MARKETS OF OPPORTUNITY FOR CANADIAN EXPORTERS

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EDC Economics

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*EDC

EXECUTIVE SUMMARY

Exports play a critical role in powering Canada's economic growth, but what will be the key international markets of opportunity for Canadian companies in the decades ahead? This report offers some insights. Guided by trade theory, Export Development Canada's Economics team has leveraged a comprehensive cross-country dataset to build "gravity models" to incorporate key factors that have driven Canada's exports over the past 30 years. We then apply these models to assess whether Canada is currently taking full advantage of its export potential across 170 countries, and we quantify the export opportunities for Canada in each market over the next 30 years.

KEY FINDINGS

More room to grow now.

1. Despite already having high levels of engagement with the world's top markets of the United States and China, there's still more room to grow Canada's exports to these destinations. Our model estimates that, on an annual basis, Canada's exports to the U.S. and China are collectively US$31 billion below what they could be.

2. We also identify several "hidden gem markets" where Canada could also increase its exports right away. Many of these top-ranked countries are in the Asia-Pacific, including South Korea, Australia, Indonesia, Singapore, Malaysia and Thailand.

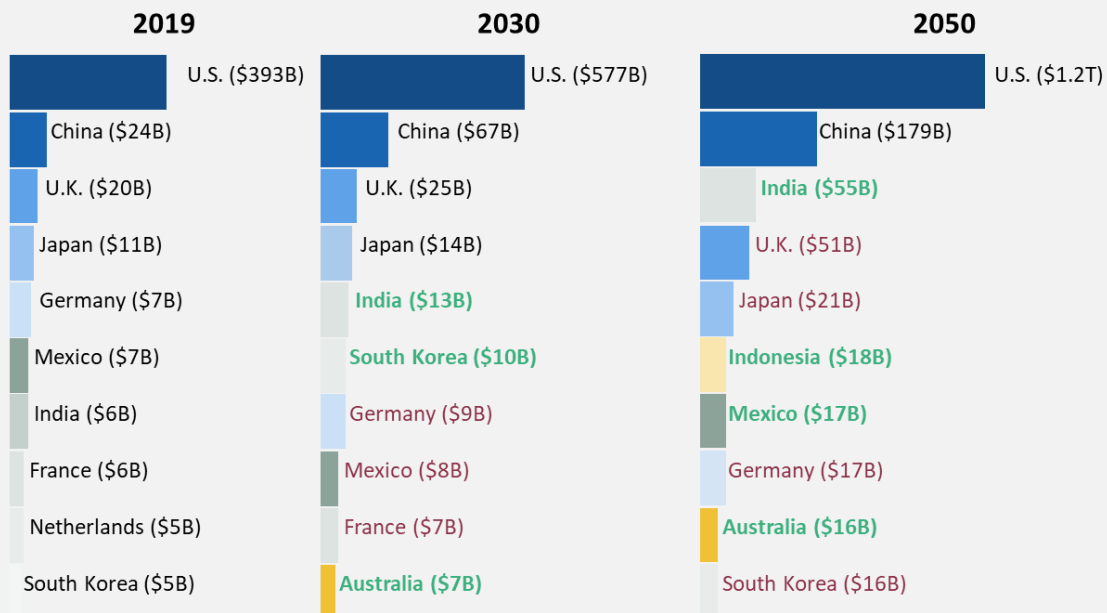*Emerging markets will continue to gain importance over time.*

3. By 2030, our forecasts indicate that annual Canadian exports could grow to US$840 billion. The Top 5 markets are expected to be the U.S., China, United Kingdom (U.K.), Japan, and India. Together, they could account for more than 83% of Canada's exports.

4. Over the next decade, our model estimates that India will rise from Canada's 7th most important trading partner to its 5th, while South Korea will rise from 10th position to 6th.

5. Over the long run, emerging economies will continue to gain prominence in global economic activity, with their gross domestic product (GDP) expected to overtake that of advanced economies by 2040. Many of the fastest-growing countries are in the Asia-Pacific, including China, India, Indonesia, Malaysia, and Vietnam. As such, we find that Asia and Oceania countries' share of Canada's exports is likely to nearly double (up from 12% before the pandemic to 21% by 2050), as the share of exports destined to North America and Europe falls. Underscoring these dynamics, Indonesia is expected to enter Canada's Top 10 export markets by 2050, becoming Canada's 6th most important export destination.

6. In the context of the recent discussions on the reshoring of production, we note that the U.S. is expected to remain, by far, Canada's biggest and most important long-term trading partner. We estimate that Canada's share of exports to the U.S. is likely to decline only modestly from about 74% now to around 65% by 2050.

Canadian traders need to focus more on the emerging markets of tomorrow, especially in Asia.

7. In addition to being geographically further away than the rest of North America, Asian-Pacific economies may pose unique challenges, since their regulatory, business environments, and cultures are significantly different than what most Canadian businesses are used to in the advanced economies of Europe and the U.S.

8. After considering Canada's export opportunities and individual country risks, the U.S and advanced economies of Europe are expected to remain safe and stable bets for many years to come.

9. In other regions, especially Asia—and Africa to a lesser extent—we see sizable export opportunities that generally come with elevated risks. This applies to China, which could account for almost half of Canada's future export opportunities in Asia.

10. Winning in these emerging markets will require taking a hard look at Canada's current export basket, which is rich in primary commodities, but lags other advanced economies in value-added, next generation products and services.

Canada's Top 10 current and future export markets: 2010–2050
(Actual annual exports for 2019, forecasted annual exports in USD for 2030 and 2050)

2019	2030	2050
U.S. ($393B)	U.S. ($577B)	U.S. ($1.2T)
China ($24B)	China ($67B)	China ($179B)
U.K. ($20B)	U.K. ($25B)	India ($55B)
Japan ($11B)	Japan ($14B)	U.K. ($51B)
Germany ($7B)	India ($13B)	Japan ($21B)
Mexico ($7B)	South Korea ($10B)	Indonesia ($18B)
India ($6B)	Germany ($9B)	Mexico ($17B)
France ($6B)	Mexico ($8B)	Germany ($17B)
Netherlands ($5B)	France ($7B)	Australia ($16B)
South Korea ($5B)	Australia ($7B)	South Korea ($16B)

Source: EDC Economics
Note: Green indicates that countries have moved up in rankings compared to the previous bar chart. Red indicates that countries have moved down in rankings compared to the previous bar chart.

Canada's Top 25 future export markets and risks: 2030
(Forecasted annual exports in USD billions)

Annual export potential (USD billions)

$600

$80

$70 — China

$60

**High opportunity,
lower risk**

$50

**High opportunity,
higher risk**

$40

**Significant opportunity,
low-medium risk**

$30

**Significant opportunity,
high risk**

$20 — U.K.

$10 — Japan — India

Germany
France
South Korea
Mexico
Netherlands
Australia
Belgium
Indonesia
Switzerland
Hong Kong
Saudi Arabia
Ireland
Spain
Italy
Vietnam
Brazil
$-
Norway
Malaysia
Philippines
Singapore

0   1   2   3   4   5   6   7   8   9   10

EDC Economics country risk rating

U.S.

Sources: EDC Economics, Oxford Economics
Note: EDC Economics country risk rating averages three distinct categories of risk–political violence, expropriation, and transfer and conversion. Each rating is scaled from 0–10. Averaged together, the total risk scale is from 0–10, with 10 being the highest possible risk. These ratings are assigned by EDC's country risk analysts reflect up-to-date information as of May 2021.

THE CANADIAN TRADE DIVERSIFICATION DEBATE: RECAST

A quick analysis of Canadian trade data reveals three key points:

1. Canada's exports are heavily concentrated on the U.S. market;
2. Canada's export performance has lagged behind its peers in recent decades; and
3. Canada's high degree of export concentration might be related to this suboptimal trade performance. **(Box 1)**

The final point might suggest that Canada has already exhausted its export potential in the U.S. and has in this process, ignored other markets of opportunity. Exports are an important pillar of Canada's economic growth—even more so, over the next few decades. Which countries offer Canada the biggest opportunities for trade growth and sustained expansion in its export revenues?

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Box 1: Three key observations about Canadian trade

Canada's Top 10 export markets
(2017-2019 average, USD billions)

Export markets	Goods exports	Services exports
U.S.	332	55
China	19	6
U.K.	14	5
Japan	10	1
Mexico	6	1
Germany	4	2
France	3	3
India	3	2
South Korea	4	1
Netherlands	3	1

Goods and services export volumes
(% of global total)

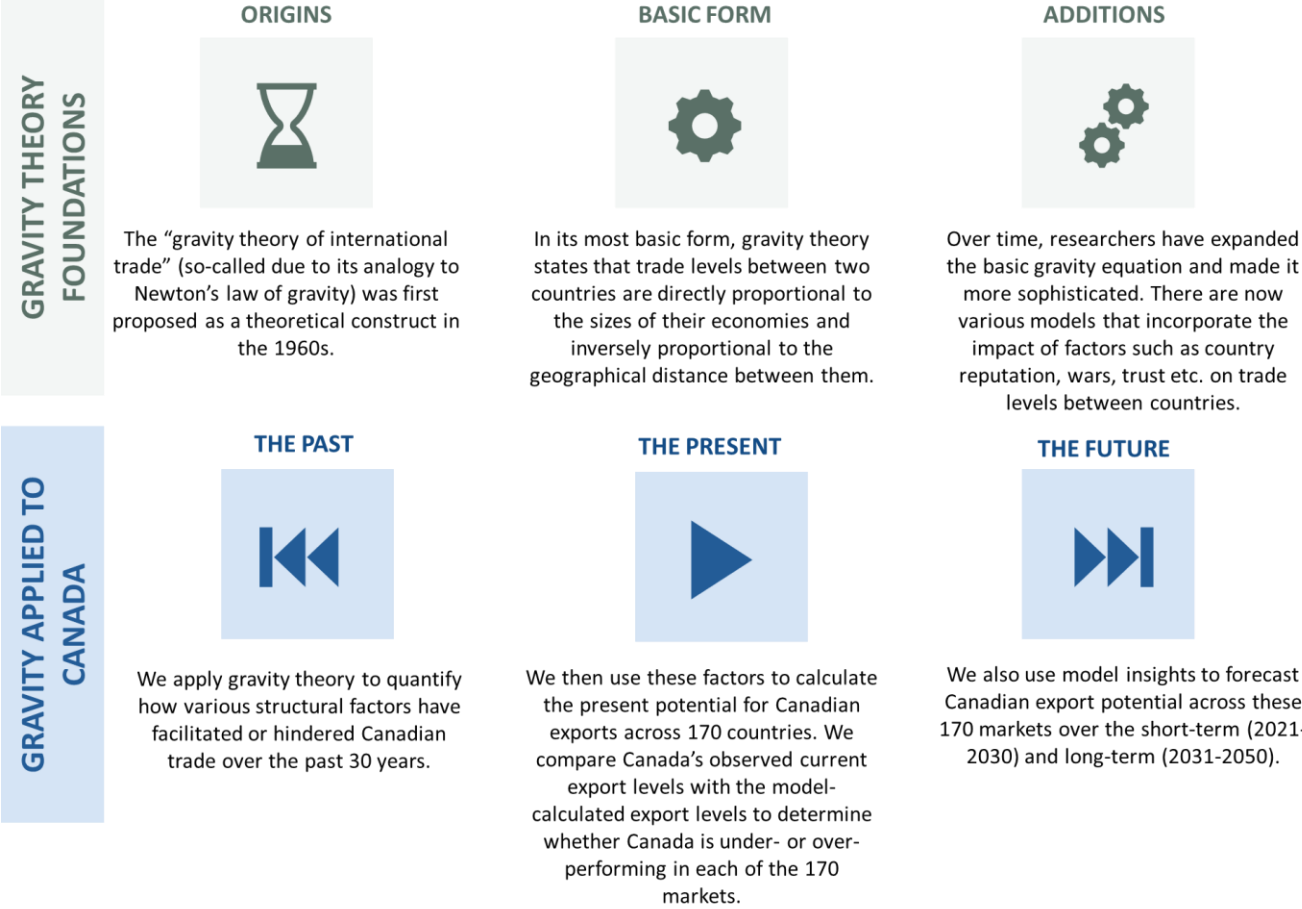Advanced economies (left axis) — Canada (right axis)

$165B gap
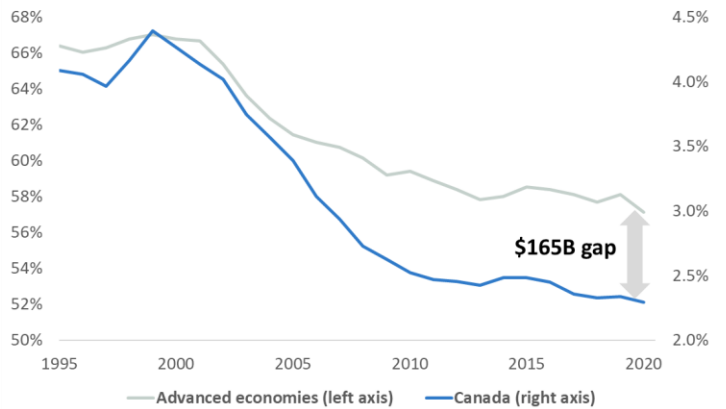
Organisation for Economic Co-operation and Development (OECD) countries' merchandise trade market concentration measure
(Herfindahl-Hirschman Index*)

Canada's trade concentration measure is significantly higher than every other OECD country, except for Mexico.
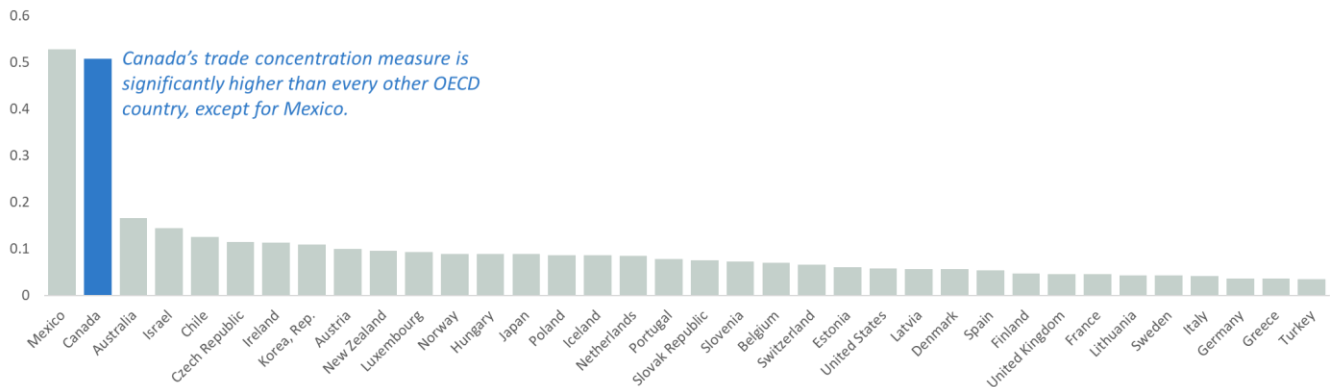
* The Herfindahl-Hirschman index is a common way to evaluate a country's export market concentration $\text{HHI} = \sum_i s_i^2$, summing the squared market shares. A higher index closer to 1 indicates a country's exports are more concentrated, while a lower index closer to zero signifies more diversified exports. This chart depicts the index based on 2017 data.
Sources: EDC Economics, Haver analytics, IMF, World Bank – World Integrated Trade Solutions Database

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In this report, we identify Canada's future export markets of opportunity. We evaluate Canada's recent trade performance across its major export destinations and determine whether Canada has taken advantage of its full export potential. We then highlight future markets of opportunity for Canadian exports in 2030 and 2050. We do this by developing theory-based gravity models that look back to incorporate key factors that have driven Canadian goods and services exports over the past 30 years. We then apply these models to assess Canada's recent export performance and estimate the size of Canada's future export opportunity across 170 markets. **[Box 2]** In doing so, we re-examine the continued potential to expand the long-standing relationship with our closest trading partner south of the border. In the next two chapters, we outline key results stemming from this exercise—mainly focusing on Canada's recent export performance and its future export opportunities. In the technical appendix, we provide additional details about the model, including parameters and specification criteria.

Box 2: Gravity modelling: Theory and our application

GRAVITY THEORY FOUNDATIONS

ORIGINS

The "gravity theory of international trade" (so-called due to its analogy to Newton's law of gravity) was first proposed as a theoretical construct in the 1960s.

BASIC FORM

In its most basic form, gravity theory states that trade levels between two countries are directly proportional to the sizes of their economies and inversely proportional to the geographical distance between them.

ADDITIONS

Over time, researchers have expanded the basic gravity equation and made it more sophisticated. There are now various models that incorporate the impact of factors such as country reputation, wars, trust etc. on trade levels between countries.

GRAVITY APPLIED TO CANADA

THE PAST

We apply gravity theory to quantify how various structural factors have facilitated or hindered Canadian trade over the past 30 years.

THE PRESENT

We then use these factors to calculate the present potential for Canadian exports across 170 countries. We compare Canada's observed current export levels with the model-calculated export levels to determine whether Canada is under- or over-performing in each of the 170 markets.

THE FUTURE

We also use model insights to forecast Canadian export potential across these 170 markets over the short-term (2021-2030) and long-term (2031-2050).
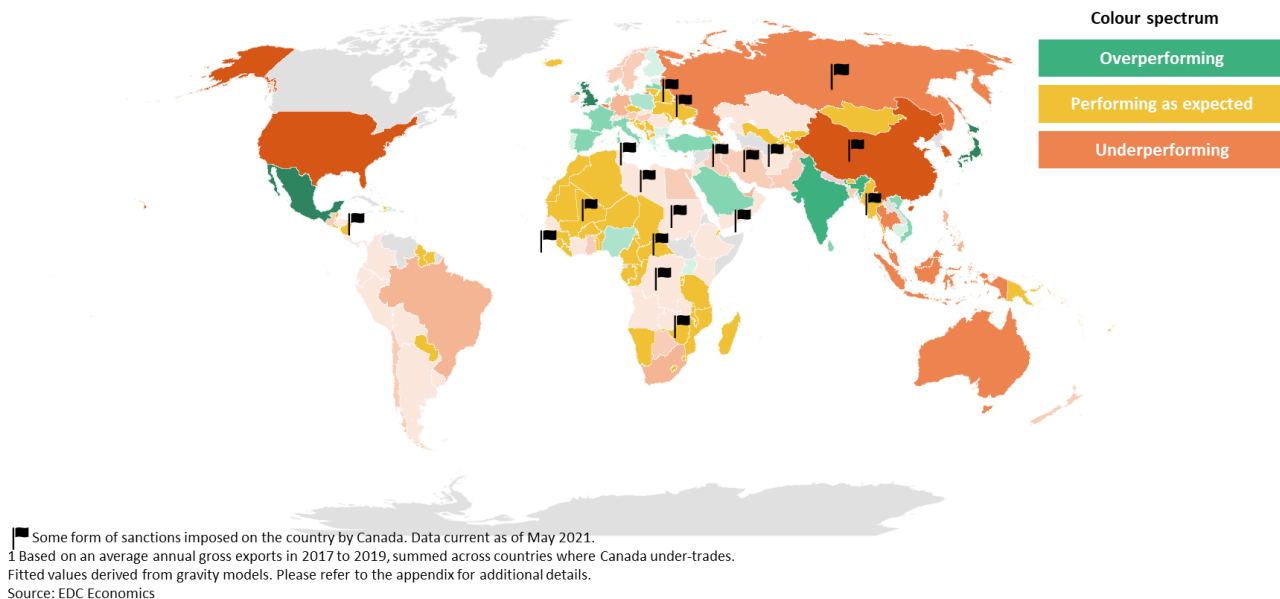
THE PRESENT: EVALUATING CANADA'S RECENT TRADE PERFORMANCE

To what extent has Canada realized the full potential of its exports in various markets? Here, we evaluate Canada's pre-pandemic trade performance using the gravity models fully described in the technical appendix. We find that Canada is leaving on average, US$39 billion per year on the table, in terms of unfulfilled export potential. **[Figure 1]**

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Figure 1: Canada's recent exports performance, goods and services

Each year Canada is leaving roughly US$39 billion[1] on the table by not realizing its full export potential.

Some form of sanctions imposed on the country by Canada. Data current as of May 2021.
1 Based on an average annual gross exports in 2017 to 2019, summed across countries where Canada under-trades.
Fitted values derived from gravity models. Please refer to the appendix for additional details.
Source: EDC Economics

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A significant chunk of this unfulfilled potential is found in large and high-growth economies around the world. In fact, Canadian exports tend to "underperform" in countries where there are inherent trade advantages such as having trade deals with large economies. This is especially true in the U.S., where it may surprise some to hear that Canadian exports are "underperforming," considering the major advantages conferred by the Canada-United States-Mexico Agreement (CUSMA), a strong U.S. economy, high degree of cultural similarities and geographical proximity. This demonstrates that even with its closest ally and trading partner, Canada could and should be doing more to improve its export performance.

This point generally applies across Europe–especially in countries, like Germany and Belgium, where the full effects of the Canada-European Union Comprehensive Economic and Trade Agreement (CETA) could be felt in the near future, hopefully boosting Canadian exports to the continent. Similarly, the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) can help Canada meet the unfulfilled export

potential across several signatory countries, including Australia, New Zealand, Malaysia and Vietnam. Elsewhere in Asia, South Korea and Indonesia are "hidden gems," where we see the underlying structural conditions as ripe for Canadian exports to thrive in the future in these markets.

Clearly, while Canadian exports have performed well in some key markets such as Mexico and the U.K., across much of the world, Canadian exports are significantly lower than what our model predicts. In some cases, this is potentially caused by sanctions that limit trade (such as in Russia, various African and Middle Eastern countries). However, in other cases, the unexplored potential could be partly attributed to underlying sectoral strengths and comparative advantages. For example, Canadian services sectors (primarily tourism and education-related travel) have performed extremely well in India over the past decade. On the flipside, Canadian goods exports to India are still below what they ideally should be— underlining the untapped potential across infrastructure, power and agri-food sectors. Similarly, in Brazil, fertilizers and other chemical products account for nearly half of Canada's goods exports. Yet, our model indicates there's still room to grow in Brazil, possibly hinting at opportunities for Canadian advanced manufacturing, fintech, cleantech and agriculture sectors.
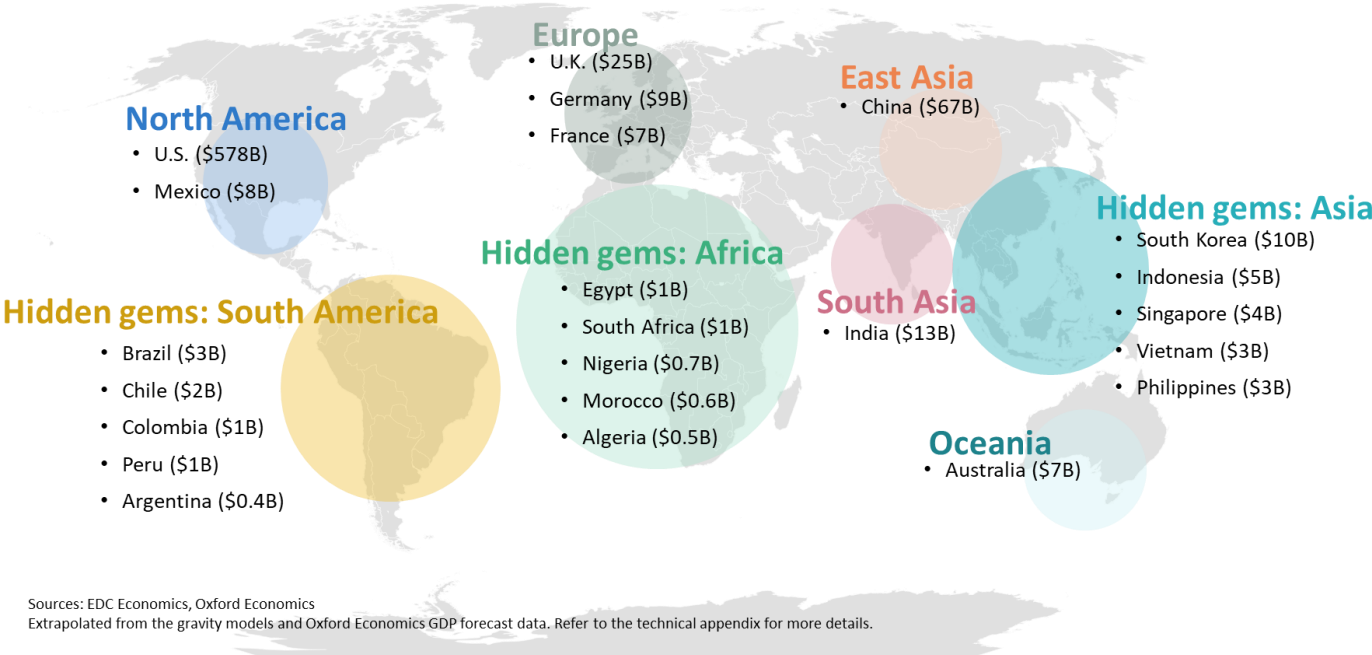
Finally, we would be remiss if we didn't discuss China. Currently Canada's second-most important trading partner, China—as the world's largest importer—has figured prominently in Canadian trade discourse over the past decade. China's fast-growing economy, coupled with its rising middle class, makes it an integral market for exporters all around the world. For Canada, this has translated into significant growth opportunities in the agricultural and mining sectors. Given that various recent forecasts show China's GDP surpassing that of the U.S. in the future–it will remain a crucial market for Canadian exporters looking to grow their business internationally. As we outline in the next section, the sheer scale of export opportunity presented by China will lead to it playing an increasingly important role in determining Canada's overall trade performance in the coming decades.

THE FUTURE: MAPPING CANADA'S EXPORT OPPORTUNITY ACROSS 170 MARKETS FROM 2021 THROUGH 2050

Canada stands to gain from the strength of its existing trade relationships with the U.S. and advanced European economies. Assuming most structural determinants of Canadian trade such as political risk, free trade agreements or FTAs, cultural proximity remain unchanged, while factoring in expected GDP growth in its export destinations, Canada could see its global annual exports grow to US$840 billion in 2030. This is 54% higher than Canada's total exports in 2019, before the COVID-19 pandemic. By 2050, Canada's global annual exports could grow to US$1.8 trillion—nearly four times the level of its 2019 exports. This represents a compound annual growth rate of 4% per year from 2020 until 2050.

Much of this growth is expected to come from long-standing Canadian trade relationships with countries, such as the U.S., U.K., Mexico, and India. However, we've identified several "hidden gems" in each region that offer sizable opportunities for Canadian goods and services exporters. **[Figure 2]**
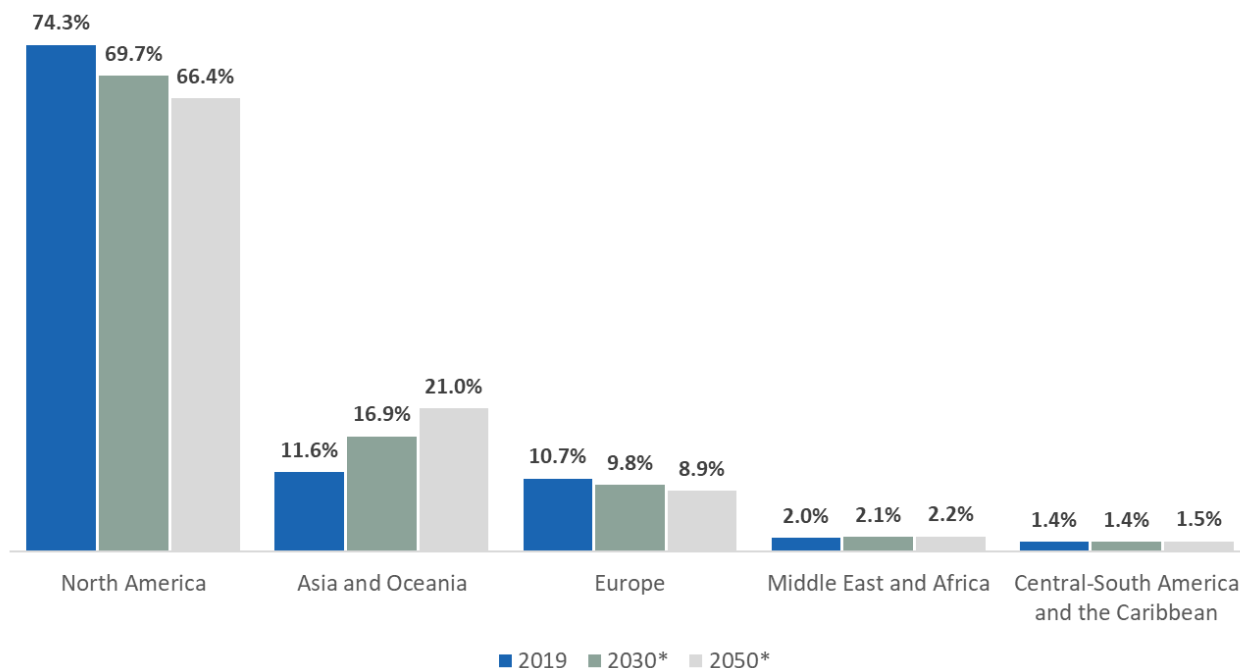
Figure 2: Canadian export opportunities in 2030

Annual Canadian exports opportunity (goods and services), 2030
(USD billions)

Europe
- U.K. ($25B)
- Germany ($9B)
- France ($7B)

East Asia
- China ($67B)

North America
- U.S. ($578B)
- Mexico ($8B)

Hidden gems: Africa
- Egypt ($1B)
- South Africa ($1B)
- Nigeria ($0.7B)
- Morocco ($0.6B)
- Algeria ($0.5B)

Hidden gems: Asia
- South Korea ($10B)
- Indonesia ($5B)
- Singapore ($4B)
- Vietnam ($3B)
- Philippines ($3B)

South Asia
- India ($13B)

Hidden gems: South America
- Brazil ($3B)
- Chile ($2B)
- Colombia ($1B)
- Peru ($1B)
- Argentina ($0.4B)

Oceania
- Australia ($7B)

Sources: EDC Economics, Oxford Economics
Extrapolated from the gravity models and Oxford Economics GDP forecast data. Refer to the technical appendix for more details.

In the subsections below, we quantify the short-term export opportunity (2030) across each region **[Figure 3]**, along with a brief discussion of specific gaps and risks in some markets. We highlight known markets of strength for Canadian exporters, as well as some hidden gems in each region.

Figure 3: Canada's future annual export potential, shares by region

Canada's recent and forecasted average export potential by region
(% of total)

	2019	2030*	2050*
North America	74.3%	69.7%	66.4%
Asia and Oceania	11.6%	16.9%	21.0%
Europe	10.7%	9.8%	8.9%
Middle East and Africa	2.0%	2.1%	2.2%
Central-South America and the Caribbean	1.4%	1.4%	1.5%

■ 2019 ■ 2030* ■ 2050*

* Indicates forecast. Sources: EDC Economics, IMF, Statistics Canada

NORTH AMERICA

2030 annual export opportunity: **US$586 billion**

Share of global annual export opportunity in 2030: **69.7%**

2050 annual export opportunity: **US$1.2 trillion**

Share of global annual export opportunity in 2050: **66.4%**

The U.S. remains, by far, Canada's biggest and most important trading partner in our forecasts. That said, over the long term, our forecasts suggest a gradually shrinking share of Canadian total exports destined to the U.S. —essentially being outgrown by the rising importance of emerging Asian markets. Nevertheless, Mexico and the U.S. together could still account for two-thirds of our total annual export opportunity by 2050. This assumes political risks in the U.S. stay minimal, that CUSMA continues to provide duty-free trade in the vast majority of sectors, and more generally, that the relative comparative advantages of each country stay stable.

The bottom line is that by the virtue of history and geography, Canada enjoys a unique advantage when it comes to the U.S. Thanks to CUSMA (formerly NAFTA), Canadian exporters across a range of industries have made significant structural inroads into the U.S. market, supported by a high level of bilateral, trade-enhancing foreign direct investment. Yet, as noted in the previous section, Canada is still leaving US$26 billion on the table each year in American exports. Some of the existing U.S. market has been captured by other exporters, through better or cheaper products. In order to take full advantage of the significant trade opportunity offered by the U.S. over the next 30 years, Canadian businesses should evaluate their current strengths with the U.S. market needs and determine future opportunities. Some of these opportunities can be found across burgeoning American high-tech, fintech and cleantech sectors, where Canadian companies could provide high value-added products and services.

When it comes to Mexico, Canadian exports have been performing quite well. As one of Canada's Top 10 export destinations, Mexico has been a key market for Canadian exporters. Our forecasts indicate that Mexico will continue to be an important trading partner for Canada in the coming decades. Canadian exports to Mexico are diversified, with strengths across agriculture, auto, chemicals and machinery sectors. More recently, Canada has also made inroads in exporting commercial services to Mexico. All of these sectors could continue serving as pillars of strength for Canadian exporters in this decade.

ASIA AND OCEANIA

2030 annual export opportunity: **US$141 billion**
Share of global annual export opportunity in 2030: **16.9%**
2050 annual export opportunity: **US$374 billion**
Share of global annual export opportunity in 2050: **21%**

Asia's diverse cluster of countries with different economic growth trajectories, results in interesting forecasts for Canadian exports. As indicated above, China provides, by far, the greatest export opportunity for Canada in the region. In this decade, Canada's annual export opportunity in China could come close to US$70 billion, almost half of our total export opportunity in Asia—and could more than double by 2050 (US$179 billion). Given that in this decade, half of Asia's export opportunity is rooted in China, many Canadian companies will continue to look at China as an important step in their export journey. **[Figure 4]**

While some bilateral challenges continue to persist, there's room for optimism as many aspects of the Canada-China relationship remain strong. However, there are lessons to be learned from the trade challenges Canadian companies have faced over the last couple years. As many can attest, the pandemic helped to shed light on the risks of offshoring when much of the world became reliant on China to supply

personal protective equipment (PPEs) and pharmaceuticals. These challenges are compounded by additional geopolitical risks, and as such, companies would do well to conduct proper and strong due diligence before entering the market. Apart from geopolitical risks, Canada's exports to China are fairly concentrated, made up mostly of primary agricultural and mining products. As the U.S. trade war with China has shown, raw materials are easier to substitute across countries, risking periods of boom and bust cycles, as Canada competes with other exporters across the world in the highly-prized Chinese market. Canadian companies that are focused on providing products or services that are situated in high-value sectors will be able to overcome this challenge and have a sustained comparative advantage.

Beyond China, other advanced and emerging Asian markets also offer considerable opportunities for Canadian exporters. Some countries, like Japan and South Korea, are promising in the short term, but aging demographics and the already-advanced state of their economies will likely imply tepid growth over the long term. Others, like Indonesia, India and Vietnam together, offer an annual export opportunity of more than US$21 billion by 2030. Given that these are fast-growing economies, their combined annual export opportunity is expected to increase dramatically to more than US$83 billion by 2050. Indonesia, in particular, is notable, given it'll be Canada's sixth most important export destination by 2050. This is largely driven by the stellar GDP growth projected for Indonesia—between 2021 and 2050, forecasts indicate that Indonesia's GDP could grow at a compounded annual growth rate of nearly 8%. Considering these markets provide significant long-term opportunities, it's imperative for Canadian exporters to start building relationships in these markets. Scoping out market needs, developing a fine-tuned understanding of market-specific factors can help Canadian businesses take full advantage of the export potential in these countries in the decades ahead. Some of these opportunities could potentially lie in the fast-growing information and communications technology (ICT) sector, as well as climate-resilient infrastructure, agri-food supply chain, and advanced medical technologies.

Figure 4: Mapping Canadian export opportunity and risks over the next decade (Asia and Oceania)

Asia and Oceania: 2030 export opportunity and country risk
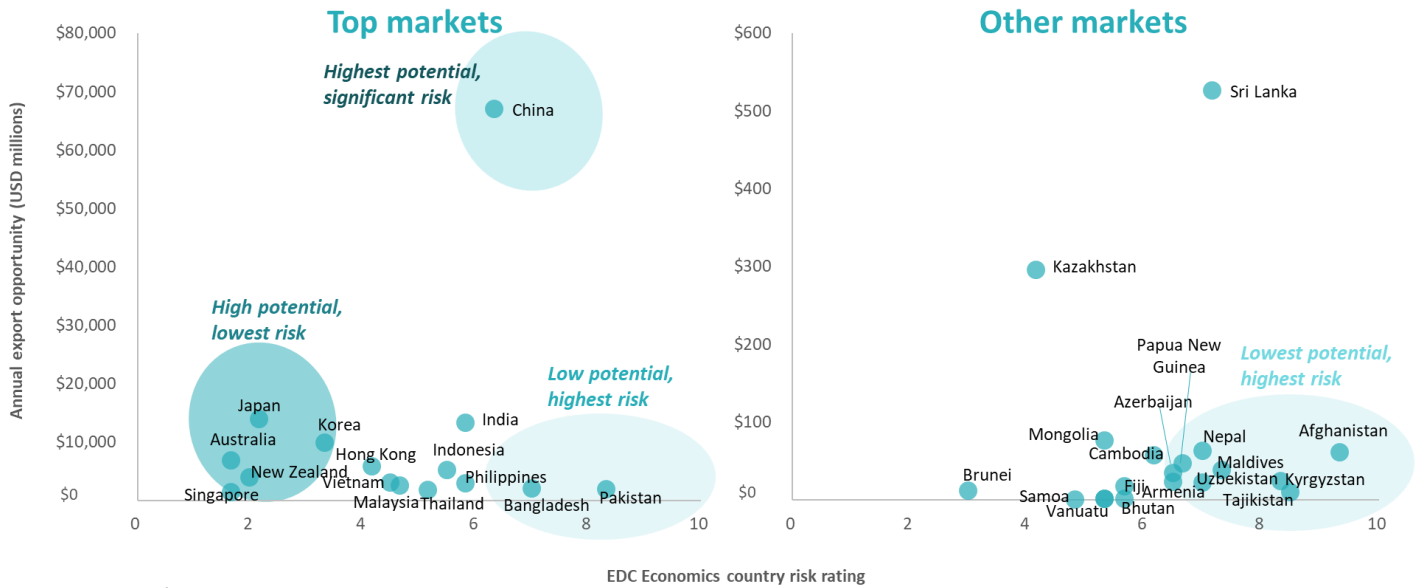
Source: EDC Economics

Note: EDC Economics country risk rating averages three distinct categories of risk–political violence, expropriation, and transfer and conversion. Each rating is scaled from 0–10. Averaged together, the total risk scale is from 0–10, with 10 being the highest possible risk. These ratings are assigned by EDC's country risk analysts reflect up-to-date information as of May 2021.

EUROPE

2030 annual export opportunity: **US$83 billion**

Share of global annual export opportunity in 2030: **9.8%**

2050 annual export opportunity: **US$159 billion**

Share of global annual export opportunity in 2050: **8.9%**

Notwithstanding the ongoing Brexit adjustment process, the U.K. remains one of Canada's Top 5 export destinations. This is intuitive given the relative geographic proximity, political stability, and cultural similarities. As an advanced economy, the U.K. provides considerable potential for Canadian exporters, and we don't expect this to change much in the years ahead. However, gold makes up the majority of Canadian exports to the U.K., which poses some risks of both high concentration and price volatility. **[Figure 5]**

Other promising markets include several of the CETA members such as France, Netherlands, Germany and Belgium. The latter two are significant, given that between 2017 and 2019, annual Canadian exports to these two countries were US$644 million below model predictions. Canadian exports to Germany in particular, are well-diversified, with strengths across numerous industries, including machinery, chemicals, minerals, and vehicles. This presents multiple avenues to pursue further growth in Germany, especially given that

Canadian businesses trading with Germany could generate annual export revenues upwards of US$16 billion by 2050.

Figure 5: Mapping Canadian export opportunity and risks over the next decade (Europe)

Europe: 2030 export opportunity and country risk
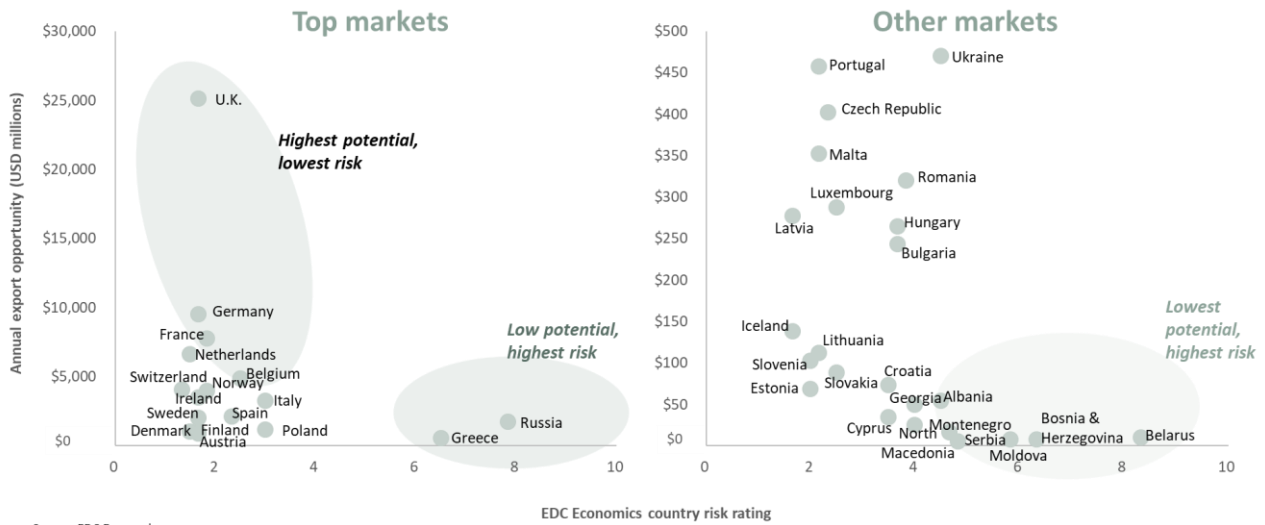
Source: EDC Economics

Note: EDC Economics country risk rating averages three distinct categories of risk–political violence, expropriation, and transfer and conversion. Each rating is scaled from 0–10. Averaged together, the total risk scale is from 0–10, with 10 being the highest possible risk. These ratings are assigned by EDC's country risk analysts reflect up-to-date information as of May 2021.

On the other end of the spectrum, most Eastern European countries offer some potential for export growth, but this is partly offset by higher risks. This includes larger countries such as Russia—where Canada currently has imposed some sanctions—and other Eastern European nations with heightened political risks such as Bosnia & Herzegovina, Belarus, Moldova and Serbia. Current Canadian exports to these countries are low on account of these risks, and we don't expect this to change soon.

AFRICA AND MIDDLE EAST

2030 annual export opportunity: **US$18 billion**
Share of global annual export opportunity in 2030: **2.1%**
2050 annual export opportunity: **US$41 billion**
Share of global annual export opportunity in 2050: **2.2%**

Heightened political risks and civil conflicts have stifled economic growth in several Middle Eastern and African countries. Reflecting these political risks, the bulk of Canada's sanctions have been applied to countries in these regions. As a result, Canadian exports here have shown only sluggish growth in the recent past. Our forecasts don't assume a drastic departure from this trend. Even by 2050, the annual export

opportunity to this region amounts to just more than US$40 billion, a little more than 2% of Canada's global annual export opportunity during that timeframe. **[Figure 6]**

Yet, there are some countries that offer reasonable opportunities for Canadian exporters—provided, Canadian businesses are able to innovate and offer products that mitigate climate risks. Kenya, Nigeria, Ghana, and South Africa—part of the "African Lions" group of fast-growing markets—together provide an annual export potential of US$2.4 billion by 2030. By 2050, these four markets could account for nearly US$6 billion in annual Canadian exports. While this may appear to be modest, it could serve as entry markets to further Canadian export growth in the region. Of these four countries, Nigeria presents the highest risk, which could blunt trade growth efforts. Yet, it's key for Canadian exporters to adopt a more strategic perspective in this region, especially given that Africa is likely to house one of the youngest populations by 2050. At that point, exporters who have built their knowledge and networks in these markets and have developed climate-resilient products will be poised to take advantage of that demographic boom.

Figure 6: Mapping Canadian export opportunity and risks over the next decade (Africa and Middle East)

Africa and Middle East: 2030 export opportunity and country risk

Top markets

Annual export opportunity (USD millions)

Highest opportunity, high risk

- Saudi Arabia
- United Arab Emirates
- Turkey
- Israel
- Egypt
- Iran
- South Africa

High opportunity, moderate risk

Mid-tier markets

- Nigeria
- Morocco
- Algeria
- Iraq
- Ghana
- Qatar
- Senegal
- Kenya
- Botswana
- Cote d'Ivoire
- Ethiopia
- Kuwait
- Oman
- Jordan
- Tanzania

Low opportunity, high risk

Other markets

- Angola
- Sudan
- Lebanon
- Bahrain
- Tunisia
- Burkina Faso
- Mozambique
- Cameroon
- Yemen
- Uganda
- Guinea
- Benin
- Congo, DRC
- Madagascar
- Togo Mali
- Zambia
- Gabon
- Suriname Congo, Republic
- Rwanda
- Niger
- Mauritania
- Zimbabwe
- Malawi
- Sierra Leone
- Namibia
- Cabo Verde
- Djibouti
- Liberia
- Seychelles
- Lesotho
- Sao Tome & Principe

Lowest opportunity, highest risk

EDC Economics country risk rating

Source: EDC Economics

Note: EDC Economics country risk rating averages three distinct categories of risk–political violence, expropriation, and transfer and conversion. Each rating is scaled from 0–10. Averaged together, the total risk scale is from 0–10, with 10 being the highest possible risk. These ratings are assigned by EDC's country risk analysts reflect up-to-date information as of May 2021.

CENTRAL AND SOUTH AMERICA, AND CARIBBEAN

2030 annual export opportunity: **US$12 billion**
Share of global annual export opportunity in 2030: **1.4%**
2050 annual export opportunity: **US$26 billion**
Share of global annual export opportunity in 2050: **1.5%**

Canadian exports to Central and South America and the Caribbean make up the smallest share of global export potential in our forecasts. Yet, this region should receive more attention than it has by Canadian exporters. Between 2017 and 2019, Canada's exports to every country in South America was lower than model predictions—an annual deficit of US$128 million. South America houses some of the fastest-growing economies, and Canada has free trade agreements (FTAs) with Chile, Peru and Colombia, and is in the process of negotiating additional market access gains in MERCOSUR (Argentina, Brazil, Paraguay, and Uruguay). These are factors that should encourage Canadian businesses to trade more with these countries. Part of Canada's underperformance in the region may be due to the higher risks in some of the most lucrative markets. **[Figure 7]**

For instance, in our forecasts, Brazil provides the highest opportunity for Canadian exporters looking to establish trade ties in Central-South America and the Caribbean. At an annual export potential of US$2.8 billion by 2030, and US$4.5 billion by 2050, Brazil is just as lucrative as some of the key emerging markets in Asia. Yet, political tensions remain high within Brazil, with its bureaucratic and legal systems posing additional challenges for Canadian businesses wishing to export. This indirectly raises the costs of doing business in the country and may have deterred Canadian exporters. With greater political stability, export potential in Brazil could increase considerably.

Chile could be a hidden gem, with a reasonably-sized export opportunity (amounting to US$1.6 billion annually by 2030) and comparatively lower risks. The short-term risk outlook for Chile is favourable, and Canadian businesses have reliable market access, thanks to the 24-year-old FTA in place. Canadian mining, forestry, infrastructure and power industries have made inroads into the market so far. Given the rising environmental, social and corporate governance (ESG) pressures, it's likely that Canadian businesses in these sectors will need to incorporate carbon-neutral and environmentally positive ways of delivering their products and services to retain a competitive advantage.

Figure 7: Mapping Canadian export opportunity and risks over the next decade (Central-South America and the Caribbean)

Central and South America, and Caribbean: 2030 export opportunity and country risk

Source: EDC Economics

Note: EDC Economics country risk rating averages three distinct categories of risk—political violence, expropriation, and transfer and conversion. Each rating is scaled from 0–10. Averaged together, the total risk scale is from 0–10, with 10 being the highest possible risk. These ratings are assigned by EDC's country risk analysts reflect up-to-date information as of May 2021.

Beyond these South American giants, Caribbean and some smaller Central American countries figure prominently in our export potential forecasts. This is primarily on account of financial services exports, with sizable annual flows to countries such as Barbados and Bahamas. Due to lack of disaggregated data, we aren't able to decompose the exact nature of these financial flows. There are some key regulatory risks that could impact export potential in these markets—among them, the recently announced G7 global corporate tax reforms and the crackdown on anti-money laundering/combating the financing of terrorism (AML/CFT) fraud. So, while our forecasts point to a sizable export potential in these markets, ongoing push for financial regulatory reforms could restrain that opportunity.

APPENDIX 1: FULL COUNTRY LIST—CURRENT PERFORMANCE AND FUTURE POTENTIAL

RANK	COUNTRY	REGION	CANADA'S CURRENT EXPORT PERFORMANCE STATUS	SHORT-TERM ANNUAL EXPORT OPPORTUNITY (2030, USD MILLIONS)	LONG-TERM ANNUAL EXPORT OPPORTUNITY (2050, USD MILLIONS)
1	U.S.	North America	Underperforming	577,748	1,169,341
2	China[S]	Asia	Underperforming	67,012	178,903
3	U.K.	Europe	Overperforming	25,088	51,202
4	Japan	Asia	Overperforming	13,802	20,833
5	India	Asia	Overperforming	13,184	54,878
6	Korea	Asia	Underperforming	9,874	16,027
7	Germany	Europe	Underperforming	9,488	16,682
8	Mexico	North America	Overperforming	8,106	17,665
9	France	Europe	Overperforming	7,741	13,271
10	Australia	Oceania	Underperforming	6,831	16,416
11	Netherlands	Europe	Overperforming	6,629	11,633
12	Hong Kong	Asia	Underperforming	5,794	10,050
13	Indonesia	Asia	Underperforming	5,165	17,847
14	Belgium	Europe	Underperforming	4,875	8,253
15	Switzerland	Europe	Underperforming	4,060	7,903
16	Norway	Europe	Underperforming	3,951	6,992
17	Singapore[1]	Asia	Underperforming	3,902	7,464
18	Ireland	Europe	Underperforming	3,456	7,658
19	Italy	Europe	Overperforming	3,232	4,719
20	Vietnam	Asia	Overperforming	2,990	10,251
21	Philippines	Asia	Underperforming	2,820	11,657
22	Brazil	South America	Underperforming	2,809	4,537
23	Malaysia	Asia	Underperforming	2,449	5,889
24	Saudi Arabia	Middle East	Overperforming	2,407	4,446
25	Spain	Europe	Overperforming	2,101	3,334
26	United Arab Emirates	Middle East	Underperforming	2,051	3,997
27	Sweden	Europe	Underperforming	1,999	4,406
28	Bangladesh	Asia	Underperforming	1,927	6,486
29	Turkey	Middle East	Overperforming	1,926	4,795
30	Pakistan[2]	Asia	Underperforming	1,828	6,749

RANK	COUNTRY	REGION	CANADA'S CURRENT EXPORT PERFORMANCE STATUS	SHORT-TERM ANNUAL EXPORT OPPORTUNITY (2030, USD MILLIONS)	LONG-TERM ANNUAL EXPORT OPPORTUNITY (2050, USD MILLIONS)
31	Thailand	Asia	Underperforming	1,718	3,325
32	Russia[S]	Europe	Underperforming	1,702	4,299
33	Chile	South America	Underperforming	1,635	3,705
34	Israel	Middle East	Underperforming	1,520	4,182
35	Colombia	South America	Underperforming	1,452	3,239
36	New Zealand	Oceania	Underperforming	1,379	2,957
37	Iran[S]	Middle East	Underperforming	1,350	3,106
38	Egypt	Africa	Underperforming	1,292	3,260
39	Poland	Europe	Overperforming	1,160	2,541
40	Peru	South America	Underperforming	1,107	2,782
41	Denmark	Europe	Underperforming	1,013	2,061
42	South Africa	Africa	Underperforming	978	2,031
43	Finland	Europe	Overperforming	937	1,636
44	Austria	Europe	Underperforming	860	1,538
45	Barbados	Caribbean/Central America	Underperforming	796	1,277
46	Trinidad & Tobago	Caribbean/Central America	Underperforming	789	1,906
47	Nigeria	Africa	Overperforming	701	1,765
48	Morocco	Africa	Underperforming	558	1,445
49	Greece	Europe	Overperforming	536	890
50	Sri Lanka	Asia	Underperforming	526	1,381
51	Algeria	Africa	Underperforming	491	999
52	Ghana	Africa	Underperforming	477	1,354
53	Iraq[S]	Middle East	Underperforming	470	N/A
54	Ukraine[S]	Europe	Overperforming	470	1,152
55	Portugal	Europe	Overperforming	457	693
56	Argentina	South America	Underperforming	407	849
57	Czech Republic	Europe	Overperforming	402	875
58	Ecuador	South America	Underperforming	401	803
59	Bahamas	Caribbean/Central America	Overperforming	380	679
60	Dominican Republic	Caribbean/Central America	Underperforming	376	1,078

RANK	COUNTRY	REGION	CANADA'S CURRENT EXPORT PERFORMANCE STATUS	SHORT-TERM ANNUAL EXPORT OPPORTUNITY (2030, USD MILLIONS)	LONG-TERM ANNUAL EXPORT OPPORTUNITY (2050, USD MILLIONS)
61	Guatemala	Caribbean/Central America	Underperforming	361	950
62	Malta	Europe	Underperforming	352	657
63	Romania	Europe	Underperforming	320	643
64	Jamaica	Caribbean/Central America	Underperforming	315	699
65	Panama	Caribbean/Central America	Underperforming	297	933
66	Kazakhstan	Asia	Underperforming	295	954
67	Costa Rica	Caribbean/Central America	Underperforming	293	681
68	Latvia	Europe	Overperforming	287	683
69	Qatar	Middle East	Underperforming	279	687
70	Luxembourg	Europe	Underperforming	277	599
71	Senegal	Africa	Underperforming	267	852
72	Hungary	Europe	Underperforming	264	483
73	Kenya	Africa	Underperforming	247	621
74	Bulgaria	Europe	Overperforming	243	455
75	Botswana	Africa	Overperforming	233	690
76	Libya[S]	Africa	Underperforming	189	341
77	Cote d'Ivoire	Africa	Underperforming	188	612
78	Ethiopia	Africa	Underperforming	184	599
79	Kuwait	Middle East	Overperforming	173	314
80	Oman	Middle East	Underperforming	155	336
81	Honduras	Caribbean/Central America	Underperforming	149	539
82	Jordan	Middle East	Underperforming	140	290
83	Iceland	Europe	Underperforming	138	260
84	Tanzania	Africa	Underperforming	136	422
85	Angola	Africa	Underperforming	122	322
86	Sudan[S]	Africa	Underperforming	115	230
87	Lithuania	Europe	Overperforming	112	204
88	Uruguay	South America	Underperforming	112	205
89	Guyana	South America	Underperforming	111	259

RANK	COUNTRY	REGION	CANADA'S CURRENT EXPORT PERFORMANCE STATUS	SHORT-TERM ANNUAL EXPORT OPPORTUNITY (2030, USD MILLIONS)	LONG-TERM ANNUAL EXPORT OPPORTUNITY (2050, USD MILLIONS)
90	Lebanon[S]	Middle East	Underperforming	108	241
91	Tunisia[S]	Africa	Underperforming	105	270
92	Slovenia	Europe	Overperforming	102	181
93	Bahrain	Middle East	Overperforming	97	177
94	El Salvador	Caribbean/Central America	Underperforming	92	184
95	Slovakia	Europe	Underperforming	88	154
96	Burkina Faso	Africa	Overperforming	87	370
97	Nicaragua[S]	Caribbean/Central America	Underperforming	78	313
98	Mongolia	Asia	Underperforming	76	217
99	Mozambique	Africa	Overperforming	74	248
100	Croatia	Europe	Overperforming	73	136
101	Cameroon	Africa	Overperforming	70	203
102	Estonia	Europe	Underperforming	68	150
103	Bolivia	South America	Underperforming	66	221
104	Nepal[4]	Asia	Overperforming	63	263
105	Afghanistan[S,3]	Asia	Underperforming	61	205
106	Yemen[S]	Middle East	Underperforming	57	195
107	Cambodia	Asia	Overperforming	57	236
108	Guinea	Africa	Underperforming	54	190
109	Albania	Europe	Underperforming	54	133
110	Uganda	Africa	Overperforming	53	153
111	Georgia	Europe	Overperforming	49	156
112	Haiti	Caribbean/Central America	Overperforming	48	145
113	Papua New Guinea	Oceania	Underperforming	47	153
114	Dem. Republic of Congo[S]	Africa	Underperforming	45	129
115	Benin	Africa	Overperforming	41	136
116	Togo	Africa	Underperforming	39	142
117	Maldives	Asia	Overperforming	38	87
118	Madagascar	Africa	Underperforming	36	109
119	Zambia	Africa	Underperforming	35	90
120	Azerbaijan	Asia	Underperforming	34	85

RANK	COUNTRY	REGION	CANADA'S CURRENT EXPORT PERFORMANCE STATUS	SHORT-TERM ANNUAL EXPORT OPPORTUNITY (2030, USD MILLIONS)	LONG-TERM ANNUAL EXPORT OPPORTUNITY (2050, USD MILLIONS)
121	Mali[S]	Africa	Overperforming	34	86
122	Cyprus	Europe	Underperforming	34	61
123	Gabon	Africa	Underperforming	33	83
124	Paraguay	South America	Underperforming	32	87
125	Suriname	Africa	Overperforming	31	121
126	Rep of Congo	Africa	Underperforming	30	71
127	Antigua & Barbuda	Caribbean/Central America	Underperforming	27	64
128	Rwanda	Africa	Underperforming	25	81
129	North Macedonia	Europe	Underperforming	25	57
130	Kyrgyzstan	Asia	Underperforming	24	77
131	Armenia	Asia	Underperforming	24	67
132	St. Lucia	Caribbean/Central America	Underperforming	22	50
133	Uzbekistan	Asia	Underperforming	22	80
134	Niger	Africa	Underperforming	21	68
135	Chad	Africa	Overperforming	21	53
136	Grenada	Caribbean/Central America	Overperforming	20	48
137	Mauritania	Africa	Overperforming	18	48
138	St. Kitts & Nevis	Caribbean/Central America	Underperforming	18	35
139	Fiji	Oceania	Overperforming	17	49
140	Serbia	Europe	Overperforming	16	30
141	Malawi	Africa	Overperforming	15	33
142	Zimbabwe[S]	Africa	Underperforming	15	24
143	Sierra Leone	Africa	Underperforming	14	41
144	Belize	Caribbean/Central America	Underperforming	13	28
145	St. Vincent & Grenadines	Caribbean/Central America	Underperforming	12	28
146	Namibia	Africa	Underperforming	12	26
147	Brunei Darussalam	Asia	Underperforming	12	17
148	Belarus[S]	Europe	Underperforming	10	38

RANK	COUNTRY	REGION	CANADA'S CURRENT EXPORT PERFORMANCE STATUS	SHORT-TERM ANNUAL EXPORT OPPORTUNITY (2030, USD MILLIONS)	LONG-TERM ANNUAL EXPORT OPPORTUNITY (2050, USD MILLIONS)
149	Cabo Verde	Africa	Underperforming	10	27
150	Tajikistan	Asia	Underperforming	10	34
151	Liberia	Africa	Underperforming	9	27
152	Seychelles	Africa	Underperforming	9	21
153	Djibouti	Africa	Overperforming	8	17
154	Dominica	Caribbean/Central America	Overperforming	8	18
155	Moldova	Europe	Underperforming	7	21
156	Bosnia & Herzegovina	Europe	Underperforming	7	13
157	Montenegro	Europe	Overperforming	5	13
158	Burundi	Africa	Overperforming	5	16
159	Gambia	Africa	Overperforming	2	7
160	Comoros	Africa	Overperforming	1	4
161	Vanuatu	Oceania	Underperforming	1	5
162	Tonga	Oceania	Underperforming	1	3
163	Bhutan[4]	Asia	Underperforming	1	3
164	Central African Republic[S]	Africa	Underperforming	1	2
165	Solomon Islands	Oceania	Overperforming	1	2
166	Sao Tome & Principe	Africa	Overperforming	1	2
167	Lesotho	Africa	Underperforming	1	1
168	Kiribati	Africa	Overperforming	0.4	1
169	Guinea-Bissau[S]	Africa	Underperforming	0.4	1
170	Samoa	Oceania	Overperforming	0.3	1

Source: EDC Economics

S – Some form of sanctions imposed by Canada on the country. Please note that our model doesn't incorporate the impact of sanctions on exports. As such, the model may overstate Canada's export potential in such countries.

1 –Singapore may provide a greater opportunity than quantified. It's a key financial centre in Asia, and its importance may grow on account of recent geopolitical developments in Hong Kong. Our model doesn't incorporate this scenario and as such may understate Canadian export potential in Singapore.

2- Security and political risks could rise in the longer term in Pakistan, reducing the total export potential.

3 – Our model doesn't incorporate sanctions related information, so total export opportunity in Afghanistan may be overstated. In the longer term, we expect a worsening security situation and higher political risks.

4 – Nepal and Bhutan are heavily dependent on India, which could restrict the export opportunity for Canadian companies.

TECHNICAL APPENDIX: MODEL SPECIFICATIONS

The starting point for a gravity model is to specify an equation for trade flows between two countries as being proportional to the size of their markets, and inversely proportional to distance (and other trade costs). The model can then be augmented with other factors that facilitate and hinder trade.

Over the past 30 years, Canadian trade has benefited from various factors, including growing economies and an expanding number of Regional Trade Agreements (RTAs). However, there are some key differences in the factors that impact goods versus services trade. One of the most noticeable differences is the impact of geographical distance—goods are physically shipped across long distances and international borders, and as such, tend to incur higher transportation costs. With the proliferation of digital technologies and greater internet access, services can often be delivered virtually, with little to no transportation costs. Another difference is the importance of cultural factors—where bilateral trade in services may be enhanced by the cultural similarities between two countries. For instance, a common spoken language in two countries can reduce barriers to trade due to the ability to communicate more easily. This is especially true for information services (such as consulting) or tourism. **[Graphic 1]**

Graphic 1: Canadian trade is influenced by numerous factors. Our models incorporate various elements that are quantifiable across 170 countries using historical datasets going back to the 1990s.
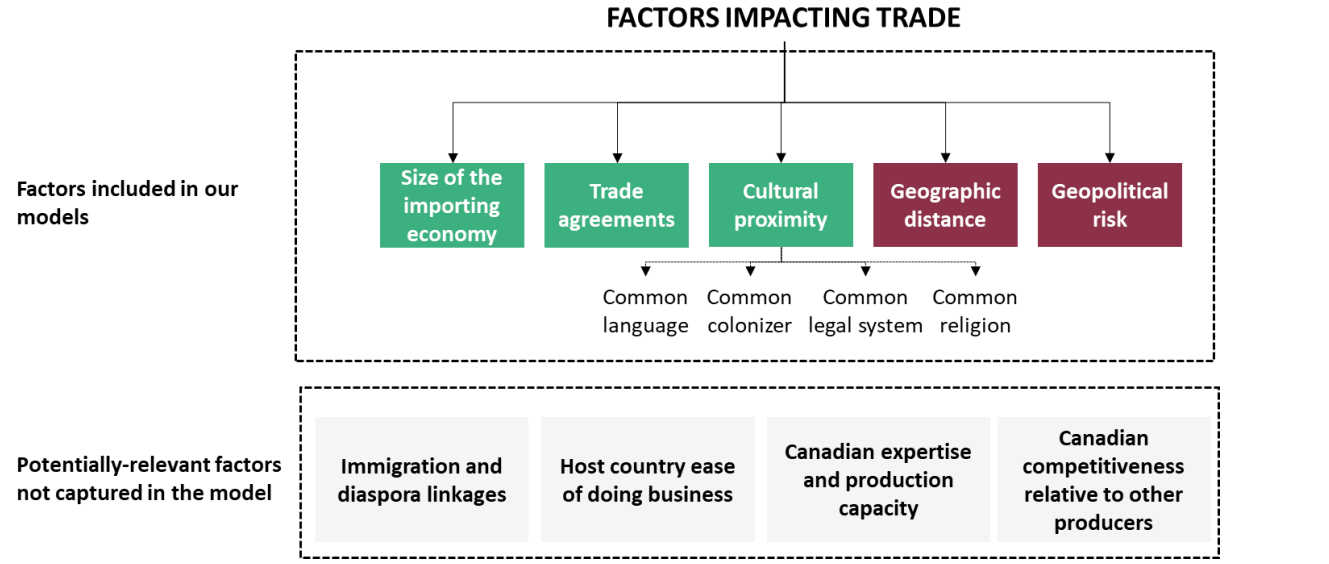
Yet, perhaps the most important difference between goods and services trade stems from something more technical. Trade in goods is tangible and therefore easier to measure, and the volume of exports and imports tend to get captured accurately with limited delay. The virtual/digital nature of services makes it much tougher to capture trade flows.

Considering these differences, we estimate two separate models for Canadian goods exports and services exports. **[Table 1]** Our models find that over the past 30 years, other things remaining equal, Canada has tended to **export more to countries with**:

- larger economies;
- regional trade agreements with Canada;
- higher degree of cultural similarities with Canada.

On the other hand, Canada tends to **export less to countries that**:

- are geographically farther away;
- tend to have higher levels of political risk.

One important thing to note about the results of our models—while they are statistically strong and explain the vast majority of the variation in Canadian trade over the past 30 years—they have some limitations. For instance, due to lack of historical data, we weren't able to model the impact of economic and trade sanctions Canada has historically placed on various countries. Similarly, we're unable to incorporate the full extent of other trade-related risks such as currency conversion risks due to lack of historical data availability.

Table 1: Gravity models—Regression coefficients for key factors (Goods exports and services exports models)

Dependent variable: Canadian Goods Exports[1]	Goods exports	Services exports
Importer GDP[3]	0.92***	1.12***
Distance[3]	-1.6***	-0.17***
Cultural Proximity (CP)	-	0.13*
Free Trade Agreement	0.13*	0.10**
Political Risk[3]	-0.28**	-
Importer Fixed Effects	Yes	Yes
Sample Period	1990-2019	1990-2019
Number of Countries	178	59
Number of Observations	4,095	1,386
R^2	0.99	0.99

Source: EDC Economics

1 We use PPML estimator for both, goods and services export models. As such, the dependent variable is in levels. 3 Expressed in natural logarithms.

* Significant at 10% level; ** Significant at 5% level; *** Significant at 1% level

Note 1: *R^2 for PPML is the correlation between fitted exports and actual exports.*

Note 2: *Services exports are much harder to measure. Canadian services export data is available for fewer countries and over a shorter time period. There is only limited sub-sector historical data for Canadian services, and financial services exports may skew results. On account of these factors, we consider our services model to be less robust, especially compared to the goods export models.*

Note 3: *Ramsey RESET test checks whether the model is misspecified. Our goods exports model passes the test, while services exports model passes the test under very loose conditions. This could potentially be on account of a smaller dataset, and the skewness introduced by financial sector exports.*

APPENDIX 3: DATA SOURCES AND DEFINITIONS

Variable	Units	Source	Data Availability
Canadian goods exports	USD Millions	IMF, Direction of Trade Statistics	1950-2019
Canadian services exports	USD Millions	Statistics Canada	1990-2020
Importing countries' GDP	USD Millions	World Bank	1960-2019
Geographical distance	Kms (Distance between most populated city in each country)	CEPII (Centre d'Etudes Prospectives et d'Informations Internationale)	(Static measure)
Cultural proximity	An index composed of dummy variables and sub-indices incorporating four factors: common language, common religion, common colonizer and common legal system.	CEPII (raw data for underlying factors)	Simple index (0 to 4—with 4 being the highest)
RTA	Dummy variable (1 = if an RTA has come into force between Canada and importing country)	Global Affairs Canada	1989-2019
Political Risk	Score between 0-10	Oxford Economics, Economics and Political Risk Evaluator (EPRE)	1996-2019
Importer fixed effects	Dummy variables	Generated using statistical software	(Static measure)

ABOUT THIS REPORT

This *Economic Insights* report is part of a publication series of concise reports written by EDC Economics staff on the future potential for Canadian exports. The views expressed in this report are those of the author and shouldn't be attributed to Export Development Canada or its Board of Directors. This report was written by Meena Aier, reviewed by Michael Borish, copy-edited by Karen Turner and Janet Wilson.

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