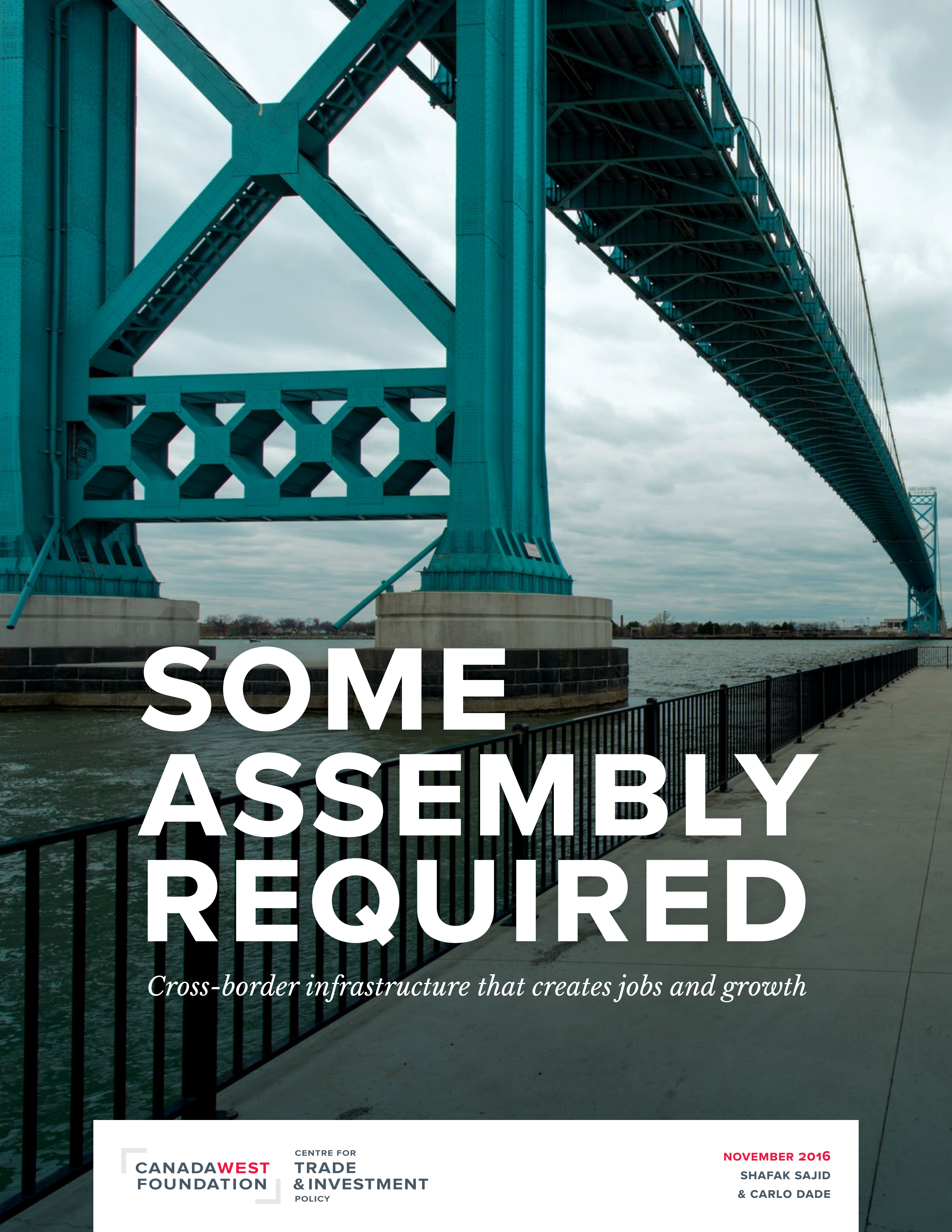

SOME ASSEMBLY REQUIRED

Cross-border infrastructure that creates jobs and growth

CANADA WEST FOUNDATION
CENTRE FOR TRADE & INVESTMENT POLICY

NOVEMBER 2016

SHAFAK SAJID
& CARLO DADE

CANADA WEST FOUNDATION

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The Canada West Foundation focuses on the policies that shape the West, and by extension, Canada. Through our evidence-based research and commentary, we provide practical solutions to tough public policy challenges facing the West, and Canada as a whole, at home and on the global stage.

This report was prepared by Shafak Sajid and Carlo Dade. The ideas in this paper were developed and tested through a series of working group meetings organized in partnership with the George W. Bush Institute. We would like to thank our colleagues at the Economic Growth program at the Bush Institute and the directors and staff at the North American Development Bank and the Inter-American Development Bank for hosting and participating in these meetings. The diverse opinions and insights through these discussions enriched the report. We would also like to thank The Donner Canadian Foundation for their support.

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CENTRE FOR TRADE & INVESTMENT POLICY

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CONTENTS

PREFACE

The paper proposes a tool for growing and protecting good jobs in North America.

For many state and regional economies, Canada is the largest trading partner: 1.7 million jobs in the U.S. are directly tied to trade with Canada and 2.5 million jobs in Canada are directly tied to trade with the U.S.[i] Protecting and growing the jobs tied to this trade is of obvious importance. Equally important and often overlooked, the movement of goods and services across borders in North America is tied directly to producing things together in North America that are sold – at home and abroad – in direct competition with goods produced by other trade blocs.

An efficient movement of goods across borders is **critical** to growing and protecting jobs that are tied to trading with each other, and jobs that are tied to the North American integrated supply and production chains. Unnecessary inefficiencies in the movement of goods across North America's borders add costs, suppress productivity and wages, limit global competitiveness and threaten jobs.

This paper argues that a North American Border Infrastructure Bank (NABIB), focused on providing financing **and,** more importantly, information, would improve the trade competitiveness and protect jobs in North America.

The U.S. and Canada fund and help run development banks in other parts of the world that provide intelligence and funding services to other trade blocs; making those blocs more competitive. This paper proposes that Canada and the U.S. make that same investment in improving infrastructure to protect jobs in North America.

The United States and Mexico already have a binational bank, the North American Development Bank (NADB), dedicated to improving community and environmental infrastructure along that border. The NADB has recently made small forays into more transportation-related infrastructure projects. But there is a clear need for an institution focused exclusively on improving trade infrastructure tied to moving goods through North America's integrated supply and production chains. Ideally, such an entity would be trilateral as this would provide the greatest benefit and return on investment. However, if necessary as a second best option, significant benefits could still be realized by following the NADB model and creating a binational institution focused on the northern border as an interim step to creating a trilateral North American entity.

The paper makes the claims that:

01

Planning, financing, building, maintaining and operating border infrastructure has become increasingly difficult primarily, but not exclusively, for political reasons, and will be even more difficult in the near future.

02

Other trade blocs, which also have integrated supply and production chains, have institutions and resources not present in North America. These mechanisms mitigate and manage political tensions and facilitate planning, financing and building cross-border infrastructure to produce goods jointly. They also provide knowledge of integrated supply and production chains. In North America, we talk about integrated supply and production chains – but we don't have the data.

i For the U.S., exports to Canada supported $US290 billion in GDP, while in Canada $325 billion Cdn in GDP was tied to exports to the U.S. in 2015.EDC Economics, U.S. Election and Potential Impacts on Canadian Trade, 2016.

03

The challenges that hinder the planning, financing and building of border infrastructure, and directly threaten North American jobs, can be resolved by the creation of a third-party, independent infrastructure bank – a North American Border Infrastructure Bank (NABIB). The institution would be jointly capitalized, staffed and governed by the member governments.

A NABIB would be a North American institution with a limited mandate, set out below. It would not have a broad development mandate and would not fulfill all, or even most, of the functions of traditional development or infrastructure banks such as the Inter-American Development Bank or the Asian and European Infrastructure Banks. It would have a narrow focus and solve specific issues.

This paper views infrastructure broadly to include not just physical infrastructure such as roads and bridges, but also facilities and operations of those facilities for security and immigration, as well as, potentially, energy- and cyber-related infrastructure and security.

A NABIB would:

i. Focus narrowly and solely on providing solutions to the specific physical, financial, security and information challenges tied directly to the movement of factors of production across borders in North America.

ii. Finance border infrastructure, excepting sea ports, in North American corridors and gateways such as bridges and customs plazas.

iii. Proactively collect and disseminate data and analysis on the movement of factors of production tied to the integrated supply and production chains in North America and the infrastructure associated with this.

iv. Provide advice and assistance, including co-ordination, to all levels of government on design, building, regulation, management of border infrastructure and security protocols to improve the quality of decision making and return on infrastructure investment.

A fifth implicit outcome from creation of a NABIB would be to engage the participating NAFTA partners in a permanent, jointly staffed and administered institution focused on the foundational element of North American trade – the movement of factors of production across integrated North American supply chains. In the present political climate, this may be the most important contribution.

These assumptions were tested through debate at a series of working group meetings organized by the George W. Bush Institute and the Canada West Foundation. The goal was to provide a framework to help governments decide whether a NABIB is warranted and, if so, negotiate the terms for creating such an entity. Details not addressed in the paper are ones that require political compromise and negotiation.


UGMU 8723140
22G1
GROSS 24.000 KG 52.910 LB
TARE 2.330 KG 5.140 LB
NET 21.670 KG 47.770 LB
CUBE 33.1 CU.M 1.169 CU.FT
EISU 3526339
22G1
GROSS 24.000 KG 52.910 LB
TARE 2.400 KG 5.290 LB
NET 21.600 KG 47.620 LB
CUBE 33.1 CU. 1.169 CU.FT

The scale of

NORTH AMERICAN TRADE

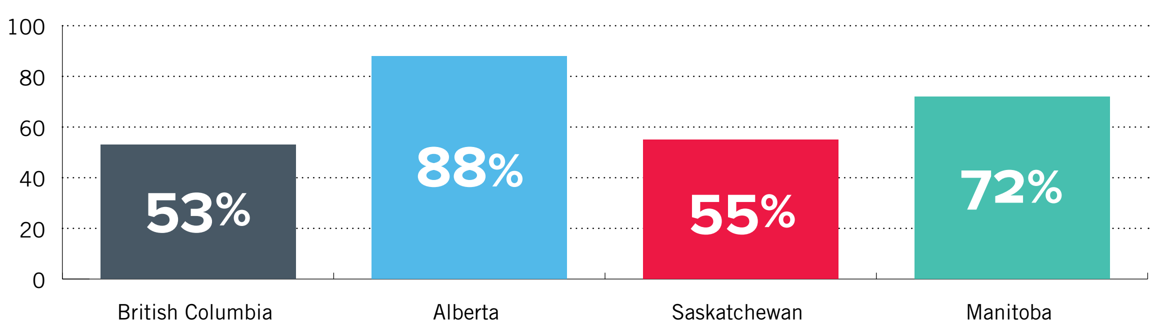
The U.S., Canada, and Mexico are each other's most important trading partners, and the North American Free Trade Agreement (NAFTA) is the foundational trade agreement for all three. Trilateral trade in the 20 years of NAFTA has quadrupled, from $288 billion to $1.2 trillion.[1]

North American integration really means integration for jobs and job growth. Nearly nine million U.S. jobs depend on trade and investment with Canada. And close to 2 million are directly tied to trade.[2]

Canada and the United States are the world's largest bilateral trading partners; in 2015, more than US$670 billion in goods and services flowed between them. The U.S. is Canada's largest trading partner, with 76 per cent of Canadian exports going across the border. Fifty-one per cent of this trade travels by road and 20 per cent by rail.[3] In western Canada, Alberta is the Canadian province most reliant on NAFTA, with 88 per cent of provincial exports going to NAFTA countries.

Canada is also the U.S.'s largest customer, purchasing US$338 billion in goods and services in 2015.[4] The top categories were mineral fuels, vehicles, machinery and plastics. Canada is the top export destination for border states, such as Michigan, Montana, Ohio and New York. For example, with total goods traded reaching $69 billion, 259,000 jobs in Michigan depend on Canada-U.S. trade and investment.[5] Trade with Canada is not limited to border states, however. Canada is the top export destination for 35 U.S. states.

FIGURE 1: EXPORTS TO NAFTA PARTNERS (% OF TOTAL)



Source: Statistics Canada

TABLE 1: U.S. MAJOR METROPOLITAN AREAS LARGEST TRADING PARTNERS

METROPOLITAN AREA *(ranked by trade volume)*	**TOP TRADE PARTNERS**		
	1ST	2ND	3RD
NEW YORK Northern New Jersey-Long Island	Canada	China	Japan
HOUSTON Sugar Land-Baytown, TX	Mexico	Canada	China
LOS ANGELES Long Beach-Santa Ana	Mexico	Canada	China
DETROIT Warren-Livonia	Mexico	Canada	Saudi Arabia
MIAMI Ft. Lauderdale-Pompano Beach	Venezuela	Brazil	Colombia
SEATTLE Tacoma-Bellevue	China	Japan	Canada
CHICAGO Naperville-Joliet	Canada	Mexico	Germany
SAN JOSE Sunnyvale-Santa Clara	Canada	South Korea	Mexico
MINNEAPOLIS-ST. PAUL Bloomington, MN-WI	Canada	China	Mexico
PHILADELPHIA Camden-Wilmington	Canada	U.K.	Mexico
DALLAS-FORT WORTH Arlington	Mexico	Canada	China
BOSTON Cambridge-Quincy	Canada	Japan	China
SAN FRANCISCO Oakland-Fremont	Canada	Japan	China
SAN JUAN Caguas, Guaynabo	Netherlands	U.K.	Belgium
PORTLAND Vancouver-Beaverton	China	Malaysia	Mexico
CINCINNATI Middletown	Canada	Mexico	U.K.
SAN DIEGO	Mexico	India	China
ATLANTA Sandy Springs-Marietta	Canada	Mexico	Singapore
NEW ORLEANS Metairie-Kenner	China	Singapore	Netherlands
PITTSBURGH	Canada	China	Brazil
ST. LOUIS	Canada	China	Mexico
PEORIA	Chile	Canada	Brazil
WASHINGTON D.C. Alexandria, Arlington	U.K.	Singapore	Taiwan
MEMPHIS	Canada	Mexico	China
SALT LAKE CITY	India	Hong Kong	Canada

Source: Global Trade Magazine, 2012

Canada

A look at the top trading partners for the 25 largest U.S. metropolitan areas by export volume adds greater detail (see Table 1). For the top 10, Canada is the first, second or third largest trade partner for nine metropolitan areas, and is the number 1 trading partner for five of the 10 largest metropolitan areas. By comparison, China is the top trading partner for only one U.S. metropolitan area: Seattle-Tacoma.

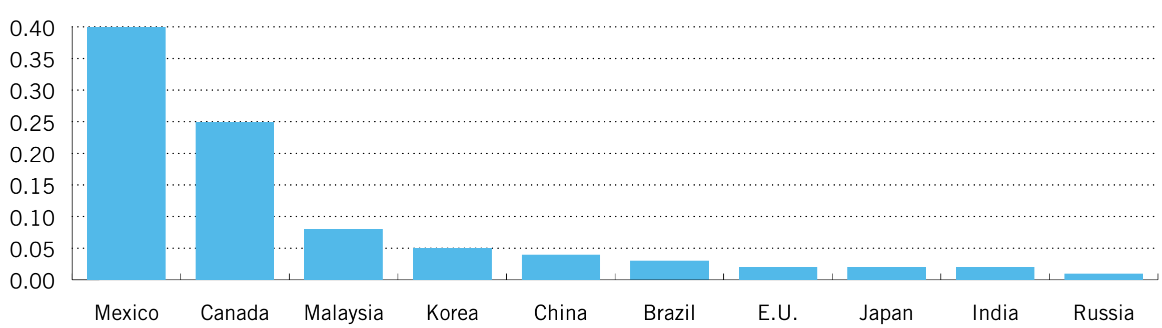
Not only do we export goods and services to each other, but we also produce things together. A large portion of the trade within North America is inputs or component parts – the intermediary products, goods, and services used to make other goods or services. Many jobs across North America are linked to producing things together and moving them back and forth across our borders. The ability to move goods efficiently across North America's borders is an important source of the competitiveness of these goods within North America and abroad.

The U.S., Canada and Mexico all have supply and production chains that stretch around the globe, but the National Bureau of Economic Research shows that the most important of these connections are within North America. The interconnectedness of North American production is demonstrated by the fact that, of every dollar in goods that the U.S. imports from Mexico, 40 cents are U.S. components. Similarly, for every dollar of goods imported from Canada, 25 cents of that dollar in goods contains U.S. components.[6] The next highest component of U.S. content in goods imported from another country is Malaysia, at only five per cent. A mere four per cent of goods the U.S. imports from China are made with U.S. content.

Intra-North American trade is tied to jobs in all three countries, unlike trade with China, the EU and other markets.

For example, the North American automotive industry is so integrated that the production of a vehicle in North America may involve more than 7,050 customs transactions. A typical car assembled in Ontario or the mid-western U.S. is built with parts that have crossed the Canada-U.S. border, on average, seven times. Border delays caused by congestion or inefficient customs processes can add as much as $800 to the cost of a North American-assembled vehicle.[7] Yet, an automobile arriving from Asia is only required to give a 24-hour advance notice and pass a single border security check before rolling off a ship and on to car dealerships.[8]

FIGURE 2: VALUE OF U.S. CONTENT IN US$1 OF IMPORTS FROM SELECT COUNTRIES



Source: National Bureau of Economic Research Working Paper No. 16426. Cambridge, MA, 2010

We have a better understanding of bilateral supply and production chains that trilateral ones. The NABIB would provide data on trilateral, while helping with more information on bilateral supply chains.

The trading relationship that the North American partners and especially Canada and the U.S. enjoy, along with the integrated supply chains, broadly tie into the competitiveness of the trade bloc. To be competitive, an economy and its firms must have access to competitive partners; to take advantage of their partners' competitiveness, they must be able to move factors of production – goods, knowledge, finance and people – efficiently to and from their partners.[ii]

Competitors in other trade blocs are not standing still and are using modern trade rules to close the competitiveness gap with the North American trade bloc. There are many examples including the formation of trade blocs such as the EU, ASEAN, Pacific Alliance and several bilateral and trilateral agreements within Asia. While the competitive environment, technological advancements and demographics have changed, the NAFTA partners have not systematically ensured that their relationships have kept pace. Our competitors have identified border infrastructure as a priority and have taken steps to invest in infrastructure and improve their competitiveness. We have helped them do this by capitalizing and staffing development banks, all of which play a similar role to what is proposed here for NABIB. **We must do the same for ourselves**.

ii Improving the competitiveness of partners, e.g., education levels, skills or domestic regulation are also important but are not amenable to the types of joint interventions that are literally and figuratively present at borders.

Border infrastructure is

FACING INCREASING CHALLENGES

Delays at the borders, and the unpredictability of crossing times, are the most common challenges faced by exporters and producers. Queues of trucks and cars can be a result of inadequate infrastructure or delays caused by inspection functions at the customs plaza. There is broad agreement among stakeholders that budget constraints on border security resources and the challenges caused by a lack of adequate inspection capacity impacts the speed of the inspection.

Border infrastructure investments should be viewed in both regional and national terms. The greatest benefit is reaped by the region, but there are broader impacts to the national economy, including GDP and jobs. Figure 3 shows truck traffic, initiating at the southern border and travelling to the entire country by Day 7.

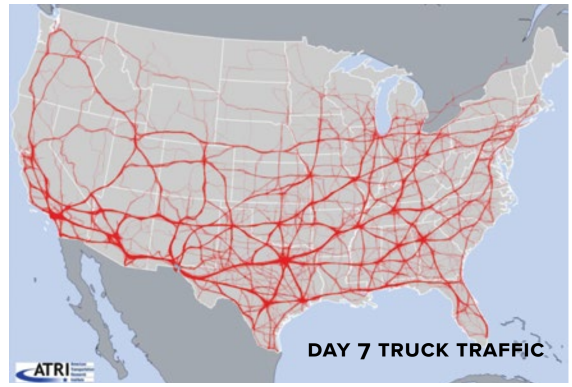
COST OF BORDER DELAYS

The costs of border delays to the U.S. and Canadian economies include:

- Along the southern border of Canada, inadequate infrastructure investments for border crossings, along with staffing shortfalls and inefficient security and customs procedures, cost the U.S. economy US$7.8 billion in lost output in 2011.[9] The costs are expected to increase to US$15 billion annually by 2020.
- Delays at U.S. and Canadian border crossings cost Canada between $15 billion and $30 billion Cdn every year. While U.S. exports to Canada are slightly lower than Canadian exports to the U.S., it is safe to say that the economic impact of border delays has the same disruptive effect on the U.S. economy.[10]
- Statistics Canada data show that the cost of shipping goods across the border increased by 25 per cent between 2000 and 2009. [11]
- An economic impact model by University of South California in 2013 estimates the impact of adding just one more Customs Border Patrol (CBP) officer at each of 17 U.S. passenger land ports of entry, 12 major freight crossings and four major airports. These 33 additional staff would create an additional $66 million in GDP, 1,094 annual jobs and $21 million value in time saved.[12]

Congestion at various border crossings on the northern border is well-documented and steps have been taken to alleviate the delays. Initiatives such as Beyond the Border have tried to streamline operations on the border. These initiatives have “thinned” the border by facilitating more efficient border clearance processes, increasing membership in the NEXUS traveler program, and implementing pilot programs for reducing border wait times. One major weakness of initiatives like Beyond the Border is that these are not permanent. They lack long-term data sets, staff

FIGURE 3: NATIONAL IMPACT OF BORDER MOVEMENTS



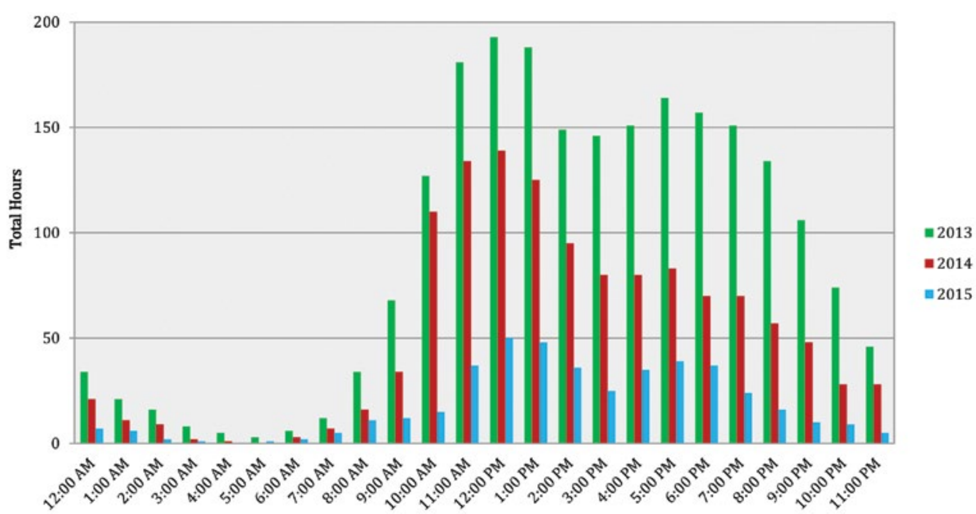
Source: Texas Department of Transportation

with expertise and perspectives to guide decision making. Their continuation is subject to political whim and not necessity.

The decrease in border wait times at certain bridges from 2013 to 2015, as shown in Figure 4, in part can be attributed to a decline in the volume of truck traffic, but also to the work done by initiatives such as Beyond the Border. However, there is more room to facilitate efficient border clearance processes and ensure a smooth movement of goods. Additionally, the Niagara Falls Bridge Commission has noted that there are still delays of more than an hour and the reason is insufficient officers and inspection booths during peak times.[13]

It is clear that cross-border infrastructure remains inadequate. The economic and job impact of improving border crossing wait times is significant. North America is not getting projects along the border built efficiently and effectively.

FIGURE 4: TOTAL HOURS OF REPORTED DELAY: LEWISTON-QUEENSTON BRIDGE, PEACE BRIDGE, AND RAINBOW BRIDGE (BY TIME OF DAY)



Source: Niagara International Transportation Technology Coalition, Annual report 2015

Challenges facing cross-border

INFRASTRUCTURE IMPROVEMENTS

01

Funding for major infrastructure[iii]

One of the biggest constraints to improving border infrastructure is funding the high capital costs. While large cross-border infrastructure projects have the ability to bring large economic returns, they often come with price tags that are too high for individual states and provinces, given limited federal funding programs.

The U.S. struggles with financing infrastructure projects, in a large part because its system of state-based financing is complex. Funding for roads is channeled to the states though the Highway Trust Fund (HTF) and funding for port-of-entry inspection and office buildings comes out of the same appropriation as funding for other roads and federal buildings, such as courthouses in state capitals. Hence, the U.S. government has no permanent mechanism through which it can set priorities for investment in border infrastructure. Further, according to the Congressional Budget Office, the cumulative HTF deficits are projected to be $75 billion by 2025.[14] The challenge will only get worse.

Bilateral co-ordination issues are even more striking. The U.S. built the Guadalupe-Tornillo Bridge halfway across the Rio Grande River before Mexico secured funding for its part of the bridge. There is also an emerging issue in financing U.S. Customs and Immigration facilities and services. At times, the physical infrastructure is there but no one to staff the gates.

The Gordie Howe International Bridge between Detroit, Mich., and Windsor, Ont., is an example of the funding challenges listed above.

Infrastructure projects are expensive and the absence of funding for large scale infrastructure projects is becoming a trend with the U.S. government. It has increasingly been externalizing and outsourcing this cost. This is evident in the need for external non-U.S. government funding for customs and border facilities, such as the Northgate rail crossing in Saskatchewan and the air traveller pre-clearance facility in Abu Dhabi. U.S. Customs and Border Protection has formalized its process for donations to fund new facilities, major renovations or expansions.[18]

This allows project proponents who can afford to fund the building and staffing of secure U.S. Customs and Immigration facilities to advance projects independent of the normal Department of Homeland Security (DHS) budgeting process, with its inherent political uncertainty. The U.S. Congress has expressed concerns over the loss of control inherent in outsourcing customs and immigration facilities. To this point, concern has largely focused on the Abu Dhabi facility (see textbox on page 13).

iii As the paper was being released, a U.S. Border Prioritization Council and a Build America Bureau were announced at the Canada-U.S. Transportation Working group meeting.

CASE STUDY

GORDIE HOWE INTERNATIONAL BRIDGE

Detroit/Windsor is one of the busiest commercial border crossings in North America. More than 25 per cent of all merchandise trade between the U.S. and Canada travels across the Ambassador Bridge. This represents a volume of trade comparable to trade between the U.S. and the U.K., or Japan. Approximately 259,000 jobs in Michigan depend on the Ambassador Bridge, as it is the primary point of entry into Canada.[15]

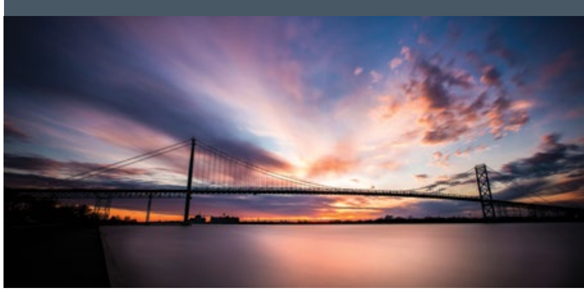
A new bridge was proposed by a binational study group in the early 2000s. It was intended to supplement the Ambassador Bridge, which is more than 80 years old and in need of significant maintenance, and to increase the capacity for traffic and passenger flow across the Detroit River.

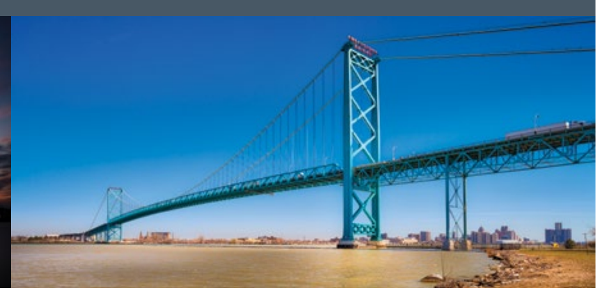
Ambassador bridge traffic[16]

Canada made several unsuccessful attempts to engage Michigan in the financing of this bridge. In 2010, Canada announced it would finance the entire bridge construction, including the construction of highways connecting the bridge in Michigan.[17] The U.S. only had to pay for the inspection plaza on the U.S. side ($250 million). Michigan was able to use Canada's funding of transportation infrastructure in Michigan to claim offsets for funding from the U.S. Highway trust fund at 4:1 ratio equalling $2.2 billion that it was able to use elsewhere in the state. Then Michigan governor Jennifer Granholm reportedly burst into a state legislature committee hearing on the bridge to interrupt the proceedings with news of the offer. Despite this, political opposition to the bridge – including massive political contributions and advertising by the owner of the Ambassador Bridge – turned what two governors had determined was essentially a free gift to Michigan into a perceived financial disaster and $100-million liability for the state.

In 2015, the U.S. government announced it would not fund construction of customs and border facilities for the bridge, forcing Canada to once again step up to finance the shortfall ($250 million).

The bridge was scheduled to start construction early this year. However, there have been delays on both sides of the border, including property issues, the bidding process and selecting a contractor. The estimated cost has risen from $2.1 billion to $4 billion, partly because of the decline of the Canadian dollar.





CASE STUDY
PEACE BRIDGE

It is easy to consider the Detroit/Windsor bridge, known as the Gordie Howe Bridge, as a one-off case and not symptomatic of a larger North American problem with building border infrastructure, but there are other instances of note. Another example is the dispute between Canada and New York State Gov. Andrew Cuomo, which began with efforts to expand the plaza on the U.S. side of the Peace Bridge near Niagara Falls. The Canadian members of the binational bridge authority raised concerns over spending far more for the land than its appraised value. After the dispute escalated into a public controversy, the Canadian and U.S. ambassadors stepped in to restore order.

photo credit: Simplyphotos

CASE STUDY
ABU DHABI PRE-CLEARANCE FACILITY

The Department of Homeland Security (DHS) created an uproar with its idea to open a U.S. Customs and Border Protection pre-clearance facility in Abu Dhabi. Several members of Congress signed a petition stating that this project sets a precedent for deploying customs capacity through third-party financing, which is not in the national interest. [19]

Despite the opposition, the facility opened in 2014 and has facilitated more than one million passengers. The facility arguably would not have been built, or not built in such a timely manner, if the United Arab Emirates government had not offered to fund 85 per cent of the facility, including the salaries of U.S. Customs officials.

Security

However, third-party financing has the ability to be transformative, particularly as it pertains to North America. Canada and the U.S. have closer co-operation on security and border issues than they do with other countries and projects facilitate and already large trade volumes. North American border infrastructure is less likely to face the type of criticism in the U.S. Congress that the UAE pre-clearance facility has faced; institutionalizing a Canadian or a North American "exemption" could give North American border infrastructure projects a leg up on securing the financing for human and other resources needed to operationalize border infrastructure.

Having the NABIB serve as a repository and centre for shared expertise on North American border security infrastructure could also help to standardize U.S. Customs and Border Protection (CBP) and Department of Homeland Security (DHS) requirements with the added benefit to help Canadian supply chains that extend to Mexico.

02
Complex governance of cross-border projects

Cross-border infrastructure projects face several challenges because multiple levels of government from more than one country are involved. This creates challenges in gaining political support, meeting regulations, and obtaining multiple levels of approvals. The Canadian Border Services Agency and the U.S. Department of Homeland Security were each created through the merger of several departments. However, between the U.S. and Canada, at least 44 agencies are responsible for protecting the border, which increases the administrative costs associated with projects. [20]

At least
44
AGENCIES
are responsible for protecting the border, which increases the administrative costs associated with projects.

03
Information and planning

Our North American infrastructure exists within the context of different national and sub-national jurisdictions across different transportation modes. Data and information is available, but for specific modes or crossings. Working groups and planning commissions exist, but for specific gateways.[iv] While local forecasts are important, there is also room and value for forecasting the overall infrastructure needs of the trade bloc.[21] After extensive research, we were unable to find a list of priority projects (including costs) for the northern border. The lack of bloc-wide system knowledge of the interconnection across NAFTA supply chains and domestic and cross-border infrastructure means that no single entity is bringing together all the fragmented initiatives, or analyzing and prioritizing broader infrastructure issues. The result is that projections of traffic – the cornerstone of any infrastructure business model – are produced by the project promoters themselves. This undermines confidence in the business case and increases financial risk. The Ontario Chamber of Commerce has noted that the lack of a long-term, multi-modal infrastructure plan for the northern border contributes to under-investment and hence poor border efficiency. In the past, short-term approaches to cross-border infrastructure have contributed to the $100-billion Cdn transportation infrastructure deficit in Ontario.[22]

iv The Transportation Border Working Group has biennial meetings to discuss border issues and exchange information. The DHS Border Infrastructure Investment Plan was not available at the time of writing this report.

Other trading blocs benefit from

INDEPENDENT INFRASTRUCTURE BANKS

Every other global trade bloc has access to an independent third-party institution, generally an infrastructure bank or the infrastructure division of a regional development bank. These institutions are available to inform choices made by governments on cross-border infrastructure through deep knowledge of trade, logistics, regulatory environments, and related factors in each country of the trade bloc. Their permanence, professional staff, long-term horizons and institutional memory somewhat remove them from domestic political pressures and provide information that can improve infrastructure investment decisions.

For example, the European Investment Bank (EIB) plays a crucial role in bringing financial capacity as well as infrastructure knowledge and technical advising under one roof. Ninety per cent of the EIB's lending is spent to support logistical integration of the region. In the absence of other cross-border infrastructure tables, it also serves to harmonize regulatory reforms.

The Asian Investment Bank, created in 2014, is backed by an initial paid-up capital of US$50 billion with total authorized capital of $100 billion. The full potential of Asia as a global economic power can only be realized by reducing the infrastructure gap. Hence, the bank's main lending thrust is in infrastructure financing across Asia. When the bank was created, Chinese President Xi Jinping said that "To build fortune, roads should be built first."[23]

How a bank could improve

BORDER INFRASTRUCTURE

Historically, several initiatives, such as Beyond the Border, have focused on cross-border infrastructure competitiveness in North America but have had short-term mandates with no guarantee that the work will continue or survive a change in government/ administration. Despite achieving some success, they have lost a great deal of expertise and knowledge upon the end of their mandate.

Conceptually, an infrastructure bank is a government-established institution that provides three distinct but equally important functions: **1) financing assistance, 2) technical assistance and information sharing to infrastructure project proponents, and 3) neutral, disinterested, expert third-party validation.**

Financing: There are a number of examples of bridges owned and operated on a for-profit basis by private investors or public-private partnerships.

However, the Canada-U.S. border exists in a complex context with federal government authorities alongside state/provincial and municipal authorities, with law enforcement concerns balanced against economic returns. This opaque policy and regulatory environment is less than welcoming for private capital, which explains why private investment in these projects is not more common.

Since no comprehensive and standard approach to analyzing and modeling traffic across our borders exists, a dedicated border infrastructure bank presents an opportunity to signal priorities and invite investment which would result in the selection of the highest return cross-border projects.

Such a bank, based on public capital but able to engage private capital via bond issuance, would create a more permissive environment for private capital and mobilize resources well above the required up-front investment in paid capital.

Technical assistance: Such a bank would provide technical and financial expertise, as well as government relations experience and advice integral to proponents developing projects as they navigate through the regulatory frameworks. Other infrastructure banks, such as the EIB, put a great deal of emphasis on advisory services.

Third-party validation: Such a third-party, independent border bank would be an efficient and politically viable means of addressing financing and knowledge gaps together.

IMPLEMENTATION STEPS

North American infrastructure has not caught up to the changing global dynamics where other trade blocs are using an institutional approach to plan and invest in infrastructure as a means to improve long-term competitiveness. As we imagine what a NABIB would look like, it would be prudent to learn from the successes and challenges of other infrastructure banks. The section below is informed by the working group meetings and best practices from other infrastructure banks.[v]

Structure

Create a trilateral infrastructure agency

An efficiency and political reality argument can be made for a single North American infrastructure bank. Benefits gained by two separate specialized border infrastructure banks would be offset by the cost of replication and redundancy in performing essentially the same set of tasks. A single institution would also ensure improved sharing of information, innovation and best practices between the borders, something that is lacking. A single institution would fit better with the governance architecture embodied in the trilateral leaders' summit. In addition to efficiency, there is a political reality argument for a single institution. Convincing the U.S. to create a single entity will be difficult; convincing it to create two such entities would be more difficult. A new agency can perform the planning, information sharing and co-ordination function. Financing, however, is one of the biggest challenges with border infrastructure. However, given the current political climate, a bilateral version may be a starting point solving immediate issues for Canada.

Create a bilateral border infrastructure agency

Rather than a single integrated production and trade zone similar to the EU, North America is often seen as two separate integrated production and trade zones. There are considerable differences in the northern and southern borders in North America, which will require different policies and strategies. Besides geographical and security differences, these include differences in the nature, timing and intensity of traffic flows. For example, there is minimal variability along the U.S. southern border with Mexico, but U.S.-Canada border crossings have seasonal fluctuations. The financing needs of the two borders are also different, with greater expenditures required for the southern border zone. This would suggest there should be two separate infrastructure institutions that would co-operate and share information but have distinct mandates and financing structures. Further, Mexico and the U.S. already have the North American Development Bank that focuses on environmental projects along the southern border. The Canada-U.S. bank's focus will be to grow and protect jobs.

Board and governance

The proposed NABIB would be a corporation jointly chartered and capitalized by two governments. It would be led by a board of directors, with representation from each country. It is important to have both governments represented on the board, so there is no perception of domination by one government's interests.

v This includes the North American Development Bank, European Investment Bank, Inter-American Development Bank and the World Bank.

Based on the experience of other infrastructure banks, such as the European Investment Bank (EIB), the table below is a sample of what the governance structure could look like:

GOVERNING BODY	APPOINTING MEMBERS & TERMS	MAIN ROLES & RESPONSIBILITIES
Board of Governors	The governors are cabinet ministers who participate *ex officio* in the bank.	→ High level policies → Approval of annual accounts → Appointment of members of other governing bodies
Board of Directors	Directors, from each country, are appointed by the board of governors for a renewable term (for example, five years).	→ Approval of finance and operational strategy → Control of the management committee
Management Committee	Members are appointed by the board of governors, for a renewable term. Terms should be staggered to ensure continuity.	→ Day to day management of the bank
Audit Committee	Members are appointed by the board of governors for a non-renewable period of six financial years, with a member being replaced every year.	→ Auditing annual accounts and financial statements → Ensuring the bank's practice is in accordance with market and best practices

Source: European Investment Bank

Mandate and priorities

The mandate for the bank is a critical point of negotiation for the participating countries. The pressure from shortages in the Highway Trust Fund will create a set of pressures in the U.S. not present in Canada, while Mexico is currently facing a tight budget environment.

One option to define "border" would be for the bank to adopt geographic limits to funding similar to those used by the North American Development Bank. A geographic limit of, say, 25 or 100 kilometres of the border would make the bank a true "border" infrastructure bank. A second option would be to tie funding to a rigorous connection to infrastructure, tied directly to integrated North American supply and production chains, or tied to assets and gateways and corridors linked to producing goods in common. These criteria do not exist and would have to be developed, along with information about integrated supply and production chains. Collecting data and development of these criteria would be the essential preliminary step to creation of the bank under this scenario. All parties to the bank would commit funding for development of criteria, ideally to be done by an expert, experienced, independent and disinterested third party like the Inter-American Development Bank. Capitalization and launch of the bank would be dependent upon acceptance of the funding criteria by all parties.

These criteria would also be essential for the functioning of the NABIB board and its role in projection selection. Selection criteria would also have to include regional economic, social and environmental costs and benefits that would

be informed by the work in developing project selection criteria (for example, see Appendix B). Having the Inter-American Development Bank or the World Bank with their unique experience in development of evidence-based criteria and regional integration would be invaluable, and an easily accessible resource.

Capitalization

To successfully achieve its roles and objectives, the bank would need an initial commitment of capital from each of the participating countries, of which 15 percent could be paid-in-capital and 85 per cent could be callable capital. Since the bank's lending capacity would be based on total capital, the bank could leverage almost $10 in investments for every dollar in paid-in capital. If yearly administrative costs are taken from the initial funds of the bank, this decreases its lending capacity. A suggestion to overcome this problem is for the bank to charge transaction or application fees to cover operational costs and ensure its self-sufficiency and sustainability.[24]

Financing and leveraging

The proposed NABIB would be able to offer various financial instruments to finance large, qualified and priority infrastructure projects to ensure flexible repayment schedules, and allow repayment through customs tolls or fees.

Public-private partnerships (P3s) have become a popular tool to fund infrastructure projects over the last 25 years. The NABIB will enable the participating governments to apply the P3 model to large scale border infrastructure projects. Institutional investors, such as pension funds, insurance companies or sovereign wealth funds, have a growing need for a diversified portfolio of long-term assets and are a source for the bank to consider. To unlock the potential of the Canadian pension fund, for example, work needs to be done to build relationships and a foundation laid for such public-private partnerships. A potential tool to ensure that the bank does attract private investment is a cap on the percentage of the project's financing that is covered by loans from the NABIB.

The instruments that can be used by the bank include:

- Loans
- Bonds
- Equity finance

Loans and bonds are the most common kinds of infrastructure finance. A project can use multiple financial instruments and be structured to have a long-term maturity.

In the case of a trilateral option, there may be concern in Canada that all the money will be used to finance projects on the southern border. A financing scheme can be agreed upon by the three countries, where no less than 25 per cent will be spent on each border, north and south. A cap on the total amount of lending annually, averaged over a certain period or as a percentage of the banks portfolio, is another path to achieve balance and mitigate Canadian concerns. As small loans are more difficult and costly to administer, research on infrastructure banks suggests that the NABIB could restrict lending to projects above a certain amount.[25] Certain banks also bundle smaller sized projects to reduce risk.

Risk management

There is a critical need for the bank to effectively manage risk. Research indicates that large-scale infrastructure suffer from under-management of risk through the lifecycle of the project, which reduces their value in the long-term.[26] Common challenges include cost overruns, delays, failed procurement, and lack of available private financing.

The private sector can improve the efficiency of the financing, construction and maintenance of the project. However, the public sector role is to provide the framework to benefit from these gains in efficiencies. Transferring too much risk to the private sector, especially what it cannot insure against such as political risk and legal procedures, leads to inefficiencies and eventually a failure to attract private investors.

There are several things the bank can do to manage the risk:

- Infrastructure projects have numerous stakeholders with different risk-bearing capacities. **Front-end planning** can formulate a proper risk profile that can be allocated effectively and managed during the implementation phase.
- It is important for the bank to **diversify its base** so as to minimize risk. More projects and more diversified project spreads the risk. One way is for the bank to expand from focusing solely on projects related to ports of entry to broader trade corridors.
- Large-scale infrastructure projects have high revenue risk in the beginning stages and different actors have different capacities to bear risk. The bank can provide **loan guarantees** to disaggregate the risk and make projects more attractive to private sector investors.

Grants

In addition to the financing instruments outlined above, the bank can in certain cases blend the loans with grant funding. Grants are non-reimbursable funds provided for certain programs, financed by the bank's resources or third-party funds.

Grants are the core of the Inter-American Development Bank's (IDB) business and serve as incentives to reduce the cost bias of border infrastructure projects and unlock their profitability. However, grants are sparingly used by other infrastructure investment banks on a case-by-case basis. Project preparation costs such as feasibility studies and socio-economic and environmental assessments are non-reimbursable costs that states and local governments may be hesitant to put up. For the NABIB, grant financing could be an agile instrument used to conduct initial community outreach in the border communities as well the initial studies before starting a project. Some grants may eventually be paid back to the bank if the project gets a loan.

Advising

For the private sector investing in large scale infrastructure projects, having a public institution on board is a source of security, and the NABIB would be well-positioned to provide that to leverage private investment.

Large infrastructure projects require significant investment, which also coincides with complex legal, regulatory and financial arrangements. This requires a level of knowledge and expertise that is expensive to acquire on a project-by-project basis. It is possible for investors to pay these fixed costs, but that will only occur if there are sufficient shovel-ready projects in the pipeline. The NABIB's planning and advising services would complement the lending and financing function and be a good resource for investors to navigate through the complicated regulatory frameworks of the participating countries. Moreover, it will be a resource for the multiple levels of government in the participating countries as it will reduce regulatory burden. Each project can involve several layers of government, each with several representatives, on each side of the table, many of whom would not have participated in the last large-scale border infrastructure project. The bank would eliminate the

need to relearn how to manage complexities of cross-border infrastructure with each new project and could ensure sharing of lessons and best practices.

With the privatization of border infrastructure costs, the bank can play a role in having consistent standards for these projects. The bank would build expertise and common procedures in an effort to streamline and standardize the CBP and DHS approach towards infrastructure projects like the Abu Dhabi clearance facility, adding predictability and avoiding one-off, idiosyncratic requests.

Planning function

While financing infrastructure projects is one of the major challenges faced by governments, a key concern is the lack of planning and prioritizing of infrastructure projects. No dedicated institution looks at North American integrated supply and production chains and related traffic flows. The NABIB presents an opportunity to signal priority policies and encourage investment, which will result in the selection of the highest-return projects. Every dollar invested in infrastructure provides a potential short-term return of approximately $1.43 up to $3.83 in the long run.[vi] However, to see these gains materialize, the right project has to be selected.[27]

For it to do that effectively, the proposed NABIB needs to establish its key role in providing information and planning. With expertise from all three countries around the table, the NABIB will be able to pursue a co-ordinated approach to overarching infrastructure challenges. The planning function presents an opportunity to develop a North American Border Infrastructure strategy that is multimodal and establishes a clear and common vision for infrastructure development that will meet the requirements of North American supply and production chains in the future. This strategy would inform the project selection criteria decided by the board. The committee would build on the work and use the expertise of current initiatives such as Beyond the Border but build permanent capacity and expertise.

The NABIB is envisioned to be an information hub, collecting data and combining and integrating various sources of data into a coherent and comprehensive model. Covering administrative costs of the bank has to be considered. Although the development and maintenance of such a model would increase administrative costs significantly, care must be taken, because charging high transaction fees could deter investors.

Infrastructure projects – operating costs

Lack of funding to hire personnel to staff new border infrastructure facilities has been a challenge in the past that will only increase if the NABIB is successful in building new infrastructure. The NABIB could play a role in addressing this challenge by including operational costs in long-term planning and financing of these projects.

A potential specialization for the NABIB could be the standardization of the design, certification, and financing of customs and border facilities. A close relationship with security agencies would give the institution an ability to bring an added level of security and confidence by all governments in what is essentially a partial privatization of border security services. As seen in the Abu Dhabi case study, the ability to avoid delays caused by lack of DHS funding could be an important advantage. The involvement of the bank would prevent concerns about deploying customs capacity through third-party financing, which may not be in the national interest, as in the Abu Dhabi clearance facility case.

vi The analysis is based on an economic modelling system, which is a multi-region, multi-sector and dynamic equilibrium model for Canada.

CONCLUSION

In North America, we build things together, with products and parts crossing our border, often multiple times. Border infrastructure, therefore, is crucial to the North American competitiveness and jobs. As other trade blocs around the world find innovative ways to improve efficiencies, North America must step up. Not only is our current funding framework inadequate to maintain and build new border infrastructure, but there is also a lack of broader planning and co-ordination along the border.

A North American Border Infrastructure Bank would help solve the major border infrastructure challenges by fulfilling the financing role. More importantly, it would be key to developing institutional knowledge and expertise on cross-border infrastructure to plan and co-ordinate border infrastructure needs. The bank would provide a permanent table for the North American partners to be engaged and focused on trade integration and the movement of goods and people, not only in the immediate term but also for the long-term.

In the new political climate, this may be its most important contribution.

APPENDIX A

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Additionally, staff from the Inter-American Development Bank, North American Development Bank and the World Bank made presentations to the working group.

APPENDIX B

Priority list – Beyond the Border initiative

In 2011, under the Beyond the Border initiative, a five-year Border Infrastructure Investment Plan (BIIP) was initiated. Under the BIIP, Canada and U.S. identified priority border crossings. The 2016 BIIP 3.0 plan has highlighted the following priority border crossings.

- Lacolle, Quebec – Champlain, New York;
- Lansdowne, Ontario – Alexandria Bay, New York *(Thousand Islands Bridge)*;
- Queenston, Ontario – Lewiston, New York *(Queenston – Lewiston Bridge)*;
- Fort Erie, Ontario – Buffalo, New York *(Peace Bridge)*;
- Sarnia, Ontario – Port Huron, Michigan *(Blue Water Bridge)*;
- Emerson, Manitoba – Pembina, North Dakota; and
- North Portal, Saskatchewan – Portal, North Dakota.

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