

# The Canadian-Australian Productivity Gap: Comparative Institutions and Policy Settings

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**LESSONS FOR CANADA FROM DOWN UNDER**

Essay Series



## CHAPTER 3

# The Canadian-Australian Productivity Gap: Comparative Institutions and Policy Settings

*By Stephen Kirchner*

### Key points

- This essay reviews comparative institutional and policy settings in Canada and Australia to help identify the sources of Canada's relatively poor productivity performance since the mid-1990s.
- Canada and Australia are similarly ranked on measures of their institutional, policy, and regulatory settings. But Australia outranks Canada on measures of economic freedom (9<sup>th</sup> versus 14<sup>th</sup> place), FDI regulatory restrictiveness, its overall tax system, attractiveness to global talent, labour market flexibility (as measured by the unemployment rate and productivity gains from the reallocation of labour), product and financial market regulation.
- Canada outranks Australia on measures of globalization, corporate taxation, cross-border tax rules and complexity, and innovation. However, Canada's advantages on measures of globalization are largely an accident of geography rather than superior institutions or policy settings.
- Australia suffers a global economic integration and productivity penalty based on its geography, but this only serves to underscore Canada's underperformance in overall productivity growth.
- Much of Australia's superior productivity performance is due to a stronger investment share of GDP adding to the country's capital stock.
- While the investment share of GDP differential between Australia and Canada has narrowed in recent years, decomposing investment spending by asset type shows that around half of this narrowing is due to an increase in the share of GDP in Canada that encompasses investments in dwellings rather than to higher business investment. Addressing

policies that may be acting as impediments to stronger private non-residential investment spending should be a priority for Canadian policymakers.

- Canada's functionally and geographically fragmented regulation of its financial system compared to Australia's unified, national approach may help explain Canada's weaker performance on business lending, which would in turn impair capital formation and productivity performance.
- Australia dramatically improved its relative position on the Fraser Institute's Economic Freedom index in the 1980s and 1990s, broadly coinciding with the onset of its outperformance of Canada in growth in productivity and living standards.
- Australia enjoys a more internationally competitive tax system than Canada, particularly in relation to personal, consumption, and property taxes, although it underperforms Canada on corporate taxes and corporate tax complexity.
- Canada underperforms Australia in product market regulation and is at the more restrictive end of the OECD spectrum on this measure while Australia is at the less restrictive end. A broad-based deregulatory agenda focused on these categories of regulation, perhaps informed by a government-mandated advisory body like Australia's Productivity Commission, could help lift Canada's productivity performance.
- The Australian Productivity Commission conducts government-mandated productivity reviews every five years that examine productivity developments in the Australian economy and outline options for reform. Canada could benefit from the establishment of a similar government advisory body with a mandate to promote policies conducive to faster productivity growth.
- Australia's experience points to long-run productivity payoffs from economic reforms. Australia's extensive economic reforms were implemented mostly during the 1980s and 1990s. The productivity surge in the 1990s, while partly a global phenomenon, is also widely recognized as the payoff from earlier reforms that are reflected in the sharp narrowing in the size of the economic freedom differential between Australia and Canada over this period.

## Introduction

The first essay in this series examined the long-run performance of Canadian productivity growth and growth in average living standards relative

to Australia, identifying historical episodes of both outperformance and underperformance on the part of the Canadian economy. It found that Canada's average living standards have declined in the long-run relative to Australia's. This in turn reflects a long-run decline in Canadian productivity growth, both relative to its own past, but also relative to Australia. While most advanced economies have experienced slower productivity growth in recent years, Canada has underperformed Australia in recent decades despite the many similarities between the two economies.

The second essay examined trends in labour productivity in the business sectors of the two economies. It found that labour productivity growth in Canada's business sector underperformed Australia's by 0.3 percentage points per annum on average since the mid-1990s. This underperformance is mostly due to productivity shortfalls within individual sectors of the Canadian economy. This is consistent with international evidence showing that most of the slowdown in productivity growth in advanced economies is due to slower gains in the efficiency of individual industries rather than changes in their relative importance within the overall economy (Goldin, Koutroumpis, Lafond, and Winkler, 2021). However, Australia also obtained larger productivity gains on average from reallocating labour to more productive sectors of its economy than did Canada. This is consistent with the findings of other researchers, who report that "the effect of reallocation [on productivity in Canada] was essentially zero for the period 2000 to 2015" (Gu, 2020: 6). This suggests that Canada needs to pay more attention not only to efficiency-promoting reforms within individual sectors of the economy, but also the flexibility of its labour markets and labour mobility, so that workers can more easily move to industries where they are more productive.

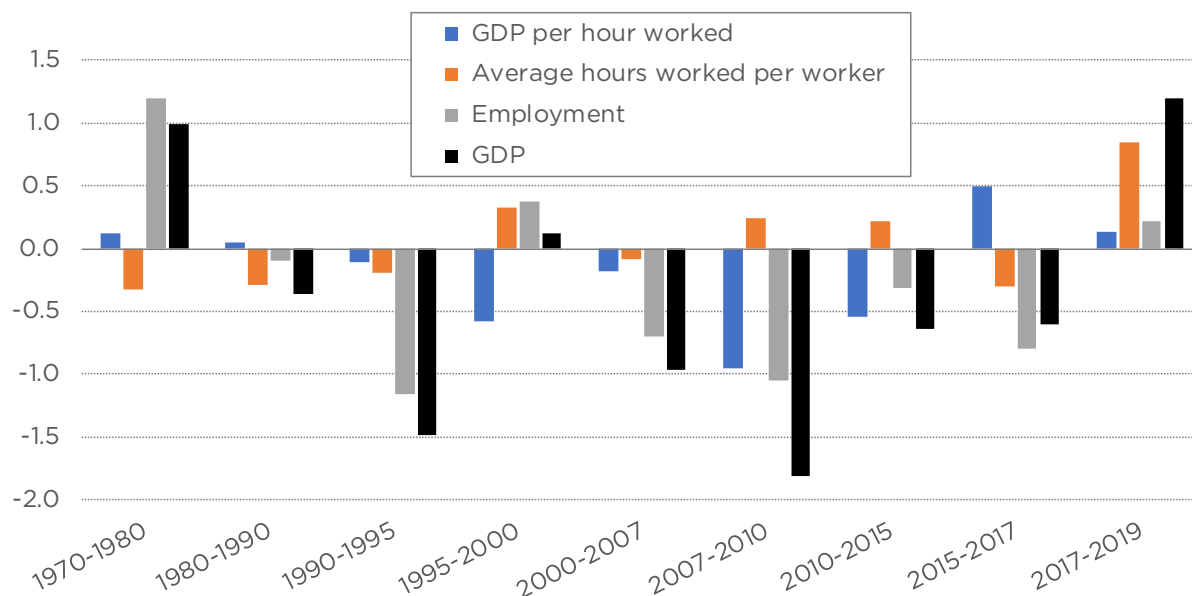
There is little consensus on the causes of the global productivity slowdown. A number of factors have been implicated, including a slower pace of globalization, slower rates of innovation, the lingering effects of the 2008 financial crisis, reduced capital deepening and demographic factors, among others. However, comparisons with a peer economy like Australia may give insight into particular factors that may be inhibiting Canadian productivity growth relative to that in other countries. While it is unlikely that any single factor or set of policies is responsible, observed differences in institutions and policies may nonetheless help identify productivity-enhancing reforms.

This essay further breaks down the historical relative growth rates of GDP, labour, and multifactor productivity (MFP) in Canada and Australia to zero in on the sources of Canada's underperformance. Differences in the rate of capital accumulation appear to play a large role in explaining these relative growth outcomes. Accordingly, this essay decomposes differences

in the investment share of GDP by asset type to identify where Canada has fallen short in capital accumulation relative to Australia. The essay then reviews institutional and policy settings in the two economies with a view to identifying reforms that draw on Australia's experience and that could raise Canada's absolute and relative productivity performance.

The essay finds that although Canada and Australia are similarly ranked in the quality of their institutional and policy settings, Australia enjoys an edge on measures of economic freedom, the competitiveness of the overall tax system, investment spending, and the regulation of foreign direct investment, as well as financial system and product market regulation and global talent attraction. Although Canada outperforms on measures of global economic integration, this is an accident of geography rather than a reflection of better institutions and policies. Australia also benefits from a government-mandated advisory body that champions productivity-enhancing economic reforms—an institution Canadian policymakers may wish to consider.

**Figure 1: Breakdown of the Canada-Australia GDP Growth Differential (annual average, percentage points)**



Source: OECD (2021).

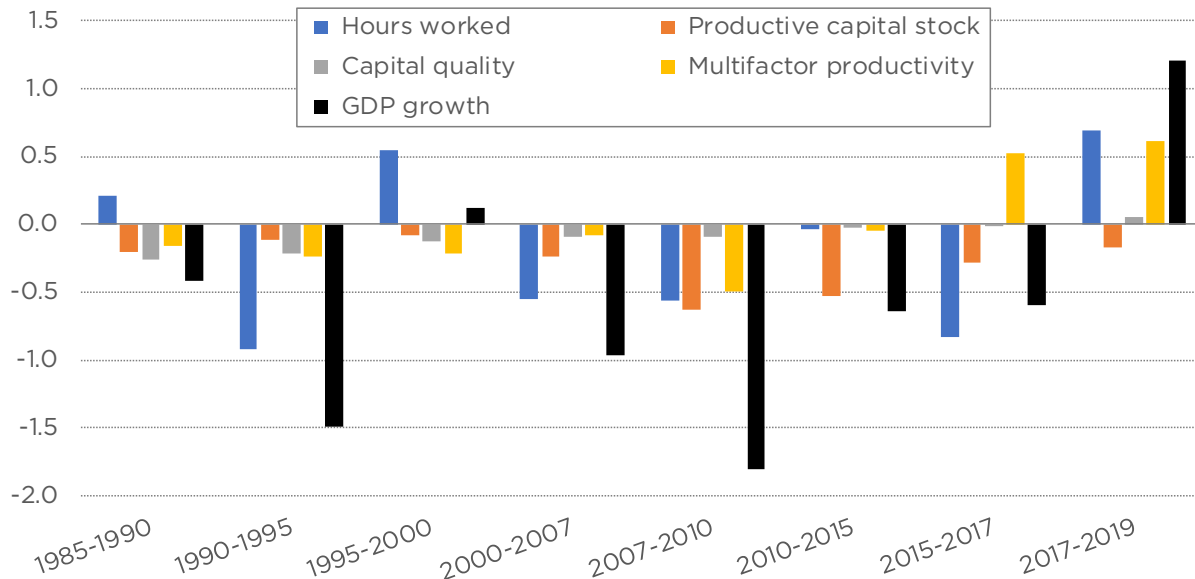
## A look at relative economic growth rates in Canada and Australia

The first essay examined average rates of economic and per capita income growth in the Canadian and Australian economies based on contributions from the quality and quantity of labour and capital inputs. We can also decompose economic growth into contributions from labour productivity, average hours worked per worker, and employment growth over recent decades and express these contributions in terms of the difference between Canada and Australia (Figure 1).

Figure 1 shows that Canada's relative rate of economic growth has mostly lagged Australia's, particularly between 1990-1995 and 2000-2010. Canada's most dramatic underperformance comes in the aftermath of the 2008 financial crisis, to which Canada had a greater exposure given its much closer relationship with the US economy. Australia did not experience a recession in 2008 (measured as two consecutive quarters of negative growth). One percentage point of the 1.8 percentage point economic growth differential between 2007 and 2010 is due to Canada's relatively weak labour productivity growth. Canada's GDP growth outperformed in the decade from 1970 to 1980, but it did so largely through adding additional workers rather than through growth in labour productivity. Canada's outperformance on labour productivity was a modest 0.1 percentage points per annum for the decade from 1970 to 1980. Canada's labour productivity outperforms between 2015 and 2019, but labour inputs are again the main driver of the overall economic growth differential over this period. Canada mostly underperforms on economic growth and the components shown in figure 1 between 1980 and 2015.

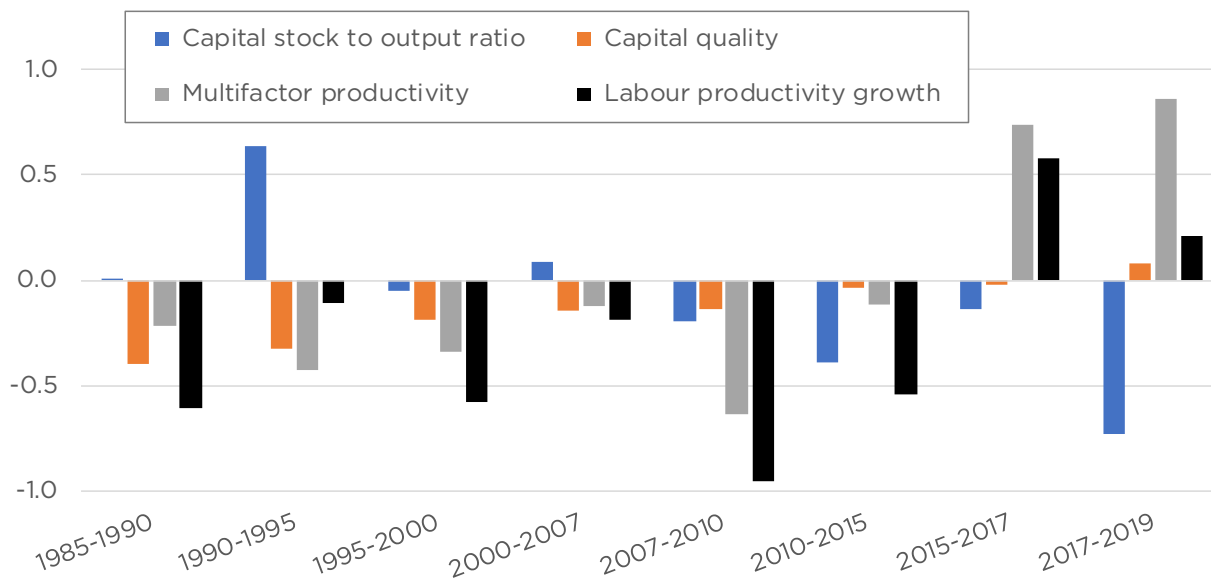
Another way of looking at these differences in economic growth rates is in terms of contributions from multifactor productivity (see the first essay for definitions) and labour and capital inputs. Taken together, these contributions sum to overall GDP growth. This allows us to separately identify the contribution of capital inputs, which in figure 1 is subsumed in labour productivity. The contribution of capital inputs can be further broken down into a contribution from changes in the volume of the productive capital stock and gains from changes in the composition of capital (i.e., capital quality, similar to measured quality improvements in consumer goods). The sum of these contributions from the capital stock and capital quality yields the overall contribution of capital services to GDP growth highlighted in table 1 of the first essay, a measure on which Australia has outperformed Canada since 1990. Figure 2 shows this breakdown for various periods from 1985 to 2019.

**Figure 2: Breakdown of GDP Growth Differential (annual average, percentage points)**



Source: OECD (2021).

**Figure 3: Canada-Australia Labour Productivity Growth Differential Contributions (annual average, percentage points)**



Source: OECD (2021).

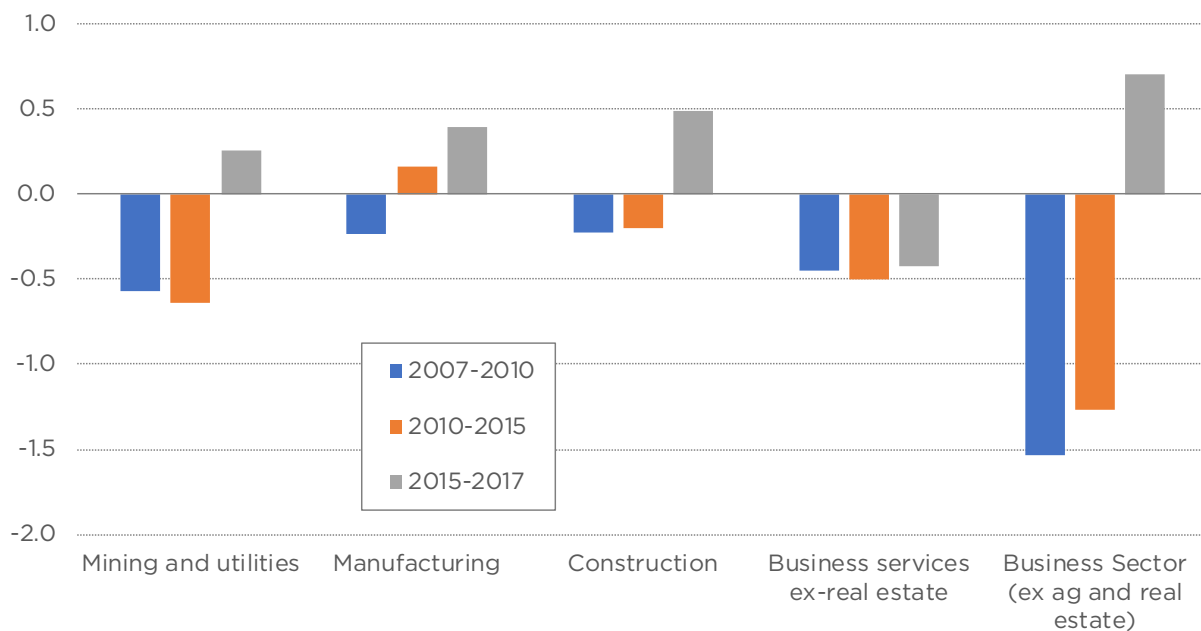


Canada underperforms in the relative contribution of MFP from 1985 until 2015, after which it outperforms. However, Canada’s relative economic performance since 2015 largely reflects differences in the growth rate of labour inputs as measured by hours worked. As noted in the first essay, Australia has outperformed in additions to its capital stock, although this has mixed implications for growth in labour and multifactor productivity over shorter time horizons given lags between an increased capital stock and increased output. Large capital projects in the mining sector, for example, can take many years before they yield increased output.

### Assessing relative labour productivity growth

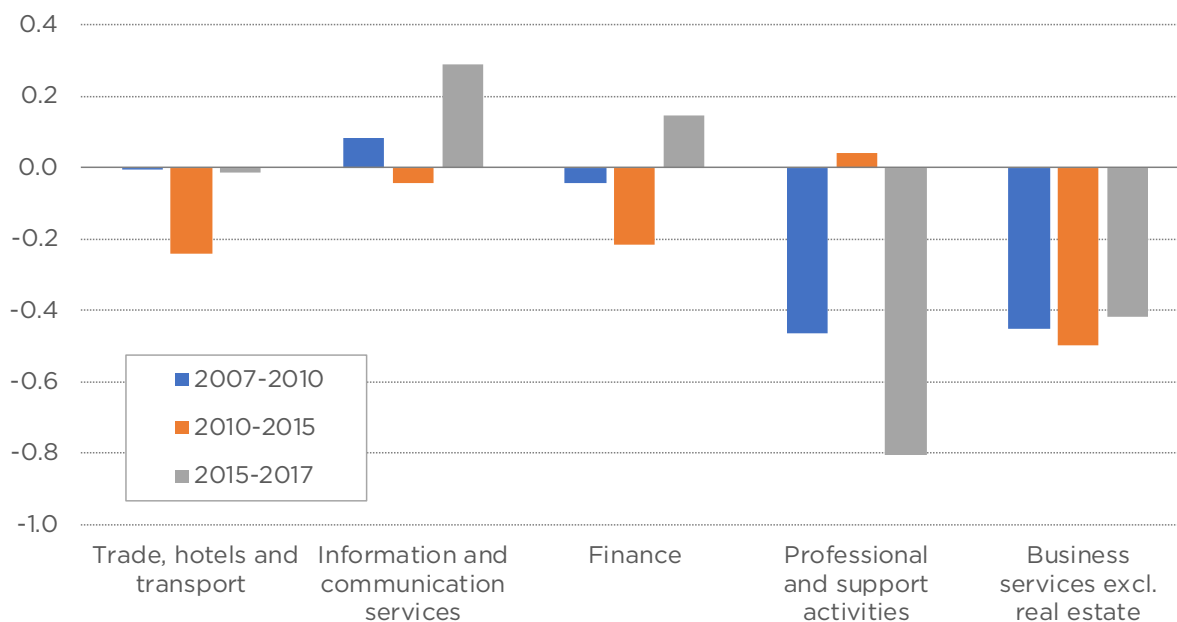
In the second essay, we looked at differences in labour productivity growth in terms of contributions from different industries and changes in the industry composition of the two economies as proxied by hours worked. We can also consider differences in labour productivity growth as a function of contributions from multifactor productivity, the capital-to-output ratio, and capital quality (figure 3).

**Figure 4: Canada-Australia Labour Productivity Growth Differential by Industry (annual average, percentage points)**



Source: OECD (2021).

**Figure 5: Canada-Australia Labour Productivity Differential for Business Services (annual average, percentage points)**



Source: OECD (2021).

Canada underperforms in both labour and multifactor productivity growth between 1985 and 2015 but outperforms more recently. The recent outperformance in labour productivity growth largely reflects gains in multifactor productivity rather than in the quantity or quality of capital inputs. This is consistent with figure 2 in showing that Canada's recent relative economic performance has been driven largely by MFP and relative growth in hours worked rather than additions to the quantity and quality of Canada's capital stock.

### Labour productivity by industry

The second essay reviewed differences in productivity performance by industry and the business sector since the mid-1990s. Figure 4 summarizes the more recent performance of these sectors by subtracting the performance of Australian industries from Canada's.

Consistent with the decomposition of labour productivity growth, it is the capital-intensive sectors of mining, manufacturing, and construction that have underperformed in Canada, at least until 2015-17. In the

business services sector, Canada underperformed in labour productivity growth over the decade between 2007 and 2017.

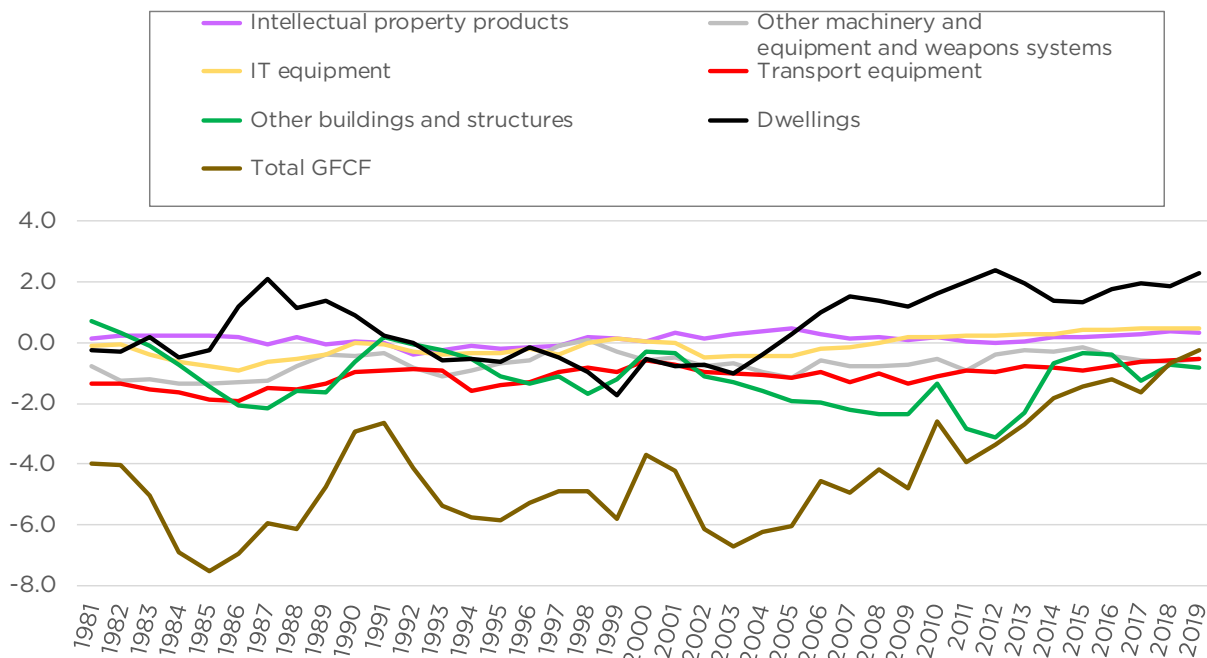
The services sector can in turn be broken down into its constituent industries (figure 5).

Canada mostly outperforms in productivity growth in ICT (information and communications)-related services, but its performance across other services sectors is more mixed—and business services overall are a drag on Canada’s labour productivity growth between 2007 and 2017 relative to labour productivity growth in Australia’s service industries.

### Examining differences in the investment share of output

The first essay noted the long-run trend in the investment share of GDP in the two economies. Australia has devoted a larger share of its economy to investment, although that difference has narrowed over time. More recently, the private business investment share of the Australian economy has fallen to a 29-year low. We have also seen how differences in the growth

**Figure 6: Canada-Australia Investment Share of GDP by Asset Type (percentage point differential)**



Source: OECD (2021).

rates for the quantity and quality of capital inputs have affected multifactor and labour productivity growth. Australia has generally outperformed in the economic growth contribution made by capital services, although the contribution of capital services to relative productivity growth has been more mixed. There may be significant lags between capital investment and increased output, particularly in capital-intensive sectors such as mining and non-residential construction.

Figure 6 separates the overall differential in the gross fixed capital formation share of the two economies into different asset types.

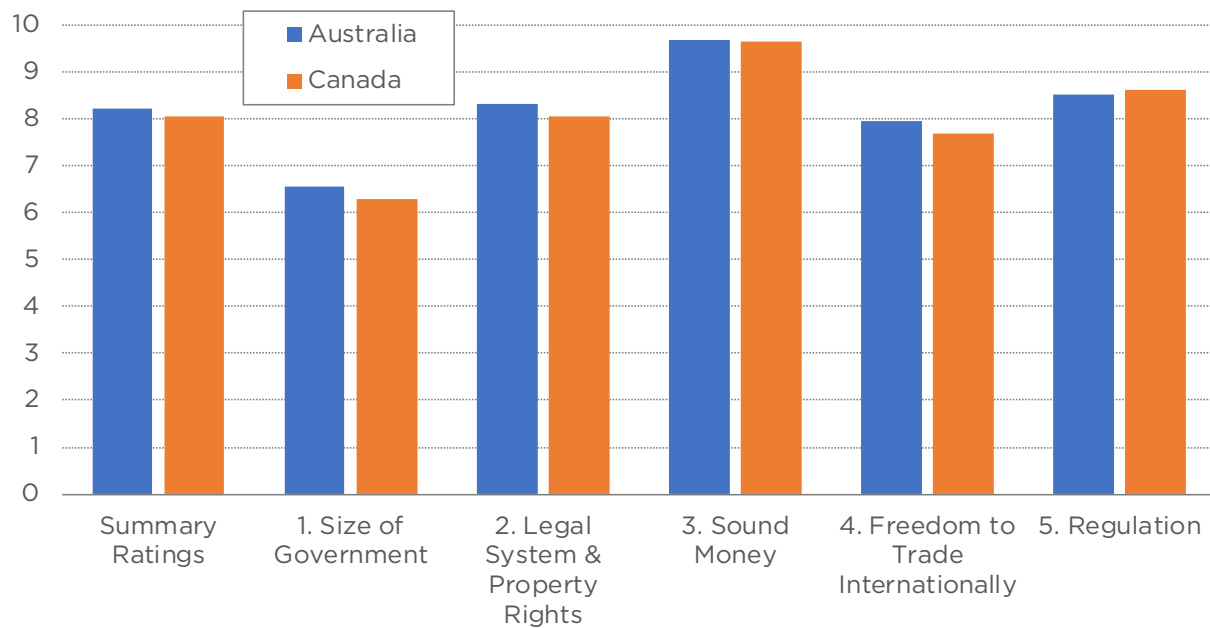
As noted in the first essay, the overall Canada-Australia investment differential has narrowed over time so that the two economies now have similar investment shares relative to the size of their economies. However, of the 6.5 percentage point narrowing of the differential in Canada's favour since 2003, 3.3 percentage points, or around half, has come from a larger investment share being directed to housing in Canada. While relative and absolute gains in the housing investment share are welcome from the standpoint of housing supply, Canada still devotes a smaller share of its economy to other asset types, with the exceptions of intellectual property products and IT equipment. The differential in non-dwelling construction has also narrowed, having peaked in 2012 amid Australia's terms-of-trade boom, suggesting this is mostly cyclical and mining industry-related. The outsized role of housing investment in accounting for the narrowing in the investment share differential implies that Canada's non-dwelling investment share still falls short relative to Australia's.

## **What does the Fraser Institute's economic freedom measure tell us about the productivity gap?**

Australia out-ranks Canada on the Fraser Institute's Economic Freedom index at 9<sup>th</sup> place versus Canada's 14<sup>th</sup>. The difference in ranking obscures the fact that the two countries score similarly in the summary rating based on 2019 data (figure 7).

Australia scores modestly higher on four of the five main categories. The exception is regulation, where Canada scores marginally better. However, as we shall see, Canada underperforms on the OECD's measure of product market regulation. Of the 49 individual categories in the Fraser Institute index, Canada scores higher than Australia on only 17 or 35 percent of them. This suggests that Australia's outperformance on the overall index is broadly based. Research based on the Fraser Institute measure shows that an increase in the index stimulates economic growth (De Haan, Lundström, and Sturm, 2006). Given that productivity is the main driver

**Figure 7: Canada and Australia on the Fraser Institute's Economic Freedom Index**



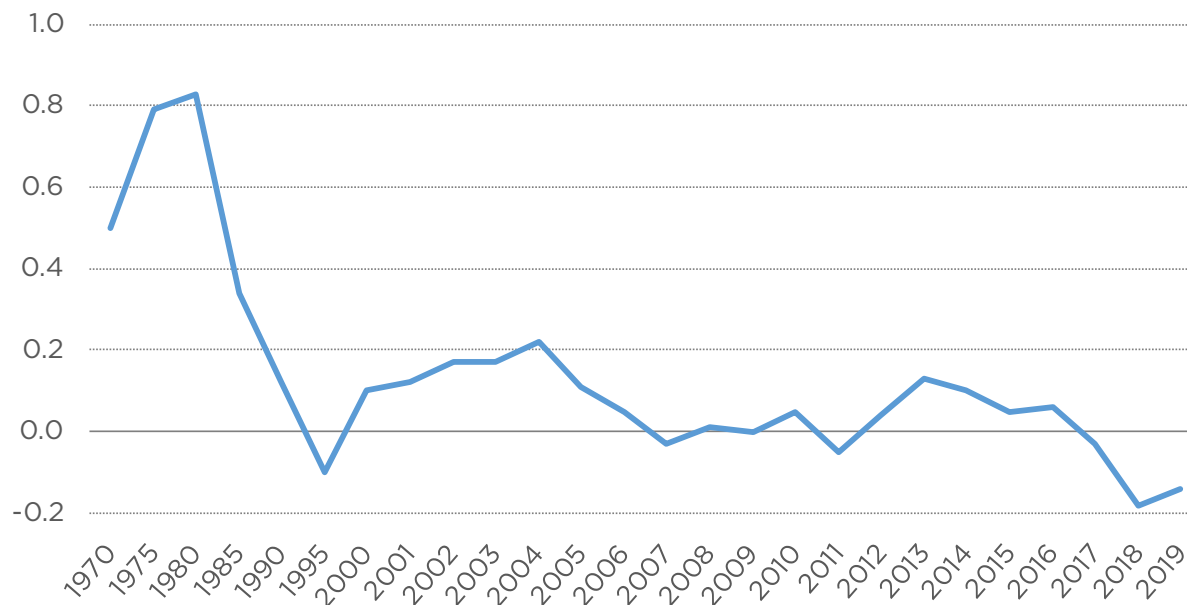
Source: Gwartney, Lawson, Hall, and Murphy (2021).

of economic growth in the long-run, it is reasonable to infer that the index is also positively correlated with productivity outcomes, although this relationship remains relatively under-studied (Nissan and Niroomand, 2008).

Given the small differences in the overall score for Canada and Australia, it is unlikely that this difference is a sufficient explanation for the productivity gap in a static sense. In a dynamic sense, however, Canada's economic freedom score has trended lower over time relative to Australia's (Figure 8).

From a substantial lead in the 1970s, when Canada enjoyed a superior level of average living standards and productivity, Canada's score fell below parity with Australia in the mid-1990s (when the measure was reported only every five years) and again since 2017. The impact of Australia's extensive economic reforms in the 1980s and 1990s on its relative score is evident in figure 8. Although the two countries have been close to parity on this measure in recent decades, the sharp narrowing of Canada's lead after 1980—and especially in the mid-1990s—is broadly coincident with the deterioration in Canada's economic performance relative to Australia. The narrowing in the economic freedom gap suggests that much

**Figure 8: Gap in the Economic Freedom Score between Canada and Australia**



Source: Gwartney, Lawson, Hall, and Murphy (2021).

of Australia's historical economic outperformance has come from simply matching and then exceeding Canada's level of economic freedom, imparting a positive impulse to productivity growth in the process. Australia has been running, while Canada has been standing still, enabling Australia to catch up to and then exceed Canada on productivity and living standards.

### **Other measures of comparative institutional and policy settings**

In addition to the Fraser Institute's economic freedom measure, we can consider how the two economies rank in terms of other measures of institutions, policies, and outcomes that research suggests are important to productivity growth.

### *International economic integration*

The KOF Globalisation Index measures both the depth and breadth of global connectedness, including integration with the global economy (KOF Swiss Economic Institute, Undated). The index has been found to be positively correlated with economic growth, among many other measures of economic welfare (Gygli, Haelg, Potrafke, and Sturm, 2019). The Economic Globalisation Sub-Index is positively correlated with labour productivity in OECD economies (Kirchner, 2020). On this measure, Canada ranks 47<sup>th</sup> (higher) versus Australia's 62<sup>nd</sup>. Canada also ranks more highly on the DHL Global Connectedness Index (32<sup>nd</sup> versus Australia's 34<sup>th</sup> in 2020) (Altman and Bastian, 2020).

But Canada's relatively greater integration with the world economy only serves to underscore its economic underperformance relative to Australia. Distance from global markets has been found to account for as much as 40 percent of Australia's productivity shortfall relative to the United States (Battersby, 2006). Much is made of Australia's growing exposure to the rapidly expanding Chinese economy, but Beijing is closer to Berlin than it is to Canberra. By contrast, Canada shares a land border with the world's largest and one of the most productive economies. Correcting for this geographic penalty would imply that Canada's relative productivity performance is even worse than the numbers indicate. Canada's outperformance on measures of global economic integration is mostly an accident of geography rather than evidence of better institutions or policies. Both countries have free trade agreements with the United States.

It is likely that Australia's competitiveness disadvantage due to its geography has given it an incentive to search for greater domestic economic efficiencies. Improving Canada's relative position on the Economic Globalisation Index through greater economic openness could still be expected to improve Canada's absolute and relative labour productivity performance given its positive correlation with labour productivity.

### *Foreign direct investment*

Foreign direct investment is an important source of productivity spillovers to domestic firms from global firms that are at the frontier of efficiency. Gu notes that "the declining productivity growth of frontier firms [in Canada] may reflect a lack of innovation diffusion from global frontier firms to firms operating in Canada" (Gu, 2020: 6). Australia and Canada are similarly ranked and scored on the OECD's Foreign Direct Investment Regulatory Restrictiveness Index, but both are at the more restrictive end of that distribution compared to peer economies such as the United States

and the UK (OECD, Undated). Canada's inward stock of FDI was equal to 75.1 percent of its GDP in 2020 compared to Australia's 55.6 percent, but both come in below the more open UK at 82 percent (OECD, 2022). Given the important role FDI plays in knowledge transfers and accelerating productivity spillovers, both economies could improve their productivity performance by adopting a more liberal approach to foreign investment screening, including greater openness and transparency. Canada's regulation of inward FDI requires that many foreign investors above a certain threshold demonstrate that their investment will bring a net benefit to Canada, whereas Australia's regulation of FDI is based on a negative test, where investment is only rejected if it is deemed to be "contrary to the national interest" (Kirchner and Mondschein, 2018).

The United States is the single largest foreign investor in Australia, providing a vehicle through which Australia can take advantage of knowledge transfers, access to US managerial talent, intellectual property, and supply chains. US investment in Australia below a threshold that is defined by the Australia-US Free Trade Agreement (AUSFTA) is exempt from foreign investment screening (Kirchner, 2021a). Opening Canada's aviation, financial, and communications markets to US entry would enable Canada to better capitalize on the already prominent role of US FDI in the Canadian economy (Atkinson, 2021: 5).

### *International tax competitiveness and complexity*

Australia ranks 9<sup>th</sup> on the Tax Foundation's International Tax Competitiveness Index compared to Canada's 20<sup>th</sup> place (Bunn and Asen, 2021). The index measures the extent to which a country's tax system adheres to both competitiveness and neutrality in tax treatment. While Australia lags Canada (that is, is less competitive) in its corporate tax rate and cross-border tax rules ranking, it scores better on individual, consumption, and property taxes. Canada could potentially improve its absolute and relative productivity performance through tax reforms focused on these areas of taxation. Canada could also improve its corporate tax rank, currently 23<sup>rd</sup> out of a group of 37 advanced economies, although better than Australia's 29<sup>th</sup> place. In the complexity of corporate tax rules category, Canada ranks 27<sup>th</sup> while Australia ranks 41<sup>st</sup> out of 69 countries on the survey-based Tax Complexity Index (Hoppe, Schanz, Sturm, and Sureth-Sloane, 2021).

The particular importance of corporate tax levels to foreign investment outcomes is well illustrated by trends in US investment in Australia. Since the US lowered its corporate tax rate below Australia's as part of former President Trump's 2017 tax reforms, Australia has suffered an outflow of US investment dollars (Kirchner, 2021a). A lower corporate tax



rate combined with a more liberal approach to FDI screening could be expected to benefit investment and productivity growth in both economies.

### *WIPO Global Innovation Index*

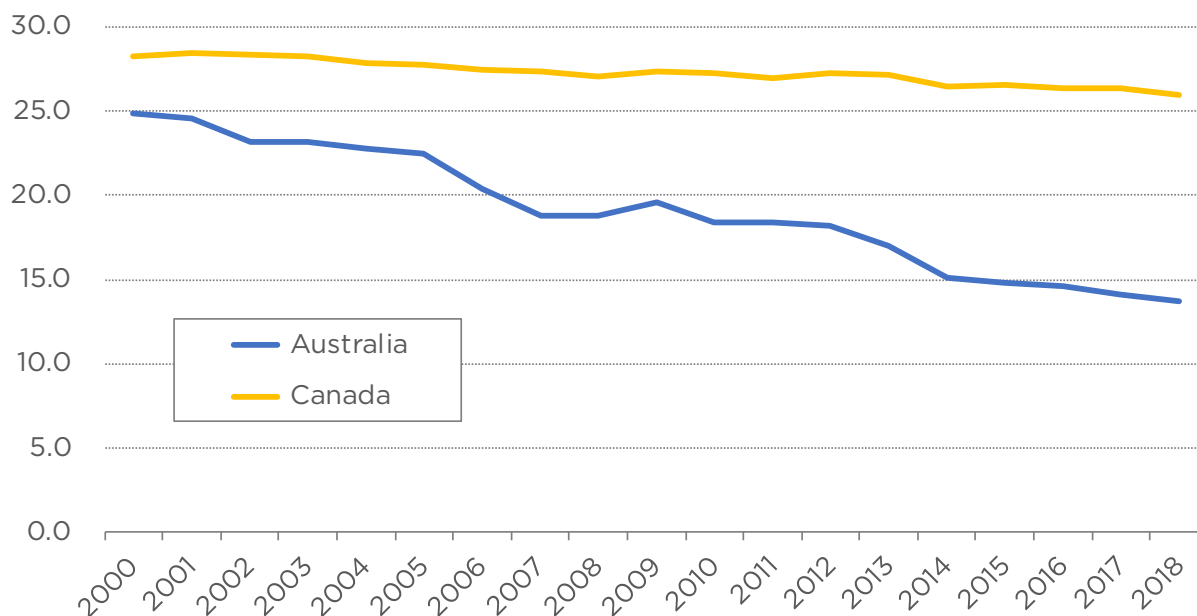
Canada ranks 16<sup>th</sup> on the World Intellectual Property Organization's Global Innovation Index compared to Australia's 25<sup>th</sup> place (World Intellectual Property Organization, 2021). As already noted, Canada devotes a larger share of investment spending to intellectual property products. Australia tends to be a net consumer and importer of intellectual property. However, the efficiency implications of being a larger producer of intellectual property are ambiguous. The application of intellectual property rather than its production may be more important to productivity outcomes and growing more successful domestically based companies.

Australia is one of the few advanced economies to generate significant productivity benefits from the use of ICT (information and communications technologies); ICT accounted for around one-third of Australian labour productivity growth in the 1990s (Shahiduzzaman, Layton, and Alam, 2015). Because Australia is a net consumer and importer rather than a producer and exporter of ICT equipment, Australia experienced the ICT revolution as a form of capital deepening. This contributed to labour productivity, as well as multifactor productivity from user-based innovations based on ICT. Australia was only able to capitalize on these labour productivity gains because of its openness to imports of ICT capital equipment, which facilitated a high take-up rate for new technology, as did contemporaneous product and labour market reforms. The declining relative price of imported ICT capital goods reduces the relative price of investment in Australia and encourages capital accumulation, boosting productivity through capital deepening (Harris and Robertson, 2007). Lower imported ICT prices also help income growth by having a positive effect on Australia's terms of trade. Because the technology revolution is largely exogenous to the Australian economy, its benefits largely accrue via Australia's economic openness to the rest of the world.

Australia and Canada have devoted similar shares of GDP to R&D on average, although both spend less on R&D than the United States and the average for the OECD.

### *Global Talent Competitiveness Index*

Australia and Canada are similarly ranked (11<sup>th</sup> and 13<sup>th</sup> place respectively) on the Global Talent Attractiveness Index. Migrants have been

**Figure 9: Trade Union Density in Canada and Australia (%)**

Source: OECD Stat (2022).

shown to make a positive contribution to Australian productivity growth. Migrants to Australia earn between three and five dollars per hour more than non-migrants, implying higher rates of productivity. Migrants accounted for around 0.17 percentage points of Australia's annual productivity growth and 0.1 percentage points of its MFP growth between 2006 and 2011 (Parham et al., 2015). The proportion of Australians born overseas is at its highest since the late 19th century at around 29 percent, suggesting that migration is making a stronger contribution to both the quantity and quality of labour inputs (Australian Bureau of Statistics, 2016, March 30). However, Australia's international border closures during the 2020-21 pandemic have seen net overseas migration turn negative for the first time since 1946 (Australian Bureau of Statistics, 2021, December 17). In the absence of catch-up migration, Australia will lose 1.5 million people over the next 10 years relative to what would have been the case had there been no pandemic restrictions (Kirchner, 2021b, December 21). Australia and Canada are close substitutes for prospective migrants and are in competition to attract global talent. By matching or exceeding Australia's attractiveness to the most talented prospective migrants, Canada could expect to gain a corresponding productivity benefit.

**Figure 10: Canada-Australia Unemployment Rate Differential (percentage points)**



Source: OECD (2022).

### *Labour market regulation*

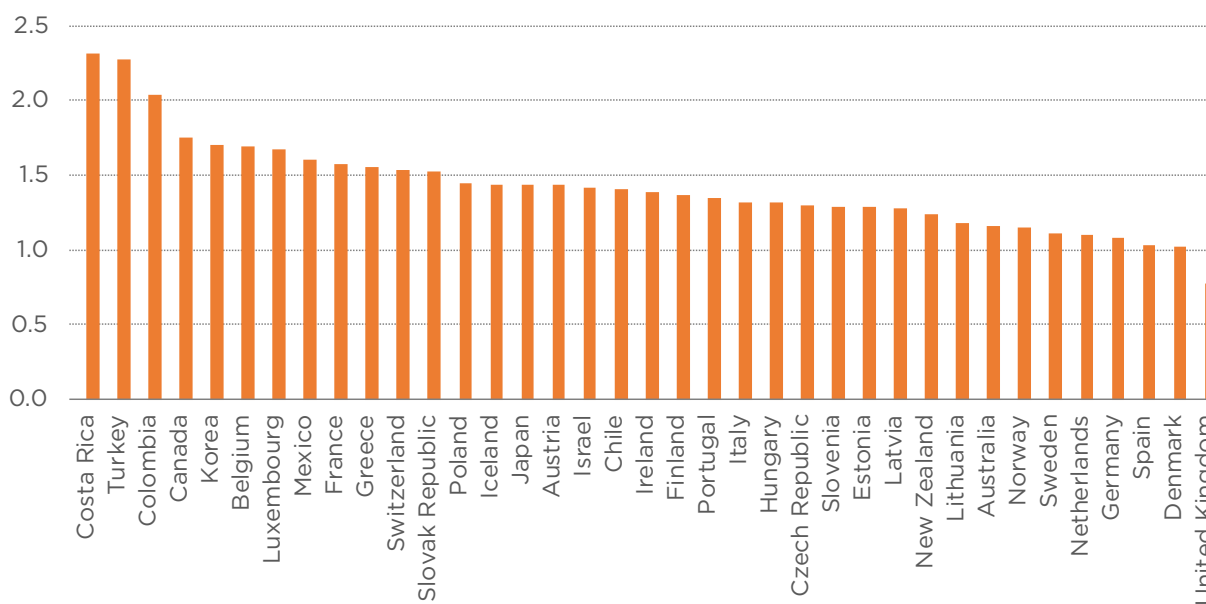
Canada and Australia are rated similarly on employment protection legislation, scoring 1.6 and 1.7 out of 6, respectively, on the OECD's Employment Protection Legislation indicator in 2019. Only the US has a lower (less restrictive) score than Canada and Australia (OECD, 2020).

Australia has lower and declining trade union density, with only 14 percent of wage and salary earners being trade union members, compared to 26 percent in Canada in 2018. Trade union density in Australia has also been declining at a faster rate than in Canada (figure 9).

In 2020, Australia had the highest minimum wage in the OECD at US\$12.40 an hour once adjusted for purchasing power parity (i.e., relative domestic price levels). Canada was 10<sup>th</sup> highest at US\$10.50 an hour (OECD Stat, 2021). However, as economist Evan Capeluck notes, Australia's higher minimum wage has encouraged capital-for-labour substitution and capital deepening and so may be a factor in Australia's outperformance on capital inputs and productivity (Capeluck, 2016: 14).

Despite a higher minimum wage, Australia has also maintained a consistently lower unemployment rate than Canada. The unemployment rate

**Figure 11: Product Market Regulation  
(higher score = more restrictive)**



Source: OECD (2018).

differential has varied over time, reflecting the relative cyclical performance of the two economies, but Australia has averaged an unemployment rate that is 1.5 percentage points lower than Canada's since 1978 (figure 10).

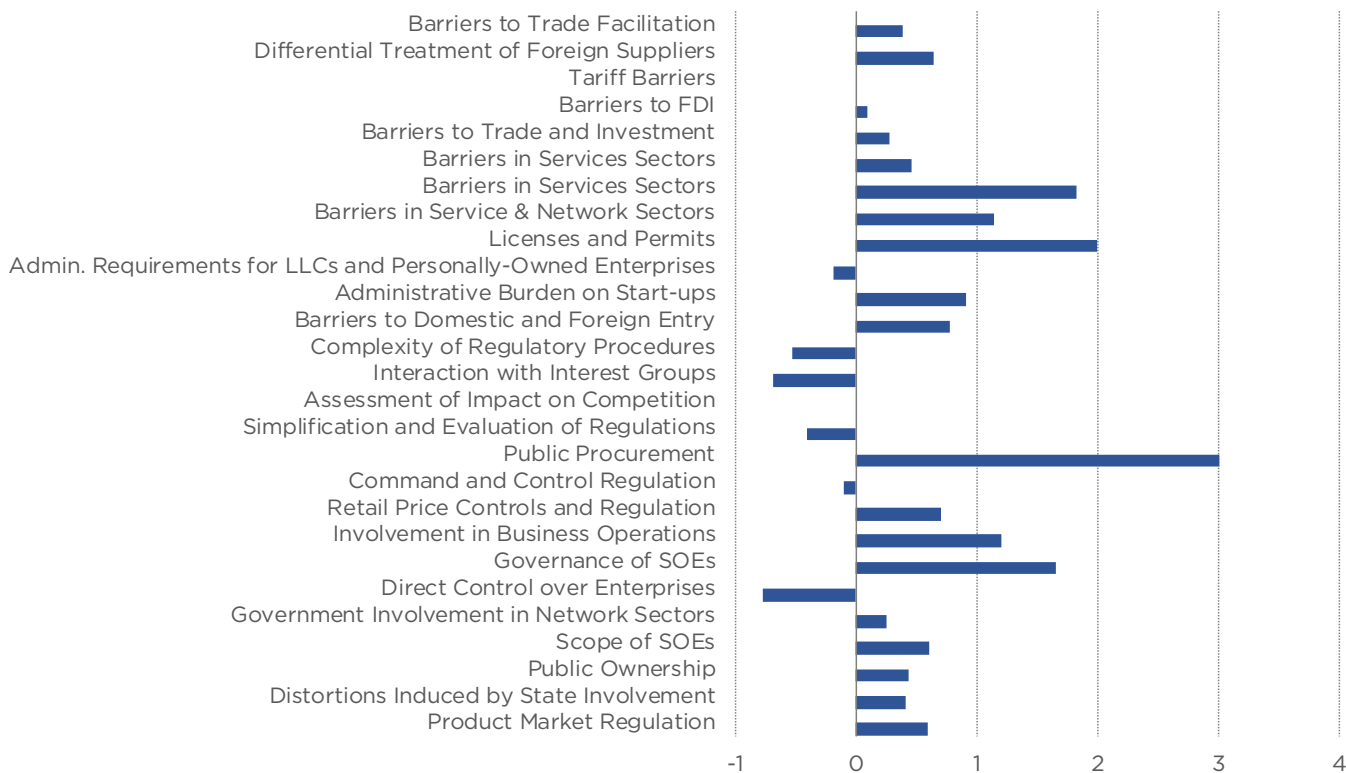
### *Product market regulation*

The OECD's 2018 measure of product market regulation shows Canada to be the fourth most restrictive jurisdiction in the OECD, while Australia is the eighth least restrictive (figure 11), so this is an area where the two economies appear to differ significantly, despite their relatively similar score on the Fraser Institute Economic Freedom Index measure of regulation.

Canada scores higher on 21 out of 27 individual categories of regulation, implying that Canada is more restrictive across most types of product market regulation relative to Australia (figure 12).

This suggests that Canada could benefit from a broad-based deregulatory agenda to align its product market regulatory settings more closely to those in less restrictive jurisdictions like Australia. The OECD's review of the contribution to Canadian productivity growth of greater dynamism amongst smaller businesses has identified that there is scope for Canada to

**Figure 12: Types of Product Market Regulation—the Canada-Australia Differential**



Source: OECD (2018).

reduce regulatory barriers to product market competition (Carey, Lester, and Luong, 2016).

### *Financial regulation*

We have seen that poor capital formation has been a drag on Canada’s relative economic growth and productivity performance. The financial sector plays a critical role in mediating between saving and investment and ensuring that capital is efficiently priced and allocated. Canada ranks behind many peer economies, including Australia, in both small and over-all business lending as a share of GDP and in the interest rate spread for small versus large businesses (Omran and Kronick, 2019: 11). This points to a potential role for improved financial system regulation in increasing the efficiency of the financial system to support productive investment spending.

It has often been noted that Canada’s prudential and market conduct regulation is highly fragmented both functionally and geographically. In

Canada both federal and provincial governments have prudential regulation of financial institutions and the country lacks a national securities regulator (Omran and Kronick, 2019).

This is in contrast to Australia, which has a “twin peaks” model, in which there is a national prudential regulator, the Australian Prudential Regulation Authority, and a national securities and market conduct regulator, the Australian Securities and Investments Commission. The Netherlands and the UK also use this twin peaks model while Sweden and Norway have combined prudential and market regulators (Omran and Kronick, 2019). Australia has conducted periodic high-level reviews of the efficiency and effectiveness of its financial system regulation, including the Financial System Inquiry in 2014 and the Wallis Inquiry in 1997. In addition, financial system regulators are subject to periodic capability reviews to assess their organizational fitness against the mandate governing them. Australian regulators also have market efficiency as part of their mandates. Canada’s financial services regulators could benefit from similar reviews and more explicit mandates to promote financial system efficiency and competitiveness (Omran and Kronick, 2019: 2). As shown in figure 5, labour productivity in financial services in Canada lagged Australia’s between 2007 and 2015. Both economies have relatively concentrated banking sectors and barriers to entry for new banks.

### *Firm size*

As Robert Atkinson notes, “among developed nations, large corporations outperform small businesses on virtually all economic and social indicators” (Atkinson, 2021: 4). This is also true of Australia, where large firms enjoy higher labour productivity than small and medium firms (figure 13).

The OECD does not record comparable data for Canada, but Atkinson argues that “Canada suffers from having too great a proportion of its economy in smaller, less productive firms than in large, more productive companies” (2021: 18). Given Canada’s larger population and economy, comparisons with Australia on indicators of firm size are likely to be misleading, but Australia’s experience supports Atkinson’s contention that “big is beautiful” when it comes to labour productivity.

### *Government advisory bodies*

Other researchers have pointed out that Canada could benefit from an economic reform advisory body such as Australia’s Productivity Commission (Capeluck, 2016). The commission’s role in Australia is to provide

**Figure 13: Labour Productivity in Australia, Per Person Employed, by Firm Size, US\$, Current PPPs**



Source: OECD (2021).

“independent research and advice to Government on economic, social and environmental issues affecting the welfare of Australians” (Productivity Commission, Undated). The commission in its current form dates from 1998 and evolved out of earlier tariff and industry assistance advisory bodies. In both its current and previous iterations, the commission has played an important role in quantifying the costs of industry assistance, protectionism, and anti-competitive regulation and advocating for productivity-enhancing economic reform. The commission also conducts government-mandated productivity reviews every five years that aim to examine productivity developments in the Australian economy and develop options for reform. While Australian governments have not always followed the commission’s advice, it remains a powerful and independent advocate for better economic policy. Canada could benefit from the establishment of a similar government advisory body with a mandate to promote policies conducive to faster productivity growth.

## Conclusion

This essay has reviewed comparative institutions and policies in Canada and Australia to help identify the sources of Canada’s relatively poor

productivity performance since the mid-1990s. It is unlikely that Canada's performance is attributable to any single institution or policy. Rather, the relative performance of the two economies at the aggregate level is better viewed as a reflection of the combination of the two, as well as factors exogenous to the two economies.

Overall, Canada and Australia are similarly ranked on measures of their institutional, policy, and regulatory settings. However, it is notable that Australia outperforms Canada on economic freedom, FDI regulatory restrictiveness, its overall tax system, attractiveness to global talent, labour market flexibility (as measured by the unemployment rate and productivity gains from the reallocation of labour), and product and financial market regulation.

Canada outperforms Australia on measures of globalization, corporate taxation, cross-border tax rules and complexity, and innovation. However, Canada's advantages on globalization measures are largely an accident of geography rather than superior institutions or policies. Australia suffers a global economic integration and productivity penalty based on its geography, but this only serves to underscore Canada's underperformance in overall productivity growth. Australia's geography may have spurred the country to make greater efforts to overcome this penalty through increased domestic efficiencies and a stronger commitment to domestic economic reform.

Much of Australia's superior productivity performance is due to a stronger investment share of GDP that has added to the country's capital stock. This has boosted labour productivity growth, although capital deepening has had more mixed implications for multifactor productivity in recent years. While the investment share of the GDP differential between Australia and Canada has narrowed, breaking down investment spending by asset type shows that around half of this narrowing is due to an increase in the investment share of GDP devoted to housing in Canada rather than to higher business investment. Addressing policies that may be acting as impediments to stronger investment spending on private non-residential dwellings should be a priority for Canadian policymakers.

Canada's restrictive approach to regulating foreign direct investment may be a factor inhibiting FDI inflows relative to Australia, even though Canada enjoys a larger stock of FDI as a share of GDP. Canada's functionally and geographically fragmented regulation of its financial system compared to Australia's unified, national approach may help explain Canada's weaker performance on business lending, which would in turn impair capital formation and productivity performance on a relative basis.

Australia dramatically improved its relative position on the Fraser Institute's Economic Freedom Index in the 1980s and 1990s, broadly



coinciding with the onset of its outperformance of Canada in growth in productivity and living standards. In the mid-1990s and again since 2017, Australia scored higher on this measure than Canada. As noted in the second essay, Australia seems to have obtained a larger and more persistent productivity dividend from its economic reforms in previous decades compared to peer economies like Canada and New Zealand that implemented broadly similar reforms.

Australia enjoys a more internationally competitive tax system than Canada, particularly on personal, consumption, and property taxes, although it underperforms Canada on corporate taxes and corporate tax complexity. Both economies would benefit from a lower corporate tax burden, not least to help them attract FDI. Australia has experienced a loss of US investment in part due to a higher corporate tax rate relative to the US since America's 2017 corporate tax reforms.

Until the onset of the 2020 pandemic, Australia enjoyed stronger population growth than Canada on average, with most of this coming through net overseas migration. Research has found that migration has made a positive contribution to Australian productivity growth. While Canada and Australia are similarly ranked in terms of migration attraction, Canada could compete more aggressively with Australia and other peer economies in attracting the best skilled migrants.

On labour market regulation, Australia has enjoyed a consistently lower unemployment rate than Canada, despite a higher minimum wage. Australia has also seen a more dramatic decline in union density relative to Canada. As the second essay found, Australia has enjoyed a stronger positive contribution to labour productivity growth from reallocating labour to more productive sectors of its economy. Australia's higher minimum wage may have had the effect of encouraging capital for labour substitution and capital deepening, benefiting productivity growth by increasing the stock of capital per worker.

Canada also underperforms Australia in product market regulation and is at the more restrictive end of the OECD spectrum on this measure while Australia is at the less restrictive end. A broad-based deregulatory agenda focused on these categories of regulation, perhaps informed by a government mandated advisory body like Australia's Productivity Commission, could lift Canada's productivity performance to the extent that Canadian governments are prepared to act on that advice.

Australia's experience points to long-run productivity payoffs from economic reforms. Australia's extensive economic reforms were implemented mostly during the 1980s and 1990s. The productivity surge in the 1990s, while partly a global phenomenon, is also widely recognized as the pay-off from earlier reforms that are reflected in the sharp narrowing of

the size of the economic freedom differential between Australia and Canada found in this essay.

More recently, Australia has lost some of the reform impetus seen in earlier decades and productivity growth in the country has slowed along with that in the rest of the world. The investment share of the economy has also declined to levels similar to Canada's. But Australia's experience still points to public policies that could lift Canada's long-run relative and absolute productivity performance over time.

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