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Markets, Monopolies and Moguls: The Relationship between Inequality and Competition

Andrew Leigh and Adam Triggs*

Abstract

Analysing private market research data, we estimate the degree of market concentration across 481 industries in the Australian economy. On average, the largest four firms control 36 per cent of the market. Some industries are considerably more concentrated. In department stores, newspapers, banking, health insurance, supermarkets, domestic airlines, Internet service providers, baby food and beer, the biggest four firms control more than 80 per cent of the market. We suggest ways in which high market concentration may increase inequality and discuss some policy ideas to address the problem.

1. Introduction

In 1992, packaging businessman Ed Zac started cardboard box manufacturer, Zacpac, with a leased factory in Caringbah and then a permanent factory in Ingleburn in Sydney. He had just one cutting machine and one folding–glueing machine (Zacpac 2016). A family-run operation, Zacpac hoped—like many small businesses—to grow large enough to employ more staff and expand its operations.

The cardboard box manufacturing industry is significant because such a large share of consumer products come packed in cardboard. Indeed, some have even suggested that if you want to see how the output of the overall economy is doing, you should look at the output of cardboard box manufacturers (Obel 2009). If people are not buying boxes, the theory goes, they are not buying products.

At the time when Zacpac began, the Australian cardboard box market was worth around $2 billion. Not surprisingly, the firm's management wanted a share of the action. They did not expect to become billionaires, but they figured if they worked hard and played by the rules, they would be able to expand their operations.

Unfortunately for Zacpac, others had different ideas. Between them, two companies—Visy and Amcor—controlled over 90 per cent of the cardboard box market and they were not merely large—they were actively colluding. Over a 5 year period from 2000 to 2005, senior representatives of the two firms began a series of clandestine meetings (see Beaton-Wells and Brydges 2008).

In scenes reminiscent of spy thrillers, they met in hotels and motels, including the Rockman's Regency Hotel in central Melbourne and

* Leigh: Shadow Assistant Treasurer, Shadow Minister for Competition and Federal Member for Fenner, Australian Capital Territory 2600 Australia; Triggs: Crawford School of Public Policy, Australian National University, Australian Capital Territory 0200 Australia. Corresponding author: Leigh, email <Andrew.Leigh.MP@aph.gov.au>.
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the Tudor Motel in Box Hill, Melbourne. They made phone calls from public phones and prepaid mobiles and met up in parks, including Westerfolds Park in Templestowe and Myrtle Park in North Balwyn, Melbourne (see Beaton-Wells and Brydges 2008).

The collusion went to the highest level in the firm and included a 2001 meeting at the All Nations Hotel in Richmond, Melbourne, between the firms' two chief executives: Amcor's Russell Jones and Visy's Richard Pratt.

Eventually, as sadly happens in so many clandestine affairs, things broke down. Since the start of their collusion, Visy's market share had grown from 47 per cent to 55 per cent of the market, but Amcor's had shrunk from 45 per cent to 36 per cent. At the end of 2004 (Beaton-Wells and Brydges 2008), Amcor went to the Australian Competition and Consumer Commission (ACCC) and announced it was willing to confess its role in the collusion in exchange for immunity from prosecution.

The ACCC took action, ultimately leading to a court judgement which imposed a $36 million fine on Visy for price-fixing, the largest fine in Australian history at that time, and $2 million worth of fines for the individuals involved (ACCC 2016). The ACCC also sought a criminal conviction against Richard Pratt for providing false evidence. This charge was ultimately abandoned on account of his poor health (Pratt died in 2009). A few years later, a class action brought by Maurice Blackburn on behalf of more than 1,000 businesses affected by the price-fixing led to Amcor and Visy paying out $95 million (Maurice Blackburn Lawyers 2011).

In 2009, Australia criminalised cartel conduct with a jail term of up to 10 years. This put Australia in line with the United States, United Kingdom, Germany, Ireland and Canada.[1] Those involved in the cardboard box cartel were fortunate that their cartel did not operate a few years later or they might have found themselves behind bars for serious cartel conduct.

The combined market share of Amcor and Visy is still large—at 84 per cent—but significantly down from the 91 per cent that it was at the peak of their duopoly (Beaton-Wells and Brydges 2008; IBISWorld 2016). And what about Zacpac? Their Sydney factory has now expanded to five cutting machines and four folding–glueing machines—far more computerised than when it began (Zacpac 2016). Zacpac recently opened a second factory in Stapylton, on the Gold Coast. In the past few years, their business has grown at an annual rate of over 30 per cent (Hoy 2014).

Like a large tree that overshadows the saplings around it, firms that abuse their market power prevent newer competitors from growing. They hurt entrepreneurs and often reduce the scope for innovation. Consumers suffer through higher prices, lower quality and less choice.

But, some of the benefits of market power invariably go to the people who run the firms. At the time of his secret meeting at the All Nations Hotel, Richard Pratt was the third-richest person in Australia (Beaton-Wells and Brydges 2008).

But, are not moguls who made their money through wielding market power the exception? What about the story of ingenious entrepreneurs creating value for the community? Such examples do exist—think of Boost Juice founder, Janine Allis, Red Balloon founder, Naomi Simson, or Atlassian founders, Mike Cannon-Brookes and Scott Farquhar.

Alas, when it comes to the wealthiest Australians, breakthrough innovators are not the norm. Analysing how the richest Australians made their money, Frijters and Foster (2015) estimated that just five out of 200 had become rich primarily by inventing a new product or service. Far more commonly, the most affluent operated in industries with limited competition or with significant reliance on government decisions.

One analysis from the 1990s looked at the industries in which the rich-listers made their fortunes. It concluded that about one-quarter grew wealthy in an industry that was uncompetitive at the time (Siegfried and Round 1994). Since then, the problem may have become worse. As Stensholt (2012, p. 50) noted, 'There is a dearth of new, young and entrepreneurial people on the latest BRW rich list.'

The remainder of this article is structured as follows. We begin by looking at the extent to which the largest players dominate markets in Australia and how this has changed over time. Next, we discuss the relationship between uncompetitive markets and the rising inequality Australia has experienced in the past generation. We conclude by suggesting some ways in which competition laws might be amended in order to reduce inequality.

2. New Estimates of Market Concentration in Australia

Like us, we expect you are always looking for economic games to play at your next dinner party. So, here is one that we learned from John Daley, head of the Grattan Institute. Try seeing how many industries your guests can name that are *not* dominated by a few large players. We can guarantee you, this is a game that will not tie up the conversation all night.

Moving from anecdote to data, it turns out that an empirical analysis of market concentration in Australia is harder than one might think. Unlike the US Census Bureau, the Australian Bureau of Statistics (ABS) does not compile data on the market share of the largest firms. So instead, we are left to rely on private market research. In what follows, we present data drawn from IBISWorld Industry Reports, from which we were able to compile comparable market share data for 481 industries. All estimates are for 2016 and represent the shares of industry revenues. Appendix 1 lists the four-firm concentration ratios for all 481 sub-industries.

To take a few industry-specific examples, in department stores, newspapers, banking, health insurance, supermarkets, domestic airlines, Internet service providers, baby food and beer and soft drinks, the biggest four firms control more than four-fifths of the market. In petrol retailing, telecommunications, credit unions, cinemas, liquor retailing, bottled water and fruit juice, the largest four companies control more than two-thirds of the market. In pharmacies, pharmaceuticals, hardware, gyms, snack foods, magazines, newsagents and international airlines, the big four account for more than half of the market.

The data also give a few answers for that dinner party game. Car dealers, hairdressers, dentists and law firms are all industries where the top four firms account for less than one-tenth of the market. Since it would be unwieldy to show a chart with all these industries, Figure 1 depicts market concentration for the 20 largest industries in Australia based on industry revenues.

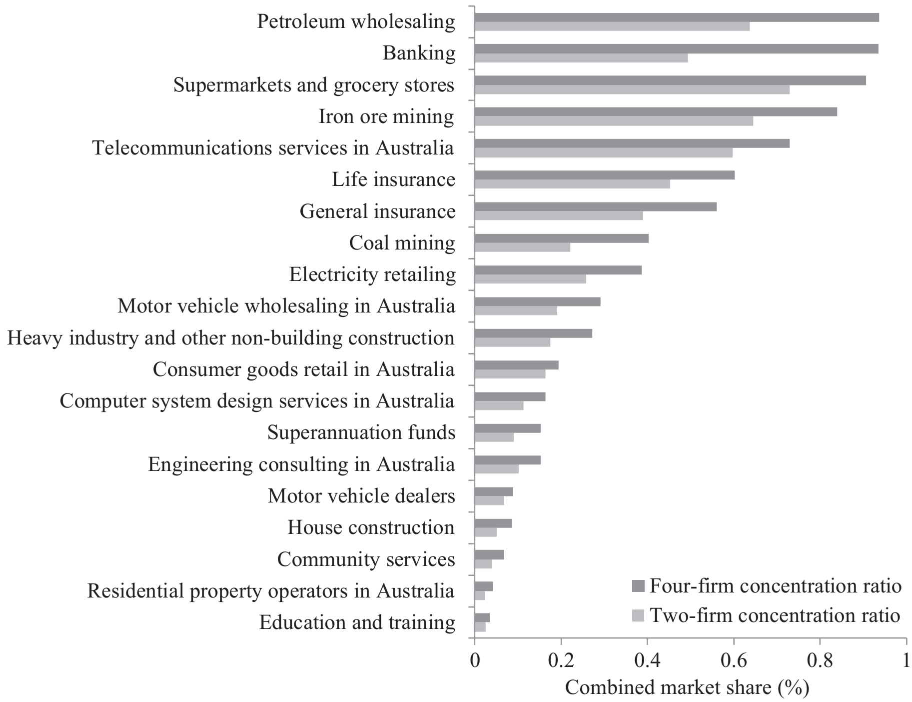
Although there is no set rule, a market with a four-firm concentration ratio of more than one-third is often considered to be concentrated. On this measure, almost half of the 481 IBISWorld industries are concentrated markets. Market concentration in Australia is a cradle-to-grave affair, running from baby food to funeral services. In the 481 industries covered, the weighted average market share of the largest four firms is 36 per cent (the unweighted four-firm concentration ratio is 38 per cent).

To see how market concentration differs across different sectors of the economy, we aggregate these 481 industries into the 19 sectoral classifications used by the Australian and New Zealand Standard Industrial Classification system.[2] In aggregating concentration estimates within each sector, we weight the data according to the share of total sectoral revenues that each industry comprises.

Figure 2 shows the four-firm concentration ratios for each of the 19 sectors that make up the Australian economy. The most concentrated sector is *Information, media and telecommunications*, followed by *Arts and recreation services* and *Mining*. The least concentrated sectors are *Construction* and *Education and training*. We return later in the article to look at possible correlates of market concentration across sectors.

While international comparisons of markets are complicated by definitional differences, it is worth noting that a recent analysis looked at 893 industries in the United States (The Economist 2016). On average, the largest four firms controlled 33 per cent of the US market—slightly less market concentration than our 36 per cent estimate for Australia. While it is

Figure 1 Market Concentration in the 20 Largest Australian Industries Based on Industry Revenues



Source: Authors' calculations, based on IBISWorld (2016).

possible that the US analysis is defining markets more broadly, this does suggest that large Australian firms are more dominant in our markets than large US firms are in that country.

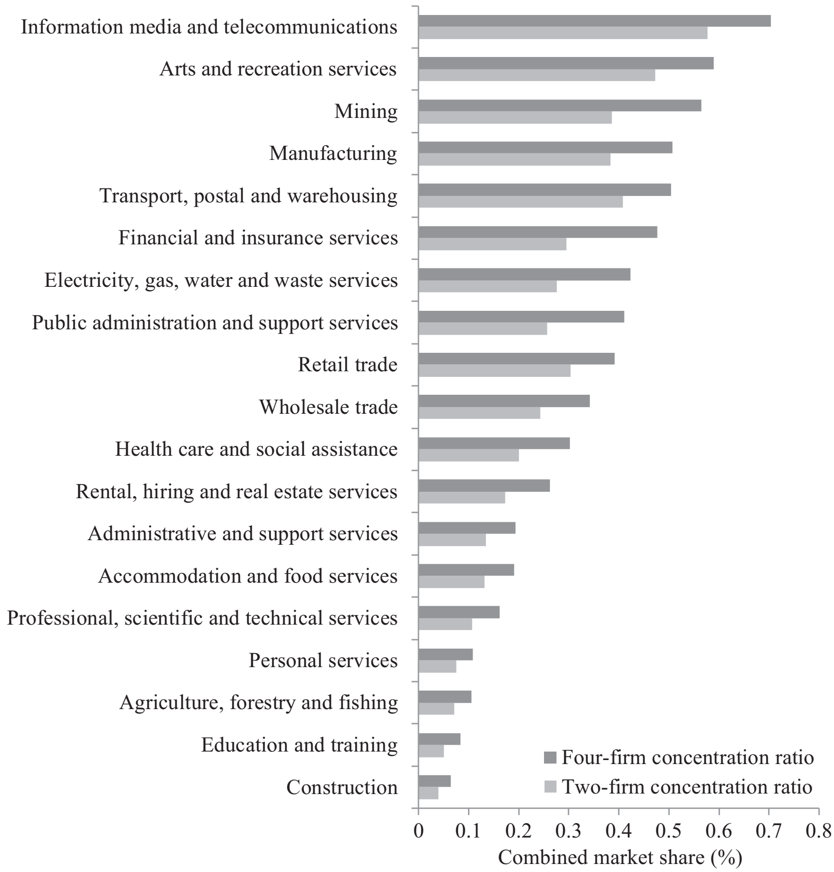
By way of comparison, Figure 3 looks at 12 markets for which we were able to obtain four-firm concentration ratios for both countries. In three cases (pharmacies, bottled water and beer), Australia has equally or less concentrated markets than the United States. But in the remaining nine markets, Australia has more concentrated markets than the United States. The differences are largest for liquor retailing (where the top four US firms have 10 per cent, while the top four Australian firms have 78 per cent), commercial banking (US 26 per cent, Australia 94 per cent), supermarkets (US 31 per cent, Australia 91 per cent), health insurance (US 35 per cent, Australia 93 per cent) and cardboard manufacturing (US 36 per cent, Australia 88 per cent).

Admittedly, the United States is an imperfect competition benchmark for Australia, given that its population is 13-fold larger than ours. However, analyses focused on particular sectors have sometimes suggested that Australia has highly concentrated markets in specific sectors. The Finkelstein (2012) media inquiry found that, across 26 countries, Australia was the only one in which the leading press company accounted for more than half of daily newspaper circulation.

The ACCC's (2008b, p. xvi) grocery inquiry found that:

> The lack of incentives for Coles and Woolworths to compete strongly across the board on prices reflects the high levels of concentration in the industry and frequent monitoring of competitors' prices. Evidence indicates that if one player attempts to lead prices down, the other will follow, making it extremely difficult for either to win significant numbers of customers from the other through an aggressive pricing strategy.

Figure 2 Market Concentration across Sectors



Source: Authors' calculations, based on IBISWorld (2016).

Comparing our market with other countries, it noted that:

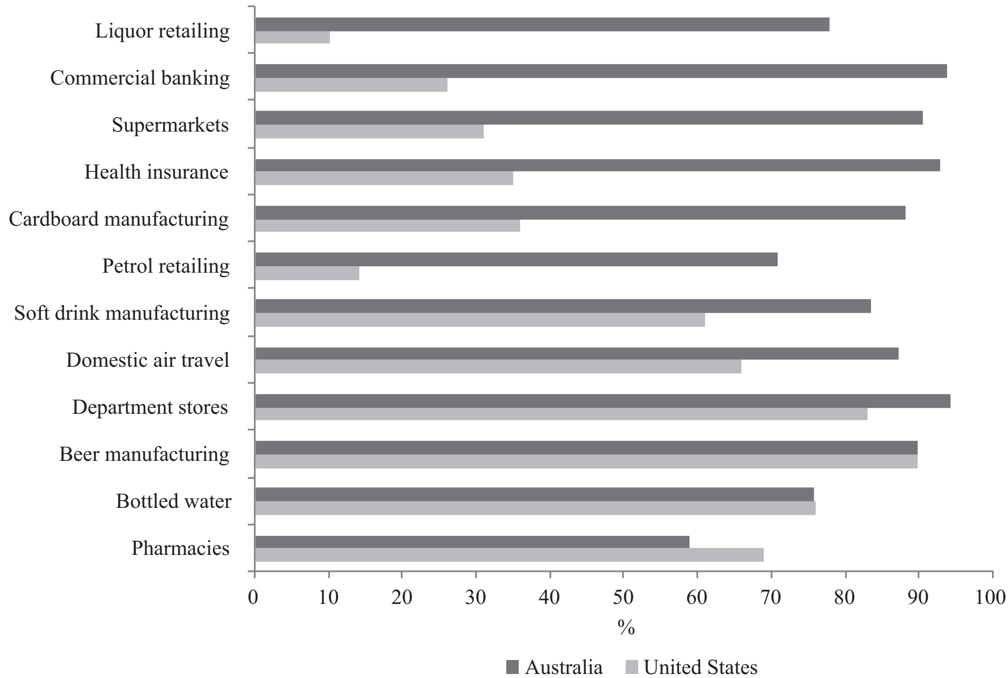
> International comparisons show that market structures vary widely between countries. In some [Organisation for Economic Co-operation and Development] OECD member nations, including New Zealand and Austria, the grocery industry is dominated by two participants. The United Kingdom and Canada have a larger number of retailers, although there is one clear leader in each country. [ACCC 2008b, p. 41]

While recent years have seen a significant degree of price competition among supermarkets, the Australian majors have been among the most profitable supermarkets in the world (Evans 2015).

In the case of banking, Figure 4 shows a comparison across advanced nations, covering the period from 2009 to 2013. This suggests that in these years, our banking sector was slightly more concentrated than the OECD average, with Australia ranking the 15th most-concentrated out of 33 nations (World Bank 2013).[3] Charles Littrel from the Australian Prudential and Regulation Authority recently noted that the combined market share of the big four banks has doubled from 1990 to 2016. As reported by Whalley (2016, p. 76), Littrel warned of systemic risks, on the basis that because all four Australian lenders are 'in the same business model they're all hugely exposed to each other'.

Looking across countries, the World Economic Forum's 2015–16 Global Competitiveness Report has similarly found that Australia ranks poorly on a number of indicators relating to competition. On 'intensity of local competition',

Figure 3 Four-Firm Market Concentration in Australia and the United States



Sources: Authors' calculations, based on The Economist (2016); IBISWorld (2016).

Australia ranks nineth. But, on 'effectiveness of anti-monopoly policy', Australia is back at 32nd. When asked to rate 'the extent of market dominance' in Australia, the World Economic Forum's experts put Australia still further back, at 47th (World Economic Forum 2015).

Another piece of evidence about Australian market concentration can be seen from looking at the largest firms' share of the Australian economy. In Figure 5, we analyse the 10, 50 and 100 largest firms in Australia, both in terms of stocks (revenues) and flows (market capitalisation). To look at revenues, we combine IBISWorld Industry Reports with national accounts data from the ABS, which gives each firm's gross value added to the Australian economy. To look at market capitalisation, we analyse firms that are listed on the Australian Securities Exchange (ASX), using data from the *MorningStar DATAnalysis* database.

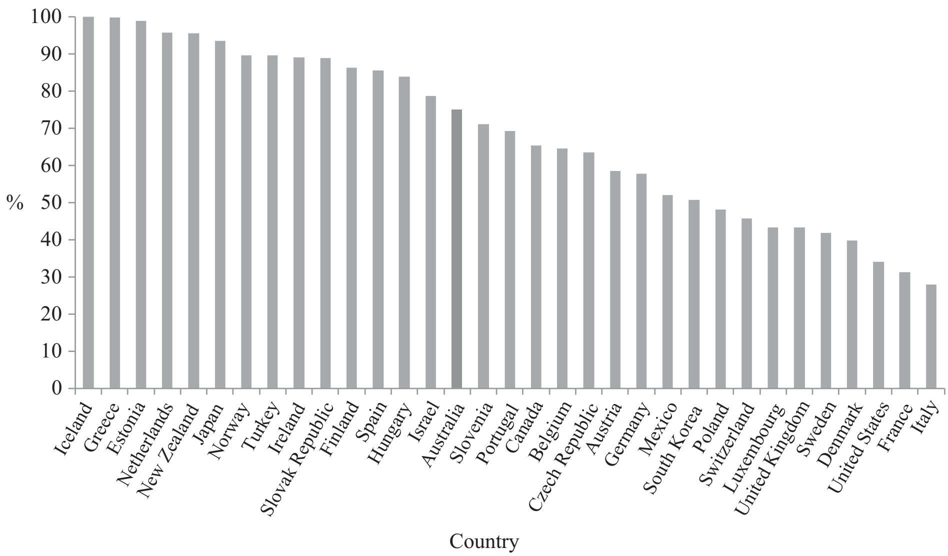
In terms of revenues, the 10 largest firms collectively account for 5 per cent of the Australian economy. The 50 largest firms collectively account for 11 per cent and the 100 largest firms account for 14 per cent of the economy.[4] In terms of market capitalisation, the 10 largest firms account for 62 per cent of the ASX. The 50 largest firms account for 89 per cent of the share market and the 100 largest listed firms account for 95 per cent of the share market.[5]

Is market concentration increasing? In the United States, economic Census data show that since the late 1990s, two-thirds of markets have experienced an increase in concentration. Across nearly 900 markets, the share of the largest four firms rose from 26 per cent in 1997 to 33 per cent in 2012 (The Economist 2016).

While the available data do not allow a parallel analysis for Australia, particular industries have become more concentrated. For example:

- In supermarkets, Australia has benefited from the entry of Aldi and Costco. But since 2008, the combined market share of Coles and Woolworths has risen from 60 per cent

Figure 4 Three-Firm Concentration Ratios in Banking across OECD Countries (average from 2009 to 2013)



Source: World Bank, Global Financial Development Database, 2013.

to 73 per cent (ACCC 2008b; IBISWorld 2016).

- In banking, the 2008 acquisition of St George by Westpac constituted a merger between the third- and fifth-largest banks in Australia. Depending on market definition, Westpac's market share went from between 12 per cent and 17 per cent to between 19 per cent and 25 per cent, according to the ACCC's (2008a) public competition assessment.

- In 2013, a joint venture saw Virgin airlines acquire 60 per cent of Tiger Airlines. Virgin's market share was 30 per cent and Tiger's was 2 per cent (ACCC 2013).

- In meat processing, the 2011 merger between Teys Bros (Holdings) Pty Ltd and Cargill Beef Australia led to increased market concentration (though the complexity of defining this market makes it difficult to quantify) (see ACCC 2011).

- In bottled drinks, the acquisition by Asahi (which owns Schweppes) of P&N beverages removed a competitor (P&N), which was well known for supplying beverages at the lower end of the price spectrum. In bottled water, Schweppes went from 9 per cent to 19 per cent, and in fruit juice, Schweppes went from 5 per cent to 16 per cent (ACCC 2010).

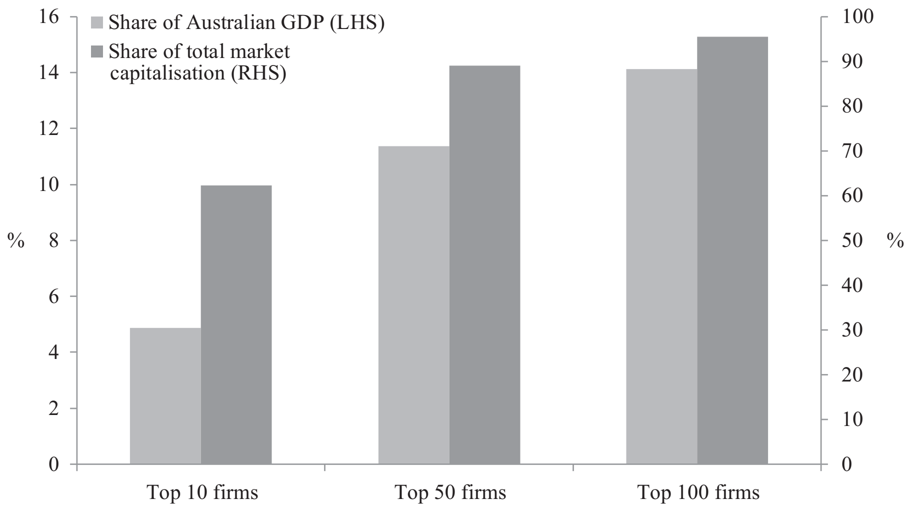
- Among Internet service providers, the TPG merger with iiNet increased iiNet's share of fixed broadband services from 15 per cent to 27 per cent (ACCC 2015).

However, it is worth noting that the high degree of concentration on the ASX (shown in Figure 5) does not appear to have increased over the period 2000–2015.

Another approach to looking at changes in market concentration is to count the minnows, rather than measuring the whales. In Figure 6, we use ABS figures to look at the number of firms in the industry, compared to that industry's gross value added. From 2011–12 to 2014–15, the number of firms operating across all industries fell by 1 per cent, while gross value added increased by 11 per cent.

In some industries, the drop was particularly pronounced:

Figure 5 Shares of the Australian Economy Represented by the Largest Firms



Note: GDP denotes gross domestic product, LHS denotes left hand side and RHS denotes right hand side.

Sources: Authors' calculations, based on MorningStar DATAnalysis database, 2000–2015; ABS (2016); IBISWorld (2016).

- In mining, the number of firms fell by 2 per cent, while gross value added increased by 38 per cent.
- In rental, hiring and real estate services, the number of firms increased by 3 per cent but gross value added increased by 37 per cent.
- In retail trade, the number of firms fell by 8 per cent, while gross value added increased by 13 per cent.
- In information, media and telecommunications, the number of firms increased by 2 per cent, while gross value added increased by 19 per cent.
- In public administration and safety, the number of firms fell by 7 per cent, while gross value added increased by 14 per cent.
- In arts and recreation services, the number of firms fell by 6 per cent, while gross value added increased by 8 per cent.

The 'long tail' of small- and medium-sized businesses has shortened somewhat in recent years.

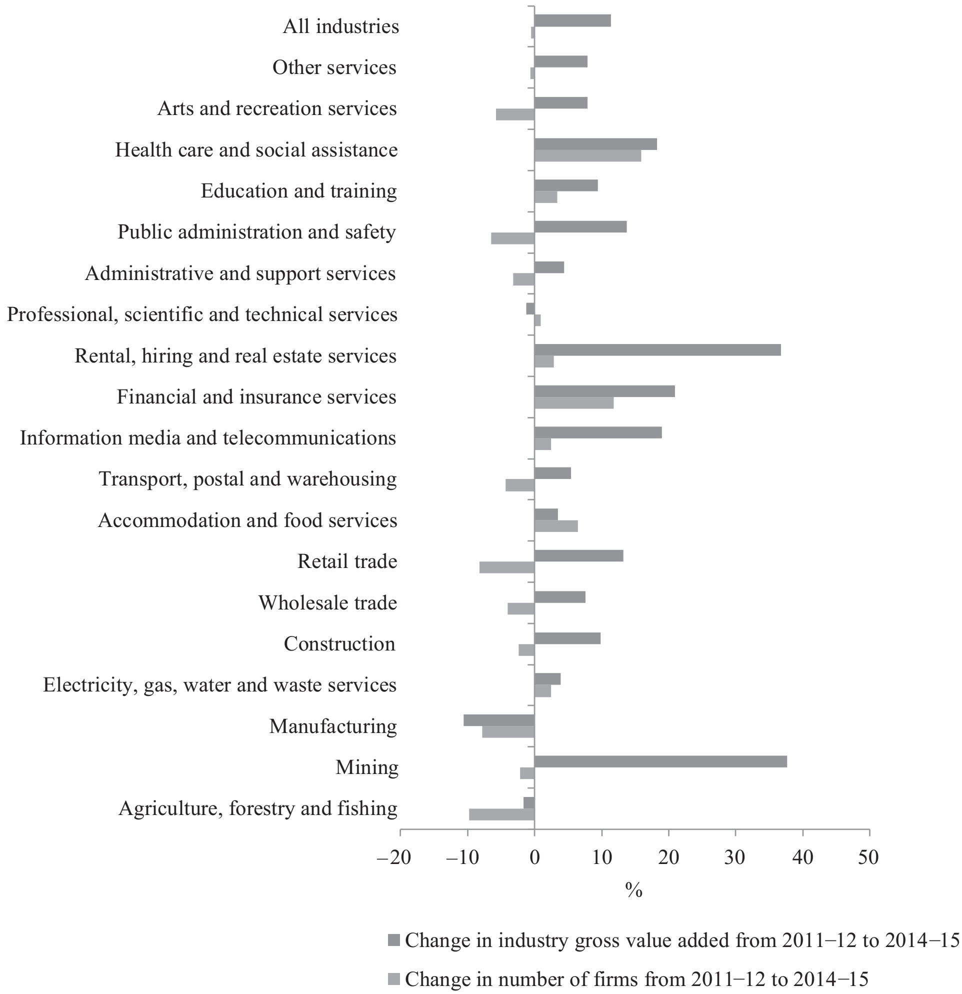
What might explain the observed degree of market concentration in Australia? The most obvious is market size and proximity to larger markets. As ACCC chair, Rod Sims, has observed: 'Australia has many markets that are highly concentrated, which is perhaps not surprising given the relative size of our population' (Sims 2013).

However, this does not explain why markets should have become *more* concentrated. Since the turn of the century, Australian population growth has been among the fastest in the advanced world and incomes per person have also risen (though not in recent years) (Infrastructure Australia 2015). If all that mattered was market size, there should be less market concentration in Australia, not more.

Yet a range of factors has pushed in the opposite direction. As the US Council of Economic Advisors (2016, p. 1) recently noted:

> The causes underlying a possible decrease in competition and corresponding increase in market power are not clear, but candidate explanations include efficiencies associated with scale, increases in merger and acquisition activity, firms' crowding out existing or potential competitors either deliberately or through innovation,

Figure 6 Changes in Number of Firms and Industry Value Added



Sources: Authors' calculations, based on ABS (2015); IBISWorld (2016).

and regulatory barriers to entry such as occupational licensing that have reduced the entry of new firms into a variety of markets.

The Institute for Mergers, Acquisitions and Alliances tracks merger activity in Australia back to 1992. Over this period, the Institute reports that the number of mergers has risen from 394 (with a combined value of US\$12 billion) to 1,460 in 2015 (with a value of US\$117 billion). Merger activity peaked in Australia in 2007. In that year, Australia saw 3,094 mergers, valued at US\$344 billion (Institute for Mergers, Acquisitions and Alliances 2015).

Worldwide, the Institute for Mergers, Acquisitions and Alliances (2015) estimates that in the past three decades there has been almost a 10-fold increase in the number and value of mergers. Admittedly, not all merger activity will result in increased market concentration. In some cases, the counterfactual might be that one of the firms fails altogether. In other cases, merging companies may not be competitors. But in general, mergers tend to increase market concentration.

A similar pattern can be seen in new business formation. As we noted earlier, the total number of businesses in Australia fell by

1 per cent between 2011–12 and 2014–15 (Figure 6). As you might imagine, there is considerable churn in the business sector. Australia has around 2 million businesses. Each year, about 10–15 per cent of them shut down, while another 10–15 per cent start up (Figure 6).

In principle, a decline in the number of firms could be driven either by more exits or fewer entrants. In practice, the main trend has not been business collapse—indeed, the number of business exits has fallen slightly—but a slowing in new business formation. From 2011 to 2015, the rate of new business formation in Australia declined by 2 per cent. Over time, fewer new businesses are likely to lead to more market concentration.

Since the 1950s, services have steadily increased their share of the economy. As a higher proportion of the economy becomes weightless, the challenge of concentrated markets becomes harder still. In information technology industries, some early commentators had speculated that market concentration might be lower because barriers to entry and switching costs were lower. In many sectors, this now looks to be a forlorn hope. Google dominates search. Apple dominates smart phones. Facebook and Twitter dominate social media. Amazon and Alibaba are key players in online retailing (Team 2015). In the sharing economy, Uber and AirBNB have a significant share of their respective markets. Competitors struggle to make inroads due to a combination of intellectual property, network effects and merger activity. Ironically, the best hope for consumers is the prospect that the steady expansion of online platforms, such as Facebook and Google, will bring them into competition with one another.

3. Competition and Inequality

Analyses of inequality have tended to ignore the prospect that a lack of competition might be a significant driver of inequality. For example, work by Leigh (2013) sketched out the evidence that inequality has risen since the late 1970s. Over that period, Australia has seen greater inequality in wages, household income, top income shares and top wealth shares. For example, Figure 7 depicts the divergence in real earnings over the period 1975–2014. Over four decades, earnings rose by 23 per cent at the 10th percentile, 44 per cent at the median and 72 per cent at the 90th percentile. For other analyses of long-run inequality in Australia, see Atkinson and Leigh (2007), Burkhauser, Hahn and Wilkins (2015), Wilkins (2015) and Katic and Leigh (2016).

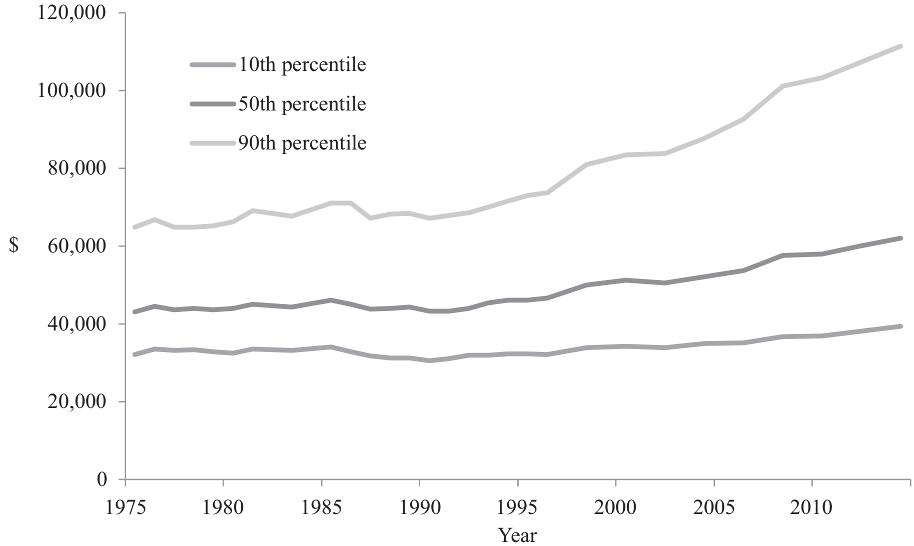
As measured by top income shares, inequality in Australia today is as high as it has been in three-quarters of a century. However, when it came to analysing the drivers of inequality, Leigh (2013) focused on union membership, top tax rates, technology, globalisation and education—making only passing mention of uncompetitive markets.

By contrast, Atkinson (2015) is an excellent analysis of competition and inequality which looks at the interplay between competition and inequality. That work discusses how concentrated markets can lead to a more concentrated distribution of income and how competition policy should be different in a high-inequality society than in a low-inequality society.

As we teach undergraduates, increased market power leads to more producer surplus. In an era of high unionisation, some of this surplus would have been shared with shop floor employees, but as the power of organised labour has waned, this becomes less prevalent (Baker and Salop 2015). Instead, modern-day market power tends to benefit shareholders and top executives at the expense of consumers. Because both capital owners and senior executives are wealthier than the median consumer, market power tends to increase inequality.

Two Australian studies which look at the relationship between competition and inequality are Creedy and Dixon (1998, 1999). They found that monopoly power has a larger impact on lower income groups and increases inequality. The 1998 study used Australian Household Expenditure Survey data to generate demand elasticities for 14 commodity groups to obtain estimates of the relative welfare loss for households with different income levels. They found that the welfare loss associated with

Figure 7 Inequality in Earnings in Australia (2014 dollars)



Source: ABS (2014).

monopoly power is largest for poor households, which depend on government pensions and benefits for their principal source of income. The 1999 study extended this analysis with more detailed measures of welfare (through equivalent variations) and inequality (using a larger number of households in the Household Expenditure Survey) and confirmed their findings that reduced competition can have substantial effects on the distribution of welfare.

Surveying the literature in both developed and developing nations, Begazo and Nyman (2016) from the World Bank similarly concluded that a lack of competition tends to hurt the poorest households the most. Comanor and Smiley (1975) found that past and current monopoly have had a major impact on the current degree of inequality in the United States. They found that possibly one-half of existing wealth holdings by the richest 2.4 per cent of American households was due entirely to capitalised monopoly gains. Importantly in terms of policy responses, Dutt (1984) found that policies that reduce monopoly power can have positive effects on both growth and income distribution.

A similar conclusion flows from Piketty's (2014) model of inequality, in which inequality is said to rise when the rate of return to capital (r) exceeds the rate of economic growth (g). As is well known, the market equilibrium under monopoly is one in which prices are higher, output is lower and profits are higher than under perfect competition. Therefore, an increase in market power is likely to both increase the rate of return on capital and slow the rate of economic growth.

In an analysis of competition in the US economy, Dayen (2015) notes that since the 1980s, greater numbers of mergers have been approved by antitrust agencies, leading him to suggest the existence of an easier regulatory burden in recent decades. (One way in which this might occur is if the number of regulatory staff did not rise to match the number of mergers.) As a result, Dayen (2015, pp. 50–1) contends:

> ... monopolies drive inequality. Executives and Wall Street traders make astronomical incomes, while wages are squeezed. Post-merger price increases, from health care to cable TV service to airline tickets, translate into a decline in real wages. Big mergers also encourage reduction in actual wages, when consolidations produce layoffs and limit avenues for employment. And though high skills are supposedly a defense against wage cuts, cartel behavior by Silicon Valley firms to prevent raiding each other's workers kept wages for coders and engineers low.

> Suppliers to platform monopolies experience a price crunch across the spectrum, reducing their own profits and funnelling them to the biggest firms, where they pass to executives.[6]

Dayen (2015, p. 51) quotes Joseph Stiglitz: 'High concentration in the [personal computer] PC platform market with Microsoft gives rise to the richest person in the country. Monopoly increases wealth at the top, and for average Americans real wages decrease.' Similarly, an analysis of American markets in *The Economist* magazine notes the lack of competition in many sectors and points out: 'High profits can deepen inequality in various ways. The pool of income to be split among employees could be squeezed. Consumers might pay too much for goods' (The Economist 2016).

It is sometimes suggested that monopoly power ultimately benefits consumers by spurring innovation.[7] While this is theoretically possible, it is easy to think of examples in which market power *reduces* social welfare in innovative industries; for example, by exclusive contracts that lock in inferior technologies. Moreover, this argument does not apply to all industries. In the example of the cardboard box cartel that we opened with, it is difficult to see any evidence that the duopoly's market power encouraged greater innovation.

At a macroeconomic level, others have suggested that the US economy is exhibiting the hallmarks of excessive market power. Krugman (2016, p. A21) observes that:

> Profits are at near-record highs, thanks to a substantial decline in the percentage of GDP going to workers. You might think that these high profits imply high rates of return to investment. But corporations themselves clearly do not see it that way: their investment in plant, equipment, and technology (as opposed to mergers and acquisitions) hasn't taken off, even though they can raise money, whether by issuing bonds or by selling stocks, more cheaply than ever before.

As Krugman points out, if high corporate profits reflect growing monopoly power, then 'the result would be what we see: an economy with high profits but low investment, even in the face of very low interest rates and high stock prices' (Krugman 2016, p. A21).

Similarly, Summers (2016a) has suggested that his theory of 'secular stagnation' may be partially driven by rising market power. Like Krugman, Summers (2016b) notes that:

> The rate of profitability in the United States is at a near-record high level, as is the share of corporate revenue going to capital. The stock market is valued very high by historical standards, as measured by Tobin's q ratio of the market value of the nonfinancial corporations to the value of their tangible capital. And the ratio of the market value of equities in the corporate sector to its GDP is also unusually high.

A high rate of return to old capital would imply that there is a high payoff to investment in new capital. Yet, as Summers (2016b) points out, 'business investment is either in line with cyclical conditions or a little weaker than would be predicted by cyclical conditions'. He suggests one way of reconciling this:

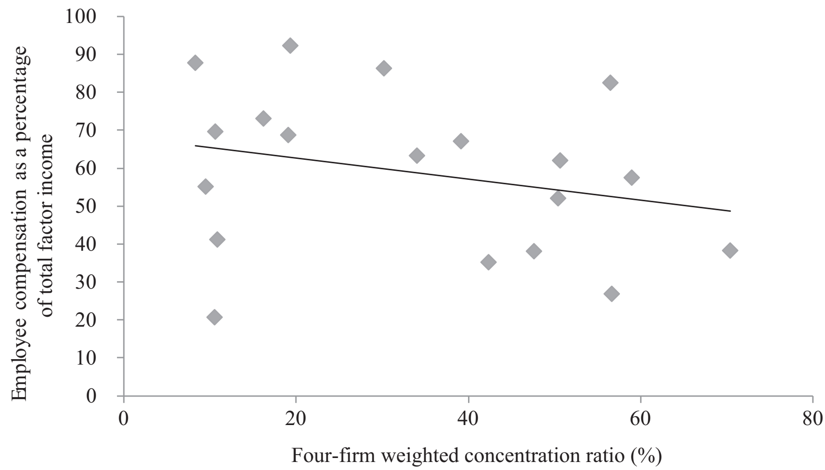
> It could be that higher profits do not reflect increased productivity of capital but instead reflect an increase in monopoly power. If monopoly power increased one would expect to see higher profits, lower investment as firms restricted output, and lower interest rates as the demand for capital was reduced. This is exactly what we have seen in recent years!

Although most of the theories about competition and inequality posit economy-wide effects, it is nonetheless worth looking at the available industry-level data to see whether there is any relationship between the degree of market concentration in a sector and the wage share of total factor income. As Figure 8 depicts, the relationship is modestly negative—suggesting that the wage share is lower in more concentrated industries—but does not approach statistical significance.

4. Possible Policy Responses

The speech version of this article (Leigh 2016) was delivered during the federal election campaign. As Shadow Minister for Competition, Leigh announced four policies that Labor intended to pursue if elected. Sadly (from our perspective), Labor narrowly lost the 2016 election.

Figure 8 Market Concentration and the Wage Share



Sources: IBISWorld (2016); ABS (2016).

Nonetheless, even the world of the second-best can be made better. So in the interests of improving policy development, we set out below four ideas that might be implemented by a future government seeking to help tilt the playing field towards the most disadvantaged.

First, amend section 76 of the *Competition and Consumer Act 2010* (Cwlth) to allow the court to apply higher penalties for conduct that targets or disproportionately impacts disadvantaged Australians or apply lower penalties when firms have provided adequate compensation to those affected. Consumer rip-offs are always reprehensible, but they have a different impact on the most affluent, compared with the most vulnerable. To a high income consumer, losing a few thousand dollars might be an annoyance. To a low income consumer, losing a few thousand dollars might be life-changing.

Second, include a requirement in the *Competition and Consumer Act* that the ACCC prioritise investigations of conduct that targets or disproportionately impacts disadvantaged Australians. The growth of inequality may make it desirable to enact an explicit legislative requirement for the competition regulator to put the most vulnerable first.[8]

Third, task government to investigate the impacts of increased market concentration on income inequality in Australia and produce policy recommendations on how the negative effects of market concentration can be mitigated. This kind of high-level exercise could explore ways in which highly concentrated markets widen the gap, as well as suggesting practical ways in which competition and consumer laws can reduce inequality.

Fourth, encourage states and territories to include competition principles in planning and zoning legislation, as recommended by the Harper Review, with a specific focus on shortfalls of appropriately zoned land for key services in disadvantaged communities. Traditionally, inner-city zoning issues have attracted a disproportionate share of public attention, leaving zoning in outer suburbs to be neglected. Ensuring that states and territories provide proper attention to outer suburbs and apply competition principles might improve the sustainability of these communities.

5. Conclusion

The past generation has been very kind to those at the top of the income distribution. The top 1 per cent share has doubled. The top 0.1 per cent share has tripled. Never in Australian history has such a large share of the population owned private jets, private helicopters, Porsches and Maseratis.

Yet, at the same time, a significant share of the population is doing it tough. Nearly one-quarter of Australians say that they could not raise $3,000 in an emergency without doing something drastic (Melbourne Institute of Applied Economic and Social Research, University of Melbourne 2014). One in five families says that they cannot afford a week's holiday away from home once per year. One in eight cannot afford dental care. One in 20 cannot afford Christmas presents for family and friends (Leigh 2013).

Looking at industry data for 481 markets, Australia's product markets appear highly concentrated. Applying the rule of thumb that a market is concentrated if the largest four firms control one-third or more, over half of the industries in the Australian economy are concentrated markets.

Concentrated markets are not solely responsible for rising inequality, but it seems likely that they have played a part in the steady rise in inequality over the course of the past generation. Engendering more competition in Australia would not only have efficiency benefits, but most likely equity impacts as well.

Similarly, on the policy side, competition and consumer laws will never be the only way in which governments seek to fight inequality, but they should be enjoined in the battle. By tilting competition and consumer laws towards the most disadvantaged, it might be possible to help ameliorate the rising gap between the rich and the rest.

July 2016

Appendix 1: Four-Firm Concentration Ratios across Industries

Table A1 lists the four-firm concentration ratios for all 481 sub-industries.

Table A1 Four-Firm Concentration Ratios

No.	*Industry*	*Market share of the top four firms (%)*
Accommodation and food services		
1	Pubs, bars and nightclubs	13.90
2	Fast food services	42.70

Continued

Table A1 Continued

No.	*Industry*	*Market share of the top four firms (%)*
3	Restaurants	4.00
4	Social clubs	4.00
5	Catering services	53.30
6	Hotels and resorts	18.90
7	Cafes and coffee shops	12.60
8	Serviced apartments	4.00
9	Motels	4.00
10	Caravan parks and camping	4.00
11	Holiday houses	4.00
Administrative and support services		
12	Temporary staff services	22.10
13	Employment and recruitment services	14.00
14	Commercial cleaning	15.60
15	Travel agents	39.20
16	Packaging services	4.80
17	Event promotion	10.80
18	Payroll and other administration services	9.00
19	Call centres	13.60
20	Building pest control	4.00
21	Debt collection	36.10
22	Credit agencies	75.70
Agriculture, forestry and fishing		
23	Grain growing in Australia	4.00
24	Beef cattle farming	4.00
25	Grain sheep or grain beef cattle farming	5.40
26	Shearing, cropping and agriculture support services	4.00
27	Dairy cattle farming	4.00
28	Forestry and logging	20.00
29	Sheep–beef cattle farming	4.00
30	Beef cattle feedlots	21.10
31	Outdoor vegetable growing	5.00
32	Sheep farming	20.00
33	Citrus, banana and other fruit	19.30
34	Cotton ginning	51.70
35	Fishing in Australia	5.80
36	Hay and other crop growing	4.00
37	Pig farming	35.60
38	Aquaculture	39.70
39	Sugar cane growing	6.00
40	Grape growing	4.00
41	Horse farming	13.50
42	Apple, pear and stone fruit growing	4.00
43	Cotton growing	12.30
44	Egg farming	74.30
45	Nursery production	4.00
46	Forestry support services	16.70
47	Rice growing	93.40
48	Poultry meat farming	13.70

Continued

Table A1 Continued

No.	*Industry*	*Market share of the top four firms (%)*
49	Undercover vegetable growing	36.90
50	Floriculture production	25.10
51	Turf growing	4.00
Arts and recreation services		
52	Lotteries	85.50
53	Casinos	97.40
54	Sports administrative services	42.00
55	Horse and sports betting	85.40
56	Sports and physical recreation clubs	10.90
57	Music and theatre	19.30
58	Art galleries and museums	20.60
59	Horse and dog racing	37.20
60	Gyms and fitness services	63.50
61	Sports and physical recreation facilities	35.70
62	Nature reserves	22.80
63	Zoological and botanical gardens	46.70
64	Amusement parks	59.80
65	Performing arts venues	39.90
Construction		
66	Heavy industry and other non-building construction	27.20
67	House construction	8.50
68	Commercial and industrial building construction	9.50
69	Site preparation services	6.00
70	Multi-unit apartment and townhouse construction	17.20
71	Electrical services	8.80
72	Road and bridge construction	28.00
73	Institutional building construction	18.20
74	Plumbing services	2.00
75	Land development and sub-division	13.00
76	Carpentry services	4.00
77	Metal cladding, water-proofing and scaffolding services	4.00
78	Concreting services	3.00
79	Air conditioning and heating services	8.00
80	Painting and decorating services	9.80
81	Landscaping services	8.00
82	Plastering and ceiling services	2.00
83	Structural steel erection services	6.00
84	Tiling and carpeting services	3.50
85	Fire and security alarm installation	20.80
86	Roofing services	6.00
87	Bricklaying services	4.00
88	Construction machinery and operator hire	18.20
89	Glazing services	9.10
90	Elevator installation and maintenance	71.70

Continued

Table A1 Continued

No.	*Industry*	*Market share of the top four firms (%)*
91	Insulation services	17.60
Education and training		
92	Education and training	3.50
93	Universities	27.50
94	Technical and vocational education and training	9.10
95	Art and non-vocational education	9.00
96	Sports instructors	4.80
Electricity, gas, water and waste services		
97	Electricity retailing	38.70
98	Electricity distribution	50.80
99	Water supply	41.50
100	Gas supply	43.00
101	Sewerage and waste services	40.60
102	Solid waste collection services	34.10
103	Waste remediation	19.20
104	Electricity transmission	84.40
105	Waste treatment and disposal services	45.90
106	Hydro-electricity generation	88.00
107	Liquid waste collection services	49.40
108	Wind and other electricity generation	43.00
Financial and insurance services		
109	Superannuation funds	15.30
110	Banking	93.50
111	Life insurance	60.20
112	General insurance	56.10
113	Health insurance	72.40
114	Foreign banks in Australia	35.30
115	Custody, trustee and stock exchange services	25.00
116	Financial asset investing	8.60
117	Insurance brokerage	79.80
118	Superannuation funds management services	18.30
119	Non-depository financing	22.00
120	Fund management services	65.60
121	Investment banking and securities brokerage	32.40
122	Financial planning and investment advice	43.40
123	Money market dealers	72.10
124	Mortgage brokers	50.80
125	Credit unions	67.10
126	Building societies	88.80
Health care and social assistance		
127	General hospitals	66.40
128	Community services	6.70
129	Aged care residential services	11.80
130	Personal welfare services	8.20
131	General practitioner medical services	9.50

Continued

Table A1 Continued

No.	Industry	Market share of the top four firms (%)
132	Specialist medical services	5.10
133	Child care services	20.00
134	Dental services	9.90
135	Other health services	12.10
136	Diagnostic imaging	46.00
137	Crisis and care accommodation	12.00
138	Pathology health services	88.90
139	Ambulance services	87.50
140	Optometry services	45.90
141	Physiotherapy services	9.00
142	Chiropractic services	4.00
143	Psychiatric hospitals	68.50
Information media and telecommunications		
144	Telecommunications services in Australia	72.90
145	Wireless telecommunications carriers in Australia	97.80
146	Wired telecommunications network operation in Australia	87.00
147	Telecommunications resellers in Australia	8.70
148	Free-to-air television broadcasting in Australia	67.30
149	Pay television in Australia	78.20
150	Internet service providers in Australia	89.60
151	Newspaper publishing in Australia	86.10
152	Magazine and directory publishing in Australia	68.20
153	Motion picture and video production in Australia	14.00
154	Software publishing in Australia	51.20
155	Motion picture and video distribution in Australia	46.30
156	Internet publishing and broadcasting in Australia	73.60
157	Cinemas in Australia	69.10
158	Radio broadcasting in Australia	65.90
159	Book publishing	30.30
160	Libraries and archives in Australia	14.90
161	Data processing and web hosting services in Australia	37.20
162	Data storage services in Australia	51.60
163	Music publishing and sound recording in Australia	57.60
164	Video post-production services in Australia	34.60
Manufacturing		
165	Meat processing	52.20
166	Petroleum refining and petroleum fuel manufacturing in Australia	90.60
167	Gold and other non-ferrous metal processing in Australia	43.40

Continued

Table A1 Continued

No.	Industry	Market share of the top four firms (%)
168	Iron smelting and steel manufacturing in Australia	45.40
169	Motor vehicle manufacturing	63.90
170	Printing in Australia	14.30
171	Pharmaceutical products manufacturing	57.60
172	Aluminium smelting in Australia	67.10
173	Poultry processing in Australia	67.80
174	Structural steel fabricating in Australia	41.20
175	Chocolate and confectionery manufacturing in Australia	48.80
176	Butter and dairy product manufacturing in Australia	53.50
177	Alumina production in Australia	97.70
178	Fruit and vegetable processing in Australia	30.70
179	Ready-mixed concrete manufacturing in Australia	70.80
180	Wine production in Australia	39.60
181	Tea, coffee and other food manufacturing in Australia	27.20
182	Wooden structural component manufacturing in Australia	25.50
183	Fabricated metal product manufacturing in Australia	16.40
184	Aluminium door and window manufacturing in Australia	11.70
185	Mining and construction machinery manufacturing in Australia	42.60
186	Soft drink manufacturing	83.60
187	Beer manufacturing	89.90
188	Prepared animal and bird feed manufacturing in Australia	69.40
189	Cured meat and smallgoods manufacturing in Australia	47.80
190	Power automation products and other electrical equipment manufacturing in Australia	49.00
191	Motor vehicle parts and accessories manufacturing in Australia	16.70
192	Aircraft manufacturing and repair services in Australia	62.40
193	Motor vehicle body and trailer manufacturing in Australia	23.10
194	Industrial gas manufacturing in Australia	47.10
195	Artisanal bakery product manufacturing in Australia	21.40
196	Fertiliser manufacturing in Australia	69.90
197	Flour and grain mill product manufacturing in Australia	67.20

Continued

Table A1 Continued

No.	Industry	Market share of the top four firms (%)
198	Medical and surgical equipment manufacturing in Australia	62.70
199	Glass and glass product manufacturing in Australia	45.00
200	Pulp, paper and paperboard manufacturing in Australia	64.40
201	Paint and coatings manufacturing in Australia	56.50
202	Plastic injection-moulded product manufacturing in Australia	24.40
203	Sugar manufacturing in Australia	78.50
204	Explosives manufacturing in Australia	76.30
205	Shipbuilding	71.10
206	Bread production in Australia	55.70
207	Synthetic resin and synthetic rubber manufacturing in Australia	30.20
208	Cheese manufacturing in Australia	58.80
209	Cooking oil and margarine manufacturing in Australia	49.40
210	Railway equipment manufacturing and repair in Australia	75.60
211	Cereal, pasta and baking mix manufacturing in Australia	49.60
212	Basic inorganic chemical manufacturing in Australia	42.80
213	Corrugated paperboard container manufacturing in Australia	89.30
214	Metal coating and finishing in Australia	21.40
215	Structural metal product manufacturing in Australia	20.70
216	Copper, silver, lead and zinc smelting and refining in Australia	90.00
217	Cement and lime manufacturing in Australia	78.80
218	Concrete product manufacturing in Australia	67.20
219	Conveyor and crane manufacturing in Australia	31.70
220	Jewellery manufacturing in Australia	14.40
221	Plastic bag and film manufacturing in Australia	40.30
222	Measurement and other scientific equipment manufacturing in Australia	23.30
223	Wooden furniture and upholstered seat manufacturing in Australia	19.00
224	Sanitary paper product manufacturing in Australia	79.60
225	Plaster product manufacturing in Australia	62.90

Continued

Table A1 Continued

No.	Industry	Market share of the top four firms (%)
226	Snack food manufacturing	53.50
227	Prefabricated metal building manufacturing in Australia	24.80
228	Sheet metal product manufacturing in Australia	8.90
229	Agricultural machinery manufacturing in Australia	6.30
230	Household appliance manufacturing in Australia	40.00
231	Timber resawing and dressing in Australia	25.50
232	Industrial machinery manufacturing in Australia	17.00
233	Milk and cream processing in Australia	96.10
234	Cut and sewn textile product manufacturing in Australia	13.60
235	Electric cable and wire manufacturing in Australia	61.20
236	Soap and cleaning compound manufacturing in Australia	46.40
237	Glass wool, stone and non-metallic mineral product manufacturing in Australia	20.20
238	Lubricants and other petroleum product manufacturing in Australia	72.90
239	Metal drum, can and bin manufacturing in Australia	62.40
240	Basic organic chemical manufacturing in Australia	13.50
241	Plastic blow-moulded product manufacturing in Australia	79.70
242	Cake and pastry manufacturing in Australia	31.20
243	Communication equipment manufacturing in Australia	16.00
244	Audio visual electronic equipment manufacturing in Australia	14.40
245	Fabricated wood manufacturing in Australia	54.60
246	Heating, cooling and ventilation equipment manufacturing in Australia	34.60
247	Tailoring and clothing accessories manufacturing in Australia	16.00
248	Pump and compressor manufacturing in Australia	53.80
249	Seafood processing in Australia	32.20
250	Ice cream manufacturing in Australia	77.20
251	Spring and wire product manufacturing in Australia	60.30

Continued

Table A1 Continued

No.	Industry	Market share of the top four firms (%)
252	Copper tubes and wire manufacturing in Australia	50.10
253	Boatbuilding and repair services in Australia	15.60
254	Pesticide manufacturing in Australia	99.90
255	Aluminium rolling, drawing and extruding in Australia	50.20
256	Machine tool and parts manufacturing in Australia	32.90
257	Log sawmilling in Australia	24.30
258	Milk powder manufacturing in Australia	88.70
259	Plastic flooring and other polymer product manufacturing in Australia	16.90
260	Clay brick manufacturing in Australia	96.10
261	Boiler and tank manufacturing in Australia	18.80
262	Cosmetics, perfume and toiletries manufacturing in Australia	50.30
263	Steel pipe and tube manufacturing in Australia	63.40
264	Food processing machinery manufacturing in Australia	25.00
265	Natural rubber product manufacturing in Australia	7.00
266	Biscuit manufacturing in Australia	86.80
267	Computer and electronic office equipment manufacturing in Australia	12.40
268	Paper stationery manufacturing in Australia	65.20
269	Fruit juice manufacturing	75.70
270	Electric lighting equipment manufacturing in Australia	32.10
271	Metal roof and guttering manufacturing in Australia	85.60
272	Paper bag and other paper product manufacturing in Australia	53.10
273	Fibreglass product manufacturing in Australia	4.40
274	Wood chipping in Australia	73.50
275	Adhesive manufacturing in Australia	42.30
276	Pallets and other wood product manufacturing in Australia	17.00
277	Carpet and textile floor covering manufacturing in Australia	58.90
278	Bottled water manufacturing	75.80
279	Automotive electrical component manufacturing in Australia	28.40
280	Nut, bolt, screw and rivet manufacturing in Australia	38.80

Continued

Table A1 Continued

No.	Industry	Market share of the top four firms (%)
281	Iron and steel forging in Australia	66.40
282	Plastic foam product manufacturing in Australia	41.90
283	Spirit manufacturing in Australia	61.70
284	Mattress manufacturing	73.30
285	Veterinary pharmaceutical manufacturing in Australia	86.10
286	Leather and leather substitute product manufacturing in Australia	71.50
287	Metal furniture manufacturing in Australia	12.00
288	Paperboard container manufacturing in Australia	76.60
289	Footwear manufacturing in Australia	30.30
290	Synthetic and natural textile manufacturing in Australia	24.40
291	Reproduction of recorded media in Australia	43.30
292	Ceramic product manufacturing in Australia	23.50
293	Women's and girls' wear manufacturing in Australia	17.20
294	Gaming and vending machines manufacturing in Australia	78.50
295	Photographic and optical good manufacturing in Australia	24.50
296	Toy and sporting good manufacturing in Australia	9.90
297	Wicker and fibreglass furniture manufacturing in Australia	7.00
298	Sleepwear, underwear and infant clothing manufacturing in Australia	7.00
299	Prefabricated wooden building manufacturing in Australia	9.60
300	Printing support services in Australia	29.30
301	Rope, cordage and twine manufacturing in Australia	6.00
302	Men's and boys' wear manufacturing in Australia	6.40
303	Wet baby food	95.00
304	Knitted product manufacturing in Australia	5.00
305	Non-ferrous metal casting in Australia	12.00
306	Dry baby food	96.00
Mining		
307	Iron ore mining	83.90
308	Coal mining	40.20
309	Oil and gas extraction in Australia	49.10
310	Gold ore mining in Australia	47.70

Continued

Table A1 Continued

No.	Industry	Market share of the top four firms (%)
311	Mining support services in Australia	7.70
312	Copper ore mining in Australia	65.50
313	Silver, lead and zinc ore mining in Australia	80.50
314	Petroleum exploration in Australia	17.00
315	Rock, limestone and clay mining in Australia	31.40
316	Nickel ore mining in Australia	77.10
317	Bauxite mining	97.90
318	Manganese and other mineral mining in Australia	76.20
319	Mineral sand mining in Australia	72.10
320	Salt and other mineral mining in Australia	47.70
321	Mineral exploration in Australia	16.00
322	Brown coal mining in Australia	98.60
323	Uranium mining in Australia	100.00
324	Gravel and sand quarrying in Australia	59.00
325	Diamond and gemstone mining in Australia	89.40
Personal services		
326	Motor vehicle engine and parts repair and maintenance in Australia	8.00
327	Community associations and other interest groups in Australia	4.00
328	Motor vehicle body, paint and interior repair in Australia	9.00
329	Heavy machinery repair and maintenance in Australia	10.00
330	Hairdressing and beauty services in Australia	7.10
331	Laundry and dry-cleaning services in Australia	30.90
332	Motor vehicle electrical services in Australia	4.00
333	Computer and electronic equipment repair in Australia	5.00
334	Parking services in Australia	52.30
335	Babysitting and other personal services in Australia	5.00
336	Domestic appliance repair and maintenance in Australia	4.00
337	Funeral directors, crematoria and cemeteries in Australia	44.80
338	Weight loss services in Australia	38.00
339	Photographic film processing in Australia	25.00
340	Clothing and footwear repair in Australia	34.70
341	Brothel keeping and sex worker services in Australia	8.00

Continued

Table A1 Continued

No.	Industry	Market share of the top four firms (%)
Professional, scientific and technical services		
342	Computer system design services in Australia	16.30
343	Engineering consulting in Australia	15.20
344	Legal services in Australia	8.60
345	Accounting services in Australia	24.80
346	Dental services	9.90
347	Management consulting in Australia	16.40
348	Architectural services in Australia	3.60
349	Scientific research services in Australia	37.60
350	Environmental science services in Australia	31.80
351	Specialised design services in Australia	2.00
352	Surveying and mapping services in Australia	10.60
353	Veterinary services in Australia	13.00
354	Advertising agencies	32.20
355	Advertising agencies in Australia	32.20
356	Market research and statistical services in Australia	27.80
357	Media buying agencies in Australia	31.60
358	Public relations services in Australia	20.20
Public administration and support services		
359	Police and firefighting services in Australia	60.10
360	Investigation and security services in Australia	24.50
361	Correctional and detention services in Australia	84.00
Rental, hiring and real estate services		
362	Residential property operators in Australia	4.30
363	Office property operators in Australia	7.10
364	Retail property operators in Australia	20.20
365	Real estate services in Australia	10.70
366	Industrial and other property operators in Australia	10.90
367	Machinery and scaffolding rental in Australia	27.00
368	Furniture, appliance and equipment rental in Australia	13.40
369	Passenger car rental and hiring in Australia	29.30
370	Transport equipment and large vehicle rental in Australia	38.40
371	Video and DVD hire outlets in Australia	67.70

Continued

Table A1 Continued

No.	Industry	Market share of the top four firms (%)
Retail trade		
372	Consumer goods retail in Australia	19.30
373	Supermarkets and grocery stores	90.60
374	Motor vehicle dealers	8.80
375	Fuel retailing in Australia	71.20
376	Department stores in Australia	94.30
377	Clothing retailing	14.70
378	Clothing retailing in Australia	13.20
379	Hardware and building supplies retailing in Australia	52.80
380	Pharmacies	58.50
381	Domestic appliance retailing in Australia	46.70
382	Liquor retailing	78.30
383	Furniture retailing in Australia	35.60
384	Fresh meat, fish and poultry retailing in Australia	7.40
385	Tobacconists and specialised grocery retailing in Australia	25.50
386	Computer and software retailing in Australia	39.60
387	Motor vehicle parts retailing in Australia	36.40
388	Tyre retailing in Australia	46.60
389	Sport and camping equipment retailing in Australia	36.90
390	Convenience stores in Australia	22.90
391	Fruit and vegetable retailing in Australia	4.00
392	Newspaper and book retailing in Australia	24.60
393	Cosmetic and toiletry retailing in Australia	13.40
394	Watch and jewellery retailing in Australia	46.90
395	Floor coverings retailing in Australia	45.00
396	Footwear retailing	37.20
397	Antique and used goods retailing in Australia	26.30
398	Garden suppliers retailing	8.50
399	Garden supplies retailing in Australia	8.50
400	Manchester retailing in Australia	48.90
401	Electrical and lighting stores in Australia	17.80
402	Trailer and caravan dealers in Australia	6.00
403	Motorcycle dealers	8.50
404	Houseware retailing in Australia	9.00
405	Marine equipment retailing in Australia	11.10
406	Duty free stores in Australia	57.00

Continued

Table A1 Continued

No.	Industry	Market share of the top four firms (%)
407	Video game and recorded music retailing in Australia	84.40
408	Personal accessory retailing in Australia	39.60
409	Toy and game retailing in Australia	48.90
410	Stationery goods retailing in Australia	65.60
411	Bread and cake retailing in Australia	31.40
412	Flower retailing in Australia	4.00
413	Photographic equipment retailing in Australia	48.00
Transport, postal and warehousing		
414	Road freight transport in Australia	16.90
415	International airlines	61.00
416	Domestic airlines	90.50
417	Rail passenger transport in Australia	92.70
418	Rail, air and sea freight forwarding in Australia	41.10
419	Rail freight transport	72.40
420	Rail freight transport in Australia	72.40
421	Postal services in Australia	97.50
422	Urban bus and tramway transport in Australia	32.00
423	Taxi and limousine transport in Australia	7.00
424	General warehousing and cold storage in Australia	34.10
425	Airport operations in Australia	72.20
426	Courier pick-up and delivery services in Australia	22.30
427	Water transport terminals in Australia	58.20
428	Port operators in Australia	58.70
429	Grain storage in Australia	49.10
430	Road freight forwarding in Australia	9.00
431	Toll road operators in Australia	93.90
432	Pipeline transport in Australia	70.60
433	Stevedoring services in Australia	87.10
434	Navigation, towage and services to water transport in Australia	79.40
435	Removalists in Australia	24.80
436	Long distance bus transport in Australia	15.60
437	Water freight transport in Australia	92.70
438	Scenic and sightseeing transport in Australia	14.80
439	Water passenger transport in Australia	35.30
440	Non-scheduled air transport in Australia	15.40

Continued

Table A1 Continued

No.	Industry	Market share of the top four firms (%)
Wholesale trade		
441	Motor vehicle wholesaling in Australia	29.10
442	Petroleum product wholesaling in Australia	93.60
443	Telecommunications and other electrical goods wholesaling in Australia	17.70
444	Metal and mineral wholesaling in Australia	31.10
445	General line grocery wholesaling in Australia	64.40
446	Computer and computer peripheral wholesaling in Australia	39.30
447	Farm and construction machinery wholesaling in Australia	12.00
448	Soft drink and pre-packaged food wholesaling in Australia	4.00
449	Cereal grain wholesaling in Australia	55.80
450	Medical and scientific equipment wholesaling in Australia	9.00
451	Hardware wholesaling in Australia	30.00
452	Livestock and other agricultural supplies wholesaling in Australia	21.20
453	Meat, poultry and smallgoods wholesaling in Australia	7.00
454	Industrial and agricultural chemical product wholesaling in Australia	18.30
455	Pharmaceuticals wholesaling in Australia	77.90
456	Motor vehicle new parts wholesaling in Australia	14.30
457	Fruit and vegetable wholesaling in Australia	7.00
458	Mining and industrial machinery wholesaling in Australia	30.80
459	Household appliance wholesaling	23.80
460	Household appliance wholesaling in Australia	23.80
461	Clothing wholesaling in Australia	8.50
462	Cosmetics and toiletry wholesaling in Australia	20.20
463	Paper product wholesaling in Australia	19.00
464	Commercial vehicle wholesaling in Australia	50.90
465	Plumbing goods wholesaling in Australia	37.90
466	Liquor wholesaling	77.00
467	Liquor wholesaling in Australia	77.00
468	Timber wholesaling	27.70
469	Timber wholesaling in Australia	21.50

Continued

Table A1 Continued

No.	Industry	Market share of the top four firms (%)
470	Furniture and floor covering wholesaling in Australia	9.10
471	Fish and seafood wholesaling in Australia	5.70
472	Toy and sporting goods wholesaling in Australia	11.10
473	Dairy produce wholesaling in Australia	4.00
474	Wool wholesaling in Australia	34.10
475	Tobacco product wholesaling in Australia	87.10
476	Textile product wholesaling in Australia	8.30
477	Kitchen and diningware wholesaling in Australia	6.40
478	Footwear wholesaling in Australia	18.20
479	Jewellery and watch wholesaling in Australia	17.80
480	Book and magazine wholesaling in Australia	56.90
481	Motor vehicle dismantling and used parts wholesaling in Australia	9.00

Endnotes

1. For example, in 2015, the antitrust division of the U.S. Department of Justice brought criminal charges against 66 individuals and 20 firms and collected a total of US$3.6 billion in criminal fines and penalties (Gidley et al. 2016).

2. These are accommodation and food services; administrative and support services; agriculture, forestry and fishing; arts and recreation services; construction; education and training; electricity, gas, water and waste services; financial and insurance services; health care and social assistance; information media and telecommunications; manufacturing; mining; personal services; professional, scientific and technical services; public administration and support services; rental, hiring and real estate services; retail trade; transport, postal and warehousing; and wholesale trade.

3. Concentration is defined as: 'assets of three largest commercial banks as a share of total commercial banking assets. Total assets include total earning assets, cash and due from banks, foreclosed real estate, fixed assets, goodwill, other intangibles, current tax assets, deferred tax assets, discontinued operations and other assets'.

4. The gross value added of individual firms to the Australian economy is obtained by identifying the largest firms in Australia based on revenues, calculating each firm's share of a sector's total revenues and multiplying

this share by the ABS's calculation of that sector's gross value added contribution to gross domestic product (GDP).

5. These figures are obtained by calculating the share of total market capitalisation of firms listed on the ASX held by the largest 10, 50 and 100 firms.

6. Similarly, World Bank experts have recently argued that cartels in Latin America harm the poorest by raising prices of milk, domestic gas, sugar, tortillas and passenger transport (see Licetti and Goodwin 2015).

7. This perspective was summed up by Justice Scalia in *Verizon Communications Inc. v Law Offices of Curtis V. Trinko, LLP* (2004) 540 U.S. 398: 'The mere possession of monopoly power, and the concomitant charging of monopoly prices, is not only not unlawful; it is an important element of the free-market system. The opportunity to charge monopoly prices–at least for a short period–is what attracts "business acumen" in the first place; it induces risk taking that produces innovation and economic growth. To safeguard the incentive to innovate, the possession of monopoly power will not be found unlawful unless it is accompanied by an element of anticompetitive conduct.'

8. At present, the ACCC's compliance and enforcement policy lists 12 factors that will be taken into account when considering whether to give priority to a matter. One of these is if the matter relates to 'conduct detrimentally affecting disadvantaged or vulnerable consumer groups'. However, the ACCC's compliance and enforcement policy is simply an ACCC policy document, which could readily be changed without reference to the Parliament. On the ACCC's current enforcement policy, including the way in which it prioritises Indigenous consumers, see Sims (2016).

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