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Canada's Pivot to the Indo-Pacific: The Strategic Importance of Prioritizing a Trade Agreement with ASEAN

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EXECUTIVE SUMMARY

Canadian business and political leaders have long looked to strengthen bilateral economic relations with the ASEAN Economic Community based on its openness to trade, its dynamism and its integration into Asian production chains. Given the shift from an Asia-Pacific to an Indo-Pacific framing for engagement with Asia being made by Canada and by many of its major trading partners, ASEAN's strategic position at the heart of the Indo-Pacific makes it all the more important in trade policy considerations. Accordingly, it is timely to revisit the merits of a Canada-ASEAN trade agreement both in direct economic terms and as part of Canada's broader strategy as it seeks to frame its own pivot to the Indo-Pacific.

Canada's commercial engagement with ASEAN grew substantially over the past two decades as the ASEAN economies sustained strong growth. Canada maintained its overall 0.5 percent share of ASEAN's imports over this period, which translated into Canada accounting for $6.8 billion of the $1.326 trillion increase in ASEAN's overall imports between 2001 and 2019.

While Canada appears to have held its own in the growing ASEAN market over the past two decades, there is an open question as to whether Canada's performance was in line with reasonable expectations concerning its trade with ASEAN. To calibrate expectations, we examine Canada's exports to ASEAN through a gravity model framework.

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The gravity model posits that countries trade more intensively with partners that are larger, geographically closer, more open, have greater economic freedom, and with which they share commonalities that tend to reduce trade costs, such as common language, common cultural characteristics, common legal systems, common currencies, and historical ties. Bilateral free trade agreements and complementary patterns of comparative advantage also boost bilateral trade.

Overall, we find that, if Canada had exported to ASEAN on a par with its average global performance, exports to ASEAN would have been in total about 8 percent higher than they were on average in the period 2017-2019. Agricultural and agri-food exports fell 22.4 percent short of the expected level and manufacturing exports fell 2.6 percent short. Accordingly, there appears to be scope for Canada to raise the level of its game in the region, with the major caveat being that the shortfall has mainly been in agri-food products, which can be difficult to get into markets.

To assess the scope for a free trade agreement (FTA) to help Canada close the gap, we review the potential impact of an ASEAN-Canada FTA (ACFTA). An official joint study had concluded there were large potential gains; however, a study conducted on the basis of the ASEAN-Australia-New Zealand FTA (AANZFTA) template found relatively modest impacts. With ASEAN having signed the more ambitious Regional Comprehensive Economic Partnership (RCEP), we consider the implications of an ACFTA based on this template as well as on a more ambitious tariff elimination basis.

Bilateral trade increases by $2,771 million in the RCEP template scenario and by $4,331 million with more ambitious tariff reductions. These increases leverage real GDP gains for Canada of 0.02 percent and 0.03 percent in the two scenarios respectively, implying income gains of $1,660 million and $2,138 million (the equivalent of some $150 to $200 per year for a family of four) in the two scenarios respectively. Both scenarios come with modest net job creation on the order of 2-3 thousand.

Three sectors make relatively strong increases in overall farm/factory-gate shipments due to a strong performance in bilateral exports to ASEAN Member States: pork and poultry, oil seeds and vegetable oils, and machinery and equipment. However, the income gains from the FTA help drive growth in Canada's domestic demand for services, which results in the major domestic services sectors being the biggest sectoral winners in terms of increased sales. At the same time, few Canadian sectors experience a decline in shipments as a result of intensified import penetration from ASEAN exporters – and in these cases, the decline is very small, implying no disruptive impact on Canada's economy.

Strategically, an FTA with ASEAN would position Canada to join the RCEP, which is comprised of ASEAN and its other major free trade partners (India excepted). The RCEP, which entered in force at the beginning of 2022, is now the largest regional trade agreement in the world and is likely to be an important framework for the future development of East Asian value chains and production networks. In the context where Canada had completed an ACFTA, it would have free trade arrangements with all RCEP parties save one, China. We simulate Canada's accession to RCEP on the basis of first having established an ACFTA. Based on the RCEP template of commitments, Canada's accession to RCEP would generate an increase in bilateral trade with RCEP partners of about $30.5 billion, which would leverage an estimated 0.28 percent increase in real GDP, and economic welfare gains of $11.9 billion.

The results reported here establish that Canada under-performs in the ASEAN market and that an FTA with ASEAN would help correct for that. Further, given that ASEAN remains a relatively high-growth economic region, deeply integrated into East Asian value chains and production networks, the stronger the export base that Canada can build through an FTA, the greater the likely expansion of Canada's bilateral trade as ASEAN expands. Further, it complements Canada's existing

trade agreements in the region by opening up preferential trade with a number of ASEAN Member States that are not likely to be able to take on CPTPP commitments in the medium term.

Even more importantly, becoming an ASEAN Plus One partner would position Canada to join the RCEP. This has several strategic advantages. First, it enables Canadian firms to trade under accommodating rules of origin in the largest trade agreement currently in force, one that includes the Asian CPTPP members that have yet to ratify the CPTPP and Canada's other free trade partner in the region, Korea. Second, it creates an alternate route to a free trade agreement with China, which would offset Canada's present disadvantage in that market given China's Phase One Agreement with the United States and vis-à-vis other major trade competitors such as Australia and New Zealand that have preferential access to China's market under the RCEP. Third, given the open invitation that India retains to join RCEP under already largely negotiated terms, it provides Canada an alternate route to a trade agreement with India and thus represents a strategic hedge with regard to Canada's efforts to revive the Canada-India free trade talks.

Accordingly, as Canada frames its pivot to the Indo-Pacific, it should place strategic importance on prioritizing a trade agreement with ASEAN.

1 INTRODUCTION

With Canada having new or updated trade agreements in place covering trade in North America, with Europe, and with many of its major trading partners in the Pacific Rim, Canada's trade diversification strategy must increasingly look to the Global South. In the high-growth developing world, the Association of Southeast Asian Nations (ASEAN) stands out.

Canadian business and political leaders have long looked to strengthen bilateral economic relations with the ASEAN Economic Community based on its openness to trade, its dynamism and its deep integration into Asian supply chains. ASEAN has similarly looked to expand its network of free trade agreements (FTAs) to diversify its markets and drive growth. This mutual interest prompted an independent evaluation of a possible FTA (Ciuriak et al. 2017a); and an official joint study (GOC-ASEAN 2019). Both studies made a positive case for an ASEAN-Canada FTA (ACFTA).

Much water has passed under the bridge since these studies were completed. The Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) was implemented (although not as yet ratified by two of the ASEAN parties, Brunei and Malaysia). Further, the Regional Comprehensive Economic Partnership (RCEP) came into force as of 1 January 2022, integrating ASEAN's bilateral free trade agreements with China, Korea, Japan, Australia and New Zealand into a streamlined regional pact. Although India withdrew from the negotiations at the eleventh hour, the RCEP nonetheless is now the biggest FTA in the world (and the door remains open for India's accession). Moreover, the widespread shift from an Asia-Pacific to an Indo-Pacific framing for engagement with Asia has emphasized ASEAN's geographic location which straddles the oceanic divide and makes ASEAN the linchpin of any comprehensive political and economic regional strategy.

On 16 November 2021, Canada and ASEAN agreed to pursue negotiations towards such an agreement. Accordingly, it is timely to revisit the merits of an ACFTA both in direct economic terms and as part of Canada's broader strategy as it seeks to frame its own pivot to the Indo-Pacific.

First, to provide context, the report considers whether Canada is trading in the ASEAN market consistent with its potential, taking into account the realities of economic geography.

Second, the report provides an updated quantitative assessment of the trade and economic implications of an ACFTA using a dynamic computable general equilibrium (CGE) model. The level of ambition is calibrated to be consistent with

the RCEP, which is ASEAN's most ambitious and most comprehensive trade agreement to date, and one that has positively surprised observers in terms of the number of tariff lines on which commitments were made (including on agricultural trade), the accommodating rules of origin, improvements in services and investment access, and coverage of new areas such as e-commerce and data (Asian Trade Centre 2020). The assessment takes into account tariff reductions as well as a lowering of non-tariff barriers to trade in goods and services and investment.

Third, it considers the implications of Canada becoming an ASEAN Plus One partner in terms of strategically positioning Canada to join the RCEP. The RCEP spans the deepest and most efficient production value chains in the world, is home to the largest number of Global 500 firms, and encourages production input flows within the group through the aforementioned accommodating rules of origin. The RCEP now has the strongest claim to meaningfully integrate the Indo-Pacific given ASEAN Member States' (and Australia's) extensive exposure to the Indian Ocean littoral alongside the integration it offers along the West Pacific littoral. With an open door to India for future accession, the RCEP is positioned to be the key trade agreement for Indo-Pacific trade going forward.

To preview the results, the study finds a positive but modest impact on bilateral trade between Canada and ASEAN with consequent modest welfare and real GDP gains. The trade gains and the economic benefits they leverage could, however, be substantially higher. This reflects both the scope for more ambitious tariff cuts (which could be leveraged in part through Canada's parallel trade negotiations with Indonesia towards a bilateral FTA) and the fact that bilateral Canada-ASEAN trade underperforms compared to expectations based on economic geography, a deficit that could be made up in the new global environment as companies seek to secure their supply chains and customer relations in the face of geopolitical tensions.

The still larger prize, however, is the opening for Canada, as an ASEAN Plus One partner, to accede to the RCEP. This promises direct gains that are an order of magnitude higher than those under the ACFTA alone. Moreover, it would enable Canadian firms to trade under accommodating rules of origin in the largest trade agreement currently in force, one that includes the Asian CPTPP members that have yet to ratify the CPTPP and Canada's other free trade partner in the region, Korea. Further, it creates an alternate route to a free trade agreement with China, which would offset Canada's present disadvantage in that market given China's Phase One Agreement with the United States and vis-à-vis other major trade competitors such as Australia and New Zealand that have preferential access to China's market under the RCEP. And finally, given the open invitation that India retains to join RCEP under already largely negotiated terms, it provides Canada an alternate route to a trade agreement with India and thus represents a strategic hedge with regard to Canada's efforts to revive the Canada-India free trade talks.

2 BACKGROUND

2.1 ASEAN and its FTA Partners

Formed originally through the Bangkok Declaration of 1967 as a political grouping in the context of the Cold War geopolitical contest between the communist bloc and the US-led anti-communist coalition and against the backdrop of the hot war in Vietnam, ASEAN has grown through enlargement from the original five signatories (Indonesia, Malaysia, Philippines, Singapore and Thailand) to its present membership of ten through the inclusion of Brunei Darussalam and the Indo-Chinese group of Cambodia, Lao PDR, Myanmar and Vietnam. This expansion served to bridge the former geopolitical divide in southeast Asia and gave ASEAN a longstanding mission to continue to build bridges both political and economic.

In the first regard, ASEAN hosts the ASEAN Regional Forum (of which Canada has been a Dialogue Partner since 1977) and the East Asia Summit. These institutions have kept the lines of communication on security issues open in the region.

In the second regard, it has progressively deepened economic integration between its member states through the ASEAN Free Trade Agreement (AFTA) of 1992, and the commitment to form a single market, an ASEAN Economic Community, by 2025. It has also been central to regional economic integration in East Asia by forging bilateral trade agreements with its major regional partners, China, India, Japan, Korea, and the Australasian duo of Australia and New Zealand, and by acting as the prime mover to integrate and streamline these agreements through the RCEP.

This orientation is particularly relevant today as Canada and many of its major trading partners adopt "Indo-Pacific" framings for their relations with Asia. While some formulations of the Indo-Pacific are confrontational, reflecting the flaring geo-strategic rivalry between the United States and China (see Ciuriak 2020 for a review of the origins of the various framings), ASEAN's interpretation remains decidedly inclusive.

As an economic entity, ASEAN now has a plausible claim to being an economic power. Its economy reached US$3.3 trillion in 2021 (Table 1);[1] this makes it the fifth largest economy in the world behind the United States, the European Union, China, and Japan. The reality of such a claim will, of course, be considerably enhanced when ASEAN's single market enters into force.

ASEAN has population heft (667 million in 2021); a growing middle class with average per capita incomes about US$5,000 (Table 1); growth dynamism, having sustained real growth in GDP of about 5 percent since 2001 (IMF, 2021); and as mentioned an integral role in the globally competitive Asian production chains which makes it a prime destination for firms seeking to diversify supply chains.

At the same time, it is a highly heterogeneous region. As brought out in Table 1, population sizes range from under 500,000 (Brunei) to 272 million (Indonesia); economies range in size of GDP from US$16 billion to US$1.15 trillion (with Brunei and Indonesia again providing the bookends); and per capita incomes that range from US$1,246 (Myanmar) to US$66,266 (Singapore). This heterogeneity inevitably creates difficulties for ASEAN in moving forward; seen in a positive light, however, this heterogeneity also inculcates approaches to policy formation that emphasize inclusiveness in order to achieve consensus.

From a trade policy perspective, three things stand out in the tariff structures that ASEAN economies maintain (as summarized in Table 1):

- There is no common external tariff, which makes negotiations complex and results in variable geometries in the agreements that ASEAN forges – this is true of the RCEP and of any agreement that Canada might negotiate on the basis of the RCEP template.
- Applied most favoured nation (MFN) tariffs are relatively high, meaning that a preferential trade agreement is likely to generate significant improvements in preferential market access vis-à-vis third parties – and to claw back market access lost due to preference erosion to parties that already have FTAs with ASEAN.
- There is much "water" in the tariff structures of ASEAN member states. This provides them considerable flexibility to raise applied tariffs facing non-FTA trading partners without penalty under WTO rules. By extension, exporters in non-FTA partner countries face a relatively high degree of uncertainty about future market access in these markets.

These considerations work to both make a trade agreement with ASEAN more difficult to negotiate

1 Unless specifically indicated as in this instance, all dollar figures are in Canadian dollars.

Table 1: ASEAN and its FTA Partners – Income, Population and Tariff Profiles

	GDP (US$ bn)		GDP Per Capita (US$)		Pop. (millions)	Agricultural Tariffs			Non-agricultural Tariffs		
	Mkt	PPP	Mkt	PPP		MFN Bound	MFN Applied	Water	MFN Bound	MFN Applied	Water
ASEAN	3,328	8,978	4,987	13,454	667						
Brunei	16	30	33,952	65,621	0.46	31.2	0	31.2	24.4	0.3	24.1
Cambodia	26	78	1,647	4,930	16	28.0	12.7	15.3	17.9	10.0	7.9
Indonesia	1,150	3,530	4,225	12,967	272	47.1	8.7	38.4	35.5	8.0	27.5
Lao PDR	19	62	2,626	8,444	7.4	19.6	11.2	8.4	19.1	8.2	10.9
Malaysia	371	969	11,125	29,048	33	53.6	8.7	44.9	14.9	5.2	9.7
Myanmar	67	237	1,246	4,426	54	103.6	9.6	94	21.2	6.0	15.2
Philippines	386	983	3,492	8,900	110	35.0	9.8	25.2	23.4	5.5	17.9
Singapore	379	615	66,266	107,682	5.7	20.9	0.1	20.8	6.2	0	6.2
Thailand	546	1,331	7,809	19,028	70	39.1	29.3	9.8	25.7	7.1	18.6
Vietnam	368	1,141	3,743	11,608	98	18.8	16.5	2.3	10.5	8.4	2.1
RCEP Partners	25,648	36,871	15,772	22,674	1,626						
Australia	1,611	1,427	62,619	55,492	26	3.5	1.2	2.3	10.7	2.6	8.1
China	16,863	27,072	11,891	19,090	1,418	15.7	13.8	1.9	9.1	6.5	2.6
Japan	5,103	5,634	40,704	44,935	125	17.8	15.8	2.0	2.5	2.5	0
Korea	1,824	2,503	35,195	48,309	52	61.5	56.8	4.7	9.8	6.6	3.2
New Zealand	248	235	48,348	45,879	5	5.8	1.4	4.4	10.1	2.0	8.1
RCEP Total	28,976	45,849	12,634	19,992	2,293						
Memo: India	2,946	10,181	2,116	7,314	1,392	113.1	34	79.1	36.0	11.9	24.1
Memo: Canada	2,016	2,027	52,791	53,089	38	15.3	15.1	0.2	5.1	2.1	3.0

Sources : IMF, World Economic Outlook Database (October 2021). WTO Tariff Profiles. Notes: GDP is in US$ billions at market and purchasing power exchange rates, respectively; GDP per capita is US$ at market and purchasing power parity (PPP) exchange rates, respectively; population is in millions; MFN tariffs for agricultural and non-agricultural products are simple averages of bound rates under the party's WTO commitments and of applied rates as per the latest data in the WTO tariff profiles. "Water" is the difference between the bound and applied tariffs and represents a measure of uncertainty about future tariffs.

Table 2: Bilateral Merchandise Trade, Canada-ASEAN, in $Millions, 2001-2019

	2001	2019	Average Annual Growth (*percent*)
Canada Imports from ASEAN	6,998	20,157	6.05
ASEAN Imports from Canada	2,754	9,552	7.15
Two-way Trade	9,752	29,708	6.38

Sources: International Trade Centre Trade Map; calculations by the study team.

but also more worthwhile because of the large gain in certainty from binding FTA tariffs in addition to the actual reduction of applied tariffs. To date, the effect of FTAs in binding tariffs at the agreed FTA levels has not been integrated into quantitative assessments of FTAs. The economic literature on uncertainty, however, suggests that the effect of binding is significant (see, e.g., Ciuriak et al. 2020 for the effect of binding market access in services).

As regards ASEAN's FTA partners, these hardly need an introduction as they include two of the largest economies in the world – China and Japan – and three globally engaged economies in Australia, Korea and New Zealand. Together with ASEAN, these economies combine to create a market of 2.3 trillion people generating a GDP value of almost US$30 trillion. Significantly, the RCEP economies are home to 222 of the Global 500 firms in Fortune's 2021 list, and 214 Unicorns, almost one quarter of the global total of 916 tallied by CB Insights (2021). Modern trade theory emphasizes that it is firms that trade – not countries. The RCEP economies are exceptionally rich in firms, including dynamic high growth start-ups.

2.2 Canada-ASEAN Trade in Perspective

Canada's commercial engagement with ASEAN increased substantially over the past two decades. Bilateral merchandise trade grew by about 6.4 percent per annum, with ASEAN's imports from Canada rising from $2.75 billion in 2001 to $9.55 billion in 2019 or by 7.15 percent per annum, prior to the pandemic disruptions. Over the same period, Canada's imports from ASEAN rose from $7.0 billion to $20.2 billion, or by 6 percent per annum (Table 2).

Canada maintained its overall 0.5 percent share of ASEAN's imports over this period, which translated into Canada accounting for $6.8 billion of the $1.326 trillion increase in ASEAN's overall imports between 2001 and 2019. While ASEAN imports from Canada grew faster over this period than Canada's imports from ASEAN, the bilateral trade imbalance meant that ASEAN's bilateral trade surplus expanded substantially.

2.3 Calibrating Expectations

While Canada appears to have held its own in the ASEAN market over the past two decades, there is an open question as to whether Canada's performance met reasonable expectations concerning its trade with ASEAN. To calibrate expectations, we use a gravity model framework. The gravity model posits that countries trade more intensively with partners that are larger, geographically closer, more open, have greater economic freedom, and with which they share commonalities that tend to reduce trade costs, such as common language, common cultural characteristics, common legal systems, common currencies, and historical ties. Bilateral free trade agreements and complementary patterns of comparative advantage also serve to boost bilateral trade.

We estimate a gravity equation for Canada's exports to 188 countries to calibrate the role of

Table 3: Canadian Exports to ASEAN, Average 2017-2019, Compared to Predicted Levels

Destination	Actual	Predicted	Under-trading (*$ millions*)	Under-trading (*percent of predicted*)
Goods (ex precious metals & fossil fuels)	6,035	6,542	-506	-7.7
Agri-food	1,668	2,150	-482	-22.4
Manufacturing	4,367	4,483	-116	-2.6

Source: Calculations by the study team.

these various factors in influencing the intensity of Canada's bilateral trade relations. The estimated equations establish an "expected" level of trade. This expected level can be compared to actual levels to see if Canada is performing according to expectations, exceeding expectations, or under-performing. In the latter case, this can be an indication of possibly unexploited trade potential. Annex 1 provides a technical description of the gravity equation, the data, the estimating technique, the equation specification and the estimation results.

Overall, we find that, if Canada had exported to ASEAN on a par with its average global performance, exports to ASEAN would have been in total $506 million or about 8 percent higher than they were on average in 2017-2019, if we perform the analysis on total goods excluding precious metals and fossil fuels (which do not tend to follow standard gravity patterns). When the analysis is performed separately for agri-food and manufactures, we find that both product groups were under-traded, with agricultural and agri-food exports falling 22.4 percent short of the predicted level and manufacturing exports 2.6 percent short (Table 3).

2.4 CGE Model Simulations Methodology

2.4.1 The CGE Model and Modelling Protocols

To model the ACFTA and Canada's accession to RCEP, we deploy a recursive dynamic version of the standard Global Trade Analysis Project (GTAP) model, modified to include foreign direct investment (FDI). A detailed description of the model structure is provided in Ciuriak et al. (2017).

The ACFTA is simulated based on a projection of the global economy to 2035 that reflects the impact of the pandemic in 2020-2021 and a recovery based on the International Monetary Fund's World Economic Outlook of October 2021 (IMF 2021). The impact of the ACFTA is the difference in 2035 between the ACFTA scenario and this baseline. The impact of the RCEP, meanwhile, is the difference between the additional liberalization involved in Canada's accession and the new baseline in which the ACFTA is already in place.

The model is built on the GTAP V10 database (Aguiar et al. 2019), which has a base year of 2014. The 65 sectors in this dataset are aggregated to 33 for computational tractability. The 141 regions are aggregated to 39, with the individual ASEAN and RCEP economies separately represented except Brunei, Cambodia, Lao PDR and Myanmar, which are grouped as "Other ASEAN."

Given that FDI is active in the model, the supply of capital, both domestic and international, responds to changes in changes in the rate of return to capital. At the same time, the effective labour supply, both in terms of jobs and labour productivity, changes in line with changes in real wages. This treatment of the labour market response is consistent with: (a) theoretical expectations that labour is paid its marginal product; (b) empirical evidence that labour supply responds to real wages – in particular, Evers et al. (2008), on the basis of a meta-analysis, conclude that the labour supply elasticity is about 0.1 for men and 0.6 for women,

or about 0.35 on average; and (c) the findings of heterogeneous firms trade analysis that show that trade liberalization transfers market share to firms that feature higher productivity and higher wages (Melitz 2003).

Impacts on the level of output and economic welfare thus come from two major sources: the reallocation of production in Canada and ASEAN across sectors in line with the respective comparative advantage of each economy in response to the changes in tariffs and other trade costs; and the dynamic effects on each economy's endowments of labour and capital, including through flows of FDI, and through impacts on the productivity of labour. The calibration of the productivity effect follows Ciuriak and Xiao (2016).

As a benchmark for reasonability of the simulations, we compare the expansion of trade and the expansion of real GDP. DeRosa and Gilbert (2006: 238) suggest a rather general rule of thumb that real GDP gains in percentage terms are likely to be a fraction of the trade expansion in percentage terms. Based on established economic research that links economic openness and income gains, for an average economy, a ratio of real GDP to trade gains of about 0.2 is considered reasonable; for economies that are more dependent on trade, a higher ratio is plausible. We also consider the extent of trade diversion and the change in a country's terms of trade: large changes in terms of trade, which drive a high degree of trade diversion, are not generally supported by the empirical literature on the impact of trade agreements.

2.4.2 The Policy Shocks

For the ACFTA, we develop tariff liberalization schedules for the ASEAN economies based on the template of their RCEP tariff commitments.

For non-tariff measures affecting goods trade, we assess the impact of the RCEP commitments on the parties' scores under the OECD's Trade Facilitation Indicators (TFIs) taking into account their commitments under the WTO Trade Facilitation Agreement (TFA). This does not result in material changes to border regimes.

For services, we develop liberalization shocks by applying the RCEP template to the cross-border (Mode 1) scores of the parties on the OECD's Services Trade Restrictiveness Index (STRI) (Gelosso Grosso et al. 2015). We also take into account the extent of squeezing "water" out of the bindings in the General Agreement on Trade in Services (GATS) by comparing RCEP bindings to the parties' scores in the corresponding GATS Trade Restrictiveness Index (GTRI) developed by Miroudot and Pertel (2015). The methodology for combining the liberalization of applied measures and the effect of bindings is set out in Ciuriak et al. (2020).

We perform a similar exercise for investment, drawing on the Mode 3 components of the STRI/GTRI. The horizontal components of these indexes also cover goods sectors, allowing an assessment of whether the RCEP template liberalizes investment in the goods sectors (it does not).

The RCEP policy shock takes into account that Canada's trade relations with most of the parties will have already been liberalized through the CPTPP (which we assume Brunei and Malaysia will have ratified), the Canada-Korea FTA, and the new ACFTA which is built into the baseline for the simulations describing Canada's accession to the RCEP. The liberalization shock for RCEP accession thus boils down to applying China's RCEP commitments to Canada and Canada's CPTPP commitments to China.

2.4.3 Currency Conversion

As regards the reported impacts, the original figures in the ACFTA and RCEP Accession scenarios are developed in US dollars at 2014 prices, consistent with the base year of the GTAP V10 database. These figures may be converted to Canadian dollars at 2021 prices as follows:

(a) To convert 2014 US dollar prices to 2021 prices, we use the ratio of the US GDP deflator in 2021 divided by the deflator in 2014 to capture US dollar inflation between 2014 and 2021. Based on the IMF WEO database, October 2021, this ratio is expected to be 1.136.

(b) To convert 2021 US dollar values to Canadian dollars we use the Bank of Canada's official exchange rate of CAD/USD 1.2535.

(c) This yields a conversion value of 1.424 (=1.136*1.2535) – that is, the figures below in 2021 CAD are about 42 percent higher than the original model-generated figures in 2014 USD.

(d) For the Joint Study and the Ciuriak et al. (2017) study, which were based on 2011 USD prices, the conversion to 2021 CAD raises the dollar estimates by 48 percent.

2.4.4 Previous Studies

A possible ACFTA has been quantified in a Joint Study (GOC-ASEAN, 2020) that involved separate evaluations conducted by ASEAN and Canada; accordingly, there are two official benchmarks for the potential impact of such an agreement.

The analysis conducted by ASEAN shows that an agreement that includes goods liberalization, a reduction of non-tariff barriers, and improvements to trade facilitation would increase ASEAN's exports to Canada by 18.7 percent and Canadian exports to ASEAN by 26.5 percent. These gains are calculated to increase ASEAN's GDP by 1.6 percent and Canada's GDP by 0.3 percent.

The analysis conducted by Canada suggests that an agreement that includes goods, services and investment liberalization would increase ASEAN exports to Canada by 15.5 percent and Canadian exports to ASEAN by 13.3 percent. The Canadian analysis suggested that these trade gains would increase ASEAN's GDP by 0.12 percent and Canada's by 0.10 percent.

A third study was conducted for the Asia Pacific Foundation of Canada, the Business Council of Canada, the Canada-ASEAN Business Council, and the University of British Columbia (APFC, CABC, BCC, UBC, 2019). This study found smaller bilateral trade gains (Canadian exports to ASEAN growing by 8.46 percent and imports from ASEAN by 10.92 percent), consistent with the lower level of ambition built into the assumptions. These trade gains generated lower gains in real GDP of about 0.03 percent.

Official joint studies typically make strong assumptions about the degree of liberalization in order to bring out the untapped potential for trade expansion. Actual agreements tend to fall short of the modelled results as the level of ambition is tempered in actual negotiations by the difficulties of liberalizing sensitive sectors, especially in services. This helps account for the smaller trade gains in the non-official study.

A second observation is warranted on the smaller ratio of real GDP gains to trade gains in the latter study compared to the Joint Study simulations. This appears to reflect the fact that less of the real GDP gain is driven by non-tariff measures, which have a stronger impact on a region's productive capacity than tariff reductions because they reduce costs, and thus implicitly boost the effective productive endowments through higher productivity.

3 ACFTA ECONOMIC IMPACTS

3.1 Overview of ACFTA Impacts

Table 4 sets out the estimates of the impact of an ACFTA on real GDP and welfare. We report two simulations: one based on the RCEP template (column 4) and one with a more ambitious tariff elimination schedule to illustrate the full economic potential of ACFTA (column 5). For comparison, the table includes the two estimates from the Joint Study (columns 1 and 2), and the estimates conducted for the study sponsored by the Asia Pacific Foundation, the Canadian and ASEAN Business Councils, and the University of British Columbia (column 3), based on the AANZFTA template.

As can be seen, the three estimates based on actual FTA templates are much smaller than the Joint Study estimates. As noted, one major reason for the smaller gains in FTA simulations based on actual FTA templates is that the ambitious targets for reduction of non-tariff barriers (NTBs) that joint studies assume typically prove to be difficult to achieve in actual negotiations. At the same time, the

Table 4: Macroeconomic Impacts of the ACFTA – Comparison Across Studies

	Joint Study ERIA*	Joint Study Canada	AANZFTA Template	RCEP Template	Ambitious Tariff Cuts
Real GDP (*percent change*)					
Canada	0.29	0.10	0.032	0.021	0.031
ASEAN	1.53	0.18	0.017	0.039	0.047
GDP (*$millions*)					
Canada	7,567	3,771	1,218	1,657	2,134
ASEAN	58,351	8,914	1,858	1,403	2,357

* Economic Research Institute for ASEAN and East Asia.

Sources: GOC-ASEAN Joint Study; APFC, CABC, BCC, UBC (2019); and the study team. Original estimates in US$ at 2011 and 2014 prices in the respective studies are converted to US$ at 2021 prices, based on the IMF World Economic Outlook database, October 2021; these figures are converted to Canadian dollars using the Bank of Canada's official exchange rate for 2021. https://www.bankofcanada.ca/rates/exchange/annual-average-exchange-rates/

gap suggests there is headroom for stronger gains given a higher level of ambition. For third parties, the impacts are very small and essentially negligible at the macroeconomic level.

As regards the changes in the estimates based on the RCEP vs. AANZFTA templates, comparing columns 4 and 3, it can be seen that the value of the ACFTA for Canada in real GDP terms on the RCEP template applied to the updated baseline data is somewhat smaller and it takes the more ambitious tariff reduction scenario to match the earlier estimate. However, in terms of the value of GDP, the gains are larger (which reflects more favourable terms of trade for Canada). For ASEAN, the RCEP template results in substantially larger real GDP gains but somewhat smaller gains in the value of GDP due to less positive terms of trade effects. Overall, the results are similar in order of magnitude across the latter three studies; the main difference with the Joint Study results comes from the optimistic assumptions concerning NTB reduction.

Table 5 provides the real GDP and economic welfare impacts of the two ACFTA scenarios developed for this study. As can be seen, the main benefits for ASEAN from the ACFTA are captured by Indonesia, Thailand and the Philippines. Economies that already have free trade arrangements with Canada through the CPTPP (Malaysia, Singapore and Vietnam), do not stand to benefit from the ACFTA, and indeed Vietnam is marginally worse off. The "Other ASEAN" economies (the Indochina group of Cambodia, Lao PDR, and Myanmar together with Brunei) also do not benefit – this is largely due to the limited amount of bilateral trade and the limited liberalization in sensitive sectors by these economies.

3.2 Macroeconomic Impacts for Canada

This section delves deeper into the macroeconomic impacts of an ACFTA for Canada. For Canada, the ACFTA boosts GDP in value terms (taking into account changes in prices due to higher wages and terms of trade gains, etc.) by $1.66 billion in 2035 when all the phased-in impacts have worked their way through the economy. This represents an increase of about 0.051 percent over the value of GDP in the baseline in 2035. In volume terms, the GDP impact is smaller, an increase of 0.021 percent, with the difference between value and volume made up by an increase in the GDP deflator

Table 5: Macroeconomic Impacts of the ACFTA by Party

	Real GDP (*percent change*)		Welfare (*$millions*)	
	RCEP Template	**Ambitious**	**RCEP Template**	**Ambitious**
Canada	0.021	0.031	1,165	1,605
ASEAN	0.039	0.047	2,180	3,001
Indonesia	0.054	0.067	1,287	1,908
Malaysia	0.001	0.000	7	0
Philippines	0.062	0.076	192	376
Singapore	0.005	0.004	23	12
Thailand	0.076	0.088	726	848
Vietnam	-0.004	-0.009	-48	-102
Other ASEAN	-0.001	-0.018	-7	-41

Source: Estimates by the study team.

of about 0.31 percent. Canada enjoys positive terms of trade impacts (0.27 percent increase), which also work to increase prices in Canada (CPI increase of 0.17 percent). While the higher prices boost the value of Canada's GDP, they limit the gain in economic welfare, which improves by $1.165 billion or by about 0.044 percent.

Consumption grows relatively strongly compared to investment and the higher price profile in Canada induces greater overall import growth compared to export growth.

Bilateral trade increases by $2,766 million in the RCEP template scenario and by $4,322 million with more ambitious tariff reductions, which suggests there is room to squeeze out more trade gains under the RCEP template. The increase in total trade with the world is about half of bilateral trade in each case as roughly 50 percent of the increase in bilateral trade represents trade diversion. Canada's overall trade balance with the world declines; this is expected in an FTA scenario because the rest of the world does not receive a similar boost to demand as the bilateral FTA partners.

In terms of the structure of GDP, the ACFTA makes Canada a more open economy as both exports and imports increase more strongly in real terms than real GDP. The deflection of Canadian exports from traditional markets such as the United States increases the diversification of Canadian trade. Similarly, the diversion of imports from traditional sources towards ASEAN serves to increase the variety of products put on the Canadian market.

The impact on Canadian factor markets is heavily influenced by modelling assumptions. The Canadian economy has, in recent years, seen productivity rise faster than real wages (Greenspon et al. 2021). However, this appears to be the result of structural factors holding back wage growth rather than a delinkage between productivity and pay, all else being equal. The ACFTA would not be expected to reproduce exactly the same pattern of productivity and growth as the normal expansion

Table 6: Macroeconomic Impacts of the ACFTA for Canada

	RCEP Template	Ambitious Tariff Reduction
Major Indicators		
Economic Welfare (*$millions*)	1,165	1,605
Economic Welfare (*percent change*)	0.044	0.061
GDP Value Change (*$millions*)	1,657	2,134
GDP Value Change (*percent*)	0.051	0.066
GDP Volume (*percent change*)	0.021	0.031
GDP Deflator (*percent change*)	0.031	0.035
CPI (*percent change*)	0.017	0.014
Terms of Trade (*percent change*)	0.027	0.038
Real GDP Expenditure Components (*percent change*)		
Consumption	0.054	0.069
Government Expenditure	0.056	0.072
Investment	0.032	0.047
Total Exports of Goods and Services	0.046	0.074
Total Imports of Goods and Services	0.080	0.122
International Trade (*$millions*)		
Bilateral Exports of Goods and Services	1,387	1,981
Bilateral Imports of Goods and Services	1,378	2,340
Total Exports of Goods and Services	609	921
Total Imports of Goods and Services	804	1,205
Trade Balance	-195	-284
Factor Markets		
Capital Stock (*percent change*)	0.016	0.024
Real wage Unskilled (*percent change*)	0.025	0.038
Real wage Skilled (*percent change*)	0.021	0.032
Labour (number of jobs)	1,815	2,798
Unskilled	1,328	2,047
Skilled	487	751
Jobs (*percent change*)	0.008	0.013
Labour productivity (*percent change*)	0.012	0.018
Key Ratios		
Real GDP/Real Trade (*percent change*)	0.33	0.32
Real Wages/Productivity growth (*percent change*)	1.92	2.03

Source: Estimates by the study team.

Table 7: Canada's Gaining Sectors, $Millions

	Bilateral Exports	Bilateral Imports	Total Exports	Total Imports	Domestic Shipments	Total Shipments
Trade-driven Gaining Sectors						
Pork and Poultry	292	0	247	20	23	269
Oil Seeds and Vegetable Oils	356	11	201	29	49	249
Machinery and Equipment	142	107	79	86	-23	56
Income-driven Gaining Sectors						
Other Services	0	0	-9	15	709	700
Trade	3	1	-4	12	364	360
Construction	0	0	-1	1	349	349
Business Services	4	13	-28	34	272	244
Financial Services	6	7	-11	24	158	147

Source: Calculations by the study team.

Table 8: Canada's Declining Sectors, $Millions

	Bilateral Exports	Bilateral Imports	Total Exports	Total Imports	Domestic Shipments	Total Shipments
Other Manufacturing	8	224	-2	92	-24	-26
Textiles and Apparel	13	417	18	78	-35	-17
Transportation Equipment	18	35	-8	11	-7	-15

Source: Calculations by the study team.

of the Canadian economy would. For one thing, structural factors are held constant; for another, the growth is driven by trade liberalization, which tends to transfer market share to more productive firms that pay higher wages.

The simulations suggest that real wages would rise about twice as much as productivity. This is somewhat on the high side, in which case real growth and productivity might be somewhat higher than indicated in the simulation and price and wage growth somewhat less.

Given the real wage growth, and an assumption of a labour supply elasticity of 0.35, job growth would amount to 1,815 and 2,798 in the two scenarios, with a relatively strong weighting towards unskilled labour.

In terms of key ratios, the simulation generates reasonable results. The ratio of real GDP to real trade gains is about 0.3, which is broadly in line with the "rule of thumb" of 20 percent. This takes into account that Canada is a relatively highly open economy and trade leverages greater real GDP gains than, say, for larger economies such as the United States (see Ciuriak and Xiao 2016, for a discussion of these reality checks).

Overall, we conclude that the simulations are within the bounds implied by Canada's historical experience and on the conservative side in terms of the scale of real GDP and productivity gains.

3.3 Sectoral Impacts

Table 7 sheds light on potential sectoral impacts. We focus on the RCEP template scenario. Three sectors make relatively strong increases in overall farm/factory-gate shipments due to a strong

performance in bilateral exports to ASEAN Member States: pork and poultry, oil seeds and vegetable oils, and machinery and equipment. The strong performance on bilateral exports drives total export increases coupled with some increases in domestic shipments for the two agricultural product groups, this in turn drives increases in total shipments (which are equal to total exports plus domestic shipments).

Overall, however, the sectors making the strongest gains in total sales are the services sectors, which make their gains almost entirely from the domestic market; in these cases, the gains are driven by the income growth in Canada generated by the ACFTA.

As regards sectors that emerge the least well-off under the ACFTA, the declines in total shipments due to import penetration from ASEAN competitors are modest. A key message is that Canada's economy does not face any significant disruption from an ACFTA.

3.3.1 ASEAN's Sectoral Trade Gains

ASEAN makes its largest bilateral export gains in textiles and apparel ($417 million in Canadian imports). Other sectors that increase sales in Canada include "other manufacturing" ($224 million), and the chemicals-rubber-plastics complex ($210 million. Food products and machinery and equipment also make tangible gains in the Canadian market.

4 CANADA ACCEDING TO RCEP

An advantage of an FTA with ASEAN is that Canada, as an ASEAN Plus One partner, would be primed to join the RCEP, which is comprised of ASEAN and its free trade partners (India and recent FTA partner Hong Kong excepted). In this section, we provide a preliminary perspective on the value to Canada of joining RCEP. Since Canada, building on the ACFTA, the CPTPP and the Canada-Korea FTA, would have free trade arrangements with all the RCEP parties save China, the accession would largely boil down to a Canada-China negotiation.

Table 9: ASEAN's Leading Bilateral Export Gains, $Millions

	Canada's Bilateral Imports from ASEAN
Textiles and Apparel	417
Other Manufacturing	224
Chemicals Rubber and Plastics	210
Food Products	121
Machinery and Equipment	107

Source: Calculations by the study team.

4.1 Macroeconomic Impacts

As shown in Table 10, if Canada were to accede to the RCEP based on the negotiated RCEP template, the gains would be substantially greater than under ACFTA; moreover, there would be solid additional gains from a more ambitious tariff elimination (which would be principally by China) compared to those under the RCEP template.

Walking through the numbers briefly, Canada would make real GDP gains under the two scenarios of about 0.45 percent and 0.55 percent respectively. Welfare gains would amount to $11.9 billion and $14.4 billion respectively. In value terms (taking into account changes in prices due to higher wages and terms of trade gains, etc.), GDP would increase by $13.9 billion in 2035 when all the phased-in impacts have worked their way through the economy. This represents an increase of about 0.43 percent over the value of GDP in the baseline in 2035. These figures would rise to as much as $16.9 billion and 0.52 percent respectively under the more ambitious liberalization scenario.

In volume terms, the GDP impact is smaller, an increase of 0.28 percent and 0.35 percent in the two scenarios, with the difference between value and volume made up by an increase in the GDP deflator of about 0.15 percent and 0.18 percent respectively. Canada enjoys positive terms of trade impacts (improvements of 0.21 percent and 0.26 percent in the two scenarios respectively), which also work to increase prices in Canada (CPI increases of 0.014

Table 10: Macroeconomic Impacts of Canada Acceding to RCEP

	RCEP Template	Ambitious Tariff Reductions
Major Indicators		
Economic Welfare (*$millions*)	11,856	14,442
Economic Welfare (*percent change*)	0.449	0.547
GDP Value Change (*$millions*)	13,922	16,853
GDP Value Change (*percent*)	0.431	0.521
GDP Volume (*percent change*)	0.284	0.346
GDP Deflator (*percent change*)	0.147	0.175
CPI (*percent change*)	0.014	0.007
Terms of Trade (*percent change*)	0.212	0.263
Real GDP Expenditure Components (*percent change*)		
Consumption	0.454	0.548
Government Expenditure	0.475	0.575
Investment	0.451	0.548
Total Exports of Goods and Services	0.792	1.049
Total Imports of Goods and Services	1.094	1.407
International Trade (*$millions*)		
Bilateral Exports of Goods and Services	11,312	14,777
Bilateral Imports of Goods and Services	18,136	22,600
Total Exports of Goods and Services	8,186	10,716
Total Imports of Goods and Services	10,695	13,767
Trade Balance	-2,509	-3,052
Factor Markets		
Capital Stock (*percent change*)	0.216	0.264
Real wage Unskilled (*percent change*)	0.301	0.385
Real wage Skilled (*percent change*)	0.267	0.337
Labour (number of jobs)	22,454	28,620
Unskilled	16,144	20,657
Skilled	6,309	7,963
Jobs (*percent change*)	0.102	0.130
Labour productivity (*percent change*)	0.178	0.211
Key Ratios		
Real GDP/Real Trade (*percent change*)	0.30	0.28
Real Wages/Productivity growth (*percent change*)	1.63	1.75

Source: Calculations by the study team.

Table 11: Canada's Gaining Sectors, $Millions

	Bilateral Exports	Bilateral Imports	Total Exports	Total Imports	Domestic Shipments	Total Shipments
Trade-driven						
Automotive	3,400	889	2,986	1,682	285	3,271
Oil Seeds and Vegetable Oils	1,914	24	1,432	191	373	1,805
Chemicals Rubber Plastics	2,012	1,946	1,539	1,102	-60	1,479
Income-driven						
Other Services	-1	7	-50	123	6,182	6,132
Construction	-1	8	-3	9	3,530	3,527
Trade	-22	20	-55	100	3,398	3,343
Business Services	60	140	-116	324	2,692	2,576
Financial Services	19	12	-78	193	1,504	1,427

Source: Calculations by the study team.

Table 12: Canada's Declining Sectors, $Millions

	Bilateral Exports	Bilateral Imports	Total Exports	Total Imports	Domestic Shipments	Total Shipments
Textiles and Apparel	60	4,426	227	1,435	-735	-508
Other Manufacturing	95	2,263	84	1,108	-441	-358

Source: Calculations by the study team.

percent and 0.007 percent in the two scenarios respectively).

Bilateral trade with RCEP partners increases by about $30 billion in the RCEP template scenario and by $37 billion with more ambitious tariff reductions. The increase in total trade with the world is about two-thirds of the gain in bilateral trade, meaning that roughly one-third of the increase in bilateral trade represents trade diversion. Canada's overall trade balance with the world declines; again, as noted previously, this is expected in an FTA scenario.

As regards the structure of GDP, the impacts are well balanced across consumption, investment and government expenditures. The impacts are led by trade, which expands by about twice the increase in consumption and investment.

The simulations suggest that real wages would rise about 60-70 percent faster than productivity in the two RCEP scenarios. This is somewhat on the high side, which suggests that real growth and productivity might be somewhat higher than indicated in the simulation and price and wage growth somewhat less.

Given the real wage growth, and the assumption regarding the labour supply elasticity, job growth would be robust with over 22 thousand jobs created in the RCEP template scenario and over 28 thousand in the more ambitious scenario. In both cases, there is a relatively strong weighting towards unskilled labour.

In terms of the ratio of real GDP to real trade gains, this is about 0.3, which is broadly in line with expectations for Canada. Overall, we conclude

that the simulations are within the bounds implied by Canada's historical experience and on the conservative side in terms of the scale of real GDP and productivity gains.

4.2 Sectoral Impacts

Table 11 sets out the major sectoral impacts in the RCEP template scenario. Three sectors make relatively strong increases in overall farm/factory-gate shipments due to a strong performance in bilateral exports to RCEP parties: automotive, oil seeds and vegetable oils, and the chemicals/rubber/plastics complex. In these sectors, strong performance on bilateral exports drives total export increases, which drive increases in total shipments (which are equal to total exports plus domestic shipments).

Overall, however, the sectors making the strongest gains in total sales are the services sectors, which make their gains almost entirely from the domestic market; in these cases, the gains are driven by the income growth in Canada generated by the RCEP.

Only two sectors in the Canadian economy stand to be significantly affected by increased import penetration by RCEP parties: textiles and apparel and other manufacturing. For the most part, the increases in bilateral imports are from trade diversion; while total imports do increase substantially, the impact on domestic shipments is softened by the income effect from the RCEP. Again, a key message is that Canada's economy does not face significant disruption.

5 DISCUSSION

As Canada formulates its economic strategy to build back from the pandemic-induced economic crisis, it faces an external economic environment reshaped by a confluence of mega-trends and transient but powerful shocks. The mega-trends include the digital transformation, which has ushered in a knowledge-based and data-driven economy that promises pervasive industrial disruption while at the same time posing unique economic governance challenges; and climate change and the associated transition to renewable energy and all things electric. The shocks include the pandemic; the trade and technology frictions between the United States and China; the strategic behaviour of all the major economies aimed at capturing leading roles in the new general purpose technologies built on big data, machine learning and artificial intelligence; and the weakening of the multilateral trading system through the sidelining of the WTO and the proliferating exercise of national security exceptions to justify restrictions on both imports and exports, which has opened a Pandora's Box that may be hard to close.

Of particular importance to Canada will be the as-yet unclear implications of these factors for US trade and foreign policies. The Biden Administration's review of supply chains (White House, 2021) foreshadows security-driven industrial policies to rebuild US domestic manufacturing capacity. These policies will be financially backstopped by a "Build Back Better" plan that projects over US$4 trillion spending over 10 years on infrastructure and strategic industries such as semiconductors, renewable energy, and electric vehicles (Donnan 2021). While the fate of the Biden Administration's plans remain unclear (see, e.g., Kane 2022), insofar as they have traction, they will, inescapably, drive similar supply chain realignments in the EU, China, and other regions.

It is fair to question in this context how important a role to assign to traditional trade liberalization through regional free trade agreements? This question looms large given that Canada has newly signed and implemented agreements with its North American partners through the Canada-US-Mexico Agreement (CUSMA), with many of its Pacific Rim partners through the CPTPP and the Canada-Korea FTA, and with its European partners through the Canada-EU Comprehensive Economic and Trade Agreement (CETA) and the post-Brexit Canada-UK Continuation Agreement, between Canada and the European Free Trade Association (EFTA).

Several considerations emphasize that pursuing trade diversification through traditional trade agreements should remain a central pillar in Canada's economic strategy.

First, notwithstanding the sense that we are past peak globalization, globalization is not going away. Rather, it is adapting to the changed circumstances. For example, the multinational firms that dominate international trade and are the primary actors in organizing global value chains have reacted to the Cold War decoupling policies by rearranging supply chains in order to be able to participate both in the US-centric supply system and in China's as well (Thomas and Wu 2021). Moreover, as regards supply chain risks exposed by the pandemic, firms will likely respond by increasing redundancy of suppliers – including lower-tier suppliers within supply chains – rather than by reshoring (Chen et al. 2020), just as they did in response to previous shocks (see, e.g., the adjustments made by Japanese auto firms to diversify their sourcing following the 2011 Great East Japan Earthquake; Matous and Todo 2017).

While the idea of insulating from international shocks by pulling up the drawbridges is superficially tempting, it actually concentrates risks. Indeed, quantitative assessments of supply chain propagation of shocks show that re-nationalization of supply chains would not ameliorate the economic shock of a pandemic. For example, Bonadio et al. (2020) show an average real GDP decline due to the pandemic shock of -31.5 percent, of which about one-third was propagated through global supply chains; however, with re-nationalized supply chains, the average GDP decline would have been even larger at -32.3 percent. This reflects the fact that eliminating reliance on foreign inputs increases reliance on domestic inputs, which may also be subject to lockdowns (Calvert and Ciuriak 2020).

Second, while services, intellectual property, data, and innovation linkages increasingly dominate global commerce (van der Marel 2020), these new areas are not generally separable from goods trade. For example, an increasing share of value added in agricultural and industrial production and trade is accounted for by services through "servicification" (Timmer et al., 2014). In particular, the value content in goods is increasingly accounted for by research and development, including biotechnology, product design, and marketing. Increasingly the products we make will be "smart", with value-added artificial intelligence embedded. But even smart products need market access abroad for the basic non-smart component. And of course, for firms, there is the additional value of data captured throughout the production and marketing value chain, which is driven by the movement of goods. Accordingly, traditional trade agreements, such as the ones that ASEAN can comfortably negotiate, can go a long way to unlocking trade in high-valued-added tasks.

Third, none of the major global trends and shocks alter the fact that Canada is a relatively small economy whose prosperity depends on the ability to import, which in turn depends on the ability to export. "Me first" populist policies, which did not work out well in the United States under the Trump Administration, cannot even be seriously contemplated in Canada. Without gainsaying the need to fully take advantage of Canada's internal market by removing remaining non-tariff barriers (e.g., Bemrose, et al. 2017), the internal market is small, especially in an economic era of steep economies of scale. Nor do these considerations alter the fact that Canada's comparative advantage in global trade remains based on its agricultural and resource strengths, both of which depend on global demand.

Fourth, Canada's new trade agreements are not sufficient to secure its trading future. This is underscored by the reduced certainty of access to the US market under the CUSMA compared to the original North American Free Trade Agreement (NAFTA) given that the CUSMA did not decisively defang the use of Section 232 "national security" tariffs (Ciuriak et al., 2019) not to mention the lapsing with CUSMA of the NAFTA chapters on government procurement and investor-state dispute settlement (ISDS) in an era of new-found sensitivity around inward FDI. Moreover,

Canada's competitive position in global markets will be eroded by events beyond Canada's control, including the trade diversion that will be generated by the newly in-force RCEP, the UK's forced march on trade negotiations to secure its trading future in a post-Brexit context, and the US push for a "powerful new framework" for East Asia.

The results reported here establish that Canada under-performs in the ASEAN market and that an FTA with ASEAN would help correct for that. Further, given that ASEAN remains a relatively high-growth economic region, deeply integrated into East Asian value chains and production networks, the stronger the export base that Canada can build through an FTA, the greater the likely expansion of Canada's bilateral trade as ASEAN expands.

To be sure, Canada's values-based trade and foreign policy will have to answer questions about engagement with ASEAN at a time when some of its member states (Myanmar and Thailand) are in the midst of political turmoil and have been put in the dock for human rights violations and abrogation of democratic rights. The answer is straightforward: firms trade and households benefit from that trade. A progressive trade agenda should be people-centred, not government-centred. ASEAN is a constructive force in the region and Canada should engage with it.

Even more importantly, becoming an ASEAN Plus One partner positions Canada to join the RCEP. This has several important strategic advantages.

First, it would enable Canadian firms to trade under accommodating rules of origin in the largest trade agreement currently in force, one that includes the Asian CPTPP members that have yet to ratify the CPTPP and Canada's other free trade partner in the region, Korea.

Second, it would create an alternate route to a free trade agreement with China, which would offset Canada's present disadvantage in that market given China's Phase One Agreement with the United States and vis-à-vis other major trade competitors such as Australia and New Zealand that have preferential access to China's market under the RCEP. Notably, Australia moved ahead with RCEP notwithstanding the political frictions with China and the Biden Administration is actively seeking to expand trade with China even as it takes a tough line on human rights and national security concerns (Williams 2021). For Canada, the direct trade gains from RCEP come mostly from the bilateral liberalization that RCEP entails between Canada and China – and these gains are an order of magnitude larger than the gains from an ACFTA alone.

Third, given the open invitation that India retains to join RCEP under already largely negotiated terms, it provides Canada an alternate route to a trade agreement with India and thus represents a strategic hedge with regard to Canada's efforts to revive the Canada-India free trade talks. As per Ciuriak et al. (2022), the gains from an RCEP-style trade agreement with India – whether struck as a bilateral deal or through India reconsidering its withdrawal from RCEP would add considerably to the benefits Canada would enjoy.

Accordingly, as Canada frames its pivot to the Indo-Pacific, it should place strategic importance on prioritizing a trade agreement with ASEAN.

ANNEX 1: GRAVITY MODEL ANALYSIS

This annex describes the gravity model framework developed to calibrate expectations concerning Canada's trade potential in the ASEAN market.

The gravity model is premised on the observation that countries trade more intensively with partners that are larger, geographically closer, more open, have greater economic freedom, and with which they share commonalities that tend to reduce trade costs, such as common language, common cultural characteristics, common legal systems, common currencies, and historical ties. Bilateral free trade agreements and diplomatic representation boost trade as does having complementary patterns of comparative advantage.

Gravity models take these various effects into account and allow the calculation of an expected level of trade, which can be compared to actual levels to provide an indication of possibly unexploited trade potential.

We perform the analysis on data for the period 2010-2019, which provides a large panel dataset on Canada's exports to 188 partner economies in the recent pre-pandemic period. While the focus of our analysis is on Canada's exports, we rely on partner economy import data to establish the size of these bilateral flows. This reflects the fact that data recorded by the country of export (Canada in this case) can be distorted by trans-shipment of goods through third countries (which might be country of consignment on export documents but not the final destination). Importing economy authorities look through to the country of origin of the goods and therefore import data tend to more accurately reflect trade patterns. Given the dominant level of trade between the US and Canada, we exclude US trade from the data.

To take account of the fact that trade in precious metals and other mined products (including oil and gas) do not follow gravity patterns (due to high weight-to-value ratios for raw materials and the use of pipelines for oil and gas), we focus on Canadian exports of manufactured goods and agri-food.

5.1 Gravity Model Estimation Results

The table below provides the results for the main equation on which we settle for the alternative categories of Canadian exports. Generally, the pattern of Canadian global exports of goods in these broad categories follows the lines of economic geography. The three equations explain a high percentage of the variation (about 91 percent) of Canadian exports by destination market.

The **size of Canada's economy**, which captures its potential as a source of exports, has the expected moderately positive effect on the scale of Canada's exports. An increase in the size of Canada's economy by 1 percent results in an expansion total goods export of about 0.66 percent. For agricultural and agri-food products the corresponding figure is 0.35 percent and for manufactures 0.71 percent.

The **size of the partner's economy,** which measures demand-pull, is a highly significant determinant of the direction of Canadian exports for all categories of goods. We use a combination of population and per capita GDP to capture the effect of increasing size and demand for imports. For every 1 percent increase in the size of the partner economy as measured by population, Canada's exports of goods are about 0.99 percent larger (and more for agri-food at 1.03 percent and manufactures at 1.02 percent). Exports also systematically increase with increasing incomes in the destination economy: for every 1 percent increase in the per capita GDP of the destination economy, Canada's exports are about 0.96 percent higher (about 0.95 percent for agri-food and 1.01 percent for manufactures).

Increasing **distance** to foreign markets reduces Canada's exports: Canada's exports are about 0.51 percent smaller for every 1 percent increase in distance for all goods, with a much smaller impact on agri-food products (-0.26 percent), but much stronger for manufactures (-0.50 percent).

The impact on trade intensity of commonalities such as common colonial history that reduce

bilateral trade costs are captured by dummy variables, which takes the value of 1 when the commonalities are present and zero otherwise. Several of these were tested – common language, common colonial history, and common legal systems. These tend to be highly correlated. The estimated coefficient 0.42 for **common colonial history** in the equation for total goods is converted to a trade impact as follows: exp (0.4162284)-1 = 51.62 percent. In other words, Canada's exports to a given destination are about 51.6 percent higher if that destination has a common colonial history with Canada (higher for agri-food at 97.9 percent and lower for manufactures at 33.9 percent)

Having a regional trade agreement in place between the parties plays an important role in trade flows. The estimated coefficient (0.83) for **a regional trade agreement** in the equation for total goods is converted to a trade impact as follows: exp (0.8318892)-1 = 129.8 percent. In other words, Canada's exports to a given destination are about 129.8 percent higher if that destination has a trade agreement in place with Canada. The impact is larger for manufactures with a 160 percent improvement for this sector and a slightly lower impact of 46.4 percent for agricultural products.

A Trade Correlation Index (TCI) is the simple correlation coefficient between two economies' Trade Specialization Indices (TSI) which compares net exports (exports minus imports) to the total trade flows (exports plus imports).[2] The TCI was calculated for each of the sector groups: Goods; Agriculture & Agri-Foods; and Manufacturing. These indicators aid in the measurement of an economy's trade performance and degree of competition/dependencies between economies that is evidenced through trade. They also take into account the similarity of the pattern of comparative advantage between trading partners. The TCI variable captures the extent to which comparative advantage plays a role in deepening trade. Canada should have greater exports to countries that import intensively the products that it exports intensively compared to countries that are themselves intensive exporters of those products. Trade complementarities can be identified as well. An example of the application can be seen in Ciuriak (2014) which compares Canada's correlation to Australia and China. The correlation coefficient between the TSIs of Australia and Canada are positive and the correlation coefficient between the TSI's of China and Canada are negative, consistent with expectations.

TSI Correlation Coefficients

Canada-China	Canada-Australia	China-Australia
-0.464	0.681	-0.554

Source: Ciuriak (2014).

2 Following (Ciuriak & Kinjo 2006) a country's TSI is calculated for each sector defined at the 2-digit HS code level.

$$\frac{X_i - M_i}{X_i + M_i}$$

This yields a vector of 97 values, one for each HS 2-digit product group. The TCI is the correlation between the exporter's vector and its partner's vector then captures the degree to which they specialize in the same exports. This variable can take values that range from 1 if the exporter's TSIs are identical to its partners over the various sectors, to –1 if the exporter tends to only export those products that the partner economy tends to import. The former group of partners (those with a positive correlation of the TSIs) would tend to be natural competitors in international trade while those in negative territory would tend to be the exporter's natural trading partners, according to the principle of comparative advantage.

Estimation Results			
	(1)	(2)	(3)
	Goods ex Mines and Fossil Fuels	Agriculture & Agri-food	Manufactures
Canada's GDP	0.66	0.35	0.71
Distance to Destination Market	-0.51	-0.26	-0.50
Population in the Destination Market	0.99	1.03	1.02
Per Capita GDP in the Destination Market	0.96	0.95	1.01
Sibling relationship	0.42	0.68	0.29
Regional Trade Agreement	0.83	0.38	0.96
Trade Specialization Index Correlation	-0.57	-1.47	-0.27

Source: Calculations by the study team.

Further as shown in Ciuriak and Kinjo (2006), countries with positively correlated TSI correlation coefficients tend to trade more intensively with one another.

The estimated coefficient (0.57) for the TSI correlation coefficient in the equation for total goods is converted to a trade impact as follows: exp (-0.565233)-1 = -43.2 percent. In other words, Canada's exports to a given destination are about 43 percent lower if that destination has a positively correlated TSI correlation coefficient – i.e., is a natural competitor. The impact is more pronounced for agriculture with a 77.1 percent negative impact and 23.9 percent negative impact for manufactures when trading with a natural competitor

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