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North America's Globally Competitive Landscape

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EXECUTIVE SUMMARY

While North America's competitiveness has improved over the last three decades, global challenges in the areas of economics, politics, technology and communications, and society in general have impacted producers, consumers, and the public at large in a myriad of ways.

Beyond the United States-Mexico-Canada Agreement (USMCA) there are a number of dynamic factors that play a major role in shaping the business environment in North America and, therefore, competitiveness. These include competition from China; North America's financial system; supply chains and logistics; workforce; the linkages between large and small firms; and the entrepreneurial environment in all three USMCA countries.

There are seven forces and factors that will continue to profoundly impact North America's competitive landscape:

- 1. The China Factor.** Members of the USMCA should focus on finding ways to cooperate on political, economic, and social matters to create advantages that help overcome challenges posed by China.

Remaining competitive in the face of the economic challenges posed by China requires significant effort from the North American region. Strengthening trade and investment flows among the three countries can help them emerge stronger and increase their competitiveness in the future. To do so, Canada, Mexico, and the United States must strive to create, develop, and integrate their commercial networks and bolster the quality of their workforces to achieve higher productivity levels. These kinds of strategies are necessary to ensure the region remains competitive vis-à-vis the economic power of China.

- 2. Innovation.** One of the main challenges to the region's innovation and competitiveness is funding and public spending on research and development (R&D). The translation of research and development into economic growth and wealth creation is a complex path. It is important that North America focuses on supporting research that results in the creation of new products and processes and helps alleviate issues of individuals and organizations. Both federal and local governments must set in place policies that stimulate innovation and create an environment that motivates and enables innovators to act upon their ambitions. This requires expanding their expenditures and funding of R&D and education, along with bringing together the public and private sector into partnerships that unleash the innovation potential and set in place strategies that allow for world-class innovation.

- 3. Financial System.** Over the past few years, North American corporate and commercial banks have experienced significant growth and have benefitted tremendously from economic tailwinds. The adverse effects of the pandemic will remain notable for the global banking industry, forcing the competitive landscape of the sector to change and slowing growth in traditional product areas, while fostering innovation in other areas—especially in the digitalization of basically every sphere of banking and capital markets.

While the USMCA is not entirely dissimilar to the North American Free Trade Agreement (NAFTA), it introduces some changes that will affect the financial sector of North America. For example, in the revised accord, parties recognize the importance of regional macroeconomic stability and agree to maintain a market-determined exchange rate regime, refrain from competitive devaluation, and strengthen economic

fundamentals. Also, no party will be able to adopt or maintain measures placing limitations on: the number of financial institutions; cross-border financial service suppliers; financial service operations or number of natural persons employed; or, the total value of financial service transactions or assets.

Overall, the USMCA has created new provisions that affect the region's financial industry in relation to macroeconomic policies, exchange rate matters, access to payment and clearing systems, transfer of information and data, and the establishment of financial institutions from other member countries and the types of services these can offer. These policies are set to add a higher level of transparency to financial organizations, liberalize cross-border financial services, and aim toward policies that add stability to the financial industry of the region.

- 4 Supply Chains: Structure, Organization, and Operation.** The signing and ratification of NAFTA and its new version, USMCA, has made North America one of the largest trading blocs. However, moving goods across borders remains a complex task in terms of transportation, logistics, and overall supply chain effectiveness. Particularly, cross-border transportation remains difficult across the U.S.-Mexico border.

All three countries have discussed the importance of increasing resilience through technological change and safeguarding against cyber-attacks. Many companies in Canada have a high supply chain exposure due to their dependence on Chinese products. As a result, Canada has been focusing on improving the resiliency of its supply chains. Mexico has low costs and access to the United States and Canadian markets. The country's capability to provide a nearby locus for production of goods helps companies simplify their supply chain management while reducing risks.

Like supply chains all over the world, the North American one has some important challenges to overcome. Above all, it needs to complete the reshoring of companies on North American soil. This will allow the U.S., Canada, and Mexico to reduce dependency on other regions, increasing their resilience and minimizing potential problems, as the pandemic has shown.

- 5 Workforce.** As with many other regions of the world, the workforce in North America suffers from a significant skill gap that affects the region's competitiveness and economic performance. This skill gap also creates mismatches, making it difficult for employers to recruit and hire employees who have the specific skillsets needed, and making it challenging for employees to acquire the necessary education and training needed for the jobs available in the marketplace. As a result, companies from the United States, Mexico, and Canada—despite significant investments made in technological advancements—cannot realize their full potential due to lower levels of productivity from their workforce vis-à-vis other economic powers such as China.

The main challenges for the region's workforce surround the skills gap, quality standards of workers, best practices on work-based learning and training and lack of a common language or guidelines to validate credentials, competencies, and work experience.

Finally, the three countries have much to gain from strengthening their partnerships, focusing on increasing the competitiveness of border states, all while creating millions of jobs and increasing the well-being of the region. One possible avenue for stimulating workforce development is through public-private-academic

partnerships. Dialogue between governments, educational institutions, the private sector, and other stakeholders can help explore best practices for workforce development.

- 6 Linkages between Large and Small Firms.** As the global business environment becomes increasingly competitive, firms of all sizes are faced with new challenges and opportunities to increase profitability, growth, and market share. One way to achieve this is through linkages between large and small firms.

Backward linkages, in which small and mid-size enterprises (SMEs) act as subcontractors to large firms, traditionally have been of great interest to policymakers. In North America, this kind of linkage has become popular as many firms from Canada and the United States have outsourced part of their value chain to low-cost locations like Mexico, especially in the manufacturing sector. During the last decade or so we have also seen a significant increase in the establishment of investment funds and other programs aimed at start-ups by big corporations.

Evidence has shown the importance, and potential benefits, of linkages between large and small firms, as a way to foster investment, economic growth, technological advancements, product development, and spillovers of know-how. Thus, overcoming the obstacles to these linkages and implementing policies conducive to such linkages is essential to ensure more of these mutually beneficial partnerships are established and carried out successfully in North America.

- 7 Entrepreneurial Environment in North America.** Entrepreneurship has become synonymous with start-ups. The term encompasses a broader range of business models and enterprises including many, many non-tech firms.

When it comes to the number of start-ups, North America has two of the world's leading countries—the U.S. and Canada. The United States ranks as the country with the highest number of start-ups, with approximately 71,000, while Canada ranks fourth, with around 3,300 start-ups, surpassed only by India and the United Kingdom.¹

Mexico, on the other hand, ranks a distant third in North America with around 565 start-ups. Despite this, Mexico has some very successful start-ups, including Bitso, a platform to buy and sell cryptocurrencies.

Overall, the entire region has seen an important increase in venture capital and other essential resources necessary for a thriving entrepreneurial ecosystem. However, it faces some challenges, as do other entrepreneurial ecosystems, such as actually growing its consumer base, finding the best talent, and adapting to the new world of work so that employees – and therefore productivity – can thrive.

The future of North American competitiveness will depend on deeper regional integration. In that regard, the USMCA, irrespective of any shortcomings, provides a sound trilateral framework, building on NAFTA, that will strengthen the competitiveness of the region and pave the way for a North America that can achieve success for its public and private sectors and citizens at large.

¹ Artem Minaev, "Startup Statistics (2023): 35 Facts and Trends You Must Know," FirstSiteGuide, March 22, 2023, <https://firstsiteguide.com/startup-stats/>.

INTRODUCTION

Competitiveness is the coin of the realm for industries, companies, nations, and regions. While North America's competitiveness has improved over the last three decades, global challenges in the areas of economics, politics, technology and communications, and society in general have impacted producers, consumers and society at large in a myriad of ways.

Within this milieu, the key drivers of economic growth and development—neoliberal economic policies and free market-oriented institutional reforms—have fallen out of favor or been rejected to a great extent by a number of governments and large segments of their citizenry the world over. The same can be said about globalization in general.

The implications of these developments for North America, specifically regional economic integration as embodied in the USMCA, are huge and multidimensional. Canada, Mexico and the U.S.—individually and collectively—possess many challenges as well as assets that contribute to a more competitive North America. To begin with, *the political and economic fundamentals* in all three countries serve as an anchor for stability. While controversy, polarization, frustration, and scandal have plagued the leaders, administrations, and political parties in all three nations, they all display an immutable resilience.

Turning to *human capital*, if we go by the OECD's authoritative PISA tests, the base for all three countries presents a mixed picture. Nevertheless, the three nations do have the labor pool necessary to excel in production, and all three nations have a network of decent vocational and technical schools that collaborate with the private sector as well as excellent universities in engineering, computer science, business, and the physical sciences.

Another set of assets in North America is *industrial clusters*. These are geographic areas that comprise co-located companies representing either a single or multiple industries. They are driven by talent, location, government incentives, networks, transportation and other infrastructure. Several large firms can source talent from local universities and import and build supply networks for products and services. The auto industry is a perfect example, with a clustered presence in Ontario, Dearborn, and Saltillo.

In the case of Mexico, many clusters have formed around the maquiladora industry, with nationwide distribution. Prominent examples are the aerospace cluster in the states of Querétaro and Sonora; automotive cluster in Chihuahua and Saltillo; medical devices in Baja California; and the best-known cluster—electronics—in Jalisco where one finds Oracle, Intel, HP, and IBM – and not just manufacturing, but R&D as well.

When it comes to the U.S. and Canada, one typically thinks of Silicon Valley and Boston's Route 128 when mentioning clusters. But, like Mexico, the proliferation has been nationwide: Colorado (computer integrated systems and programming), Albany (nanotechnology), Pittsburgh (advanced materials and energy) and Minneapolis (cardiovascular equipment). There is also a plethora of start-ups and later stage communities in Austin, Salt Lake City, Boulder, Miami, Seattle, Waterloo, Toronto, and Montreal that have evolved into cutting-edge clusters.

Another armament in North America's arsenal of competitiveness is co-production and its relationship to nearshoring. South of the U.S. border, these manufacturing sites are known as maquiladoras. These low-cost production facilities produce goods mainly for export (principally to the U.S.).

As for co-production and Canada, the Canadian and U.S. steel and aluminum industries are deeply integrated and underpin continental supply chains that strengthen the global competitiveness of the North American economy. In aluminum, Canada and the U.S. share a highly integrated market with combined trade of \$12.3 billion in 2020.² In terms of *consumer markets*, the North American consumer market is a lucrative yet challenging one for companies, with free consumer review websites and social media available to shoppers. This includes “aspirational consumers” — who are at lower income levels.

Looking at Mexico, the largest consumer age groups are the young and the elderly (those 60 or older). These consumers are largely brand loyal, and the biggest factors in their purchasing decisions are quality, practicality, and price. As for Canadian consumers, while affordability and quality are the most important features of their consumption decisions, what distinguishes that nation is the population’s championing of a customer-centric strategy.³ Many Canadians generally place an emphasis on companies that show empathy to their customers and employees as well as other stakeholders.

In reality, in our post-pandemic world, North American integration has been resilient—it is not falling apart. We are trilaterally more interdependent than ever before. And companies outside North America continue to establish a presence in the region for the reasons (assets) mentioned above. South Korea is an excellent example. There are over 2,000 companies with South Korean investment in Mexico, including Samsung, LG, Hyundai, and Kia.

It is not possible to discuss competitiveness in North America without mentioning the United States-Mexico-Canada Agreement (USMCA), an updated version of the 1994 North American Free Trade Agreement (NAFTA). Entered into force in 2020, the new version includes major changes on cars, new policies on labor and environmental standards, intellectual property protections, and some digital trade provisions. For all three nations it creates fewer obstacles to doing business, reduced costs of moving goods internationally, greater protection for intellectual property, support for e-commerce, and resources aimed at small businesses.

Admittedly, the USMCA is not perfect. For example, there have been disputes over dairy between the U.S. and Canada and debates over biotechnology, corn, and seasonality between the U.S. and Mexico.⁴ And the anti-competitive rules of origin requirements prove harmful to producers and consumers alike.⁵ Nonetheless, the positives do outweigh the negatives.

This monograph posits that beyond the USMCA, there are a number of dynamic factors that play a major role in shaping the business environment in North America and, therefore, competitiveness. These include competition from China; North America’s financial system; supply chains and logistics; workforce; the linkages between large and small firms; and the entrepreneurial environment in all three USMCA countries.

2 Government of Canada, “Steel and Aluminum,” *International Trade and Investment*, https://www.international.gc.ca/trade-commerce/controls-controles/steel_alum-acier_alum.aspx?lang=eng.

3 EY Canada, “Can uncertainty be your best opportunity for growth?” *Ernst & Young*, December 21, 2020, https://www.ey.com/en_ca/future-consumer-now/can-uncertainty-be-your-best-opportunity-for-growth.

4 Ellie Vorhaben, “Agricultural trade under the USMCA: challenges, potential solutions, and win-win opportunities,” *Wilson Center*, September 17, 2021, <https://www.wilsoncenter.org/article/agricultural-trade-under-usmca-challenges-potential-solutions-and-win-win-opportunities>.

5 This heavily impacts the automotive sector. USMCA raised local content requirements from 62.5%, as existed under NAFTA, to 75%. It also requires that 40% of cars and 45% of trucks must be manufactured by workers who earn at least \$16 per hour. Additionally, the same percentage increase (62.5% to 75% applies to *all* steel-intensive products.)

I. The Global Context—China at the Door

North America is often considered one of the most competitive regions in the world. The economies of Mexico, Canada, and the United States have taken advantage of their complementarities and made enormous efforts to integrate their supply networks, as well as their manufacturing and service sectors. One recent example of these efforts is the USMCA, which aims to create a framework for deeper economic integration that allows these countries to compete together in the global economic arena.

However, the competitiveness of the region is not without its challenges. One of the most eminent threats comes from China, one of North America's most important economic competitors. China has aggressively transformed into a major competitor to every economy in the world, and it has its eyes set on global economic dominance. This has resulted in an alteration of the global landscape, with varying effects from one country to another. Bearing this in mind, now more than ever, members of the USMCA should focus on finding ways to cooperate on political, economic, and social matters to create advantages that help overcome the challenges posed by China.

The United States and China

The competition between China and the United States has intensified during the last decade, with the focal point being control over the domination of global trade and technology. Technology has become increasingly important because of its repercussions on politics, security, and economic growth. Additionally, the U.S. economy has become dependent on China for raw materials and equipment, as China has become the dominant player in global manufacturing.⁶ This became evident during the pandemic, where disruptions created shortages of critical life-supporting equipment, pharmaceutical products, medical masks, and other health care supplies. This economic interdependency is especially concerning because it can pose considerable risks for U.S. jobs and supply chains.

These concerns have urged the Biden Administration to propose and the United States Congress to pass legislation that can contribute to reduce the reliance on China for the country's manufacturing sector. One such example is the "U.S. Innovation and Competition Act" approved in June of 2021, which marks one of the most significant steps towards strengthening the U.S.'s competitive position vis-a-vis China. The bill approves the investment of billions of dollars in research and manufacturing across multiple industries including robotics and artificial intelligence. These efforts hope to address the decline in production of many goods, such as the shortage of semiconductors that has had negative consequences on the production of cars and computers. Additionally, this bill aims to keep the United States in the technological forefront by investing in key industries and technologies that will foster innovation and will place the country in an advantageous position in the battle for technological supremacy with China.

Mexico and China

China's rapid export expansion over the last three decades has raised concerns among many countries, especially developing nations like Mexico, as it poses a threat to their overseas market share, especially in the United States. China has become an important competitive threat for Mexico, as the country has been losing its overseas market share, foreign direct investment (FDI), and competitiveness in the United States at the expense

6 The Economist, "China Is the World's Factory, more than Ever," *The Economist*, September 8, 2021,

of Chinese exports. This is exacerbated by the fact that as opposed to other developing countries who mainly export raw materials and commodities, both China and Mexico specialize in exporting manufactured goods, thus making them competitors for the U.S. market.

Additionally, China's rapid economic growth and increasing role in the global market impacts the employment rates and wages of Mexico's labor force. China benefits from lower manufacturing wages when compared to Mexico, resulting in lower priced Chinese products that have seen an increased demand in the United States. The result is a decreased demand for Mexican labor in the manufacturing industry resulting in unemployment. However, when considering the differences with which Mexico has built its competitiveness, it is possible to understand that the loss of revealed comparative advantages of Mexican products in U.S. markets cannot only be attributed to China's wage advantage. This is due to the fact that Mexico lacks an environment where the strengthening of scientific and technological policies, the training of engineers, the accumulation of technological capacities, and macroeconomic and institutional policies can stimulate internal growth, reduce technological dependence, and increase exports with better terms of trade.

Canada and China

Increased demand for Canadian exports by China has resulted in the country becoming Canada's second most important trade partner after the U.S. The two economies are highly complementary, with Canada being endowed with abundant natural resources that China needs to continue to propel its economic growth. However, such demand for natural resources has caused the economic benefits of this trade relationship to unevenly distribute across a limited number of industries and regions of Canada. On the bright side, the relationship with China has made Canada less dependent on the American economy for its trade.

The rise of China as an economic superpower has had other effects on Canada's competitiveness. Similar to the case of the U.S. and Mexico, the growing preference of Canadians for low-cost Chinese products has detrimentally affected Canadian manufacturing and jobs, as well as pushed down wages on the industries that are in direct competition with China.

Similar to Mexico, Canada has also seen its share of the U.S. market decline at the expense of Chinese products. However, the United States' plans to rethink critical supply chains and re-shore manufacturing creates a great opportunity for Canada to regain its lost ground in the U.S. market. Building strategic supply chain alliances with the U.S. could help Canada grow its exports to this country and revitalize some sectors that have long been at the core of Canada's export strengths: energy, metals, and the auto-industry. However, as Canada aims to create new alliances with the U.S., it must strive to maintain its economic relationship with China due to its major role as an importer of Canadian agriculture and natural resources.

Looking Forward

The USMCA block, being an influential collective player in different industries, has some important joint strategies that can be implemented to compete against China. These strategies include, among other things, increased investment, trade, and innovation. Each country has significant competitive advantages that can be used to produce synergies and achieve more impactful results than what each country would be able to on their own.

Competing against China will require a coordinated effort on the part of the USMCA. As in the past, the United States, Mexico, and Canada need to devise economic, social, and political cooperation mechanisms that can help them better compete in the global arena. The experience of NAFTA, with its achievements and opportunities for improvement, is a great starting point to consider what needs to be done.

The pandemic revealed the need to rethink the economic relationship between the United States, Mexico, Canada, and China. The lack of supplies of these critical elements – like pharmaceuticals and medical devices that came from China (among other countries) – put patients and medical personnel at risk. Additionally, the shortage of transistors or computer chips, which are critical components found in everything from cars to house appliances, has created obstacles for economic growth in North America. This has resulted in many countries trying to relocate production from China. Such a relocation might not occur at the level and speed that many countries want, but it will most likely occur in one way or another. The USMCA block has the chance to establish itself as a key player in this reorganization of supply chains.

Conclusion

Remaining competitive in the face of the economic challenges posed by China requires significant effort from the North American region. Strengthening trade and investment flows among the three countries can help them emerge stronger and increase their future competitiveness. To do so, Canada, Mexico, and the United States must strive to create, develop, and integrate their commercial networks and bolster the quality of their workforce to achieve higher productivity levels. These kinds of strategies are necessary to ensure the region remains competitive in the global arena vis-à-vis the economic power of China.

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II. Innovation in North America

In 2018, the United States, Canada, and Mexico signed a new free-trade agreement, with intellectual property (IP) reforms designed to encourage economic growth and innovation. The USMCA offers an opportunity to modernize many components of NAFTA, including IP laws and their enforcement across North America. This is necessary because the agreement must reflect the current technological landscape, which has completely transformed the global economy and society. IP standards of the original NAFTA, signed in 1994, were revolutionary for their time, but must now be strengthened in order to foster innovation, job creation, and competitiveness of creative industries of the region. Some of these revisions include: creating a 10-year term of regulatory data protection for biologics, establishing border enforcement against all suspected counterfeit goods including goods-in-transit, strengthening civil and criminal penalties for theft of corporate trade secrets, introducing a longer copyright protection term, and strengthening digital rights management and technological protection measures.

These revisions of the IP standard by the USMCA have the potential to foster innovation among North America's tech hubs and industries, such as the pharmaceutical industry. Through these modernized IP measures, the partnership can foster the growth of numerous industries and millions of jobs that rely on patents, copyrights, and trademarks across the region.

It is important to note that the new agreement promotes the publication of open government data and the protection of cross-border data flows. The USMCA explicitly establishes that "facilitating public access to and use of government information fosters economic and social development, competitiveness, and innovation." The purpose of these revisions is to foster data-driven innovation in the region.

In addition to these new IP and data standards, innovation and growth of tech hubs in the region will also depend on other aspects. For example, Deloitte's Technology Fast 500 finds that the growth of emerging tech hubs in the North American continent is fueled by access to talent, resources, and expertise via accelerators and incubators, government support in the form of R&D funding, and the redesign of university curriculum to mirror tech innovation and startup culture. Several tech hubs around the continent include Silicon Valley (California, United States); Toronto (Canada), and Guadalajara (known as the "Mexican Silicon Valley"). These types of initiatives are essential to support the growth of promising tech startups and foster a startup culture in industries like tech, media, and telecom.

Innovation in the U.S.

Innovation has been the backbone of the American economy, spanning industries like healthcare, finance, education, space exploration, agriculture, and entertainment. Since the 1950's, the U.S. has invested significantly in technology to block aggressions from other nations. Unfortunately, today's digital innovations provide U.S. adversaries with the capabilities to challenge and destabilize the country's privacy rights, democratic ideals, economic success, and national security. Competitors like China have been investing heavily in multiple industries to achieve economic dominance and extinguish competing technologies. For example, China's dominance in 5G infrastructure will further support the country's digital economy. Additionally, China is the overall leader in artificial intelligence and specifically in applications such as facial recognition. While innovation has been growing at a

faster rate than ever before and more innovation is expected in the next decade, the United States' innovation ecosystem is expected to slow down and lose its leadership to China.

This slowdown in innovation has occurred despite the country's steady increase in investment in scientific research since the 1970s as measured in terms of dollars spent, the number of PhDs trained, and articles published. This can be explained by the separation of academic and corporate science. Large firms have withdrawn from science, with corporations cutting back investments and now specializing in development, while universities now specialize in research. This specialization has made it more difficult for research to be translated into useful applications because university science and research is different from corporate science, with the latter embodying the usefulness of their invention. While venture capital (VC) has helped to connect university research with commercial applications, this has only been the case for sectors like digital innovation. Therefore, fostering innovation requires exploring new ways to bridge the gap between science and application. This includes initiatives from the public sector to finance startups with growth potential and nurturing research that has high commercial viability.

III. Corporate R&D in the U.S.

Another important change in U.S.'s innovative landscape is that talent and capital have begun to move from the country's main tech hubs into more affordable cities. By moving to these new cities, entrepreneurs will most likely be exposed to new real-world problems that will influence the types of projects on which they will spend their time. Challenges in fields like healthcare, farming, housing, and transportation will likely prompt new ideas due to the relationships developed by tech employees with their new networks. These changes present an important opportunity to tackle challenges that have often been overlooked and improve the lives of more Americans.

Overall, the U.S.'s innovation system seems to be undergoing a crisis that has revealed the need for thorough modernization. Creating a strong national innovation system requires several measures, all of which can facilitate the correct structuring of the business environment, the regulatory environment, and the innovation policy environment. The latter is of particular concern, because while the country has good business and regulatory environments, its innovation policy environment is weak, with less sophistication than in other nations. For example, on a GDP basis, Korea invests 89 times more than the United States on industrially oriented research, with Germany 43 times more, and Japan 15 times more. Therefore, for the United States to meet the global competition in the innovation landscape, policymakers must make significant increases in federal funding for universities, federal labs, and other innovation inputs.

Furthermore, for innovation and creativity to continue driving the American economy, the U.S. must continue to enact and enforce trade policies that respect innovation by ensuring strong IP protection that fosters an innovative environment across industries. In doing so, innovation will remain one of the country's comparative advantages.

Innovation in Canada

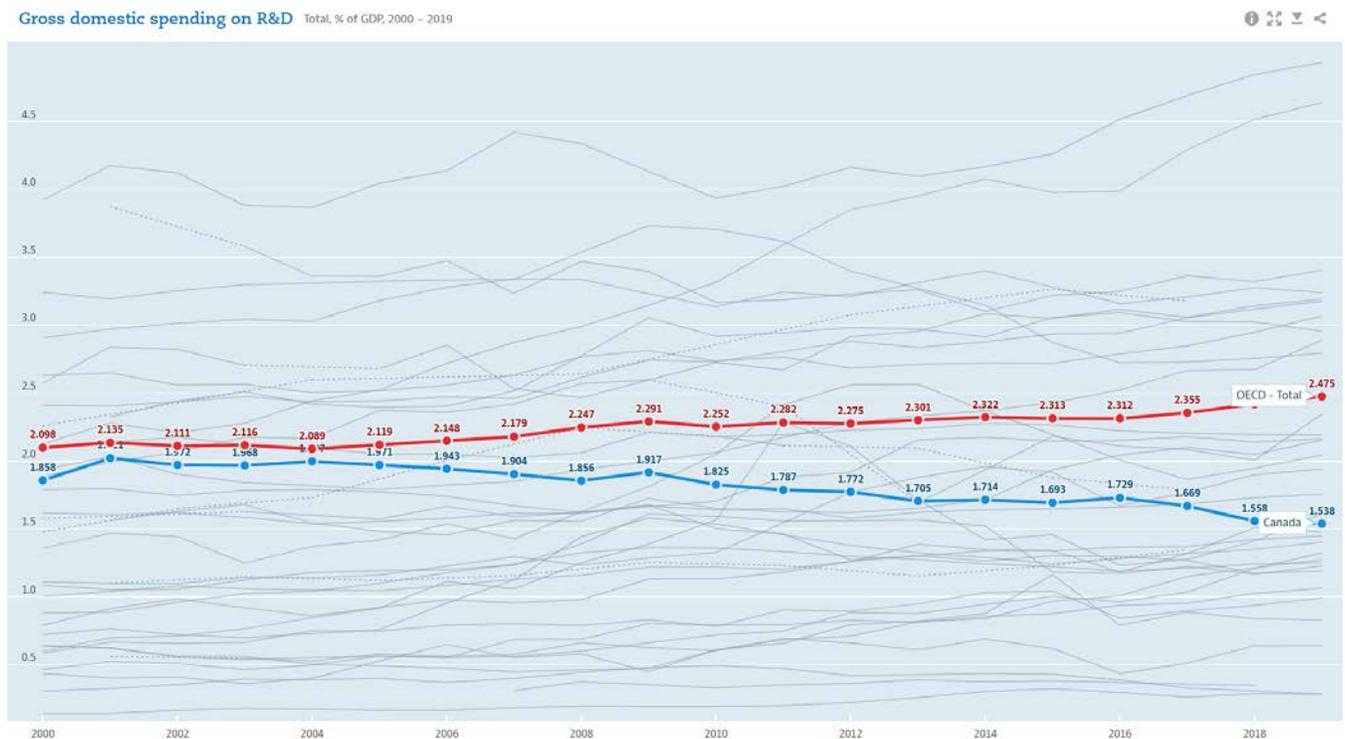
For decades, the Canadian government has tried to promote innovation through the funding of research and development and by funding start-ups. Unfortunately, Canada's innovation performance remains weak when compared to other developed countries. For example, the Global Competitiveness Index, which evaluates the

competitiveness and innovativeness of countries, ranked Canada 17th among all developed countries in 2018 for innovation performance. Much of this has been attributed to the failure of Canadian start-ups to develop into larger, successful firms that can convert innovation into commercial technological outcomes which in turn, promote the growth of innovative suppliers and customers.

Canada has also focused on higher-education R&D spending, ensuring that scientists are well-funded to develop their research. However, R&D spending in higher education is less likely to produce tangible innovation outcomes when compared to business R&D, contributing to the country’s increase in stock of knowledge but lack of commercial application.

Additionally, declining levels of private and public R&D spending are a major threat to Canada’s research capacity and innovation output over time, as can be seen in chart 1. To fully capture the economic and social benefits of Canada’s research, the country must ensure the growth of a sufficient number of innovative start-ups to scale that can take advantage of government investments in R&D and can ensure that the commercialization of R&D is done in Canada and not offshore.

CHART 1: GROSS DOMESTIC SPENDING ON R&D IN CANADA⁷



The COVID-19 crisis has also hindered innovation by exacerbating some of the weaknesses that existed before the pandemic. For example, GDP fell by 13 percent over the first half of 2020, and more than three million Canadians lost their jobs. As a result, the government introduced “Budget 2021,” a recovery plan to combat

7 OECD, “Gross Domestic Spending on R&D,” 2022, <https://data.oecd.org/rd/gross-domestic-spending-on-rd.htm>.

the country's unemployment and stagnant economic growth. Part of this plan consists of providing significant funding for research and development to strengthen Canada's innovative performance. Additionally, Canada has developed an Innovation Superclusters Initiative⁸ to bring together technology clusters across the country in the areas of ocean sciences, artificial intelligence, advanced manufacturing, protein industry, and digital technology. The supercluster initiative aims to drive economic growth, attract talent, and advance research and innovation. Under this project, the government has provided \$30 million to five superclusters, with the expectation to create thousands of new jobs and grow the economy by tens of billions of dollars by 2028.

Innovation in Mexico

Mexico ranks increasingly higher each year in the World Intellectual Property's . The growth in Mexico's innovative output is partly a result of its high-tech manufacturing, which spans a wide range of industries, including electronics and medical devices. For example, Biofase takes discarded avocado pits and turns them into bioplastic knives, forks, and spoons for export to more than 19 countries including the U.S., U.K., and Australia. Other leading companies in terms of innovation include Alestra (communications and information), Hoope (healthcare), Cronology (environmental), and Vetelia (transportation Mexico has become one of the most innovative countries among Latin American nations, only surpassed by Chile.⁹

The country has put in place several initiatives to support smarter manufacturing technologies. Local governments around the country have invested heavily in creating a more skilled workforce that can support the inflows of FDI. In its 2019 report on education, the OECD found that the country has made notable progress in increasing educational attainment, and the percentage of the population with at least upper secondary or tertiary attainment has steadily increased since 2005.¹⁰ Some of the country's initiatives include MexicoFIRST and PROSOFT, which provide training grants for the IT industry, consulting, and certification in IT international quality standards. These foci help to bridge the gap between graduate capabilities and employer demands and contributing to the IT sector's competitiveness. In 2020, Information and Communication Technology jobs grew 1,000 percent from 2019. Secondly, the Mexican government has focused on improving and developing its infrastructure and connectivity. In 2020, the current president Lopez Obrador presented a plan to invest MXN 300 billion in 39 projects that would improve the nation's communications, energy, and water industries. Thirdly, Mexico has embraced the use of data to optimize its processes and adopt advanced manufacturing technologies.

Mexico has become one of the leading exporters of Information and Communication Technology equipment in the OECD, with its IT outsourcing industry growing at an annual rate of 10-15 percent, making it the third-largest exporter of IT services worldwide. However, according to most indicators used to measure science, technology and innovation performance, the country remains at the bottom of the list, with the smallest number of researchers per million persons and a lower number of patent families among OECD countries (see chart II.7). Additionally, there are

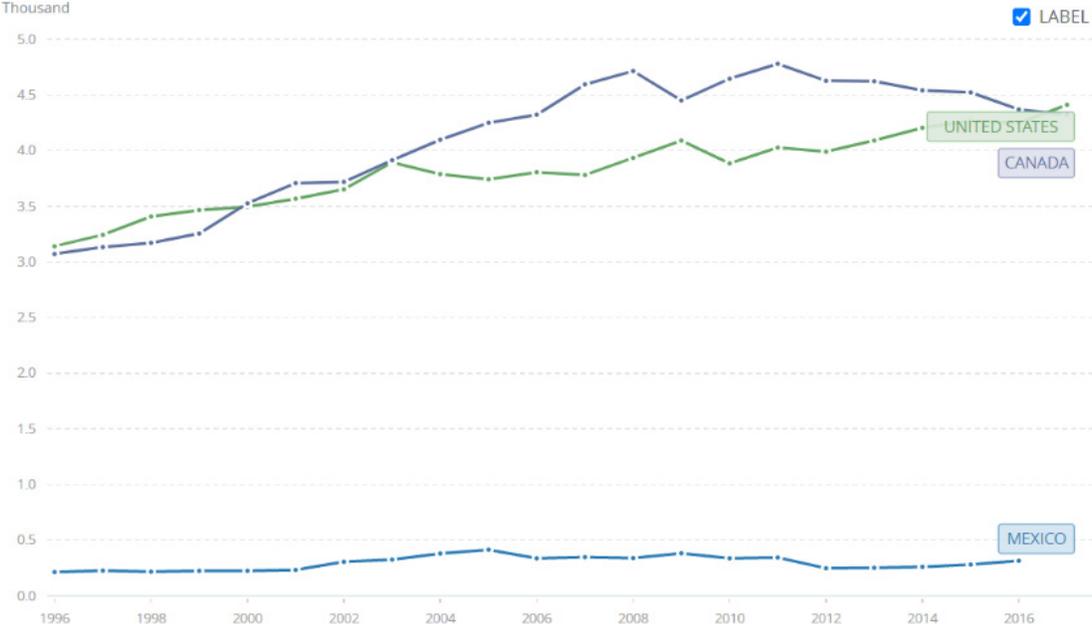
8 The supercluster is a new initiative promoted by the Canadian federal government to strengthen Canada's most promising clusters and allow innovative firms to operate more productively in sourcing inputs and accessing information, knowledge, and technology.

9 Global Innovation Index, "GII 2020: COVID-19 Pandemic's Expected Impact on Global Innovation; Annual Ranking Topped by Switzerland, Sweden, U.S., U.K. and Netherlands," September 2, 2020. <https://www.globalinnovationindex.org/media-press-releases>.

10 OECD, "Education Policy Outlook: Mexico," February 2018, <https://www.oecd.org/education/Education-Policy-Outlook-Country-Profile-Mexico-2018.pdf>

wide disparities between states in the country with large regional differences in education rates and productivity of workers. For example, almost 50 percent of the top-level researchers are found in the Federal District.

CHART 2: RESEARCHERS IN R&D (PER MILLION PEOPLE)¹¹



One aspect where the country has been advancing tremendously is in social innovations that advance Sustainable Development Goals (SDGs). The country presents a favorable environment to financially support social enterprises, furthermore, many U.S.-based social enterprise intermediaries and investors have developed close ties with companies focusing on these types of innovations. For example, SalaUno is a Mexican social enterprise that aims at eliminating visual problems in Mexico through alliances, innovation, efficient processes and without patients absorbing all the cost.

Regional Integration and Innovation

In terms of regional innovation, the USMCA provides the most significant effort to fuel regional innovation in North America. The revised agreement is set to address the challenges and opportunities of the current technology-driven world and foster integration among Canada, Mexico, and the U.S. to boost innovation. The USMCA includes intellectual property rights protection for the technology industry (and others), and by extension, technology jobs. The agreement also includes provisions to support the expansion of digital trade in a fair and beneficial way for all countries.

Specifically, for the auto industry, the new agreement’s purpose is to support an integrated, globally competitive automotive business in North America. It requires automakers to use 75 percent of North American-made parts in their cars by 2023 to be imported duty-free, which incentivizes automakers to source an increased amount

11 The World Bank, “Researchers in R&D (per Million People) - Mexico, United States, Canada,” October 24, 2022,

of North American parts in their cars. These changes require a higher amount of North American parts and will increase production costs. To avoid the absorption of these costs by consumers or car makers, manufacturers are incentivized to innovate and streamline their manufacturing processes. For example, American automaker Ford argues that USMCA supports an integrated and globally competitive automotive business in North America.¹² The USMCA's new provisions are designed to incentivize investments in the automotive sector, promote additional purchase of auto parts from the region, support higher-paying jobs, encourage automakers and suppliers to integrate and coordinate their production in the region, and advance automotive R&D. Foreign car manufacturers such as Ford, Toyota, Nissan, Fiat, and Honda tend to operate in border states and central states in Mexico.¹³

Furthermore, USMCA's digital trade provisions go far in addressing customer needs. Subsidiaries from the agriculture, manufacturing, finance, hospitality, logistics, and tourism sectors will have the ability to transfer data across the border to optimize their inventories and track shipments. For example, Magento Commerce, a Mexican company that creates sites for online sales, expects USMCA to make it easier to generate cross-border transactions and boost growth for the Mexican e-commerce sector.¹⁴ Online marketplaces like Amazon, Mercado Libre, and Linio are expected to contribute to the growth of the Mexican e-commerce market, which was valued at over USD \$12.3 billion in 2018. Overall, these regulations set by the USMCA provide a major victory for the North American market and are set to boost economic growth and innovation in the region.

Challenges of Competitiveness in North America

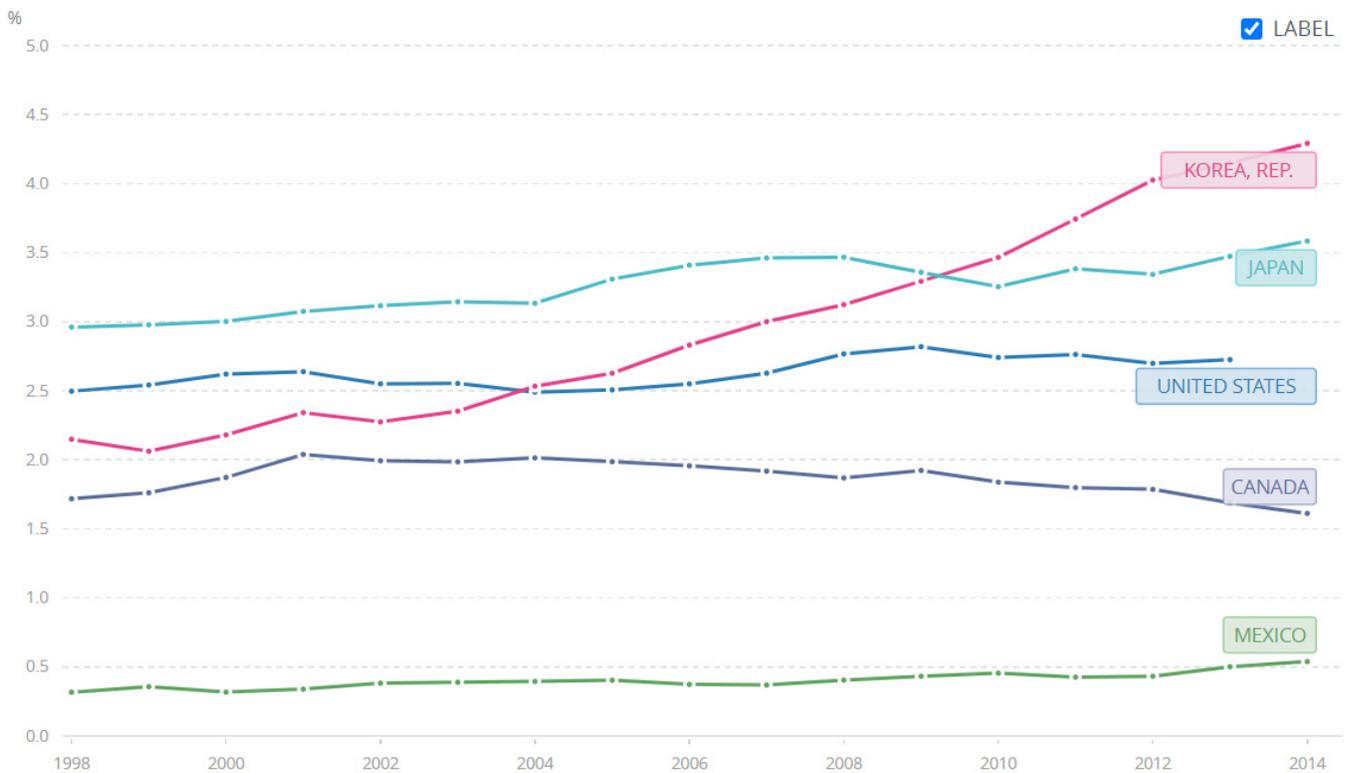
North America has great potential to become one of the most innovative regions in the world and reap the rewards of greater economic growth and prosperity. However, many challenges remain. One of the main challenges to the region's innovation and competitiveness is funding and public spending on research and development. The large national debt due to the pandemic has reduced financial support for innovation from the government. For example, North America faces a significant lag in R&D investment when compared to countries like Korea and Japan, as seen in chart 3. To harness its full potential, local and federal governments in the region must place innovation at the core of their activities. They must not only increase funding and incentives for research and development but must also democratize the funding processes to permit more individuals and firms to become beneficiaries of public and private investment. Policymakers should investigate whether the current mix of tax incentives and direct support stimulates tangible innovation outcomes and how they explore new ways to improve spending by looking at practices by top-performing nations.

12 Owen Stuart, "How Will the Shift from NAFTA to USMCA Affect the Auto Industry?" *Industry Week*, October 12th, 2018, <https://www.industryweek.com/the-economy/article/22026500/how-will-the-shift-from-nafta-to-usmca-affect-the-auto-industry>

13 CPI, "Mexico Manufacturing Automotive & Auto Parts Industry," *Co-Production International*, <https://www.co-production.net/mexico-automotive-auto-parts-industry>.

14 Jorge Saldaña, "USMCA Digital Trade Provisions Create Opportunities," *MEXICONOW*, October 30, 2020, <https://mexico-now.com/usmca-digital-trade-provisions-create-opportunities/>.

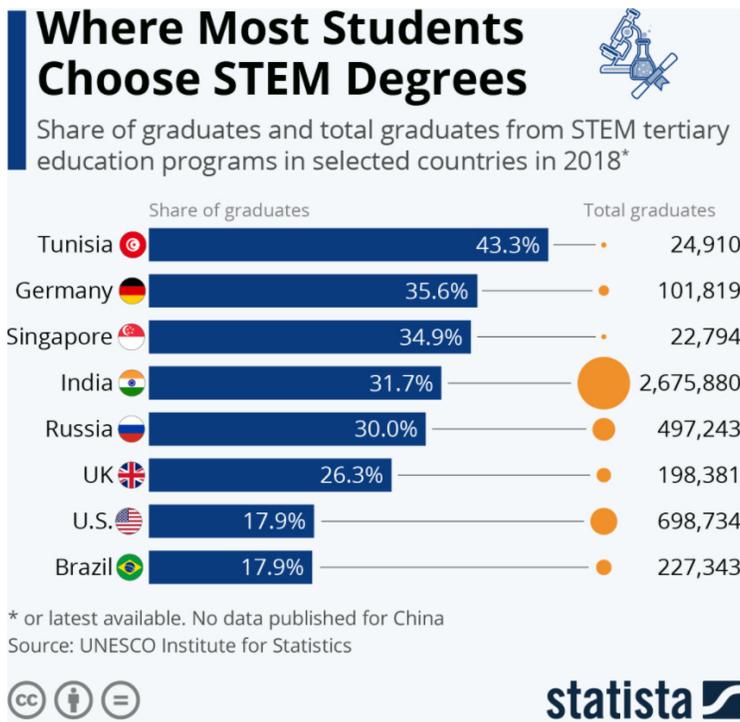
CHART 3: RESEARCH AND DEVELOPMENT EXPENDITURE (% OF GDP) - UNITED STATES, MEXICO, CANADA, SOUTH KOREA, JAPAN¹⁵



Another important outstanding challenge is the adequate training and education of the region’s workforce. Policies must be set in place to stimulate world-class innovators in STEM (science, technology, engineering, and mathematics) areas and to provide access to a wider and more diverse population in these areas. While the United States is the leader in North America with regards to the total share of graduates specifically from STEM areas, it remains behind several countries in Europe and Asia as seen in chart 4. The region has room for improvement in the skills and capabilities of its workforce and should focus on ensuring the development of capabilities and expertise that are necessary for innovation and strengthening these skills across organizations in the region.

15 The World Bank, “Research and Development Expenditure (% of GDP) - United States, Mexico, Canada, Korea, Rep., Japan,” 2022, https://data.worldbank.org/indicator/GB.XPD.RSDV.GD.ZS?end=2014&locations=US-MX-CA-KR-JP&name_desc=false&start=1998

CHART 4: 10 WHERE MOST STUDENTS CHOOSE STEM DEGREES 2018¹⁶



The translation of R&D into economic growth and wealth creation is a complex path. It is important that North America focuses on supporting research that results in the creation of new products and processes and helps alleviate issues of individuals and organizations. Both federal and local governments must set in place policies that stimulate innovation and create an environment that encourages innovators to act upon their ambitions. This requires expanding expenditures and funding of R&D and education, along with bringing together the public and private sectors into partnerships that unleash the innovation potential and set in place strategies that allow for world-class innovation.

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IV. Financial Systems in North America

Over the past few years, North American corporate and commercial banks have experienced significant growth and have benefitted tremendously from economic tailwinds. According to McKinsey, within the region's banking system commercial and corporate have been the largest growth segment from 2015 through 2018, with a compound annual growth rate (CAGR) of about 10 percent. In regard to volume, deposits and balances grew approximately 5 percent CAGR, and in terms of loans and deposits, net-interest margins saw 10 to 20 percent increases over these past years. That said, there is still significant variance between the largest banks and the rest of these, in terms of revenue and growth. For example, within the industry, the leading banks have posted 15 or 20 percent CAGR while the others are below 2 percent CAGR.¹⁷

However, the outlook for the banking sector in the region after the global pandemic remains uncertain. The industry's response to the pandemic has been notable thus far, with most banking operations transitioning relatively smoothly to a virtual model in a matter of weeks and achieving effective customer service, employee productivity, agility and resilience, while deploying the necessary technology and reassuring regulators. The role of the banking system in stabilizing the economy was a crucial one, especially in the United States and Canada, where relief programs and government stimulus were transmitted through banks. Additionally, banks' healthy levels of capital before the pandemic were paramount in helping to mitigate the negative effects of the health crisis and providing hope for the possibility of the global economy to recover in the near future.

Despite this, the adverse effects of the pandemic will still be notable for the global banking industry, forcing the competitive landscape of the sector to change and slowing growth in traditional product areas, while fostering innovation in other areas—especially in the digitalization of mostly every sphere of banking and capital markets.

Banking System in the United States

The banking system of the United States has been characterized as a more crowded and highly competitive space, with over 7,000 domestic banks. As a result of this competition, U.S. banks have become more avid risk-takers; creating a less-stable financial system and resulting in notable events like the Savings and Loans crises of the 80's and 90's as well as the Great Recession of 2008.

Despite this large number of domestic banks, the biggest four banks in the country (JPMorgan Chase, Bank of America, Citigroup, and Wells Fargo) hold approximately 45 percent of assets held by U.S. banks.

In terms of regulation, lawmakers in the United States have mandated that the majority of the population must have access to banking services and products, resulting in a "retail banking model" where these services are accessible to all as opposed to only offering banking to the wealthy. U.S. banking regulations have also focused on topics like privacy, consumer protection, and anti-money laundering. Additionally, while most countries have one bank regulator, the U.S. banking system is subject to regulation at both the federal and state level, at times causing banking organizations to be subject to numerous federal and state regulations.

The future of the United States' banking system will likely face multiple challenges. The U.S. income gap seems

17 Szilard Buksa et al., "Firing on All Cylinders in North American Commercial Banking," *McKinsey & Company*; February 18th 2020, <https://www.mckinsey.com/industries/financial-services/our-insights/firing-on-all-cylinders-in-north-american-commercial-banking>

to be widening, which in combination with decreasing loan demand, decreasing payment transaction volumes, low rates, and the general contraction of the global economy, will force U.S. banks to increase their reliance on other sources of income like trading revenues and wealth management fees.

Banking System in Canada

The banking system in Canada has a reputation for efficiency and effectiveness and has been recognized as one of the safest in the world due to its regulatory laws and overall concentration. The industry is dominated by the “Big Five” which can be described as Canadian multinational financial conglomerates, accounting for approximately 90 percent of the industry’s revenue. These banks are Bank of Montreal, Scotiabank, CIBC- Canadian Imperial Bank of Commerce, Royal Bank of Canada, and Toronto Dominion Bank. Thus, the banking system in Canada is highly concentrated and banks are generally more diversified in terms of the services they provide, with many of them expanding into wealth management, insurance, deposits, loans, and brokerage services.

Additionally, having fewer banks has allowed regulators to be more involved in everything banks do and to have closer relationships with banks, resulting in a level of scrutiny that causes Canadian banks to be more risk averse. Despite policies that have kept interest rates low, the commercial banking industry in Canada experienced steady growth from 2015 through 2020. The effect of the financial crisis of 2008 on the industry was weaker than that on the United States banking industry.

However, Canada’s banking system is expected to experience moderate growth in the upcoming years as the economy starts to normalize after the global pandemic. As consumers significantly reduce their spending and aim towards reducing their level of debt amid rising interest rates, banks in Canada must find new sources of revenue. The banking industry in Canada has begun to respond to this by expanding its digital and online capabilities and upgrading its technological infrastructure, to enter the fintech bandwagon and improve their productivity.

Banking System in Mexico

Mexico’s commercial banks offer a variety of services including deposit accounts, lending, trusts and mutual funds, and foreign exchange and trading. Of the 48 banks operating in the country, seven control approximately 80 percent of the market share based on total assets (BBVA Bancomer, CitiBanamex, Santander, Banorte, HSBC, Inbursa, and Scotia Bank). It is worth noting that of these banks, all except for Banorte, are foreign banks. Mexican banks are more risk averse in terms of lending; much of this being a consequence of the 1994 Peso Crisis which has caused banks to be very cautious about who qualifies for lending. This has caused small and medium-sized enterprises (SMEs) to have trouble accessing credit. While banks are now beginning to lend to a wider range of customers, they do so at high interest rates. Overall, the Mexican banking system benefits from having some of the highest interest rates for loans in Latin America.

The banking sector’s main regulators include the Secretariat of Finance and Public Credit (Secretaría de Hacienda y Crédito Público or SHCP), the National Banking and Securities Commission (Comisión Nacional Bancaria y de Valores or CNBV), and BANXICO. Recently, several policies have been enacted to encourage more lending to SMEs, but whether a larger proportion of companies will gain better access to credit remains to be seen.

Recently, the slowing of economic growth due to the global pandemic has led to asset decline, high inflation, and increased interest rates, which will create important challenges for the banking sector. Given a decrease in consumer income, the industry expects to see a decline in borrowers' ability to repay credit. However, the big banks in Mexico are expected to continue business in the foreseeable future.

Opportunities for the Financial Sector

After the global pandemic, the financial sector in North America continues to face wariness regarding profit generation due to increasing bad debt, continuing spikes in interest rates, and decreased loan growth. However, the pandemic also allowed the financial sector to learn valuable lessons, and going forward it would be worthwhile to institutionalize some of these learnings to create a more resilient and agile workforce that can help boost productivity and collaboration. These are some of the unique opportunities that the banking sector has in the upcoming years:

Sustainable Finance: through their multitude of roles as engines of economic growth, banks have an opportunity to engage in sustainable finance and to help reallocate capital toward activities that are net positive to societies, as well as fostering new behaviors among clients and counterparties. With heightened scrutiny, stakeholders' focus has shifted to transparency on topics such as climate change, diversity, and inclusion. Banks are now strengthening environmental, social, and governance (ESG) commitments in meaningful ways. For example, Goldman Sachs will deploy US\$750 billion across investing, financing, and advisory activities by 2030 on themes such as climate transition and inclusive growth.

Digitizing Process to Improve Customer Engagement: Financial sector customers are becoming more and more focused on attributes such as transparency, effortless processes, paperless interactions, and support throughout the processes. Additionally, the pandemic accelerated digital adoption across product and demographic segments. For example, Bank of America's business banking app witnessed a significant growth in mobile check deposits.¹⁸ This represents an opportunity to increase the adoption of contactless technologies and digital experiences. While Mexico has been slower to adopt fintech, the country is not far behind, with a growth of 23.4 percent in the Mexican fintech industry in 2018, and over 400 fintech start-ups, making it the second largest fintech market in Latin America.¹⁹ When adding a new banking relationship in North America, quick resolution of problems, competitive pricing on loans, and simple online interfaces were ranked as very important by business owners.²⁰

Additionally, the financial sector should pay close attention to "Banking-as-a-Service (BaaS)" platforms. These platforms have surfaced as the main component of open banking, in which banks offer more financial transparency options for customers by opening their application programming interfaces (APIs) for third parties to develop new services. For example, BBVA is one of the retail banks that have launched their own BaaS platforms, allowing them not only to get ahead of the competition but to also unlock a new stream of revenue by monetizing their platform.

18 PYMNTS, "Bank of America: Almost 48M checks deposited digitally in Q2" PYMNTS.com, August 5, 2021 <https://www.pymnts.com/news/digital-banking/2021/bank-of-america-almost-48m-checks-deposited-digitally-in-q2/>

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USMCA and the Financial Industry in North America

While the USMCA is not entirely dissimilar in many aspects to NAFTA, it introduced some changes that will affect the financial sector of North America:

- Parties recognize the importance of regional macroeconomic stability and agree to: maintain a market-determined exchange rate regime, refrain from competitive devaluation, and strengthen economic fundamentals.
- USMCA countries must publicly report their monthly interventions, as well as their foreign exchange reserves and other data. All parties must also consent to public disclosure by the IMF.
- Parties must grant financial institutions of another party established in its territory access to payment and clearing systems operated by public entities. However, parties are not required to provide access to the party's lender-of-last-resort facilities.
- The USMCA modified NAFTA's previous transfer of information provisions by stating that no party may prevent a covered person from transferring information into and out of the party's territory when the activity is within the scope of its license. Parties can still adopt or maintain measures to protect personal data, personal privacy, and confidentiality subject to the provisions in Chapter 17.
- No party will be able to adopt or maintain measures placing limitations on: the number of financial institutions, cross-border financial service suppliers, financial service operations, the number of natural persons employed or the total value of financial service transactions or assets. Parties may require the registration of a cross-border financial service supplier or financial instrument.
- Parties must allow other USMCA countries' financial institutions to supply new financial services within their territories if their financial institutions would be allowed. Parties may require authorization subject to the new financial services provisions.

In sum, the USMCA created new provisions that affect the region's financial industry in relation to macroeconomic policies, exchange rate matters, access to payment and clearing systems, transfer of information and data, the establishment of financial institutions from other member countries and the type of services these can offer. Overall, these policies are set to add a higher level of transparency to financial organizations, liberalize cross-border financial services, and aim towards policies that add stability to the financial industry of the region.

The financial industry in North America has opportunities for growth in the future, however, it must face a myriad of challenges brought forth and accelerated by the pandemic. In order to ensure continuity and their future growth and performance levels, financial organizations must focus on aspects such as: digitalization, the virtualization of the workforce, safety and privacy, corporate responsibility, cost reduction, collaboration, partnerships, and the development of ecosystems, and the global movement of people and goods.

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V. Supply Chains: Structure, Organization, and Operation

The signing and ratification of NAFTA and USMCA has made North American one of the largest trading blocs.

Union Pacific, the second largest railroad company in the United States, reiterates the importance of USMCA for the region's supply chains and transportation of goods, with its president Lance M. Fritz stating that:

*"Approximately 40 percent of Union Pacific's business either originates or terminates outside the United States. Many of our customers depend on trade with Canada and Mexico to grow their businesses. Passing the USMCA is as important to Union Pacific and our 39,000 employees as it is to our roughly 10,000 customers."*²¹

21 Lance M. Fritz, "Opinion: New North American trade accord deserves passage," *Union Pacific*, October 6, 2019, <https://www.up.com/media/nafta/index.htm>.

However, moving goods across borders remains a complex task in terms of freight transportation, logistics, and overall supply chain effectiveness. Particularly, cross-border transportation remains difficult across the US-Mexico border. Some of the obstacles include cabotage restrictions and compliance with technical standards. For example, trucking, which is the main form of transportation between Canada, the U.S., and Mexico, can be challenging because of differences in truck size, and weight standards among countries, with Mexico and Canada allowing higher weights than the United States. Furthermore, cabotage, the right to operate sea, air, or other transport services within a particular territory, causes trucks to return empty to their countries of origin due to restrictions to transport freight between two points within a country. Additionally, in North America, there is a higher demand for northbound loads than for southbound loads, resulting in an imbalance that affects transportation rates, availability of trucks and equipment, and leads to empty backhauls. Furthermore, the pandemic has caused a shortage of truck drivers, resulting in cost pressures, reduced cross-border capacity, and significant challenges for supply chains across the region.

Rail and intermodal, which are the second most widely used option when it comes to transporting goods, face their own set of challenges. For example, strong U.S. domestic demand in combination with insufficient containers to meet shipper demand, and long idle times while containers sit empty or after loading at yards and plants, reduces the competitiveness of rail. In order to better meet these demands, railway companies have been implementing new strategies and action plans. For example, at the beginning of 2021, Canadian Pacific Railway Ltd. (CP) announced that it would acquire Kansas City Southern (KCS), stating that *“The transaction will combine the two railroads to create the first rail network connecting the U.S., Mexico, and Canada. The combined network’s new single-line offerings will deliver dramatically expanded market reach for customers served by CP and KCS, provide new competitive transportation service options, and support North American economic growth. The transaction is also expected to create jobs across the combined network. Additionally, efficiency and service improvements are expected to achieve meaningful environmental benefits”*²²

Another challenge of USMCA and NAFTA for supply chains is that despite its successes, NAFTA was unable to counter the movement of companies to Asian soil. Part of what the USMCA seeks to do is change this situation. However, there is concern among shippers and others on whether this will actually happen as a result of the USMCA. For many companies, this decision isn’t a straightforward one.

As of June 2020, just before the USMCA was implemented, a poll suggested that 60 percent of shippers were aware that they would have to make changes, but they were not sure what those changes would be. Under NAFTA, shippers were required to follow strict regulations on a product-specific basis. The USMCA introduces a new level of complexity to a wide range of products that source many of their components globally.

Complexity aside, the USMCA offers a potentially less burdensome administrative load to shippers. NAFTA required mandatory formats to perform operations. In this regard, the USMCA offers a friendlier alternative where formats only need to include specific information, making it easier for the different agents involved. For

22 Railwage Age Staff, “Canadian Pacific, Kansas City Southern Will Merge into ‘The First USMCA Railroad,’ CPKC,” *Railway Age, Simmons-Boardman Publishing*, March 21st, 2021, <https://www.railwayage.com/freight/class-i/canadian-pacific-kansas-city-southern-will-merge-into-the-first-usmca-railroad-cpkc/>.

example, FedEx states that USMCA offers certain benefits including: increases in the de minimis, or the duty and tax exemption threshold for imports into Canada and Mexico, potentially reducing overall shipping costs; value limits increases; and reductions in the amount of documentation.²³ However, the long-term impact of these and other aspects will be seen in the years to come.

It is expected that the region's exports will increase mostly due to increases in U.S. exports while the share of Canadian and Mexican exports is expected to decrease. As a result, North America's overall global exports are likely to remain at their current global share of 14 percent throughout the 2019-2025 period, even if exports for the region increase. Mexico can compete with other regions in terms of production costs, particularly in goods for the automobile industry. Nonetheless, it is weak in areas that involve advanced technologies and intellectual property rights, such as semiconductors. Canada has suffered from "Buy American" rules, which are yet to be addressed by President Biden, and the closing of the U.S.-Canada border on behalf of Prime Minister Trudeau as a result of the pandemic.²⁴

Impacts From and on the USMCA

Much of the spirit of NAFTA has been carried over to the USMCA, awarding it the nickname NAFTA 2.0. The new agreement considers some of the much-needed modernization and innovation since NAFTA was negotiated 28 years ago. The USMCA comes at a convenient moment when businesses and policymakers alike are looking for additional resilience in supply chains as a result of the Covid-19 pandemic. The pandemic exposed some of the difficulties and weaknesses of North American supply chains as the movement of goods across borders became problematic. For example, the high reliance of the U.S. pharmaceutical industry on Chinese and Indian drug manufacturers for their final products and some key ingredients, along with the reliance of North American automakers on auto parts from China and South Korea, has resulted in: reduced productivity and economic growth, an inability to deliver goods to consumers, and losses for corporate giants, numerous small and medium-sized firms, and companies and workers in trucking, rail, and freight.

Reshoring conversations have been gaining traction as President Joe Biden has emphasized the importance of strong internal North American relations, and his administration prioritizes supply chain security with Canada and Mexico.

For North America, it seems like supply chains will remain static and most companies, at least until 2025, will remain where they are, particularly in relation to Asia. Investors are aware of the lack of competitiveness in North America, Asia's low-cost manufacturing capabilities, and how North American regions have handled the pandemic; although this remains uncertain as the situation still unfolds.

Other factors like politics, protectionism, and cross-border tensions are expected to further complicate supply chain success. North America's dependence on Asian goods, particularly from China, has turned supply chains into a geopolitical instrument. The U.S. political discourse points to a growing necessity to reduce dependence

23 FedEx, "USMCA Trade," *International Shipping*, 2019, <https://www.fedex.com/en-us/shipping/international/usmca-trade.html>.

24 The Economist Intelligence Unit, "North American Supply Chains: Will Reshoring Actually Happen?" *The Economist Intelligence Unit*, 2021, <https://economistchina.com/wp-content/uploads/North-American-supply-chains-Will-reshoring-actually-happen.pdf>.

on China for critical goods, which is increasingly viewed as a rival. However, for many companies, this might mean losing access to the large Chinese market.

Another factor that adds to the challenges of the North American supply chains is Mexico's political situation, which businesses see as unfavorable. According to the Economist Intelligence Unit (EIU), the country's 'political effectiveness' metric scored a low reading, fueling concerns with the country's growing protectionist stance.²⁵ Lastly, it is worth mentioning that Mexico also obtained a low score in terms of "private enterprise policy," which can be interpreted as a challenge for businesses. However, despite these aspects, Mexico's low costs, especially in relation to the U.S., Canada, and even some Asian countries such as Vietnam, Thailand, and Malaysia, remain a potential advantage for the region.²⁶

Canada has been experiencing a gradual reopening as a result of its vaccination program. Yet, there are still many procurement and supply difficulties. Supply chains across all industries have been disrupted. Particularly worth mentioning are the lumber and microchip shortages, which have respectively affected the construction as well as the automotive and consumer electronics industries. A report by the Canadian Federation of Independent Businesses (CFIB) found that 41 percent of business owners are worried about logistics, whereas in April 2020 the number was 29 percent.²⁷

In sum, in the short term, all these different factors will most likely deter investors from considering North America as a viable alternative to the current configuration of global supply chains.

Features of Supply Chain Management (SCM) in the U.S., Canada, and Mexico

With the U.S. recovering to pre-pandemic levels, North American integration and cooperation have become more important than ever. Many supply chains have been struggling as a result of the disruptions induced by the pandemic. In particular, the shortage of microchips has been a major factor affecting all major U.S. industries. President Biden has presented a plan to address SCM issues, especially those involving U.S. reliance on adversaries, particularly China. The administration has discussed the importance of increasing resilience through technological change and safeguarding against cyber-attacks, a strategy that will require new approaches, including moving away from free-market ideologies and ensuring more tax, labor, and climate measures that will require increases in local manufacturing rather than depending on production in low cost nations.

Many companies in Canada have a high supply chain exposure due to their dependence on Chinese products. At the beginning of the pandemic, many companies faced non-traditional shifts in demand. These changes were felt in some industries in the form of massive upswings, and in others as complete shutdowns. As a result, Canada has been focusing on improving the resiliency of its supply chains. This has meant a reallocation of procurement to other Asian countries. As a result of the pandemic, Canadian companies have also had to deal with issues related to labor capacity as well as procurement fraud and compliance.

25 Ibid.

26 Ibid.

27 Laure-Anna Bomal, "The Logistics Impact of COVID-19 on Small Businesses," *Research Snapshot, Canadian Federation of Independent Businesses*, June 2021 <https://www.cfib-fcei.ca/en/research-economic-analysis/logistics-impact-of-covid-19-on-small-businesses>

Mexico has low costs and access to the U.S. and Canadian markets. The country's capability to provide nearshored goods helps companies simplify their supply chains while reducing risks. As ports all over the world try to operate at sub-optimal conditions, Mexico has the advantage of being able to use other forms of transport. Improvements in cross-border infrastructure on the U.S.-Mexico border has been one of the recent discussion items between the two countries. Additionally, they have also discussed the creation of sustainable economic and social development in southern Mexico and Central America in order to address the primary drivers of migration. Lastly, cybersecurity and workforce development issues have also been on the agenda.

Challenges and Responses

Like supply chains all over the world, North American supply chains have some important challenges to overcome. Above all is the completion of the reshoring of companies to North American soil. This will allow the U.S., Canada, and Mexico to reduce dependency on other regions, increasing their resilience and minimizing potential problems, as the pandemic has shown. The inability to successfully reshore companies may limit USMCA's impact. It is yet to be seen how this will play out. To successfully achieve substantial reshoring, the region needs to strengthen investor trust and reduce costs to continue to attract foreign direct investment; otherwise, investors will continue to select Asia as their production hub due to the region's low costs.²⁸

The region also faces industry-specific challenges. Automobile manufacturers, for example, need to certify under the USMCA that 75 percent of their steel and aluminum comes from Canada, Mexico, or the U.S. to access duty-free trade benefits. Under NAFTA, this requirement was 62.5 percent. Another challenge for this industry involves the Labor Value Content (LVC) requirement, which specifies that a certain percentage of finished vehicles should be made by workers that earn a minimum of \$16 per hour.

Additionally, the North American supply chain, like others all over the world, has to undergo a digital transformation that will allow it to stay competitive in the global market. At the core of these challenges lies the implementation of technology to satisfy market demands. In an October 2021 report, KPMG condenses the challenges of the supply chains of the future. These include: putting the customer first through service differentiation, utilizing and leveraging technology platforms effectively, obtaining the required talent to implement desired technologies, understanding the importance of an ethical and sustainable business vision, adequately managing and making sense of the available data, and lastly, balancing the need between variety and the costs associated with complexity.²⁹

These challenges are not unique to the automotive supply chain. To address them, the region must invest heavily and guarantee a highly skilled workforce. The Association of Manufacturing Technology estimates that the U.S. will have to invest between USD 400 and 600 billion in manufacturing technologies to reduce the trade deficit with China.³⁰

28 The Economist Intelligence Unit, "North American Supply Chains: Will Reshoring Actually Happen?"

29 KPMG, *Future of Supply Chains*, October 2021, New York: KPMG, <https://assets.kpmg.com/content/dam/kpmg/cz/pdf/2022/future-of-supply-chain-2021.pdf>

30 Cathy Ma, "83 percent of North American Manufacturers Are Likely to Reshore Their Supply Chains in 2021," *Thomas*, July 5 2021, <https://www.thomasnet.com/insights/83-of-north-american-manufacturers-are-likely-to-reshore-their-supply-chains-in-2021-report/>.

How the Current and Post-COVID Environment Can Impact North American Competitiveness

Many companies saw how Asian countries, particularly China, managed the COVID-19 pandemic somewhat successfully while North American countries struggled. However, the growing dependence on the Asian region also showed the necessity of supply chain resilience. These factors will have a significant impact on investors and firms when deciding where to build new manufacturing plants.

As demand rebounds, many North American supply chain shortages have become exposed. This has resulted in a growing trend in which North American companies are seeking to add suppliers from the region to their operations. According to the 2021 Thomas State of North American Manufacturing Report, 83 percent of manufacturers are planning on doing so.³¹ Whether or not companies will reshore to North American soil, only time will tell.

Despite the challenges, and thanks to the recovery of the economy, Q1 2021 saw important growth regarding raw materials, traditional manufacturing output, and advanced manufacturing technologies. However, to keep this dynamic going, North American companies will need to make use of all available SCM technologies. To do this, companies will also need employees with the right skills. Addressing the supply chain talent gap is something that companies need to take seriously. There is a great opportunity for companies that invest in upskilling their employees to take advantage of SCM technologies. By doing so, they will be able to implement automation technologies that will contribute to building more resilient supply chains. The U.S., Canada, and Mexico have an opportunity to use the USMCA to improve their existing supply chains. This will require a high level of coordination and political will.

The recent global pandemic has emphasized the vulnerability of global supply chains as well as the challenges of relying on a limited number of sources for supplies. This fragility of supply chains in North America and across the globe has encouraged companies to evaluate the resilience and competitiveness of their supply chains and consider other options to ensure sources of essential materials and supplies, especially in times of uncertainty and crisis. Canada, Mexico, and the United States have the opportunity to rethink their supply chains to ensure competitiveness and efficiency, address the current challenges, and make the most out of the USMCA. The next few years will see some shifts in supply chains, with some companies diversifying their value chain activities from Asia into other regions. North American countries must determine a clear geopolitical position with Asia and implement strategies that enable their supply chains to become resilient and strengthen the economic growth of the continent.

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VI. North American Workforce

As with many other regions, North America suffers from a significant workforce skills gap that affects the region's competitiveness and economic performance. This skills gap also creates mismatches, making it difficult for employers to recruit and hire employees who have the specific and in-demand skillsets. It is also challenging for employees to acquire the necessary education and training needed for the jobs available in the marketplace. As a result, companies from the United States, Mexico, and Canada—despite the significant investments made in technological advancements—cannot realize their full potential due to lower levels of productivity from their workforce vis-à-vis other economic powers such as China. Manpower's 2018 talent shortage survey demonstrates that employers in the region face difficulties filling jobs, with 46 percent of employers reporting this problem in the U.S., 50 percent in Mexico, and 41 percent in Canada, respectively.³² Specifically, these employers find it challenging to acquire employees with the necessary hard (technical) and soft (human/social) skills, as well as industry experience.

Simultaneously, the region has focused on implementing the "Fourth Industrial Revolution" or "Industry 4.0," with multiple technological changes and thus, redefining the kinds of jobs that are needed as well as creating new classes of jobs. Namely, the amount and importance of data for companies has increased significantly, causing firms in many industries to see the need to hire data scientists who can manipulate large amounts of data and, more importantly, turn data into actionable insight. For example, Honeywell established a laboratory located in Mexicali, Baja California, which is focused on systems integration and employs 350 specialists that participate in the design, engineering, and testing of aeronautic components.³³ Intel, a processors company, invested USD

32 Manpower Inc, "ManpowerGroup Releases 2018 Talent Shortage Survey Results," June 26th, 2018,

33 Ministry of Economy, "Crafting the Future: A Roadmap for Industry 4.0 in Mexico," *Government of Mexico*, April 2016,

170 million in the Intel Design Center located in Zapopan, Jalisco, whose workforce is made up of approximately 1,000 people, many of which are specialized engineering students.³⁴ Mexican companies like Grupo Modelo, one of the biggest beer producers in the world with a presence in more than 150 countries, is another example of companies hiring data scientists.³⁵ Additionally, new employment opportunities have increased for individuals with outstanding social and communication skills and critical thinking, as these are deemed necessary skills to adapt to the changing technologies and work with automation, artificial intelligence, and robots.

These changes are expected to create greater opportunities for the workforce by contributing to more higher-paying jobs in the years to come. The increased use of robotics and other technological advances to assist workers will improve the quality of certain jobs in manufacturing. This will ultimately reduce the number of physically demanding or routine jobs. For example, physically demanding automotive assembly-line positions could be replaced by robotics. Other advancements may help increase the productivity of machine operators by using automated systems that facilitate monitoring machine performance and product quality. However, this shift will also create challenges for these countries to make these changes in the workforce a reality. This is an important issue because the region has been seeing an increasing decline in manufacturing jobs since the year 2000 due to international competition, new production methods, and technological advancements. In the United States, employment in computer and electrical products declined by 43 percent between June 1979 and June 2019, while in Canada, the plastic product manufacturing industry has seen one of the sharpest declines in employment. These changes in the marketplace have left thousands of workers behind, resulting in unfilled jobs and unemployment.

Moreover, the COVID-19 pandemic has reshaped the way business is conducted and the way work is done, forcing companies around the world to focus on remote work, e-commerce, and increase the use of technology in the workplace (e.g., automation, algorithms), disrupting workers around the globe. McKinsey's report titled "The Future of Work after Covid-19" finds that in the United States customer service and food service jobs could fall by 4.3 million, while transportation jobs could grow by nearly 800,000.³⁶ At the same time, the market demand for workers in healthcare and STEM could grow at a greater rate than before the pandemic, reflecting increased attention to health due to an aging population and rising incomes, not to mention the growing need for people who can create, deploy, and maintain new technologies.

The McKinsey report also argues that those hardest hit by the pandemic will be low-wage employees, workers without a college degree, women, ethnic minorities, and younger workers.³⁷ Additionally, the report finds that going forward, all growth in labor demand will be in high-wage jobs, creating the need for many of the displaced low-wage workers to shift to occupations in higher-wage categories such as technology, healthcare, and business management jobs that list a bachelor's degree as a requirement, in order to remain employed.³⁸

34 Ibid.

35 Javier Castillo, "Empresas mexicanas exitosas contratando," *Occmundial*, June 28, 2021,

36 Susan Lund et al, "The future of work after Covid-19," *McKinsey & Company*, February 18, 2021, <https://www.mckinsey.com/featured-insights/future-of-work/the-future-of-work-after-covid-19>.

37 Ibid.

38 Ibid.

The Workforce in the United States

According to the World Bank, the U.S. workforce was composed of more than 165 million workers in 2020. Of the total workforce, most workers are employed in the service sector, where about 107 million people worked in private service-providing industries, according to the Bureau of Labor Statistics data from 2021. Among the service sectors, the biggest were trade, transportation, and utilities (29 million workers), followed by education and health services (24 million workers), and professional and business services (21 million workers). Outside the private service-providing industry, approximately 22 million Americans worked in government in December of 2021. Approximately 12.5 million Americans worked in manufacturing at the same time period.³⁹ In terms of ages, according to the Pew Research Center, in 2019 Millennials were the largest generational group in the U.S. workforce, with approximately a third of the labor force being between the ages of 23 to 38, surpassing Generation Xers, aged between 39 and 54.⁴⁰

Another important characteristic of the American workforce is the pay gap, not only between genders, but also between those with college degrees and their less-educated counterparts. The Pew Research Center found that in 2018, women's earnings were only 89 percent of men's, among full and part-time workers between the ages of 25 to 34. Furthermore, the pay gap is evident when comparing white workers with black and Hispanic workers. However, Asian men made 117 of what white men earned.⁴¹

The Workforce in Canada

According to the World Bank, the workforce in Canada was composed of more than 20 million workers in 2020.⁴² Of the total workforce, the majority of workers were employed in the service sector, where approximately 15 million people worked in service-related industries, according to Statistics Canada.⁴³ Among the service sectors, the biggest was wholesale and retail trade (2.9 million workers), followed by healthcare and social assistance (2.6 million workers), and professional, scientific, and technical services (1.7 million workers).⁴⁴ Approximately 3.8 million Canadians worked in manufacturing during the same time.⁴⁵ In terms of ages, according to Statistics Canada, in 2018 Millennials were the largest generational group in the Canadian workforce, with approximately 8 million being between the ages of 25 to 44, surpassing Generation Xers, who make up 7 million workers.⁴⁶

The demand for skills has been changing in Canada as a result of population aging, as well as technological progress, putting significant pressure on the labor supply. These trends have resulted in changes to task content and, at times, the destruction of jobs, but also the creation of new jobs that require new skills. OECD data

39 U.S. Bureau of Labor Statistics, "Employees on nonfarm payrolls by industry sector and selected industry detail," *United States Department of Labor*, 2023, <https://www.bls.gov/news.release/empsit.t17.htm>

40 Desilver, Drew. "10 Facts about American workers." *Pew Research Center*, August 29th<https://www.pewresearch.org/fact-tank/2019/08/29/facts-about-american-workers/>

41 Ibid.

42 The World Bank, "Labor force participation rate, total (% of total population ages 15+) (national estimate) - United States, Canada," 2023, <https://data.worldbank.org/indicator/SL.TLF.CACT.NE.ZS?locations=US-CA>

43 Statistics Canada, "Employment by industry, monthly, seasonally adjusted and unadjusted, and trend-cycle, last 5 months," *Government of Canada*, 2022, <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1410035501>.

44 Ibid.

45 Ibid.

46 Statistics Canada, "Labour force characteristics by sex and detailed age group," *Government of Canada*, 2023, <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1410032701>

suggests that 29 percent of jobs in Canada will see significant changes in task content, and another 14 percent of jobs could be completely automated in the next 15 to 20 years.⁴⁷ Additionally, Canada's workforce has been characterized by an under-representation of several groups and higher unemployment rates, especially those with a low level of educational attainment (high school or less), persons with disabilities, immigrants, and indigenous persons. However, women's participation in the Canadian workforce is relatively high, with 75.4 percent of working age women working full time compared to 87.6 percent of working age men.⁴⁸

Regarding skills and education, 58 percent of Canadian adults aged 25-64 had a tertiary education in 2018, placing Canada as the country with the highest share of tertiary-educated workers among the OECD.⁴⁹ Moreover, 26 percent of adults graduate from a college program in Canada, a larger number when compared to the percentage in the United States (11 percent) and across the OECD (7 percent).⁵⁰

The Workforce in Mexico

According to the World Bank, the workforce in Mexico was composed of approximately 54 million workers in 2020. According to the Instituto Nacional de Estadística y Geografía (INEGI), in 2021 the majority of workers were employed in the service sector (34 million workers or approximately 62 percent of the workforce).⁵¹ Among the service sectors, the biggest was wholesale and retail (10 million workers), followed by hospitality, transportation, communication (6 million workers), and professional services (4 million workers).⁵² Approximately 24.8 percent (13 million workers) worked in manufacturing and approximately 12.4 percent (6 million) worked in agriculture during the same time.⁵³ In terms of age groups, the labor force in Mexico is mainly composed of a young population with the 25-54-year-old group having the highest employment rate.⁵⁴ Additionally, in 2021 approximately 20 million workers were women while 34 million were men, these numbers account for 41 percent participation in the workforce of women who are old enough to work, and 74.3 percent participation for men, according to INEGI.⁵⁵

It is worth noting that Mexico's workforce is characterized by a high level of informality, with approximately 30 million, or more than 55 percent of the workforce, having informal jobs.⁵⁶ Informal employment now also includes other working conditions such as self-employment in agriculture.⁵⁷

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48 Statistics Canada, "Labour force characteristics by sex and detailed age group."

49 OECD iLibrary, "Workforce Innovation to Foster Positive Learning Environments in Canada." <https://www.oecd-ilibrary.org/sites/2b95c0dc-en/index.html?itemId=/content/component/2b95c0dc-en> <https://www.oecd-ilibrary.org/sites/2b95c0dc-en/index.html?itemId=/content/component/2b95c0dc-en>

50 Ibid.

51 INEGI, "Resultados De La Encuesta Nacional De Ocupación Y Empleo, Nueva Edición Cifras Durante El Segundo Trimestre De 2021," *Instituto Nacional de Estadística y Geografía*, 2021, https://www.inegi.org.mx/contenidos/programas/enoe/15ymas/doc/enoe_n_notas_tecnicas_trim2_2021.pdf.

52 Ibid.

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57 INEGI, "Encuesta Nacional de Ocupación y Empleo (ENOE) Resultados de Ciudades." *Instituto Nacional de Estadística y Geografía*, 2019, https://www.inegi.org.mx/contenidos/programas/enoe/15ymas/doc/resultados_ciudades_enoe_2019_trim4.pdf.

The demand for skills has also been changing in Mexico, with highly skilled and well-experienced individuals increasingly sought after. Due to rapidly growing industries like aerospace, medical device, electronics, automotive, consumer products, and metal mechanics, engineers are in high demand in Mexico. USMCA has also contributed to the expanding scope of Mexico's manufacturing operations, resulting in more and more companies requiring a larger pool of engineers and technical personnel. In fact, Mexico graduates more engineers than the United States.⁵⁸

USMCA and the Region's Workforce

The USMCA, which took effect in July 2020, has created a new set of opportunities for cooperation on issues related to workforce development. Under NAFTA, trade within the region increased tremendously, contributing to the building of regional production networks for the petrochemical and automotive sectors, as well as for other manufactured products, and supporting over 12 million jobs in the North American region.⁵⁹

Although the new terms of the USMCA do not address workforce development, Chapter 23 discusses labor. This chapter focuses on cooperation through apprenticeships and sharing of best practices among member countries. Chapter 26 focuses on competitiveness and advocates for the "Committee on Competitiveness" that should address workforce development as one of its main issues.

Challenges for the region's workforce

While North America's cross-border production and networks have increased the region's competitiveness, some challenges remain in terms of workforce development:

- Skills gaps in Mexico, Canada, and the United States have limited economic performance
- Lack of agreement regarding quality standards of workers and minimum criteria for selection
- Limited incentives and support to small and mid-sized companies to develop training programs for teaching new and better skills to their workforce
- Absence of dialogue between stakeholders from all three countries to establish best practices on work-based learning, training
- Lack of a common language or guidelines to validate credentials, competencies, and work experience

Opportunities for Workforce development

The three countries have much to gain from strengthening their partnerships, focusing on increasing the competitiveness of border states, all while creating millions of jobs and increasing the well-being of the region. One possible avenue for stimulating workforce development is public-private-academic partnerships. Dialogue between governments, educational institutions, the private sector, and other stakeholders, can help explore best practices for workforce development. For example, the Canadian aerospace company Bombardier Inc. has invested in the Universidad Aeronáutica en Querétaro (UNAQ) in Mexico, to ensure more individuals attain the

58 Bismarck Lepe, "Three Reasons Mexico Could Fill the U.S. Talent Gap," *Forbes*, March 8, 2021 <https://www.forbes.com/sites/forbestech-council/2021/03/08/three-reasons-mexico-could-fill-the-us-talent-gap/?sh=67d9b6747037>

59 Business Roundtable, "New Study: International Trade Supports Nearly 39 Million American Jobs," *Business Roundtable*, March 18, 2019. <https://www.businessroundtable.org/new-study-international-trade-supports-nearly-39-million-american-jobs>.

necessary education and training, in order to develop a workforce that meets the demands of their company and the labor market in general. This partnership has been successful in placing the state of Querétaro as an aerospace hub and fostering its GDP growth.

Many of the challenges for North America's workforce, such as the skills gap, combined with changes in the way people work brought forth by the pandemic, create an urgent call to action for the three countries. The North American economies should focus on modernizing their workforces' skills which requires investing in the development of their current and future workers. Without active dialogue and coordinated efforts to address some of the existing challenges, opportunities for job creation and job reallocation may be missed. As new technologies emerge, and the mode of working continues to change, the need for a better, more skilled workforce will remain necessary for the region's competitiveness and productivity.

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VII. Linkages between Large and Small Firms

As the global business environment becomes increasingly competitive, firms of all sizes are faced with new challenges and opportunities to increase profitability, growth, and market share. One way to achieve this is through linkages between small and large firms. While large firms and SMEs play distinct roles in the economy and the business ecosystem, they depend on each other in several ways. For example, large multinationals like Walmart and Microsoft depend on small and medium businesses across their supply chain to act as suppliers of inputs, distributors, and to outsource multiple activities of their value chain.⁶⁰ Large businesses are also dependent on small businesses for their customer base, as larger firms like Xerox or Bank of America have developed specialized services and products to cater to small companies' needs, which constitute an important market in terms of their profitability.⁶¹ Other large firms turn to smaller companies to outsource retailing of their products to consumers.

Innovation is another aspect in which large firms can benefit from smaller companies. Many new and great ideas come from small businesses and innovative start-ups which are then commercialized and marketed by big corporations. This has been the case for firms in the pharmaceutical and medical device industry, which are increasingly outsourcing research and development operations to smaller organizations. For example, Johnson & Johnson and GlaxoSmithKline have each invested approximately USD \$50 million into a venture capital fund to support start-up firms in the biotech sector.⁶² Johnson & Johnson has also created innovation centers in cities such as Boston and Shanghai with the purpose of funding life-science research and market products in this industry at a faster pace.⁶³ Large businesses can also tap into small businesses for their workforce, as many young workers get their start in small businesses, and once they have acquired experience and training, they can move to the larger corporate world where the benefits and opportunities for growth are enticing for professionals.

From the perspective of the small business, there are also many benefits from partnering and developing linkages with larger firms, as these are important sources of capital, early customers, and market access. Small businesses are often confronted with numerous challenges, especially in the early stages of their creation; therefore, they need to partner with larger firms if they want to increase their chances of survival. Large firms and multinationals can support smaller firms and especially start-ups with the resources needed to operate and grow. The difference between the mean annual R&D spending of large and small companies grew from less than USD \$20 million in the 1980s to almost USD \$120 million in 2017.⁶⁴

Thus, for many small businesses, working with large companies represents a cornerstone of their development and growth of their business as they increase their access to financing, their visibility and brand image, networks of experts, and access to a larger customer base. One example of these kinds of partnership is Samsung's

60 Beth Winston, "Why Is the Presence of Small Businesses Important for Large Businesses?" *Chron*, <https://smallbusiness.chron.com/presence-small-businesses-important-large-businesses-61120.html>

61 Ibid.

62 Craig Peterson, "Why do large corporations invest in startups?" *Growth Capital Ventures*, February 8, 2019, <https://www.growthcapital-ventures.co.uk/insights/blog/why-do-large-corporations-invest-in-startups>

63 Ibid.

64 Vijay Govindarajan, et al., "The Gap Between Large and Small Companies Is Growing – Why?" *Harvard Business Review*, August 9th, 2019, <https://hbr.org/2019/08/the-gap-between-large-and-small-companies-is-growing-why>.

Strategy and Innovation Center, which invests capital and expertise to spark innovators to find solutions and develop new products in the device sector.⁶⁵ For startups, these partnerships are essential to overcome some of their main obstacles: lack of financing, limited market knowledge, lack of guidance, and limited contact with new clients and investors.

Understanding the advantages of small firms

While conventional wisdom suggests that small businesses are usually at a disadvantage when compared to larger firms, this is not always the case. Both large and small businesses have much to gain from these partnerships. It is worth acknowledging that although it may seem like large firms hold the power, small businesses are key to large firms' success. Additionally, small firms can hold a competitive edge when compared to large businesses. Small businesses are more prepared to offer personalized or customized service by taking the time to gain in depth knowledge about the potential customer and evaluating the customer's needs in order to develop a custom solution, whereas large firm usually have a "one size fits all" mentality. For example, FitMyFoot – [a company that produces insoles and sandals](#) - uses technology to manufacture customized shoes and insoles for customers. By using their app, customers can take pictures of their feet, which are used to take measurements and build a digital map of each person's footbed, and create custom insoles and sandals; customers can also customize the design and color. Another example is Function of Beauty, [a company that allows its customers to create personalized, shampoo and conditioner](#). By taking a quiz about their hair needs, the company creates a personalized formula to help address customers' hair needs and preferences. Customers can also choose the color and scent of their shampoo and conditioner.

Furthermore, small businesses tend to have more flexibility than larger organizations in all sorts of processes because large firms tend to focus on consistency while small firms have the ability to be more flexibility both in their internal processes and with customers. This flexibility coupled with creativity, which tends to be another strong suit of small businesses, allows these organizations to react faster and offer more innovative solutions to customers. Overall, small businesses have the advantage of faster decision-making processes when compared to larger firms, which means they can test new technologies, processes, and marketing techniques much quicker than large organizations.

The rapid changes in the business landscape make it difficult for large firms to innovate quickly enough to keep up with new customer needs. For example, in the hospitality industry, younger and smaller firms like Airbnb have surpassed the market capitalization of a large firm like Hilton, which has been in the industry for almost 100 years and has presence in more than 100 countries.⁶⁶ The same can be said for Uber, a firm that without owning any single car, has managed to exceed the market capitalization of BMW, one of the largest automakers in the world.⁶⁷

65 Colleen Carpentier, "Why Multinationals and Startups Gain More Working Together," *Harvard Business Review*, June 4th, 2019, <https://hcli.org/articles/why-multinationals-and-startups-gain-more-working-together>.

66 IESE Business School, "Here's How Large Firms Can Innovate by Collaborating with Startups," *Forbes*, May 10th, 2018, <https://www.forbes.com/sites/iese/2018/05/10/heres-how-large-firms-can-innovate-by-collaborating-with-startups/?sh=31a45ad82241>.

67 Ibid.

Linkages between Small and Large Firms in North America

Backward linkages, in which SMEs act as subcontractors to a large firm, have been of great interest to policymakers. In the North American region, this kind of linkage has become popular as many firms from Canada and the United States have outsourced part of their value chain to low-cost locations like Mexico, especially in the manufacturing sector. The signing of NAFTA (now USMCA) has also facilitated and fostered this type of linkage across the region. For example, it allows for reducing dependence on local suppliers while taking advantage of lower prices and the proximity of Mexican suppliers. The proximity of Mexico to Canada and the United States is beneficial in lowering the costs of transporting inputs and providing greater flexibility in changing the specifications of inputs. While there are numerous benefits to backward linkages, such as technology transfers, training, and market opportunities, this has still created an ongoing debate about the loss of jobs in the United States and Canada. Other types of linkages are investment opportunities, in which large firms invest in startups to foster the development of the business ecosystem. For example, Google has invested in multiple Mexican startups, such as Unima (healthcare startup), Econduce (electric scooter company), and Tizkka (fashion app).⁶⁸

Linkages in the United States

Small businesses are the backbone of the U.S. economy and, according to the U.S. Small Business Administration (SBA)—an independent federal government agency charged with monitoring and supporting America’s small businesses—these companies account for 99.7 percent of companies with paid employees in the country, 65 percent of the country’s net job creation, and more than one-third of the U.S.’s export value.⁶⁹ Although they can be seen as the “small guy,” these businesses are essential in supporting the United States’ job creation, exports, innovation, and they have a profound impact in their local communities. A study by American Express titled “Small Business Economic Impact Study” found that in 2018 approximately 67 percent of every dollar spent at a small business remained in the local community.⁷⁰ For this reason, American Express established a resource center called “Stand for Small” which is a partnership with around 40 companies across multiple industries to provide support to small businesses such as tips, tools, and other discounts to small business owners.⁷¹ Additionally, American Express encouraged card members to shop at small businesses by providing them with an incentive of USD \$5 for every USD \$10 spent at small businesses using their American Express card.⁷² This kind of strategy can increase small businesses’ sales while also boosting revenue for American Express.

In the United States, companies are developing linkage programs with SMEs that are not necessarily part of their value chain to enhance their corporate social responsibility and for public relations purposes, such as demonstrating their commitment to the wellbeing of the community and mitigating any criticism from the point of view of investors. Other firms undertake such linkages and partnerships with small businesses as a way to

68 “Google will push three Mexican Start-ups towards Silicon Valley,” *The Yucatan Times*, December 2nd, 2016 <https://www.theyucatan-times.com/2016/12/google-will-push-three-mexican-start-ups-towards-silicon-valley/>

69 Skye Schooley, “The Power that Small Businesses Wield,” *Business News Daily*, February 21st, 2023. <https://www.businessnewsdaily.com/15359-importance-of-small-business.html>

70 Barry Moltz, “How Large Companies Are Supporting Small Businesses,” *American Express*, September 28th, 2020, <https://www.americanexpress.com/en-us/business/trends-and-insights/articles/how-large-companies-are-supporting-small-businesses/>.

71 Ibid.

72 Ibid.

promote stability and take advantage of the long-term opportunities brought forth by a vibrant local economy. Corporate giant Microsoft established a partnership to stimulate SME growth in Africa, with the help of the United Nations Industrial Development Organization (UNIDO).⁷³ The initiative has three purposes: promoting foreign direct investment in sub-Saharan Africa through the creation of an online portal for foreign investors, creating rural business information centers to provide a range of training programs to improve SME productivity and competitiveness, and enabling UNIDO's entrepreneurship educational curriculum by providing information and communication technology components.

Other large companies, like the Coca-Cola Company, have recognized the importance of small business linkages as part of its organizational culture and as an essential way to capture value at all points along its value chain. The company has found that these linkages allow it to maintain its competitive edge by building relationships with its local retail partners, working with them to accelerate profitable growth, and improve their efficiency and effectiveness. In Latin America, the company has created formal customer development training centers that provide basic business training for more than 20,000 independent retailers at little to no cost.⁷⁴ In East Africa, the local bottler—Coca-Cola Sabco—has trained local entrepreneurs on finance and business topics to establish themselves as distributors.⁷⁵

Linkages in Canada

Small businesses account for an important percentage of the Canadian economy. According to statistics from the Government of Canada, in 2019 over 97.9 percent of the employers in the country were small businesses employing over 8 million individuals in the country or over 68 percent of the total private labor force.⁷⁶ Additionally, in 2019, SMEs contributed to 40.6 percent of the total value of exported goods and over 50 percent of the country's GDP.⁷⁷

In Canada, companies like Shopify, the e-commerce firm that specializes in platforms for online stores and retail point-of-sale systems, helped up to 3,000 small businesses in Toronto to get their online store set up and launch Shopify at no-cost, as part of the city of Toronto's "ShopHere" program.⁷⁸ The company's vice president asserted that the main goal was for business owners to have an omni-channel experience and seamlessly connect offline and online selling capabilities.⁷⁹ Shopify also provided training for business owners in building their online stores. Additionally, Shopify has partnered with the Government of Canada in their "Go Digital Canada" initiative to bring thousands of small businesses online and help them adapt to a digital economy, fast.⁸⁰ Through this partnership,

73 "Working Together to Enable Innovation, Jobs, & Opportunity," *UNIDO and Microsoft*, June 2008, https://www.unido.org/sites/default/files/2008-06/microsoft_Partnership_0.pdf

74 Beth Jenkins et al., "Business Linkages: Lessons, Opportunities, and Challenges," *International Finance Corporation*, 2007, https://www.ifc.org/wps/wcm/connect/f613fc02-ab0b-4bad-8d54-69ff4b04e699/Pub_008_BUSINESS%2BLINKAGES%2BRoundtable%2BReport%2B-%2BFINAL.pdf?MOD=AJPERES&CVID=IK6-286.

75 Ibid.

76 Government of Canada, "Key Small Business Statistics — 2020," *Innovation, Science and Economic Development Canada*, 2020, https://www.ic.gc.ca/eic/site/061.nsf/eng/h_03126.html.

77 Ibid.

78 Shopify, "Shopify Empowering 3000 Small Businesses in Toronto Through ShopHERE Partnership," May 12th, 2020, <https://news.shopify.com/shopify-empowering-3000-small-businesses-in-toronto-through-shophere-partnership>.

79 Ibid. <https://news.shopify.com/shopify-empowering-3000-small-businesses-in-toronto-through-shophere-partnership>

80 Shopify, "Shopify Partners with the Government of Canada for 'Go Digital Canada'" July 15th, 2020, <https://news.shopify.com/shopify-partners-with-the-government-of-canada-for-go-digital-canada>.

Shopify will provide Canadian entrepreneurs the opportunity to develop their online presence, grow their business, and access a variety of resources and tools to build their store online, including step-by-step guidance. Another important partnership has been developed by Rogers Communications, the Canadian communications and media company operating primarily in the fields of wireless communications, cable television, telephone and Internet.⁸¹ The company has teamed up with the Toronto Region Board of Trade to help SMEs in Ontario, through the Recovery Activation Program (RAP), which provides support to SMEs as they evolve and develop a digital transformation strategy.⁸² As part of RAP, Rogers will host a one-hour webcast and three-hour digital certification where SMEs will have access to industry experts to learn more about how they can take their business to the next level, digitally.⁸³ The program has helped over 1,000 Ontario businesses and hosted over 4,000 virtual events free to businesses of all sizes across Ontario.⁸⁴

Linkages in Mexico

There are 4 million SMEs in Mexico that represent 12.4 percent of the gross domestic product and employ 47.2 percent of the workforce.⁸⁵ Given their importance for the national economy, the Mexican government has developed a series of initiatives to support SMEs by strengthening their access to finance, developing programs to assist young entrepreneurs and female entrepreneurs, and establishing programs to strengthen alternative financial instruments such as venture capital for SMEs.

CEMEX, the Mexican multinational building materials company, together with 11 companies including Telefónica, BCG, and Microsoft, launched Restarting Together, a global challenge to encourage startups and small and medium-sized businesses to find innovative projects that will expedite economic recovery and a return to normality after the COVID-19 pandemic. According to the company's website, "*[t]his initiative also looks to identify projects to boost economic recovery in a sustainable way, aimed specially at improving employment, revitalizing the ecosystem.*"⁸⁶ Furthermore, CEMEX Ventures, which is the company's corporate venture capital division, focuses on identifying the startups that are working on solving the challenges of the construction industry, whether they benefit the firms' end of the value chain or others.⁸⁷ They have already invested in 12 startups, which focus on finding new ways of building with modular construction, offer a solution to optimize waste management, provide groundbreaking materials and technologies that are conscious of our environment, promote the safety of the workforce, optimize the supply chain management of their industry, and enhance productivity in the sector.⁸⁸

81 "Rogers for Business teams up with the Toronto Region Board of Trade to support small businesses in Ontario," *Rogers*, May 6th, 2021 <https://about.rogers.com/news-ideas/rogers-for-business-teams-up-with-the-toronto-region-board-of-trade-to-support-small-businesses-in-ontario/>

82 Ibid.

83 Ibid.

84 Ibid.

85 OECD, "Mexico SME Financing," 2020, <https://www.oecd-ilibrary.org/sites/c2314a63-en/index.html?itemId=/content/component/c2314a63-en>.

86 CEMEX, "CEMEX 2020 Integrated Report," 2020, <https://liferayprod-cdn.cemex.com/documents/20143/52528892/IntegratedReport2020.pdf/d7d4abda-2ddd-0809-8902-b09af5114bba?t=1616705081446>

87 Gonzalez Galindo, "Innovation Construction, 12 innovations for the future," *CEMEX Ventures*, July 13th 2021,

88 Ibid.

Another multinational company, Grupo Bimbo, the world's leading baking company, has joined in the efforts of supporting small businesses. The company has developed Red Qiubo— a digital transaction platform that allows small business owners to accept electronic payments using credit cards, debit cards, and food vouchers, as well as offer bill payments and purchases of mobile phone minutes, giving SMEs the technological tools that allow them to increase productivity in their everyday operations.⁸⁹ Through Red Qiubo, Bimbo announced its membership to the “Better than Cash Alliance,” a UN-hosted alliance of governments, companies, and organizations aimed at accelerating the transition to digital payments as a way to drive growth, reduce poverty, and increase efficiency and financial inclusion.⁹⁰ This initiative demonstrates Bimbo's commitment to helping develop small businesses and helping these companies earn greater profits, create jobs, and have an overall positive impact on the Mexican economy. Additionally, by enabling the use of digital payments in small businesses, the company helps improve operational efficiency while also expanding access to financial services for consumers in “mom-and-pop” stores.

Successful Linkages between Large and Small Firms

During the last decade or so we have seen a significant increase in the establishment of investment funds and other programs aimed at start-ups by big corporations. In fact, between 2011 and 2016, the number of active corporate investors tripled in growth from a little more than 300 to 965, with 75 percent of Fortune 100 firms having their own venture capital arm.⁹¹ Mondelez International, formerly Kraft, is among a number of corporations, including Nike, Microsoft, American Express, and PepsiCo, that have invested in start-ups as a key element of their corporate strategy.⁹² To cite another example, Microsoft Ventures (M12) has invested in more than 50 start-ups in 2020, focusing on startups in the artificial intelligence sector.⁹³

These examples have shown the importance and potential benefits of linkages between large and small firms, as a way to foster investment, economic growth, technological advancements, product development and spillovers of know-how. Thus, overcoming the obstacles to these linkages and setting up policies to enable and encourage such linkages are essential to ensure more of these mutually beneficial partnerships are established and carried on successfully in North America.

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89 Grupo Bimbo, “Share In: Grupo Bimbo Joins the Better Than Cash Alliance to Help Small Businesses in Mexico,” July 7th, 2015 <https://www.grupobimbo.com/en/press/releases/innovation/share-grupo-bimbo-joins-better-cash-alliance-help-small-businesses-mexico>.

90 Ibid.

91 Peterson, “Why do large corporations invest in startups?” <https://www.growthcapitalventures.co.uk/insights/blog/why-do-large-corporations-invest-in-startups>

92 Ibid.

93 Ibid.

VIII. Entrepreneurial Environment in North America

A start-up, although hard to define, is considered an entrepreneurial endeavor that consists of a company undergoing the initial stages of its operations. A characteristic of many start-ups is that they are often funded by venture capital thanks to their potential to grow. Many start-ups seek to achieve Unicorn status, which means having a valuation of USD \$1 billion or more.⁹⁴ Under this metric, the North American region has some of the world's most valued unicorns.

When it comes to the number of start-ups, North America has two of the world's leading countries—the U.S. and Canada. The United States ranks as the country with the highest number of start-ups, with approximately 71,000, while Canada ranks fourth with around 3,300 start-ups, surpassed only by India and the United Kingdom.⁹⁵ The United States is home to well-known and not so well-known start-ups. The list includes start-ups that differ considerably in their industry like HackerRank, a skill-based tech hiring platform, Instacart, a grocery delivery company, and Segment, a customer data platform, to mention a few. Meanwhile, Canada is the birthplace of companies such as Windscribe, an online privacy company, Wealthsimple, an investment management platform, and Keyhole, an analytics solution.

While Mexico has fewer startups than its USMCA partners, it does have some very successful ones. These include Bitso, a platform to buy and sell cryptocurrencies, Cornershop, an on-demand grocery delivery service, and Kavak, a platform to buy and sell certified used cars. Because of its socio-political context, and the fact that there are many opportunities for businesses to address a variety of needs, the country offers start-ups an interesting market to grow in through its wide spectrum of industries.

Overall, the entire region has seen an important increase in venture capital and other essential resources necessary for a thriving entrepreneurial ecosystem. However, it faces some challenges like other entrepreneurial ecosystems in the world, such as actually growing through new customers, finding the best talent to do so, and adapting to the new world of work so that employees can thrive.

Entrepreneurial Environment in the United States

Some of the world's most successful start-ups come from the United States, making it one of the most active places in terms of start-up activity. This can be explained, in part, by a number of factors like the availability of talent, venture capital, and other critical resources for start-up success. Paradoxically, although considered a leader in the field, the country has seen how the number of young firms and their share in the job creation process have declined in time. Compared to other OECD countries, the United States ranks third from the bottom in terms of new business formation as of 2013.⁹⁶ Some of the reasons for this include increased market concentration, which affects competition and new startup creation; changes in demographics such as population growth and aging; and access to strategic resources like finance and education.

94 Investopedia, "Unicorn." IIAC Publishing, <https://www.investopedia.com/terms/u/unicorn.asp>.

95 Minaev, "Startup Statistics (2023): 35 Facts and Trends You Must Know."

96 Lisa Abraham and Benjamin Master. "Entrepreneurship in America." *RAND Corporation, Perspectives*, 2018, <https://www.rand.org/pubs/perspectives/PEA1141-1.html>.

Despite this, and although there are many different types of start-ups, these companies in the United States tend to contribute greatly to job creation and innovation processes, the creation and constant evolution of a dynamic business environment, and the possibility of economic mobility across society.

An important aspect to consider when talking about start-ups is opportunity share, which is a new business activity that is the product of opportunity rather than necessity: when it comes to entrepreneurship, motivation, or the reasons for starting a business, matters. Under this lens, it is important to mention that the opportunity share of new entrepreneurs had a sharp decline throughout 2020, mostly explained as a result of the pandemic and the reshuffling of entrepreneurs' needs.⁹⁷ However, when seen from the big picture of entrepreneurship, the story is different.

Over the course of 12 months in 2021, investors put \$329.5 billion into startup investments across all stages, per Crunchbase data. That's a record-setting increase of 92 percent from 2020 levels.⁹⁸

In terms of demographics, there are important aspects to consider when looking at these numbers. Overall, men tend to start more businesses than women.⁹⁹ This trend has been consistent for over two decades and persisted throughout the pandemic. Additionally, it is also important to mention the significant decreases in terms of opportunity shares for racial and ethnic groups, Asians being the group with the largest drop.¹⁰⁰

No matter what the case for demographics is, entrepreneurs will have to deal with some of the common challenges of start-ups all over the world, including sales requirements, like finding more buyers, to managing limited resources adequately to avoid affecting processes and organizational culture.

Entrepreneurial Environment in Canada

Even before the pandemic, Canada was already seen on behalf of start-ups as an attractive place to do business. As of 2019, the availability of VC funds and the prospect of being acquired had made the country an interesting place for start-up entrepreneurs.¹⁰¹ Since then, the Canadian VC market has hit an all-time high according to the Canadian Venture Capital and Private Equity Association (CVCA). This has taken many by surprise, especially after the global events of the COVID-19 pandemic. Much of the increase in VC investment has focused on later-stage and growth equity investments.

Throughout 2021, 14 Canadian tech companies achieved unicorn status.¹⁰² Most of these are located in the software sector. Some of them include 1Password, a password manager; Blockstream, a blockchain technology

97 Kauffman Foundation, "National Report on Early-Stage Entrepreneurship in The United States: 2020," *Kauffman Indicators of Entrepreneurship*, March 2021, https://indicators.kauffman.org/wp-content/uploads/sites/2/2021/03/2020_Early-Stage-Entrepreneurship-National-Report.pdf.

98 Joanna Glasner, "North American Startup Funding Scaled Unprecedented Heights In 2021," Crunchbase, January 2022, <https://news.crunchbase.com/startups/na-vc-startup-funding-2021-recap/#:~:text=An%20astounding%20%24208%20billion%20went,we've%20seen%20to%20date>.

99 Ana de la Rosa, "Breaking Down Barriers: Female Entrepreneurs in Mexico Fight for Gender Equity," *Latina Republic*, November 16th 2021, <https://latinarepublic.com/2021/11/16/breaking-down-barriers-female-entrepreneurs-in-mexico-fight-for-gender-equity/>.

100 Kauffman Foundation, "National Report on Early-Stage Entrepreneurship in The United States: 2020," https://indicators.kauffman.org/wp-content/uploads/sites/2/2021/03/2020_Early-Stage-Entrepreneurship-National-Report.pdf

101 Silicon Valley Bank, "Canada Startup Outlook 2019," *SVB Financial Group*, 2019, https://www.svb.com/globalassets/library/uploadedfiles/content/trends_and_insights/reports/startup_outlook_report/canada/svb-suo-canada-report-2019.pdf.

102 Josh Scott, "SVB REPORTS CANADIAN TECH STARTUPS DREW RECORD \$16 BILLION IN INVESTMENT IN 2021," BetaKit, February 9th, 2022 <https://betakit.com/svb-reports-canadian-tech-startups-drew-record-16-billion-in-investment-in-2021/>

company; Clio, a legal tech company; and Visier, a workforce analytics software provider.¹⁰³ A major trend in the Canadian entrepreneurial ecosystem is the fact that capital investment priorities are changing. In 2019, VC activity was focused on early-stage companies.¹⁰⁴ Meanwhile, in 2020, VC activity was focused on late-stage investments.¹⁰⁵ Additionally, Canadian companies are preparing more for initial public offerings. In the short term, one of the main challenges consists of bringing more funding to the seed stage of start-ups.¹⁰⁶ Nonetheless, it is worth highlighting that foreign players have been investing in the country.

In terms of promising sectors, a survey of Canadian entrepreneurs for the Canadian Start-up Outlook 2019 found that the most attractive areas include Artificial Intelligence (AI), big data, life sciences, and digital health, to mention some of the most important ones.¹⁰⁷

In terms of growth, Canadian start-ups are expected to continue their increasing trend and not slow down any time soon. The growing proportion of young adults as well as immigrants helps explain Canada's rise in new entrepreneurial activity as calculated by the Business Development Bank of Canada.¹⁰⁸ Additionally, it is worth mentioning that as of 2019, its pool of entrepreneurs is seeing an increased number of women pursuing entrepreneurship, along with a more diverse population.¹⁰⁹

Entrepreneurial Environment in Mexico

Mexico has been undergoing a sharp increase in its entrepreneurial activity for some time now, with young adults becoming more and more involved in the entrepreneurial ecosystem. This can be explained in part as a result of the 2008 financial crisis, which hit the country hard and impacted the mindset of young adults. However, despite the positive growth, the country still lags behind when compared to the United States and Canada in terms of the National Entrepreneurship Context Index.¹¹⁰ Nonetheless, it has been positioning itself as an attractive place for different agents of the entrepreneurial ecosystem.

In general, Mexican entrepreneurs can take advantage of their geographical proximity to the United States and Canada, including facilities provided by USMCA. To do so, Mexican entrepreneurs need to step up and not only convince investors of their businesses, but also about the underlying risks associated with their country, especially in terms of security.

There are an important number of Mexican start-ups dedicated to financial technology such as [briq.mx](#), a crowdfunding financial platform; Kubo.financiero, a loan and investment company; and Play Business, a collective investment web ecosystem. Mexico's financial sector has only provided credit cards to 15 percent of the population,

103 Ibid.

104 Meagan Simpson, "Canadian VC Funding Hits All-Time High as Seed Investment Continues to Lag." *Betakit*, November 16th, 2021, <https://betakit.com/canadian-vc-funding-hits-all-time-high-as-seed-investment-continues-to-lag/>

105 Ibid.

106 Ibid.

107 Silicon Valley Bank, "Canada Startup Outlook 2019."

108 Business Development Bank of Canada, "A Nation of Entrepreneurs," *Government of Canada*, 2019, https://publications.gc.ca/collections/collection_2020/bdc/CC143-22-2019-eng.pdf.

109 Ibid.

110 Global Entrepreneurship Monitor, "2020/2021 Global Report from the Global Entrepreneurship Monitor," 2021, .

making this an area of interest for entrepreneurs.¹¹¹ Other sectors that lag behind include the transportation sector and the service industry. Aside from the start-ups already mentioned, some of Mexico's most prominent start-ups include Jüsto, an online supermarket, and Credijusto, a FinTech company that provides financial solutions and credit to companies. Other important areas of entrepreneurship also include real estate, automobiles, and logistics.

When it comes to gender issues, Mexico sees a strong male-dominated entrepreneurial ecosystem.¹¹² In general, women have a harder time finding the same amount of funding as their male counterparts.¹¹³

Obstacles and Challenges for Startups and Entrepreneurs in North America

For the last decade, North America, like other regions of the world, has witnessed a continuous stream of challenges and opportunities for new venture creation and the expansion of later-stage companies. This disruption creates opportunities but also demands adequate resources for start-ups to succeed. Canadian start-ups need to keep the momentum going. With VC funds at an all-time high, companies strive more than ever to prove their valuation to the market. To do this, they will have to keep growing and creating an adequate entrepreneurial ecosystem where start-ups can thrive. In the case of Mexico, companies will need to convince VC investors of their business models and that their investments will be secure despite the country's security issues and uncertainties.

Having access to highly skilled workers is one challenge that start-ups in North American countries will continue to face. The war for talent is one that countries will need to face in order to help start-ups grow. How states decide to support entrepreneurial ecosystems in each of the North American countries and the region as a whole will determine the success or failure of many start-ups in the region. As stated by the 'Entrepreneurship in America' report by the Rand Corporation, start-ups are being tested as a result of the pandemic.¹¹⁴ They need to understand the current context in order to navigate uncertainties and stay afloat.

Incentives and Opportunities for Entrepreneurs and Startups

When it comes to incentives and opportunities, North American countries are no different from others. They need to make sure that the right policies are in place to foster an entrepreneurial environment that is attractive to the different agents involved. This includes not only investors but also entrepreneurs and skilled workers.

Inflation is a major issue that many countries are facing. The measures central banks take to confront it will determine, to a great extent, many of the conditions of the entrepreneurial ecosystem. This can be an opportunity for many start-ups to continue finding financial support, but it will depend mostly on whether states put in place the right incentives.

The pandemic has presented an important turning point for many start-ups, not only in terms of challenges but also of opportunities for businesses. Countries like the US and Canada can take advantage of their developed entrepreneurial ecosystems, while Mexico can thrive if entrepreneurs focus on solving its population's unmet needs.

111 Javier Arreola, "The Entrepreneur's Landscape in Mexico Has Changed," *ConnectAmericas*, *Inter-American Development Bank*, June 7th, 2019 <https://connectamericas.com/content/entrepreneur%E2%80%99s-landscape-mexico-has-changed>

112 de la Rosa, "Breaking Down Barriers: Female Entrepreneurs in Mexico Fight for Gender Equity."

113 Ibid.

114 Abraham and Master, "Entrepreneurship in America." <https://www.rand.org/pubs/perspectives/PEA1141-1.html>

Additional Reading

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IX. Conclusion

A truly, competitive North America will heavily depend on all three nations' ability to harness, revitalize and sustain progress in research and development and innovation; financial and regulatory reforms; significant improvement in the structure, organization and operation of supply chains at present and in the post-pandemic environment; a dependable and continuous supply of workers with both hard and soft skills and higher levels of productivity; better linkages between large and small enterprises, to the benefit of both; and actions by the public, private and non-profit sectors to further build and sustain an entrepreneurial environment for both individuals and firms of all sizes.

Finally, as Mexican economist and former trade negotiator Luis de la Calle asserts: "The future success of North America will depend on deeper regional integration."¹¹⁵ In that regard the USMCA, irrespective of any shortcomings, provides a sound trilateral framework, building on NAFTA, that will strengthen the competitiveness of the region and pave the way for a North America that can achieve success for its public and private sectors and citizens at large.

115 Luis de la Calle, "A truly competitive North America," *The Brookings Institute*, February 2022, <https://www.brookings.edu/essay/usmca-forward-building-a-more-competitive-inclusive-and-sustainable-north-american-economy-competition/>

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