential. More output could be produced but not sold. There is an effective demand failure, high unemployment and, within companies, under-utilisation of the employed workforce – a form of “labour hoarding” (Martin et al 2012).<sup>38</sup>

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<sup>37</sup> Lavoie M and Stockhammer E (2012) ‘Wage-led growth: Concepts, theories and policies’, in Lavoie and Stockhammer (eds) *Wage-led growth*, International Labour Office, Geneva.

<sup>38</sup> Martin W and Rowthorn R (2012) *Is the British economy supply constrained?* UK Innovation Research Centre, May.

This is important. The joint effect of high wages and labour shortages under conditions of rising demand are associated with high productivity growth as employers try to economise on their labour costs. Alice Rivlin, a former Vice Chair of the Federal Reserve Board, reflected on the lessons of monetary policy in the US. A major theme was ‘that tight labor markets have enormous social benefits’ (Rivlin 1999).<sup>39</sup> People with limited skills and experience pick up jobs, which gives them the opportunity to learn on the job and build up a work history. Other workers get the chance to obtain more training, take on greater responsibilities, and can more easily get out of dead-end jobs. Moreover, the economic situation improves for the unskilled so that “the widening gap between education groups appears to have stabilized, at least temporarily, and may even be beginning to narrow’. On top of all this there are productivity and other economic benefits. As she says:

Productivity growth accelerated in 1997 and 1998 as labor markets tightened. Nobody knows exactly why or how long it will last. My own conjecture is that, combined with rapidly evolving information technology, scarcity of labor forces firms to reorganise their processes, use employees more effectively, provide or encourage additional training, and substitute machines for people. To the extent that tight labor markets actually contribute to faster productivity growth, their inflationary impact is diminished (Rivlin 1999).

Another paper from the IMF shows that it is demand that is the dominant factor explaining the variance in investment, employment, output etc. (Bruha et al 2016).<sup>40</sup> Most people would be aware in a general sense that Keynesian views have been overtaken by neoliberalism. One of the tenants of the latter is that economies are self-correcting and, left alone, will quickly respond to shocks and return to a state of full employment. Trouble is it is almost impossible to separately identify demand. Unsold produce can be the result of a lack of demand or a price/cost structure that is uncompetitive, and it is not easy to say unambiguously one way or the other. The importance of the IMF piece is that, as the authors say: ‘business cycle dynamics of key macroeconomic data can be largely explained by a single source of variation...the ‘demand factor’’ (Bruha et al 2016 p 21).

All of this suggests an interesting dynamic whereby higher wages encourage higher aggregate demand which produces labour shortages and so productivity increases which in turn can allow even higher wages and so set up a virtuous cycle. There is also the case where that works in reverse. Taylor and Ömer point out that if businesses “succeed with

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<sup>39</sup> Rivlin AM (1999) “New challenges for central bankers,” *The Arthur Burns Memorial Lecture*, Frankfurt, Germany, 23 September.

<sup>40</sup> Bruha J Andrlé M and Solmaz S (2016) ‘Output and Inflation Co-movement: An Update on Business-Cycle Stylized Facts’, *IMF Working Paper No 16/241*, 13 December.

wage suppression then there is less incentive for productivity-increasing innovation” (Taylor and Ömer 2018 p 5).<sup>41</sup>

The upshot of the previous argument is that public policy should support upward movements in real wages.

### **Recommendation**

**The Senate should find that the relationship between real wages and productivity works in both directions. Higher productivity does increase the scope for business to pay higher wages (whether or not they do is another matter) but higher wages increase the incentive for business to seek labour saving solutions which necessarily means higher productivity.**

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<sup>41</sup> Taylor L and Ömer O (2018) ‘Race to the bottom: Low productivity, market power, and lagging wages’, *Institute for New Economic Thinking: Working Paper No. 80*, 8 August.

# Productivity estimates for the non-market sector

In an address to the National Press Club on 16 July the former Treasury secretary, Ken Henry, said that lower productivity growth rates over the last 25 years compared with the previous period had cost workers \$500,000.<sup>42</sup> We cannot reproduce that figure but note that he uses a figure for the economy as a whole whereas the appropriate productivity figure is that for the market sector alone. This will be the subject of a forthcoming paper, but the important points are outlined here.

There has been analysis in the press and elsewhere to the effect that low productivity growth in the public sector is dragging down Australia's overall productivity performance. Over the last 30 years productivity in the market sector increased 65% but for the economy as a whole the figure was 44%.

This argument is used to attack the public sector and especially big spending programs like the NDIS. One outlet said "The NDIS-ification of the economy is in full swing" implying low productivity in NDIS spreading to the rest of the economy.

If productivity growth is lower in the public sector, then aggregate productivity growth will be lower than private sector productivity growth. But does this mean lower living standards than would otherwise occur? We have unpacked these arguments.

First the public sector. Take two nurses, one manages 8 patients and the other 10. Without knowing anything else can we say one is more productive than the other?

No—but the measures used in practice say the one with 10 patients is more productive. Put simply, our measures of public sector productivity are hopeless.

Now no one is interested in productivity for its own sake. The interest is in the implications for living standards which brings us to the second point.

Our measures of labour productivity in the market sector are probably reasonably good. When we measure changes in living standards, we are usually measuring cash income with prices faced by consumers. That is what we do when we use the consumer price index (CPI). So our living standards measures are really a measure of our purchasing power in the

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<sup>42</sup> <https://www.afr.com/policy/economy/ken-henry-says-you-should-be-half-a-million-dollars-richer-20250716-p5mfeu>

market for consumer goods. There is no satisfactory way of measuring the benefits of access to public goods and services.

If, in practice, entitlements to public goods and services do not figure in these measures, why worry about the public sector dragging these measures down? If we are using conventional measures of living standards then consistency suggests we also use market sector productivity to link measures of living standards and productivity.

Important as public goods and services are, access to a world class leukemia clinic or not does not make it into living standard measures in practice. We know our entitlement to health, education and other services is much better than in most third world economies. But when we examine living standards in each, we compare the incomes in each with what their residents can buy in the market.

### Recommendation

**The Senate should refer to productivity in the market sector when referring to living standards where living standards are measured as income relative to prices. Access to government services from childcare to open heart surgery are critical to living standards but most measures of living standards are based on purchasing power over goods and service in the market sector in which case public sector productivity is not relevant.**

Before leaving this section, we should note that the empirical evidence does not show any correlation between the size of government and output per head across countries.

## Military spending

Military spending is one of the classic cases of an activity with a “product” that defies definition in any tangible or measurable way. Without a measurable product we cannot divide the outputs by the inputs to obtain productivity and compare values over time in order to estimate productivity growth. The Financial Review reported that billionaire businessman Ryan Stokes, the chief executive of SGH Limited, the country’s largest industrial conglomerate, “urged the Albanese government to cut back spending on what he described as non-productive expenditure amid an intensifying debate about the driver of resurgent inflation”.<sup>43</sup>

The military fits that description with spending of \$51,598 million<sup>44</sup> and non-financial capital spending of \$14,876 million for a total of \$66,474 million or 2.3% of estimated GDP. Not only that but Australia is under pressure to increase spending as a share of GDP. Minister for Finance, Sen Kate Gallagher, says there are a number of things we cannot afford in Australia. “There is always more that

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<sup>43</sup> Kehoe J et al (2026) “Treasury contradicts Chalmers on spending blowout”, *Financial Review*, 11 February.

<sup>44</sup> Australian Government (2025) *Mid-year Economic and Financial Outlook*, at <https://budget.gov.au/content/myefo/download/myefo-2025-26.pdf>

can be done. But not everything can be done at once.”<sup>45</sup> From now on people will be able to point to the military as a barrier to other expenditure. Most other areas of government spending have outputs that cannot be readily quantified but we can at least talk about them in a qualitative sense, the contribute to law and order, train future generations, keep us healthy and so on.

Worse than that, the military is a large drain on other productive sectors. The discussion raised by AUKUS has drawn out some of the implications of military spending such as the claim on Australia’s STEM workforce. For example, the Prime Minister, Anthony Albanese, has said “The program [AUKUS] will create around 20,000 direct jobs over the next 30 years across industry, the Australian Defence Force and the Australian Public Service including trades workers, operators, technicians, engineers, scientists, submariners and project managers.”<sup>46</sup> Australia’s scientific, education and training institutions will also play a central role. These are likely to be the people who train the technicians, engineers, and others.

Business dependent on high tech has been concerned about the restrictions on high tech sales and the requirements that they be cleared by the military. Those concerns extend to advanced manufacturing in areas tangentially related to military applications.

A lot of these concerns were expressed most strongly by the Greens but even the Coalition Senators noted the concerns of small and medium enterprises and the potential to limit exports to countries outside AUKUS. The Greens were concerned about America’s “demand for stringent export control systems”.<sup>47</sup> The United States Studies Centre says “Australia has limited capacity in areas like manufacturing to support too many priorities.”<sup>48</sup> That seems code for military activities clashing with the agendas for renewable energy, critical minerals processing and the like.

R&D is likely the most important consideration. We like to think of ourselves as a clever country but the indicators suggest otherwise. As a share of GDP Australia’s R&D is well down on the list as is shown in Figure 3.

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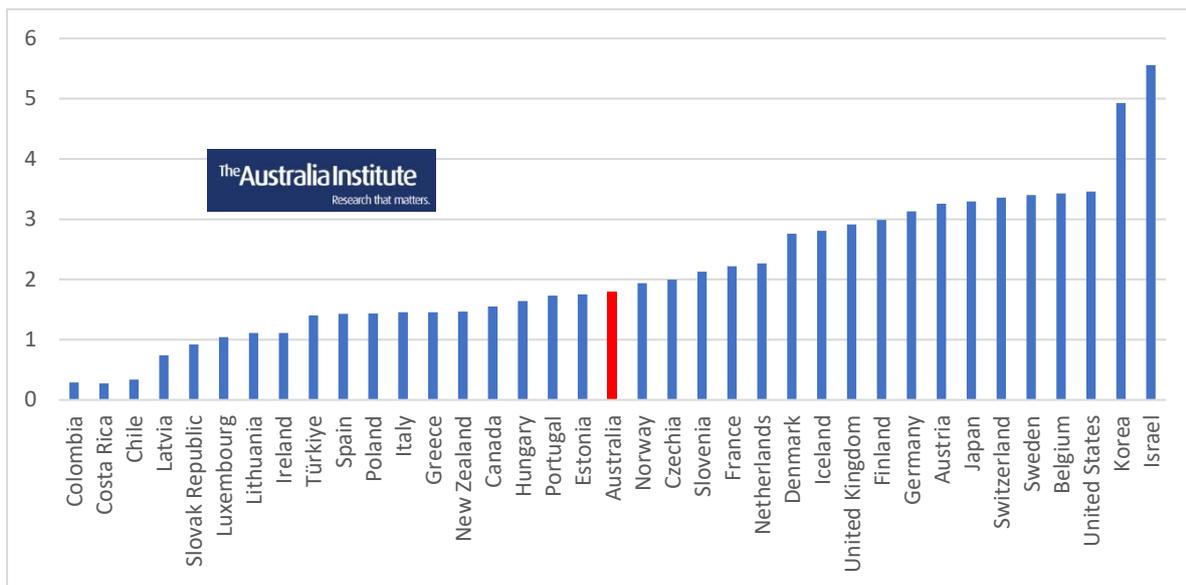
<sup>45</sup> The Mandarin (2023) “Katy Gallagher: ‘There is always more that can be done. But not everything can be done at once’”, The Mandarin, 2 November.

<sup>46</sup> Prime Minister Anthony Albanese et al (2023) “AUKUS Submarine Workforce And Industry Strategy” Media release, 14 March <https://www.pm.gov.au/media/aukus-submarine-workforce-and-industry-strategy>

<sup>47</sup> Defence Trade Controls Amendment Bill 2023 [Provisions], Report March 2021.

<sup>48</sup> United States Studies Centre (2024) *Laying the foundations for AUKUS: Strengthening Australia’s high-tech ecosystem in support of advanced capabilities* at <https://www.usssc.edu.au/strengthening-australias-high-tech-ecosystem-in-support-of-advanced-capabilities>

Figure 3: R&D share of GDP



Source: OECD

The USSC makes it clear that military is likely to have priority when it says “Defence linkages with academia and industry need to go deeper, especially to ensure that the ADF can gain access to the latest innovations in private industry quickly and efficiently for military advantage.” The idea seems to be that Australian research, high tech etc should be part of some sort of war economy but there should be debate about whether we want our universities and manufacturing to go down these paths.

As the Australian research effort is directed towards military applications there will be consequences for Australian researchers. Collaboration outside the UK and US is likely to be frowned upon, especially with China, but China is increasingly becoming the place to go to for civilian research in a host of areas. The impact of this has not been spelt out. Moreover, military research is subject to strict confidentiality which conflicts with open research with collaboration between scholars throughout the world.

### Recommendation

**The Senate should note the impact of increasing military spending on lost opportunities elsewhere in Australia. Government spending may be cramped by the military.**

**The Senate should look at the consequences of military activity for the civilian employment in STEM subject areas as well as the impact on civilian research and development.**

## Demand-led alternatives

Every month the National Australia Bank surveys employers about the economic conditions they face, what determines their confidence and what they expect in the future. Invariably business cites demand factors and capacity utilisation as fundamental to hiring and investment intentions.<sup>49</sup>

The PC would know that there has been a long tradition in economics that associates the growth in demand with the growth in output and the level of capital accumulation. The National Australia Bank surveys referred to above point to demand factors include trading conditions and forward orders as very important for Australia's economic growth generally and, in particular, the investment climate.<sup>50</sup> Demand factors have been regarded as critical since at least Adam Smith who described increasing returns due to the division of labour made possible by increases in the size of the market.<sup>51</sup> Keynes made output itself depend on the state of aggregate demand and it was a small step to also make investment depend on demand. Keynes had also pointed out that investment at any interest rate was dependent on the confidence of investors or their "animal spirits". The modern version is Verdoorn's law and is mainly associated with Nicholas Kaldor.<sup>52</sup> Verdoorn's law basically says that it is high aggregate demand that drives increases in productivity and, part of the process is increasing investment caused by demand pressing on the productive capacity thereby encouraging new investment.

The PC's approach is to smooth out business cycles which removes procyclical movements in productivity and so avoids asking what might happen for example if we could extend the boom period of the cycle.

## VERDOORN'S LAW AND INDUSTRY POLICY

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It seems a propitious time to be thinking about productivity, the role of manufacturing industry in productivity growth and the role of industry policy in promoting manufacturing.

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<sup>49</sup> See for example, *NAB Monthly Business Survey Apr-25* at <https://business.nab.com.au/wp-content/uploads/2025/05/NAB-Monthly-Business-Survey-April-2025-.pdf>

<sup>50</sup> *NAB Monthly Business Survey Apr-25* at <https://business.nab.com.au/wp-content/uploads/2025/05/NAB-Monthly-Business-Survey-April-2025-.pdf>

<sup>51</sup> Deleidi M, Fontanari C & Gahn SJ (2023). "Autonomous demand and technical change: exploring the Kaldor–Verdoorn law on a global level", *Economia Politica*, Vol 40, pp 57–80 at <https://doi.org/10.1007/s40888-023-00294-y>

<sup>52</sup> Kaldor N (1957) "A model of economic growth", *Economic Journal*, vol 67, pp 591–624.

Productivity occurs when the rate of output growth exceeds the rate of input growth. Verdoorn's Law offers an explanation of what drives productivity growth. It is certainly not a complete explanation, but it is both an important part of the explanation and it offers a clear guide to policy. In this section, I would like first, to briefly describe Verdoorn's Law - that growth of productivity in manufacturing is a function of the rate of growth of manufacturing output; second, explain why it works and finally, briefly indicate why this finding is important for industry policy.

The positive association between the rate of manufacturing industry output growth and productivity growth was first established statistically in post-war Europe by the Dutch economist Peter Verdoorn. This result has been confirmed globally at a national and regional level and is rather grandly named Verdoorn's Law (McCombie et al 2002).

Estimating Verdoorn's Law typically takes the form of a simple linear regression equation:  $p = y + xQ$

Regressing the natural log of  $p$ , the rate of manufacturing labour productivity growth, on the natural log of  $Q$ , manufacturing industry value-added growth gives  $x$  the Verdoorn coefficient and the intercept  $y$ , the rate of productivity growth independent of output growth.

$x$  or the Verdoorn coefficient is interpreted as the percent change in manufacturing productivity for a given percent change in manufacturing output. Whilst a statistical association is not causation there are strong plausible reasons for maintaining that the direction of effect is from an increase in manufacturing output to an increase in manufacturing productivity.

The typical result globally of empirical estimates for the Verdoorn coefficient is approximately 0.5. This means a 1% increase in manufacturing output is associated with a 0.5% increase in manufacturing productivity.

This is a very simple model, and there are problems like autocorrelation, which are corrected in more complex presentations of Verdoorn's Law (Millemaci et al 2013). However, it does capture an important industrial dynamic, the early form of which goes back to Adam Smith's analysis of productivity growth in manufacturing and which he attributed to incremental increases in the division of labour.<sup>53</sup> The division of labour he said is limited by the size of the market.

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<sup>53</sup> Smith A (1776) *An Inquiry into the Nature and Causes of the Wealth of Nations*, London: Methuen & Co. Ltd  
Productivity submission

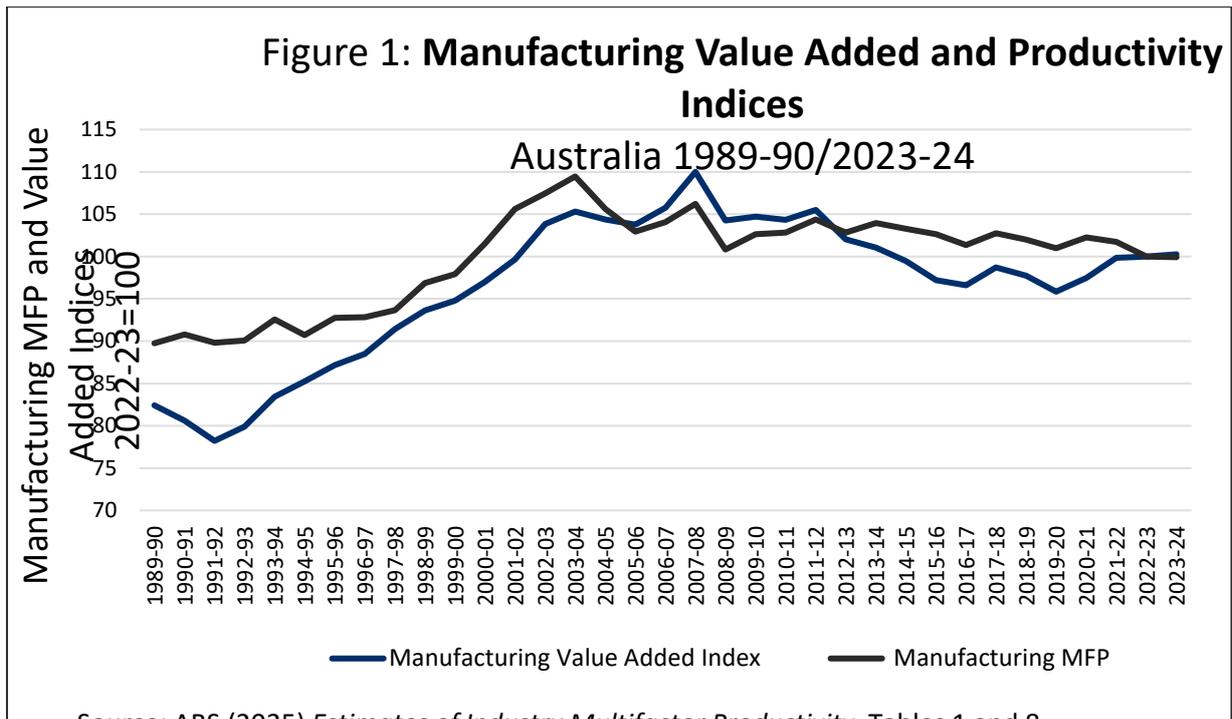


Figure 1 shows the ABS data I used to estimate the Verdoorn coefficient for Australia. It shows over the 35 years to 2023-24 on the vertical axis an index of Australian manufacturing value-added or output and an index of manufacturing productivity termed MFP. It is important to note that the index of manufacturing productivity shows growth in output per hour worked that is not accounted for by the growth in labour or capital input.

The key points from the data are first, trends in output and productivity are closely related. As one variable moves so too does the other, mostly in the same direction. Second, there are clearly 2 distinct periods, a period of relatively high growth of output and productivity from 1989-90 to 2007-08 and a much slower rate of growth in both thereafter.

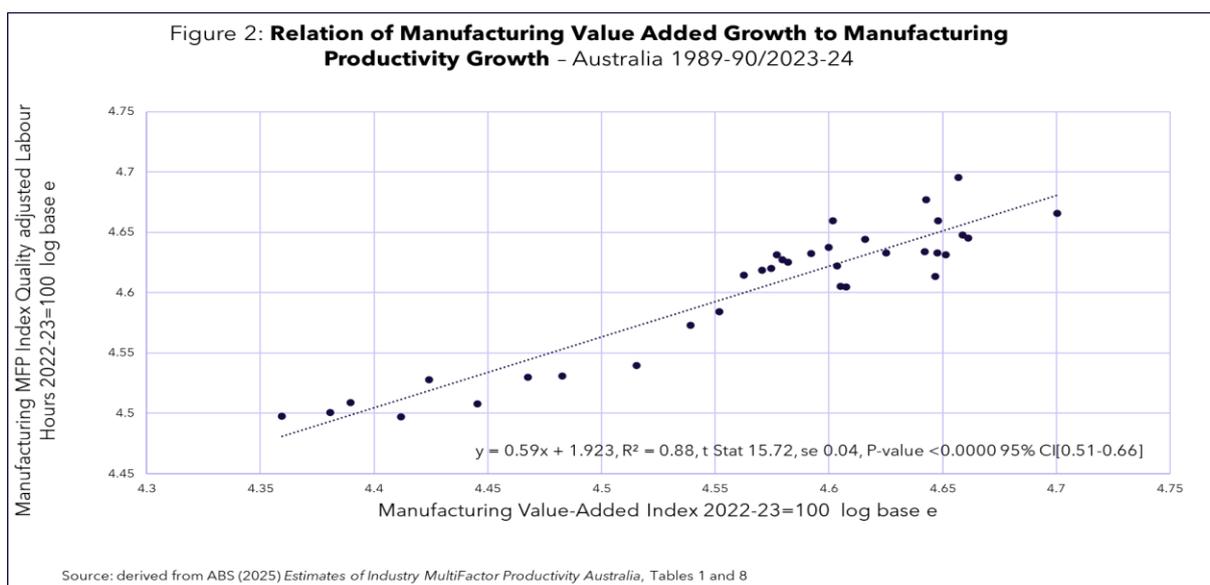


FIGURE 2 shows a scatter plot and fitted line of the relation between manufacturing output growth and manufacturing productivity growth over the 35 years. Each dot represents a particular year and shows the corresponding output growth rate in logs on the horizontal axis and productivity growth on the vertical axis. Over the full period the Verdoorn coefficient is 0.59. Over the period a 1% increase in manufacturing output is associated with a 0.59% increase in productivity. This is consistent with most other studies globally.

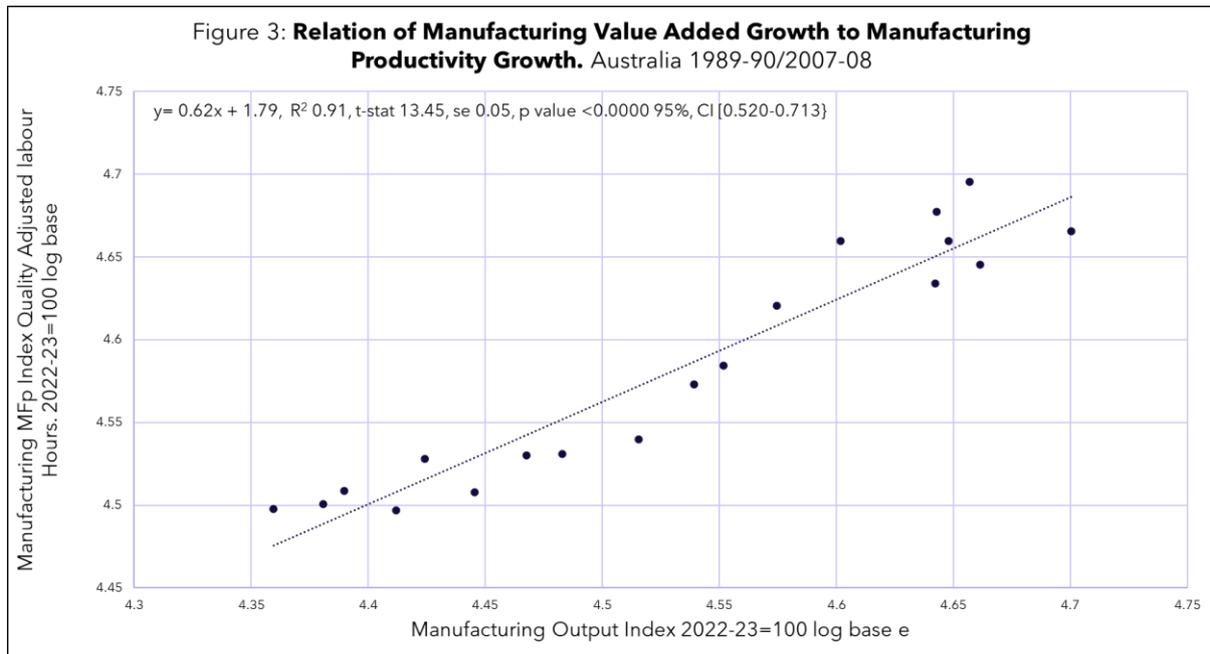


FIGURE 3 repeats the procedure for figure 2 except it is only for the higher growth period- the 19 years to 2007-08. As you would expect, if the model is correct, the Verdoorn coefficient is even higher in the high output growth period at 0.62 than for the full 35 years, as the full period included both high and low growth periods.

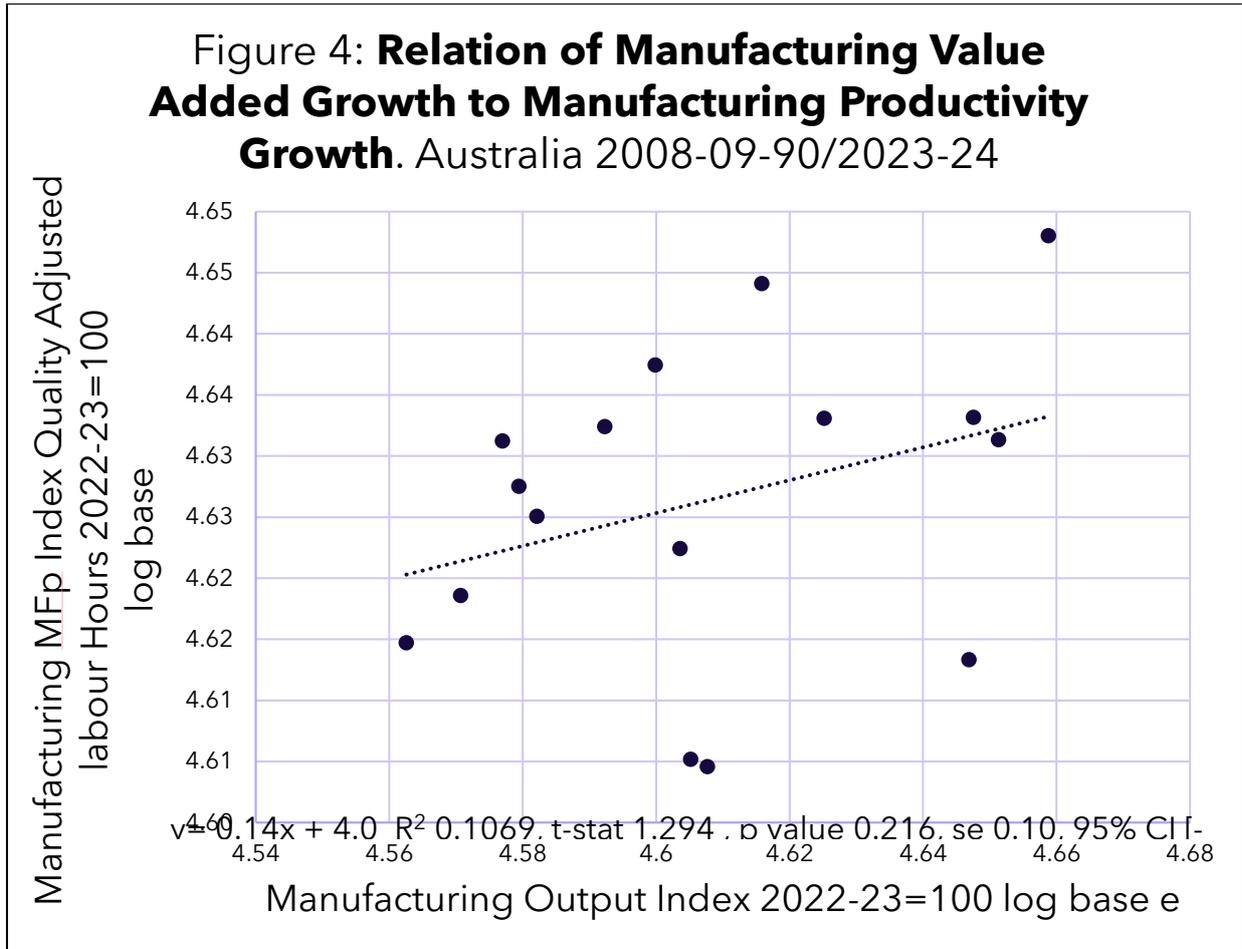


FIGURE 4 shows the model for the low growth period- the 16 years to 2023-24. The Verdoorn coefficient is just 0.14. Taken together figures 3 and 4 tell a story about the Verdoorn coefficient that is internally consistent.

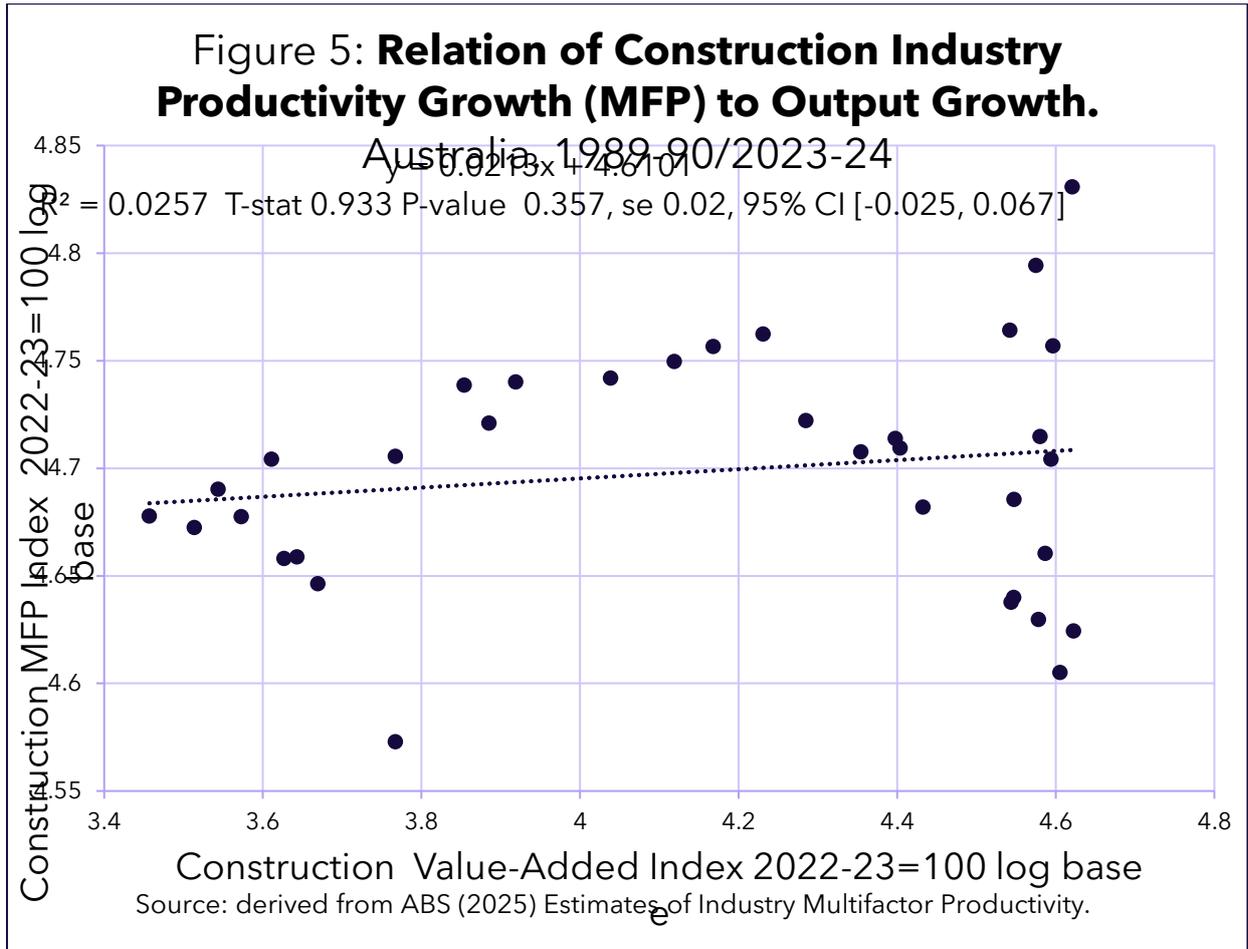


FIGURE 5 The Verdoorn relation does not apply to all industries. Just to round the picture out Figure 5 shows a different industry - construction. There is clearly little association between output growth and productivity growth.

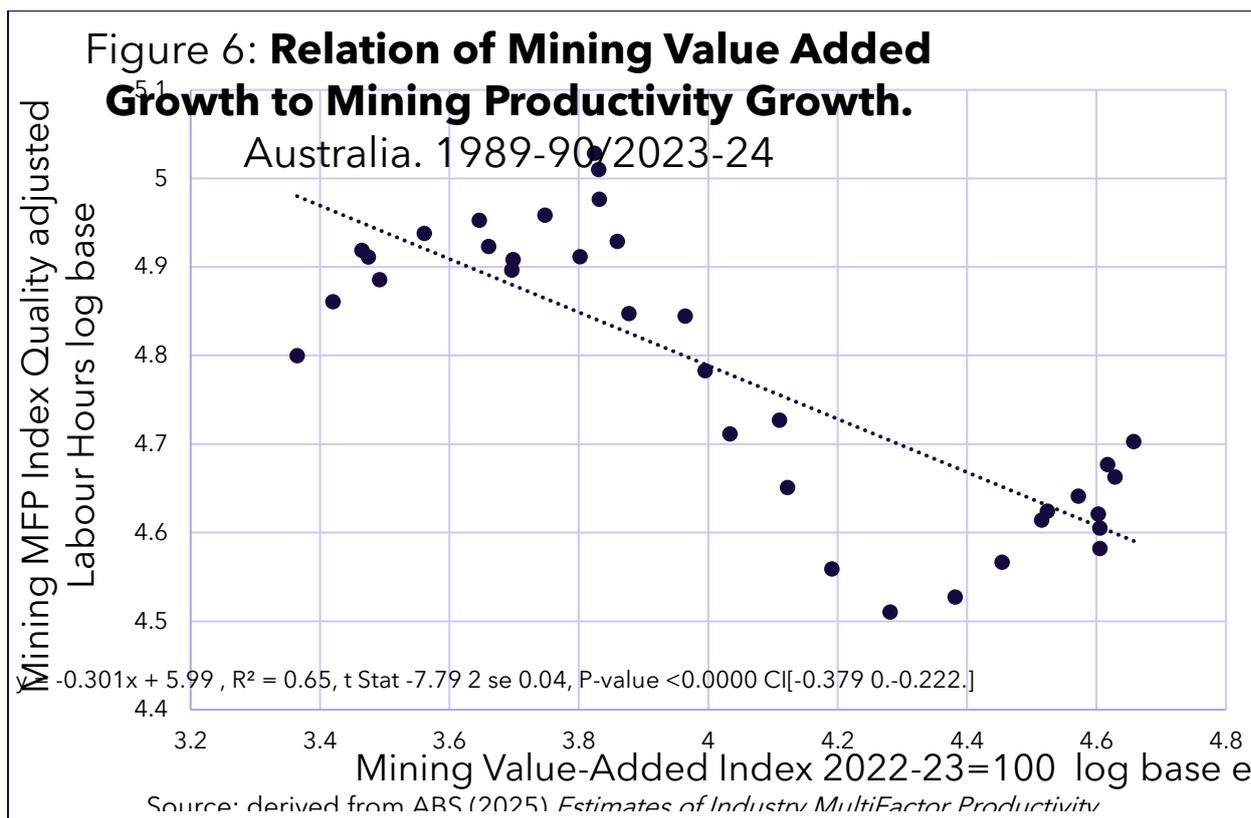


Figure 6 The mining industry clearly shows a negative association between output growth and productivity. Mining exhibits decreasing returns to scale.

## Why does the Verdoorn law work?

The association between rising output and productivity growth is attributed to various forms of increasing returns to scale that operate in the short-run and over the long-run and operate at the level of the individual firm, the industry of which the firm is a part and at an inter-industry level. In the short run there is, for example, improved capacity utilisation. Increased output allows the firm to spread its fixed cost over higher revenue base lowering marginal cost. Increased output also accelerates learning by doing in production such as plant optimisation through improved workflows and hastens worker familiarity and competence with production systems and products. Increased output also accelerates learning by using- this is where feedback from customers is incorporated into more efficient production and improved design. Larger output also confers buying and selling power on firms that increases value-added per unit output. In the longer-term increased scale of output permits investment in R&D, training and more efficient and more capital-intensive production techniques. New capital equipment and ICT incorporate more productive technologies that are not fully captured in ABS estimates of the growth in industry net capital stock and contribute to productivity growth. Many studies show the most important determinant of capital investment is rising actual or expected demand. Rising demand also permits increased specialisation within the firm and makes it feasible for other firms within

the industry and across industries to supply more specialised products and services to other firms and industries. Specialisation has long been recognised as an important source of productivity growth. In addition, improved competitiveness from rising productivity can lift exports which, by itself, is associated with improved productivity. Finally, the relation between productivity growth and output growth is self-reinforcing - productivity lowers prices which increases demand and output for manufactures which in turn lifts productivity.

## Well so what? What does this mean for policy, if anything?

The most obvious implication is that lifting manufacturing output will lift manufacturing productivity and its competitiveness. The Verdoorn Law justifies policies like local content and support for the Industry Capability Network. It also explains why they can work.<sup>54</sup>

Failure to support Australian manufacturing over the last 2 decades has lowered economy-wide productivity. Increasing the size of manufacturing industry in GDP will lift the economy-wide productivity level and its growth rate.

The Verdoorn Law reinforces the expectation that in return for taxpayer support firms attain agreed minimum productivity targets. Industry assistance must impose performance targets and adjust these targets over time.

If industry policy can significantly lift the output of a firm or industry sector this means that its past level of productivity performance may not be a good guide to future performance. This complicates the task of industry policy managers negotiating with firms in setting productivity targets for firms and trying to identify potentially high performing firms or sectors to support.

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<sup>54</sup> Interestingly early work by the Productivity Commission, then named the Industry Commission, found a similar strong relation between output growth and productivity growth for manufacturing (Gretton and Fisher 1997: Figure 2.3). From 1974–75 to 1994–95 manufacturing in Australia accounted for approximately 45% of economy wide productivity growth (Gretton and Fisher 1997: Figure 2.4). This was due to the above average rate of productivity growth in manufacturing and the high share of manufacturing output in total GDP (Gretton and Fisher 1997: 16). However, the Commission did not mention the Verdoorn effect, nor did it draw any policy conclusions to favour manufacturing industry growth. The government interventionism implied by the Verdoorn Law is inconsistent with its world view. Indeed, the Industry Commission argued strongly against selective support for high productivity industries as a means of raising economy-wide productivity (Toner 2000: 27). It is worth noting that the finding manufacturing experienced above average rates of productivity growth and contributed disproportionately to economy-wide productivity occurred in a period when manufacturing was subject to high, though declining, rates of tariff protection. In other words, the Industry Commission, and later Productivity Commission, have consistently argued that tariffs were adverse for productivity, but its own research showed that industry assistance and high productivity growth are not mutually inconsistent.

The key message is that Verdoorn's Law provides an important rationale for industry policy and suggests which instruments may be effective. However, just as it is not a complete explanation of productivity growth it is far from the whole story around industry policy. A more comprehensive policy is required especially focussed first on developing and integrating the science and technology base with industry, second, labour force development is essential and finally infrastructure investment. Combining these supply-side measures with strong demand for manufacturing output is key to successful industry policy. This is after all the policy currently pursued successfully by China and, historically, in Japan, Germany and the US.

The final point is that Verdoorn type analysis emphasises the key role of demand as a driver of productivity growth and provides a rationale for government intervention to support demand for domestic manufacturers. This emphasis on the importance of the demand-side in productivity growth is inconsistent with the Productivity Commission economic model. The PC focus is on ensuring markets conform to a text-book model of the economy in which demand plays no part in productivity growth. Thus, its key policy objectives over the last 30 years, and some of its biggest wins, have been privatisation of electricity, ports and transport systems; altering the industrial relations system; contracting out employment services, aged care, childcare, hospitals and vocational education and removing assistance to industry. A great record of success. This is a world view that makes the PC indifferent to industry structure. If an aluminium smelter shuts and is replaced with a KFC it is all good- the market is just efficiently re-allocating resources. Ironically, the PC has contributed to the very productivity decline over the last 20 years about which it now professes such concern.

By contrast to the arguments in this section the Reserve Bank makes a point of comparing demand to supply and takes wage and price inflation as indicating demand is too high relative to capacity. By deliberately taking pressure off capacity, the Reserve Bank ensures that the mechanisms behind the Verdoorn effect are not brought into play. There is little reason for business to invest in new capital if it can easily meet demand, yet it is new capital goods that are likely to be productivity enhancing.

As a final point we note that the IMF has drawn attention to the Australian paradox whereby the Australian labour market looks tight but the macroeconomy nevertheless shows signs of "cooling".<sup>55</sup> The cooling macroeconomy is inconsistent with demand induced productivity gains. At least some of the blame must be sheeted home to the RBA's recent tightening cycle. Arguably the RBA has kept monetary policy too tight ever since the period soon after the stimulus associated with the global financial crisis.

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<sup>55</sup> IMF (2026) Australia: Selected issues, at <https://www.imf.org/-/media/files/publications/cr/2026/english/1ausea2026002-source-pdf.pdf>

## **Recommendation**

**The Senate should emphasise the role of high growth in demand relative to the labour force as a powerful and positive contribution to productivity growth.**



# Taxes and efficiencies

Many participants in the debate have emphasized the tax structure as having an important impact on productivity. The political system demands that revenue closely match government spending which means each will be around a third of GDP in Australia's case. It can be argued that income is the best measure of capacity to pay and so income should be the main tax base in a country like Australia. Furthermore, there is the principle that tax should be progressive so that higher income people pay a bigger *proportion* of their income in tax. Others claim that taxing income is inconsistent with the objective of encouraging high productivity because they distort incentives to work and invest.

Some of the wealth taxes are good taxes in this regard and cannot be accused of distorting incentives. This is especially true of the broad taxes that cover all assets that constitute wealth.

Wealth taxes may counter the tendency for the increasing concentration of wealth in modern economies. Piketty argued that so long as the rate of return on capital exceeds the growth in the economy then wealth increases relative to the size of the economy. Since wealth tends to be highly concentrated, the returns argument produces increasing wealth concentration.

The process Piketty described is clearly happening in Australia with the household wealth to GDP ratio increasing from 3.7 times in 1988-89 to 6.3 times in March 2025.<sup>56</sup> We have shown that the rich 200 in Australia have increased their wealth from 8% to 25% of GDP over the last 20 years.<sup>57</sup> The IMF has warned that inequality is bad for economic growth and productivity. The managing director of the IMF, Kristalina Georgieva, has argued that capital taxation should be part of any reform for precisely that reason.<sup>58</sup>

Wealth taxes should include inheritance taxes. The inheritance tax takes from those who no longer need it and the beneficiaries have not been used to having it. This is true whether the tax is levied on the value of the estate (estate duty) or on the individual recipient of a bequest (inheritance tax).

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<sup>56</sup> ABS (2025) *Australian National Accounts: Finance and Wealth, March 2025*, 26 June and ABS (2025) *Australian National Accounts: National Income, Expenditure and Product, March 2025*, 4 June.

<sup>57</sup> Richardson D and Stilwell F (2024) *Wealth and inequality in Australia*, Discussion Paper, August at <https://australiainstitute.org.au/wp-content/uploads/2024/08/P1689-Wealth-and-inequality-Updated.pdf>

<sup>58</sup> Georgieva K (2024) "A Low-Growth World Is an Unequal, Unstable World", *IMF Blog*, 23 July at <https://www.imf.org/en/Blogs/Articles/2024/07/23/a-low-growth-world-is-an-unequal-unstable-world>

The aging of the population means that the tax base is likely to be expanding well into the future. The Productivity Commission showed that inheritance is likely to keep increasing.<sup>59</sup> Also the inheritance tax is a powerful tool in addressing inequality by checking the intergenerational transfer of high concentrations of wealth. As such it is likely to tip the balance of many beneficiaries to remain in the workforce rather than live unproductive lives. When businesses are passed on to heirs there are additional issues. The Economist described how family business dynasties have been able to thrive and how they impose dangers to the economy by consolidating business empires outside professional management and without market discipline. *The Economist* quotes Warren Buffett who compared family succession to “choosing the 2020 Olympic team by picking the eldest sons of the gold-medal winners in the 2000 Olympics”.<sup>60</sup>

The Henry review also made the point that an estate duty would be efficient and would help address inequality while also ensuring more of the likely recipients participate in the labour market. All but four OECD countries imposed estate duties in 2010 when the Henry report was published.<sup>61</sup>

Years ago, the Australian states competed against each other for hosting retirees by abolishing estate duties. To prevent that the administration of the inheritance/estate tax should be centralised with an agreed uniform set of tax rates, thresholds and the like. The GST offers a model for a tax earmarked for the states.

Among OECD countries Belgium raises the greatest proportion of its tax through estate duties. The actual tax scales in the case of Belgium are relatively light in the case of immediate family but quickly climb to a marginal rate of 80 per cent for unrelated beneficiaries. If Australia had a similar revenue effort the yield would be around \$12 billion per annum but would increase to around double that with the combined State and Commonwealth rates that used to apply in the 1960s.<sup>62</sup>

Estate duties have a major role to play in addressing the increasing inequalities in Australia. The higher we go up the income distribution in Australia the worse has been the increase in the inequality and it is among the very rich that an estate duty would be most effective in addressing intergenerational transfers of wealth.

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<sup>59</sup> Productivity Commission (2021) *Wealth transfers and their economic effects*, Research paper, Canberra at <https://www.pc.gov.au/research/completed/wealth-transfers/wealth-transfers.pdf>

<sup>60</sup> The Economist (2015) ‘All too human: How families can cause trouble for their firms’, *The Economist*, 18 April.

<sup>61</sup> Australian Government (2010) *Australia’s future tax system: Report to the Treasurer*, December 2009, Part Two: Detailed Analysis, Vol 1, (Henry Review)

<sup>62</sup> The details are in Taxation Review Committee (1975) *Full Report*, 31 January.

There are two main types of estate duties: the estate duty itself is normally assumed to operate on the entirety of the estate. On the other hand, an inheritance tax would apply to the amounts received by any beneficiary of the estate. We leave the question open but would welcome a debate about the relative merits of these two options.

# Company tax

Company tax seems to have been given a lot of attention because investment is supposed to be critically important for productivity growth while the return on investment is supposed to be an important determinant of investment itself.

The company tax is a special adaptation of the income tax designed to fit the circumstances of the corporate sector. Company taxation is provided under the *Income Tax Assessment Act 1997*. Company tax is a tax on the corporation's income and so is often described as distortional.

Company tax is effectively payable on the profit of the company subject to many qualifications. Profits are equal to company income or receipts minus expenses such as the wages bill, rent, the cost of inputs and other items that contribute to the operation of the business. Certain items are not deductible as an expense. Dividends paid to shareholders are an obvious example of a company payment that is not an expense but is a distribution of the profits of the company. On the other hand, interest paid to lenders is a legitimate expense. There are many provisions of the company tax that we can ignore for the purposes of this paper.

At present, the general company tax rate is 30% but, for smaller companies with a turnover below \$50 million, the tax rate is 25%. We estimate that 30.9% of the company tax collected is given back to shareholders as franking credits.<sup>63</sup> In discussing the Australian tax system it is important to understand franking credits which are generated as part of Australia's dividend imputation system.

## **1. Some of the claimed benefits are based on flawed assumptions.**

The idea that cutting the company tax rate would suddenly cause multinational corporations to stop avoiding tax (optimistically termed a "morality dividend") is clearly overblown, if not ridiculous. This is just one of the bizarre assumptions in the economic modelling that claims to show company tax cuts help the economy.<sup>64</sup>

However, it is important that the red herring of international tax avoidance has been raised because it highlights an important factor. Obviously, business will try to argue to the tax authorities in any country that some of their profits are made outside that country's

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<sup>63</sup> This figure is the authors' calculation based on franking credits received by individuals, super funds, partnerships and trusts and the overall company tax paid. The data came from ATO (2024) *Taxation statistics 2021-22* at <https://www.ato.gov.au/about-ato/research-and-statistics/in-detail/taxation-statistics/taxation-statistics-2021-22>.

<sup>64</sup> See Murphy C (2016) "Company tax scenario", *Report for Treasury*, 28 April.

jurisdiction and in other countries with lower tax rates. That search for advantageous tax arrangements should not be mistaken for genuine business looking for low tax jurisdictions.

## **2. Evidence from President Trump's first term company tax cuts — they did nothing for employment *or* investment.**

What did we see instead?

- Big benefits to rich shareholders through share buy-backs and dividend increases, and
- An increase in mergers and acquisitions that benefit corporate executives and make big business even bigger.

A recent assessment of the original Trump tax cuts says:

more than six years later, there is little evidence that the law's costly corporate tax cuts delivered promised growth or improved well-being for the vast majority of the nation's workforce. Instead, the law provided the largest tax cuts to the wealthy and profitable corporations, exacerbated inequality, and eroded revenues that could otherwise have been used to address national priorities.<sup>65</sup>

This report also cites IMF research that shows that the little, or no investment response may reflect the increased corporate market power which means cuts in tax merely increase monopoly profits.

Some assessments have shown small increases in investment following the Trump tax cuts albeit less than expected by the proponents. However, a study that adjusted for the pre-existing trend in investment and compared with other countries found no change to the underlying investment to GDP trend.<sup>66</sup>

## **3. The thinking behind reducing company tax is inconsistent with economic theory.**

The reasoning of why Australia's company tax rate should be cut is demonstrated by Professor John Freebairn in 2016 when he advocated for a cut to the rate by asserting that "No doubt there are some mines that have an investment that wouldn't work at 30 per cent but will work at 28.5 per cent".<sup>67</sup> This example, however perfectly demonstrates the reason for not cutting company tax rates. Company tax is not equivalent to any other business cost. If a company does not make a profit; it is not liable to pay any tax and in that respect the

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<sup>65</sup> Ross J (2024) "The Tax Cuts and Jobs Act Failed To Deliver Promised Benefits" *American Progress*, 30 April at <https://www.americanprogress.org/article/the-tax-cuts-and-jobs-act-failed-to-deliver-promised-benefits/>

<sup>66</sup> Gale WG, Hoopes JL and Pomerleau K (2024) "Sweeping changes and an uncertain legacy: The Tax Cuts and Jobs Act of 2017", *Journal of Economic Perspectives*, Vol 38(1), pp 3-32.

<sup>67</sup> Mather J (2016) 'Benefits of company tax cut would flow to foreigners, then workers', *The Australian Financial Review*, 22 March.

company tax is fundamentally different to other costs and indeed other taxes and levies such as payroll taxes and mineral royalties. The mine in the above example would still be profitable at 28.5% (or any other rate) otherwise it would not pay a company tax at all. That of course is fundamentally different from, say, an increase in the cost of capital through an increase in the rate of interest which will increase the cost of borrowing as well as increasing the opportunity cost of capital. Likewise, many other taxes and government charges are payable whether or not the company makes a profit. For example, the iron ore royalty rate in WA is 7.5 per cent of the value of the iron ore mined.<sup>68</sup> If the mining company receives \$100 a tonne, pays \$7.50 in royalties and has expenses of \$95/tonne it will run at a loss as a result of the royalty. There is no way a profit related tax can do that.

### **Dividend imputation and franking credits**

The design of Australia's company and personal taxation systems aims to prevent the so-called 'double taxation' of dividends. Before dividend imputation was introduced the double taxation of dividends occurred as a result of the interaction of the company and the personal income tax systems. A company that earns a profit is liable to pay company tax. It may then pay a dividend to its shareholders who, in turn, are also liable to pay tax. There was some concern that the final after-tax income of the shareholder might be a small proportion of the original company profit. The dividend imputation system was designed to address those concerns through refunds to individual taxpayers to reflect the tax paid by the company and imputed to the individual shareholder. A numerical example helps here.

Take a company which makes a profit of \$100. Assuming it has no deductions etc it will pay company tax at 30% (or \$30) leaving it with an after-tax return of \$70. That \$70 might be retained by the company or it may be paid out to shareholders as dividends. If the \$70 is paid as dividends, then those dividends are again assessable in the hands of the dividend recipient. A dividend recipient may be an individual shareholder or a trust, partnership, super fund or another company. For simplicity assume the dividend recipient is an individual. Now the \$70 dividend is assessable income in the hands of the recipient but under the imputation system credit is given for the tax already paid by the company.

We now outline how that is done.

Every \$70 received as a dividend by an Australian individual taxpayer is 'grossed up' and taken to be the original \$100 in working out the personal tax liability. However, the company tax paid, the \$30, is credited against the individual's tax liability. Hence if the shareholder is on a 47 per cent marginal tax rate (including the Medicare levy) the tax on the 'grossed up' dividend of \$100 is assessed as \$47. A 'franking credit' of \$30 representing the company tax already paid is recognised and a net liability of \$17 is payable by this

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<sup>68</sup> Western Australia Government (2015) *Mining Regulations 1981*.

individual to the tax office. That leaves \$57 (=70+30-47) in the hands of the shareholder with the tax office receiving \$47, \$30 from the company and \$17 from the individual.

The net effect in this example is as if the company paid no tax and the individual is taxed on the full amount at the appropriate marginal tax rate. If the franking credit exceeds the actual assessed tax liability (for example, if the dividend is paid to a low-income earner not liable to pay tax) then that taxpayer receives a cash payment for the difference subject to residency, etc. The cash payment is important in the case of other entities taxed at low rates, such as super funds. We referred earlier to the amount credited against the individual's tax liability as a 'franking credit'. Companies that pay tax maintain a franking credit account and can declare a franked dividend, so long as the franking credit account maintains a positive balance.

We estimate that 30.9% of the company tax collected is given back to shareholders as franking credits.<sup>69</sup>

### **Economic theory discussion**

#### **Much of the economics theory used by proponents of company tax cuts is wrong**

During the 2016 company tax debate the KPMG modelling based on their understanding of the economic processes at work.<sup>70</sup> Their main result was that a cut in company tax will boost the economic indicators we care about. The main mechanism was the assertion that cutting company tax rates reduces the cost of capital, which increases investment which results in the substitution of capital for labour resulting in both higher capital/labour ratios and higher productivity, output per head. However, the model virtually assumes what it wants to demonstrate. Once certain assumptions are fed in, the only uncertainty is the order of magnitudes involved in the final results and after all the feedback effects.

#### **Problems with the above account**

Economists tend to assume that the objective of business is to maximise profit. Generally, you can express profit as revenue minus costs. That in turn can be expressed mathematically as a function of output – the level of production. To maximise profit the business will produce more output until profits peak. Mathematically that means marginal revenue equals marginal cost and the business can pick the quantity to produce for maximum profit. But mathematically the conditions for maximising profit will be the same as the conditions for maximising 70% of the profit which means the after 30% profit

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<sup>69</sup> This figure is the author's calculation based on franking credits received by individuals, super funds, partnerships and trusts and the overall company tax paid. The data came from ATO (2024) *Taxation statistics 2021-22* at <https://www.ato.gov.au/about-ato/research-and-statistics/in-detail/taxation-statistics/taxation-statistics-2021-22>.

<sup>70</sup> KPMG (2016) *The economic impact of a GST-funded company tax cut*, 14 January

condition for maximum profit is exactly the same as the condition for maximising 100% of the profit, or any other figure for that matter. This reinforces Stiglitz's point that taxing profit is fundamentally different from other taxes such as payroll, GST, energy and so on.

In the case of a corporate entity looking to invest, the essential argument is that investment will take place until the return on the marginal investment is just equal to the cost of capital and that will be true whether or not the company needs to borrow or can meet the investment cost out of retained earnings. Increases in the company tax rate will reduce the after-tax return on the investment but that is balanced by increases in the value of interest deductions (or increase the tax on returns from keeping retained earnings in the bank). It is still profitable for the company to keep investing until that point. Hence Stiglitz says that the company tax 'is an infra-marginal tax on the return to capital (or pure profits) in the corporate sector'.<sup>71</sup>

The marginal condition (invest until returns just equal the cost of capital) is unaffected by the company tax rate. In principle that means the company tax rate can be increased substantially without altering corporate behaviour. Stiglitz criticises those who assert that the corporate tax rate introduces an inefficiency by increasing target rates of return on the part of investors. As he says, "they confuse the average with marginal cost of capital".<sup>72</sup> It is this confusion that is behind claims that the company tax is inefficient compared with other possible taxes.

If the best company tax system is one that allows you to recoup any capital outlays and generate a normal return on investment, then Stiglitz makes it clear that the tax system is already a good approximation for that.<sup>73</sup> The actual capital outlays on buildings, equipment, software and the like are tax deductible over time using the provisions for depreciation and amortisation expenses. Investments are normally financed through borrowings and, to the extent that interest charges reflect the market rate of return, then interest payments reflecting the normal rate of return are tax deductible. Moreover, the interest charges tend to be composed of a real rate of return plus an inflation component. To the extent that the prices of capital goods follow general inflation trends, then interest charges generate a rate of return sufficient to cover inflation in capital goods prices. If there is 100% gearing of new investment, that is, no shareholder funds are used, then an investment that just breaks even pays no tax but earns the going rate of return. If then the investment produces an accounting profit, that will be equal to the surplus above depreciation, amortisation and financing costs which only exists in companies making above normal rates of return.

In practice companies may not be 100% geared and so some of the measured profit will be part of a normal return on investment. Working in the other direction, most companies will

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<sup>71</sup> Stiglitz JE (1973), p 26.

<sup>72</sup> Stiglitz JE (1973), p 33.

<sup>73</sup> Stiglitz JE (2025) *The Origins of Inequality, and Policies to Contain it*, Oxford University Press.

be operating equipment that has been fully or partially depreciated in earlier tax returns, either in full or in part. Hence, Stiglitz can claim the company tax system is a good approximation of a rent tax.

The review of the Australian Tax system by the then Secretary of Treasury, Ken Henry saw the tax on economic rent as being a very good tax because it taxes the inherent profitability of a particular resource.<sup>74</sup> However, the review seemed unaware that the analogous argument applies to profit earned in the corporate sector. Just like a resource rent tax, the company tax rate can be quite high without affecting the incentive to invest and, hence, without affecting behaviour.

The US Congressional Research Service has surveyed the econometric evidence that might or might not support claims to the effect that lower company tax rates increase economic growth, boost employment and the like.<sup>75</sup> It generally debunks the notion that lower company taxes are beneficial in the ways usually suggested.

Analyses, such as that by KPMG mentioned above, repeat a common mistake of treating company tax as a cost. Instead, it is a tax on the profit—the residual after all other claimants on the company's revenue have been met. That fact alone makes company tax fundamentally different. The modelling also assumes away other real-world problems and for example, assumes away dividend imputation when talking about the required rate of return on capital.

Another point worth noting is that the people who argue for lowering the cost of capital relative to labour to stimulate investment do not appreciate that this could be done by increasing labour costs instead as we noted above. We would argue that lowering the cost of capital after tax is an ineffective way of encouraging less labour-intensive techniques of production.

## **Recommendation**

**The Senate note that productivity increases is a consideration for the tax system but not the only one and not necessarily the most important. Company tax seems to have few downsides and, in any case, eligible company owners in Australia get reimbursed for any company tax paid on their behalf.**

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<sup>74</sup> Henry K (2008) *Architecture of Australia's tax and transfer system*, August.

<sup>75</sup> Gravelle JG and Hungerford TL (2011). *Corporate tax reform: Issues for Congress*, 16 December.

# Competition issues: Costs associated with competition

It is generally taken for granted that competition is a good thing and that competition will ensure a market is well-behaved and delivers benefits to consumers. For example:

The benefits of competitive markets include lower resource costs and overall prices, better services and more choice for consumers and businesses, stronger discipline on businesses to keep costs down, faster innovation and deployment of new technology, and better information allowing more informed consumer choices. Competitive markets are dynamic and innovative, which can benefit Australians both now and into the future.<sup>76</sup>

That is the theory. However, in practice competition can lead to perverse results.

Australia's key markets are concentrated and non-price competition is an important feature of many markets. Non-price competition can mean a host of business strategies from advertising to fraud and other criminal activities. As this is being drafted the ACCC case against Coles and Woolworths is being heard. There are very serious allegations of fraud and deception being made against those companies.

Australia's commercial history is littered with examples of criminal activities intended to advance business interests. And there are grey areas. Woollies and Coles won a case against an Australian Competition and Consumer Commission (ACCC) ruling on petrol price discounting. They both know that price discrimination in favour of supermarket customers is anti-competitive behaviour and certainly against the spirit of the law yet engage in that behaviour just to the point they think they are safe from being found guilty. That sort of behaviour demonstrates why the law is essential. Often players go to the limit of the law, so the law then provides the boundary around which the market players concentrate. This is not necessarily to suggest that all businesspeople are crooked but that some industry structures and other market features invite criminal behaviour. They effectively invite criminals to self-select.

Over and over again we keep finding evidence that in many areas the market is broken. When the market does not work well it is likely that various providers will be making excessive profits.

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<sup>76</sup> Australian Government Competition Policy Review (2014) *Issues Paper*, p. 1.

In the case of the mining industry, we are very clear that even the most vigorous competition is not going to drive out excess profit. The reason is that mining companies receive “economic rents”. Given world commodity prices Australia’s superior reserves mean that Australian miners will earn more than the going rate of return and those superior profits will not be bid away by competition from other suppliers so long as Australian mineral deposits are much superior to those in the rest of the world. Other industries also earn economic rents. For example, the big banks are so profitable because they can earn rents through their operation of the means of payment in Australia as well as operating with economies of scale. It seems that rents are in fact a common part of the Australian economic landscape.

The rate of return on capital in Australia is 15.2 per cent when calculated from the national accounts.<sup>77</sup> This figure does not include capital gains and is much greater than the going rate of return which is proxied by the 10-year bond rate, 4.75%, or its average value the last decade, 2.75%.<sup>78</sup> A high rate of return indicates there are many rents being appropriated by Australian companies. The Australia Institute has published extensively on the problems posed by economic power in modern Australia.

We might well ask why rents are a problem. It is generally accepted that incomes in our system are “deserved” if the income is a payment for some sort of service to the community. That service may be supplying labour or capital that assists in the provision of a good or service that the community needs. But there is also the concept of a “fair price” for that good or service. If someone is able to extract an income much higher than normal, we regard that as unfair and possibly immoral. For example, the miner who has access to a nation’s resources during a commodity boom will be receiving super profits as a result and we regard that as unfair. (The UK and other countries imposed excess profits tax on oil companies following the war on Ukraine.)

Likewise, many societies have prohibitions against usurious interest charges.

### **Limitations on competition**

The outcome of competition is often that one or a small group of producers “wins”. They are able to take over their competitors or drive them out of business. A win might be a result of better cost efficiencies, but it may instead reflect various non-price attributes. If it is indeed the result of more efficient production, then potentially we are all better off as a result of company X winning the competition.<sup>79</sup> However, often the win is a result of just being the first in the market. That is true of some of the American tech companies but also

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<sup>77</sup> ABS (2025) *Australian system of national accounts, 2024-25*, Cat no 5204.0, 24 October. The basis for this calculation is to compare the gross operating surplus (excluding dwellings), with the non-financial corporate sector capital stock excluding dwellings.

<sup>78</sup> RBA Statistics at <https://www.rba.gov.au/statistics/tables/#interest-rates> accessed 9 February 2026.

<sup>79</sup> But not if it leads to abuse of power in other ways – robber baron behaviours.

true of Westpac, formerly the Bank of NSW, for example. The Bank of NSW was the first bank established in NSW and survived the many banking upheavals that followed.

In practice competition is more like guerrilla warfare—virtually anything goes in trying to increase sales including illegal practices when there is little likelihood of being caught. Companies may well use prices to attract consumers but that is only one of the possible tactics. The important thing is that in some markets there is less scope to misrepresent the product or build brand recognition or adopt other practices that can be antisocial.

It has long been recognised that oligopolistic competition eschews price competition and instead competition is based on the attributes of the product and attempts to whip up enthusiasm for new features. Nobel prize winning economist Michael Spence refers to ‘nonprice competition’ as ‘activities by firms or corporations that shift the demands for products, their own and [against] those of their rivals’<sup>80</sup> (Spence. P. 255).

R&D spending can be involved in oligopolistic competition. Generally, the implication of oligopolistic competition is that resources are wasted in unnecessary competition.

As an example, Spence referred to the petroleum industry and its ‘excess of nonprice competition in retail outlets, advertising and promotions of a variety of kinds’ (Spence, p. 255). Hence competition to make buying petrol more convenient meant an oversupply of petrol stations that were often situated across the road or next door to each other.

In the airline industry scheduling rivalry was observed to erode airline profits.<sup>81</sup>

This point should be emphasised. In some oligopolistic markets excess profit may be competed away in a manner analogous to the way firms in perfect competition act so as to bring profits back to some normal rate. But the big difference is that returns are reduced to normal because costs are inflated by wasteful competition whereas genuine competition would see monopoly profits competed away to the benefit of the consumer.

### **When competition is perverse**

In many markets competition can be perverse. There is for example the ratings agency problem which involved new players that increased competition between the ratings agencies but, as the OECD reported, the increased competition resulted in ‘ratings grade inflation’ as the agencies competed for new custom or to retain old customers. The OECD said ‘the agencies made discretionary upward adjustments in ratings in efforts to retain or capture business, a direct consequence of the issuer-pays business model and increased

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<sup>80</sup> Spence M (1977) ‘Nonprice competition’, *American Economic Review, Papers and Proceedings*, May, p 255.

<sup>81</sup> Schmalensee R (1977) ‘Comparative static properties of the regulated airline oligopolies’, *The Bell Journal of Economics*, Vol 8, Autumn, p 565.

concentration among investment banks. Issuers [ie a smallish number of firms wanting their products to be rated] could credibly threaten to take their business elsewhere'.<sup>82</sup>

A similar example involved increased competition in the New York's vehicle testing centres. In New York vehicles have to be periodically tested for pollution control and owners can choose which privately operated testing centre to attend. The result was quick testing and easy passing which resulted in testing centres improperly passing vehicles so as to achieve customer loyalty. A study found that as the number of competitors increased so did the pass rates.<sup>83</sup> New businesses were more likely to be lenient and pass polluting vehicles. Honest businesses risked losing business to dishonest competitors. All up 'Entrants, rather than remedy market failure, contributed to it'.<sup>84</sup> The study concluded that

Policy makers must consider whether competition is the ideal market structure when corruption, fraud, or other unethical behaviors yield competitive advantages. If customers indeed demand illicit dimensions of quality, firms may feel compelled to cross ethical and legal boundaries simply to survive, often in response to the unethical behavior of just a few of their rivals. In markets with such potential, concentration with abnormally high prices and rents may be preferable, given the reduced prevalence of corruption<sup>85</sup>

Treasury officials argued that the level of economic rents in Australia were \$64.4 billion in 2011-12<sup>86</sup> which was equal to 12.5 per cent of the gross operating surplus that year.<sup>87</sup> Incidentally 57 per cent of the rents or \$36.8 billion was assumed to be in the finance sector.

Whether the Treasury estimate is correct or not we can agree that there are very high rents in Australia that are effectively a private levy on the Australian population equivalent to an indirect tax.<sup>88</sup> High economic rents are a sign that competition is inadequate to drive profits down to competitive returns.

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<sup>82</sup> OECD (2011) *Bank Competition and Financial Stability*, OECD Publishing 27 October, p 210.

<sup>83</sup> Stucke ME (2013) 'Is competition always good?', *Journal of Antitrust Enforcement*, pp. 1–36

<sup>84</sup> Stucke ME (2013), p. 34.

<sup>85</sup> Bennett VM and others, 'Customer-Driven Misconduct: How Competition Corrupts Business Practices' (2013) *Management Science*, cited in Stucke ME (2013) p. 35.

<sup>86</sup> Rimmer X, Smith J and Wende S (2014) 'The incidence of company tax in Australia', *Economic Roundup (Treasury)*, Issue 1, pp 33-47.

<sup>87</sup> ABS (2013) *Australian system of national accounts, 2012-13*, Cat no 5204.0, 1 November.

<sup>88</sup> The mining tax is different but is effectively a private appropriation of the value of resources that are theoretically owned by all Australians.

## Electricity

The history of electricity regulation and reforms is an interesting case study.<sup>89</sup> The cost of electricity increased by 170 per cent from 1995 to 2012, an increase four times higher than the rise in the consumer price index (CPI). This increase occurred despite the industry being subjected to privatisation and corporatisation for the past two decades, a process that promised to increase efficiency and lower prices. Yet it is likely privatisation has contributed to price increases. Output per worker has fallen markedly in electricity since the reform programs while it has increased in the rest of the economy.

Over the period from June 1995 to 2012, we reported that productivity across the economy as a whole increased by 33.6 per cent, while in the electricity sector it declined by 24.9 per cent. One explanation is the rapid increase in staff numbers in occupations that do not have a direct role in actually generating electricity. For example, the number of managers in the sector grew from 6,000 in 1997 to 19,000 in 2012, a rise of 217 per cent. This has seen the ratio of managers to workers change from one manager to every 13 workers in 1997 to one manager for every nine workers in 2012. An occupational category described as 'Business, Human Resource and Marketing Professionals' increased from 2,200 to 9,400. Likewise, the sales staff increased from 1,000 to 5,000. In contrast to this, there was a much smaller increase in the group of people who are directly involved in producing electricity. Indeed, it looked like there was no decline in output per worker if we only count those that actually make electricity.

A similar thing happened to the capital costs associated with privatisation. Private buyers tend to pay more than the value of an electricity plant is worth because of the potential for monopoly profits. Having paid a premium above the value of the capital assets, these businesses are then obliged to seek high prices to achieve a competitive return. In this way further costs are passed onto consumers. The private buyers were buying businesses that had the potential to earn way above the usual rate of return. The monopoly premium was the outcome of competitive bidding for the assets, but having paid the monopoly premium their cost structure was such that they had to charge the monopoly price to generate a reasonable return on the inflated assets. All of that was of course at the direct cost to consumers.

The architects of the privatisation, market creation and corporatisation programs clearly did not take into account the increases in functions that a player in a competitive market has to take on. The changes created the need for a sales team and marketing professionals. New businesses that used to be under the one roof, now had to deal with each other which involved drawing up and managing contracts, monitoring and enforcing performance all of

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<sup>89</sup> The following is based on Richardson D (2013) *Electricity and privatisation: What happened to those promises?* The Australia Institute, Technical Brief No. 22, April.

which involve costs and the more complex the matters contracted then the more resources have to be spent managing, monitoring and enforcing performance against the contractual arrangements.

Along with sales teams and marketing professionals came deceptive and barely illegal practices. The sales and similar expenses seem imperative to a market player but are socially wasteful—especially for a commodity like electricity that sells itself. Clearly the architects of the current system likewise did not consider the scope for a new oligopoly market to create the scope for consumer rip offs.

We have concentrated on electricity, an area in which the Australia Institute has studied fairly closely. However, there are analogous issues in other areas that have been privatised.

- The behaviour of Qantas under Alan Joyce,
- Private ports upsetting the miners,
- Toll roads blocking free alternatives,
- Communications carriers skimping on community service obligations and denying consumers state of the art performance,
- ...

On top of actual privatisations there are areas where governments and the community have increasingly resorted to the private sector but with problems involving private providers

- Childcare
- Education
- Health
- ...

Non-price competition in areas such as private education take the form of excessive provision of gyms, rowing equipment, swimming pools and the like. These add nothing to the educational outcomes but involve more resources, hence a reduction in productivity.

Mazzucato and Collington argue that most often the motive for outsourcing of consulting is the risk aversion on the part of politicians and public servants who are afraid of making mistakes and seek to avoid blame for possible failure.<sup>90</sup> However, the consequence can be that the government agency that contracts out no longer has the expertise in the area and loses even the ability to properly manage contracts. There is also the risk that the outsourced organisation will intentionally or otherwise impose different values and ideologies on the organisation.

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<sup>90</sup> Mazzucato M and Collington R (2023) *The Big Con*, Allen Lane: UK.

## Recommendation

**That the Senate point out that privatisation and the growth of other non-government provision has involved various forms of non-price competition that is often anti-social and also, for present purposes, reduces productivity in Australia.**

Reversing privatisation may often be very difficult, the proverbial unscrambling of the egg. But there is one area of privatisation where immediate steps could be made.

## Office accommodation

For some time, the Commonwealth Government has been privatising its office accommodation when it should not have been.

The Australian National Audit Office (ANAO) examination of estate property sales pointed to the high hurdle rate of return used by the Government to decide whether to sell or retain particular properties. A high hurdle rate of 15 per cent was chosen. Properties that did not deliver 15 per cent were to be sold under that policy. In criticising the high hurdle rate the ANAO notes that “By applying the hurdle rate of return of 15 per cent ...to the selection of properties for sale, it would be unusual for the Commonwealth to continue to own property.”<sup>91</sup> At the time the long term (10-year) bond rate was within the range 5 to 6 per cent<sup>92</sup> implying a premium of 9 to 10 per cent. The ANAO noted that “A property with security of tenure to the Commonwealth in the form of a non-cancellable lease over a long period represents a low risk and the criteria used for the hold/sell decision should reflect that risk profile. The use of a hurdle rate of return that is too high would result in a sub-optimal investment outcome and financial loss to the Commonwealth when combined with long-term leaseback arrangements.”<sup>93</sup>

The ANAO found that these properties were going to cost the government money over time and some sales were associated with negative present values. The decision to impose a very high hurdle rate of return was clearly unwarranted and so would appear to be an ideological decision.

The National Audit Office in the UK found similar problems with the Private Finance Initiative, a scheme designed to attract private finance for constructing schools and other

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<sup>91</sup> The Auditor-General (2001) “Commonwealth Estate Property Sales: Department of Finance and Administration”, *Audit Report No.4 2001–2002: Performance Audit* at [https://www.anao.gov.au/sites/default/files/anao\\_report\\_2001-2002\\_04.pdf](https://www.anao.gov.au/sites/default/files/anao_report_2001-2002_04.pdf)

<sup>92</sup> RBA (2001) *Statement on Monetary Policy*, August.

<sup>93</sup> The Auditor-General (2001) “Commonwealth Estate Property Sales: Department of Finance and Administration”, *Audit Report No.4 2001–2002: Performance Audit*, p 15.

buildings. The NAO found that the schools financed privately cost about 40 per cent more than those financed by government borrowing.<sup>94</sup>

Generally schemes that involve the private sector supplying the finance inevitably cost more in servicing private debt than is available to governments that can borrow at the long term government bond rate. Of course, private financiers come up with jargonistic slogans such as “public private partnerships” that attempt to disguise the fundamental truth that government can borrow more cheaply.

### **Recommendation**

**That the Senate note government should aim to own its office accommodation and other real property where practical and where there are clear benefits over time.**

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<sup>94</sup> The Economist (2018) “Britain’s outsourcing model, copied around the world, is in trouble”, *The Economist*, 28 June.

## Retail trade

Retail trade is especially interesting and includes the duopolists Coles and Woollies as well as a host of small business traders in various segments of retailing. The ABS input output tables suggest there are very high mark-ups in parts of this industry. An earlier paper by The Australia Institute examined this issue and we repeat that exercise in Table 1. We have included all product groups with a markup of 50% or more. Note too that the markup is calculated on the cost to consumers before the retail markup but adding in the wholesale margin where applicable.

Table 1: Product average mark-up by type

	<b>Retail markup %</b>
<b>Footwear manufacturing</b>	<b>172</b>
<b>Tanned leather, dressed fur and leather product manufacturing</b>	<b>163</b>
<b>Textile manufacturing</b>	<b>161</b>
<b>Textile product manufacturing</b>	<b>114</b>
<b>Knitted product manufacturing</b>	<b>100</b>
<b>Other manufactured products</b>	<b>96</b>
<b>Basic non-ferrous metal manufacturing</b>	<b>88</b>
<b>Wine, spirits and tobacco</b>	<b>81</b>
<b>Glass and glass product manufacturing</b>	<b>80</b>
<b>Furniture manufacturing</b>	<b>74</b>
<b>Pulp, paper and paperboard manufacturing</b>	<b>69</b>
<b>Forestry and logging</b>	<b>68</b>
<b>Natural rubber product manufacturing</b>	<b>66</b>
<b>Polymer product manufacturing</b>	<b>66</b>
<b>Non-metallic mineral mining</b>	<b>64</b>
<b>Cleaning compounds and toiletry preparation manufacturing</b>	<b>63</b>
<b>Clothing manufacturing</b>	<b>59</b>
<b>Paper stationery and other converted paper product manufacturing</b>	<b>58</b>
<b>Other fabricated metal product manufacturing</b>	<b>54</b>
<b>Metal containers and other sheet metal product manufacturing</b>	<b>53</b>
<b>Bakery product manufacturing</b>	<b>51</b>
<b>Dairy product manufacturing</b>	<b>51.</b>
<b>Beer manufacturing</b>	<b>50</b>

Source: ABS (2025) *Australian National Accounts: Input-Output Tables, 2022-23*, 26 March.

Table 1 suggest some product groups have extremely high markups. The textile, clothing and footwear industries in particular have very high markups of 100% or more with footwear topping the list at 172%. The ABS suggest that 41 per cent of the value of the relevant consumer purchases support the retail sector.<sup>95</sup> The margin imposed by the retail sector acts as a large private tax burden on consumers. Our impression from inspection of the list is that the mark up is largest in segments that are characterised by more product differentiation on the part of producers. Hence sellers of clothes and shoes are able to charge a much higher mark-up than sellers of fresh food for example.

All up, retail markups on goods amount to 9.5% of household final consumption expenditure. And note that this does not include the implied retail markup on services like gas, water and electricity. In the main the ABS does not separate retail components for services. The other thing to note is that high retail markups do not necessarily mean that the retailers are earning large profits. For example, shoe retailers tend to be located in shopping centres that tend to charge very high rents.

We also had a quick look at the similar data for 2012-13.<sup>96</sup> The average markup on goods was higher at 46% in 2012-13 and retail cost households 10.3% of their total consumption expenditure. Those figures suggest that there has been some improvement towards lower margins on consumer items. Nevertheless, as Table 1 shows, markups remain extraordinarily high.

### **Recommendation**

**The Senate takes note of the very high retail markups facing Australian customers. Productivity improvements in retail could significantly reduce the cost of living. The Senate might do a great service by conducting inquiries into the retail industry.**

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<sup>95</sup> The retail markup was calculated over the goods categories; sheep, grains, beef and dairy cattle to other manufactured products.

<sup>96</sup> ABS (2015) *Australian National Accounts: Input-Output Tables, 2012-13*, 25 June at <https://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/5209.0.55.0012012-13?OpenDocument>

## Do what the private sector does

Ordinary observation among businesses in Australia suggests that as we transition from small to big business we gradually see more functions brought inhouse. The local shop does not have a human resources department, it does not employ lawyers, or information specialists, it brings in accountants and bookkeepers on an ad hoc basis. As we examine increasingly larger businesses it is noteworthy that these functions and others are gradually introduced or brought inhouse. In addition to those already mentioned are salespeople and marketing professionals, procurement, logistics, fleet and property services and middle management.

As businesses expand these various functions are brought inhouse, yet for the biggest business of all, government, there is a strong lobby for outsourcing and contracting out. One possible explanation is political as mentioned earlier. The Abbott Government had commissioned the National Commission of Audit (NCA) which was chaired by Tony Shepherd. He had been chair of the Business Council of Australia as well as head of Transfield, an Australian listed company. Transfield was the beneficiary of outsourcing and, for example, ran offshore detention facilities for asylum seekers. Naturally the NCA recommended everything possible should be contracted out in which case Transfield and other corporate interests might benefit. Effectively business interests were given a unique opportunity to lobby government in the guise of a report on the functioning of government.

In some cases outsourcing and contracting out have created powerful lobby groups that can then influence government to deliver policies that will benefit the lobby group. An American example includes the privatisation of prison services which then generated a powerful interest group that lobbied government to promote tougher law and order policies that would boost prison inmate numbers.<sup>86</sup>

In addition to the financial savings made by organisations big enough to utilise inhouse services there are a number of other positive aspects to government delivery of services. These are implicit in many of the failures we mentioned in relation to contracting out, outsourcing and privatisation. For example, earlier Sappington and Stiglitz's reference to residual rights of intervention were mentioned. In a complex contract when gaps appear the government may be obliged to fill the gap. However, in the interim it is likely that there will be negotiation and perhaps even legal action which imposes costs on both sides. On the other hand if everything is sourced inhouse the same problem is dealt with differently.

The Commonwealth Bank of Australia (CBA) experience with information technology (IT) provides valuable lessons in this regard.<sup>87</sup> By the early 2000s CBA had substantially reduced its inhouse IT operations which were mostly contracted out to EDS.<sup>88</sup> There were

“tensions” with EDS and the loss of capabilities on the part of the CBA meant it was difficult to coordinate and integrate new services. Following these problems CBA changed its strategy and “regain IT capabilities and rebuild its IT function so it could select and integrate external IT providers. The regained IT capabilities enabled CBA to successfully complete major IT projects”.<sup>89</sup> CBA clearly benefited from returning to an inhouse model for its IT operations.

Empirical evidence suggests that inhouse provision is related to the size of an organisation.<sup>90</sup> Clearly, we should not expect that the local credit union would be in a position to set up operations that can do what the CBA’s inhouse IT can do. But governments are also in a position in which the presumption should be doing it inhouse.

Other examples can be cited and we referred to the Boeing disaster above.<sup>91</sup> A recent example is the contracting out of the ASX IT system to replace its ageing clearing arrangements. ASX chief executive Helen Lofthouse is reported to have told a parliamentary committee that “escalating delays” on the part of the software provider caused the ASX’s decision “to pull the plug on the project. This triggered a \$250 million write-down, set the critical market infrastructure upgrade back at least five years, and triggered a loss of faith in ASX’s capability to manage technology, infuriating the Reserve Bank and corporate regulator.”<sup>92</sup>

### **Recommendation**

**That the Senate note that for most business the optimal strategy is not to devolve itself of function as it gets bigger but quite the opposite. As it gets bigger, business tends to bring in-house many services that it used to procure in the market. Government is well advised to do the same.**

# Conclusion

A major theme of this submission has been that many of the leave-it-to-business solutions from lower company tax to privatisation are either benign or can have major perverse consequences. And to slightly misquote Zingales we might say “If the most profitable line of business is to dupe customers, competitive pressure will induce firms to innovate along that dimension”. Not all businesses are crooked but crooked people will self-select into positions where they can take advantage of customers while bad businesses often drive out the good ones.

We can conclude by recapping our recommendations:

**That the Senate note that actual measures of productivity are subject to measurement difficulties which suggests we should be suspicious of any empirical results that may be produced. Productivity measures tend to use national accounting data but that can lead to problems.**

**The Senate note that productivity measures are influenced by more than just those technological factors that increase output per head. As far as we are aware Australia does not produce productivity measures that are immune from these and other contaminations.**

**While acknowledging that ordinary labour productivity measures have many problems the Senate should note that the problems with multifactor productivity are infinitely worse and render the concept unfit for purpose.**

**The Senate note that GDP is not a good measure of Australian income/product and that GNP is a more appropriate measure of output in so much as it better reflects production and income due to Australian residents. The Senate should recommend that the ABS produce productivity estimates that use GNP and make adjustments for the various other issues we have identified.**

**The Senate note that the work of the Productivity Commission relies on mainstream economic theory which is very unsuited to studying the dynamics of productivity.**

**That the Senate note that there are strong incentives for fraud in any economic system and that regulation, often very strong regulation, is required to ensure that people “play by the rules.”**

**That the Senate note there are many arguments applied to various industries that amount to applying standard neoclassical/neoliberal models in contexts where the necessary conditions for arguing that the market knows best are not met.**

**The Senate should report that we know too little about why businesses fail in Australia and what can be done to ensure new ventures are more successful. Eliminating failure would also eliminate waste and hardship and be consistent with higher productivity.**

**The waste from uncompetitive parts of the economy must be noted. Where possible governments need to intervene to eliminate waste from non-price competition in uncompetitive markets.**

**The Commonwealth and the states and territories need to come up with a model that encourages infrastructure investment spending that is likely to be beneficial without the artificial constraints imposed by Australia's fiscal apparatus.**

**The Senate should find that the relationship between real wages and productivity works in both directions. Higher productivity does increase the scope for business to pay higher wages (whether or not they do is another matter) but higher wages increase the incentive for business to seek labour saving solutions which necessarily means higher productivity.**

**The Senate should note the impact of increasing military spending on lost opportunities elsewhere in Australia. Government spending may be cramped by the military.**

**The Senate should look at the consequences of military activity for the civilian employment in STEM subject areas as well as the impact on civilian research and development.**

**The Senate should emphasise the role of high growth in demand relative to the labour force as a powerful and positive contribution to productivity growth.**

**While acknowledging that ordinary labour productivity measures have many problems the Senate should note that the problems with multifactor productivity are infinitely worse and render the concept unfit for purpose.**

**The Senate note that productivity increases is a consideration for the tax system but not the only one and not necessarily the most important. Company tax seems to have few downsides and, in any case, eligible company owners in Australia get reimbursed for any company tax paid on their behalf.**

**That the Senate point out that privatisation and the growth of other non-government provision has involved various forms of non-price competition that is often anti-social and also, for present purposes, reduces productivity in Australia.**

**That the Senate note government should aim to own its office accommodation and other real property where practical and where there are clear benefits over time.**

**The Senate take note of the very high retail markups facing Australian customers. Productivity improvements in retail could significantly reduce the cost of living. The Senate might do a great service by conducting inquiries into the retail industry.**

**That the Senate note that for most business the optimal strategy is not to devolve itself of function as it gets bigger but quite the opposite. As it gets bigger, business tends to bring in-house many services that it used to procure in the market. Government is well advised to do the same.**