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ON REGULATION, PRODUCTIVITY AND GROWTH

REFORMS TO MAKE AUSTRALIA MORE PROSPEROUS



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Institute of Public Affairs

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Summary

Concern over Australia's recent falling productivity growth should centre on the real contemporary policy task of achieving marginal reforms that enable individuals to propel long-run economic growth and prosperity.

The key policy framework to achieve this, we propose here, is a classically liberal approach to economic policy that involves maintaining the rule of law, limiting government, protecting private property and cutting red tape.

Adopting this approach understands that economic growth is fundamentally driven by individual decision making over heterogeneous capital resources, and that prospective policy changes should be judged on their capacity to facilitate individual economic calculation and action.

A competitive free market economy is essential for growth for two interconnected reasons: (1) that free markets provide the incentives for the discovery of novel methods to achieve economic ends; and (2) because the market mechanism acts as an indispensable selection process to determine how those new things align with individual desires.

A competitive free market economy—centred on the institutions of private property and rule of law—does not only facilitate productivity growth, but also the important dynamic processes that ensure that growth meets human needs.

There are widespread claims that the liberalisation and microeconomic reforms of 1980s and 1990s Australia have been exhausted. Subsequently, new policy approaches towards productivity—for instance, investment in human capital—have been rationalised.

In this paper, especially given the present fiscal budget pressures, rather than examining specific determinants of changes in productivity statistics in the past, or propose new spending measures, we examine one major area of potential economic reform: cutting red tape.

Recent Institute of Public Affairs research has shown that red tape costs Australia at least \$176 billion every year in foregone economic output. As an estimate of the direct and indirect costs of over-regulation at all levels of government, that figure is the equivalent of approximately 11 per cent of GDP.

Cutting red tape not only requires a systematic approach towards regulatory design.¹ Achieving reform also requires marginally cutting existing red tape. This is the focus of the second half of this paper, where we propose a series of recommendations through reforms in the areas of environment, transport, energy and workplace relations, including:

- market-based approaches to native vegetation;
- repealing sections of federal law that enable 'green lawfare';
- abolishing cabotage restrictions on coastal shipping;
- abolishing the 'water trigger' in the EPBC Act;
- removing moratoria on energy production and exploration;
- ensuring energy technology neutrality; and
- breathing flexibility into the workplace relations framework.

Redoubling efforts to cut unnecessary red tape in these areas will help propel further decades of Australian growth.

¹ Allen, Darcy and Novak, Mikayla. "Ten red tape initiatives for the next Australian government." *Institute of Public Affairs Occasional Paper* (2016). <https://www.ipa.org.au/publications/2516/ten-red-tape-initiatives-for-the-next-australian-government>

1. Productivity and regulatory trends in Australia

1.1. A brief introduction to productivity statistics and growth

In this section we briefly introduce the concept of productivity, recent trends of productivity growth figures in Australia, and finally outline the need to focus on a broad notion of not only productivity but more broadly on efficiency and growth.

Productivity is an economic statistical measure of the ratio of economic outputs in relation to inputs (e.g., labor and capital). Criticisms in the calculation of productivity should warn against taking all productivity statistics at face value or in isolation. Even despite the simplicity of the productivity concept itself, shortcomings in its measurement have long been understood.² This includes its calculation through various indices (and as a residual),³ the difficulty in determining capital inputs, as well as that any headline aggregate productivity statistics ignore the more nuanced and detailed industry and firm level data.⁴

Observing upward trajectories in aggregate productivity statistics means little without subsequent benefits in the lives of everyday Australians.⁵ Our interest in productivity, therefore, is only insofar as it contributes to the process of economic growth—and as such how it is paired with its counterparts in allocative and dynamic efficiency—thereby making our lives more prosperous.⁶

2 Australian Bureau of Statistics. “Estimates of Productivity in the Australian National Accounts.” (2005) <http://www.abs.gov.au/ausstats/abs@.nsf/featurearticlesbytitle/FF3C9780DDBF25B7CA2571E0001F27D0?OpenDocument>

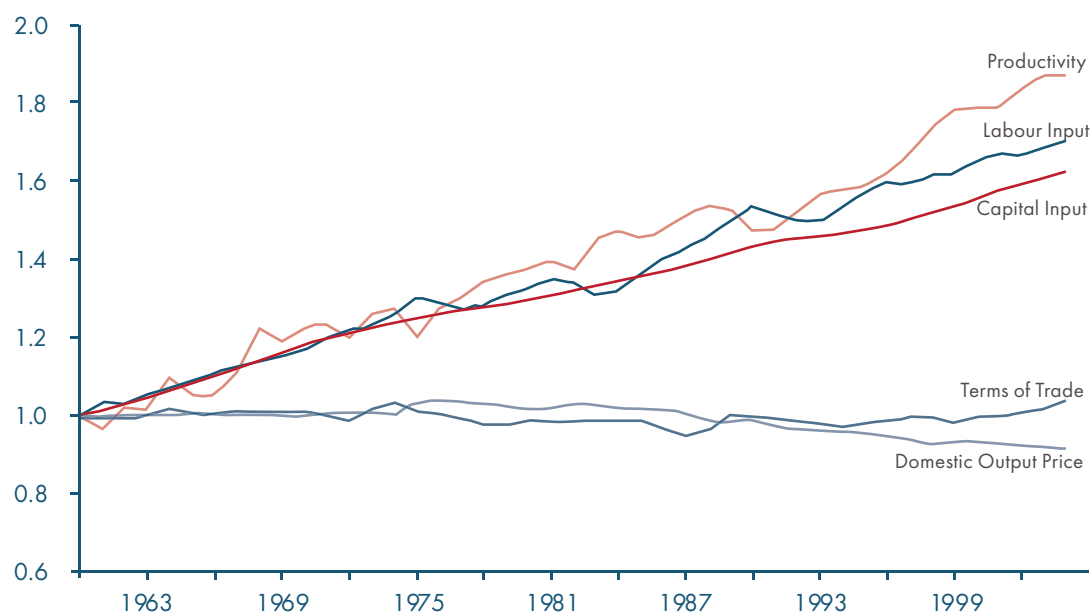
3 House of Representatives Committee. “Inquiry into raising the productivity growth rate in the Australian economy.” *House Standing Committee on Economics* (2010):25 http://www.aph.gov.au/parliamentary_business/committees/house_of_representatives_committees?url=economics/productivity/report.htm

4 Davidson, Sinclair and de Silva, Ashton. “Does Australia have a Productivity Growth Problem?” *Institute of Public Affairs Occasional Paper* (2012) https://www.ipa.org.au/library/publication/1331585603_document_davidson_desilva_productivity.pdf
Gruen, David. “The importance of productivity.” *Productivity Commission–Australian Bureau of Statistics Productivity Perspectives Conference* (2012):8 http://www.treasury.gov.au/~media/Treasury/Publications%20and%20Media/Speeches/2012/Importance%20of%20productivity/Downloads/PDF/Gruen_The_Importance_of_Productivity.ashx

5 To be clear, productivity and all forms of economic efficiency are not intrinsically intertwined.

6 Australian Government The Treasury. “Submission: Raising the level of productivity growth in the Australian economy.” (2009):3 http://www.aph.gov.au/parliamentary_business/committees/house_of_representatives_committees?url=economics/productivity/subs/sub10.pdf

Nevertheless, a general consensus among economists and policy makers suggests that over the relatively lengthy time period from 1959-60 to 2003-04, evidence suggests improvements in productivity proved the “largest single source of improvements in real income” which was “followed by labour force increases and capital stock increases.”⁷ This is depicted graphically below, demonstrating each of the determinants of real income improvements.⁸



Source: Diewert and Lawrence (2006):VII

Given this historically tight relationship between productivity and growth in real incomes, we are motivated to examine the economic and regulatory conditions of productivity improvement, and, in particular, suggest reforms that will create such conducive economic conditions.⁹

It is useful to first recap how interpretations on the measurement of productivity growth in Australia have changed the economic and regulatory narrative, thereby giving context to the present debate. Throughout the 1980s and 1990s the Australian economy experienced an unprecedented upward trajectory in productivity growth.

Over the recent decade, however, beginning around 2003-04, Australian multifactor productivity growth began to dwindle.¹⁰ Multifactor productivity growth rates over the previous two decades are outlined below.¹¹

7 Diewert, W. Erwin and Lawrence, Denis. “Measuring the Contributions of Productivity and Terms of Trade to Australia’s Economic Welfare” *Report by Meyrick and Associates to the Productivity Commission, Canberra* (2006):IX <http://www.pc.gov.au/research/supporting/economic-welfare/economicwelfare.pdf>

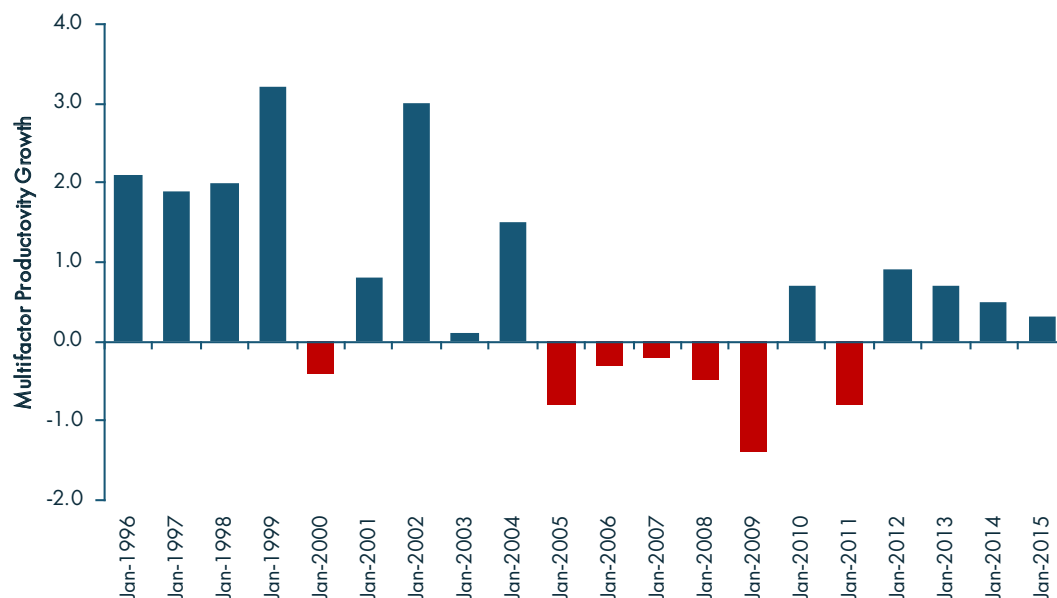
8 Note that likely the terms of trade would have a great influence if this graph was to continue past 2004.

9 Parham, Dean. “Microeconomic reforms and the revival in Australia’s growth in productivity and living standards.” In *Conference of Economists, Adelaide*, vol. 1 (2002) <http://www.pc.gov.au/research/supporting/living-standards/mrrag.pdf>
See also *ibid.* House of Representatives Committee (2010):16

10 Multifactor productivity growth is a measure of productivity that attempts to account for the effects in the growth of total output in relation to the inputs of labor and capital.

11 We caution against observing small changes in MFP statistics growth due to measurement issues. Nevertheless, this representation is useful for the purposes at hand.

Figure 1 Multifactor Productivity Growth



Source: ABS cat 5204.013

Observing this trend, academic research, and indeed the political discussions that have ensued, have either focused on: (1) the causes of the productivity surge, including regulatory changes preceding it; or (2) potential reasons for the productivity plummet, including whether that plummet was merely a statistical anomaly.

The productivity surge of the 1990s is most often attributed to a series of microeconomic reforms and liberalisation of the Australian economy preceding and during it.¹² This includes additional flexibility and liberalisation of both product and factor markets:

Policy and institutional factors have been instrumental in driving and enabling improved productivity performance in the 1990s. Policies that have opened the economy and strengthened competition have provide incentives to be more productive and provided access to new technologies and knowledge. Policies that have encouraged more flexibility in product and factor markets have given firms greater ability to adjust and innovate.¹³

Even given the various dissenters over the determinants of the productivity surge, the liberalisation and deregulation of the Australian economy is generally considered the driving force behind productivity improvements through the 1990s.¹⁴ This is alongside the focus on the investment and adoption of new technologies, e.g., computers.¹⁵

12 Parham, Dean. "Sources of Australia's productivity revival." *Economic Record* 80, no. 249 (2004): 239-257
See also *ibid.* Parham (2002)

13 *ibid.* Parham (2004):23

14 e.g., Quiggin, John. "The Australian productivity miracle: A sceptical view." *Agenda: A Journal of Policy Analysis and Reform* (2001):333-348

15 e.g., Simon, John and Wardrop, Sharon. "Australian use of information technology and its contribution to growth." Sydney: Reserve Bank of Australia (2002) <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.200.6090&rep=rep1&type=pdf>

While the proximate causes of our recent productivity slump are an increase in inputs with little corresponding change in outputs, the broader determinants are less clear. This is despite various explanations proposed in the literature.¹⁶ It is indeed a curious puzzle of why additional inputs, such as capital, resulted in little corresponding changes in output:

Strong acceleration in the use of labour and capital inputs was the major new development in the 2000s. The fact that input use accelerated so strongly, while output growth remained static or weakened, is the proximate explanation for the productivity slump. But the conjunction of rising input demand and weaker output growth is, on the face of it, a puzzle. Explaining this puzzle is the key to understanding why MFP growth fell.¹⁷

What policy environment, then, could facilitate productivity growth once again? The obvious starting point would be to replicate the reforms of the 1980s and 1990s. In this regard, however, there is a general consensus that the reform agenda of the 1980s had run their course.¹⁸ The extent of Australia's productivity slump could "not be a simple case of the positive influences of the 1990s petering out", something more 'unusual' was happening.¹⁹

One interesting aspect of our productivity decline is the reallocation of resources towards the mining sector. Vast increases in capital within the mining sector lead to falling productivity measures (based on the volume of production), while at the same time there was a corresponding increase in prosperity (largely due to improving terms of trade).²⁰

An upshot of this seeming discrepancy between the pursuit of productivity and real incomes is to reveal the shortcomings of examining productivity statistics in isolation. Indeed:

The empirical link between increased productivity and rising living standards relies on some strict assumptions—in particular a constant price assumption.²¹

Productivity statistics ignore changes in prices. Improving terms of trade, for instance, may incentivise a shift in resources toward particular sectors, which would lower productivity, but simultaneously increase incomes and living standards.

To see how a sole focus on improving aggregate productivity measures can be misleading, consider the case of labour productivity in the United States and France. Average labour productivity is typically lower in the United States than in France. But one key reason for this is because the United States has a more deregulated labour market with (for most States) a lower minimum wage than in France. This means people with lower marginal product can work, whereas in France they cannot. But the outcome of having more low skilled people in work is average labour productivity will be lower.

Just looking at productivity statistics some conclude that France's labour market is 'better'. But this is false because the higher average productivity is the result of preventing mutually beneficial transactions from taking place (keeping the low skilled out of work), and therefore is socially harmful.

16 Parham, Dean. "Australia's productivity growth slump: Signs of crisis, adjustment or both?" Canberra: Productivity Commission (2012) <http://www.pc.gov.au/research/supporting/productivity-slump/productivity-slump.pdf>

17 *ibid.* Parham (2012):11

18 See: Dolman, Ben. "What happened to Australia's productivity surge?" *Australian Economic Review* 42, no. 3 (2009):243-263
Eslake, Saul. "Productivity: The lost decade." In *annual policy conference of the Reserve Bank of Australia, HC Coombs Conference Centre, Kirribilli, Sydney*, vol. 15 (2011):239 <http://www-dr.rba.gov.au/publications/confs/2011/pdf/eslake.pdf>

19 *ibid.* Parham (2012):3

20 *ibid.* Parham (2012):10

21 *ibid.* Davidson and de Silva (2012):6

These shortcomings lead us to caution against pursuing productivity policy as a standalone goal. Further, a focus solely on headline aggregate trends of productivity statistics, or even industry-level estimates, combined with a pursuit of productivity improvements, can lead to the rise of technocratic planning. This is contrasted with a broader political economy focus on the myriad drivers of economic growth.

This understanding defines the scope of analysis of the present paper: we do not focus on technical details of measurement, the long term cyclical trends of productivity, or indeed on productivity measurement in isolation.

We must look to more broadly than productive efficiency. Consideration must be made of how various policies impact *allocative* efficiency (how the structure of resource allocations meets human needs) and *dynamic* efficiency (how the structure of the production process changes through time).

Any examination of productivity should focus on how we can achieve *marginal* improvements from our current position, and ones that will help increase in Australian living standards.

One of these reform priorities, we outline in the following section, must be Australia's red tape and overregulation problem, which acts as a drain not only on productivity, but more broadly on efficiency. Cutting red tape will not only directly improve productivity, but also facilitate the entrepreneurial and market processes that are at the heart of economic growth.

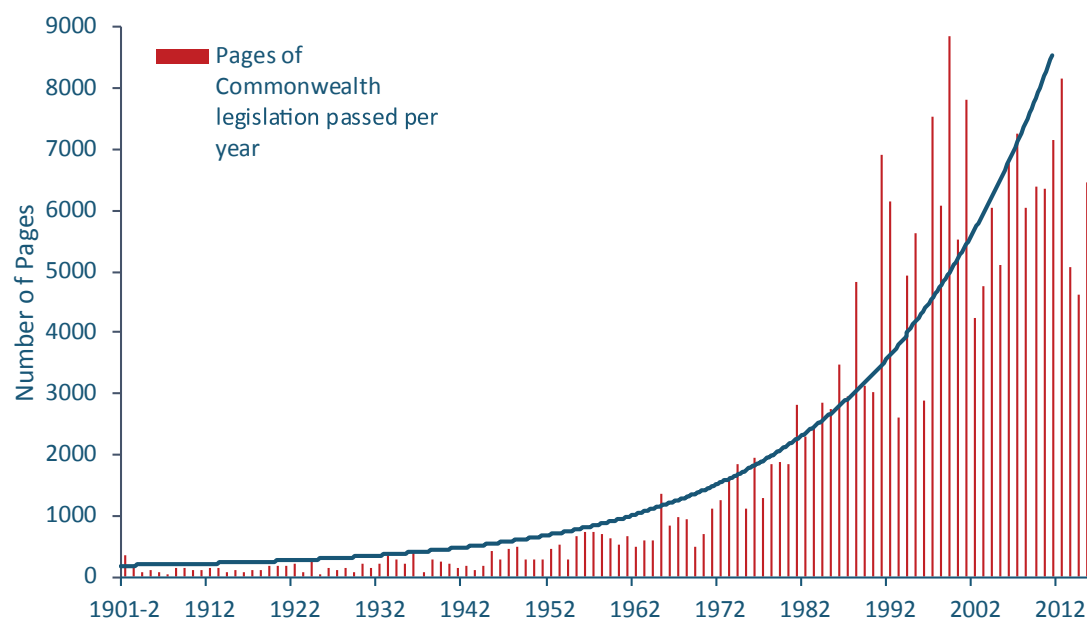
1.2. Australia's red tape and overregulation problem

The short and long term economic impact of red tape is one of Australia's most pressing policy challenges. A recent body of Institute of Public Affairs research has sought to quantify and analyse the economic impacts of an excessive red tape burden on the Australian economy. In this section we outline the broad macroeconomic trends of red tape within Australia, before a more micro approach places this in the context of productivity and efficiency.

One common proxy for the growth of regulatory burden is the number of pages of legislation passed each year. Pages of legislation are an important but imperfect proxy of the extent to which government rules restrict the economic and social behaviours of the Australian people.

The Institute of Public Affairs has calculated that in 2015 alone the Commonwealth passed over 4,500 pieces of legislation, contributing to a cumulative total of over 100,000 pages on the federal books. The precipitous upward trend in the number of pages passed per year are outlined graphically below.

Figure 2 Pages of Commonwealth Legislation Passed



Source: *Institute of Public Affairs*

But not all legislation or regulation is damaging. There is of course some minimum best practice level of regulation at which point the costs of regulation—both direct and indirect—are equal to the benefits of that regulation. Any regulations that sit above this minimum best practice line are considered ‘red tape’. This red tape acts as a ‘hidden tax’ that propagates through the economy hurting producers and consumers.²²

This discrepancy prompted further Institute of Public Affairs research to estimate the economic cost of red tape. Based on time-series cross-country regression analysis we estimated that red tape costs the Australian economy, and therefore the Australian people, at least \$176 billion in foregone economic output each year:

Based on international econometric studies of red tape costs it is estimated the economic costs of red tape in Australia is at least in the order of \$176 billion per annum (11 per cent of GDP). In other words, official estimates have understated Australian red tape costs by at least \$110 billion. The cost estimate presented here translates into red tape costs of about \$19,300 per Australian household.²³

This estimate is more than double the 2014 federal government calculation of \$65 billion—which focused solely on a bottom-up sample of compliance cost burdens at the federal level.²⁴ It is also a more comprehensive measure than previous attempts to determine the extent of the red tape burden in Australia.²⁵

22 Crews, Clyde Wayne. “Ten thousand commandments: An annual snapshot of the federal regulatory state.” *Competitive Enterprise Institute* (2016) <https://cei.org/10KC2016>

23 Novak, Mikayla. “The \$176 billion tax on our prosperity” *Institute of Public Affairs Occasional Paper*, Melbourne (2016) <http://ipa.org.au/portal/uploads/The-176-Billion-Tax-On-Our-Prosperity.pdf>

24 Commonwealth of Australia. “The Australian Government Annual Deregulation Report 2014.” (2015)

25 For another estimate see: Deloitte Australia. “Get out of your own way: Unleashing productivity.” (2014) <https://www2.deloitte.com/au/en/pages/building-lucky-country/articles/get-out-of-your-own-way.html>

But what causes this problem? Australia's red tape problem is at least partially driven by the number of regulators, i.e., the 'red tape state'. Regulators, defined broadly, are those bodies who create, design and enforce regulation.

A further Institute of Public Affairs occasional paper, based on a government database, revealed that of the 1,181 bodies at the federal level, approximately 497 are involved in policy design and enforcement.²⁶ These administrative bodies, entities and administrative relationships contribute to our red tape problem, of which we identified 31 that could be abolished, merged or transferred to the states.

The increasing number of compliance workers within the Australian economy, in order to deal with this increasing regulatory burden, are one potential explanation for slowing productivity growth.²⁷ It is therefore worthwhile to examine the theoretical link between regulation and productivity, and to provide some reform directions from which we can alleviate some of this burden.

We proceed as follows. Section 2 begins by outlining the theoretical and empirical evidence on the link between over-regulation and red tape and some of the main drivers and determinants of economic growth, productivity and efficiency. Following this, Section 3 outlines our proposals of reforms relating to environment, transport, energy and workplace relations. Section 4 concludes.

26 Novak, Mikayla. "The red tape state." *Institute of Public Affairs Occasional Paper*, Melbourne (2016) <http://ipa.org.au/portal/uploads/160526-MN-FinalReport.pdf>

27 Note that in this paper we do not claim, nor seek to provide, direct novel empirical evidence between lowered productivity growth and regulation. Our argument is a theoretical one.

2. Connecting competition, innovation and regulation

2.1. Productivity and efficiency improvements are driven by individual action

All determinants of productivity growth and efficiency gains are fundamentally the result of, first, individual economic calculation, and second, individual human action.²⁸ The implication of this understanding is to approach productivity policies from a classically liberal perspective. That is, of creating an economic environment conducive to efficient unencumbered economic calculation and decision making.

The myriad determinants of productivity in literature—both positive and negative—are well known to be diverse and complex. One common categorisation is between ‘intermediate’, ‘underlying’ and ‘fundamental’ influences. This distinction speaks to the proximate distance of the influence of productivity, but not the importance.²⁹ For example, the impact of a new production process technology can be more clearly articulated than can the importance of a strong rule of law or confidence in economic stability.

Given this complexity, it is important to place all public policy decisions surrounding productivity improving reforms within an overarching framework. That framework, we propose in this section, is a classically liberal one. In this view, policies seeking to improve productivity and efficiency should focus on a strong rule of law, limited and constrained government, and removing burdensome regulation and red tape.

This sentiment was espoused by economist Robert Barro, who has noted that growth in GDP per capita is “enhanced by better maintenance of the rule of law, smaller government consumption, and lower inflation.”³⁰ And as previous IPA research has argued:

Establishing the determinants of long-term economic growth is much like the search for the Holy Grail. Everyone knows what it is, yet finding its exact location is problematic. As Adam Smith indicated, ‘peace, easy taxes and a tolerable administration of justice’ seems to work well.³¹

The importance of such a broad approach to policies relating to productivity is not at first clear. This is at least partially because productivity statistics are regularly aggregated upwards—to the firm, to the industry, and to the nation. Such an approach, however, not only inhibits understanding of the nuanced and heterogeneous movements within that aggregated data, but fundamentally obscures the fact that all of these actions stem from individual economic calculations and choices.

28 i.e., Mises, Ludwig von. *Human action*. Ludwig von Mises Institute (1949)

29 ibid. House of Representatives Committee (2010):98

30 Barro, Robert J. *Determinants of economic growth: a cross-country empirical study*. MIT Press (1997):119

31 ibid. Davidson and de Silva (2012):15

Indeed,

Productivity improvements occur as the result of decisions taken by and implemented in enterprises and workplaces, not as the direct result of public policy initiatives.³²

Firms, sectors and countries are made of autonomous choosing individuals. Choosing individuals occupy both the supply-side and the demand-side of the economy. The former is generally within businesses, as they pursue one avenue of economic activity as compared to another. The latter is usually as consumers, on deciding whether to purchase goods and services and for what price.

But economic progress and growth are not deterministic. Indeed, for most of history humans barely subsisted. That was up until around 1800 when there was a remarkable uptick in innovation, economic growth, and wealth. This was the “Great Enrichment.”³³

While the various explanations of economic growth vary, they agree that the process of economic growth is piecemeal. It is a process of individuals, and the groups in which they voluntarily cooperate and exchange, undertaking complex economic calculations in order to improve their position. The idea of economic growth is inseparable from the concept of self-actualisation—the fundamental drive to do better.

To be clear, the economic growth process is not the result of converging and homogenous preferences of individuals. As Nobel Laureate Friedrich Hayek taught us, growth emerges from discovering and coordinating often divergent and conflicting actions, i.e., a catallaxy: “the order brought about by the mutual adjustment of many individual economies in a market.”³⁴

The idea of individual decision making in a market, then, is critical to understanding productivity, and we should be cautious of shrouding that behind aggregate statistical measures.

It is useful here to recap what was perhaps the largest public economic debate in history, the ‘socialist calculation debate’, and in particular focusing of the contributions of Ludwig von Mises, and his student, Friedrich A Hayek.

Mises taught us that without private property, and market prices, goods could not be allocated in an efficient manner. Hayek taught us that those market prices were the emergent outcome of the coming together of knowledge not known to anyone in its totality, the ‘information of the time and of the place’.

The market mechanism, in this context, is itself a discovery process—both consumers demanding goods, and for the entrepreneurs supplying those goods—over all of the information dispersed about the economy that could not possibly be known by a central planner.

What this complex evolutionary process brings to bear is that—in simultaneously achieving productivity improvements, and efficiency improvements in ensuring human needs are fulfilled—heterogeneous and often conflicting views of individuals must be coordinated.

It is only through coordinating the seemingly contradictory actions of individuals through the institutions of private property and market prices that we can progress towards an economic system that meets human need.

32 *ibid.* Eslake (2011):247

33 McCloskey, Deirdre N. *Bourgeois equality: How ideas, not capital or institutions, enriched the world*. University of Chicago Press (2016)
Mokyr, Joel. *The Enlightened Economy: An Economic History of Britain 1700–1850*. Yale University Press (2009)

34 Hayek, Friedrich August. *Law, legislation and liberty: a new statement of the liberal principles of justice and political economy*. Routledge (2012)

The value of production—and hence the efficiency of production and how it meets consumer needs—is governed by consumer sovereignty in the process of economic development.³⁵

We can understand the contemporary policy questions of productivity through this lens Private property, market prices, and a court system operating with a strong rule of law enables a society to gather and put to use all of the information necessary for a productive and efficient market order.

Because of the importance of individual action, the role of governments in promoting productivity is reduced to “ensuring that the environment in which firms operate facilitates sound decision making.” The problem of productivity can be reduced to the question of how to enable individual choice, and through it, human flourishing.

This furnishes the motivation of the present paper, which outlines how regulatory barriers in the Australian context can impede productivity growth by stymying individual agents’ improving their efficiency and productivity in the search of profits. This notion of highly inflexible government dictates directly impacting productivity is understood in the literature:

Lower levels of regulation are associated with higher TFP growth over subsequent years. There is also some evidence that labour and product market deregulation have more of an effect in combination.³⁶

But the impact of regulation on productivity and efficiency is not limited to the direct financial costs of regulatory burden.³⁷ The seen and unseen effects³⁸ include how regulatory impediments distort and alter economic behaviour.³⁹ As Professor Gary Banks from the Productivity Commission has noted:

... there is a big payoff to productivity from reducing the drag on enterprise performance. It has two sides to it. One is just the deadweight cost of the paperwork and secondly is the inhibition of innovation and flexibility, particularly for small enterprises where you are often tying up the decision maker in doing red tape kind of work.⁴⁰

35 Yu, Fu-Lai Tony. *New perspectives on economic development: a human agency approach*. Springer Science & Business Media (2011):30

36 Kent, Christopher and Simon, John. *Productivity growth: The effect of market regulations*. Reserve Bank of Australia Research Discussion Paper (2007):26 <http://www.rba.gov.au/publications/rdp/2007/pdf/rdp2007-04.pdf>

37 e.g., Hopkins, Thomas D. *Regulatory costs in profile*. No. 132. St. Louis, Missouri: Center for the Study of American Business, Washington University (1996) http://wc.wustl.edu/files/wc/imce/regulatory_costs_in_profile.pdf

38 Bylund, Per L. *The Seen, the Unseen, and the Unrealized: How Regulations Affect Our Everyday Lives*. Lexington Books (2016)

39 To be more specific, over-regulation has indirect effects, i.e., beyond direct compliance costs, because the capital structure of an economy is both heterogenous and multispecific. Economic growth, in this view, comes from entrepreneurially testing and trialling new capital combinations. See, for instance, the work of Austrian capital theorists including: Lachmann, Ludwig M. *Capital and its Structure*. Ludwig von Mises Institute (1956) and Lewin, Peter. *Capital in disequilibrium: The role of capital in a changing world*. Routledge (2002)

40 Mr Gary Banks. Standing Committee on Economics Transcript. 23 October 2009 <http://parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;db=COMMITTEES;id=committees%2Fcommrep%2F12522%2F0001;query=Id%3A%22committees%2Fcommrep%2F12522%2F0000%22>

See also: Australian Bureau of Agricultural and Resource Economics. “ABARE submission to the House of Representatives Standing Committee on Economics” September (2009):15 http://www.aph.gov.au/parliamentary_business/committees/house_of_representatives_committees?url=economics/productivity/subs/sub23.pdf

Indeed:

The cost of red tape isn't just the inconvenience of government approval and filling out additional forms. The real cost of overbearing government regulation is how it fundamentally changes the structure of our economy—distorting decisions and resources away from their most productive uses.⁴¹

Empirically, recent work by the Mercatus Centre at George Mason University in the United States found that:

Less regulated industries outperform more heavily regulated industries in a variety of production efficiency measures. Therefore, policymakers should consider leaving markets to be regulated more by consumers through purchasing choices, particularly with market solutions and improved technology narrowing the information gaps between consumers and producers.⁴²

As such, the importance of individual decision making in striving for productivity and efficiency improvement suggests that policy reform should focus on the cost and impediments created by existing legislation and regulation.⁴³ Contributing to this analysis of potential regulatory reform options to stimulate productivity and growth, and in order to overcome problems of analytical complexity, we first truncate our discussion into two broad determinants of long run productivity and growth:

- *entrepreneurial* endeavour to achieve *technical change*; and
- the *competitive evolutionary market process* of *selecting* valuable economic activities over others.

Taken together, these statements imply that long run economic growth is a process of entrepreneurial activities in a competitive market economy, which are influenced by more fundamental determinants, including the policy environment.

41 Allen, Darcy. "Red tape hampers resources recovery for miners." *The West Australian*, 8 October 2016 <http://ipa.org.au/news/3563/red-tape-hampers-resources-recovery-for-miners>

42 Davies, Antony. "Regulation and Productivity." Mercatus Centre at George Mason University Research Paper (2014) <https://www.mercatus.org/publication/regulation-and-productivity>

43 Australian Chamber of Commerce and Industry. "Submission into the House of Representatives Standing Committee on Economics." August (2009):25 http://www.aph.gov.au/parliamentary_business/committees/house_of_representatives_committees?url=economics/productivity/subs/sub07.pdf

2.2. Innovation and technical change

The process of technical change, which is widely considered to be the cornerstone of economic growth, can be inhibited by over-regulation. In this section we examine how over-regulation can impact the classic Schumpeterian innovation trajectory of innovation, adoption and diffusion.⁴⁴

While it is not clear at first, red tape goes beyond the direct economic costs that it imposes on individuals, i.e., compliance costs. The cost of red tape on innovation even goes beyond the direct barring of some courses of action.

In the long run, over-regulation can fundamentally distort economic activity away from productivity-enhancing and efficiency-seeking entrepreneurial actions towards unproductive ones.⁴⁵ Before analysing these distortions, however, it is necessary to develop the link between innovation, productivity and economic growth.

One major source of higher productivity within the firm—and in the long run considered the single sole driver of economic growth—is the process of technological change and innovation. As the most recent Australian Innovation Systems Report 2015 outlines:

Innovation is the core driver of business competitiveness and productivity. It supports economic growth, exports and job creation. Facilitating innovation involves enabling disruptive technologies and globalisation to access more opportunities for new products, new industries and new markets.⁴⁶

The impact of innovation also follows to increases in living standards, as the OECD have noted:

Much of the rise in living standards is due to innovation—this has been the case since the Industrial Revolution. Today, innovative performance is a crucial factor in determining competitiveness and national progress ... the innovative effort itself, including formal research and development, remains the *sine qua non* of growth.⁴⁷

Over-regulation impedes innovation and thus productivity in several ways. The first and most obvious is how it directly prevents some economic activities. Given the importance of the introduction of novel technologies to meet human need, prescriptive rules and regulations may also inhibit the adoption of new technologies into use.⁴⁸

Entrepreneurship is a process of experimentation over the various constellation of potential opportunities for technology.⁴⁹ Where regulation prohibits, for instance, the application of new technologies—including drones, driverless cars and 3D printers—technological progress is slowed. This link has been outlined by Professor Israel Kirzner:

44 Schumpeter, Joseph A. *The theory of economic development: An inquiry into profits, capital, credit, interest, and the business cycle*. Vol. 55. Transaction Publishers (1934)

45 e.g., Baumol, William J. "Entrepreneurship: Productive, unproductive, and destructive." *Journal of Business Venturing* 11, no. 1 (1996): 3-22

46 Australian Government Department of Industry, Innovation and Science. "Australian Innovation System Report 2015." (2015):1 <http://www.industry.gov.au/Office-of-the-Chief-Economist/Publications/Pages/Australian-Innovation-System.aspx>

47 OECD. "Innovation and Growth: Rationale for an Innovation Strategy." (2007):6 <https://www.oecd.org/science/inno/39374789.pdf>

48 Arthur, W. Brian. *The nature of technology: What it is and how it evolves*. Simon and Schuster (2009)

49 Allen, Darcy and Potts, Jason. "How innovation commons contribute to the discovery and development of new technologies." *International Journal of the Commons* 10, no. 2 (2016):1035-1054 <https://www.thecommonsjournal.org/articles/10.18352/ijc.644/>

Government regulation plainly bars exploiting of opportunities for future entrepreneurial profit. A price ceiling, a price floor, and impeded merger, or an imposed safety requirements might block possibility profitable entrepreneurial actions.⁵⁰

Coupling this relationship between regulation and technology with the political economy tendency towards the 'precautionary principle', brings the need for a *permissionless* approach to new technologies. As a recent Institute of Public Affairs submission noted:

One thing is for certain, as long as there are regulations defining what nascent technologies can do, entrepreneurs are unable to test and trial their potential uses.

What this means is lower entry rates, lower exit rates, and an economy that is less entrepreneurial and dynamic. This is bad for everyone except the incumbents.

Permissionless innovation is critical because it allows market trial-and-error, learning and experimentation. Regulators must understand is that no one knows the future of technology, or what it must be used for. What is historically evident is that this can be determined by the free market.⁵¹

This brings us to a second aspect of how over-regulation impedes productivity: regulations can be used to inhibit competitive entry, thereby dampening the incentive to innovate. In this way regulation can be used as a form of 'rent-seeking' in order to specifically inhibit technological change.⁵² Indeed, the relationship between innovation, competition and productivity were recently examined by the Productivity Commission and the Australian Bureau of Statistics, finding that

Firms appear more likely to innovate if they face stronger competition. The results examining the relationship between innovation and productivity, although weaker than those between competition and innovation, suggest that innovation is associated with better productivity outcomes.⁵³

Higher profit pressures can provide impetus for rethinking business models, and these competitive forces can drive productivity growth through innovation.⁵⁴ Indeed, the threat of technologically advanced entry has been shown to increase the incentive to innovate in sectors close to the technology frontier.⁵⁵

50 Kirzner, Israel, M. "Discovery and the Capitalist Process." *Chicago University* (1985):141

51 Allen, Darcy and Potts, Jason. "Innovation strangled by red tape: Submission to the Productivity Commission Inquiry into business set-up, transfer and closure." *Institute of Public Affairs*, Melbourne (2015) http://ipa.org.au/portal/uploads/200215_Submission-DA-innovation_strangled_by_red_tape.pdf

52 See recently, Juma, Calestous. *Innovation and Its Enemies: Why People Resist New Technologies*. Oxford University Press (2016)

53 Soames, Leo, Donald Brunker, and Tala Talgaswatta. "Competition, innovation and productivity in Australian businesses." *Productivity Commission and Australian Bureau of Statistics joint research paper* (2011):1

54 Dolman, Ben & Gruen, David. "Productivity and Structural Change." Address to the 41st Australian Conference of Economists, 10 July 2012, Melbourne <http://www.treasury.gov.au/~media/Treasury/Publications%20and%20Media/Speeches/2012/Productivity-and-Structural-Change/Downloads/Productivity-and-Structural-Change-Speech-DGruen.ashx>

55 Aghion, Philippe, Richard Blundell, Rachel Griffith, Peter Howitt, and Susanne Prantl. "The effects of entry on incumbent innovation and productivity." *The Review of Economics and Statistics* 91, no. 1 (2009): 20-32 <http://discovery.ucl.ac.uk/17773/1/17773.pdf>

Indeed, noting Australia's high levels of R&D expenditure, yet with simultaneously falling productivity, it "cannot be concluded that there has been a lack of business R&D expenditure or that this has been a determining factor in the productivity slowdown."⁵⁶

One well established, albeit indirect, link between regulation and innovation is competition, as the Productivity Commission has noted:

International evidence suggests that it is market competition, rather than government assistance, that is the main driver of innovation and its diffusion throughout the economy. But innovation and productivity growth also depend on having flexible regulatory settings ...⁵⁷

As ABARES has noted, regulatory barriers and incentives relating to technology adoption must be addressed:

Facilitating innovation through improving the incentives and capability of industry to develop and adopt new knowledge and technology can accelerate productivity growth.⁵⁸

But what do these claims mean for public policy relating to innovation and thus to productivity and growth? This comes not just from understanding the incentive structure of an economic system—and namely that individuals can reap the rewards (or loss) for their risk—but also the intellectual task of entrepreneurship itself.

The knowledge necessary to be economically efficient is dispersed about the economy, and coordinated through a series of private signals and behaviours between different economic agents. Any discussion of productivity, therefore, must not only ask how as a society we can become more productive, but how, as individuals, we can bring up and put to use the information of human need.⁵⁹

One further point to note, as Fredrik Erixon and Bjorn Weigel recently outlined, is that governments interfere in this experimental process not just directly, but in how they change the uncertainty surrounding the process of innovation:

Economic regulation reduces the scope for innovators and entrepreneurs to experiment and contest markets. Yet perhaps even more detrimental to innovation has been the rise of social regulation (e.g. environment, consumer, and health protection) and how they increasingly interfere with potential innovation. Product regulations in areas like medicine and medical devices have not just raised the cost of innovation, but created uncertainty about the chances of new innovations to be approved by authorities.⁶⁰

56 Productivity Commission. "Submission to the House of Representatives Standing Committee on Economics Inquiry into Raising the Level of Productivity Growth in the Australian Economy." September (2009):xi http://www.aph.gov.au/parliamentary_business/committees/house_of_representatives_committees?url=economics/productivity/subs/sub20.pdf

57 Productivity Commission. "Productivity Commission Annual Report Series 2007-08" (2008):1 <http://www.pc.gov.au/about/governance/annual-reports/annualreport0708/annualreport0708.pdf>

58 ibid. Australian Bureau of Agricultural and Resource Economics. (2009):2

59 Hayek, Friedrich A. "The use of knowledge in society." *The American economic review* 35, no. 4 (1945): 519-530

60 Erixon, Fredrik and Weigel, Bjorn. "Risk, Regulation, and the Innovation Slowdown." Cato Institute Policy Report, October (2016) <https://www.cato.org/policy-report/septemberoctober-2016/risk-regulation-innovation-slowdown>

The competitive market process of profit and loss is not just critical in order to stimulate and incentive innovation and risk taking, but also because of the market signals that profit and loss provide. That is, and in particular because we operate through time and in ignorance, competition in free markets is a mechanism to tend the economic system towards more efficient outcomes. Examining the importance of dynamic free market selection through evolutionary processes is the task of the following section.

2.3. Market selection and evolution

Some firms are more productive than other firms. The market mechanism is the selective process behind economic growth: higher productivity firms expand, while lower productivity firms close.⁶¹ That is

Competition moves market share toward more efficient (i.e., lower-cost and generally therefore lower-price) producers, shrinking relatively high-cost firms/plants, sometimes forcing their exit, and opening up room for more efficient producers. It also raises the productivity bar that any potential entrant must meet to successfully enter.⁶²

Put another way, markets are coordination mechanisms.⁶³ What this established is a clear link between the competitive market process and long-run productivity and economic growth. Competition enhancing and private governance focused reforms may boost productivity.⁶⁴

The selection mechanism of a dynamic modern market economy is that it rewards the more productive firms and takes business away from the less productive firms. In this way, “productivity is quite literally a matter of survival for business.”⁶⁵ Over-regulation acts as frictions in the selective coordinating process of markets, which is the necessary condition of economic growth.

The process of market competition, selection and evolution is a question of dynamic efficiency. We must look beyond short-term gains to longer-term relationships:

Competition has pervasive and long lasting effects on economic performance by affecting economic actors’ incentive structure, by encouraging their innovative activities, and by selecting more efficient ones from less efficient ones over time.⁶⁶

The process of market selection, i.e. the operating environment of the firm, is known to impact observed productivity levels:

... external drivers influence the extent of Darwinian selection in the firm’s market...
Environmental factors that shift the model’s exogenous parameters or shape of the revenue function will change the minimum productivity level necessary for profitable operation...

61 ibid. Allen and Potts (2015)

62 ibid. Syverson (2011):351

63 see Metcalfe, J. Stanley. *Evolutionary economics and creative destruction*. Vol. 1. Psychology Press, (1998)

64 e.g. see Nicoletti, Giuseppe and Scarpetta, Stefano. “Regulation, productivity and growth: OECD evidence.” *Economic policy* 18, no. 36 (2003): 9-72.

65 Syverson, Chad. “What determines productivity?.” *Journal of Economic literature* 49, no. 2 (2011): 326-365.

66 Ahn, Sanghoon. “Competition, innovation and productivity growth: a review of theory and evidence.” OECD Economics Department Working Papers, No. 317 (2002):5. http://www.oecd-ilibrary.org/economics/competition-innovation-and-productivity-growth_182144868160?crawler=true

and the responsiveness of market share to productivity differences. This will shift the observed productivity distribution among the market's producers.⁶⁷

As the Productivity Commission noted in a previous submission:

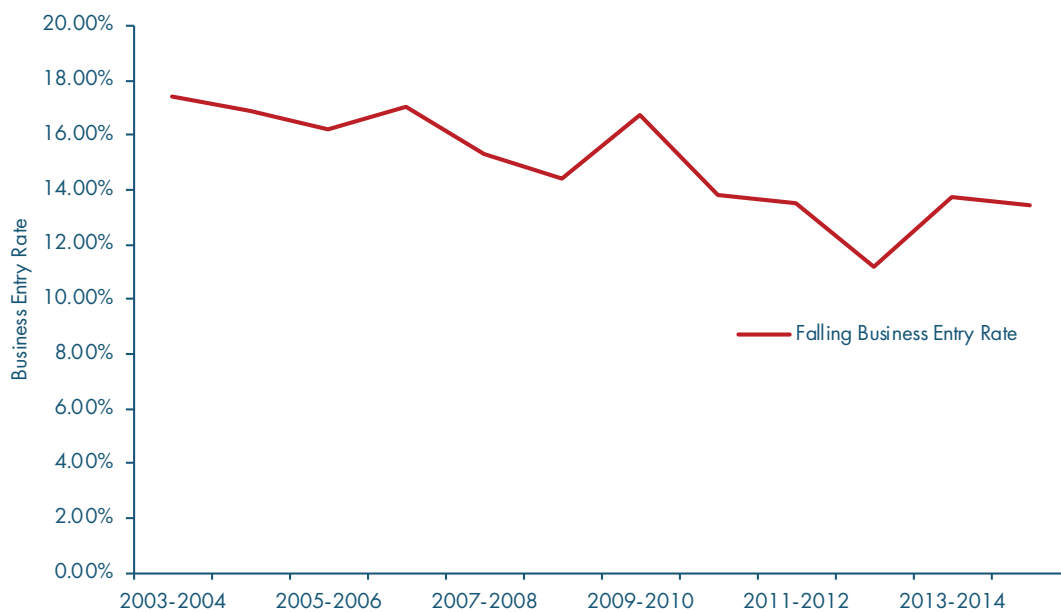
Ultimately, raising overall productivity depends on the performance of individual firms, and the competitive pressures that result in better performing firms and industries prevailing over the others - 'creative destruction'.⁶⁸

But, as Institute of Public Affairs research has demonstrated, firm entry and exit rates in Australia are in precipitous decline.

In 2003-04 the number of businesses entering the Australian economy was 325,935, or a 17.4 per cent entry rate. By 2014-15 that number had dropped to 281,553 firms, an entry rate of 13.4 per cent.

Put another way, fewer new businesses—as a proportion of existing businesses—entered the Australian economy last year than did a decade ago.

Figure 3 Business Entry Rate



Source: Institute of Public Affairs, ABS Cat No 8165.0

⁶⁷ *ibid.* Syverson (2011):348.

⁶⁸ *ibid.* Productivity Commission (2009):xii.

This suggests a slowing market process of selecting high productivity firms and the closing of low productivity firms.⁶⁹ Indeed:

It must be made emphatically clear that business entry and exit are phenomena to be praised. They represent a dynamic and entrepreneurial economy. Unfortunately, the turbulence and uncertainty of business turnover are often feared.

The free market passes entrepreneurs, businesses and ideas through a selection process. A fundamental tenet of a free society is that the productive, innovative and efficient businesses will enter markets, expand, and prosper, while their unproductive counterparts will shrink, fail and exit.

This process needs to occur continuously in all industries. It is only through free markets, clear property rights and strong rule of law that this evolving process can take place. The outcome is higher productivity, economic growth, and improved living standards.⁷⁰

This may be particularly so for small business:

While understanding the underlying economic drivers of this trend [falling business entry and exit rates] is a complex endeavour, one preventable explanatory factor, we propose, is the growing burden of red tape. This is because unnecessary and poor quality red tape are a barrier to small business entry. Government gets in the way of this natural market process by making it hard for small businesses to overcome burdensome red tape.⁷¹

Product-market regulations, which include barriers to entry, exhibit some of the most robust negative empirical links with economic growth.⁷² In particular, protectionism reduces competitive forces within product, capital and labour markets.⁷³ Any policy efforts, therefore, that aim to improve the productivity of the economy, must also aim to facilitate the free market process of economic evolution.

69 Bloom, Nicholas, Sadun, Raffaella, and John Van Reenen. "Americans Do IT Better: US Multinationals and the Productivity Miracle," 2012, *American Economic Review*, 102(1), 167-201

70 *ibid.* Allen and Potts (2015):3

71 Allen, Darcy. "Submission to the Australian Small Business and Family Enterprise Ombudsman Discussion Paper 2016." *Institute of Public Affairs*, Melbourne (2016):4 <https://www.ipa.org.au/publications/2515/submission-to-the-australian-small-business-and-family-enterprise-ombudsman-discussion-paper-2016>

72 Frontier Economics. "The Impact of Regulation on Growth." A Report Prepared for the Department of Business, Innovation and Skills, United Kingdom. May (2012) https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/32107/12-821-impact-of-regulation-on-growth.pdf

73 *ibid.* Productivity Commission (2009):xii

3. Ideas for a more productive and prosperous Australia

Given the link between productivity, efficiency and regulation outlined above, here we outline a number of regulatory reforms in order to achieve marginal gains in productivity. We focus these around the areas of environment and transportation (section 3.1), energy (section 3.2) and industrial relations (section 3.3). We present evidence for the productivity improvements that will be unleashed from progressing with these reforms.

3.1. Environment and transportation

In this section we propose several reforms to improve Australia's productivity and efficiency, particularly relating to our primary industries:

- repeal section 487 of the EPBC Act (section 3.1.1);
- adopt market-based approaches to native vegetation legislation across all jurisdictions (section 3.1.2);
- devolve federal listing of native species to the state level (section 3.1.3);
- abolish the 'water trigger' in the EPBC Act (section 3.1.4); and
- remove all remaining cabotage systems relating to coastal shipping (section 3.1.5).

3.1.1. Remove the capacity for 'green lawfare' in the EPBC Act

The introduction of section 487 of the *Environment Protection and Biodiversity Conservation (EPBC) Act 1999* extended the definition of legal standing to challenge project approvals to include environmental groups, allowing those groups to challenge approvals even when their private rights have not been violated.

This expanded special definition of standing includes persons or organisations who:

At any time in the 2 years immediately before the decision, failure or conduct ... has engaged in a series of activities in Australia or an external Territory for protection or conservation of, or research into, the environment.⁷⁴

The implication of section 487 has been frivolous and vexatious lawsuits brought to the Federal Court with the aim of disrupting, delaying and preventing the development of major projects including coal mines such as Adani.⁷⁵

⁷⁴ *Environment Protection and Biodiversity Conservation Act 1999*, volume 2, section 487(2B, 3B):442

⁷⁵ Maher, Sid. "Adani coalmine 'stuff up' puts heat on Malcolm Turnbull." *The Australian*, 27 October 2015 <http://www.theaustralian.com.au/national-affairs/climate/adani-coalmine-stuff-up-puts-heat-on-malcolm-turnbull/news-story/b1b1d769a73c2391aaf581bbe9b3c019>

The aim of litigants has not been to achieve reasonable environmental benefits, but to hold back Australian development.⁷⁶ Even accusations of foreign funds flowing to these campaigns have surfaced.⁷⁷

Repealing section 487 will remove some of the burden of the enormous, and often unseen, cost to delaying large mining projects.⁷⁸ According to the Productivity Commission, the cost of delays range from 7-13 per cent of the value of a project, while the Minerals Council of Australia cites 10-13 per cent cost.⁷⁹ That means delays on a large greenfields project worth \$3-4 billion costs approximately \$30 million in net present value every month from delays.

Recent Institute of Public Affairs research estimated the cost of delays in the courts through use of section 487 could be as high as \$1.2 billion:

Since the introduction of the EPBC Act in 2000, major projects have spent approximately 7,500 cumulative days, or 20 years, in court as a result of challenges brought under s. 487. The Institute of Public Affairs estimates these delays have cost the Australian economy as much as \$1.2 billion.⁸⁰

There are no clear attendant environmental benefits from maintaining section 487. The same underlying regulatory requirements and approvals would remain (including the need to prepare environmental impact assessments), and the common law definition of legal standing would still apply.

Repealing section 487 of the EPBC Act would create a conducive free market environment in which individuals can effectively and efficiently make economic calculations and decisions, without being distorted by frivolous lawsuits.

76 Allen, Darcy and Wild, Daniel. "Toxic Greens." *Institute of Public Affairs Review* vol. 68 no. 3 (2016) <http://ipa.org.au/portal/uploads/IPAReview-DWDA-ToxicGreens.pdf>

77 Shanahan, Dennis. "Foreign funding for Adani lawsuits." *The Australian*, 22 October 2016 <http://www.theaustralian.com.au/news/nation/foreign-funding-for-adani-lawsuits/news-story/d7179b0bbdfa5967d7ffd292c75b3f6e>

78 Wild, Daniel. "Section 487 of the Environment Protection and Biodiversity Conservation Act: How activists use red tape to stop development and jobs." *Institute of Public Affairs Occasional Paper* (2016)

79 Productivity Commission. "Major Project Development Assessment Processes". *Productivity Commission Research Report* (2013) <http://www.pc.gov.au/inquiries/completed/major-projects/report>
Minerals Council of Australia. "How green groups are sabotaging the mining industry." (2015) <http://www.minerals.org.au/news/how-green-groups-are-sabotaging-the-mining-industry>

80 *ibid.* Wild (2016)

3.1.2. Develop market-based approaches to native vegetation

Currently the costs of government achieving their environmental objectives of native vegetation are placed on private landowners. By restricting native vegetation clearing, landowners are forced to pay environmental offsets for clearing, even if the economic benefits of such clearing far outweighs the environment impacts.

We propose that state governments should replace direct regulation of native vegetation clearing in each state jurisdiction with a 'market-based' approach where governments must pay landholders for eroded property rights. For example, the Institute of Public Affairs has written on the recent proposals to tighten native vegetation laws in Queensland:

the onus of proof would be reversed. Landowners would not be entitled to compensation should their land value plummet. And the changes will be retrospective.⁸¹

This includes the economic implications of these changes:

Tightening vegetation laws will ... damage our global competitiveness and erode farmers' already weak property rights.⁸²

And as the Institute of Public Affairs Submission to the Queensland Committee over the legislation noted:

The proposed changes to vegetation management laws in Queensland should not proceed. Among other things, these changes will stifle our most productive farmers, distort economic activity, breach principles of the rule of law, and increase business uncertainty for our agriculture sector.⁸³

A farmer in Victoria, for instance, was recently asked to pay \$1.2 million in environmental offsets to remove 60 trees on his property.⁸⁴ One potential solution to this problem, was in the Productivity Commission's recent Draft Report into the Regulation of Agriculture:

Requiring governments to fund conservation helps discipline governments' demand for conservation on private land (rather than treating it as a 'free good' where more is always better).⁸⁵

There are two potential avenues in developing a market-based native vegetation system, and thereby overcoming some of the issues outlined above. The first is that government's could simply secure property rights of landholders and, if necessary, facilitate transactions between stakeholders who have competing interests for a given piece of land (i.e. environmental groups versus farmers).

81 Wild, Daniel. "Red tape is strangling Australia's primary resources industries." *The Australian*, 15 August 2016 <http://ipa.org.au/news/3543/red-tape-is-strangling-australia%27s-primary-resources-industries>

82 Allen, Darcy. "Let's get rid of this suffocating bureaucracy." *The Weekly Times*, 8 June 2016 <http://ipa.org.au/news/3489/let%27s-get-rid-of-this-suffocating-bureaucracy>

83 Allen, Darcy, Berg, Chris and Breheny, Simon. "Submission to the Agriculture and Environment Committee relating to the Vegetation Management (Reinstatement) and Other Legislation Amendment Bill 2016" *Institute of Public Affairs Submission* (2016) http://ipa.org.au/portal/uploads/27Apr16-DA-Native_vegetation.pdf

84 McLennan, Chris. "\$1.25m tree removal fee a saw point for gold miner Neville Perry." *The Weekly Times*, 3 August 2016 <http://www.weeklytimesnow.com.au/news/politics/125m-tree-removal-fee-a-saw-point-for-gold-miner-neville-perry/news-story/164dbbb27caf892e3b171f510983fce9>

85 Productivity Commission. "Draft Report into the Regulation of Australian Agriculture." (2016):16 <http://www.pc.gov.au/inquiries/current/agriculture/draft>

Adopting this approach, the government would have no direct intervention in native vegetation and biodiversity conservation. This would be a ‘Coasian’ solution to the economic problem of native vegetation.⁸⁶

Or, second, the government could purchase the cost of native vegetation retention (or indeed other environmental services) rather than through applying restrictive regulation. In effect, this is a compensation system for the erosion of property rights, as governments pursue environmental objectives. Under current law states are not required to provide compensation. However:

When governments must pay for their policy objectives this will slow down new red tape. This would be welcome recognition that government restrictions on land clearing are an assault on property rights, which must be adequately compensated.⁸⁷

It is difficult to determine the precise economic gains, including productivity gains, from repealing native vegetation legislation, particularly because many of the costings of native vegetation focus on specific regional areas.

However, based on an ABARES study in 2005, which found that the median cost of foregone rangelands development was \$217,000 a farm over the survey region in Queensland. Given there were 150,403 farm businesses in 2006, the total cost of native vegetation laws in Australia could be between \$23.4-\$32.6 billion.

3.1.3. Abolish the ‘water trigger’ in the EPBC Act

The ‘water trigger’ was introduced as a new ‘matter of national environmental significance’ (MNES) under the EPBC Act in 2013. This change means individuals or corporations require federal approval where:

The action involves coal seam gas development or large coal mining development and the action has or will have a significant impact on a water resource or is likely to have a significant impact on a water resource.⁸⁸

Because ‘water resources’ are very broadly defined, the implication of this change is to bring a wide range of projects into federal environmental approvals.⁸⁹ There is little justification for this restriction given the clear evidence there is no intent to protect water resources, especially when there is duplication with water regulation at the state level.

That the ‘water trigger’ exists to slow the development of coal seam gas and large coal mines is unsurprising given that at the time of its introduction there was no Regulation Impact Statement

⁸⁶ Coase, Ronald. “The problem of social cost.” *Journal of Law and Economics* vol 3 (1960):1-44

⁸⁷ Allen, Darcy. “Cut red and green tape to drive more growth in farming sector.” *Mercury*, 31 July 2016 <http://ipa.org.au/news/3535/cut-green-and-red-tape-to-drive-more-growth-in-farming-sector>

⁸⁸ *Environment Protection and Biodiversity Conservation Act 1999*, volume 1, section 24D, p 53

⁸⁹ A water resource includes groundwater and surface water, and includes organisms and ecosystems that contribute to the physical state and environmental value of the water resource.

because the Prime Minister wanted it to be passed through swiftly.⁹⁰ The political context at the time was a combination of water scarcity and minerals prosperity, making it an easy political sell.⁹¹

The specific costs of the ‘water trigger’ are difficult to quantify because they not only include administrative costs and recovery charges, but also delay costs. However, recent estimates by the Minerals Council of Australia, based on their member companies, found that the base administrative costs range between \$54,874 and \$99,584 for a single approval, while the delay costs, as noted above, can be \$30 million per month for large projects.⁹²

3.1.4. Devolve the listing of native species to the state level

Forthcoming Institute of Public Affairs research will demonstrate that since the introduction of the EPBC Act approximately 15 years ago, the size of the federal list of threatened flora and fauna has increased by over 40 per cent.

The implication of this is to bring further projects within the approvals process of the Commonwealth government. This is despite the fact that environmental protection is traditionally the responsibility of the states. As such, the economic cost of delays and compliance with this process is exacerbated by duplication between state and federal lists.

Devolving species protection powers to the state level is reasonable because every jurisdiction already has lists and protections. This would reduce duplication between different levels of government, which has been a concern across the multiple reviews of the EPBC Act, and would also introduce federalist competition between the efficiency and scope of the listing process across Australian states and territories.

As such we recommend repealing Part 13 of the *Environment Protection and Biodiversity Conservation (EPBC) Act 1999*, which in effect devolves the power of native species of flora and fauna to the state level. The result will be a system of competitive federalism between jurisdictions.

90 Department of the Environment. “Independent review of the ‘water trigger’ legislation issues paper.” (2015):4 <http://www.environment.gov.au/system/files/consultations/11c6034d-fc8e-4f06-a703-e51a16dec95c/files/water-trigger-review-issues-paper.pdf>

91 Whitehead, Isabelle. “Better protection or pure politics? Evaluating the ‘water trigger’ amendment to the EPBC Act.” (2013):1 http://www.nela.org.au/NELA/Documents/Better_Protection_or_Pure_Politics.pdf

92 Minerals Council of Australia. “Submission to the Independent Review of the EPBC Water Trigger for Coal Seam Gas and Large Coal Mining Development.” 12 February (2016):10 http://www.minerals.org.au/file_upload/files/submissions/MCA_Submission_-_Independent_Review_EPBC_Water_Trigger_-_12_Feb_2016.pdf

3.1.5. Abolish cabotage restrictions

The regulation on on coastal shipping—that stymies competition by reducing the number of foreign ships—makes transportation between Australian ports internationally uncompetitive.

At present there are two main types of licenses for coastal shipping: general licenses (for domestic ships), and temporary licenses (for foreign ships). The red tape placed on foreign ships includes a shorter time period for the license, specifying the details of each voyage, a requirement to make at least five voyages during the period, and, when applying for the licenses, entering into mandatory negotiation process with the general domestic license holders.

The impact of these restrictions falls on export orientated industries including mining and agriculture, and cost extraordinary taxpayer funds in subsidies to overcome the distortions from the protectionism.

Some estimates suggest that these restrictions make the net present value of coastal shipping \$76-\$150 million less than it would have been without the restrictions.⁹³ There are enormous benefits, in particular, for Tasmania, who heavily feel the burden due to the lack of competition in freight over the Bass Strait.⁹⁴

This issue has been raised by many sources including the Productivity Commission Agriculture Review,⁹⁵ the Productivity Commission Review of Primary Sector Regulatory Burden,⁹⁶ Harper Competition Policy Review,⁹⁷ and the National Commission of Audit.⁹⁸

Further, the *Shipping Amendment Legislation Bill 2015* sought to introduce a single permit system, remove contestability and exclude foreign ships from the *Fair Work Act*.⁹⁹ The effect is to return the law to its state in pre-2012. However, the bill did not pass the parliament due to concerns over the loss of Australian jobs.¹⁰⁰

Australia should abolish cabotage restrictions to improve efficiency and drive down transportation costs.¹⁰¹

93 Lane, Aaron and Berg, Chris. "Coastal Shipping Reform: Industry Saviour or Regulatory Nightmare?" *Institute of Public Affairs Occasional Paper*, Melbourne. (2013) https://ipa.org.au/portal/uploads/Coastal_Shipping_Report-Institute_of_Public_Affairs-Dec_13.pdf

94 *ibid.* Lane and Berg (2013)

95 *ibid.* Productivity Commission (2016)

96 *ibid.* Productivity Commission (2007)

97 Harper, Ian, Anderson, Peter, McCluskey, Su and O'Bryan, Michael. "Competition Policy Review." *Final Report. Canberra: Commonwealth of Australia* (2015)

98 Australian Government. "National Commission of Audit." (2014) <http://www.ncoa.gov.au/report/index.html>

99 Shipping Legislation Amendment Bill 2015 http://www.aph.gov.au/Parliamentary_Business/Bills_Legislation/Bills_Search_Results/Result?bId=r5495

100 Gramenz, Emilie. "Senate rejection of shipping bill puts \$20 Tasmanian port development in doubt" *ABC News* 26, November 2015 <http://www.abc.net.au/news/2015-11-26/rejection-of-shipping-bill-puts-port-development-in-doubt/6977868>

101 Wild, Daniel. "As a rule, bureaucracy is smothering agriculture." *The Weekly Times*, 10 August 2016 <http://ipa.org.au/news/3541/as-a-rule-bureaucracy-is-smothering-agriculture>

3.2. Energy policy

In this section we propose a series of changes relating to Australian energy policy:

- Abolish the renewable energy target (RET) (section 3.2.1);
- Remove Energy Efficiency Requirement from the Building Construction Code (section 3.2.2);
- Abolish the Equipment Energy Efficiency (E3) program (section 3.2.3);
- Ensure energy technology neutrality (section 3.2.4);
- Don't rule out new coal or nuclear technologies (section 3.2.5); and
- No gas moratoria (section 3.2.6).

This is critical for productivity and efficiency because cheap and reliable energy is an important input into economic production. Indeed, coal has been proposed as one of the main drivers of the industrial revolution precisely because it provided cheap energy.

3.2.1. Abolish the Renewable Energy Target (RET)

The Renewable Energy Target (RET) is an Australian Government scheme that aims to reduce emissions of greenhouse gases in the electricity sector and encourage the additional generation of electricity from sustainable and renewable sources.¹⁰²

The real impact of the RET is that it acts as a tax on power companies, forcing them to pay for more expensive renewable energy.

The potential benefit of repealing the RET in 2014 is \$20.3-\$37.8 billion in NPV terms from 2015-2030.¹⁰³ This is the difference between the Large-scale Renewable Energy Target (the pre-2014 status quo of 41,000GWH) and the 'real 20 per cent scenario' (which equates to 25,000GWH).

Because former Prime Minister Tony Abbott implemented in between these two scenarios (33,000GWH) it would be reasonable to say the economic benefit of repealing the RET is 'at least \$20.3 billion', which relates to the compliance costs of a lower 25,000GWH.

102 Australian Government Clean Energy Regulator. "About the Renewable Energy Target." 15 September 2016 <http://www.cleanenergyregulator.gov.au/RET/About-the-Renewable-Energy-Target>

103 ACIL Allen Consulting. "RET Review Modelling: Market Modelling of Various RET Policy Options." Report to RET Review Expert Panel. 7 August 2014 http://www.acilallen.com.au/cms_files/ACILAllen_RETReport2015.pdf

3.2.2. Remove Energy Efficiency Requirements from the Building Construction Code

Based on information provided in Regulation Impact Statements and the Productivity Commission Report *The Private Cost Effectiveness of Improving Energy Efficiency*, the costs of these energy efficiency provisions are close to \$6 billion in net present value terms.¹⁰⁴

The building and construction energy efficiency requirements reduce productivity by requiring more capital than is necessary to produce a given output. To produce a given building, for example, requires more and different types of materials than what otherwise be the case. This distorts the overall capital supply in the economy and results in more labour hours being used in construction, planning and compliance rather what would otherwise be needed, which reduces average labour productivity.

The Productivity Commission, in its report on Energy Efficiency from 2005, noted the potential productivity implications of energy efficiency requirements for buildings:

Standards distort the building market in favour of designs that use prescribed building materials and methods (in the case of deemed-to-satisfy compliance options) or satisfy particular performance measurement algorithms (in the case of performance-based compliance). This has the potential to cause more cost-effective improvements in energy efficiency to be overlooked, particularly in the longer term.¹⁰⁵

As such, we recommend that Section J of the National Construction Code, Building Code of Australia, Volume 1, 2016 and Section 3.12 of the National Construction Code, Building Code of Australia, Volume 2, 2016 should be abolished.

3.2.3. Abolish the Equipment Energy Efficiency (E3) program

The E3 Program imposes a range of requirements, such as energy rating labelling, minimum energy performance standards, performance guides and codes of conduct. Based on analysis provided in Regulation Impact Statements and the Productivity Commission report *The Private Cost Effectiveness of Improving Energy Efficiency*, the total cost society from the E3 program is at least \$6.3 billion.¹⁰⁶

¹⁰⁴ Productivity Commission. *The Private Cost Effectiveness of Improving Energy Efficiency* Productivity Commission Inquiry Report, No. 38, 31 August 2005; Australian Building and Construction Board Final Regulation Impact Statement for Decision: Proposal to Revise the Energy Efficiency Requirements of the Building Code of Australia for Residential Buildings — Classes 1, 2, 4 and 10, December 2009; Australian Building and Construction Board Final Regulation Impact Statement for Decision: Proposal to Revise the Energy Efficiency Requirements in the Building Code of Australia for Commercial Buildings — Classes 3 and 5 to 9, December 2009

¹⁰⁵ Productivity Commission. *The Private Cost Effectiveness of Improving Energy Efficiency*. Productivity Commission Inquiry Report, No. 38, 31 August 2005

¹⁰⁶ Productivity Commission. *The Private Cost Effectiveness of Improving Energy Efficiency* Productivity Commission Inquiry Report, No. 38, 31 August 2005; Regulation Impact Statements are available at <http://www.energyrating.gov.au/documents>

3.2.4. Ensure energy technology neutrality

Government support for ‘preferred’ energy technologies perverts what would otherwise be the natural flow of private sector investment into new sources of energy.

The existence of the Renewable Energy Target as well as funding provided for wind and solar projects by bodies such as the Australian Renewable Energy Agency or Clean Energy Finance Corporation encourages companies to tailor their behaviour to match available government funding.

A current case in point is the companies currently vying to construct a solar thermal tower at Port Augusta in South Australia, and who are seeking subsidies in the form of grants or government purchasing agreements, which is likely to have had something to do with:

- the Federal ALP’s April promise to “invest \$206.6 million in ARENA to support a specific Concentrated Solar Thermal funding round;”¹⁰⁷
- the then Coalition Environment Minister’s Press Club debate pledge of support for a Port Augusta solar thermal tower through the Government’s new Clean Energy Innovation Fund;¹⁰⁸ or
- the pledge of the then Shadow Environment Minister at the same Press Club debate that a Port Augusta solar tower would be “front of the queue.”¹⁰⁹

Government should not be in the business of selecting preferred energy technologies or providers. The role of government should be limited to acting as a guardian of competition, and actor of last resort in the event of market failure.

In time, improvements in renewable energy technology may very well make these energy sources more cost-effective than fossil fuels, at which time they would be welcome to supplant these generators in the market.

The Government should abolish the Australian Renewable Energy Agency and the Clean Energy Finance Corporation (CEFC), or at the very least, begin to privatise the CEFC as the United Kingdom Government has done with the equivalent Green Investment Bank.¹¹⁰

Changes in technology and genuine consumer preferences should be the drivers of the products that are available in Australia’s energy market, as they are in most other markets.

107 Australian Labor Party, “Labor’s Climate Change Action Plan,” <http://www.laborsclimatechangeactionplan.org.au/>

108 Jean, Peter. “Liberals Promise to Help Fund Construction of Port Augusta Solar Thermal Power Station.” *The Advertiser*, 18 May 2016 <http://www.adelaidenow.com.au/news/south-australia/liberals-promise-to-help-fund-construction-of-port-augusta-solar-thermal-power-station/news-story/9fde53f07cdec969d339c69022d88ab0>

109 *ibid.*

110 Department for Business, Innovation and Skills. “Private investors thought to boost investors into green energy projects.” Press Release, United Kingdom, 3 March 2016. <https://www.gov.uk/government/news/private-investors-sought-to-boost-investment-into-green-energy-projects>

3.2.5. Don't rule out new coal or nuclear technologies

The provision of safe, affordable and reliable electricity should be the goal in every energy market. As the Institute of Public Affairs noted in its November 2016 submission to the Senate Environment and Communications Committee Inquiry into the retirement of coal-fired power stations:¹¹¹

With particular reference to Victoria, right now in Europe and in Asia, brown coal ultra-supercritical power stations are in operation or being built, that offer the opportunity to considerably reduce emissions while maintaining reliable supply.

Carbon dioxide emissions at the Neurath brown coal power plant in Germany have been reduced to only 1,031 tonnes of carbon dioxide per gigawatt hour¹¹² (TCO₂/GWh) and at Niederaussem in Germany 933 TCO₂/GWh¹¹³ as generating units have been upgraded.

This compares favourably with Australia's most 'emissions intensive' coal-fired power stations as featured in a recent piece in *The Conversation*.¹¹⁴

Utilising this technology would allow brown coal to continue to be used in Latrobe Valley Power Stations for the foreseeable future. This would be a better option than outright closure.

Using this technology to build or upgrade NSW and Queensland black coal power plants could result in CO₂ emissions per gigawatt hour of electricity of 670 to 800 tonnes.¹¹⁵

An overall policy approach that prioritises supply security may also encourage the development of Australia's first nuclear power station, an ideal location for which would be in South Australia. Australia is said to enjoy around 30 per cent of the world's uranium – much of which is located in, or in close proximity to, that state.

One option could be to work with BHP Billiton on a nuclear power station that could also reliably power its Olympic Dam mine,¹¹⁶ as well as feed reliable electricity into the South Australian grid.

Another option could be the nuclear power that works in conjunction with a proposed South Australian nuclear waste disposal facility as referenced in proposals submitted to the recent Nuclear Fuel Cycle Royal Commission.¹¹⁷

Maintaining electricity security, supporting regional employment and reducing carbon dioxide emissions are all possible if technologies are not excluded from the future national energy mix.

111 Institute of Public Affairs. "Ensuring a Future for Australian Coal-Fired Power Stations" (2016) http://www.ipa.org.au/portal/uploads/161115-BH-Submission-Ensuring_a_future_for_Australian_coal_sml.pdf

112 Enerpedia, Neurath Powerplant, http://enipedia.tudelft.nl/wiki/Neurath_Powerplant

113 Enerpedia, Niederaussem Powerplant, http://enipedia.tudelft.nl/wiki/Niederaussem_Powerplant

114 McConnell, Dylan. "Have Eight of Australia's Twelve Most Emissions Intensive Power Stations Closed in the Last Five Years?" *The Conversation*, 15 September 2016 <https://theconversation.com/factcheck-have-eight-of-australias-12-most-emission-intensive-power-stations-closed-in-the-last-five-years-65036>

115 World Coal Association. "High Efficiency Low Emissions Coal Fact Sheet" http://www.worldcoal.org/file_validate.php?file=Hele%20Factsheet%20landscape.jpg

116 Potter, Ben. "BHP Billiton Calls for SA Gas Power Back." *Australian Financial Review*, 21 October 2016 <http://www.afr.com/news/bhp-billiton-calls-for-sa-gas-power-back-20161021-gs7lgm>

117 Australian Academy of Technological Sciences and Engineering. "Submission to the South Australian Nuclear Fuel Cycle Royal Commission" (2015):36 <https://www.atse.org.au/Documents/submissions/sa-nuclear-fuel-cycle-royal-commission.pdf>

3.2.6. No gas moratoria

With world primary energy consumption expected to increase by 30% over the next 25 years, (which is inclusive of a 74% increase in South East Asia and 135% increase in India),¹¹⁸ now is not the time for Australian policy makers to be banning new energy industries before they begin, or restricting exploration for existing commercial commodities as was announced in August in the State of Victoria.¹¹⁹

A permanent legislative ban on the exploration for and development of unconventional gas and an extension of the current moratorium on conventional gas would be a serious backward step. Limited supplies of any commodity leads to higher prices, which in turn leads to less customers and destroys the competitive market.

A modern industrial economy needs a diversity of industries—including services, manufacturing, agriculture and energy.

Cheap energy is the foundation upon which every other industry is built. Rather than a blanket ban, the world's best regulatory regime should be developed to manage economic and environmental interests should commercial quantities of unconventional or conventional gas be found.

3.3. Industrial relations and trading hours

For too long now, the workplace relations policy debate in Australia has been framed by arguments about the rights and privileges of unions, employer organisations, institutions, and even governments.

Australia's rigid and centralised employment laws are increasingly ill-suited to the changing nature of work, globalisation, automation and the ageing workforce.

The goal of helping people into paid employment should be the sole aim of the workplace relations system.

In this section we outline some reforms to improve Australian productivity and efficiency:

- Abolish the Australian Jobs Act 2013 (section 3.3.1);
- Remove the remaining restrictions to shopping hours (section 3.3.2);
- Abolish the Fair Work Commission (section 3.3.3); and
- Abolish Modern Awards (section 3.3.4).

118 International Energy Agency. "World Energy Outlook 2016" (2016) <http://www.worldenergyoutlook.org/publications/weo-2016/>

119 Victorian Government. "Victoria Bans Fracking to Protect Farmers," 30 August 2016 <http://www.premier.vic.gov.au/victoria-bans-fracking-to-protect-farmers/>

3.3.1. Abolish the Australian Jobs Act 2013

The Australian Jobs Act requires public and private major projects with a capital expenditure of \$500 million or more to prepare and implement an Australian Industry Participation (AIP) Plan.¹²⁰ The objective of an Australian Industry Participation Plan is to prioritise Australian businesses in the supply goods and services to a project, by requiring businesses to:

Demonstrate how full, fair and reasonable opportunity will be provided to Australian businesses to supply goods and services to a project.

An AIP applies above the a threshold of \$500 million. This arbitrarily falls on larger businesses and requires compliance through both the project and operations phase.¹²¹

The jobs plan, introduced by the Gillard government in 2013, simply applies more red tape. Indeed, as Professor Sinclair Davidson wrote at the time:

The Australian Industry Participation Plan is a recipe for increased red tape. Rather than making it easier for foreign business to operate in Australia, this plan will punish those who do business here.¹²²

According to the Regulation Impact Statement the cost of complying with an AIP plan for a large project ranges from \$50,000 - \$150,000.¹²³ However, this number remains untested in practice and is unlikely to incorporate the entire red tape cost.¹²⁴

Note that the AIP involves some duplication in some States such as WA.

120 Department of Industry, Innovation and Science. "Australian Industry Participation." Accessed 20 October 2016 <http://www.industry.gov.au/industry/IndustryInitiatives/AustralianIndustryParticipation/Pages/default.aspx> *Australian Jobs Act 2013*. <https://www.legislation.gov.au/Details/C2015C00412>

121 Business Council of Australia. "Submission on the Competition Policy Review Draft Report." (2014) <http://competitionpolicyreview.gov.au/files/2014/12/BCA.pdf>

122 Davidson, Sinclair. "Gillard's Jobs Plan Will Suffocate Business With More Red Tape." *The Daily Telegraph* 18 February 2013 <http://ipa.org.au/news/2846/gillard's-jobs-plan-will-suffocate-business-with-more-red-tape>

123 Department of Industry, Innovation, Science, Research and Tertiary Education. "Decision Regulation Impact Statement: Strengthening Australian Industry Participation." (2013):41 <http://ris.dpmc.gov.au/files/2013/02/03-Strengthening-Australian-Industry-Participation-RIS.pdf>

124 Business Council of Australia. "Submission to the Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education regarding the Australian Jobs Bill 2013 Exposure Draft." (2013) http://www.bca.com.au/docs/72578A43-FC9E-4A17-B11A-EB0D075971C9/sub_re_austrian_jobs_bill_2013_final_16-4-2013.pdf

3.3.2. Remove the remaining restrictions to shopping hours in WA, QLD and SA

Shopping restrictions prevent voluntary trade between Australians and hold back the capacity, especially of small businesses, to earn profits. They are a relic of a bygone era, before the easy access to constant online shopping:

The current system of trading restrictions reflects outdated conventions that are no longer relevant to modern society, and undermines the capacity of workers and consumers to make choices which suit their interests.¹²⁵

It's somewhat unsurprising, then, that several reports and reviews have recommended the abolition of trading restrictions.¹²⁶ While most jurisdictions have removed restrictions on retail trading hours, some are yet to do so. The specific problem and sections that must be removed varies across different states, as outlined below.

In the Perth metropolitan area retail trading is restricted.¹²⁷ WA should remove section 12 of the *Retail Trading Hours Act 1987* which relates to tradition restrictions for 'some general retail shops' and also section 14A which restricts goods that can be sold at 'filling stations'.¹²⁸ Note that the Minister can publish an exemption through government Gazette.

Queensland also has restrictive trading hours. The Queensland government should abolish section 21 Part 5 and Section 31B Part 5A of the *Trading (allowable hours) Act 1990*. The first relates to trading hour restrictions on non-exempt shops while the latter refers to restrictions for South East Queensland. Note that exempt shops also have unrestricted hours.

And finally, South Australia should abolish Section 13 of the *Shop Trading Hours Act (1977)*.¹²⁹

There is other evidence of increased employment in cities such as Victoria and Perth when trading restrictions have been relaxed.¹³⁰ For Queensland the net benefit could be \$200 million per year.¹³¹

125 Husek, Michael. "Trading hours restrictions: A significant red tape burden on Queensland." *Institute of Public Affairs Occasional Paper*, Melbourne (2016):10 <https://www.treasury.qld.gov.au/fair-safe-work/industrial-relations-policy-regulation/trading-hours-review/documents/submission-139.pdf>

126 For instance, Productivity Commission. "Relative Costs of Doing Business in Australia: Retail Trade." September 2014. <http://www.pc.gov.au/inquiries/completed/retail-trade/report/retail-trade.pdf>. Also see Harper et al. (2015)

127 See Department of Commerce. "Retail Trading Hours." (2016) <https://www.commerce.wa.gov.au/consumer-protection/retail-trading-hours>

128 *Retail Trading Hours Act 1987* [https://www.slp.wa.gov.au/pco/prod/FileStore.nsf/Documents/MRDocument:28048P/\\$FILE/Retail%20Trading%20Hours%20Act%201987%20-%20\[04-a0-01\].pdf?OpenElement](https://www.slp.wa.gov.au/pco/prod/FileStore.nsf/Documents/MRDocument:28048P/$FILE/Retail%20Trading%20Hours%20Act%201987%20-%20[04-a0-01].pdf?OpenElement)

129 *Shop Trading Hours Act 1977* <https://www.legislation.sa.gov.au/LZ/C/A/SHOP%20TRADING%20HOURS%20ACT%201977.aspx>

130 Australian National Retailers Association. "Submission to the 2015-16 Federal Budget." February (2015): 12 http://www.retailcouncil.com.au/literature_142667/ANRA_Submission_to_the_2015-16_Federal_Budget

131 Centre for International Economics, The. "Prioritisation of regulatory reforms." Report prepared for The Queensland Office of Best Practice Regulation. (2012). <http://www.qca.org.au/getattachment/7ec28607-7090-4246-a351-ec72d3bd9a56/CIE-Report-Prioritisation-of-Regulatory-Reforms.aspx>

3.3.3. Abolish the Fair Work Commission

The Fair Work Commission, which has been around in different forms since 1904, is the last surviving relic of a bygone era of centrally mandated wages, high tariffs, a fixed exchange rate, restricted immigration and preferential trade within the British Empire.

Its wide responsibilities include deciding minimum wages and the contents of awards, resolving workplace disputes, approving enterprise agreements, allowing strikes, and granting right of entry permits.

Its influence on the Australian economy is immense, with the Productivity Commission report into Australia's workplace relations framework describing it as the "largest price setting entity in the Australian economy."¹³²

The Commission in its current form should be abolished. It should be replaced with a simpler, less legalistic and less costly tribunal based on the UK Employment Tribunal, with functions limited to unfair dismissals, facilitation of collective agreements (including the administration of lawful action ballots) and conciliation of industrial disputes. It should be predominantly, or at the very least equally, staffed by people with managerial experience; and legal practitioners—whether in-house or external solicitors—should not be permitted to appear or be otherwise involved in proceedings.

3.3.4. Abolish Modern Awards

The existing National Employment Standards should be reviewed and if necessary modified to provide a statutory set of minimum conditions to replace the Modern Award framework.

The concept of centrally determined, multi-page industrial agreements that apply to employers and employees in whole industries is one that is increasingly difficult to reconcile with modern Australia.

Employers and employees should be free to negotiate all aspects of the employment relationship including hours of work, rostering, classification structures and wage relativities without the limitations or assumptions of Modern Awards.

Where employees are engaged without the use of a collective agreement, the employee's classification and remuneration should be the subject of mutual agreement, provided that the statutory minimum conditions are met. This means that penalty rates and loadings would be by negotiation, or if politically necessary, specified in the NES, ideally in a simpler and less costly form.

132 Productivity Commission. "Workplace Relations Framework" (2015) <http://www.pc.gov.au/inquiries/completed/workplace-relations#report>

4. Concluding remarks

We began by examining the theoretical and empirical links between over-regulation and red tape, on one hand, and productivity, efficiency and economic growth, on the other. Following this analysis we proposed a series of economic reforms, centred on cutting red tape and deregulation, that would help make Australia more efficient and prosperous.

The remit of Productivity Public Policy should be extended beyond narrow statistical measures of input and output ratios. That is, to incorporate the broader notions of allocative and dynamic efficiency, and their role in long-run economic growth. Productivity statistics, in this view, should not be observed in isolation.

Once such a broader conception is understood, a clear thread emerges: all attempts to maximise productivity and efficiency to propel economic growth and Australian living standards are fundamentally traced back to *individual decision making*. Countries, firms, or industries don't make economic decisions, individuals do.

Any policy attempts that seek to stimulate Australian productivity, then, should be judged on their capacity to facilitate, enable, and reward economic decision making and risk taking by Australians. The framework, therefore, on which to judge economic policies, is a *classical liberal* one.

Only a restrained government can effectively facilitate the piecemeal process of economic growth. An interventionist government—one that over-regulates and heaps red tape onto economic agents—not only distorts the complex capital structure of the economy in the short-run, but prevents the discovery of new combinations of economic activity in the long run.

Only in a free market system of private property and rule of law can propel the dual engines of capitalism—entrepreneurial endeavour seeking to discover and apply new technologies for profit, and the competitive evolutionary market mechanism that directs that behaviour towards its best use—reveal their long-term benefits in increasing Australian living standards and prosperity.

Finally, we proposed the case for a series of economic reforms, including:

- market-based approaches to native vegetation;
- repealing sections of federal law that enable 'green lawfare';
- abolishing cabotage restrictions on coastal shipping;
- abolishing the 'water trigger' in the EPBC Act;
- removing moratoria on energy production and exploration;
- ensuring energy technology neutrality; and
- breathing flexibility into the workplace relations framework.

Reference list

- ACIL Allen Consulting. "RET Review Modelling: Market Modelling of Various RET Policy Options." Report to RET Review Expert Panel, 7 August 2014 http://www.acilallen.com.au/cms_files/ACILAllen_RETReport2015.pdf
- Aghion, Philippe, Richard Blundell, Rachel Griffith, Peter Howitt, and Susanne Prantl. "The effects of entry on incumbent innovation and productivity." *The Review of Economics and Statistics* 91, no. 1 (2009):20-32
- Ahn, Sanghoon. "Competition, innovation and productivity growth: a review of theory and evidence." OECD Economics Department Working Papers, No. 317 (2002) http://www.oecd-ilibrary.org/economics/competition-innovation-and-productivity-growth_182144868160?crawler=true
- Allen, Darcy, Berg, Chris, and Breheny, Simon. "Submission to the Agriculture and Environment Committee relating to the Vegetation Management (Reinstatement) and Other Legislation Amendment Bill 2016" *Institute of Public Affairs Submission*. (2016) <http://ipa.org.au/portal/uploads/27Apr16-DA-Native-vegetation.pdf>
- Allen, Darcy W.E. and Potts, Jason. "How innovation commons contribute to the discovery and development of new technologies." *International Journal of the Commons* 10, no. 2 (2016):1035-1054 <https://www.thecommonsjournal.org/articles/10.18352/ijc.644/>
- Allen, Darcy and Potts, Jason. "Innovation strangled by red tape: Submission to the Productivity Commission Inquiry into business set-up, transfer and closure." *Institute of Public Affairs*, Melbourne (2015) http://ipa.org.au/portal/uploads/200215_Submission-DA-innovation_strangled_by_red_tape.pdf
- Allen, Darcy and Novak, Mikayla. "Ten red tape initiatives for the next Australian government." *Institute of Public Affairs Occasional Paper* (2016) <https://www.ipa.org.au/publications/2516/ten-red-tape-initiatives-for-the-next-australian-government>
- Allen, Darcy and Wild, Daniel. "Toxic Greens." *Institute of Public Affairs Review vol. 68 no. 3* (2016) <http://ipa.org.au/portal/uploads/IPAReview-DWDA-ToxicGreens.pdf>
- Allen, Darcy. "Submission to the Australian Small Business and Family Enterprise Ombudsman Discussion Paper 2016." *Institute of Public Affairs*, Melbourne (2016):4 <https://www.ipa.org.au/publications/2515/submission-to-the-australian-small-business-and-family-enterprise-ombudsman-discussion-paper-2016>
- Allen, Darcy. "Let's get rid of this suffocating bureaucracy." *The Weekly Times*. 8 June (2016) <http://ipa.org.au/news/3489/let%27s-get-rid-of-this-suffocating-bureaucracy>
- Allen, Darcy. "Cut red and green tape to drive more growth in farming sector." *Mercury*, 31 July (2016) <http://ipa.org.au/news/3535/cut-green-and-red-tape-to-drive-more-growth-in-farming-sector>
- Allen, Darcy. "Red tape hampers resources recovery for miners." *The West Australian*, 8 October (2016) <http://ipa.org.au/news/3563/red-tape-hampers-resources-recovery-for-miners>
- Arthur, W. Brian. *The nature of technology: What it is and how it evolves*. Simon and Schuster (2009)
- Australian Academy of Technological Sciences and Engineering. "Submission to the South Australian Nuclear Fuel Cycle Royal Commission" (2015):36 <https://www.atse.org.au/Documents/submissions/sa-nuclear-fuel-cycle-royal-commission.pdf>
- Australian Chamber of Commerce and Industry. "Submission into the House of Representatives Standing Committee on Economics." August (2009):25 http://www.aph.gov.au/parliamentary_business/committees/

[house_of_representatives_committees?url=economics/productivity/subs/sub07.pdf](#)

Australian Government. "National Commission of Audit." (2014) <http://www.ncoa.gov.au/report/index.html>

Australian Government Department of Industry, Innovation and Science. "Australian Innovation System Report 2015." (2015):1 <http://www.industry.gov.au/Office-of-the-Chief-Economist/Publications/Pages/Australian-Innovation-System.aspx>

Australian Labor Party, "Labor's Climate Change Action Plan," <http://www.laborsclimatechangeactionplan.org.au/>

Australian National Retailers Association. "Submission to the 2015-16 Federal Budget." (2015):12 http://www.retailcouncil.com.au/literature/142667/ANRA_Submission_to_the_2015-16_Federal_Budget

Australian Bureau of Agricultural and Resource Economics. "ABARE submission to the House of Representatives Standing Committee on Economics" (2009):2 http://www.aph.gov.au/parliamentary_business/committees/house_of_representatives_committees?url=economics/productivity/subs/sub23.pdf

Australian Bureau of Statistics. "Estimates of Productivity in the Australian National Accounts." (2005) <http://www.abs.gov.au/ausstats/abs@.nsf/featurearticlesbytitle/FF3C9780DDBF25B7CA2571E0001F27D0?OpenDocument>

Australian Government Clean Energy Regulator. "About the Renewable Energy Target." 15 September 2016 <http://www.cleanenergyregulator.gov.au/RET/About-the-Renewable-Energy-Target>

Barro, Robert J. *Determinants of economic growth: a cross-country empirical study*. MIT Press (1997):119

Baumol, William J. "Entrepreneurship: Productive, unproductive, and destructive." *Journal of Business Venturing* 11, no. 1 (1996): 3-22

Bloom, Nicholas, Sadun, Raffaella, and John Van Reenen. "Americans Do IT Better: US Multinationals and the Productivity Miracle." *American Economic Review* vol. 102 no. 1. (2012):167-201

Business Council of Australia. "Submission to the Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education regarding the Australian Jobs Bill 2013 Exposure Draft." (2013) http://www.bca.com.au/docs/72578A43-FC9E-4A17-B11A-EB0D075971C9/sub_re_austrian_jobs_bill_2013_final_16-4-2013.pdf

Business Council of Australia. "Submission on the Competition Policy Review Draft Report." (2014) <http://competitionpolicyreview.gov.au/files/2014/12/BCA.pdf>

Bylund, Per L. *The Seen, the Unseen, and the Unrealized: How Regulations Affect Our Everyday Lives*. Lexington Books (2016)

Centre for International Economics, The. "Prioritisation of regulatory reforms." Report prepared for The Queensland Office of Best Practice Regulation. (2012) <http://www.qca.org.au/getattachment/7ec28607-7090-4246-a351-ee72d3bd9a56/CIE-Report-Prioritisation-of-Regulatory-Reforms.aspx>

Commonwealth of Australia. "The Australian Government Annual Deregulation Report 2014." (2015)

Coase, Ronald. "The problem of social cost." *Journal of Law and Economics* vol 3 (1960):1-44

Crews, Clyde Wayne. "Ten thousand commandments: An annual snapshot of the federal regulatory state." *Competitive Enterprise Institute* (2016) <https://cei.org/10KC2016>

Davidson, Sinclair. "Gillard's Jobs Plan Will Suffocate Business With More Red Tape." *The Daily Telegraph* 18 February 2013 <http://ipa.org.au/news/2846/gillard-s-jobs-plan-will-suffocate-business-with-more-red-tape>

Davidson, Sinclair and de Silva, Ashton. "Does Australia have a Productivity Growth Problem?" *Institute of*

Public Affairs Occasional Paper (2012) https://www.ipa.org.au/library/publication/1331585603_document_davidson_desilva_productivity.pdf

Davies, Antony. "Regulation and Productivity." *Mercatus Centre at George Mason University Research Paper* (2014) <https://www.mercatus.org/publication/regulation-and-productivity>

Deloitte Australia. "Get out of your own way: Unleashing productivity." (2014) <https://www2.deloitte.com/au/en/pages/building-lucky-country/articles/get-out-of-your-own-way.html>

Department for Business, Innovation and Skills. "Private investors thought to boost investors into green energy projects." Press Release, United Kingdom, 3 March 2016. <https://www.gov.uk/government/news/private-investors-sought-to-boost-investment-into-green-energy-projects>

Department of Commerce. "Retail Trading Hours." (2016) <https://www.commerce.wa.gov.au/consumer-protection/retail-trading-hours>

Department of the Environment. "Independent review of the 'water trigger' legislation issues paper." 30 November (2015):4 <http://www.environment.gov.au/system/files/consultations/11c6034d-fc8e-4f06-a703-e51a16dec95c/files/water-trigger-review-issues-paper.pdf>

Department of Industry, Innovation and Science. "Australian Industry Participation." Accessed 20 October 2016 <http://www.industry.gov.au/industry/IndustryInitiatives/AustralianIndustryParticipation/Pages/default.aspx>

Department of Industry, Innovation, Science, Research and Tertiary Education. "Decision Regulation Impact Statement: Strengthening Australian Industry Participation." (2013):41 <http://ris.dpmc.gov.au/files/2013/02/03-Strengthening-Australian-Industry-Participation-RIS.pdf>

Diewert, W. Erwin and Lawrence, Denis. "Measuring the Contributions of Productivity and Terms of Trade to Australia's Economic Welfare" *Report by Meyrick and Associates to the Productivity Commission, Canberra* (2006) <http://www.pc.gov.au/research/supporting/economic-welfare/economicwelfare.pdf>

Dolman, Ben. "What happened to Australia's productivity surge?" *Australian Economic Review* 42, no. 3 (2009): 243-263

Dolman, Ben & Gruen, David. "Productivity and Structural Change." Address to the 41st Australian Conference of Economists, Melbourne, 10 July 2012 <http://www.treasury.gov.au/~media/Treasury/Publications%20and%20Media/Speeches/2012/Productivity-and-Structural-Change/Downloads/Productivity-and-Structural-Change-Speech-DGruen.ashx>

Erixon, Fredrik and Weigel, Bjorn. "Risk, Regulation, and the Innovation Slowdown." *Cato Institute Policy Report* (2016) <https://www.cato.org/policy-report/septemberoctober-2016/risk-regulation-innovation-slowdown>

Eslake, Saul. "Productivity: The lost decade." In *annual policy conference of the Reserve Bank of Australia, HC Coombs Conference Centre, Kirribilli, Sydney*, vol. 15. (2011) <http://www-dr.rba.gov.au/publications/confs/2011/pdf/eslake.pdf>

Frontier Economics. "The Impact of Regulation on Growth." A Report Prepared for the Department of Business, Innovation and Skills, United Kingdom. May (2012) https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/32107/12-821-impact-of-regulation-on-growth.pdf

Gramenz, Emilie. "Senate rejection of shipping bill puts \$20 Tasmanian port development in doubt." *ABC News* 26 November 2015 <http://www.abc.net.au/news/2015-11-26/rejection-of-shipping-bill-puts-port-development-in-doubt/6977868>

Gruen, David. "The importance of productivity." *Productivity Commission-Australian Bureau of Statistics Productivity Perspectives Conference*, 20 November 2012 <http://www.treasury.gov.au/~media/Treasury/Publications%20and%20Media/Speeches/2012/Importance%20of%20productivity/Downloads/PDF/>

[Gruen The Importance of Productivity.ashx](#)

Harper, Ian, Anderson, Peter, McCluskey, Su and O'Bryan, Michael. "Competition Policy Review." *Final Report. Canberra: Commonwealth of Australia* (2015)

Hayek, Friedrich August. "The use of knowledge in society." *The American economic review* 35, no. 4 (1945): 519-530

Hayek, Friedrich August. *Law, legislation and liberty: a new statement of the liberal principles of justice and political economy*. Routledge (2012)

Hopkins, Thomas D. *Regulatory costs in profile*. No. 132. St. Louis, Missouri: Center for the Study of American Business, Washington University (1996) http://wc.wustl.edu/files/wc/imce/regulatory_costs_in_profile.pdf

House of Representatives Committee. "Inquiry into raising the productivity growth rate in the Australian economy." *House Standing Committee on Economics* (2010) http://www.aph.gov.au/parliamentary_business/committees/house_of_representatives_committees?url=economics/productivity/report.htm

Husek, Michael. "Trading hours restrictions: A significant red tape burden on Queensland." *Institute of Public Affairs Occasional Paper* (2016):10 <https://www.treasury.qld.gov.au/fair-safe-work/industrial-relations-policy-regulation/trading-hours-review/documents/submission-139.pdf>

Institute of Public Affairs. "Ensuring a Future for Australian Coal-Fired Power Stations" (2016) http://www.ipa.org.au/portal/uploads/161115-BH-Submission-Ensuring_a_future_for_Australian_coal_sml.pdf

International Energy Agency. "World Energy Outlook 2016" (2016) <http://www.worldenergyoutlook.org/publications/weo-2016/>

Jean, Peter. "Liberals Promise to Help Fund Construction of Port Augusta Solar Thermal Power Station." *The Advertiser*, 18 May 2016 <http://www.adelaidenow.com.au/news/south-australia/liberals-promise-to-help-fund-construction-of-port-augusta-solar-thermal-power-station/news-story/9fde53f07cdee969d339c69022d88ab0>

Juma, Calestous. *Innovation and Its Enemies: Why People Resist New Technologies*. Oxford University Press (2016)

Kent, Christopher and Simon, John. *Productivity growth: The effect of market regulations*. Reserve Bank of Australia Research Discussion Paper (2007) <http://www.rba.gov.au/publications/rdp/2007/pdf/rdp2007-04.pdf>

Kirzner, Israel, M. "Discovery and the Capitalist Process." *Chicago University* (1985):141

Lachmann, Ludwig M. *Capital and its Structure*. Ludwig von Mises Institute (1956)

Lane, Aaron and Berg, Chris. "Coastal Shipping Reform: Industry Saviour or Regulatory Nightmare?" Institute of Public Affairs Occasional Paper. December (2013) https://ipa.org.au/portal/uploads/Coastal_Shipping_Report-Institute_of_Public_Affairs-Dec_13.pdf

Lewin, Peter. *Capital in disequilibrium: The role of capital in a changing world*. Routledge (2002)

Maher, Sid. "Adani coalmine 'stuff up' puts heat on Malcolm Turnbull." *The Australian*, 27 October 2015 <http://www.theaustralian.com.au/national-affairs/climate/adani-coalmine-stuff-up-puts-heat-on-malcolm-turnbull/news-story/b1b1d769a73e2391aaf581bbe9b3c019>

McConnell, Dylan. "Have Eight of Australia's Twelve Most Emissions Intensive Power Stations Closed in the Last Five Years?" *The Conversation*, 15 September 2016 <https://theconversation.com/factcheck-have-eight-of-australias-12-most-emission-intensive-power-stations-closed-in-the-last-five-years-65036>

- McLennan, Chris. "\$1.25m tree removal fee a saw point for gold miner Neville Perry." *The Weekly Times*, 3 August 2016 <http://www.weeklytimesnow.com.au/news/politics/125m-tree-removal-fee-a-saw-point-for-gold-miner-neville-perry/news-story/164dbbb27caf892e3b171f510983fce9>
- McCloskey, Deirdre N. *Bourgeois equality: How ideas, not capital or institutions, enriched the world*. University of Chicago Press (2016)
- Minerals Council of Australia. "How green groups are sabotaging the mining industry." (2015) http://www.minerals.org.au/news/how_green_groups_are_sabotaging_the_mining_industry
- Minerals Council of Australia. "Submission to the Independent Review of the EPBC Water Trigger for Coal Seam Gas and Large Coal Mining Development." 12 February (2016): 10 http://www.minerals.org.au/file_upload/files/submissions/MCA_Submission_-_Independent_Review_EPBC_Water_Trigger_-_12_Feb_2016.pdf
- Mises, Ludwig von. *Human action*. Ludwig von Mises Institute (1949)
- Mokyr, Joel. *The Enlightened Economy: An Economic History of Britain 1700-1850*. Yale University Press (2009)
- Nicoletti, Giuseppe and Scarpetta, Stefano. "Regulation, productivity and growth: OECD evidence." *Economic policy* 18, no. 36 (2003):9-72
- Novak, Mikayla. "The \$176 billion tax on our prosperity" *Institute of Public Affairs Occasional Paper*, Melbourne (2016) <http://ipa.org.au/portal/uploads/The-176-Billion-Tax-On-Our-Prosperity.pdf>
- Novak, Mikayla "The red tape state" *Institute of Public Affairs Occasional Paper*, Melbourne (2016) <http://ipa.org.au/portal/uploads/160526-MN-FinalReport.pdf>
- OECD. "Innovation and Growth: Rationale for an Innovation Strategy." (2007):6 <https://www.oecd.org/science/inno/39374789.pdf>
- Parham, Dean. "Microeconomic reforms and the revival in Australia's growth in productivity and living standards." In *Conference of Economists, Adelaide*, vol. 1. (2002) <http://www.pc.gov.au/research/supporting/living-standards/mrrag.pdf>
- Parham, Dean. "Sources of Australia's productivity revival." *Economic Record* 80, no. 249 (2004):239-257
- Parham, Dean. "Australia's productivity growth slump: Signs of crisis, adjustment or both?" Canberra: Productivity Commission (2012) <http://www.pc.gov.au/research/supporting/productivity-slump/productivity-slump.pdf>
- Potter, Ben. "BHP Billiton Calls for SA Gas Power Back." *Australian Financial Review*, 21 October 2016 <http://www.afr.com/news/bhp-billiton-calls-for-sa-gas-power-back-20161021-gs7lgm>
- Productivity Commission. "Productivity Commission Annual Report Series 2007-08" (2008) <http://www.pc.gov.au/about/governance/annual-reports/annualreport0708/annualreport0708.pdf>
- Productivity Commission. "Submission to the House of Representatives Standing Committee on Economics Inquiry into Raising the Level of Productivity Growth in the Australian Economy." (2009) http://www.aph.gov.au/parliamentary_business/committees/house_of_representatives_committees?url=economics/productivity/subs/sub20.pdf
- Productivity Commission. "Major Project Development Assessment Processes". *Productivity Commission Research Report* (2013) <http://www.pc.gov.au/inquiries/completed/major-projects/report>
- Productivity Commission. "Relative Costs of Doing Business in Australia: Retail Trade." September (2014) <http://www.pc.gov.au/inquiries/completed/retail-trade/report/retail-trade.pdf>
- Productivity Commission. "Draft Report into the Regulation of Australian Agriculture." July (2016):16

<http://www.pc.gov.au/inquiries/current/agriculture/draft>

Productivity Commission. "Workplace Relations Framework" December 2015 <http://www.pc.gov.au/inquiries/completed/workplace-relations#report>

Quiggin, John. "The Australian productivity miracle: A sceptical view." *Agenda: A Journal of Policy Analysis and Reform* (2001):333-348

Schumpeter, Joseph A. *The theory of economic development: An inquiry into profits, capital, credit, interest, and the business cycle*. Vol. 55. Transaction publishers (1934)

Shanahan, Dennis. "Foreign funding for Adani lawsuits." *The Australian*, 22 October 2016 <http://www.theaustralian.com.au/news/nation/foreign-funding-for-adani-lawsuits/news-story/d7179b0bbdfa5967d7ffd292c75b3f6e>

Simon, John and Wardrop, Sharon. "Australian use of information technology and its contribution to growth." Sydney: Reserve Bank of Australia (2002) <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.200.6090&rep=rep1&ctype=pdf>

Soames, Leo, Donald Brunker, and Tala Talgaswatta. "Competition, innovation and productivity in Australian businesses." *Productivity Commission and Australian Bureau of Statistics joint research paper* (2011):1

Syverson, Chad. "What determines productivity?" *Journal of Economic literature* 49, no. 2 (2011):326-365

Victorian Government. "Victoria Bans Fracking to Protect Farmers," 30 August 2016 <http://www.premier.vic.gov.au/victoria-bans-fracking-to-protect-farmers/>

Wild, Daniel. "As a rule, bureaucracy is smothering agriculture." *The Weekly Times*, 10 August 2016 <http://ipa.org.au/news/3541/as-a-rule-bureaucracy-is-smothering-agriculture>

Wild, Daniel. "Section 487 of the Environment Protection and Biodiversity Conservation Act: How activists use red tape to stop development and jobs." *Institute of Public Affairs Occasional Paper* (2016) http://ipa.org.au/portal/uploads/26Oct16-DW-Section487-How_activists_use_red_tape.pdf

Wild, Daniel. "Red tape is strangling Australia's primary resources industries." *The Australian*, 15 August 2016 <http://ipa.org.au/news/3543/red-tape-is-strangling-australia%27s-primary-resources-industries>

Whitehead, Isabelle. "Better protection or pure politics? Evaluating the 'water trigger' amendment to the EPBC Act." (2013):1 http://www.nela.org.au/NELA/Documents/Better_Protection_or_Pure_Politics.pdf

World Coal Association. "High Efficiency Low Emissions Coal Fact Sheet" http://www.worldcoal.org/file_validate.php?file=Hele%20Factsheet%20landscape.jpg

Yu, Fu-Lai Tony. *New perspectives on economic development: a human agency approach*. Springer Science & Business Media (2011):30

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