Alberta's Place in the World

The Changing Context of International Trade

CANADAWEST FOUNDATION

A report for the Business Council of Alberta | Carlo Dade | 2022

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Led by the Business Council of Alberta, *Define the Decade* is a major research and engagement project that looks to explore how businesses, Albertans and policy makers come together to purposefully co-create a good and prosperous life for everyone through a competitive, inclusive, and sustainable economy by the next decade. It is both a vision for the future of Alberta and economic framework that will define the next decade of Alberta's future and looks to build Alberta into a place where all who call this place home have security, belonging, and opportunity to live a good life. *https://www.businesscouncilab.com/definethedecade/*

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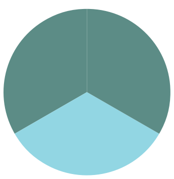
Introduction

Above average

Canada sits above the global average for exports as a percentage of a country's GDP.



Two-thirds

Over two-thirds of Canada's GDP is built upon moving goods, people, money, and information to and from markets outside of the country.

Top four

Alberta is among the top four jurisdictions in North America in exports per capita.

The economic foundation for a more prosperous future for Albertans largely begins and ends with international trade. Canada is a relatively small country and market by population, but a large economy measured by its gross domestic production (GDP). This wealth, over two-thirds of the country's GDP, is built upon moving goods, but also people, money, and information to and from markets outside of Canada.

The country sits above the global average for exports as a percentage of a country's GDP. For Canada, exports as a percentage contribute almost three times more to GDP than for the U.S. and more than for Australia. In a country where exports are so important, in Alberta they are more important still. The province is among the top four jurisdictions in North America in exports per capita.

Putting Alberta into a comparative North American context makes the point clearly.

Part of the explanation for the disparity between Canadian and U.S. jurisdictions with similar-sized economies is the ability of U.S. states to trade with each other. For the Americans the domestic market is not only obviously larger but also easier to access given the lack of both international and domestic regulatory and other barriers to trade that exist in Canada. For a country and a province where prosperity depends so much on external actors, attention needs to be paid to the conditions that influence whether and how the province can pursue them. These opportunities do not come easily. International demand, supply competition as well as competition for human talent and investment are among the many factors that can thwart Alberta's ambitions.

Alberta's long-standing desire to diversify its economy to build resilience and reduce reliance on the energy sector rollercoaster is well established. But calling for diversification is the easy part. Diversification causes changes to the economy that lead to disruption. Doing it successfully and managing the tiger once one has it by the tail is a lot harder. There are opportunities to grow the provincial economy and provide the foundations for a prosperous future, but they have always been eclipsed by the extraordinary contribution to Alberta's GDP from crude oil and natural gas.

If the objective of diversification strategies is to grow other sectors of the economy, then it makes sense to examine where other strengths lie. This report is an examination of some of the major changes to the global trade environment, including political changes, that directly influence the environment and framework for thinking about new opportunities as well as changes to old opportunities to grow the province's economy. The focus in this paper is on emerging issues, what are termed grey swans, those items sitting on, or just off the horizon that—should they materialize—will have profound impact.[1] It is assumed that issues that are already here or about to appear are well known by those reading this paper – an omission of the obvious. Beyond this, the choice of topics is subjective, informed by the daily work of the Canada West Foundation's Trade and Investment Centre in monitoring research, public discussions, and other information in Canada and abroad on global trade.

01 Importance of exports, top jurisdictions | Canada vs top 5 U.S. states (2019)

Province	**Export as % of GDP**	**Exports Per Capita** (CD$)	**2019 GDP** (CD$ thousands)	**Population** (thousands)
Newfoundland	41.89%	$28,422	$35,383,000	521
Saskatchewan	35.59%	$25,247	$83,324,000	1,174
New Brunswick	34.46%	$16,872	$38,033,000	776
Alberta	**33.49%**	**$26,923**	**$351,389,000**	**4,371**
Ontario	28.33%	$17,349	$892,226,000	14,566
Louisiana	25.09%	$18,194	$337,778,317	4,658
Prince Edward Island	22.90%	$10,862	$7,444,000	156
Manitoba	21.79%	$11,758	$73,900,000	1,369
Quebec	20.27%	$10,997	$460,252,000	8,484
Texas	17.62%	$15,035	$2,473,280,297	28,986
South Carolina	16.95%	$10,666	$324,642,405	5,157
Kentucky	15.27%	$9,792	$286,745,080	4,472
British Columbia	14.31%	$8,777	$310,978,000	5,071
Nova Scotia	13.22%	$6,332	$46,524,000	971
North Dakota	11.82%	$12,112	$78,293,071	763

Rise of political uncertainty in the U.S. will impact trade for Alberta

What

U.S. market access is increasingly uncertain and, given structural political changes in the U.S., the uncertainty will persist.

Why it matters

The U.S. is Alberta's largest trade partner.

U.S. MARKET ACCESS

Resurrecting COOL poses immediate and longer-term harms for Alberta's livestock industry. Its persistence raises doubt for potential investors in Alberta's meat processing industry about the viability of continued access to the U.S. market.

The new year opened with a series of news stories in Canadian papers on the rise of political risk and uncertainty in the U.S. This mirrored a realization in Canada and beyond about the seriousness of the situation in the U.S. and that countries must formulate plans to protect their own national interests.[2] This follows an unavoidable awareness that the increase in the intensity of domestic political tension in the U.S. has outlasted the Trump administration and could intensify.

Beyond political and security concerns, there is a structural element to this change that will lead to increased uncertainty about the performance of the U.S. economy as well as access to the U.S. market. This impact will be greatest on those regions that export goods needing to physically cross borders versus those reliant on services – feedlot alley vs Bay Street.

Unpredictable unilateral trade action from the U.S. has not, until recently, been a major worry despite occasional occurrences – the Nixon shock of the 1970s, for example, where Canadians woke one morning to discover that the U.S. had abandoned the gold standard and put a 10 per cent surcharge on everything Canada exported to the U.S. More recent shocks include softwood lumber tariffs and country of origin labelling (COOL) requirements. Recently, however Canada was hit with a series of trade blows in rapid succession rising from seldom-used executive powers, such as the national security tariffs imposed on steel and aluminum and threatened on autos and uranium. Further, there was the unprecedented threat from the White House to use the International Emergency Economic Powers (IEEP) act to impose, almost overnight, across-the-board tariffs on all of Mexico's imports to the U.S. The Trump administration's use of executive authority powers to manage trade has opened Pandora's box and lowered the bar for future use. Early in the Trump administration, the U.S. placed more new tariffs on allies than on China, despite rhetoric from the administration that China was the largest economic and political threat to the U.S.[3]

Most troubling for Alberta is the return, with a vengeance, of mandatory country of origin labelling. The last time the Americans imposed COOL requirements, in 2008/09, the Canadian cattle industry estimated losses at $1 billion a year with a similar amount for hog producers plus millions more spent on legal challenges and lobbying to fight the requirements. The U.S. lost a World Trade Organization (WTO) challenge to the labelling regulations and lost again on appeal with Canada winning the right to impose up to $3 billion in retaliatory tariffs. Despite all of this, the U.S. Senate tabled a bill in 2021 to resurrect country of origin labelling with or, reading between the lines, without it being WTO compliant. Resurrecting COOL poses immediate and longer-term harms for Alberta's livestock industry. Its persistence raises doubt for potential investors in Alberta's meat processing industry about the viability of continued access to the U.S. market. Without this guarantee of access, an investment in meat processing in Alberta serves 38 million consumers in the Canadian market as opposed to the 330 million-strong U.S. market. Beyond the livestock industry and even more concerning is what the persistence of COOL signals about the deterioration of the overall political-trade relationship and the continued erosion of the rule of law as a protection for Canadian exporters to the U.S.

On the right in the U.S., Alberta has lost traditional Republican allies like Senators McCain and Flake who have been replaced by populists who lack understanding and interest in foreign policy and have little if any appreciation of the Canada-U.S. relationship. While parts of the traditional GOP establishment remain intact, those elements are smaller and in their shift to more populist positioning, arguably less capable allies.

On the other side of the aisle, the Biden administration and democratic establishment are closer to the federal Liberals and Prime Minister Justin Trudeau. The two arguably share a similar mindset that is fundamentally at odds with some of Alberta's economic aspirations – particularly the pace and management of the restructuring of energy production and use tied to reducing greenhouse gas (GHG) emissions. Biden's immediate cancellation of the Keystone XL permit is an object lesson on this situation going forward. On environmental issues, Alberta faces an organized, focused opposition in the U.S. and an administration that is in lock step.

The longer-term implication is that the Trump years represented less an aberration of U.S. trade policy but instead let the genie of short-sighted, nationalist economic policy-making out of the bottle. Now that this new breed of U.S. politician has had a taste of how rewarding these measures are, they win votes today and incur costs to be paid by someone else tomorrow, it is virtually impossible to see any return to the old balance of thoughtful policy-making that protected Canadian interests.

Implications for Alberta

- To date, loss of access to the U.S. has been limited to certain sectors and or products. However, the threat to use the IEEPA against all imports from Mexico is a sobering reminder of an always-present threat that had been considered unlikely, let alone part of analysis. Economic growth opportunities contingent on fluid and certain access to the U.S. need in-depth consideration of vulnerability to loss of access.
- Access to the U.S. market is critical for some new growth opportunities such as plant protein products and crushed canola for bio-diesel. Part of the attraction for international investors in the Canadian plant protein industry has been access to the U.S. market. If that access to the U.S. market becomes less certain or more complicated, a traditional selling point for investment attraction is removed or weakened. Successful exploitation of these opportunities will require more "on the ground" political work, especially outside of Washington, D.C., to ensure success. If done properly and with a long-term perspective, they can also mitigate future political risks to investments as new technologies develop and similar factors change the facts on the ground, for example.
- In addition to market access, another factor needing attention is economic opportunity tied to imported inputs that have consistently been the target of direct or retaliatory "counter tariffs" by the U.S. Businesses not anticipating trade difficulties with the U.S. can still, very easily, find their products on a list of 'retaliatory' tariffs tied to the original point of contention by political—not economic—logic. Fortunately, countries including the U.S. and Canada have well known "go-to" products at the top of their lists for retaliatory trade actions. As an illustrative example of the principle, think of bourbon, a product uniquely of Kentucky, the home state of the U.S. Senate majority leader, which pops up on almost every retaliatory tariff list in any country's trade dispute with the Americans.
- Beyond investment attraction, uncertainty on market access to the U.S. is also critical for business retention. For Alberta firms whose exports to the U.S. are a major component of revenue, continued uncertainty surrounding access to the U.S. will increase the pressure on these firms to relocate or reposition some production and personnel to the U.S. If unpredictability along the border continues and the prospect of ongoing retaliatory tariff wars increase, then firms that do most of their business in the U.S. may find they must relocate to the other side of the border to ensure access to the U.S. market.

Rise of China, Fall of India

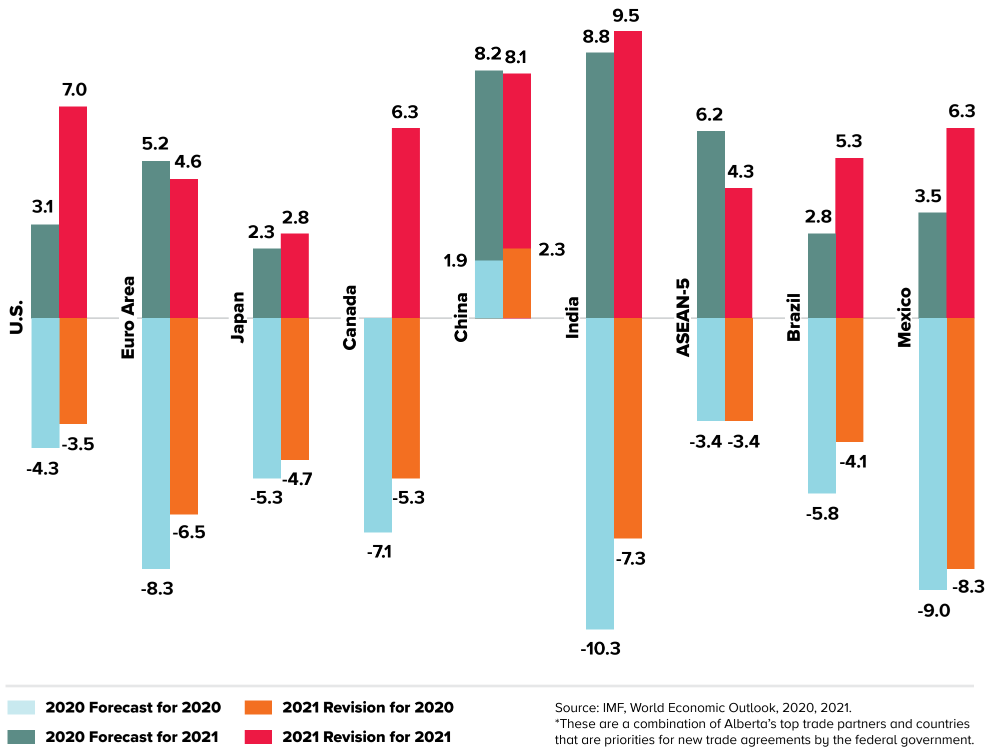
What

The two countries that have figured most prominently in discussions of markets to grow Canadian, and particularly Western Canadian, exports are China and India. But only one market (China) has emerged from the COVID pandemic stronger while the other (India) is weaker.

Why it matters

China's ability to manage the pandemic has contributed to stronger performance compared to other markets, including those that are the focus of federal government attempts to facilitate diversification from China.

02 Key foreign markets* economic performance during COVID



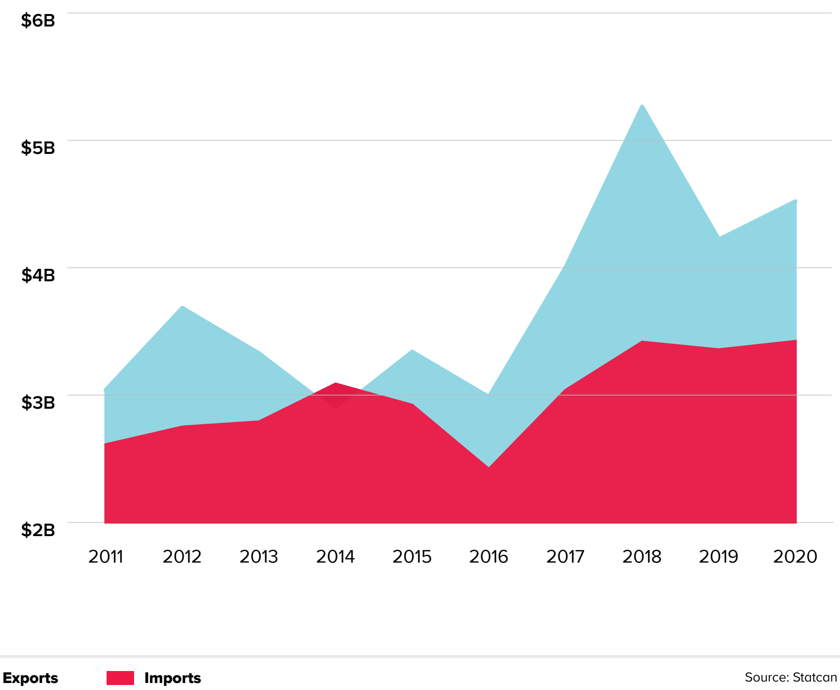
Source: IMF, World Economic Outlook, 2020, 2021.
*These are a combination of Alberta's top trade partners and countries that are priorities for new trade agreements by the federal government.

Current International Monetary Fund (IMF) forecasts for GDP growth for several key economies have been declined during the pandemic. Of note is the presence of continued growth in China in 2020 and 2021 contrasted against steep drops in other countries in 2020. While other markets are digging out of holes, China is adding growth to growth. The IMF's optimistic forecasts have a high downside risk from new variants and depend on the capacity of a country's public health authorities to respond to changing conditions. China's management of the pandemic to date has not led to the drops in growth seen elsewhere and it is reasonable to assume that this will translate to a continued unique ability to grow in the face of further setbacks.

For Alberta and other exporters, the impacts of COVID on a country's middle class consumers are key. India's middle class contracted by 32 million individuals out of a middle-class population of roughly 100 million.[4] This reduction represented 60 per cent of the estimated total decline in the global middle class population which is over 500 million. In contrast, estimates for China put the middle-class contraction at only 10 million individuals.

Officials at the World Bank are increasingly expressing concerns that "second-tier" impacts of the pandemic – loss of savings, weakened social safety nets, rise in inflation – are not fully understood and that projected increases in national GDP may not translate to resumption of middle-class growth.[5]

03 Alberta-China trade, exports and imports (2011-2020)



Source: Statcan CIMT database

China is ranked below the U.K. and Canada in the Bloomberg COVID resiliency rankings, but it is better positioned to mitigate ongoing impacts of the current pandemic as well as future pandemics than are other countries with growing "global middle classes" (GMC), especially India which is ranked in the bottom half of countries.[6] China also has a stronger social safety net than India and other GMC countries in Asia, which will allow it to better mitigate second tier impacts. The pandemic public health response was uneven but generally poor in Latin America due to political reasons. The region's stronger social safety nets, especially in Brazil, kept many from falling back into poverty. However, the sustainability of borrowing to increase spending for programs like cash transfers to the poor is likely not tenable in the longer run.

Implications for Alberta

- The viability of the global middle-class population in China means that past export strategies focused on meeting demand from this demographic remain viable for China but will have to be rethought for India.
- Canadian trade with China has been steadily increasing over the past decade, most notably including during the past few years which are characterized by observers as the worst in the history of the relationship. The data makes the case that economics, not politics, drives the trade relationship with some exceptions. Given the relatively much stronger performance of the Chinese economy during the pandemic, trade with China will continue to grow and, given weaker economic performance elsewhere, may even accelerate.

Accelerating pace of climate change policy response

What

Alberta's two biggest export markets for energy products have accelerated the pace of their climate change response policies. This follows similar trends globally.

Why it matters

Alberta is directly exposed to climate and energy policy changes in the U.S., which is not only our largest market, but often our largest competitor for energy products. Oil and gas remain Alberta's largest exports and a focus of direct and ancillary economic activity within the province. In addition, just over 40 per cent of the province's agriculture exports go to the U.S. These exports will be impacted by the massive policy shifts to net zero agricultural production, and certification of such, in the U.S.

When U.S. environmental and energy policy is not aligned with that of Canada, it creates serious competitive disadvantages for Alberta exporters.

It is not only climate policy itself, but the volatility of that policy that creates problems. For example, the goal of COP26 in November was to accelerate action, but at the same time Spain has dropped its climate program, Germany is reopening coal fired electricity plants, and China is experiencing rotating blackouts and looking again to coal to address its immediate electricity and heating crises.

The other factor which amplifies carbon policy is the financial sector and its regulators' growing interest in risk due to climate exposure and ESG factors. Despite only eight per cent of funds under management being considered climate focused, there is strong growing retail interest in sustainable investing (IMF 2021).

In some cases, international examples provide guidance for future Canadian actions. The U.K.'s "Just Transition" policy shows how a country can recognize that the transition to lower emissions will take time and that development of lower carbon alternatives need to be located in regions where emissions reductions will disrupt existing economic activity and jobs.

Alberta's second-largest market, China, through its own huge supply and demand, investment activities, and trade policy, influences international markets not just for agriculture products but oil, LNG and coal as well.

The seriousness of the policy shift in the U.S. is being revealed going forward. The Biden campaign had signalled that the Keystone XL pipeline would be cancelled well before the last presidential election and stuck to that decision – rescinding the pipeline's permit on the first day of the administration. Even the Trump administration, the most favourable U.S. administration to the project, couldn't make approval by executive order stick.

When U.S. environmental and energy policy is not aligned with that of Canada, it creates serious competitive disadvantages for Alberta exporters. Carbon pricing is the most critical example. But Canada and Alberta are also susceptible to fuel and vehicle emissions standards, offset credit markets, support for emissions mitigation initiatives like carbon capture, and new fuels like hydrogen – both blue and green. The U.S. will also take a lead role on investment fund labelling requirements and securities regulation – again a situation where Canadian investment will be at a disadvantage if Canadian policy actions are misaligned, or Canadian interests are not represented.

As the U.S. seizes opportunities in decarbonization – for example with tax incentives for carbon capture, utilization and storage (CCUS) – the U.S. has attracted Canadian innovators and developed its own expertise. This advances the U.S. CCUS sector and also potentially attracts large emitting sectors like steel production. Tax incentives can also drive U.S. leadership in blue hydrogen production. American First policies are not limited to beef, steel and aluminum or

INCENTIVES & REGULATION

The U.S. is seizing opportunities in decarbonization – Alberta could easily lose leadership on CCUS, low temperature geothermal, and hydrogen if incentives and regulation disadvantage Alberta companies.

softwood lumber: the U.S. will make every effort to advance its position on CCUS and hydrogen. On the positive side, widespread adoption of CCUS technology in the U.S. should help lower the cost of its implementation in Canada – making Canadian fossil fuels even more attractive to export markets. Widespread adoption in the U.S. may also create CCUS opportunities for innovators in Canada to sell to U.S. customers.

This accelerating global response appears not only on the energy file but also in agriculture. Reducing green house gas (GHG) emissions in agriculture was part of then-candidate Biden's stump speeches and featured prominently in Agriculture Secretary Tom Vilsack's Senate confirmation hearings. This has been another climate campaign promise put into action almost immediately upon taking office with the announcement of a net-zero GHG emissions target for U.S. agriculture. This has led the Climate-Smart Agriculture and Forestry Partnership Program (CSAF) to develop and implement new technologies and practices to reduce GHG emissions in agriculture, including the promotion of markets for climate-smart commodities. If Canada's regulations are not consistent with U.S. regulations, Canada could be locked out of these opportunities. The administration has publicly floated the creation of a carbon bank (essentially an offset market) to compensate agricultural producers for carbon sequestration and other GHG reduction actions. Also under consideration is refocusing the USDA's Commodity Credit Corporation from compensating farmers for losses caused by the previous administration's trade actions against China, to paying farmers to implement sustainable practices and capture carbon in their soil. In Canada, farming practices like zero tillage, that enhance soil sequestration, have become common practice – thereby disqualifying them for credits under some carbon trading regimes.

Implications for Alberta

- In addition to reducing GHGs, a by-product of the U.S. efforts in agriculture could conceivably become new non-tariff trade barriers, e.g., a substitution of mandatory country of origin labelling for the Climate-Smart Agriculture and Forestry Strategy (CSAF) or similar new ag environmental measures to become CSAF labelling for livestock. In other words, a new barrier to keep Canadian product out of the U.S.
- The U.S. is seizing opportunities in decarbonization – Alberta could easily lose leadership on CCUS, low temperature geothermal and hydrogen if incentives and regulation disadvantage Alberta companies.
- Demand for LNG, hydrogen, as well as thermal and metallurgical coal are exposed to coal policies influenced not only by the Paris signatories, but to a large degree by China. China and India will make the market for coal and China has surpassed Japan as the world's largest LNG importer. Events in Europe (and to some degree in China) are potentially "the great reckoning" many have been expecting, as a variety of factors have exposed the vulnerability of energy systems to the lack of reliability of renewables and geopolitical pinch points (Nordstream gas pipelines) for natural gas imports from Russia.

Future government pandemic policy response capacity

What

Awareness of the persistent threat of pandemics will engender changes to economic activity.

Why it matters

A jurisdiction's ability to mitigate and manage future pandemics will be a determinant of economic competitiveness and the ability to attract investment.

NEW BASELINE

Pandemic response is poised to become a new baseline component of the business environment.

There is consensus that COVID will become an endemic disease. This will be the fifth endemic coronavirus but one with a significantly higher morbidity and mortality rate than the others. Pandemic response is poised to become a new baseline component of the business environment.

A useful analogy is the post-9/11 response to the realization of the threat of global terrorism and resulting structural responses to global trade and business. The first time that the twin towers in New York were bombed was 1993 and the threat was marginalized, much like the response in Canada to SARS. But the second time the towers were bombed in 2001, the response was global and continues to this day. In the areas directly at risk to global terrorism, new regulations, new structures and new ways of doing business were imposed on sectors such as air travel, securing cargo facilities and movement of money. We are already seeing the potential for similar changes with pandemic response.

However, the bigger challenge for economic growth is how countries (and provinces) respond to the recognition that pandemics constitute a serious, persistent threat. It is analogous to the type of challenge posed by international terrorism but far surpasses it in scope and reach into economic activity. Governments perceived to be best able to respond to and mitigate the damage from this threat will have a comparative advantage in business attraction and competitiveness. Governments in jurisdictions where poor COVID outcomes are perceived to be tied to simpler fixes, such as increasing ICU capacity, should fare better than jurisdictions where negative outcomes stemmed from harder to fix behavioral or cultural issues, for example relating to vaccination rates.

Measures to aid competitiveness include infrastructure, such as widespread testing facilities and capacity to move goods and people during a pandemic, as well as policies like alliances with key trade partners on sharing resources and recognition of standards such as the Saskatchewan-North Dakota and Alberta-Montana agreements on vaccination of truckers.

One widely discussed change, reshoring of production, is a much less likely outcome.

For critical supplies where governments are willing to provide necessary subsidies to offset higher domestic costs, there will likely be reshoring of some production. However, for products where governments will not provide subsidies there are a series of factors that will limit reshoring.[7] For Canada and the United States, reshoring without government subsidy may only make sense for products where production costs can be shared with Mexico. Weaker public health capacity and poorer management of the pandemic in Mexico, and arguably parts of the U.S., may offset the advantages of bringing production back to North America. In addition, the continued growth of the middle class in China and booming Asia (outside of India) makes a strong argument for locating production in Asia. Rather than a rush to reshore to North America, the response is shaping up to be more nuanced supply chain diversification that is highly dependent on the sector and the product.

Implications for Alberta

- Investment attraction for opportunities involving movement of people may depend on perception of capacity – as well as actual capacity – to manage future pandemics. Or put another way, has the province learned the lessons of the current pandemic and taken adequate, long-term measures to respond.
- Reshoring is more hype than reality and there appear to be limited, if any, opportunities for Alberta in the few areas where reshoring will happen.

Reframing the geography of competitiveness

What

Economic geography of competition increasingly does not align with political geography. Megaregions are adding a new component to competitive advantage.

Why it matters

Understanding the economic geography of competition is key for thinking about and formulating economic attraction and competitiveness strategies.

Alberta is not recognized as part of any megaregion. Yet, it faces competition from established and emerging megaregions.

MEGAREGIONS

Recognized collections of neighbouring political jurisdictions whose economies have become intermeshed and spawned new regional governance, coordination, planning and even promotional structures that span city, state and even national boundaries.

Alberta is not recognized as part of any megaregion. Yet, in several areas which the province has identified as economic opportunities, it faces competition from established and emerging megaregions.

Megaregions are recognized collections of neighbouring political jurisdictions whose economies have become intermeshed and spawned new regional governance, coordination, planning and even promotional structures that span city, state and even national boundaries. The core features are relative geographic proximity among jurisdictions within the region, economic coordination mechanisms, integrated economies and transportation systems, and shared culture. An important additional feature is the introduction of cooperation in place of competition for investment, government resources, etc. There is a realization that no one entity is going to get 100% of any new investment but 10% of something is better than 100% of nothing. This coordination is not limited to one sector or one initiative – it is a framework and ecosystem for sectors and initiatives.

For investment attraction of knowledge-intensive industries where geographic proximity to human capital is important, Calgary does not compete with Vancouver. It competes with the combined resources and assets of Vancouver-Seattle-Portland: the Cascadia Corridor.

This cooperation, coordination and joint planning sits on top of the baseline services and connections provided by established government agencies and resources. Seattle, Portland, and Vancouver each have similar municipal and state provincial resources as exist in Alberta. The Cascadia Innovation corridor provides an additional layer on top of this. The corridor's working groups, regular meetings of stakeholders and resources devoted to coordination and joint planning provide an ecosystem in which to grow joint initiatives. An initiative to position the region as a global leader in ag technology and food processing is therefore not a one-off or standalone. It is part of a broader ecosystem of deep, long-term cooperation, shared assets, and joint planning for related initiatives that allow investments in one area or initiative to be leveraged for wider benefit and impact.

The North American competition for the new Amazon headquarters frames the challenge posed by megaregions for Alberta, especially in its pursuit of knowledge-intensive industries that benefit from physical proximity to resources. A post-mortem of the competition shows that it was not a competition between the limited assets of one city versus another but rather of the combined assets of megaregions. In the end, Amazon placed its headquarters in the Boston-NY-Philadelphia-Washington megaregion. From its two locations in the megaregion, Amazon is within a 90-minute drive of, to pick just one of many examples, 20 of the top 100 universities in the U.S. and hundreds of other universities and technical colleges and to regional economic organizations composed of people who are a short drive or public transit trip away from each other.

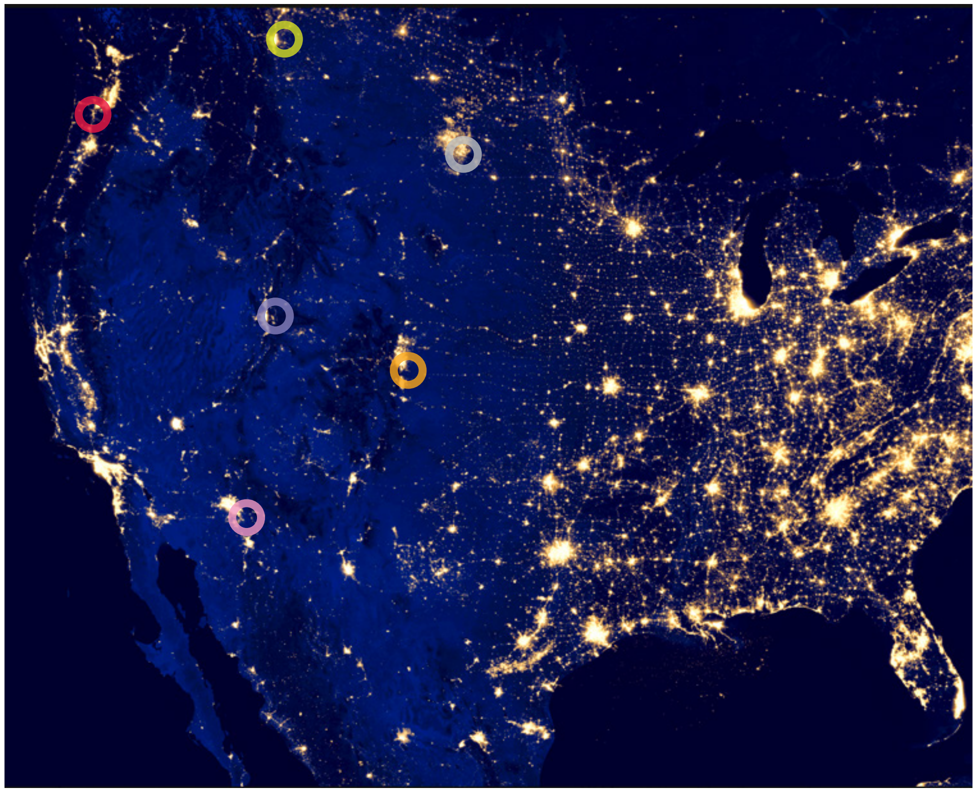
04 Emerging and Cascadia megaregions in North America

Night Map of North America, Emerging & Cascadia Megaregions

- Cascadia Corridor, Vancouver, Seattle, Portland
- Arizona Sun Corridor, Phoenix, Tucson, Nogales
- Front Range Denver, Colorado Springs, Ft. Collins, Cheyenne
- Wasatch Front — Salt Lake City, Provo, Ogden
- Bakken oil fields (not a megaregion)
- Calgary, Red Deer, Edmonton

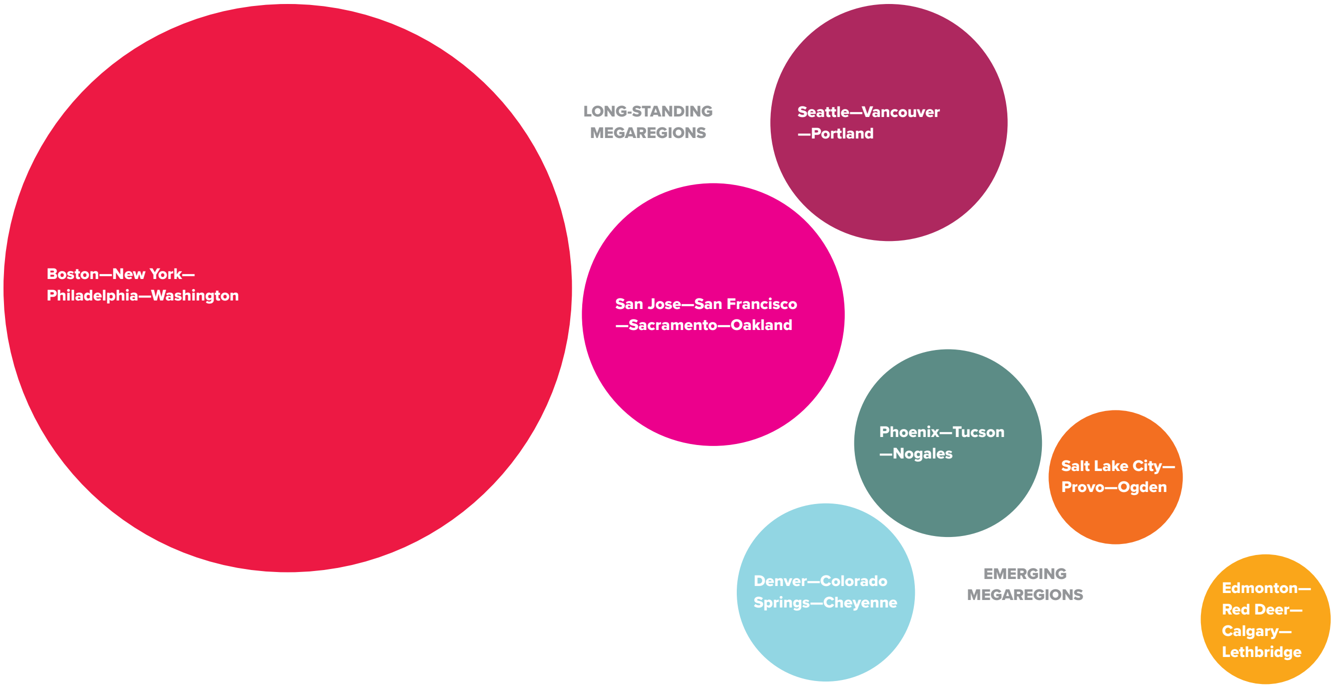
Note: The Bakken oil and gas field (represented by the gray circle) is not a megaregion. The bright lights are flaring unwanted gas from oil wells.

Source: www.nasa.gov



The long-established megaregions in North America – the Boston-Washington corridor, Chicago-Pittsburgh region, Silicon Valley, and others – present a formidable, arguably insurmountable, challenge for Alberta given that all have populations, GDPs and asset collections that are multiples larger than the entire province of Alberta let alone any possible grouped metropolitan areas within or adjacent to the province. However, these long-established megaregions also come with a host of problems associated with their size – traffic congestion, aging infrastructure, expensive housing. The more pernicious challenge for Alberta lies in the emerging megaregions in the U.S. These newly merging entities are in a Goldilocks space of having some of the benefits of megaregions without the same intensity of drawbacks as more established, larger megaregions. Here, regions such as the Front Range region of Colorado-Wyoming and Wasatch Front region of Salt Lake City, Provo and Ogden stand out.

05 Amenities and size of North American megaregions



Region	Population	GDP(US$B)	Universities/ community colleges	International airports	Regional commuter rail links	Megaregion specific coordination
Boston—New York—Philadelphia—Washington	50,524,757	$3,650	234/too many to count	9	Yes	Yes
San Jose—San Francisco—Sacramento—Oakland	10,800,707	$925.	9/25	4	Yes	Yes
Seattle—Vancouver—Portland	8,800,000	$627	14/14	3	No	Yes
Phoenix—Tucson—Nogales	5,517,131	$300	8/11	4	No	
Denver—Colorado Springs—Cheyenne	4,966,781	$570	10/8	1	No	
Salt Lake City—Provo—Ogden	2,641,048	$168.	6/10	1	No	
Edmonton—Red Deer—Calgary—Lethbridge	2,814,453	$164	7/7	2	No	No

Source: CWF calculations from various sources. Colleges do not include for-profit trade schools and institutions, a choice which arguably paints a more favourable picture for Canada. The university and college numbers exclude institutions with a primarily theological or faith curriculum. For the hypothetical Edmonton-Calgary-Lethbridge corridor, NAIT and SAIT are included under universities. Exact comparisons between U.S. and Canadian difficulties are difficult but the same distinctions and definitions were applied to U.S. and Canadian corridors to attempt an apples-to-apples comparison.

Investment attraction and economic growth opportunity strategy needs to be done through a megaregion lens recognizing that Alberta is missing a recognized megaregion.

The Edmonton-Red Deer-Calgary-Lethbridge corridor, however, does not show up in any global or even North American listing of megaregions. The jurisdictions are separate entities too far apart with too little in between to meet the general definition of geographic proximity found in most all megaregions. Table 5 on page 17 puts a potential YEG-YYC megaregion in context with what would be its likely competitors in North America.

Implications for Alberta

- Unlike the Amazon HQ campaign, investment attraction and economic growth opportunity strategy needs to be done through a megaregion lens recognizing that Alberta is missing a recognized megaregion and that creating one does not happen overnight nor through government-led actions.
- Not only do other regions, companies and investors not recognize Alberta as a megaregion –Albertans do not have a megaregion mindset (except perhaps for the oilpatch). Edmonton competes with Calgary in everything – not just sports.
- Alberta is developing some "corridor" initiatives like ag tech and food processing, but these sit in isolation from other developments as one-offs and lack the larger ecosystem of cooperation and initiatives that make similar initiatives in megaregions like those in the Front Range and Cascadia more attractive.
- It is critical to note that these megaregions, at least in North America, have grown organically from the ground up not from the top down. They are not creations of government. Governments race to catch up with the emergence of new needs and demands as economic actors create new needs and mechanisms for cooperation, coordination, and planning and most importantly as "beggar thy neighbour" is replaced by "band together to compete against others". Worse than not having a megaregion is having a government program that attempts to create one.
- Edmonton Global has had success in building a "compete together" mentality among jurisdictions in the Edmonton region and this may be a starting point, but it will take time as the development of trust comes from working together.

The rise of internationally recognized micro-credentials

What

Micro credentials can provide targeted skills training and assessment efficiently and effectively if the competencies to be credentialed are verified by employers as part of the job profile and included in a competency framework. Competency frameworks align demand and supply in labour markets, which improves productivity.

Competency frameworks are being used by Canada's competitors to to create a common, more efficient, language and standards for educators and employers. These frameworks revolutionize labour market information systems and lead to increased investment and talent attraction. By helping to match people to jobs and training more efficiently, these frameworks improve labour productivity.

Why it matters

Incorporation of competency frameworks into the workforce development and deployment systems improves competitive advantage in general and would smooth the transition and transformation of the energy sector in the province.

New jobs require new skills and competencies – a workforce without them is not productive.

Oil sands companies are changing their strategy away from new greenfield projects to increase production from current assets and at the same time reduce GHG intensity of that production. Electricity generators are making the switch from coal to natural gas and renewables ahead of regulatory mandates. Energy efficiency improvements change how and what gets built or renovated. The province is looking to replicate the cost reduction success in oil sands production as they work toward cost reductions in carbon capture and storage (CCS), hydrogen production and geothermal. And the transformation is not just limited to oil and gas – agriculture production, equipment manufacturing and food processing are seeing a revolution in efficiency, GHG reduction and automation.

Alberta's labour force is on the front line of this transition. In cities, towns and rural communities, disruption has begun to change how and where people make their living. New jobs require new skills and competencies – a workforce without them is not productive. Lower labour productivity affects competitiveness, wages, and investment attraction.

To develop the workforce required for these new jobs, training programs should be targeted to the specific competencies required to perform them. Employers lead the development of the job competency profiles that illuminate the competencies and the standards of competence required. This, in turn, informs training providers so that targeted training can be offered. Direct assessment and verification of competence can be credentialed through modular, stackable micro credentials. This system would expedite the development of the workforce for the transformation of the energy sector.

Implications for Alberta

- Alberta, more than most places, faces a labour force transition due to technological change (adoption of AI in smart ag, robotics in food processing, online service provision) as well as changes from the transition to a lower carbon economy, which is also creating a shift to new technologies and processes. The adoption of competency frameworks can better and more efficiently match people, jobs, and training.
- In a world of labour shortages of specialized talent, the guarantee of a work force that can be trained for the specific requirements of employers is a powerful tool for investment attraction. Likewise, solid labour market information about high demand jobs for people with specific competencies will attract people who can see their future in the province.

- Since competency frameworks are not in wide use in the province, employers will need support to revise job descriptions, education and experience requirements, as well as competency assessment processes to enable them to hire, train and manage a more productive and satisfied workforce. Industry associations often take the lead to develop the frameworks for their employers and interconnect their frameworks with other sectors.
- Alberta's post-secondary sector is not as responsive to current and future labour market requirements as are jurisdictions where competency frameworks are being used. Post-secondary institutions in the province do not yet have learning and assessment educational competency systems in place that would allow them to produce competency credentialed graduates.
- Labour market information (LMI) systems need to be much more granular and timely. LMI systems should align with, and inform, employers' competency frameworks as well as education providers and training course designers. This would assist in the design of career paths that take advantage of future opportunities in rapidly changing sectors.
- Competency standards are critical to take advantage of the liberalization of movement of labour, technicians, skilled trades, professionals and businesspersons under modern trade agreements such as the CPTPP (Comprehensive and Progressive Agreement for Trans-Pacific Partnership) and CETA (Comprehensive Economic and Trade Agreement). Until Alberta develops competency frameworks any competitive advantage from using these provisions of the EU agreement would fall to the Europeans who are well ahead in the use of competency frameworks.

FOR MORE INFORMATION

Canada West Foundation has built support among institutions, employers, students, and federal employment programs for the necessary changes for the past eight years. Our recent work: **Human Capital Centre, Canada West Foundation**

Multilateral trade agreements

What

Canada is party to more multilateral trade agreements than our export competitors.

Why it matters

These agreements offer greater advantages for building and exploiting supply, production, and distribution chains than traditional bilateral agreements.

06 Impact of multi-lateral agreements on market access

	Bi-lateral agreements in force	Multi-lateral agreements in force*	Markets covered in multi-lateral agreements**
U.K.	31***	8	62
Korea	13	4	46
Canada	11	4	40
Australia	12	3	22
Japan	17	2	17
E.U.	39	1	13
China	16	2	10
U.S.	12	2	8
Mercosur** **	8	0	0

* Not including WTO agreement.
** Only countries with which agreement is in force.
*** Includes continuation of EU agreements to which the UK was party.
**** Mercosur is the customs union of Brazil, Argentina, Paraguay and Uruguay that can only sign trade agreements as a bloc.
Source: CWF calculations from various sources http://rtais.wto.org/UI/publicPreDefRepByCountry.aspx

There are two important points on trade agreements to remember when thinking about trade and investment. First, Canada has a basic trade agreement with the 164 countries who are members of the WTO. We have tended to forget this in the excitement to sign more specific agreements. Second are the benefits of multi-lateral agreements over bilateral ones. Multilateral agreements with one set of rules and paperwork for multiple markets allow exporters to pro-rate the cost of agreement compliance across several markets as well as the cost of development of supply, production, and distribution chains. Shifting from a focus on commodity-based exports, where one set of rules for several markets is less important, to manufactured and processed goods where it can be a significant advantage makes this multi vs bilateral difference important. For example, under the CPTPP agreement, an exporter of a manufactured product, including food products, has one set of rules for exporting to all 11 members. Equally important, firms need, for example, only a single distribution agreement with a company in Singapore, to handle shipment, storage, distribution, and all fulfillment issues for all members of the bloc instead of 10 separate agreements.

Implications for Alberta

- The supply and production advantages of new trade agreements are a competitive advantage over U.S. competitors
- In addition to supply and production chain advantages for production and distribution of goods, improved and wider reaching labour mobility provisions in Canada's multilateral agreements, including the E.U. agreement, give Alberta another competitive advantage over U.S.-only based firms.
- Albertan firms have another advantage in being able to use supply and production chain partners in Mexico to sell into the U.S. market under the new NAFTA agreement and into the Pacific Rim and potentially the U.K. under the CPTPP.

U.S. pushes extraterritoriality in its competition with China

The U.S. has a history of using its economic power to advance U.S. political interests. For Western Canada, a notable example is the Eisenhower administration preventing Imperial (Exxon) Oil from fueling Canadian grain transport ships at the Port of Vancouver when Prime Minister John Diefenbaker refused to follow the U.S. grain embargo of China in the 1950s. More recently, U.S. administrations have instructed Canadian subsidiaries of U.S. retail stores to adhere to the prohibitions on the sale of Cuban origin goods in Canada. The extradition request of the Huawei executive involved fraud in evading economic sanctions on Iran that Canada, the U.N. and most other OECD countries do not recognize and refuse to comply with. It can be very easy to wind up on the wrong side of U.S. economic sanctions, embargos, and similar measures. As the U.S. cold war with China escalates and extends its digital technology focus, the possibility of running afoul of U.S. measures, current or future, becomes a greater concern. A new venture that requires technology held by China would raise obvious concerns. But these concerns would extend to joint production arrangements overseas.

In new sectors like plant protein or canola oil for bio-diesel one of the largest markets for Prairie processors will be the U.S. Rather than shrinking, trade dependency on the U.S. may be growing in value-added agriculture.

For most countries on the U.S. sanctions lists, e.g., Cuba, Iran, Sudan, and Zimbabwe, this is not an issue. But with the world's largest economy it is. Where lower cost or more appropriate Chinese technology is put off limits, Canadian firms may have greater difficulty competing globally with any offsetting guarantee of access to the U.S. market or say exemption from Buy America rules in exchange. This can also limit the ability to invest at home. Barring Huawei from participating in the internet buildout in Canada may remove one of the few global companies with extensive experience in remote and difficult buildouts in Africa and elsewhere. Remote Indigenous communities in Canada likely will not be impressed that highspeed internet is delayed because the Americans do not like a particular vendor, especially if the Americans are not offering some form of compensation for the loss.

Then there is the potential of more direct economic losses. Eighty-eight per cent of all Alberta exports, 61 per cent of non-oil exports go to U.S. and over 40 per cent of agricultural exports all go to the U.S. In new sectors like plant protein or canola oil for bio-diesel one of, if not the largest markets for Prairie processors will be the U.S. Rather than shrinking, trade dependency on the U.S. may be growing in value-added agriculture. Growing investments in film and TV production in the province likewise make good targets for any U.S. administration seeking leverage to enlist Canadian support for sanctions.

In the case of Cuba and Helms-Burton, Canada has specific legal measures in place to protect Canadian companies, going so far as to criminalize compliance with U.S. law. This protection is lacking for evolving U.S. rules for China. The U.S. policy and regulatory regime, the United States Innovation and Competition Act of 2021 (USICA), formerly known as the Endless Frontier Act, has two specific sections on cooperation and coordination with Canada.[8] The U.S. has not specified what it seeks from Canada but has clearly laid a marker for future asks. Obvious candidates would be cooperation on further limits on the use of Chinese software and hardware, limits on Chinese investment in North America, and potentially harmonized regimes for managing academic exchanges, likely based on the extensive measures outlined in the United States Innovation and Competition Act with Chinese universities in sensitive economic and security sectors.

Endnotes

[1] https://www.investopedia.com/terms/g/grey-swan.asp

[2] See e.g., https://www.theglobeandmail.com/politics/article-if-the-next-presidential-election-reveals-the-us-hurtling-toward/

[3] 'Analysis | Trump Has Officially Put More Tariffs on U.S. Allies than on China', Washington Post, https://www.washingtonpost.com/news/wonk/wp/2018/05/31/trump-has-officially-put-more-tariffs-on-u-s-allies-than-on-china/.

[4] A simple definition of "middle class" in this context is individuals who earn enough, and feel confident in the security of increased earnings, to increase the quantity and quality of consumption. The quantitative definition applied here comes from, Rakesh Kochhar, 'In the Pandemic, India's Middle Class Shrinks and Poverty Spreads While China Sees Smaller Changes', Pew Research Center (blog), accessed 10 September 2021, https://www.pewresearch.org/fact-tank/2021/03/18/in-the-pandemic-indias-middle-class-shrinks-and-poverty-spreads-while-china-sees-smaller-changes/.

[5] 'Millions Are Tumbling Out of the Global Middle Class in Historic Setback', Bloomberg.com, accessed 1 October 2021, https://www.bloomberg.com/features/2021-emerging-markets-middle-class/.

[6] https://www.bloomberg.com/graphics/covid-resilience-ranking/
December 22, 2021 report, accessed January 17, 2022

[7] Japan, for instance is providing direct payments to businesses to relocate production from China to Japan.

[8] https://www.congress.gov/bill/117th-congress/senate-bill/1260/text?q=%7B%22search%22%3A%5B%22endless+frontier%22%5D%7D&r=1&s=2

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