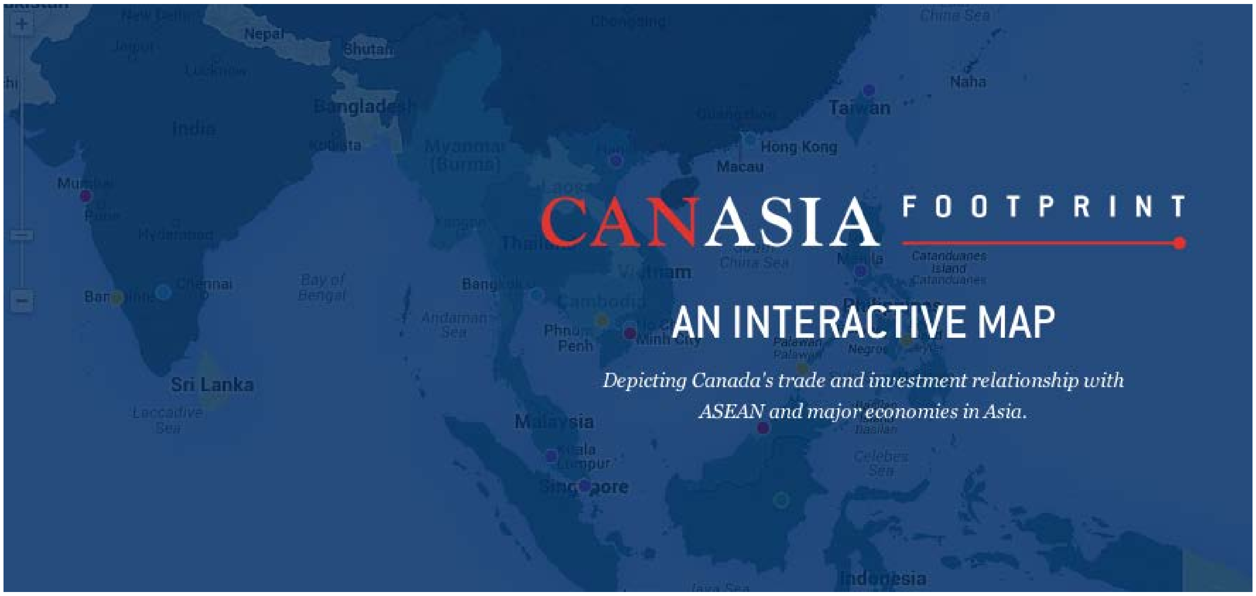

Mapping Canada's Footprint in Asia

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Executive Summary

What is Canada doing in Asia? What are Canadian enterprises doing in Asia? The answer is quite a lot, but getting to this answer was not easy. Comprehensive, easily-accessible information pertaining to Canada's investment, trade, and human capital flows in Asia is unclear, lacks aggregation, and is not readily available to the public. As a result, the narrative concerning Canada's footprint in Asia is incomplete and unfocused, much to the detriment of Canadian business as well as Asian market economies. To address this, the CanAsia mapping project tracks Canadian presence in Asia by aggregating and analyzing publically available country- and Canadian company-level data. The project establishes *where we are*, proposes *where we want to be*, and charts *how we get there*. For the purposes of the project, a sample group of countries (the "A-16") was chosen that includes the six major Asian economies—China, Hong Kong, India, Japan, Taiwan, and the Republic of Korea (Korea)—and the member states of the Association of Southeast Asian Nations (ASEAN). Furthermore, the project contextualizes engagement with the region by benchmarking Canadian performance against that of comparator countries such as the United States, Australia, France, Germany, and the United Kingdom.

So what is Canada doing in Asia? Canadian merchandise exports to the A-16 have doubled over the past decade, but still only account for a mere 2.5 percent of Canadian GDP. Compare this to Germany's 5.5 percent or Australia's 12.9 percent and our underperformance in this area becomes clear. Australia's export advantage makes sense—its physical proximity cannot be beat. That said, there is no reason that Canada—with its direct Pacific pathway to Asia—should be lagging behind European competitors. Canadian investment trends in the region are similarly lacklustre. Out of all the OECD comparator countries, Canada ranks last in terms of foreign direct investment (FDI) position in the A-16 region.

However, the Canadian footprint is more than just commercial. Canada has engaged with A-16 governments to conclude trade agreements, such as Free Trade Agreements (FTAs), Foreign Investment Promotion and Protection Agreements (FIPAs) and tax treaties; establish military linkages; create science and technology research partnerships; and provide development aid. These state-to-state relationships enable a fuller utilization of Asian markets by Canadian companies, which benefits Canada as well as the host countries.

The project identified 1307 physical Canadian company locations across the A-16. While small and medium enterprises (SMEs) play a significant role in Canada's global footprint, Canada's presence in the A-16 is heavily dependent on large, "flag bearer" companies. Out of the 1307 locations identified, 47 percent belonged to 48 large companies, each responsible for 5 or more locations in the region. Their presence is also highly concentrated in traditional commercial areas. This leads to the first of four "breakout opportunities" identified by the report.

Canadian companies are primarily located in "sticky markets," countries and cities that have lower barriers to trade and have historically served as commercial hubs. This has created a chicken and egg problem: businesses have flocked where it has been easy to flock, and new businesses chase the old in order to gain access to their markets and take advantage of the commercial infrastructure they have created. It is too soon to tell whether Canadian companies are "stuck" in these markets or are simply using them as staging grounds for further regional expansion.

The report's second finding is that Canada has a significant educational presence in the A-16, but the various players lack coordination and a long-term growth strategy. To leverage greater benefits of scale, the Canadian education sector must pursue a coordinated strategy for further growth. The Council of Ministers of Education, Canada (CMEC) provides an avenue through which this strategy can be realized.

The third finding is that growing energy consumption across the A-16 offers opportunities for Canada. Over the past decade (2003-2012), coal, oil, and natural gas consumption have increased 100, 34, and 99 percent, respectively. While the A-16 has remained relatively self-sufficient in coal, it depends on external sources for a large portion of its oil and natural gas needs. Canada, as a net energy exporter, has an opportunity to meet this booming demand. This is especially true for natural gas, as the price differential between Asian and North American natural gas provides a lucrative arbitrage opportunity, assuming the necessary national infrastructure can be agreed upon and constructed.

Finally, the report found that Canadian companies have been particularly successful in information and communications technology (ICT), accounting for the second largest physical presence in the A-16 after the much broader "other services" category. The majority of this presence is in manufacturing, and clustered in large cities where companies can access the educated workforce required. ICT is where flag bearer companies are most prolific—larger companies have a larger risk appetite and are more willing to enter smaller, less familiar markets. By testing these markets, large ICT companies are laying the foundation for future Canadian SME growth in the region.

Based on these four major findings, in addition to a more nuanced analysis and visualization through the map, Canada's opportunities and shortcomings within the A-16 become clear. Canada is indeed well behind its competitors in trade and direct investment, and though it continues to grow both the pace may not be enough. Canadian companies do have a large physical presence, but this could be expanded beyond the small number of large firms, and beyond traditional commercial hubs. Canada is excelling in ICT, but needs a coordinated education strategy, and lacks the national infrastructure to access Asian energy markets. Canada is doing well but it can do better.

Note from the Canadian Council of Chief Executives

Over the next two decades, Asia's rapid growth will transform the global economy, reshaping traditional patterns of international trade, pulling hundreds of millions of people out of poverty, and doubling the ranks of the world's middle class consumers.

Asia has become a powerful engine of global growth, and it is essential that Canada engage fully with the region during this remarkable period of economic and geopolitical transition.

In 2011, the Canadian Council of Chief Executives (CCCE) launched a multi-year initiative intended to raise awareness across Canada of Asia's growing economic power and influence, and identify key policy solutions that would enhance our country's ability to succeed in a transforming global economy.[1] Subsequently, Deanna Horton, Senior Fellow at the Munk School of Global Affairs, University of Toronto, approached the CCCE with an intriguing proposal: to engage Munk students in the second year Master of Global Affairs Capstone Program in an exercise aimed at mapping Canada's commercial footprint in Asia.

As the project took shape, the CCCE contributed publicly available data on its member companies, and answered questions from the researchers as they sought to identify and delineate the activities of Canadian firms in 16 countries in the region (the A-16). The footprint map and final report are wholly the results of their efforts.

Among other findings, the project demonstrates that Canadian exports to Asia constitute only one dimension of the expanding Canada-Asia economic relationship. Increasingly, Canadian firms are establishing a presence on the ground, based on investments and in-market sales.

Canadian merchandise exports to the A-16 have doubled over the past decade and now account for 2.5 per cent of Canadian GDP. Still, this pales in comparison with Germany's 5.5 percent and Australia's 12.9 percent. Clearly there is room for improvement – not least with regard to the potential for Canadian energy exports.

The report also notes the great diversity of economic activity in Asia. Small and medium enterprises (SMEs) play a significant role in Canada's global footprint. In addition, Canada's

[1] For more information, refer to Canadian Council of Chief Executives website: www.ceocouncil.ca

presence in the A-16 depends heavily on large, “flag bearer” companies. The presence of these large firms also ensures that their supply chain partners are introduced to new customers and Asian business practices.

Finally, the report highlights the opportunities for Canadian firms in a wide variety of sectors, including education, financial services, clean technology, advanced manufacturing and energy.

The CCCE welcomes this important contribution by student researchers at the Munk School of Global Affairs. It is hoped that the continued development and crowd-sourcing of the CanAsia Map will enhance the understanding of Canada’s international economic footprint.

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Introduction

The CanAsia map project was conceived to tackle a distinct problem concerning Canada's relationship with Asia. Specifically, the project seeks to address the fact that there is currently a lack of clear, aggregated, and easily accessible information pertaining to Canada's investment, trade, and human capital flows in Asia. As a result, the narrative concerning Canada's footprint in Asia is incomplete and unfocused, much to the detriment of Canadian business as well as Asian market economies. This report has two purposes. First, to give the reader a fuller understanding of Canada's footprint in Asia and second, to provide a series of policy recommendations aimed at both broadening and deepening Canada's presence in the region.

Scope

This report is an intermediate outcome of a multi-staged mapping project that aims to plot the breadth and depth of Canada's footprint in Asia. By producing an interactive map that will show a detailed representation of Canadian firms and organizations operating in Asia, the project aims to communicate the importance of Asia to Canada and vice versa. The analysis contained in this report complements the mapping component of the project by presenting findings, drawing conclusions, and proposing next steps.

The unique data set created for this map addresses the problem of Canada's fragmented narrative and provides the tools necessary to create a clearer, aggregated, and more accessible source of information relating to Canada's investment, trade, and human capital flows in Asia. The map and analysis incorporates both macro- and micro-level data. Plotting macro-level data highlights how Canada's official interactions with Asia have changed in the past decade and captures the growth of the region itself. It also allows for macro-level comparison among Canada's chief competitors in the A-16, providing a benchmark by which Canadian engagement can be judged. Micro-level data allows for analysis at the country, sectoral, and company levels. This indicates where Canadian companies and organizations are located, the types of sectors that predominate, and how geographically dense or disperse their presence is.

For the purposes of the CanAsia map project, a sample group of countries was chosen that includes the six major Asian economies and the member states of the Association of Southeast

Asian Nations (ASEAN).[2] For convenience, these countries are referred to as the A-16 throughout this report.

The comparator countries chosen represent Canada's largest competitors in this region, both from the West but also from within Asia. The comparator countries from the West are the United Kingdom (UK), the United States (US), Germany, France and Australia; for intra-Asian comparisons, China, Korea, India and Japan were chosen.[3]

The CanAsia map and analysis target Canadian companies with a physical presence in the A-16. A company was determined to be Canadian if it was based in Canada or if it had substantial ties to Canada, such as a Canadian owner. An office, plant, or other location with a publicly available address was plotted as a physical presence.

The scope of the project was limited to companies that have a physical presence because the primary focus of this project is mapping Canada's footprint; a company can only be mapped if it can be tied to a specific location. It is important to clarify that this is not an exhaustive list of Canadian companies active in the region. The scope of the project is limited by the methodology employed in terms of the breadth of companies covered, the type of presence, and the public availability of information. However, the number and diversity of company locations identified is an illustrative sample of Canada's presence in the A-16 and relevant conclusions can be drawn from the data.

The structure of this report is centred on three questions: *where are we now*, *where do we want to be,* and *how can we get there*?

[2] The six major economies selected were China, Hong Kong, India, Japan, the Republic of Korea (Korea), and Taiwan. The member states of ASEAN are: Brunei Darussalam, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam. ASEAN is comprised of one of the most diverse group of nations in the world, with a combined population of over 600 million and a total joint GDP of US$2.1 trillion (Asia Pacific Foundation, 2013, p. 5)

[3] For a more detailed overview of the methodology employed, please see Appendix A: Methodology.

Where are we now?

Plotting the recent trajectory and current status of Canada's footprint in Asia

The connections between Canada and Asia have grown considerably in the past decade. The rise of emerging markets and the impact of the 2008-2009 Global Financial Crisis on many developed economies have underscored the importance of looking across the Pacific for growth. This section provides a detailed discussion of Canada's footprint in Asia, from trends in trade and investment to Asia, to an analysis of the company data set compiled.

Country-Level Data

Macroeconomic Growth

The strong economic growth experienced by the A-16 since 2003 has been unevenly distributed. While China's real GDP growth was 146 percent and Myanmar's 110 percent, Brunei Darussalam's growth was 9 percent over the same period, and Japan's was only 7 percent.[4]

Per capita real GDP growth rates are consistent with this pattern, with the highest growth in China and a per capita decline in Brunei Darussalam. The per capita real GDP of the A-16 countries in 2012 ranged from a low of US $707 in Laos to a high of US $36, 938 in Japan.[5]

The A-16 represents one of the largest and most diverse regions in the world. The total population of the A-16 amounts to an impressive 3.4 billion people, accounting for 48 percent of the total global population.[6] Yet, this impressive market, almost half of the people in the world, accounts for less than 10 percent of all Canadian exports.

Comparator Countries

[4] See Appendix B: A-16 Macroeconomic Indicators
[5] See Appendix B: A-16 Macroeconomic Indicators
[6] For information on A-16 population rates, see Appendix B: A-16 Macroeconomic Indicators. For information on total world population rates, see "US and World Population Clock," *United States Census Bureau*, 3 March 2014, accessed (online) 3 March 2014, <https://www.census.gov/popclock/>.

The data presented in Table 1 shows the selected comparator countries' aggregate 2012 merchandise exports to the A-16 region as a percentage of their GDP. As can be seen in the table, Canada is well behind most comparator countries in this metric. Australia's strong presence in the A-16 markets is consistent with its close proximity to the region, but the fact that Germany, France, and the UK are all out-performing Canada is a telling indication of Canada's shortcomings in this region. Despite its direct Pacific trade routes to the A-16, Canada has been under-utilizing its potential in this significant market.

Table 1: Comparator Country Exports to the A-16 as a Percentage of 2012 GDP

Comparator Country	Exports as % of GDP, 2012
Korea	26.9%
Australia	12.9%
China	10.3%
Japan	6.7%
Germany	5.5%
India	3.9%
France	2.7%
UK	2.6%
Canada	2.5%
US	2.4%

Canadian Export Growth

Services

Between 2002 and 2011, Canadian services exports to the A-16[7] increased from US $3.7 billion to US $7.7 billion, an increase of 106 percent. Australia, the only comparator country for which trade in services data was publicly available, saw its services exports increase from US $7.6 to US $22.8 billion—an increase of 199 percent—over the same period. For the year 2011, services exports to the A-16 respectively accounted for only 17 percent and 11 percent of total Canadian and Australian exports to the region.[8] While the trade in services story provides a level of nuance to the analysis, the scarcity of available data on trade in services across all comparator countries, in addition to its relatively low proportion of the overall trade relationship (as observed through Canada and Australia), indicates that focusing on the merchandise trade relationship is a sufficient analytical heuristic.

Merchandise

Despite underperformance relative to the comparator countries, Canadian exports to the A-16 have dramatically increased over the past decade. Exports to this market grew by 118 percent over that period, outstripping export growth to other key Canadian markets and showing a

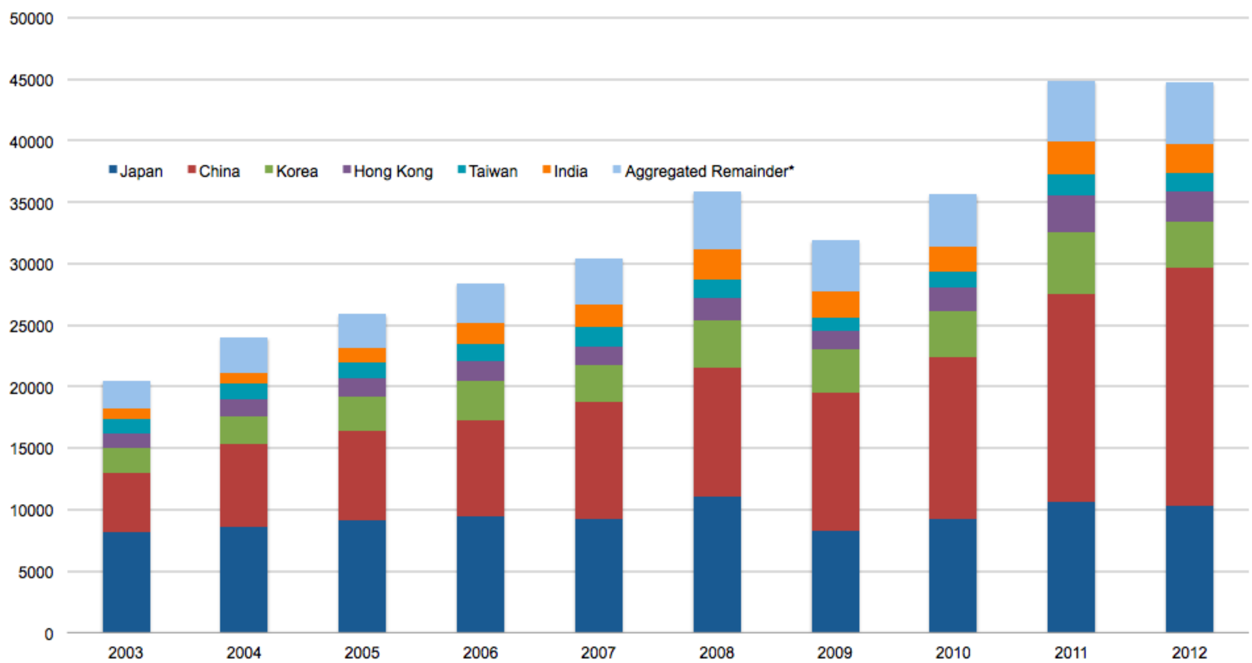
[7] Services exports to A-16 include the following countries: Japan, Korea, China, Taiwan, Hong Kong, India, Indonesia, Malaysia, Philippines, Singapore, Thailand and Vietnam. Data not available for Brunei Darussalam, Cambodia, Laos and Myanmar.

[8] See Appendix C: Trade with the A-16

marked Canadian focus away from traditional markets, namely the US and the EU, and towards Asia.

The largest percentage export growth was seen in Cambodia (356 percent), China (369 percent) Myanmar (444 percent), Vietnam (424 percent), and Laos (24,603 percent). With the exception of China, these figures highlight the very low base starting points for some of the smaller countries, which exaggerate percentage change.[9]

Figure 1: Canadian Merchandise Exports to the A-16, 2003-2012 (Millions USD)



*Aggregated Remainder includes Singapore, Thailand, Indonesia, Malaysia, Philippines, Vietnam, Brunei, Cambodia, Myanmar, and Laos

The more interesting export growth stories come from exploring raw figures and establishing where big number growth has taken place. In 2003, Canadian exports to the A-16 amounted to just over C $20 billion. A decade later, that number had more than doubled to over C $44.7 billion, an increase of 124 percent. The most significant contributions to that growth in order of

[9] See Appendix C: Trade with the A-16; to explore this issue further, we can look to Myanmar and Cambodia. In Myanmar, such high growth rates are easily explained by the reduction in economic sanctions against the country that began in 2012. Cambodia, on the other hand, was not a sanctioned country. Growth of exports to Cambodia, therefore, is better explained by an actual increase in relations between the two countries, including its status as a Most Favored Nation (MFN) for Canada. For more details, see (Department of Foreign Affairs, Trade and Development Canada, 2013)

impact, accounting for 93 percent of the C $24.8 billion increase in exports to the region, were China, Japan, South Korea, India, Hong Kong and Indonesia.[10]

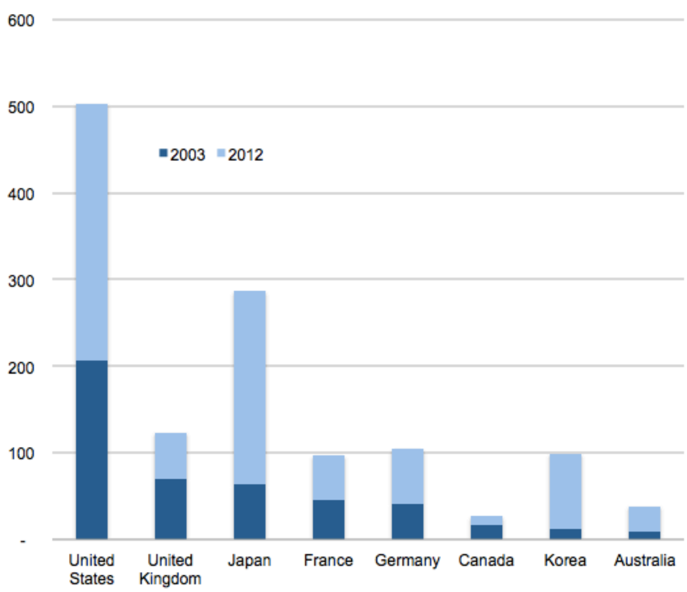
Investment

In line with its performance in trade, Canada's foreign direct investment (FDI) in the A-16 over the past decade has been lacklustre relative to Western and Asian comparators. The position, or cumulative stock, of Canadian FDI in the region grew from US $16 billion in 2003 to US $27 billion by 2012, falling behind its comparators in both total volume and rate of growth.[11]

Table 2: Change in FDI Position in the A-16, 2003 - 2012

OECD Country	USD Billions
US	295.9
Japan	223.3
Korea	87
UK	53
Germany	63.3
France	51.8
Australia	28.9
Canada	10.2

Figure 2: Canada and Comparator Country FDI Position, 2003 and 2012



As can be seen in Figure 2, Canada had a larger FDI position in the A-16 than both Korea and Australia in 2003. However, investments from those countries surged in the ensuing decade while Canadian investment grew slowly and ultimately fell to last in aggregate FDI position by 2012. Notably, Canada's largest single year increase in FDI position in the A-16 occurred in 2009 as many comparator countries saw their lowest contributions, perhaps reflecting divergent investor outlooks in the midst of the Global Financial Crisis. While this does not make for a trend, it does demonstrate the appetite for Canadian investment in the region and could support Canada's brand in the A-16.

The top five countries for Canadian FDI positional growth from 2003-2012 were Hong Kong, China, the Philippines, Indonesia, and India. Of these five, three countries (Hong Kong, China and Indonesia) fall within Canada's top locations for FDI in 2012. Indeed, just five countries –

[10] See Appendix C: Trade with the A-16
[11] See Appendix D: Investment in the A-16, including methodological note regarding gaps in reported data.

Japan, Hong Kong, China, Singapore, and Indonesia – account for 88 percent of Canada's total FDI position in the region.

The general picture that the investment data provides becomes more nuanced when supplemented with company-level data. One story of particular note is the investment pattern in Indonesia. According to the company data, Indonesia does not have an abundance of active Canadian companies.[12] Yet, its levels of Canadian FDI are among the highest in the A-16 as of 2012. The extractive sector is particularly active in Indonesia, with five firms each operating multiple locations in the country. Natural resource extraction is capital intensive in the early stages of production, and while these costs fall over time, the initial capital investment is captured in Canada's FDI position in Indonesia.

The growth of intra-Asian investment flows, particularly from Korea and Japan, shows that the A-16 is investing in itself. While Canada had a greater investment position than Korea in 2003, by 2012 it had surpassed Canada by a significant margin. The Canadian investment position increased by US $10,199 million, while Korea and Japan's positions increased by an impressive US $87,018 million and US $223,338 million, respectively.[13]

Investment comparisons can be a bit misleading for a couple of different reasons: First, positional investment values are a cumulative measure. As a result, those comparator countries that have been investing within the A-16 longer than Canada are likely to report much higher stock levels of investment than Canada.

Second, Canadian investment data is not reported when the investment comes from two or fewer companies in order to protect confidentiality. As a result, the official FDI position values do not include investment in countries where the Canadian presence is minimal. However, the unreported investment numbers may be significant, particularly where Canadian companies are engaging in capital-intensive industries such as resource extraction. For example, Canada did not report FDI data for Vietnam for 2003 or 2004 but has for every year since. This indicates that the number of Canadian firms investing in Vietnam has increased, showing a gradual expansion of Canadian firms into frontier markets.

[12] See Appendix E: Company-level Data
[13] See Appendix D: Investment in the A-16

The limitation of confidentiality is also important to bear in mind when considering the future value of the CanAsia map as a tool. As crowd-sourcing elements are incorporated into the map, these missing investment figures could be supplemented by self-reported information from specific companies, hopefully resulting in a much more comprehensive understanding of Canada's actual investment activities within the A-16.

Finally, investment figures often do not capture the investment that enters a country via a third party company or country. Some Canadian investment is routed through offshore centres on its way to the A-16, potentially distorting the true value of Canadian investment in the region. For example, Canada's 2012 FDI position in Singapore is listed as $2.3 billion USD by the OECD, but reported as $3.4 billion USD by Singapore's national statistics agency.[14] As with the confidentiality issue, this challenge will be somewhat mitigated when the crowd-sourcing aspect of the map comes into play, as companies are able to provide more comprehensive information regarding their investment activities in the region.

Energy

Canada is one of the most energy rich countries on the planet, possessing the third largest petroleum reserves as well as significant quantities of natural gas. Furthermore, energy has been Canada's largest export sector since 2008. Historically, the vast majority of this energy has been exported to the United States, which is in the midst of its own energy renaissance. As such, the American energy market is increasingly saturated and Canadian energy products are trading at a discount to global prices. It is in Canada's interest to diversify its energy export markets to take advantage of higher global prices and increase demand security.

Asian energy demand growth is growing faster than that of any other region, and, as such, provides an ideal future market for Canadian energy products. Between 2003 and 2012, petroleum consumption in the A-16 grew 34 percent, coal consumption grew 100 percent, and natural gas consumption has grown 99[15] percent. China is obviously the single greatest driver of this growth, accounting for 66 percent of total petroleum consumption growth and 80 percent of

[14] See Singapore's Department of Statistics' "Foreign Direct Investment in Singapore by Country/Region, 2008/2012" for more details

[15] For Natural Gas Consumption, growth rates have been calculated based on 2002-2011 as comprehensive 2012 data were unavailable.

total coal consumption; however, 64 percent of total natural gas consumption growth came from outside of China, indicating a much broader market base.

Government to Government Relations

Four dimensions of government to government relations were explored in order to characterize the relationship between the Canadian government and the governments of the A-16: economic agreements such as trade or tax treaties, Official Development Aid (ODA), military linkages and partnerships, and science and technology research partnerships.[16] All four of these dimensions have implications for the economic conditions facing Canadian businesses in the host state.

Economic Agreements

Table 3: Canadian Economic Agreements with the A-16

	Status/Type of Agreement		
Country	**FIPA**	**FTA**	**Tax Treaty**
Brunei Darussalam		TPP Negotiations	
Cambodia			
China	Signed		In force & renegotiation
Hong Kong			In force
India	In negotiation	In negotiation	In force
Indonesia	In negotiation		In force
Japan		Bilateral & TPP Negotiations	In force
South Korea		Signed	In force
Laos			
Malaysia		TPP Negotiations	In force & renegotiation
Myanmar			
Philippines	In force		In force
Singapore		Bilateral & TPP Negotiations	In force
Taiwan			
Thailand	In force	In discussion	In force
Vietnam	In negotiation	TPP Negotiations	In force

Canada currently has two Foreign Investment Promotion and Protection Agreements (FIPAs) in force with A-16 nations, signed with Thailand and the Philippines in the late 1990's, and an agreement with China was concluded in 2012 but has not yet been ratified domestically. FIPAs are in negotiation with India, Indonesia, and Vietnam. Not every A-16 country requires a FIPA, as Canada pursues FIPAs to supplement lacklustre existing protections in countries receiving Canadian investment. FIPAs are less necessary with countries such as Japan or Singapore, which have high Canadian investment but provide sufficient domestic investor protections.

Canada has no Free Trade Agreements (FTAs) yet in force in the region, though negotiations are at different stages with six of the A-16 countries. Bilateral negotiations with South Korea have recently concluded and multilateral negotiations through the Trans-Pacific Partnership

[16] See Appendix F: Government to Government

(TPP) are the current focus. Four of the A-16 states are participating in the TPP negotiations: Japan, Malaysia, Singapore, and Vietnam. While the TPP negotiations have subsumed bilateral talks with Japan and Singapore, Canada continues in longstanding negotiations with India. Canada is also in discussions with Thailand regarding a possible FTA with that country, and monitoring the role of the ASEAN Economic Community (AEC), set to come into existence in 2015.

The majority of the A-16 countries have tax treaties with Canada in force to facilitate taxation of firms active in both jurisdictions, with the most notable exceptions being Myanmar and Taiwan. Canada has also utilized less formal agreements to further economic relations with the region, such as the 2011 Joint Declaration on Trade and Investment between ASEAN and Canada.[17]

Canadian ODA

All Canadian ODA disbursed across the A-16 in 2012 was concentrated in seven of the A-16 countries: Vietnam, China, India, Cambodia, the Philippines, Indonesia, and Thailand.[18] Across all of these A-16 aid recipients, Canadian aid was focused into two broad sectors. The first, social infrastructure and services, includes government capacity building, public sector policy and administration management, and civil society support. The second, production sectors, is comprised of agriculture, forestry, fishing, agricultural research and industry.

Canadian ODA can take different forms; direct bilateral aid, or aid provision through partnerships and global initiatives. Vietnam was the largest recipient of total bilateral aid at C $3.89 million (31 percent of total Canadian ODA to A-16 countries), followed by China with C $3.83 million (30 percent), and India with C $2.06 million (16 percent). Canada also provided international assistance to Laos, Malaysia, and Myanmar in 2011-2012 through global initiatives.[19] The strength of Canadian ODA to China and India is consistent with their standing as major A-16 markets and Canada's long established history with both countries. In looking at Vietnam, however, Canadian ODA tells a bit of a different story. Vietnam is a major recipient of Canadian ODA, but there are fewer locations of Canadian firms within the country relative to the

[17] (Canadian Trade Commissioner Service, 2011)
[18] See Appendix F: Government to Government. In this report, ODA (Official Development Aid) is defined according to the OECD definition. This report's ODA figures include those directly given from Canadian government to the recipient country's Public Sector, NGOs and Civil Society, Public-Private Partnerships (PPP) and Other Channels. This excludes disbursements given through Multilateral Organizations channel.
[19] See Appendix F: Government to Government

other big ODA recipients, China and India. This can be attributed to Canada's close relationship with Vietnam, which extends back to 1994 when then Prime Minister Jean Chretien became one of the first Western leaders to visit the country.[20] This indicates the lasting impact that established programs can have on long-term aid and investment to a country.

Government capacity building is one of the priority areas for Canadian ODA, and good governance and the rule of law leads to a more favourable investment environment for Canadian firms. In particular, significant Canadian ODA percentages help to build public sector policy and administration management, public finance management, and decentralization and support to subnational governments. The primary recipients of this type of aid include: Vietnam (19.4 percent of total ODA to Vietnam), Cambodia (19.3 percent), the Philippines (68.3 percent), Indonesia (40.54 percent), and Thailand (100 percent).[21] Additionally, ODA more generally delivers long-term benefits derived from fostering local connections with Canada and building the Canadian brand. Recent Canadian Government policy encourages alignment of aid activities with key Canadian interests. In terms of ODA, this would suggest that Canadian aid to the A-16, and particularly the less developed countries, should continue to address gaps in governance capacity and public administration.

Military Linkages

Military cooperation provides a prominent point of contact in Canada's relations with the A-16 governments. The military is an important domestic institution in many of these countries and fostering strong ties yields both reputational and strategic benefits. Canadian military linkages demonstrate a commitment to the country, developing institutional connections and supporting Canadians in the area. Additionally, Asia will play a larger role in the Canadian strategic focus due to Canada's NATO commitments and strong ties to the American military which is reportedly undertaking a "rebalance" to the Pacific.

Military relations with the A-16 countries vary considerably. Canada has strong military ties to Japan, South Korea, and China, with significant training, collaboration and cooperation agreements. Canada has less established military relationships with India, Indonesia, Malaysia,

[20] See (Milestones in Vietnam-Canada Relations, n.d.)
[21] See Appendix F: Government to Government

Philippines, Singapore, and Thailand, characterized by the provision of training, and joint exercises.

Canada is involved in three different major multilateral military cooperation arrangements in the A-16 region: the annual Asia Security Summit, the RIMPAC Military Exercise, and the Ulchi Freedom Guardian Exercises.[22]

Science and Technology Partnerships

The Canadian government has developed science and technology research partnership agreements and programs with a select number of A-16 countries in an effort to boost international linkages to Canadian researchers. These partnerships benefit Canadian companies operating in Canada and the A-16, especially in research-intensive sectors such as ICT and energy. Science and technology partnership agreements were signed with China and India in 2008. Each country is also a part of the five-year, C $20 million International Science and Technology Partnership Program, renewed in 2010, which supports bilateral research with commercialization potential. Japan also has a science and technology partnership agreement with Canada, signed in 1986, as well as targeted programs for sectors such as nanotechnology, space, and renewable energy and energy use.[23]

Company-Level Data

The company-level data is a non-exhaustive list of Canadian firms active in the A-16. Where it was available, location information was retrieved from publically accessible data on company websites. A total of 499 Canadian companies or organizations[24], with 1307 locations, were identified through this data. Of the 499 companies with identified locations, 173 of them had multiple sites. Of those, only 48 companies had more than five locations, accounting for 615 of the total number of locations.[25]

[22] See Appendix F: Government to Government
[23] See Appendix F: Government to Government
[24] Confirmed to be either Canadian-owned or significantly tied to Canada.
[25] See Appendix E: Company-level Data. Note that the 615 locations do not encompass the entire scope of the large retail networks of joint ventures, franchises, or other arrangements.

Table 4: Firms with Multiple Locations

	Number of Firms	Percentage of Total # of Locs
More than 1 Location	173	74.9
More than 5 Locations	48	47.1

This indicates a strong physical presence of larger firms, and a relatively weaker presence of a large number of SMEs. According to a survey by the Asia Pacific Foundation (APF), 45 percent of Canadian companies in ASEAN countries reported revenues of less than C $1 million in 2012 and 31 percent of the companies reported revenues of between C $1 million and C $49 million in the same year.[26] This corresponds with conclusions drawn from the aforementioned data set that many of the Canadian companies included therein are small and mid-sized enterprises.

Sectors

The sector with largest number of locations was Other Services with almost one third of the total data points (357 locations). This broad sector category captures a wide range of activities from professional services to hospitality. The prevalence of this sector illustrates a diversity of Canadian presence, and demonstrates the importance of the services sector that is difficult to capture using traditional trade data.

Table 5: Number of Locations by Sector

CanAsia Sector Designation	# of Locs
Other Services	357
ICT	219
Education	175
Energy/Extractive/Environment	162
Manufacturing/Defence/Aerospace/Automotive	164
Financial Services/Indirect Investment	117
Infrastructure/Transport/Engineering/Construction	90
Agriculture/Fish/Food/Related Services	23
Total	**1307**

The results for other sectors are displayed in Table 5. Some important conclusions can be drawn from the sectoral data. First, for the Education sector, the data shows that of the 175 Canadian Educational locations in the A-16, over 100 locations instruct using the British Columbia curriculum. With British Columbia being the closest Canadian province to the region, this spread reflects the importance of geographic proximity in determining the degree of influence in the A-16. Second, in the Financial Services and Indirect Investment sector, 117 locations were confirmed but this number understates the total presence and actual importance of this Canadian sector in Asia. Canadian insurance companies, such as Manulife and Sun Life, have significant reach in the A-16 region through local subsidiaries and branded joint ventures that are not defined as Canadian physical

[26] See Asia Pacific Foundation, 2013 , p. 10 for more details

locations. The locations identified for plotting on the map capture the companies' presence in each country, but do not reflect the total reach of the hundreds of retail locations that some key Canadian financial services companies have in the region.

Corporate Social Responsibility

Another dimension of Canada's presence in the A-16 is the Corporate Social Responsibility (CSR) activities of Canadian firms in the region. Firms in the extractive industry are among the most active with CSR initiatives, often working with local partners to promote social development. In Vietnam, for example, Talisman Energy, Besra, and Asian Mineral Resources[27] all highlight their commitment to respecting the communities in which they work. Information about their CSR activities is publicly available on the websites of these firms. Talisman Energy supports a wide variety of CSR programs which focus on supporting the development of social infrastructure within the country[28], while Canadian gold producer and junior mining firm Besra focuses on promoting social and infrastructure growth within the communities that they work through education programs, infrastructure development and agricultural development.[29]

Canadian CSR activities in the region promote local social development and can enhance and complement priority areas in which Canadian ODA is targeted. These initiatives create an important comparative advantage for large Canadian firms which have an interest in protecting their reputation and credibility.

[27] See Appendix E: Company-level Data. To see an example of CSR statement, refer to (Asian Mineral Resources, 2014)
[28] See (Talisman Energy, 2012, p. 27) for more details.
[29] See (Besra, 2014) for more details.

Where Do We Want to Be?

Breakout Opportunities

The previous section set out some of the high-level findings of the data analysis. In this section, the analysis turns to a more focused treatment of key themes or tensions in the data. These breakout opportunities combine the quantitative analysis of the previous section with qualitative observations in order to parse out some broader perspectives and conclusions. Four breakout stories follow, which address education, sticky markets, energy, and the ICT sector, respectively. Narrowing in on key stories emerging from the overall analysis in the preceding section allows for the development of policy and strategic recommendations that reflect the diverse dimensions of Canada's footprint in Asia.

Education

From the data, 175 Canadian educational institutions and organizations were identified in the A-16. In addition to alumni networks from major Canadian Universities (McGill University, Richard Ivey School of Business, University of Toronto, UBC, University of Waterloo), there are hundreds of schools that instruct using one of the Canadian provincial curricula.[30] Canada has a pronounced educational presence in Asia.

Beyond the country-specific Canadian International Schools, which are present in several of the major A-16 economies (Singapore, Japan, China, Hong Kong), there are dozens of other organizations which reflect and support the Canadian education system across the region. There are schools at all levels, education associations (including extensive alumni networks), and partnership programs that extend across the entire region. These institutions range from preschool/early childhood education right up to University preparation courses specifically designed to funnel international students into Canadian post-secondary educational institutions. Some schools are tiny community schools, while others teach thousands of students.[31]

[30] See Appendix E: Company-level Data
[31] For example, the Canadian International School of Singapore – CIS, which has a current student body of 2900 students across 2 campuses. For more details, refer to (Canadian International School, 2014).

The provincial nature of the Canadian education system provided its own unique source of comparative information as the data allowed for an analysis of which provincial curriculum tended to dominate in the A-16. British Columbia was overwhelmingly reflected in the data with over 100 educational locations associated with this westernmost province. Given that British Columbia is Canada's "gateway to the pacific", these findings highlight that geographic proximity is an important factor in the dispersion of Canadian provincial curricula across the A-16.

In addition to the educational presence, several Canadian workplace standards boards are partnered with local institutions and organizations within the A-16. Canadian excellence in applied education is also important to mention because it provides linkages between lower and higher levels of education, and indicates the expanding importance of Canadian workplace standards bodies. Of note is the Primary Structures Educational Foundation, Inc. in the Philippines which provides training to Philippine students in welding practices as certified by the Canadian Welding Board.

While the number of institutions present in Asia is striking, the industry is highly fragmented. There is little scale or strategic oversight as most schools are SMEs that vary in size. Even for Maple Bear Schools, a franchise with dozens of primary school locations, the geographic spread appears sporadic. A more focused and guided growth strategy would match Canadian capacity to local demand, but it is not clear where such leadership can come from. The Council of Ministers of Education, Canada (CMEC), which coordinates provincial education policy and has a secondary focus on supporting Canadian education internationally, will likely have an important role to play.

The Government of Canada views education (especially tertiary education) as "an investment that will lead to future benefits both for the individual and for society."[32] Of particular importance to the Government is the correspondent increase in employability and competitive innovation capabilities that results from an educated population.

Canada's recently announced International Education Strategy, "designed to maintain and enhance Canada's global position in higher education"[33], emphasizes the importance of attracting foreign researchers and instructors to Canada in order to deepen Canadian academic

[32] (Statistics Canada, 2013)
[33] (Department of Foreign Affairs, Trade and Development Canada, 2014a)

relationships with institutions and researchers from abroad. The Strategy comes with some additional funding to support the objectives as outlined within the strategy, about C $5 million per year, although the funding is minimal when compared with the aims of the Strategy. The primary goal of the Strategy is to double the number of international students choosing Canada by 2022. The Government of Canada has calculated that an increase of this size in the number of international students will create at least 80,000 new jobs for Canadians, and provide a boost of about C $10 billion annually for the Canadian economy. Given the high demand for quality international education in Asia, the potential draw from the region could help the Government of Canada fulfill this aim.[34]

While the major economies in Asia have well-established educational systems of their own with extensive experience dealing with international students and international curricula, the developing economies that are rapidly growing in the region (Cambodia, Vietnam, and Thailand, for example) do not yet have an education system that is as well established. As a result, the market for international education in this region is quite high, with middle and upper class parents looking to send their children abroad in order to receive a more “quality” education. Currently, the UK, Australia and the US are the well-known foreign markets for international students coming from this region.[35] Canada’s competitors in the region maintain local offices devoted towards educational promotion in their countries (EducationUSA have advisors in all their Embassies[36]; The British Council maintains permanent offices around the world[37]; Study in Australia is also run through its Trade Commissioner Services offices around the world which often hire local staff in order to more effectively communicate the benefits of Australian education to local populations[38]), while Canada does not, further diminishing Canadian competitiveness in the A-16 education market.

The “innovation gap” identified by the Government of Canada in 2011 is best addressed through promotion of greater international education in Canada. The newly announced International Education Strategy emphasizes China, India and Vietnam as the markets in the A-16 with the greatest potential for growth for Canadian Education[39], with South Korea and Japan identified as the markets with relatively well-established Canadian Education Brands. The Strategy

[34] Ibid.
[35] (Haque, 2012)
[36] (Education USA, 2014)
[37] (British Council, 2014)
[38] (Study in Australia, 2014)
[39] See (Department of Foreign Affairs, Trade and Development Canada, 2014a)

highlights the Government of Canada's desire to expand beyond their established markets in the major economies and emphasizes the developing/emerging markets in the region where the potential for growth is the highest.[40] As Canada fosters and develops more partnerships and exchanges with international institutions, both the incoming international students and researchers, as well as those Canadian students who study abroad and return home, will help diversify Canadian innovation and narrow the abovementioned gap.

Moving Beyond Sticky Markets

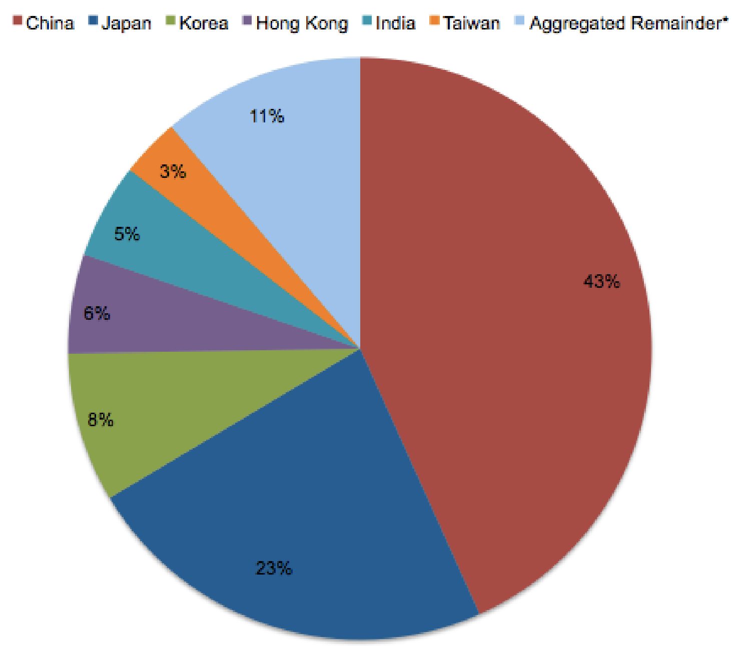
"Sticky markets" refers to the tendency of companies to congregate in traditional or well-established markets in the region. Canadian firms tend to congregate in traditionally important commercial hub cities in Asia. In particular, the data shows a strong tendency for companies to locate in the larger economies, namely China, Hong Kong, India, Singapore and Japan. From the data, most Canadian companies in the A-16 are found in China and Hong Kong, which together host 39 percent of the Canadian company locations identified. Outside of these two locations, Canadian companies are found in India (13 percent), Singapore (10 percent), and Japan (9 percent).[41] This is to be expected, as it makes practical sense for companies to locate as close as possible to the markets they are seeking to access. Within these countries, it was identified that Canadian companies have a strong tendency to locate in the major metropolitan centers such as Tokyo, Beijing, Guangzhou, Hong Kong, Shanghai, Shenzhen, Mumbai, New Delhi, and Seoul. These cities are favoured locations as they are major centers with large populations and established infrastructure. They also provide the business services necessary for trade, as exemplified by the presence of local offices of Canadian law firms in cities such as Tokyo, Hong Kong, Beijing, and Shanghai.

Canadian businesses appear to prefer established locations where they know that either the business environment is stable and predictable (Hong Kong, Singapore) or where their return on investment is large enough to offset challenges of doing business in these markets (China, India, Japan, South Korea). The data confirms that the Canadian presence in smaller markets is weaker.[42] In addition to their smaller market size, countries such as Cambodia, Brunei,

[40] (Department of Foreign Affairs, Trade and Development Canada, 2014b)
[41] See Appendix E: Company-level Data
[42] See Appendix E: Company-level Data

Myanmar, and Laos attracted a minimal number of Canadian businesses due to their inhospitable business environment with underdeveloped rule of law and limited business infrastructure. The tendency for Canadian companies to stay in larger and proven markets is also supported by survey results by the Asia Pacific Foundation, which show that three quarters of Canadian companies active in China did not intend to diversify their investments in China into ASEAN countries in 2013 and 2014.[43] The administrative challenges and the additional operational costs explain companies' tendencies to remain concentrated in a few countries rather than expanding their operations.

Figure 3: 2012 Share of Canadian Exports to the A-16



Note: figures were rounded to the nearest whole percentage point.
*Aggregated Remainder includes Singapore, Thailand, Indonesia, Malaysia, Philippines, Vietnam, Brunei, Cambodia, Myanmar, and Laos

China, Japan, Korea, Hong Kong, and India have been the top five destination countries for Canadian exports in the A-16 region since 2003. With the exception of Hong Kong (which is outpaced by Taiwan), these same countries also make up the top five source countries for Canadian imports as well.[44] The heavy concentration of Canadian companies in these countries is consistent with the significance of these countries as trading partners.

The geographical distribution of Canadian companies does not always reflect the importance of the country as a major export market for Canada. For instance, although Japan and Korea are more important destinations for Canadian exports, they respectively host only 9 and 5 percent of Canadian company locations in A-16 countries, according to the data set.

According to the World Bank's "Doing Business" ranking, which assesses the ease of doing business around the world, Hong Kong and Singapore rank as the two most business-friendly

[43] See Appendix E: Company-level Data. Refer to (Asia Pacific Foundation, 2013) for more details
[44] See Appendix C: Trade with the A-16

countries.[45] Both countries have a strong history of investor protection and promoting cross-border trade, serving to explain why Singapore, in particular, has such a high concentration of Canadian businesses[46] despite its relatively small volume of annual trade.[47] Meanwhile, Japan and South Korea—both of which are large, developed markets—do not host significantly more Canadian offices and operations than less significant markets such as Philippines or Malaysia. Part of this may be due to the far higher costs, both financial and regulatory, that must be incurred when doing business in these countries. Another reason for the small Canadian presence in Japan and South Korea is the composition of Canadian exports to these countries. For both of these countries, Canadian exports largely consisted of natural resources and agricultural products, which do not necessarily require establishing sales offices.[48]

Energy Growth in the A-16

The A-16 has seen significant energy demand growth over the past decade. The primary sources of energy in the region are coal, oil, and natural gas, and the region has seen considerable growth across the board. Coal, the primary source of energy in the region, has grown 100 percent over the past decade, from 2.7 billion tonnes consumed in 2003 to 5.4 billion tonnes in 2012. Regional coal production has tracked consumption, however, with the A-16 increasing production from 2.5 billion tonnes in 2003 to 5.2 billion tonnes in 2012. For this reason, the A-16 is unlikely to present a significant future market for foreign coal.

Oil consumption has dramatically outpaced regional production. Between 2003 and 2012, consumption in the A-16 has risen from 20.5 million barrels per day (bpd) to 27.4 million bpd, an increase of 34 percent. Production has only seen marginal growth, increasing from 7.5 million bpd to 8.2 million bpd. This growth is unlikely to plateau soon, and the A-16 will prove to be the largest petroleum demand growth market over the coming decades. While Asia will always represent a significant market opportunity for Canadian oil, the price differential between the West Texas Intermediate benchmark and Asian local prices is not significant enough to place oil at the centre of Canadian energy strategy in Asia.

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[45] (Economy Rankings, n.d.)
[46] See Appendix E: Company-level Data
[47] See Appendix C: Trade with the A-16
[48] (Asia Pacific Foundation, 2014b); Specific export product categories include natural resources (mineral fuels and oils, wood pulp, and ores) and agricultural products such as meat and cereals.

The largest opportunity for the Canadian energy industry is in natural gas. Between 2002 and 2011[49], natural gas consumption has grown from 9.3 trillion cubic feet per day (cf/d) to over 18.5 trillion cf/d, a rise of 99 percent over the past decade. While regional production has also almost doubled, from 7.6 trillion cf/d in 2002 to 13 trillion cf/d in 2011, the A-16 still depends on external sources for over 30 percent of their natural gas supply. Unlike oil, the price differentials between stranded North American natural gas and both continental gas and Liquefied Natural Gas (LNG) prices in Asia are sizable. The average price paid for landed LNG in Japan or South Korea is between 300 percent and 500 percent higher than the Henry Hub spot, the North American reference price. This creates a lucrative arbitrage opportunity. Liquefying natural gas to ship across the Pacific adds between US $4-5 per thousand cubic feet to the price of North American gas, effectively adding 100-150 percent to the domestic cost.[50] However, this is still below local prices in Continental Asia and far below the price paid for LNG in Japan and South Korea. The major regional supplier of natural gas is Russia, which uses its monopoly supplier position to charge prices far above fair market value. Building Canadian export capacity to the region would help alleviate key allies of energy price burdens and serve to stabilize North American gas prices by diversifying the Canadian customer base. In addition, the expensive nature of LNG processing means that prices in North America will not increase by any significant amount, so Canadian industry can continue to benefit from low natural gas feedstock and related electricity prices. Moving to utilize this opportunity could prove to be a valuable addition to Canada's economy and an especially significant boon to Canada's west coast.

Like all profitable opportunities, exploiting Asian natural gas markets is not without its risks. Three risks top the list and should be watched carefully while pursuing this commercial course. First, the Henry Hub reference price could increase. North American natural gas prices have already seen considerable growth, with the price increasing from US $2/tcf in mid-2012 to over US $5/tcf at the beginning of 2014. This is, in part, due to the massive adoption of natural gas in electricity generation and industrial use. Low gas prices have pressed many industrial production facilities to relocate to North America from Europe and even Asia—to many of these industries, gas feedstock is a much larger proportion of overall costs as compared to labour. If the price of North American gas increases too much, the arbitrage window will close. The second risk is the exploitation of shale gas reserves in continental Asia. While the United States has been the most prolific shale gas story, the world's largest holder of shale gas is actually

[49] Latest available data for Natural Gas
[50] (III, 2012)

China.[51] Despite this natural bounty, political and legal factors have ensured that China's natural gas stays in the ground. If this gas is exploited in the coming decades, large volumes of natural gas will find its way into the Asian continental markets. While this will not eliminate the need for LNG in Japan and Korea, it will significantly cut into the aggregate Asian market and hurt Canadian energy prospects. Finally, political factors could lead to a renegotiation of prices in the region. As this section has outlined, Asian countries pay prohibitively high prices for natural gas. To combat this, there has been initial discussions of creating an "Asian gas buyers' club,"[52] which could collectively negotiate with major gas suppliers to lower prices. If this occurred, it would damage Canada's prospects in Asia by closing the arbitrage window or reducing the price of natural gas below the marginal cost of the liquefaction process.

Any of these possibilities pose considerable risk to Canadian energy opportunities in Asia. It will cost Canada hundreds of billions of dollars to build the infrastructure necessary to meet Asian demand, and that investment will yield little reward if political or market circumstances change and the arbitrage opportunity closes. However, even if Canada cannot provide physical energy sales to the region, there will always be a role for Canadian companies—which are among the most technically sophisticated in the world—to play in Asian resource extraction.

Canada's Strength in ICT

Canadian companies have a strong Asian presence in the ICT sector. As discussed above, ICT is the second-most prevalent sector in the region after the broad Other Services category.[53]

The data shows that most ICT companies are located in Singapore, Hong Kong, Tokyo, and large Chinese and Indian cities. While the Chinese locations are primarily in either Beijing or Shanghai, Canadian ICT companies in India are more dispersed. There are locations in New Delhi and Mumbai and their suburbs, but also Bangalore, Hyderabad, and others. Many of the companies active in India have multiple locations in different cities, speaking to both the segmentation of the Indian market and the prominence of ICT in the country.

[51] (Technically Recoverable Shale Oil and Shale Gas Resources: An Assessment of 137 Shale Formations in 41 Countries Outside the United States, 2013)
[52] (Asia Gas Buyers' Club Threatens Canada's Energy Plans, 2014)
[53] See Appendix E: Company-level Data

The ICT sector is indicative of the diversity of companies active in the A-16. Consider the size and reach of companies, which range from a select few larger companies with a widespread presence across many countries to a wide array of SMEs with fewer than 5 locations.[54] Blackberry and Future Electronics have locations in 11 of the A-16 countries, and other large Canadian companies such as CGI Group and OpenText also have broad presences.[55] Large companies not only have more locations in more countries, they also appear to be among the first movers into smaller markets. For example, large Canadian ICT companies are present in Malaysia and the Philippines but there are few SMEs. This disparity may point to the varying growth strategies and risk appetites of companies of different sizes, as companies with a smaller presence choose to grow in Asia through established markets. ICT sector SMEs as a group are more focused in the sticky A-16 markets, whereas individual large Canadian companies build on their presence in established markets by being early movers into secondary markets.

Many of the companies with a greater presence are manufacturers and sellers of ICT equipment. The representation of services-oriented ICT companies is comparatively weaker. This may partially stem from the methodological bias towards companies with a physical presence. The impact of Canadian ICT companies is likely to be larger than is indicated in the geographically-focused data as services in general—and perhaps ICT-related services in particular—can move across borders without a physical imprint. Consider for example Shopify: a Canadian company that provides online infrastructure for small retailers, it gained a foothold in Singapore through a partnership with Singapore-based telecom Singtel. Shopify has subsequently leveraged that partnership to expand regionally into Malaysia, Indonesia, and India. It has been able to access and serve these national markets quickly with a very light physical footprint because of its central strategic partnership. Future crowd-sourced layers of the map will illuminate this lighter services footprint more clearly.

The presence or absence of trade and investment agreements with Canada does not seem to have a significant effect on investment in the ICT sector. Canada does not have a FIPA or FTA with any of the countries in which there is a strong ICT presence.[56] Though these agreements would ease investment and trade from Canada, companies are currently choosing to locate

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[54] See Appendix E: Company-level Data
[55] See Appendix E: Company-level Data
[56] See Appendix F: Government to Government

where there are other incentives in place. In particular, these may be the clustering benefits and ease of labour market access in large Asian metropolitan centres.

The presence of the ICT sector in the A-16 highlights the importance of both large firms and SMEs to Canada's success in the region. An important consideration following from this is whether and how company size may affect the necessity and efficacy of alternate trade promotion policies.

Large firms are prominent "flag-bearers" for the Canadian brand. Their reach and propensity for expansion into new markets make them important ambassadors, even beyond their economic significance. Comparatively, SMEs are a significant proportion of Canada's presence and add depth in large markets and focused market niches. They may also be more flexible and adaptable by virtue of their size, particularly in the ICT sector.

Effective trade promotion must serve the needs of these two types of businesses. The Canadian Government has committed to increasing SME participation in global markets with its Global Markets Action Plan. These efforts should focus on helping growth-oriented Canadian companies move into Asia, but also help companies with a small presence grow in the region. Larger firms are likely to have a significant advantage in terms of furthering Canadian interests in a cost-effective manner. They are present in more countries, with more locations, and more economic activity. They also have greater internal capacity to manage relations in local countries without government support. Overall, the Canadian government should ensure that the measures it adopts leverages the benefits of Canadian flag bearers while serving the needs of SMEs.

How Do We Get There?

Strategic advice on expanding Canada's footprint in Asia

The breakout opportunities outlined in the previous section explore prominent trends or themes that emerged from the data analysis. These breakout stories have also been framed to point potential ways forward. This section turns to this next step: providing actionable policy advice that that can be used to broaden and deepen Canada's footprint in Asia.

In late 2013, the Government of Canada released its *Global Markets Action Plan* to boost Canadian trade by prioritizing "economic diplomacy" and supporting private sector expansion into key markets.[57] The Government aims to almost double the number of SMEs exporting within five years through trade promotion measures and enhanced access through trade agreements. It also plans to focus on key markets and sectors where identified Canadian capacity aligns with future growth potential. 12 of the A-16 states are included in the list of priority emerging or established markets, including nine as priority markets that involve broad Canadian interests.

Strengthen Ties in Education

Expanding on the recently released International Education Strategy, the Government of Canada should proactively undertake three specific activities in order to expand Canadian educational presence across the A-16. First, the Government should broaden its focus beyond the markets prioritized in the Strategy in order to leverage opportunities in emerging economies in the region. Second, the Government should promote the Canadian brand by highlighting the benefits of Canada more generally as a way to attract more international students to Canada, and through encouraging greater participation by organizations such as CMEC in the support of Canadian educational promotion in the A-16. Finally, the Government should focus on expanding partnerships with local institutions in order to embed the Canadian education brand within the broader international education environment within the region.

The International Education Strategy identifies developing countries as the largest potential markets for education. The strategy's focus on India, China, and Vietnam, while a good start,

[57] (Department of Foreign Affairs, Trade and Development Canada, 2014d)

might be too narrow and result in Canada missing a key opportunity to leverage potential in other regional markets. Given the growing size of the education markets in other Asian nations (especially in Southeast Asia), the Government of Canada would do well to expand their scope of target markets in order to incorporate more of the A-16.

Promoting the Canadian education brand is best accomplished by leveraging existing relationships and opportunities within the region, for example, through encouraging organizations such as CMEC to coordinate and support Canadian institutions in travelling to attend international education fairs across the region. Canadian institutions also need to engage more proactively with education brokers in the A-16 in order to increase the brokers' awareness and promotion of Canadian educational institutions.

Canada in general has several key characteristics that make it an attractive destination for international students beyond the education system. Canada is a stable and safe country, a known leader in research and innovation in several key sectors (ICT, aerospace, agriculture and engineering to name a few), and has the economic growth and stability to support state-of-the-art research and facilities. Furthermore, Canada is a bilingual country, expanding its appeal beyond the traditional Anglophone education market and providing opportunities for Francophone students. This is especially important in Southeast Asia where the remnants of French colonialism continue to permeate in several key markets. By leveraging this, the Government can increase its appeal in a way that Canada's primary competitors (the UK, US, Australia, and New Zealand) cannot.

Get Less Stuck in Sticky Markets

If Canadian businesses are to expand into new areas of Asia and beyond the traditional destinations such as Hong Kong, the Canadian government should do its best to reduce barriers to expansion. This requires active, adaptable, and accessible Trade Commissioner Services and Embassies in order to lower information costs and connect Canadian businesses to local partners. Resources that show Canadian companies active in an area, such as the CanAsia Map, should be public and easily accessible to facilitate networking and connections.

The Canadian government can also facilitate moving beyond sticky markets by accelerating the conclusion of FIPAs and FTAs in the region. Expanding Canadian presence in Japan and Korea would be a way to utilize existing relationships while moving beyond traditional business centers such as Hong Kong and Singapore. Canada has begun to deepen economic relations with both Japan and South Korea by engaging in multilateral and bilateral FTA negotiations with Japan and by recently signing the Canada-Korea FTA. A government report released on March 7, 2012 stated that a Canada-Japan FTA would increase Canadian GDP by between US $3.8 billion and US $9.0 billion.[58] The FTA with South Korea is expected to result in economic benefits for Canada as it is predicted to increase Canadian exports to South Korea by approximately 33 percent.[59]

China has the highest and most concentrated share of Canadian business presence and trade among the A-16 countries. Given that many of the Canadian companies in China are located in coastal urban centers, this presence can and should be used to create connections with the emerging areas such as Chongqing, where the data shows very few Canadian companies. In other countries with heavy Canadian presence, such as India, Singapore, and Japan, Canadian Embassies could also serve as focal points where businesses could find information about potential local partners to collaborate and expand their business activities in Asia. There are currently ten agreements at various stages of negotiations, including the TPP. In looking to prioritize these different agreements, Canada should focus on India, ASEAN states such as Singapore, and the multilateral venue of the TPP, which includes Japan, Malaysia, Singapore, and Vietnam. Concluding these agreements will facilitate growth in trade and investment.

Enhance Domestic Support for Energy Infrastructure

In order to meet booming Asian energy demand, Canada will need to organize and execute hundreds of billions of dollars of infrastructure development. Canada has the resources and the expertise to meet this demand, but the proper transportation infrastructure—pipelines, liquefaction facilities, ports, etc.—are either nonexistent or in short supply. This will require a national energy strategy that harmonizes the federal Government, provinces, and Canada’s First Nations; without all three of these groups, the enterprise will fail. Currently, these groups are discussing energy infrastructure issues in haphazard and disorganized ways, creating an environment of uncertainty that is deleterious to the Canadian energy industry. Canada needs to

[58] (Government of Canada, 2014)
[59] (Financial Post, 2014).

enunciate an official energy strategy. It is only with a public, coherent, and codified strategy that Canada can hope to begin meeting the challenges facing the energy sector.

Furthermore, this infrastructure is estimated to cost upward of US $500 billion. Recent moves by the Government of Canada to limit foreign investment in Canadian energy companies has slowed the influx of capital into the Canadian energy industry at a time when it needs it most. While the focus of this policy has been on takeovers of Canadian energy firms by state-owned energy companies, the reality is that many of the largest energy companies operating out of the A-16 are state-owned. Canadian strategic and business interests should govern Canadian policy in this area.

Focus Support for Canada’s Flag Bearers

Analysis shows that a sizeable portion of Canada’s footprint in Asia comes from a select number of large companies with expansive operations across a range of jurisdictions. These companies are important flag bearers who carry the Canadian brand with them in their interactions with host governments and customers.

SMEs feature largely in the Government of Canada’s recently-introduced *Global Markets Action Plan*, and their number and reach demonstrate that they play an important role in Canada’s footprint in Asia. However, the role of larger companies is significant and warrants support for their overall scope and willingness to move into new markets. In light of the need to achieve best returns on investments in Canada’s diplomatic efforts, larger companies should serve a more central position in Canada’s strategy going forward.

This is not to impose an arbitrary divide between types of Canadian firms or to say that SMEs should be forgotten. The vitality of Canada’s presence requires a diversity of firms. The Trade Commissioner Service must ensure that SMEs with an interest in expanding into and across Asia receive assistance and support. A healthy presence of larger Canadian firms helps pave the way for future SME expansion, though, as Canada’s flag bearers build the Canadian brand in a host economy and foster business connections and familiarity that may assist SMEs. Building Canada’s reach into the region helps all firms, regardless of current firm size.

Conclusions

An overarching goal of this project was to contribute to a better understanding of Canada's presence in Asia. Beginning from the central proposition that improving Canada's connection to Asian markets requires first understanding the breadth and depth of its footprint in the region, this project has sought to advance the Canadian narrative in Asia by gathering and analyzing data about the region and mapping the location of Canadian companies. The data shows that Canada's presence is comprised of many small companies and some large ones, working in all types of sectors and in almost every country in the A-16. Researching, categorizing, and mapping the locations of Canadian businesses in the A-16 helps to emphasize where Canada has achieved success in penetrating these increasingly important emerging markets and underscores areas of future opportunity.

The Government of Canada's recent focus on priority markets and international education demonstrate the timeliness of this research. Canada has recognized the need to take greater strides in Asia, but in order to do so it must first take stock of its existing footprint.

Next Steps

The CanAsia Map is an ongoing project at the Munk School of Global Affairs. As such, these final remarks offer an opportunity to discuss future steps that will open up further avenues for continued analysis, namely in terms of data collection and focus areas.

The Canadian company locations plotted in this initial stage were based on data received from the Canadian Council of Chief Executives (CCCE) and through correspondence with regional embassies. In the future, more data from the business community will be welcomed: crowd-sourcing offers the ability to gather information directly from businesses and individuals in the region. Inviting Canadian companies to place themselves on the CanAsia Map will allow the map to capture a wider spectrum of Canadian companies and business activities in the region, such as those firms that may not have physical offices but have significant business or investment engagement. Furthermore, firms will have the opportunity to share more information about their own activities, should they desire, leaving room for a deeper analysis of data such as firm revenue, depth of investment, employment figures, and changes in business activities over time.

Another valuable future data source will be the incorporation of crowd-sourced human capital information from across the region. Expanding this project beyond business and economic activities to include the social and cultural importance of alumni networks, expat communities, and Diasporas will enhance the nuance of the understanding of Canada’s overall relationship with the region.

Finally, the CanAsia map focuses on Asia, and specifically the A-16 sample group. In the future, this same methodology can be applied to Canadian presence in other major regions, with the end goal of mapping Canadian presence throughout the globe.

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Appendix A: Methodology

At the country level, the data selected included major economic indicators associated with macro-level country analysis, such as real GDP growth, and trade and investment flows. This data reflects recent data over a longer time horizon in order to emphasize the timeliness of the research and in recognition of the recent growth trajectory of these economies. Widely available and reputable statistics databases were drawn from, namely those of the Organization for Economic Cooperation Development (OECD), the World Bank (WB), the International Monetary Fund (IMF), Statscan, as well as national statistics agencies from within the A-16 and comparator countries.

For the purposes of comparable information when necessary, all figures were first converted from local currency into US dollars and then into Canadian dollars using the prevailing exchange rate at the time of writing (Canadian $0.90 to US $1).

As mentioned above, at the company level research was focused on Canadian companies with a presence in the A-16. The company list was compiled based on correspondence with the CCCE as well as with the Canadian Embassy and Consular staff within the A-16 region. The CCCE provided a list of member companies active in the region based on their own internal research. Some of the Canadian Embassies and Consulates in the A-16 provided their own lists of companies active within their countries. The company information was supplemented by information found online through local Canadian Chambers of Commerce. Finally, some companies were added as a result of their being mentioned in news media or other sources over the duration of the project. Not all sources provided an equivalent access to data and the consistency of the data varied depending on its source. This was addressed by focusing on a number of key questions and performing supplemental research when required.

After compiling the master list of companies based on the aforementioned sources, company websites, annual reports and other regulatory filings were examined to determine:

- that it was indeed a Canadian company,
- that it currently had operations in the A-16, and
- the exact location and address of its presence.

Information recorded, where available, included:

- the company name,
- its sector and sub-sector,
- the name of the project, subsidiary, or partner,
- its address, and
- any additional notes about its activities.

The sector categories were determined based on collected data, and amended in conversation with the client, correspondent to the NAICs codes available through Industry Canada.

Table 6: Sectoral Breakdown – CanAsia Map and NAICs

NAICS Codes	2012 NAICS Sector names	CanAsia Designation
11	Agriculture, forestry, fishing and hunting	Agriculture/Fish/Food/Related Services
21	Mining, quarrying, and oil and gas extraction	Energy/Extractive/Environment
22	Utilities	Energy/Extractive/Environment
23	Construction	Infrastructure/Transport/Engineering/Construction
31-33	Manufacturing	Manufacturing/Defence/Aerospace/Automotive
41	Wholesale trade	Other Services
44-45	Retail Trade	Other Services
48-49	Transportation and warehousing	Infrastructure/Transport/Engineering/Construction
51	Information and cultural industries	ICT
52	Finance and insurance	Financial Services/Indirect Investment
53	Real estate and rental and leasing	Financial Services/Indirect Investment
54	Professional, scientific and technical services	ICT
55	Management of companies and enterprises	Other Services
56	Administrative and support, waste management and remediation services	Other Services OR Energy/Extractive/Environment
61	Educational services	Education
62	Health care and social assistance	Other Services
71	Arts, entertainment and recreation	Other Services
72	Accommodation and food services	Other Services
81	Other services (except public administration)	Other Services
91	Public administration	Other Services

Source: North American Industry Classification System (NAICS) Canada, 2012

At this stage of the project, each data point for a company location does not distinguish the magnitude of a company's presence other than in the notes where employment or revenue figures were available. As such, the data speaks more to the breadth of Canada's presence in a country than to its depth in economic magnitude.

The sample countries of the A-16 that were selected were based on a variety of characteristics. Economic importance, the size of the local market, population size, share of global GDP, GDP per capita and the growth rates in all of these factors highlighted which Asian economies were considered the major economies. These are the countries which form the major Asian players in the global market, and as such receive the most global attention especially from major competitors in the region (the comparator countries). The ASEAN nations were chosen because of their importance as a regional entity and especially the impending creation of the ASEAN Economic Community (AEC), which is due to come into existence in 2015. ASEAN currently has multiple trade and investment agreements with countries around the world and, as an entire entity, is a global economic powerhouse. In addition, it is one of the faster growing regions in the world and a definite part of the Asian community towards which other countries (specifically the United States and Europe) have pivoted in recent years. In order to maintain competitiveness in the region, Canadian focus must incorporate the ASEAN community as well as the major economies in the region.

Appendix B: A-16 Macroeconomic Indicators

Table 7: Real and Nominal GDP, Population, GDP per Capita, and GDP Growth 2003-2012

		2003	2012	2003-2012			2003	2012	2003-2012
China	Nominal (Billions USD)	1,640	8,227	402%	Philippines	Nominal (Billions USD)	84	250	198%
	Real GDP (2005 Billions USD)	1,841	4,522	146%		Real GDP (2005 Billions USD)	92	145	58%
	Population (Millions)	1,288	1,351	5%		Population (Millions)	83	97	17%
	Real GDP per Capita (2005 USD)	1,429	3,348	134%		Real GDP per Capita (2005 USD)	1,116	1,501	35%
India	Nominal (Billions USD)	591	1,825	209%	Hong Kong	Nominal (Billions USD)	161	263	63%
	Real GDP (2005 Billions USD)	708	1,369	93%		Real GDP (2005 Billions USD)	156	234	50%
	Population (Millions)	1,093	1,237	13%		Population (Millions)	7	7	6%
	Real GDP per Capita (2005 USD)	647	1,107	71%		Real GDP per Capita (2005 USD)	23,110	32,742	42%
Japan	Nominal (Billions USD)	4,303	5,964	39%	Singapore	Nominal (Billions USD)	96	277	188%
	Real GDP (2005 Billions USD)	4,409	4,712	7%		Real GDP (2005 Billions USD)	105	181	72%
	Population (Millions)	128	128	0%		Population (Millions)	4	5	29%
	Real GDP per Capita (2005 USD)	34,521	36,938	7%		Real GDP per Capita (2005 USD)	25,609	33,989	33%
Korea	Nominal (Billions USD)	644	1,156	79%	Vietnam	Nominal (Billions USD)	40	138	249%
	Real GDP (2005 Billions USD)	777	1,078	39%		Real GDP (2005 Billions USD)	45	83	83%
	Population (Millions)	48	50	4%		Population (Millions)	80	89	10%
	Real GDP per Capita (2005 USD)	16,231	21,562	33%		Real GDP per Capita (2005 USD)	563	931	65%
Taiwan	Nominal	311	474	52%	Myanmar	Nominal	10	53	408%
	Real GDP (2006 Billions local currency)**	10,444**	14,979**	43%**		Real GDP (2000 Billions local currency)**	3,625**	7,616**	110%**
	Population (Millions)*	22.6	23.3	3%		Population (Millions)	50	53	6%
	Real GDP per Capita (2006 local currency)**	462,031**	642,437**	39%**		Real GDP per Capita (2000 local currency)**	73,117**	144,252**	97%**
Indonesia	Nominal (Billions USD)	235	878	274%	Brunei	Nominal (Billions USD)	7	17	154%
	Real GDP (2005 Billions USD)	258	427	66%		Real GDP (2005 Billions USD)	9	10	9%
	Population (Millions)	218	247	13%		Population (Millions)	0.4	0.4	17%
	Real GDP per Capita (2005 USD)	1,180	1,732	47%		Real GDP per Capita (2005 USD)	26,713	24,947	-7%
Thailand	Nominal (Billions USD)	143	366	156%	Cambodia	Nominal (Billions USD)	5	14	206%
	Real GDP (2005 Billions USD)	159	224	41%		Real GDP (2005 Billions USD)	5	10	98%
	Population (Millions)	64	67	4%		Population (Millions)	13	15	15%
	Real GDP per Capita (2005 USD)	2,458	3,353	36%		Real GDP per Capita (2005 USD)	389	672	73%
Malaysia	Nominal (Billions USD)	110	304	176%	Lao PDR	Nominal (Billions USD)	2	9	355%
	Real GDP (2005 Billions USD)	128	198	55%		Real GDP (2005 Billions USD)	2	5	96%
	Population (Millions)	25	29	17%		Population (Millions)	6	7	18%
	Real GDP per Capita (2005 USD)	5,127	6,765	32%		Real GDP per Capita (2005 USD)	427	707	66%

Sources: Real Percentage Change: IMF Database; Nominal (USD): IMF Database; Real (2005 USD): World Bank Database; Population: World Bank Database; Real GDP per Capita (2005 USD): Real GDP/Population; *Population (Taiwan): CIA Factbook; **Real GDP Local: IMF WEO Database. Please note that raw figures for GDP real growth rates for Taiwan and Myanmar Raw were unavailable.

Appendix C: Trade with the A-16

Table 8: Canadian Merchandise Exports (Millions of C$)

	2003	2012	2003-2012
Brunei Darussalam	3	4	57%
Cambodia	1	8	426%
China	4,809	19,366	303%
Hong Kong	1,176	2,472	110%
India	763	2,361	209%
Indonesia	455	1,681	269%
Japan	8,193	10,358	26%
South Korea	2,000	3,713	86%
Laos	0	10	63257%
Malaysia	484	784	62%
Myanmar	0	3	526%
Philippines	378	528	40%
Singapore	444	908	104%
Taiwan	1,243	1,464	18%
Thailand	460	717	56%
Vietnam	86	370	331%
A-16 Total Exports	20,496	44,746	118%
Total Cdn Global Exports	381,071	454,395	19%

Source: Industry Canada Trade Data Online

Table 9: Trade in Services

USD (Millions)	Canada			Australia		
	2002	2011	2002-2011	2002	2011	2002-2011
World	40,823	84,737	108%	19,372	51,826	168%
Japan	1,176	1,288	10%	1,821	1,986	9%
Korea	415	772	86%	544	1,803	231%
Brunei Darussalam	-			27	56	105%
China	540	1,688	213%	866	5,830	573%
Taiwan	267	393	47%	249	563	126%
Hong Kong	485	1,325	173%	888	1,764	99%
India	196	552	182%	268	2,214	726%
Indonesia	105	206	96%	595	1,308	120%
Malaysia	140	344	146%	568	1,693	198%
Philippines	106	197	86%	85	456	434%
Singapore	182	701	286%	1,255	3,227	157%
Thailand	79	126	60%	342	993	190%
Viet Nam	24	67	183%	126	946	654%
A-16 Total	**3,712**	**7,659**	**106%**	**7,635**	**22,837**	**199%**

Source: OECD

Table 10: Comparator Country Trade with A-16 (2012)

	2012									
USD (Millions)	**Canada**	**USA**	**Australia**	**UK**	**France**	**Germany**	**China**	**India**	**Japan**	**South Korea**
China	19,465	110,484	76,020	16,085	19,909	87,850	0	13,535	132,816	134,331
India	2,373	22,105	12,693	7,405	4,351	13,691	47,677	0	9,755	11,921
Japan	10,411	69,955	49,725	7,446	9,757	22,548	151,627	6,100	0	38,850
Korea	3,732	42,284	20,608	7,435	8,175	17,632	87,674	4,202	56,676	0
Taiwan	1,471	24,349	8,329	1,752	2,505	7,621	36,777	3,044	42,389	14,819
Indonesia	1,690	7,997	5,047	1,030	1,762	4,132	34,285	5,331	18,680	13,946
Thailand	721	10,888	5,090	3,060	2,745	5,532	31,197	3,733	40,262	8
Malaysia	788	12,841	5,281	2,409	3,956	6,524	36,526	4,444	16,303	7,803
Philippines	531	8,060	1,887	541	1,298	2,002	16,732	1,187	10,914	8,229
Hong Kong	2,484	37,461	2,697	8,191	7,911	7,822	323,445	12,279	37,807	32,609
Singapore	913	30,525	7,361	6,898	7,729	8,606	40,750	13,619	21,457	22,892
Vietnam	372	4,624	1,855	475	810	2,562	34,213	3,967	9,893	15,954
Myanmar	3	66	88	21	0	131	5,674	545	1,158	1,331
Brunei	4	158	37	81	17	68	1,252	40	173	112
Cambodia	8	226	28	18	163	58	2,708	112	216	593
Lao PDR	10	33	4	6	173	158	937	29	127	165
Total A-16	**44,974**	**382,056**	**196,752**	**62,851**	**71,260**	**186,936**	**851,475**	**72,169**	**398,625**	**303,563**

Source: National Statistics Bureau of A-16 countries, OECD Database. Conversions to USD based on December 31, 2012 exchange rates as listed by the Bank of Canada.

Appendix D: Investment in the A-16

As FDI position data was unreported by some countries for certain years, the data set herein was adjusted to represent the best material estimate given available information. As such, if FDI position was unreported for 2005, for instance, 2004 values were carried forward rather than assuming a value of 0. Similarly, 2005 data was rolled back if the 2004 data was not available. In the tables below, the asterisks reflect that such a change has been made.

Table 11: FDI Position by Partner Country, 2003

FDI Position by Partner Country, 2003								
USD (Millions)	**Canada**	**Korea**	**US**	**UK**	**Japan**	**France**	**Germany**	**Australia**
Japan	6,534	643	57,794	4,214	-	30,428	9,849	387
Korea	540	-	13,063	2,390	5,068	1,153	5,202	958
Brunei Darussalam	-	2*	(27)	2	-	-	5	-
Cambodia	-	48*	1	-	-	38	-	-
China	638	6,441	11,261	3,229	15,277	2,698	8,820	369
Hong Kong	2,176	1,407	36,426	30,734	5,679	1,862	3,989	4,012
India	160	533	4,868	2,775	1,505	798	2,035	306*
Indonesia	2,659	1,238	8,603*	2,336	6,729	898	1,183	446
Lao	-	9*	-	-	-	3	-	-
Malaysia	337	334	7,057	2,634	3,954	297	1,730	200
Myanmar	-	31*	-	-	-	191	-	-
Philippines	91	500	6,390	1,028	3,157	261	446	53*
Singapore	2,865	423	51,053	16,972	9,814	4,746	5,939	2,137
Taiwan	-	115	11,983	1,146	4,343	249	529	48*
Thailand	392	529	6,886	2,422	7,641	1,115	1,311	164
Vietnam	72*	1,062.2*	218	573	1,698*	345	49	449
A-16 Total	16,464	13,316	215,576	70,455	64,865	45,082	41,087	9,526

Table 12: FDI Position by Partner Country, 2012

FDI Position by Partner Country, 2012								
USD (Millions)	**Canada**	**Korea**	**US**	**UK**	**Japan**	**France**	**Germany**	**Australia**
Japan	6,394	3,710	133,967	8,538	-	35,699	11,986*	235
Korea	572	-	35,125	5,562	25,526	4,698	7,668*	695*
Brunei Darussalam	-	6	116	255*	-	9*	5*	-
Cambodia	-	1,536	54	-	-	99*	17*	-
China	4,260	50,591	51,363	11,197	92,967	21,727	44,271*	8,706
Hong Kong	7,166	11,625	47,767	56,528	18,334	11,078	6,271*	4,672
India	647	3,818	28,385	9,527	15,066	4,687	9,877*	1,612
Indonesia	3,234	5,147	13,480	5,647	18,378	3,000	2,110*	5,135
Lao	-	124	-	-	-	1*	-	-
Malaysia	716	4,350	15,001	3,339	13,277	793	4,247*	3,844*
Myanmar	-	1,327	1	-	-	28	-	-
Philippines	760*	2,180	4,591	791*	10,351	1,103	626*	1,042
Singapore	2,335	4,383	138,603	14,498	35,968	10,187	13,240*	11,267
Taiwan	73*	632	16,482	3,387*	13,298	492	1,408*	40*
Thailand	382	2,569	16,882	2,273	34,947	2,532	2,307*	554
Vietnam	51	7,182	1,064	1,940*	8,393	745	368*	589*
A-16 Total	26,590	99,181	502,881	123,482	286,505	96,878	104,400	38,392

Source: OECD

Appendix E: Company-level Data

Table 13: Number of Canadian Firm Locations, by Sector

CanAsia Sector Designation	# of Locs	# of Firms
Other Services	357	119
ICT	219	83
Education	175	101
Energy/Extractive/Environment	162	67
Manufacturing/Defence/Aerospace/Automotive	164	51
Financial Services/Indirect Investment	117	28
Infrastructure/Transport/Engineering/Construction	90	33
Agriculture/Fish/Food/Related Services	23	18
Total	**1307**	**500**

Source: Company websites, local Chambers of Commerce websites, the CCCE, Embassy-provided public information.

Table 14: Number of Canadian Firm Locations, by Country

Country	# Locs
China	292
Hong Kong	214
India	167
Singapore	138
Japan	118
South Korea	68
Philippines	64
Malaysia	55
Vietnam	45
Indonesia	43
Taiwan	37
Thailand	35
Cambodia	27
Brunei	2
Myanmar	2
Laos	0
Total	**1307**
Big Five Economies	859
ASEAN Total	448
ASEAN minus Singapore	310

Source: Company websites, local Chambers of Commerce websites, the CCCE, Embassy-provided public information.

Appendix F: Government to Government

Table 15: Canada – A-16 Official Development Aid Relationships

	Government & Civil Society - general	Total CND ODA To All Sectors	Percentage of ODA
Vietnam	0.8	3.9	19.4%
China	0.1	3.8	1.6%
India	0.1	2.1	4.4%
Cambodia	0.3	1.3	19.3%
Philippines	0.8	1.2	66.5%
Indonesia	0.0	0.1	40.5%
Thailand	0.1	0.1	100.0%
Total A-16	**2.1**	**12.5**	**16.8%**

Source: OECD

Table 16: Canada – A-16 Defence Relationships

	Military Training and Cooperation Program?	Recent High-level Visits?	Agreements
China		Yes	Cooperation Plan Initiative (2013)
India		Yes	
Indonesia	Yes - MTCP Centre of excellence		
Japan	Yes - implementing partner		Canada-Japan Joint Declaration on Political, Peace and Security Cooperation (2010); Canada-Japan Acquisition and Cross-Servicing Agreement (ACSA) (pending Parliamentary approval)
Korea	Yes	Yes	Mutual Support MOU
Malaysia	Yes		
Philippines	Yes		
Singapore	Yes		
Thailand	Yes		

Source: http://www.forces.gc.ca/en/news/article.page?doc=canada-s-defence-relations-in-the-asia-pacific-region/hob7h9ya

Table 17: Canada – A-16 Defence Relationships, Multilateral

Name of Cooperation	Description	A-16 Countries Involved
Asia Security Summit	"Shangri-La Dialogue"	Singapore
RIMPAC Military Exercise	Maritime exercises in Hawaii	India, Indonesia, Japan, Malaysia, Philippines, Korea, Singapore, Thailand
Ulchi Freedom Guardian Exercises		Korea

Source: http://www.forces.gc.ca/en/news/article.page?doc=canada-s-defence-relations-in-the-asia-pacific-region/hob7h9ya

Table 18: Canada – A-16 Science and Technology Partnerships[60]

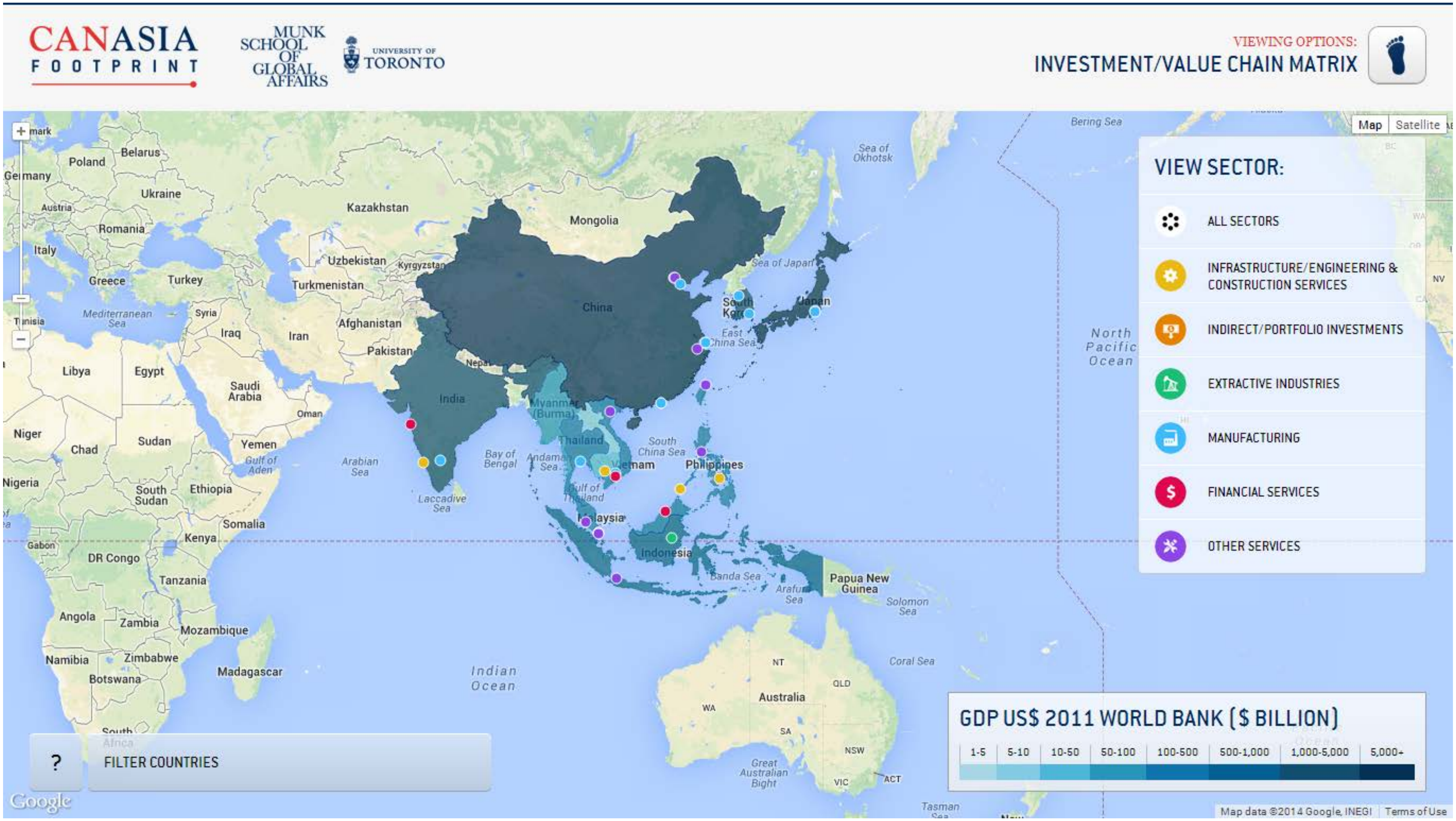
	S&T Partnership Agreement	ISTPP*?	NSERC Collaborative Agreements	Additional Agreements	Exchanges
China	2008	Yes			
India	2008	Yes			
Japan	1986		NSERC-JST MOU on Energy; NSERC - JSPS Exchange; Strategic Project Grants Program	Canada-Japan Nanotech; CSA-JSX Space MOU	Yes
Taiwan			Strategic Project Grants Program		

Source: http://www.tradecommissioner.gc.ca/eng/science/agreements.jspm

[60] The International Science and Technology Partnership Program is a five-year, $20M program to support bilateral research collaboration with commercialization potential. The ISTPP focuses on collaboration with China, India, Israel, and Brazil. It was renewed in 2010. (http://www.tradecommissioner.gc.ca/eng/funding/istpp/istpp.jsp)

Appendix G: Screen Captures of the Map

Figure 4: Map Screen Capture - A-16 Sectors



*At the request of CCCE, the sectors shown on the screen captures have been modified to reflect the NAICs sectors discussed above.

Figure 5: Map Screen Capture - Filter by Country

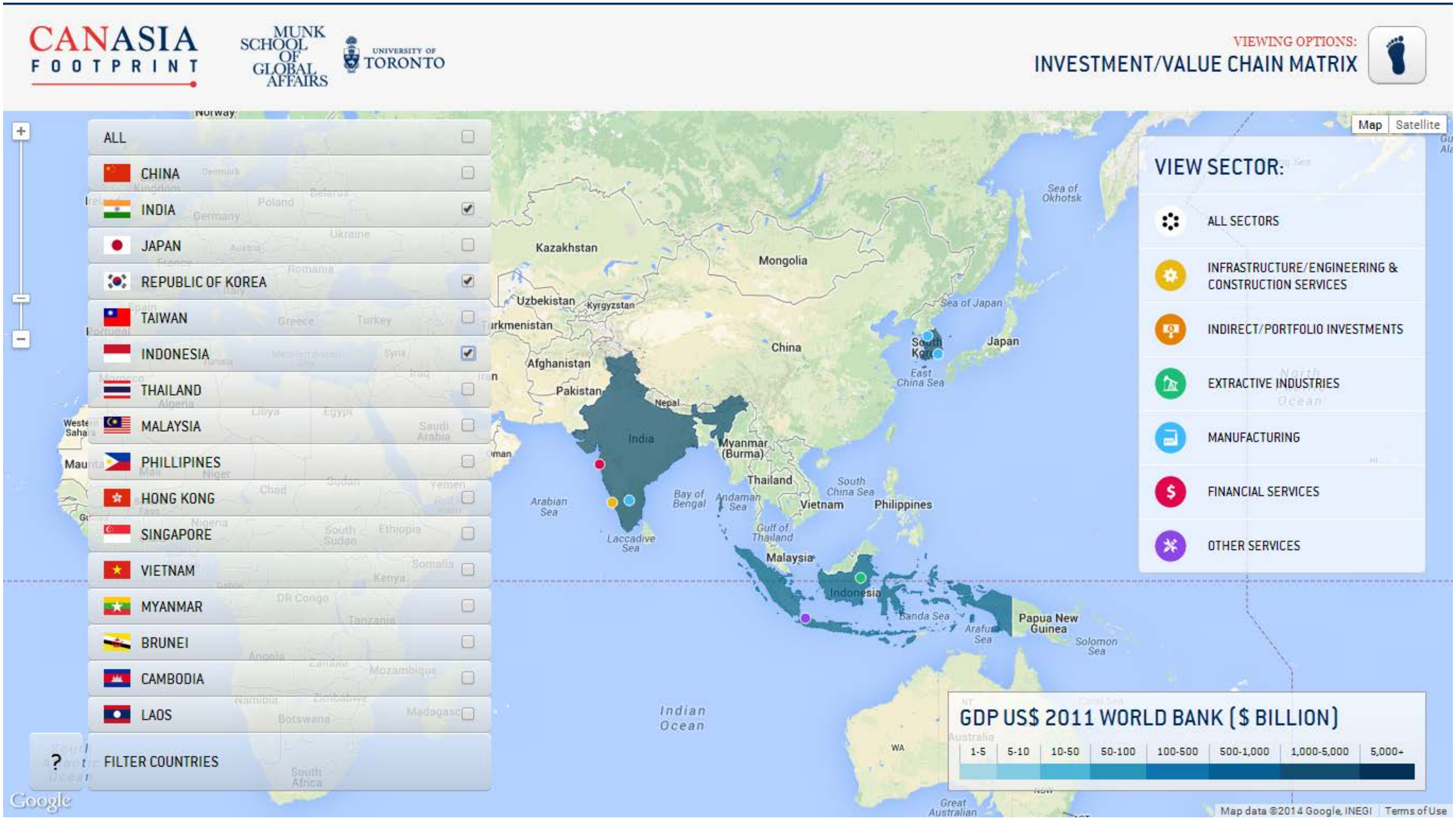


Figure 6: Map Screen Capture - Filter by Other Services

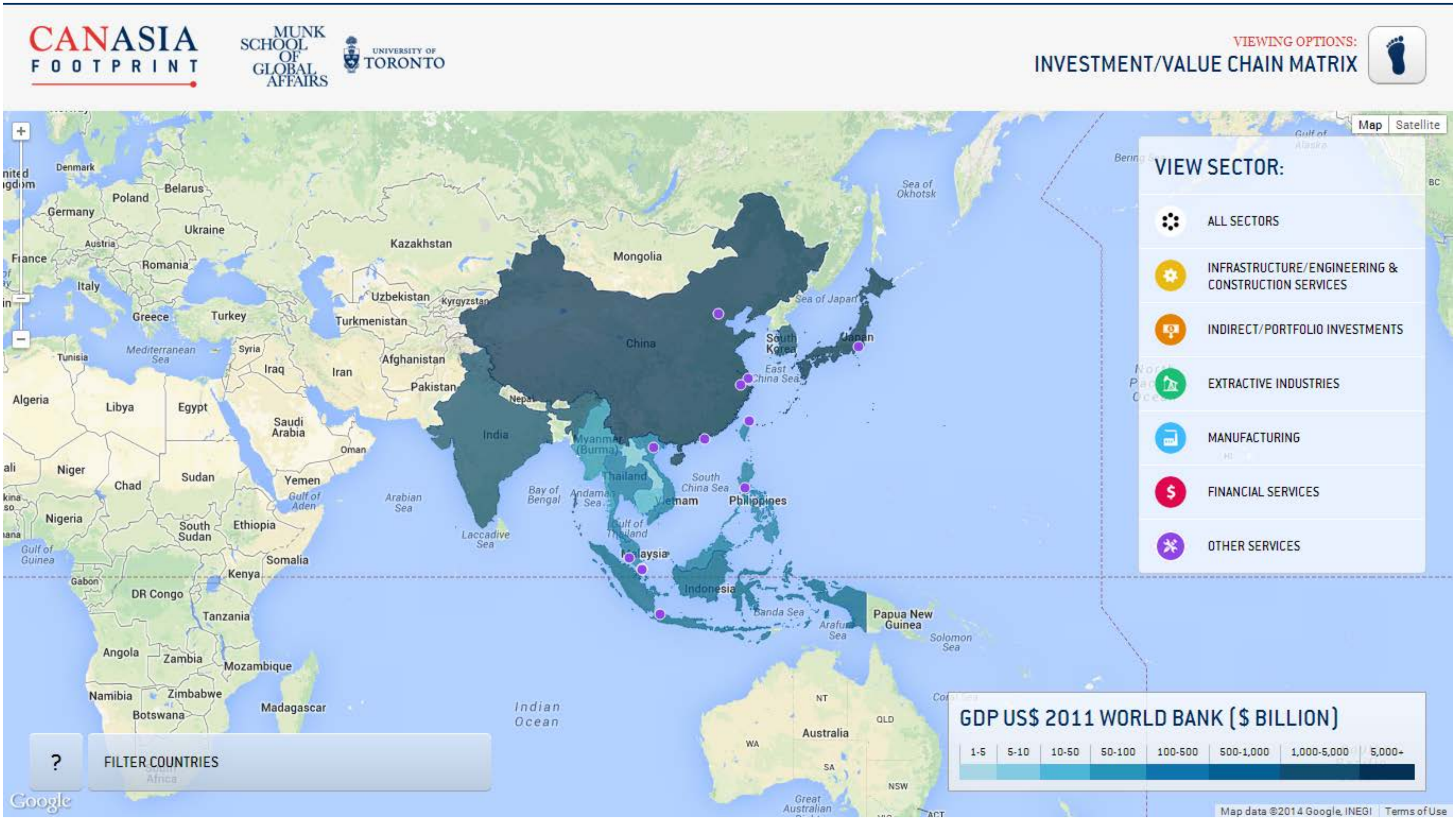


Figure 7: Map Screen Capture - GDP Growth, China

Figure 8: Map Screen Capture - Canadian Companies in Vietnam, Multi-sectoral

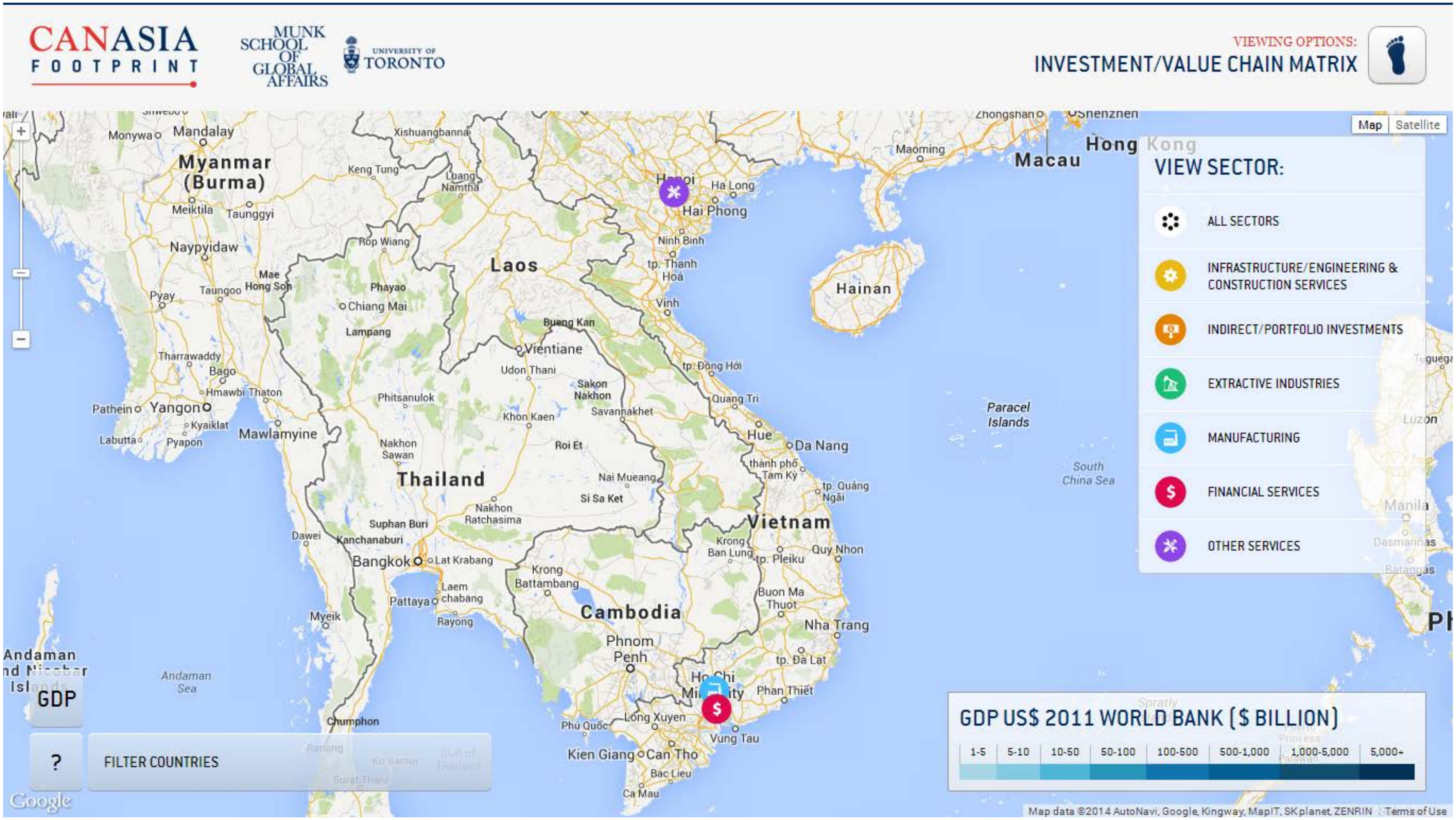


Figure 9: Map Screen Capture – Company-Specific View, Singapore

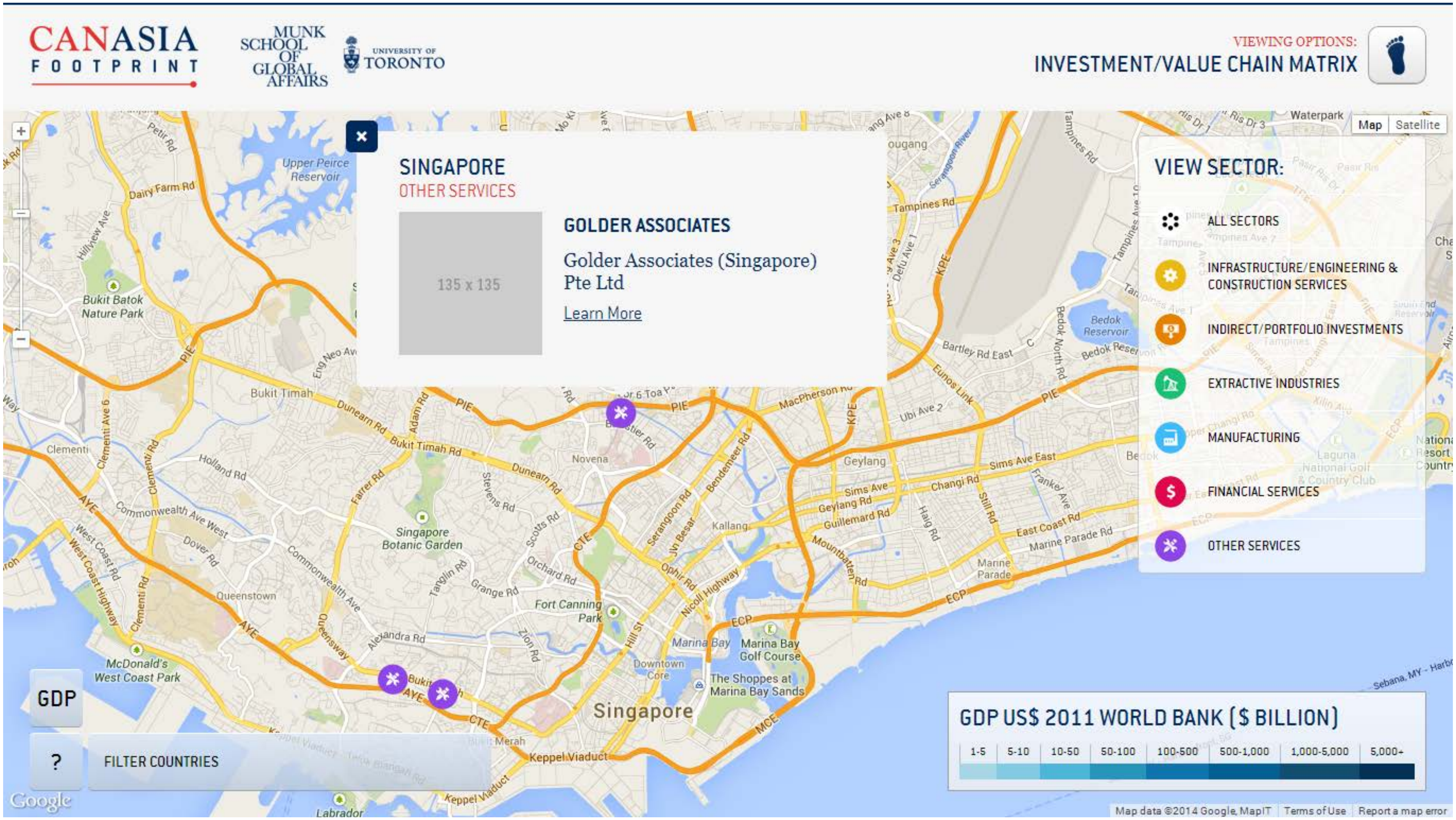


Figure 10: Map Screen Capture - Company-Specific, Regional View

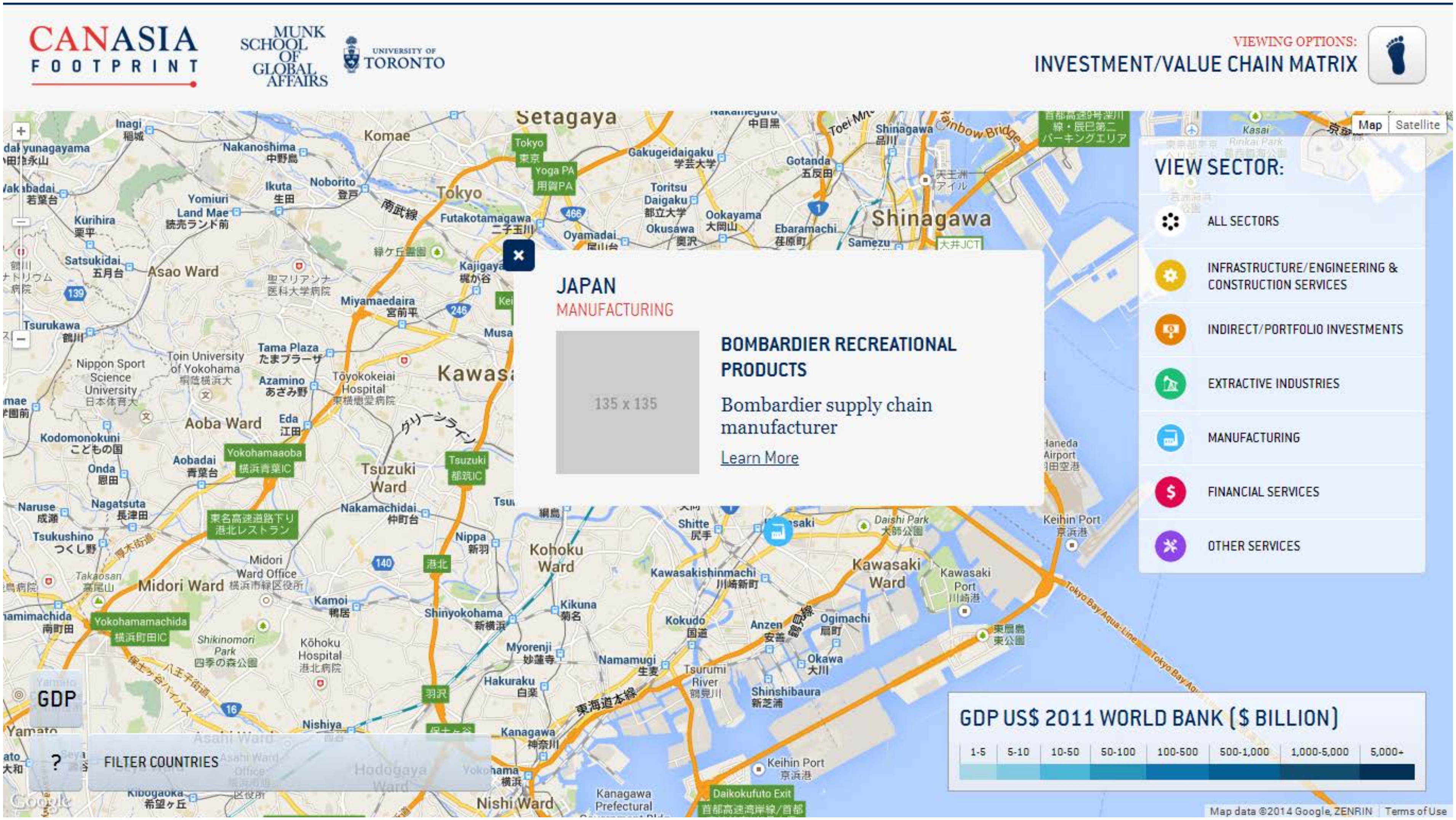
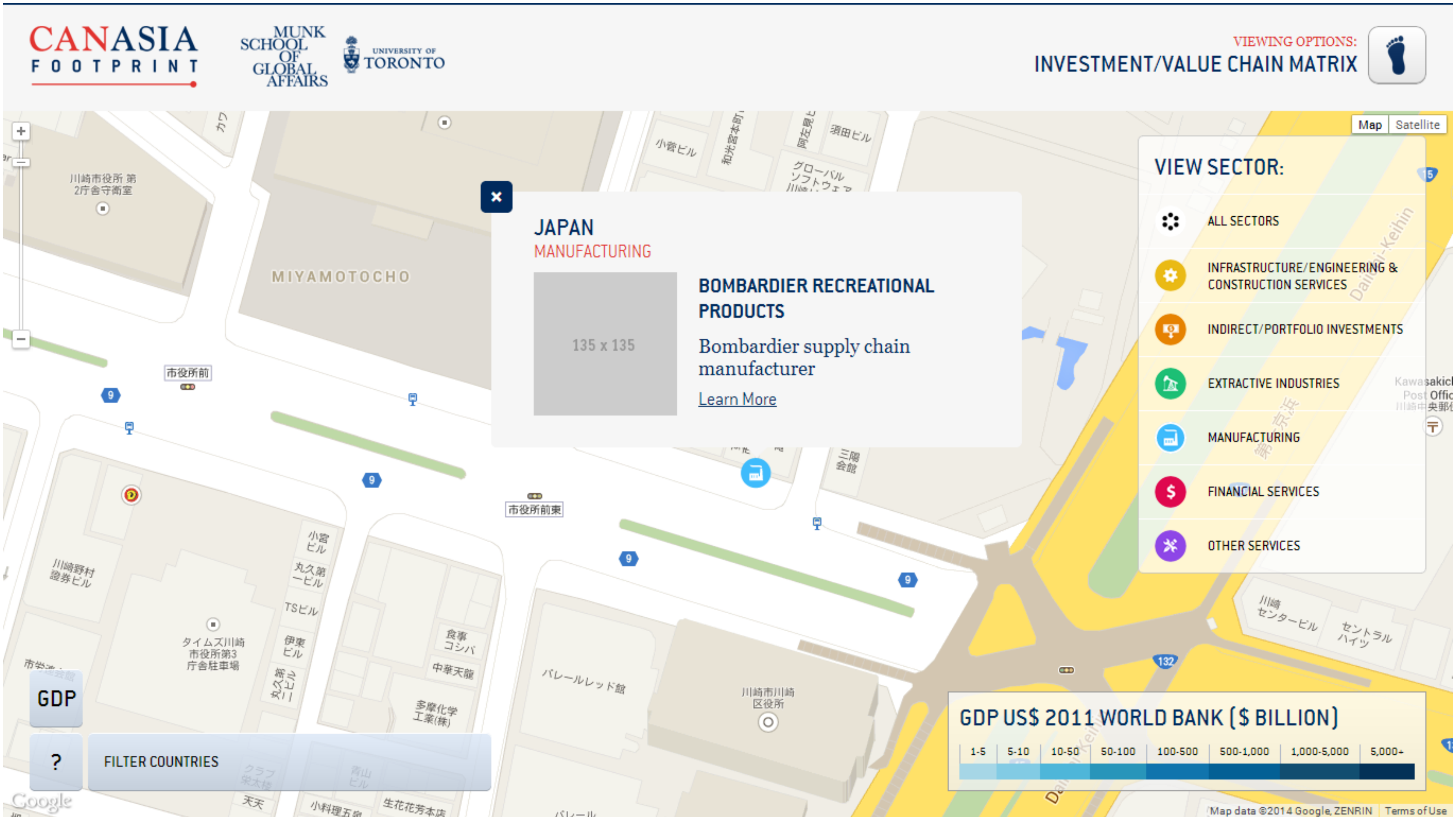


Figure 11: Map Screen Capture - Company-Specific, Street Level View



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