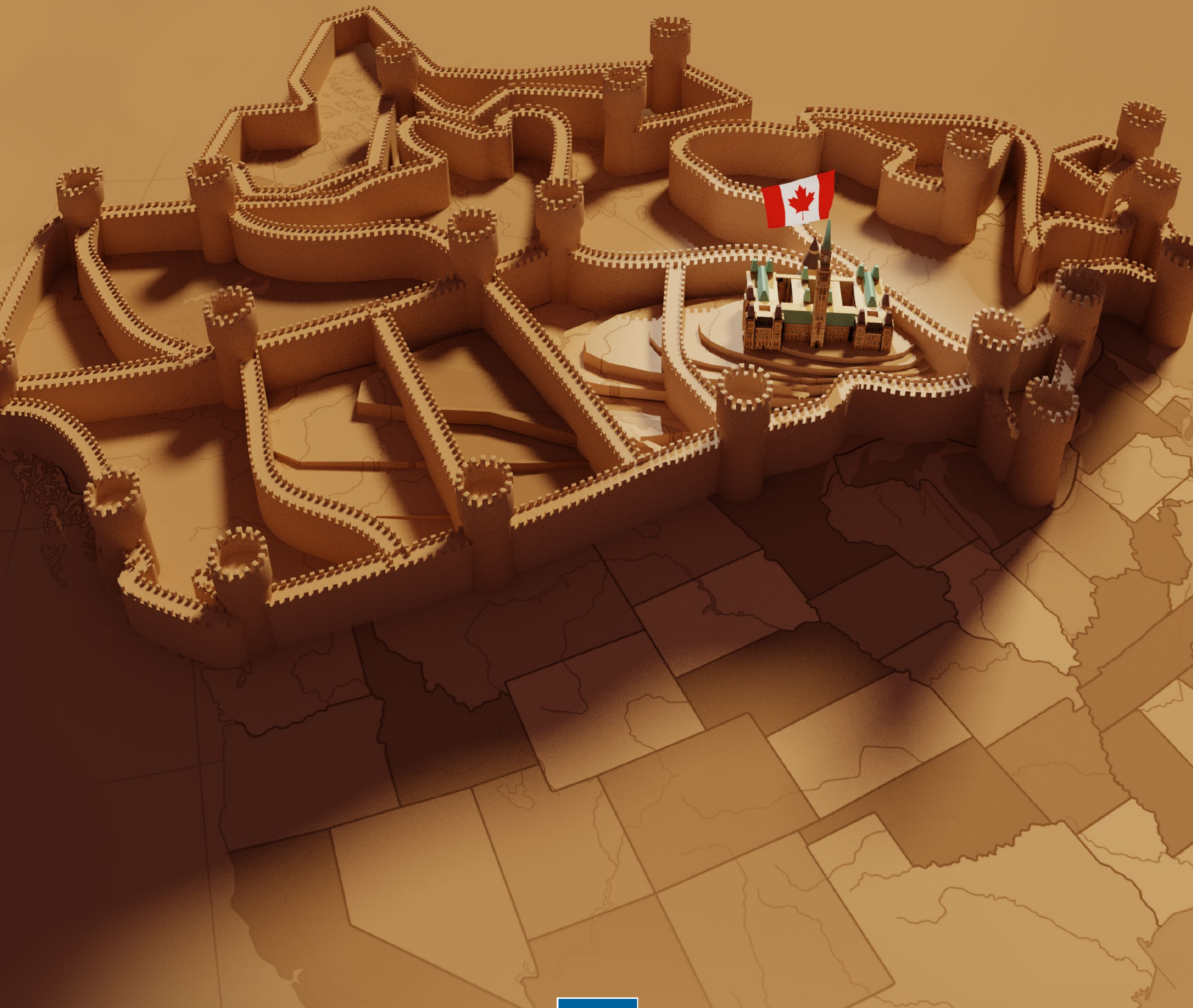
Walled from Competition
Measuring Protected Industries in Canada

Vincent Geloso



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Executive Summary

Consumers are best served by firms when the latter are exposed to the threat of competition. Absent the possibility of new firms threatening their incumbent status, established players have less incentive to cut costs and prices and improve services. The threat of entry by competitors disciplines firms in ways that serve consumer welfare but there are many barriers to competition in Canada resulting from government interference and these barriers affect a sizable share of the Canadian economy.

What constitutes barriers to competition? There are some barriers that arise from the features of the goods produced or from external factors (for example, geography, distance, or technological limitations). However, there are many more barriers that are the results of government interference. The federal government limits foreign investments in crucial sectors such as air transportation, telecommunications, and broadcasting. In telecommunications, all firms with more than a 10% market share cannot have more than 20% of the voting shares owned by non-Canadians. Similar rules apply to broadcasters and air carriers. In sectors like air transportation, there are additional prohibitions such as that preventing non-Canadian carriers from providing services between Canadian airports.

These restrictions on foreign activity in Canada are compounded by additional barriers to competition resulting from government monopolies. For example, most provincial governments (including Canada's two largest provinces, Quebec and Ontario) operate their own alcohol retail services that are shielded from private competition. As another example, Canada Post is a crown corporation with a monopoly on the domestic-letter market. All these state monopolies, to which we can add other crucial sectors such as energy distribution and urban transit, are by definition shielded from competition. Finally, there are other sectors that are shielded from competition by legislation. For example, in many provinces, intercity bus companies are given monopolies on certain profitable routes.

Such barriers to competition affect a sizable share of the Canadian economy. By adding up the economic output all the sectors protected from competition by the aforementioned forms of barriers to entry, we find that close to a quarter of the Canadian economy is shielded from competition (22%). This is a low-bound estimate that includes only the most important government-imposed restrictions to competition.

There are, however, two forms of barriers to competition not included in this definition. First, interprovincial barriers to competition are not included. Numerous sectors of activity are protected from competition coming from other provinces. In the case of alcohol, for example, there are important limitations upon moving liquor across provincial borders. This means that, for provinces like Alberta where there is no state monopoly on the retail sale of alcohol, there are additional entry barriers that protect incumbent firms from competition. While many, including the Canadian Senate, deem these barriers to be economically burdensome, they are not easy to quantify and were

excluded from our low-bound estimate. Second, the impact of occupational licensing is not included. Most economists qualify occupational licensing as an important source of barriers to entry. However, statistical agencies calculate output on the basis of industrial sectors, not on the basis of professions. As members of the same profession can work in different economic sectors, it is difficult to add the effects of occupational licensing to our calculations above.

Nevertheless, we can produce a cautious high-bound estimate that circumvents these two issues. That high-bound estimate of all restrictions exceeds a third (35%) of the economy. This is a sizable share of the Canadian economy that is protected from competition to some degree. In fact, Canada fares poorly amongst industrialized countries for its support of competition. International surveys of government-erected barriers against competition produced by the Organisation for Economic Co-operation and Development (OECD) show that municipal, provincial, and federal governments in Canada impose some of the most significant barriers to competition in the world. For example, Canada comes in at 48th (out of 62) in the OECD's foreign direct-investment restrictiveness index, slightly behind the Ukraine and just ahead of Mexico.

Canadian consumers would benefit greatly from the curtailing of these restrictions and provincial and federal governments in Canada should consider removing those barriers to competition and provide a framework that is more amicable to economic growth.

Introduction

During the recent trade negotiations with the United States, Canada was accused of maintaining significant trade barriers to American goods and services. This accusation was novel to many Canadians. While the dairy and poultry sectors were the most heavily targeted as a result of Canada's supply-management scheme, there is truth to the idea that Canada has significant barriers to competition in many sectors of the economy. Large portions of the Canadian economy are shielded from competition to one degree or another. Some of these protections come in the form of state-owned monopolies such as energy and alcohol retail in many provinces. There are also several pieces of legislation (provincial and federal) that restrict the ability of foreign firms to enter the Canadian market. There are also regulations (largely imposed by provincial governments) that confer advantages to incumbent firms by erecting barriers against potential competitors.

By restricting competition, these barriers negatively affect the living standards of Canadians. This study aims to enable readers to understand the magnitude of these barriers. It is divided into three sections. The first explains the importance of removing barriers to competition that are erected by government action. The second shows that Canada is, according to the limited international data on restrictions against competition, in the group that most restricts competition. The third section attempts to measure the share of the economy that is affected by barriers to competition.

The importance of the threat of entry

Before proceeding with an attempt to measure the portions of the economy that are shielded from competition, it is necessary to understand the problems that are generated by barriers to entry. While high upfront costs constitute an important form of barrier, most barriers can, and in large part do, emerge from government restrictions.[1] Many economists will qualify an industry as competitive based on whether or not it is possible to threaten incumbents (referred to as barriers to entry) rather than the number of firms or the market share of particular firms (Demsetz, 1982; Baumol, 1982). There are two reasons for this being the best way to conceive of competition.

First, a firm's market share does not entail lack of competition even if that firm dominates the market. A firm may have been able to get a large share of the market because it is efficiently producing goods and services for consumers relative to its competitors (Demsetz, 1973). If entry is easy, any attempt on the part of that firm to increase prices or reduce quality will induce competitors to enter the field so as to acquire part of that firm's market share. This being the case, even if a firm stands alone on a given market, it must be on alert if the threat of entry is real. This is sufficient to induce competitive behaviour. Moreover, it suggests that—from the perspective of maximizing consumer welfare—what matters is entry and the threat of entry rather than the number of competitors on a given market.

Secondly, large market shares are a lure for innovation. Investments in research and development of new products are made attractive by the possibility of conquering the vast majority of the market for a particular good. This is important because firms may innovate by creating alternatives to the products of a given firm. This is the equivalent to the car industry competing with the horse-carriage industry or the electrical industry competing with the candle-making industry. As such, competition may come from unforeseen directions as a result of innovation. Absent barriers to entry by these innovating firms, even large firms that dominate a given market will be forced to innovate and improve in order to preserve customer loyalty.

The threat of entry, therefore, appears to be one of the strongest pro-competition forces that serve to discipline firms and encourage them to be more efficient and innovative in order to improve quality and reduce prices to consumers. Thus, barriers to entry encourage anticompetitive behaviour. Very often, the barriers to entry emanate from government intervention either by restricting entry or by increasing the cost of entry. By reducing the threat of competition, government-created barriers to entry increase the incentive of firms to behave in a anticompetitive manner that ultimately hurts consumers.

1. For a historical overview of how barriers to entry tend to be erected by government action, see DeLorme, Frame, and Kamerschen, 1997.

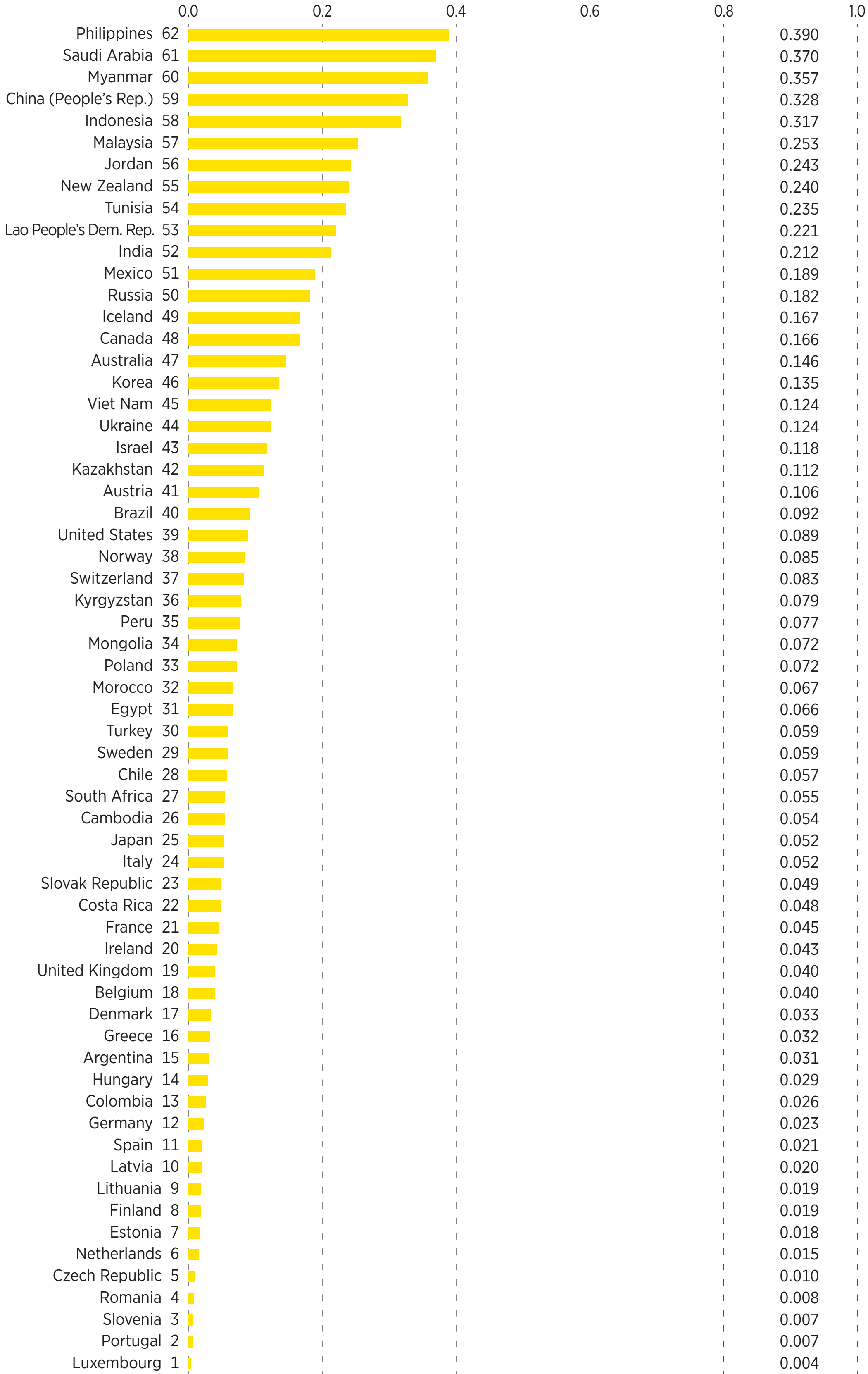
International assessments of Canadian barriers to entry

One of the difficulties in measuring barriers to entry is that they come in a great many forms. This does not lend itself well to empirical measurement for the purpose of international comparisons. As a result, there is a limited amount of data on which researchers can rely to measure how much a particular country restricts competition. The best available data is provided by the Organisation for Economic Co-operation and Development (OECD), which created measures of "restrictiveness". These data cover key sectors of the rich economies that are members of the OECD as well as other economies that are not members of the organization. The two broadest measures they produce position Canada as one of the economies with the most stringent legally imposed barriers to entry.

The first measure is the OECD FDI Regulatory Restrictiveness Index (OECD, 2019a). It covers four entry barriers for foreign direct investment by foreign firms across different industry markets: foreign equity restrictions (that is, prohibitions on foreigners owning more than a given proportion of a firm's shares); screening and approval requirements (that is, the ability of governments to turn down mergers or acquisitions); rules for key personnel (that is, nationality requirements for key employees); and all other restrictions (for example, prohibition on buying real estate). Each of these components are given a score between 0 (no regulatory impediments) and 1 (full restrictions of foreign investment) and are them summed to arrived at a measure of restrictiveness (Kalinova, Palerm, and Thomsen, 2010: 11). According to that index, Canada is the 48th (out of 62) least restricted economy (**figure 1**) slightly behind countries such as Ukraine and Korea and slightly ahead of countries like Russia, Mexico, and India (Thomsen and Mistura, 2017). The index can also be broken down by industries, which is useful since, as we will see below, Canadian governments tend to erect barriers in particular sectors of economic activity. For example, in air transportation, Canada ranks 54th out of 62 while it ranks 59th out of 62 in both the telecommunications and media sectors. In all these sectors, Canada erects significantly higher barriers than closely comparable countries such as the United States and the United Kingdom.

The second measure, the OECD Product Market Regulation Statistics (OECD, 2019b), is a broader measure as it tries to measure overall barriers to entry. The OECD sends out some 1,400 questions to the participating governments about economy-wide or sector-specific regulations. These questions relate to state ownership and monopolies, barriers to international competitors and suppliers, barriers to entry in particular sectors of activity, regulatory complexity, tariffs, price controls, and ownership restrictions. The answers provided are then converted into an empirical measure in a manner similar to the FDI Regulatory Restrictiveness Index. The score is between 0 (least

Figure 1: Ranks on the *Restrictiveness of Foreign Investment Index*, 2016

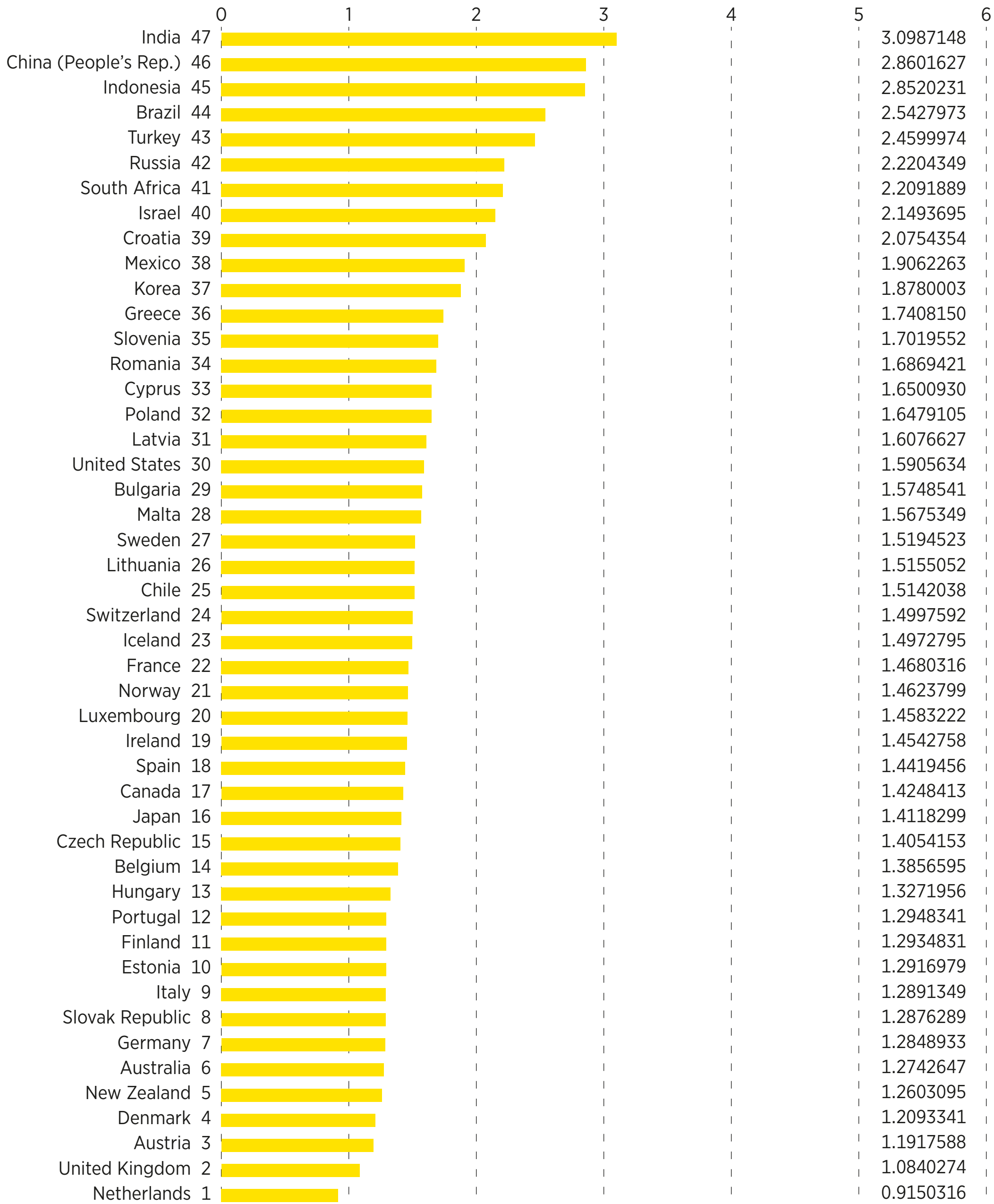


Note: Countries ranked from greatest to least regulation on a scale of 0.0 to 0.1.

Source: OECD, 2019a, *OECD FDI Regulatory Restrictiveness Index*.

restrictive) and 6 (most restrictive) (Koske, Wanner, Bitetti, and Barbiero, 2013). On that index, Canada is 17th least restrictive out of 47 (**figure 2**), behind countries such as Australia (6th), New Zealand (5th), and Germany (7th). In some subcomponents of the index, Canada fares much worse. For example, in the component for "barriers to trade and investments", it ranks 36th out 47.

Figure 2: Ranks from *OECD Product Market Regulation Statistics*, 2013



Note: Countries ranked from greatest to least regulation on a scale of 6 to 0.
Source: OECD, 2019b, *OECD Product Market Regulation Statistics*.

Moreover, it is worth pointing out that this data has some problems: Canada has the second lowest completion rate (74%) among OECD members to the questions sent by the organization (Koske, Wanner, Bitetti, and Barbiero, 2013: 8). Thus, there are chances that the Index is understating the extent of regulations that act as entry barriers in Canada. In addition, the OECD database of product market regulation suggests that, of the 28 economies that have consistently completed the survey between 1998 and 2013, Canada is one that did the least to remove entry barriers: 20 other economies made greater effort to reduce these barriers than Canada did (OECD, 2019b).

What portion of the Canadian economy is walled from competition?

For our purposes, the OECD measures are not exhaustive and do not tell us what portion of the Canadian economy is shielded from competition. Barriers against competition come in many different forms and it is difficult to enumerate them all exhaustively. Not only do they come in different forms, they also sometimes overlap making their compilation even more troublesome to achieve. However, there are three main sources of barriers to competition that are easy to calculate: [1] restrictions on non-Canadian market participants; [2] private firms benefitting from particular protections not afforded under the aegis of the first type of barrier; and [3] state-owned monopolies. These three forms of protection are likely to represent the vast majority of restricted sectors. Adding the output of each of the sectors where competition is limited by these three forms of protection and then expressing it as a percentage of the total economy will allow us to see the portion of the economy where there are restrictions to competition.

There is some overlap among the different forms, though. For example, some sectors with foreign investment restrictions are also sectors where state-owned corporations with monopoly power operate (for example, electricity generation). For this reason, we start from restrictions against foreign business activity first and then add state-owned corporations that are unaffected by those. Finally, we add some key sectors that are protected from competition but that are not state-owned. This avoids double counting.

More importantly, these three forms of barriers to entry necessarily constitute a low-bound estimate of the extent of the barriers to competition that exist. This is because other forms of barriers could not be easily included. The first is occupational licensing. Many professions, such as construction and architecture, face entry restrictions that are meant to restrict competition. These restrictions vary by province and are of differing effect. More importantly, some of the entry restrictions affect sectors (for example, notaries, hair stylists, and architects) for which there is limited data about their contribution to the overall economy. Moreover, when there is data, it is not available at the provincial level; this is problematic given that these regulations vary by province and that a breakdown by province would be required (Gomez, Gunderson, Huang and, Zhang, 2015; Banerjee and Phan, 2014).[2] Finally, there are no breakdowns of output based on professions; this is problematic when professionals are occupied in many different industries and, thus, are difficult to properly integrate into calculations.

Secondly, the barriers on interprovincial trade are not included because they overlap with those caused by occupational licensing. For example, construction workers cannot move easily from one province to another in order to work on a particular project.

2. Note that some of the occupational licensing affects sectors with entry barriers that we can easily measure. The overlap creates a potential double-counting problem.

Some of the interprovincial barriers are also hard to measure, such as the fact that each province requires a different packaging format for coffee creamers and milk. This difficulty in arriving at a unified measure was acknowledged by the Senate of Canada in its most recent publication on interprovincial barriers to trade (Standing Senate Committee on Banking, Trade and Commerce, 2016). This does not mean that these barriers to competition across provincial lines are not costly to Canadians. One study found that reducing interprovincial trade barriers by 10% would increase the GDP of Canada by 0.9%—a sizable gain (Albrecht and Tombe, 2016).

Finally, health care and education are not included in our calculations. Even though there are margins for allowing competition in the production of these services, there are differences in the way that reforms can be brought about that require separate discussion of these two sectors. Furthermore, it is difficult to disentangle, in the national statistics, the portions of the health care and education markets that are subjected to competition from those that are protected from competition. Because of these problems, they are omitted from the present study.

However, these three caveats again suggest that the estimates provided understate the level of barriers to competition that exist in Canada. For example, while we do not know the exact share of the economy that is shielded from competition because of occupational licensing, we do know that close to 13% of private-sector workers are in regulated occupations (Gomez, Gunderson, Huang and, Zhang, 2015). Health care and education represent 12.3% of the total economy (Statistics Canada, table 36-10-0434-01). Improvement in measurements that would sort out the issues raised above would only increase the numbers presented below. Later in this bulletin, we try to estimate the potential magnitude of the barriers covered by these caveats.

Restrictions upon foreign business activity

Several pieces of legislation restrict the ability of foreign businesses to participate in the Canadian market. The broadest of those is the *Investment Canada Act* (ICA), as it applies to all sectors of activity in Canada. Under that legislation, the federal government reserves to itself the right to review (and deny) significant foreign investments in Canada. Under the act, Industry Canada possesses the right to review significant investments in Canada by non-Canadians and to reject them if they do not constitute a net benefit to Canadians. In 2019, all investments by non-Canadians exceeding $1.045 billion to acquire Canadian businesses are subject to review. If the non-Canadian firm acquiring the Canadian firm is a state-owned enterprise, that threshold is lower: $416 million (Industry Canada, 2019). There are also some variations on these thresholds for review depending on whether or not the acquirers of the Canadian firms are from a country that is a member of the World Trade Organization or if the firm being acquired is a cultural business (Globerman, 2015: 3–4). There are also special sections dealing with the oil and gas sectors.

There is also sector-specific legislation that complements ICA as well and extends some ownership restrictions to affect Canadians as well as non-Canadians. For example, the *Bank Act* prohibits any individual investor from owning more than 20% of a financial

institution's voting shares (if that institution has equity beyond $12 billion).[3] That proportion is slightly higher, 30%, if they are non-voting shares (Canada, Department of Justice, 2019). Foreign banks also face restrictions if they seek to enter the Canadian market and they are subjected to the approval of both the Department of Finance and the Office of the Superintendent of Financial Institutions.

In the telecommunications sector, all firms with more than a 10% market share cannot have more than 20% of the voting shares owned by non-Canadians. Broadcasters, regardless of market share, are subjected to the same ownership rule as telecommunications companies. In addition, broadcasters must have a Canadian chief executive officer (Whitehead, 2018). Finally, the *Canada Transportation Act* also restricts foreign ownership in Canadian airlines in addition to prohibiting non-Canadian carriers from providing services between Canadian airports.

All of these amount to significant restrictions upon foreign competition and the industries subjected to these entry barriers constitute a substantial share of the Canadian economy (**table 1**). An estimate for 2006 found that these sectors affected by restrictions constituted 16.5% of the Canadian economy—or one out of every six dollars of economic activity (Harischandra, Palacios, and Clemens, 2007). Updating the numbers from that prior study allows us to see that by 2017 (the last full year of data allowing such a computation), that proportion had modestly increased to 19.9% or nearly one out of five dollars in the Canadian economy.

Table 1: Industries affected by restrictions on foreign direct investment or competition and their contribution (%) to the Canadian economy

	2006	2017
Mining and oil and gas extraction	3.7%	7.6%
Other metal ore mining	0.1%	0.1%
Electric power generation, transmission and distribution	2.1%	1.8%
Air transportation	0.4%	0.5%
Pipeline transportation	0.5%	0.5%
Publishing industries	0.8%	0.5%
Motion picture and sound recording industries	0.2%	0.2%
Radio and television broadcasting	0.2%	0.2%
Pay TV, specialty TV and program distribution	0.2%	0.1%
Telecommunications	2.4%	1.8%
Finance and insurance	6.0%	6.7%
Total	**16.5%**	**19.9%**

Note: Figures are rounded.

Sources: Harischandra, Palacios and Clemens, 2007: 3; Statistics Canada, table: 36-10-0434-01.

3. In 2016, that proportion stood at $5 billion (Forgione, Mirza, Ammerman, and Brandreth, 2016: 20).

State-owned monopolies

Federal and provincial governments also operate many enterprises. These enterprises are highly (or completely) shielded from competition. However, some are already covered by foreign business activity restrictions in table 1. Among those, with the exception of those in Alberta and Nova Scotia, electricity generation and transmission are state-owned enterprises. Thus, state-owned companies such as SaskPower, Hydro-Québec, BC Hydro, Ontario Power Generation, and Hydro One Ltd. are already accounted for in table 1. The same applies to the Canadian Broadcasting Corporation (see "Radio and television broadcasting" in table 2). Thus, to avoid double-counting, we will add only the sectors of activity not affected by restrictions on foreign business activity. The largest sectors in that respect are gambling, alcohol, domestic mail and urban transit (**table 2**).

Table 2: State-owned monopolies shielded from competition (and not included in table 1), and their contribution (%) to the Canadian economy

	2017
Gambling	0.4%
Alcohol [1, 2]	0.7%–0.8%
Domestic mail	0.1%
Urban transit	0.3%
Total	**1.6%–1.7%**

Notes: Figures are rounded. [1] applies for 2016/17, as this is the latest data available. [2] Alberta and British Columbia are subtracted from the total. The values in table 2 were computed at basic prices for 2012 so that all the sectors included in the Statistics Canada subdivision could be used. However, alcohol and domestic mail were not included and a different method had to be used. We used retail sales of alcohol and revenues for Canada Post from domestic lettermail and divided by a different GDP series that is suited for that calculation (Statistics Canada, table 36-10-0222-01).

Sources: Gambling and urban transit systems from Statistics Canada, table: 36-10-0434-01; alcohol retail sales from Statistics Canada, table: 10-10-0011-01; volume of domestic lettermail (the portion of the market on which Canada Post has an exclusive right by law) from Canada Post Corporation, 2018: 66 (the revenues from that line of operation are then divided by the GDP figure obtained from Statistics Canada, table: 36-10-0434-01).

Gambling

In the case of gambling, all of the provincial governments operate state-owned lotteries and casinos. In this, Canada differs from countries like Australia, the United States, and the United Kingdom as legal gambling requires interacting nearly exclusively with governments. The vast majority of gambling activities are monopolized by enterprises operated by provincial governments (Cosgrave and Klassen, 2009). Provincial governments also regulate (and extract revenues through licensing) charitable bingos, raffles, and horse racing. Provincial governments extract between 2.9% and 5.5% of their revenues from gambling—not a negligible share of total revenues (Campbell, 2009: 69). Thus, there are important barriers to competition in gambling.

Alcohol

Alcohol receives an uneven treatment across the provinces. In Alberta, the industry is partially liberalized (West, 2003). In British Columbia, private retailers are allowed

to compete with the state-owned enterprise.[4] However, it ought to be pointed out that there are still important barriers to entry in these two provinces. For example, the province of Alberta requires that a retail liquor store be a separate, free-standing building (or the equivalent) (West, 2003: 6)—a requirement that some have deemed responsible for limiting the potential gains from liberalization (Childs and Siebert, 2015). This is a form of entry barrier because it raises the cost of entry for potential competitors and restricts the field of competitors to operators who deal solely in alcohol retail. Moreover, there is still a government board that acts as the legal importer of liquor in Alberta: "manufacturers and suppliers sell liquor products to businesses" through that board (AGLC, 2019). This limits the capacity to compete in early stages of alcohol production and thus adds an extra set of hurdles to entry. Finally, there is also a legal requirement for uniform wholesale prices. This means that all private retailers are prohibited from negotiating discounts with liquor suppliers, which limits the emergence of chains of retail stores (as retail chains tend to have some bargaining power and some efficiency advantages that can lead to lower prices) (West, 2003: 6). Thus, while these provinces have technically liberalized, there still remains some important barriers to competition.

In the other provinces, state-owned corporations play a larger role by being virtually the sole provider of services. This is the case in Ontario where private retail is quite limited by virtue of the monopoly rights conferred on the crown corporation. In other provinces, there is some private retail that co-exists with the crown corporations but the latter act as gatekeepers. For example, in Quebec, grocery and convenience stores are allowed to sell beer and wine but they must do so under price controls (for beer) and permits have to be acquired in order to provide such services.[5] Moreover, only wines that are bottled in Quebec can be sold in grocery stores and the crown corporation extracts revenues from these sales (Laurin, 2014). The ability of the state corporation to restrict entry constitutes an important barrier to competition and the gains that it could unleash.

Domestic mail

The Canada Post Corporation enjoys a monopoly on domestic mail items weighing less than 500 grams (Bertrand, Hoeg, Hopson, and McLaughlin, 2016). This segment of the postal market represented 41.2% of Canada Post's revenues in 2017. The rest of the market for courier services (parcels, direct marketing, neighbourhood mails, and so on) is open to competition (Canada Post, 2018: 66). Thus, to calculate the portion of the mailing market that is subjected to monopoly, we must limit ourselves to the letter-mail segment of the market on which Canada Post has a monopoly (see footnotes to table 2).

4. However, this formulation overstates the extent of competition in British Columbia as entry into the industry still appears to be controlled by the provincial government (see Veldhuis and Milke, 2017).
5. Moreover, private wine importers in Quebec (which are numerous) are allowed to operate, but only if they order through the state-owned Société des Alcools du Québec and with certain quantity requirements.

Urban transit

Urban transit systems, defined as "establishments ... engaged in operating local and suburban mass passenger transit systems" such as streetcars and subways, are generally operated and monopolized by municipal or provincial governments (Statistics Canada, 2019). There are some smaller cities in Canada that tender exclusive rights to operate urban transit systems, but the vast majority of Canadian cities and all the major cities rely on publicly provided urban transit (Transport Canada, 2005). Municipal governments impose a range of prohibitions on competition for these services, even though we know from international evidence that such markets can be competitive if deregulated (Karlaftis and McCarthy, 1999).

Taken together, these four sectors of activity represent an additional 1.6% of the Canadian economy that is shielded from competition. However, this proportion probably downplays the extent of the protective wall. Indeed, the requirement in Alberta that liquor stores be free-standing buildings and the prohibition of retailers negotiating wholesale prices with suppliers constitute barriers to entry that protect incumbent players from competition. Widening the definition to include all alcohol retail sales in Canada brings that proportion between 1.6% and 1.7%.

Other protected industries

There are other industries receiving protection, which generally takes the form of legal barriers to entry to potential competitors, or high barriers to entry. One such example is the case of dairy and poultry production. Under the system of supply management, producers must acquire production quotas to possess the right to produce. The quantity of these quotas being fixed, the supply of their products is also fixed. The quotas, whose purchase constitutes a barrier to entry, are compounded by heavy import duties on these products. A similar quota system exists for maple products in Quebec (Moreau, 2018). A federation of producers was granted the right to restrict the supply of maple-based product. That federation also has the right to restrict the channels that producers can use to sell their products. The federation is also the exclusive bulk sales agent and all producers must go through the federation to sell products in containers of more than five litres (Gouvernement du Québec, 1990).

The same applies for taxis in the vast majority of Canadian cities: drivers must acquire licenses for the right to operate (Schaller, 2007). British Columbia, Quebec, and (until recently) Manitoba regulated the taxi industry at the provincial level and established exclusive zone of operations for taxi drivers as well as requirement to purchase an operator's license (in addition to a special driver's permit) in order to operate. Similar restrictions exist in other provinces but the administration of these restrictions are delegated to municipal governments (Monteiro and Civettini, 2005). In addition, in some provinces like Quebec, prices are regulated (Competition Bureau of Canada, 2015; OECD, 2018). Similar regulations apply to the limousine industry where special permits must be acquired in order to operate (Monteiro and Civettini, 2005).

Finally, there is the case of the interurban bus industry. Most provinces—with the exception of Alberta, Prince Edward Island, and Newfoundland & Labrador—grant monopoly licenses on certain routes as an incentive for bus companies to operate less profitable routes with the same level of quality as on the most profitable routes (Geloso, 2012). While provincial governments cannot prohibit competition on interprovincial routes (for example, Montreal to Toronto), intraprovincial routes are subject to entry barriers and explicit limitations to competition. In addition, the firms that do have monopoly rights have obligations in the manner in which the service is provided. For example, firms in Quebec must use the same types of buses on regardless of the route served (Geloso, 2012).Combined, as can be seen in **table 3**, these amount to 0.75% of the economy.

Table 3: Additional protected industries not covered in tables 1 and 2, and their contribution (%) to the Canadian economy

	2017
Dairy and poultry (supply management sectors)	0.60%
Maple products	0.02%
Intercity busing	0.03%
Taxis and limousines	0.10%
Total	**0.75%**

Notes: Figures are rounded. Dairy and poultry is measured by using the average level of final expenditures on dairy and eggs per household, which is then multiplied by the number of households in Canada. This is then expressed as a share of GDP measured by expenditures. For maple products, we used the value of production as we were unable to find a measure of final sales by province (since only Quebec is affected by the restrictions). For intercity busing, we could not find final sales and we used final revenues from the industry. We also adjusted the figure to exclude Alberta, Prince Edward Island, and Newfoundland & Labrador, where the market is more open to competition. The value for intercity busing is for 2016.

Sources: Dairy and poultry from Statistics Canada, table 11-10-0228-01; Statistics Canada, table 11-10-0125-01; maple syrup from Statistics Canada, table 32-10-0354-01; intercity buses from Statistics Canada, table 23-10-0081-01; taxis from Statistics Canada, table 36-10-0434-01; GDP (except for taxis) from Statistics Canada, table 36-10-0222-01.

A Low-Bound Estimate

The sum of these three forms of protection cover 22.1% of the economy. In other words, nearly one out of every four dollars of economic activity is affected by restrictions to competition. Such protections serve the interests of the incumbent players and have adverse consequences for the wider Canadian public, which is deprived of the benefits of competition. This is a low-bound estimate of the share of the economy with restrictions to competition in one form or another as a result of the caveats that we underlined earlier. These caveats were made because we were unable to integrate them into the other restrictions on entry either because there was a risk of double-counting or because limited data existed about them. However, there are ways of arriving at rough estimates of their potential importance.

For example, in table 2 the retail sales of alcohol in Alberta and British Columbia were considered to be competitive markets. As indicated above, there are still some important barriers to entry in those provinces even if there is no longer a strong state-mandated monopoly. However, the estimates above did not consider barriers to interprovincial trade because we were unable to find a proper way to measure exhaustively barriers to interprovincial trade. In the case of alcohol for example, there are significant limitations to moving liquor across provincial lines. These prohibitions, which are detailed in the report of the Canadian Senate on interprovincial trade, constitute a form of entry barrier as they protect the incumbent firms from competition on some margin (Standing Senate Committee on Banking, Trade, and Commerce, 2016). As mentioned earlier, considering the entire alcohol retail industry in Canada as facing significant barriers to competition on different, but nevertheless important, margins increase the proportion mentioned above by 0.1%.

Another example is trucking, which, as the Senate's report highlights, contains numerous regulations about hours of service, safety ratings, trip inspections, medical requirements, and vehicle-specific regulations that vary by province in ways that create barriers to interprovincial trade (Standing Senate Committee, 2016: 27–28; Bonsor, 1994). Truck transportation is one of the few industries studied by the senate that lends itself with few difficulties to the analysis made in the present paper. Alone, that industry represents 1.1% of the Canadian economy (Statistics Canada, table 36-10-0434-01)—suggesting that, if it were possible to account fully for interprovincial barriers, the proportion derived above would be greater.

National statistics not being computed on the basis of employment makes it hard to measure what share of the Canadian economy is protected from competition through occupational licensing. For example, translation is a regulated occupation but translators are found in all industries so that we cannot isolate their true contribution to Canadian output. However, some subsectors of the economy are sufficiently differentiated so that occupational licensing can be matched with a category of statistics on output. This is the case for the construction sector for which substantial barriers to entry exist. First, each province restricts entry by requiring a certain training to be acquired for different construction trades. The number of regulated trades varies by province with Quebec regulating close to 30 trades and Ontario less than 10 (Descôteaux, 2010). In addition, because regulations vary by province, construction workers have limited mobility from province to province, which acts as a barrier for some construction firms. These are significant entry barriers for an industry that represented 7.4% of the Canadian economy in 2017 (Statistics Canada, table 36-10-0434-01).

Adding the proportion for trucking and construction brings our estimate of the share of Canadian economy that is affected by restrictions on competition from 22.1% to 30.6%, meaning that close to 1 in 3 dollars of output in Canada is shielded from competition. Finally, it is also worth bearing in mind that we can adjust the size of the economy to exclude health care and education. As mentioned earlier, it is difficult to arrive at a reliable estimate of the share of the markets for health care and education that are

subjected or not to competition. However, we can circumvent this issue by removing the entire sectors from the denominator so that, instead of dividing the shielded portions of the economy by the total size of the economy, we divide these portions by the total size of economy minus health care and education. Such an exercise shows how much of the remaining share of the economy is affected by restrictions against competition through legislated entry barriers: 22.1% and 30.6% jump to 25.2% and 35.1%.

Conclusion

In international comparisons of the restrictiveness of policy environments, Canada is not a stellar performer. It imposes numerous restrictions on entry to markets that limit the forces of competition from operating for the benefit of Canadians. According to the cautious calculations made in this paper, which probably under-state the true proportion, close to a quarter of the Canadian economy is heavily affected by restrictions against competition through legislated barriers to entry. This gives firms less incentive to improve, cut costs, and improve efficiency. In turn, this lowers the living standards of Canadians. Provincial and federal governments in Canada should thus consider avenues to remove those barriers to competition and provide a framework that is more amicable to economic growth.

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