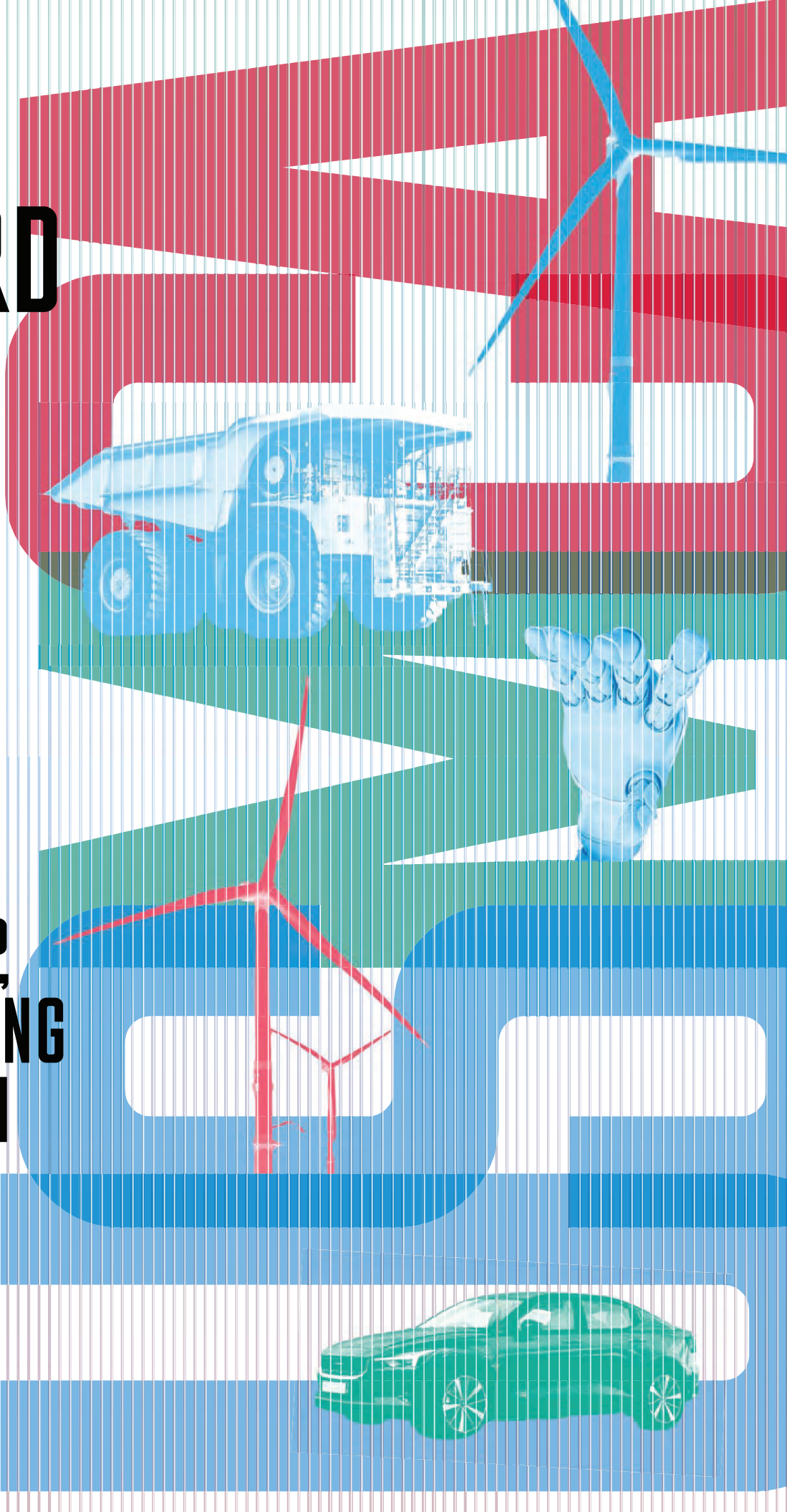
USMCA FORWARD 2025



POWER IN PARTNERSHIP, STRENGTHENING COOPERATION FOR LASTING GAINS

Global Economy and Development at BROOKINGS

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USCMA FOREWORD

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North American economic relations under Trump 2.0

As the United States, Mexico, and Canada begin discussions in the run up to the 2026 review of the United States–Mexico–Canada Agreement (USMCA), we compiled a series of expert papers that sought to identify areas where strengthening U.S. cooperation with Canada and Mexico are needed to achieve key economic and national security goals for the U.S., such as access to critical minerals, development of batteries and electric vehicles (EVs), and strong leadership in AI—and where USMCA reform can help achieve these goals. This report includes chapters that contains scholarly analyses of critical issues, often complemented by "viewpoints", which are opinion pieces from leaders in business, government, or civil society with a stake in the outcome of this agreement.

This report comes at a time when the economic relations between the U.S., Canada, and Mexico are particularly fraught. At the time of print, the U.S. has imposed a 25% tariff on most imports from Canada and Mexico, and Canada and Mexico will retaliate with their own tariffs, with likely escalation from the U.S. This will result in a major trade war among the U.S.' largest trading partners. As former Deputy U.S. Trade Representative in the first Trump administration C.J. Mahoney notes in his contribution to the report, the question is whether the USMCA will even survive 2025.

President Donald Trump claims that these tariffs are needed to address flows of fentanyl and illegal migrants. What is clear is that a 25% tariff will reduce economic growth, diminish jobs, and cut wages, and these economic harms will be magnified by retaliation.[1] A clear winner from a trade war between the U.S., Canada, and Mexico will be China as it undercuts efforts to reshore supply chains away from China into North America. The willingness of the U.S. to

impose tariffs on its largest trade partners will also force U.S. allies and trading partners to reduce their trade reliance on the U.S., including possibly expanding trade and investment relations with China.

While the focus on trade relations with Canada and Mexico since President Trump took office has been relentlessly negative, the actual reality is that trade ties across North America are strong, and exports among the three countries support over 17 million jobs. Canada and Mexico are also emerging as U.S.' key partners when it comes to rebuilding manufacturing and competing with China. Canada and Mexico are the United States' first and second largest export markets with U.S. goods exports to these countries worth around one-third of total U.S. exports. The U.S. is also the largest export market for Canada and Mexico with around 83% of Mexico's exports and 78% of Canada's exports going to the U.S. The trade relationship between the U.S., Canada, and Mexico is underpinned by the USMCA, a comprehensive agreement that President Trump negotiated during his first term in place of North American Free Trade Agreement (NAFTA).

This report focuses on a couple of key areas where deepening cooperation between the U.S., Mexico, and Canada is necessary to rebuild manufacturing and compete with China, particularly around the production of critical minerals, EV manufacturing, and the development of a more digital North America that leads on artificial intelligence (AI), including high-end semiconductor manufacturing. When it comes to critical minerals and EVs, China is currently the global leader, and the release of DeepSeek—a Chinese AI large language model (LLM) that was trained at a fraction of the cost of equivalent U.S. LLMs—has underscored that despite U.S. export controls, China is catching up on U.S.' AI leadership. As this report outlines, building on complementarities across the U.S., Canada, and Mexico is the best strategy for ensuring that the U.S.—and North America as a region—regains and retains its leadership in these key sectors.

This report is particularly timely given that USMCA is up for review next year. Under USMCA, by July 1, 2026, all the parties must agree to extend the agreement for another 16 years. Failure to agree to extend the USMCA in 2026 will lead to annual reviews of the agreement. Should the parties fail to agree to extend USMCA by 2036, the agreement will expire. Failure to agree to extend USMCA in 2026 is therefore not immediately fatal, as there is a 10-year runway before

This report focuses on a couple of key areas where deepening cooperation between the U.S., Mexico, and Canada is necessary to rebuild manufacturing and compete with China.

the agreement expires. However, failure to extend the term in 2026 will create significant uncertainty for businesses, leading to reduced investments across all three countries that will be economically costly and delay the investments needed to develop these industries and compete with China. Indeed, this is what happened during President Trump's first term, when the business uncertainty caused by the renegotiation of NAFTA into USMCA depressed investment in the U.S., Canada, and Mexico.

What has USMCA achieved so far?

USMCA was negotiated by President Trump and came into effect on July 1, 2020. The limited time the agreement has been operational, as well as the existence of phase-in periods for some of the USMCA auto commitments for instance, means that it is too early to assess with certainty the agreement's success or failure. That said, since USMCA came into effect, U.S. exports to Mexico and Canada have increased by 46%. Against this backdrop, the contributors to this report from the three countries and across industry, labor groups, and civil society all see the agreement as a success, if a qualified one, and see the USMCA review in 2026 as an important opportunity to update the agreement to achieve key economic and strategic goals.

When assessing the impact of USMCA compared with NAFTA, particularly in areas where USMCA differed with NAFTA (e.g., autos), the early results are positive. Under USMCA, the local requirements for automobiles to qualify for zero tariffs increased from 62.5% to 75%. The agreement also included a new requirement that 40% to 45% of the vehicles' production must be made by workers earning at least $16 per hour, and 70% of a vehicle's steel and aluminum purchases must originate in North America. A report by the U.S. International Trade Commission on USMCA auto chapter concluded that the agreement has "increased employment, production, revenue, capital expenditures, and profits as a result of ROOs."[2]

Another key USMCA innovation was to include binding commitments on labor standards as well as a rapid response mechanism (RRM) that allows for the U.S. and Canada to initiate complaints with the Mexican government about facilities with specific labor rights violations and apply tariffs to imports from those facilities in the event the labor issues are not resolved satisfactorily. Since USMCA came into effect, the U.S. has brought 32 RRMs against businesses in Mexico in the auto sector mainly, but also in glass, leather, rubber, small arms ammunition, and component parts manufacturing. Almost all of the issues were resolved to U.S.' satisfaction.

As for the case for organized U.S. labor, the USMCA labor commitments have fallen short. AFL-CIO President Liz Shuler in her contribution to the report argues that more is needed to respond to concerns about how trade affects U.S. labor standards and wages. A key concern is when companies threaten to move jobs to Mexico to avoid raising wages and increasing benefits. There is an important debate over the extent in which the USMCA can increase average wages in Mexico. Research and contribution by Santiago Levy for the Brookings USMCA initiative found that the Mexican exporting sector is too small for USMCA to overcome the drag on wages caused by the informal economy in Mexico.[3]

While the overall assessment of USMCA is that it has been a qualified success, the COVID-19 pandemic and the resulting economic developments since then—as well as rising geopolitical tensions with China—have also revealed the limits of the agreement. Moreover, as the U.S. has raised tariffs on imports from China, concerns have arisen about the scope for Chinese products to circumvent these tariffs by entering the U.S. via Mexico and Canada. As Pedro Casas Alatriste from the American Chamber of Commerce of Mexico notes in his contribution, "Mexico must ensure it does not become a productive platform for exporting Chinese goods to the U.S." Indeed, a common theme in this report is how USMCA can be updated to support manufacturing, reduce dependence on China for critical products, and develop more secure and less China-centric supply chains. This includes the U.S., Canada, and Mexico aligning more closely on tariffs on imports from China and similar approaches to screening Chinese investments.

Opportunities for USMCA reform; a more competitive North America

These challenges are also opportunities to review the agreement and update it as needed to further strengthen North American competitiveness. Indeed, Mahoney argues that "the best way to preserve USMCA is for the parties to double down on the project of North American economic integration and competitiveness." In his viewpoint, Marcelo Ebrard Casaubon, Mexico's Secretary of Economy, also emphasizes the importance of sustaining and deepening North American economic relations that strengthen all three countries. Candace Laing, President and CEO of the Canadian Chamber of Commerce, frames the opportunity as developing a North American economic security agenda that would leverage the resources of the three countries to build more competitive and secure North American supply chains and collectively respond to the non-market and unfair trade practices of China. And in her contribution, Judy Marks, CEO and President of Otis Worldwide Corporation, argues that the parties need to assess how USMCA could do more to support an integrated manufacturing platform that ensures North American competitiveness and security.

This year's report focused on three areas where expanding and deepening cooperation between the U.S., Canada, and Mexico are needed, and where USMCA presents an important opportunity to do just that. These areas are increasing mining and refining of critical minerals, developing a North American supply chain for EVs, strengthening the North American technology ecosystem with a focus on expanding semiconductor manufacturing and developing AI.

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Securing the supply of critical minerals and rare earth in North America

Critical minerals and rare earths are key inputs into the production of many technologies, such as batteries, mobile phones, and semiconductors and needed for defense purposes. Judy Marks underscores the importance of critical minerals for producing the technology that forms "the backbone of modern advanced manufacturing industries." This includes what Melissa Barbanell, Director for U.S.-International Engagement at the World Resources Institute, and co-authors Cait O'Donnell, Learning Manager for the Equity Center at WRI, and Briana Fowler-Puja, Research Analyst at WRI, refer to in their chapter as energy transition minerals that are needed for the clean energy transition and used to produce wind turbines, solar panels, EV batteries, and more. As all authors addressing critical minerals note, the challenge for North America is the heavy dependence on many of these minerals from China, particularly when it comes to processing. The Trump administration has also made secure supply chains a focus, and this will require addressing the heavy reliance on China for critical minerals. China's recent announcement that it will restrict exports of various critical minerals to the U.S. in response to U.S.' tariffs further underscores the strategic need for the U.S. to reduce this dependency.[4] Barbanell, O'Donnell, and Fowler-Puja note that the U.S. is 100% reliant on imports of 16 critical minerals, such as graphite, and more than 50% reliant on imports for another 29 critical minerals, including rare earths, zinc, and nickel. About 40% of U.S. imports of critical minerals come from Canada and Mexico. Moreover, the U.S., Canada, and Mexico have largely complementary resources, meaning that U.S. support for the development of critical minerals and rare earths in Canada and Mexico does not compete with U.S.' production but can replace existing dependencies on China. As Jérôme Pécresse, Chief Executive for Aluminum at Rio Tinto notes in his contribution, "there has never been a more important time to demonstrate the benefits of cross-border, resilient supply chains for critical minerals."

Reducing the dependency on China for critical minerals and developing a more North American-centered source of supply is a complex challenge that will require cooperation across North America. Authors Bentley Allan, Associate Professor at Johns Hopkins University, and Tom Moerenhout, Professor and Critical Minerals Lead at Columbia University, make clear that the U.S. alone cannot reduce its dependence on China for critical minerals, and that partnering with Canada and Mexico is needed to expand production and refine many critical minerals and rare earths.

There are already a range of policies in the U.S., Canada, and Mexico aimed at expanding extraction and refining critical minerals and rare earths. The current tax incentives to develop critical minerals in the Inflation Reduction Act (IRA) have helped, as well as the Biden administration's use of the Defense Production Act to support early-stage mining and 25% tariff on imports of critical minerals from China. In Canada, Prime Minister Justin Trudeau launched a $3.5 billion Critical Mineral Strategy that funds development of critical minerals. Mexico has increased mining of lithium and copper but a ban by former President Andrés Manuel López Obrador on private investment in lithium mining along with risks from organized crime have slowed investment into this sector in Mexico. The U.S. and Canada have a bilateral Joint Action Plan on Critical Minerals which Moerenhout describes as "notable for its scope but results have remained largely aspirational" with small co-investments into expanding cobalt and graphite mining. The reality is that despite these policies, investment across North America

into critical minerals supply chains is too limited and has not addressed what Moerenhout calls "the structural dependencies on China." For instance, the large new investments needed for mines and refining capacity require long periods of price certainty, yet existing policies have failed to address price uncertainty in the market caused by the risk of being undercut by subsidized Chinese production. New policies are therefore needed if North America is going to incentivize the needed investment and development of know-how to expand production of critical minerals and rare earths. This includes reforming USMCA to create new incentives for companies to invest in mining and refine these minerals.

Contributions to this report from Tom Moerenhout, Bentley Allan, Melissa Barbanell, Cait O'Donnell, Briana Fowler-Puja, and Leila Aridi Afas include a range of recommendations for updating the USMCA to overcome the challenges in expanding mining and refining of critical minerals. For example, Allen argues for establishing a North American Critical Minerals Club, and Leila Afas from Toyota suggests a Strategic Critical Minerals plan. In each case, the authors identify the need for the U.S. to work closely with Canada and Mexico and other allies to increase supply and guarantee demand for critical minerals as well as minerals for next generation technologies such as iron nitride magnets and perovskite solar cells. The following summarizes the key policies that could make a difference when it comes to expanding North American mining, refining critical minerals, and reducing dependencies on China:

- Apply a common North American tariff against imports of critical minerals while guaranteeing tariff-free trade within North America and be open to expanding this club to additional allies.

- Agree on a list of key critical minerals in calculating regional content values under USMCA and for tax purposes.

- Align remedies (anti-dumping and countervailing duties) and investment screening for mining, processing, and refining operations.

- Harmonize subsidies for investments into critical minerals and support co-investment.

- Stabilize prices for critical minerals with either long-term purchase agreements or contracts for difference that shares risk between the government and the investor.

- Joint procurement to create secure offtakes for mines.

- Develop common and high labor and environmental standards, building on the USMCA labor and environmental standards.

- Improve traceability of critical minerals to identify where they are being mined and processed to help understand progress in reducing dependencies on China and ensure that minerals being imported are not undermining North American environmental and labor standards.

- Share North America geological survey data. So far, the U.S. has led the establishment of the Critical Minerals Mapping Initiative that includes Canada and Australia, but not Mexico.

- Consider stockpiling critical minerals in response to China's use of export restrictions on critical minerals.

- Support recycling minerals across their lifecycle, which can reduce the need to open new mines in the first place, reduce dependence on China, and minimize the negative environmental impacts from mining.

- Update the Defense Production Act to streamline approvals and raise the budget cap for critical minerals project of acute national security concern to enhance the Department of Defense's ability to invest in strategic projects.

Building globally competitive EVs in North America

NAFTA and now USMCA has supported the development of an integrated and globally competitive autos supply chain across North America. This means for example that about 50% of the content of cars assembled in Canada comes from the U.S. In her chapter, Diana Páez at the University of Michigan's William Davidson Institute picks up on the importance of access to critical minerals with a focus on EVs. China has also emerged as a dominant producer of EVs and currently produces around two-thirds of the world's EVs and 85% of global battery cell production. As Páez explains, when it comes to EVs, the battery is the key technological innovation, and batteries require access to critical minerals. The transition to building EVs will need a North American effort that requires some retooling of existing internal combustion engine (ICE) capacity as well as new investments across the three countries. This will include more investments into development of batteries as well as investing in the infrastructure to support EVs such as charging stations. Since the conclusion of USMCA, Toyota made a $14 billion investment into battery manufacturing in the U.S.—the largest investment in a single place that Toyota has made anywhere in the world. The IRA, with its consumer tax credit tied to local content criteria for critical minerals and battery components has further supported development of an integrated North America EV supply chain. However, Páez notes that it will take several years for these investments to come online, and the problem of reliance on China for critical minerals when it comes to battery production remains to be resolved.

Páez, as well as Shuler argue that the upcoming USMCA review presents a key opportunity to update the agreement to support the development of an EV supply chain in North America. Key recommendations for achieving this are the following:

- Establish a North American Auto Dialogue to take stock of impact of agreements on autos and the transition to EVs.

- Harmonize EV standards across North America to support an integrated EV supply chain.

The upcoming USMCA review provides an opportunity for the U.S., Canada, and Mexico to assess the interoperability of their still developing approaches to AI regulation and alignment of their export controls.

- The three countries should develop flagship projects across the EV supply chain to signal commitment to developing EVs and testing new technologies. This could include expanding binational charging corridors such as ones that already exist between Michigan and Ontario and San Diego and Tijuana.

- Develop a North American approach to reskilling workforce. The work so far on developing a semiconductor workforce could be a model for doing something similar for EVs.

- Agree on a common approach to China when it comes to EVs. In addition to aligning on EV tariffs, more is needed to increase the competitiveness of the North American auto sector and should include trade agreements that also expand market access for U.S. EVs.

Securing leadership in AI

In a co-authored chapter by Claudia Del Pozo and Daniela Rojas of the Eon Institution in Mexico and a chapter by Paul Triolo at DGA Group, these authors address how cooperation across North America can strengthen the U.S.' goal of retaining global leadership in AI. Under President Biden, the goal, when it comes to competition over AI with China, was to maintain as large a lead as possible.[5] President Trump has stated that the U.S.' goal is to "sustain and enhance America's dominance in AI to promote human flourishing, economic competitiveness, and national security."[6] The importance of AI for enhancing manufacturing efficiency and reducing costs was also underscored by Judy Marks. Sustaining U.S.' AI leadership also requires reducing U.S.' dependence on Asia for high-end semiconductors used to train advanced AI models, as well as reducing Chinese access to high-end semiconductors through stringent export controls. As Del Pozo and Rojas note, Taiwan's TSMC produces over 90% of the world's advanced AI chips. Canada and Mexico will be important partners when it comes to AI leadership and in building a globally competitive semiconductor manufacturing capacity in the U.S.

The Chips and Sciences Act (CHIPS Act) made available $50 billion in funding, of which over $33 billion has been allocated to leverage an additional $450 billion in private investment into semiconductor manufacturing across the U.S., creating an estimated 115,000 jobs.[7] The CHIPS Act included $500 million for the International Technology Security and Innovation Fund to facilitate collaboration with international partners to enhance global semiconductor supply chain security and diversity. As Triolo describes it, Mexico and Canada will help the U.S. meet

its goals when it comes to building semiconductor manufacturing capacity and supply chains in North America. The work here has begun with an assessment of Mexico's semiconductor regulation and workforce needs. The U.S. government has then led the development of workforce training programs in collaboration with U.S. universities and the private sector.

A related issue here is building data centers that use advanced semiconductors to train AI and for inference. Sourcing energy for data centers will be an issue that will require more attention. This is where energy policy intersects with AI and is another area where the three countries can cooperate to secure the clean energy needed to power data centers for AI.

The upcoming USMCA review provides an opportunity for the U.S., Canada, and Mexico to assess the interoperability of their still developing approaches to AI regulation and alignment of their export controls. For instance, the AI diffusion rule that the Biden administration published in January 2025 limits U.S. exports of cutting-edge semiconductors with licensing exceptions for allies such as Canada, but not Mexico, thereby subjecting Mexico to a range of restrictions in terms of access to advanced computing chips.[8] Del Pozo and Rojas suggest that exception be extended to Mexico, which would be subject to Mexico developing appropriate AI regulation, including ones on export controls and semiconductors. Looking towards USMCA review, the authors propose several ways the agreement can be updated to support AI:

- Agree to continue USMCA and avoid 25% tariffs on trade across North America, which would raise costs and undermine the development of a semiconductor supply chain across North America.
- Align on AI regulation, privacy policies, and cybersecurity to enable the free flow of data across North America and as key building blocks for AI.
- Agree on a common approach to IP standards for AI.
- Develop more systematic AI training measures, including increasing mobility of AI talent across North America.
- Develop common guidelines for creating trustworthy and responsible AI.
- Facilitate cross-border trade in oil, gas, and electricity to support data centers for AI.

Conclusion

The future of USMCA is once again uncertain as President Trump threatens Canada and Mexico with 25% tariffs on their imports. However, these tariff threats point to a more essential challenge for the U.S., Canada, and Mexico, which is how to reform USMCA to build an enduring foundation for trilateral economic relations. The USMCA, as a replacement for NAFTA, included important reforms. But it was not the final destination. To understand what an enduring trade agreement would look like, it is important to state the economic challenges USMCA is trying to solve. For the

USMCA rules that increases investment into manufacturing in North America, such as the agreement's tighter auto rules of origin (ROOs), is a win for everyone.

U.S. at least, the challenges are addressing rising income inequality and reversing the decline in manufacturing that has traditionally been a source of middle-class jobs for blue collar workers. Rising geopolitical competition with China and the COVID-19 pandemic also highlighted for the U.S. that depending on China for key products is an economic and national security risk.

The USMCA is but one tool to address these challenges, but it is an important one. To understand what role USMCA can play, it is important to see the big picture. The U.S. economy is operating at close to capacity. The U.S. has a very low unemployment rate of around 4% and rising labor force participation rate at around 63%. The bottom line is that the U.S. does not have a large labor surplus. This means that efforts to significantly expand manufacturing in the U.S. as a share of GDP will run up against labor shortages. In effect, expanding manufacturing in some sectors will lead to contractions in other sectors of the economy. This is merely another way of stating the obvious point that the U.S. cannot manufacture everything. One solution has been to build trade and investment linkages with Canada and Mexico, giving U.S. industry access to a larger workforce and creating new opportunities to expand manufacturing in the aggregate. This means that if the U.S. is serious about reducing reliance on China and developing more secure supply chains, then more manufacturing will have to happen in the U.S. and also in Mexico and Canada.

Given the reality that more trade with Canada and Mexico is indispensable, the U.S. needs to determine which manufacturing it wants within its borders. Yet, since a lot of manufacturing in North America is part of a broader supply chain, increasing manufacturing in Mexico or Canada often relies on significant U.S. inputs, increasing manufacturing and jobs in the U.S. For instance, research for the Brookings USMCA initiative by Luz María de la Mora, former Mexican Undersecretary for Trade, showed that almost 50% of Mexico's intermediate goods imports come from the U.S., and the U.S. accounts for around 14% of Mexico's exports to the world.[9] In other words, increasing Mexico's manufacturing and trade also grows the U.S. manufacturing base. This means that USMCA rules that increases investment into manufacturing in North America, such as the agreement's tighter auto rules of origin, are a win for everyone.

In order to expand trade and investment ties across North America in the pursuit of more secure supply chains and less dependence on China, the U.S. must address the ongoing challenge of ensuring trade with Mexico does not put downward pressure on the U.S.' environmental and labor standards. When it comes to labor standards, the USMCA labor chapter and RRM were

important first steps in addressing this issue, but more is needed. USMCA can raise standards in Mexico's exporting sector, and experience with the RRM points to where further reform of the RRM is needed.[10] But other actions beyond the USMCA will be necessary. This includes implementing Mexico's labor reforms and reforming its social security regulations that have pushed the labor force into the informal sector where wages and productivity are lower. These are just a couple of examples of how trade agreements—along with other complementary domestic legislation—are often needed to effectuate economy-wide changes.

The USMCA is up for review in 2026. This requirement was put into place to ensure that the agreement was regularly reviewed, and if necessary, updated. As part of the review, President Trump has made it clear that he wants to renegotiate the agreement. It was also likely that a second Biden administration would also have pushed for extensive reforms of the USMCA. This political consensus on the need for USMCA reform reflects underlying economic challenges that have persisted since the agreement's inception. While another USMCA renegotiation creates uncertainty, this upcoming renegotiation presents perhaps the best opportunity to strengthen the trilateral trade relationship. Indeed, a successful USMCA renegotiation could be the most important economic policy outcome for the Trump administration. Not only could it stabilize relations with its two largest trading partners, it would present a foundational model for competing with China—U.S.' single most important foreign policy and national security challenge—and serve as a template for international trade relations with other countries as well.

This report provides a range of recommendations on where USMCA reform is needed. The report also points to a range of other policies that are needed if the U.S. wants to truly decrease its dependence on China for critical minerals, expand production of globally competitive EVs, and remain a leader in AI.

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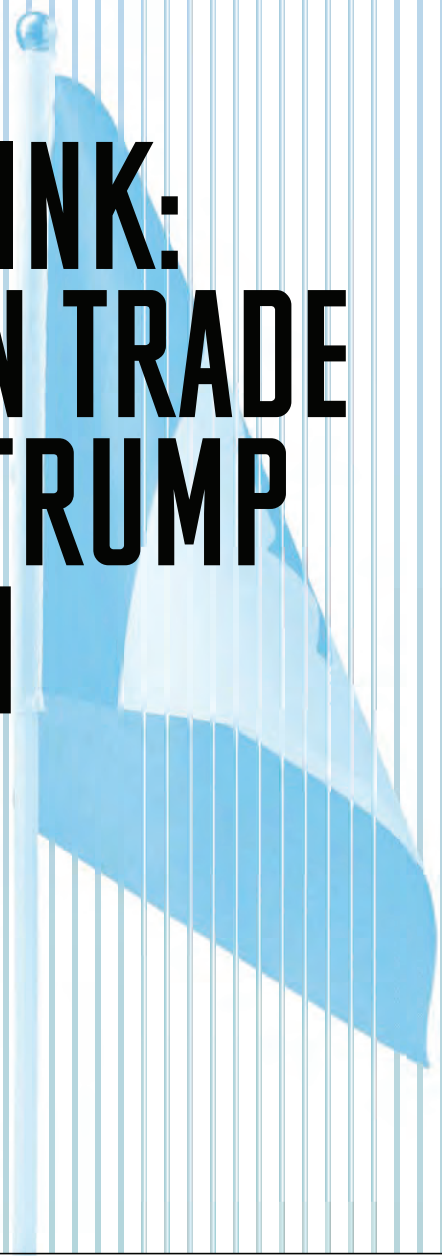
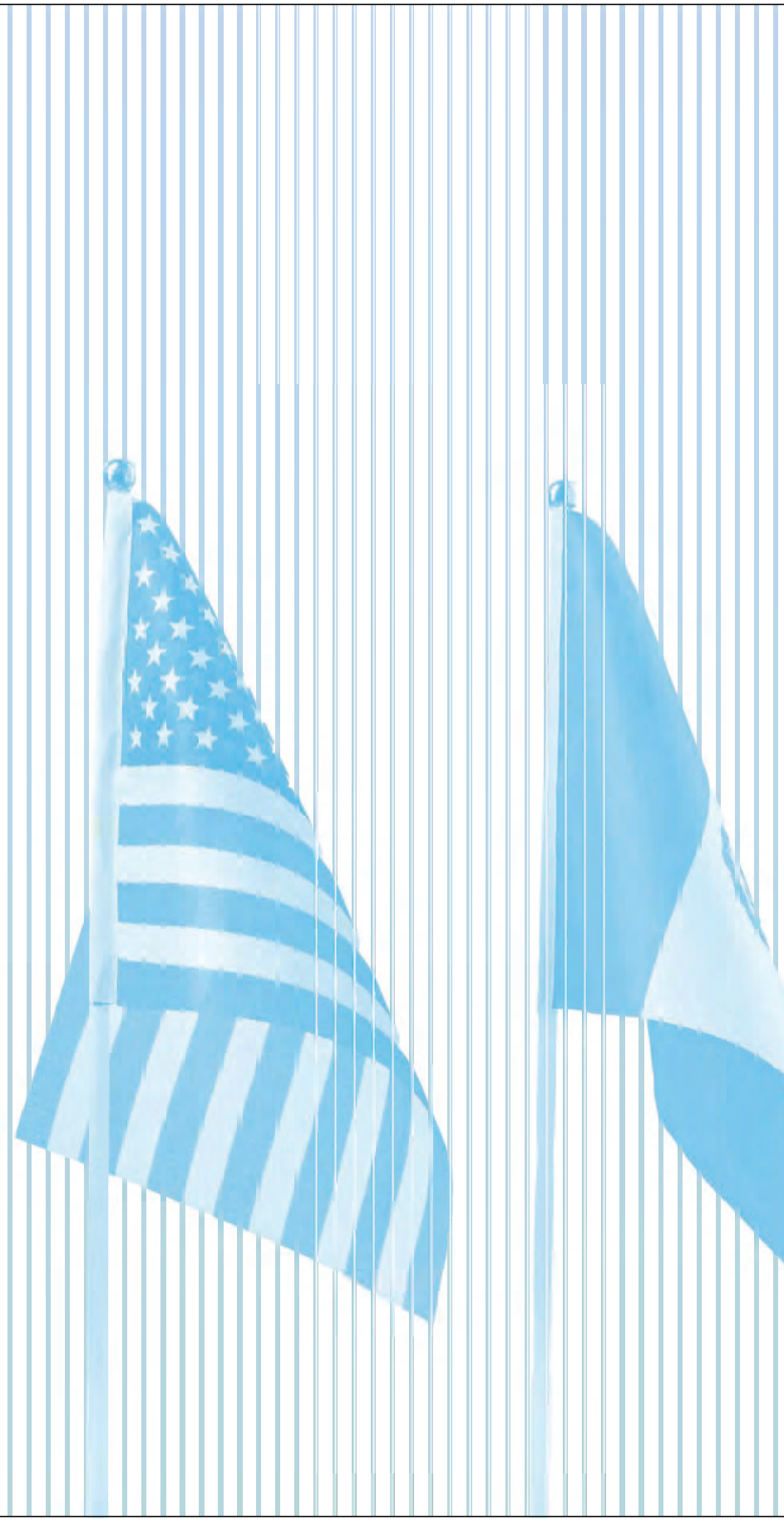
1

BACK TO THE BRINK: NORTH AMERICAN TRADE IN THE SECOND TRUMP ADMINISTRATION





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FORMER DEPUTY USTR, AND CORPORATE VP AND DEPUTY GENERAL COUNSEL, CLOUD + AI | MICROSOFT

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Not long ago the key question on the minds of North American trade watchers was whether the United States-Mexico-Canada Agreement (USMCA) would be extended when it comes up for renewal at its six-year anniversary in July of 2026. In the aftermath of President Donald Trump's historic return to the White House, and his recent decision to impose 25% tariffs on most imports from Canada and Mexico, the question now is whether the agreement will survive 2025.

In one of his first acts after being elected to a second, nonconsecutive term in the Oval Office, President Trump posted a message to his Truth Social platform threatening Canada and Mexico with 25% across-the-board tariffs unless they take steps to stop the flow of people and fentanyl across the Southern and Northern Borders. A hasty pilgrimage to Mar-a-Lago by Prime Minister Justin Trudeau and a major fentanyl bust by Mexican authorities seemed to ease tensions. Yet hours after his second inaugural ceremony concluded, President Trump renewed the threat. And on February 1, he invoked his authority under the International Emergency Economic Powers Act (IEEPA) to impose sweeping, double digit tariffs on the United States' top two trading partners. Canada and Mexico quickly announced stiff retaliatory measures. As of this writing, a temporary truce appears to have been reached, at least delaying a North American trade war more intense than any on the continent since the 1930s.[2]

Until recently, the Canadian and Mexican governments expected to defer serious trade talks with the United States until 2026 when the USMCA renewal process is set to begin. They (and many in the U.S. business community) hoped the renewal talks would be more akin to a genteel college reunion than a high-stakes brawl of the kind they experienced during the original USMCA negotiations. That uncertain and exhausting experience was a major drag on the economies of Canada and Mexico, and the reason both countries insisted there be at least six years between the agreement's entry into force and the first renewal deadline. Their negotiators surmised that, regardless of what happened in the 2020 election, the concessions made in USMCA would buy peace for the duration of the Trump era. It was a reasonable judgment at the time—but one that failed to account for the wildly improbable arc of Donald Trump's political fortunes.

In the aftermath of President Donald Trump's historic return to the White House, and his recent decision to impose 25% tariffs on most imports from Canada and Mexico, the question now is whether the agreement will survive 2025.

Even before the February 1 announcement, there were indications the renewal talks would be more, not less, difficult this time around. Unlike in the first round of USMCA negotiations, the agenda likely will go beyond traditional trade disciplines to include migration, drug interdiction, and possibly in the case of Canada, defense spending. That is in addition to the usual recipe of vexing trade irritants like tomatoes and milk and new grievances arising from USMCA itself like the parties' interpretation of the auto rules of origin and Mexico's implementation of its 2019 labor reform law.

And this assumes the renewal negotiations will take place at all. If the parties fail to reach a long-term agreement to remove the IEEPA tariffs, whether to extend USMCA may be the least of their concerns. After a few cycles of tit-for-tat retaliation and counter retaliation, President Trump might up the ante by attempting to withdraw the United States from USMCA all together, as he threatened to withdraw from the North American Trade Agreement (NAFTA) in his first term. Such a move would be met with legal challenges in the United States. But even if USMCA does not officially die, at some point, tariff barriers will shift trade patterns and render the agreement dead letter.

The situation is precarious to say the least. Whether it is hopeless depends on whether the parties can defuse the instant tariff imbroglio and turn their focus to the long term. The best way to preserve USMCA is for the parties to double down on the project of North American economic integration and competitiveness. That means Mexico City and Ottawa must disavow any interest in allowing countries outside North America to free ride off the agreement by transshipping goods to the U.S. market through Mexico and Canada. It also means they must more closely align their own tariff, investment, and industrial policies with Washington's. But a successful conclusion to the negotiations also will require the Trump administration in the end, to take "yes" for an answer and offer something other than a temporary respite from future tariff threats. Mexico and Canada's price for agreeing to the Trump administration's demands will be the promise of an enduring peace.

Sunset and other scenarios

The purpose of USMCA's renewal and extension, or "sunset" provision, was twofold: To create an opportunity for the parties periodically to reassess and update the agreement and to give each party (but, in all candor, mostly the United States) leverage to force changes to the agreement without threatening immediate withdrawal. Every six years, each party must provide notice that it wishes to extend the agreement by an additional 16 years. Thus, if the three parties each agree to an extension by July 1, 2026 (the first six-year anniversary of the agreement's entry into force), the agreement will be extended until 2042. If they fail to agree, a clock will start to tick toward USMCA's eventual termination in ten years at the end of the original 16-year term (i.e., 2036). The ten-year wind-down period was thought to be short enough to force action in the near to medium term, but long enough to avoid premature disruption and negative market reactions (at least in the initial period following the failure to renew).

But there is nothing to prevent President Trump from forcing negotiations with Mexico and Canada well in advance of the 2026 deadline as news reports suggest.[3] He can do so in two ways—unilateral trade actions and threats of immediate U.S. withdrawal from USMCA.

The Trump administration just pulled the first lever by imposing the IEEPA tariffs. The Executive Order the White House issued on February 1 provides not only for 25% tariffs but also for additional measures to counter retaliatory actions by Canada and Mexico.[4] The administration has argued the IEEPA tariffs are allowed under Article 32.2 of USMCA, which provides that nothing in the agreement shall "preclude a Party from applying measures it considers necessary . . . for the protection of its own national security interests." This exception was intentionally broadened under USMCA to encompass all "essential security interests," a significant expansion of the corresponding exception under NAFTA, which defined "essential security" with reference to "traffic in arms," activities "taken in time of war or other emergency in international relations," or "non-proliferation of nuclear weapons."[5] That the parties removed the illustrative examples in USMCA suggests an intent to broaden what constitutes an "essential security" interest.

Mexico and Canada likely disagree with President Trump's invocation of the exception, but they have no effective remedy to reverse the action. The United States has long maintained that a party's invocation of the "essential security" exception—a feature of all U.S. trade agreements—is self-judging. Even if Mexico and Canada attempted to put the matter before the USMCA dispute settlement panel and prevailed, it is unlikely the Trump administration would comply with the ruling—just as the Biden administration refused to comply with a World Trade Organization (WTO) dispute settlement panel's decision that extant Section 232 tariffs on steel and aluminum were not justified by the essential security exception to the WTO rules.[6]

If the IEEPA tariffs eventually come into effect, USMCA may survive in theory but could quickly become irrelevant in practice. Duty-free trade is the defining characteristic of comprehensive trade agreements. It is hard to imagine a scenario in which the parties would take any of their obligations under the agreement seriously in the face of sustained, double-digit duties on all or most U.S. imports from Mexico and Canada (along with stiff retaliatory duties on North and Southbound U.S. exports).

At some point President Trump may formalize the demise of USMCA by attempting to withdraw the United States from the agreement altogether. Article 32.6 of USMCA provides that any party can withdraw at any time with six months' notice. Whether the President can terminate a trade agreement unilaterally without a vote of Congress is an unsettled question of U.S. law.[7] Any attempt by President Trump to initiate a U.S. withdrawal from USMCA without Congressional acquiescence thus would kick off a high-stakes litigation battle that most certainly would end up in the Supreme Court. But even if the Court ultimately were to rule against the President, the attempted withdrawal still would have major repercussions in the months (if not years) it would take for the litigation to make its way to the nation's highest court—the intervening disruption and uncertainty would be especially severe for Canada and Mexico whose economies are heavily dependent on trade with the United States.

Grading USMCA

In determining how to change (or whether to save) the agreement, the natural starting point for the new administration is to assess whether it has achieved the objectives the first Trump administration pursued in the original negotiations. Judged by the most important metrics—investment, jobs, and increased supply chain resiliency—the agreement has been a success. A modest one so far, but a success, nonetheless.

In its latest report on the performance of USMCA's auto chapter, the U.S. International Trade Commission (ITC) found that the tightening of rules of origin resulted in lower U.S. imports of motor vehicle engines and transmissions from non-USMCA countries and increased U.S. employment, wages, capital expenditures, and revenue for U.S. producers of engines and transmissions. There were smaller but still positive effects for producers of light vehicles.[8] A report authored by the Biden administration's U.S. Trade Representative endorsed the

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ITC's findings, concluding that "the USMCA has had a positive economic impact on the U.S. and North American auto industry"; "Automakers and parts suppliers have invested billions of dollars in new production"; and, as a result, "the automotive [rules of origin] have been positive for U.S. employment, wages, capital expenditures, production, and profits."[9] This was all despite the fact that the agreement's early years coincided with a once-in-a-generation pandemic, record inflation, and a dramatic surge of Chinese auto exports into the global marketplace. And, critically, these are only the preliminary results—the USMCA rules of origin will not be fully phased in until later in 2025 when the thirteen auto companies who received temporary reprieves from meeting the stringent regional content thresholds must come into full compliance.[10]

Critics of USMCA often point out that it has not reduced trade deficits between the United States and the rest of North America. This is true, but even if the focus is on trade deficits alone, the agreement is hardly a failure. For starters, it is important to view the $1 trillion plus U.S. trade deficit in the context of the broader global economy. The world's major trading economies essentially divide into two camps—those with large, persistent trade deficits (namely the United States, the United Kingdom, and Australia) and those with large, persistent trade surpluses (namely China and Germany).[11] Persistent imbalances run contrary to classical economic theory, which holds that trade imbalances will force currency adjustments, which in turn, lead to balanced trade between nations over time. In recent years there has been a rising chorus of concern about global trade imbalances that includes not only President Trump supporters like former U.S. Trade Representative Robert Lighthizer,[12] but also President Biden's Treasury Secretary Janet Yellen[13] and the economist Michael Pettis.[14] Pettis has argued that fiscal and industrial policies in large surplus countries cause major distortions in the global economy that inure to the detriment of both U.S. workers and the country's industrial base.[15]

Whatever the merits of this critique, Canada and Mexico are not major contributors to global trade imbalances. Although it maintains a sizeable bilateral trade surplus with the United States, Mexico has run an overall trade deficit for most of the last three decades.[16] Canada's trade balance was negative in 2023 and has been for most of the past two decades.[17]

UNITED STATES-MEXICO TRADE IN GOODS ($ BILLIONS)

	Exports	Imports	Trade Balance	Deficit as a percentage of two-way trade
2020	213	323	-111	21%
2021	277	383	-105	16%
2022	324	452	-128	16%
2023	323	475	-152	19%
2024	334	506	-172	20%

Source: U.S. Census

UNITED STATES-CANADA TRADE IN GOODS ($ BILLIONS)

	Exports	Imports	Trade Balance	Deficit as a percentage of two-way trade
2020	256	270	-14	3%
2021	310	357	-48	7%
2022	359	437	-78	10%
2023	354	419	-64	8%
2024	349	413	-63	8%

Source: U.S. Census

Even if one views the bilateral trade deficits with Canada and Mexico as the sole measure of USMCA's success vel non, the trade flow data since entry into force (set forth in the chart above) are hardly damning when viewed in proper context. The U.S. goods deficit with Mexico rose by $61 billion between 2020 and 2024, an increase of 55%. But those figures are in nominal, not real, dollars and critically, this period coincided with historically high rates of inflation in the United States. Cumulative inflation rose by over 20% during this period[18]—meaning that inflation alone accounted for nearly 40% of the growth in the trade deficit.

It is also important to understand that while the size of the U.S.–Mexico trade deficit is not insubstantial at $172 billion in 2024, the overall trade relationship is far more balanced than, say, the U.S.–China relationship, and has become slightly more so since USMCA's entry into force.

The U.S. goods trade deficit with Canada rose more sharply during the same period—from $14 billion to $63 billion. But the overall trade imbalance remains modest considering the overall volume of two-way goods trade (some $761 billion in 2024) and represents a miniscule 0.2% of U.S. GDP.[19] Moreover, the entire increase in the goods trade deficit is attributable to a spike in energy imports, primarily crude oil.[20] The U.S. historically has been a net importer of Canadian energy—which makes sense given Canada's vast reserves and the United States' significantly larger population. Especially if one adds the large annual services surplus the United States runs with Canada (nearly $27 billion in 2022),[21] the U.S. would have a healthy trade surplus with Canada but for the deficit in energy trade.[22]

Canadian oil imports are hardly a threat to U.S. jobs or economic dynamism. To the contrary, this energy supply fills a critical need. Although the United States has ramped up domestic oil production in recent years (enough to become a net oil exporter), most of the new wells produce light crude oil, not the heavy crude much of America's aging refinery network is designed to process.[23] Imports of heavy crude from Canada help meet demand and also reduce U.S. dependency on oil from politically volatile suppliers like Venezuela and countries in the Middle East.

It is also important to note that the post-NAFTA trading relationship between the United States and its neighbors has evolved at the same time as U.S. trade shifted away from China.

It is also important to note that the post-NAFTA trading relationship between the United States and its neighbors has evolved at the same time as U.S. trade shifted away from China. Since USMCA's entry into force, Mexico and Canada have displaced China as the United States's top trading partners.[24] China's overall share of U.S. imports has dropped to a 20-year low.[25] The shift away from China was bound to increase U.S. trade with other suppliers, Mexico in particular. And that is not a bad thing for the United States. Mexican assembly facilities source large portions of parts and components from the United States.[26] Moving production from Asia to Mexico also makes supply chains less vulnerable to shocks from, for example, a potential conflict in the South China Sea. Indeed, supply chain resiliency was one of the major reasons we devoted so much time and negotiating capital to strengthening the regional content requirement for autos—the first Trump administration sought to prevent transshipment of parts through Mexico to evade the tariffs President Trump imposed on China pursuant to Section 301 of the Trade Act of 1974.[27]

Whether and to what extent we succeeded in that regard is a different question—and likely will be a key point of discussion in the renewal talks. Mexico's imports of Chinese auto parts have risen threefold since 2020;[28] Chinese foreign direct investment in China has more than doubled in roughly the same period.[29] And while the 25% Section 301 tariff on Chinese autos has meant the United States has not experienced the surge of Chinese EV imports that threatens the European auto industry,[30] Chinese EV companies reportedly are exploring investments in assembly plants in Mexico to access the U.S. market.[31] Even if the cars produced in those facilities did not contain sufficient regional content to qualify for duty-free treatment under USMCA, the United States' 2.5% most-favored-nation (MFN) tariff on autos might not prevent Chinese EV companies operating in Mexico from taking a significant share of the U.S. market.

The problem, however, lies not in the rules of origin but in the relatively paltry MFN tariff. That was the key constraint the U.S. negotiating team faced in the USMCA negotiations. If the cost to comply with rules of origin exceeds the tariff benefit, auto companies will pay the MFN duty rather than bear the costs of compliance. As it is, the number of U.S. auto imports from Mexico that do not comply with USMCA's content requirements (and thus are subject to duties) increased from 0.5% in 2019 to 8.2% in 2023.[32] If the USMCA rules—already the most stringent of any trade agreement—had been tightened even further, the result likely would not have been more regional content in the North American auto supply chain but less duty-free trade on the continent.

The path forward

None of this is to suggest the agreement is flawless and cannot be improved. Indeed, the magnitude of change in the five years since the USMCA negotiations concluded in late 2019 vindicates President Trump's insistence on including a sunset provision in the agreement in the first place. The pandemic exposed the fragility of global supply chains. China has become one of the world's leading exporters of automobiles, helping to push its trade surplus with the world to record levels.[33] Developments in artificial intelligence (AI) are driving new demand for energy and have led the U.S. to tighten export controls in an attempt to stymie China's AI ambitions. NATO support for Ukraine in the aftermath of Russia's invasion has strained munitions supplies and brought renewed scrutiny on NATO members—like Canada—that are not meeting their commitment to spend at least 2% of GDP on defense.[34] A spike in migration across the southern border during the Biden administration sparked a political backlash in the United States that in turn, helped fuel the Trump restoration.

The USMCA renewal negotiations offer the United States an opportunity to enlist the support of Mexico and Canada in addressing each of these challenges. The parties could take steps to further incentivize the reshoring of supply chains to North America by establishing common external tariffs, which in addition to discouraging transshipment, may make it possible to make customs procedures less burdensome. The parties seem headed in that direction already—Canada[35] and Mexico[36] both have announced new tariffs on Chinese imports in the last year. The parties could agree on common rules on foreign direct investment, particularly in the auto sector. They could make coordinated investments in critical minerals and other essential linkages in supply chains.

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The USMCA negotiations succeeded, in part, because the negotiators were successful in keeping the talks focused on traditional trade domains. That seems impossible this time around. With the IEEPA tariffs, President Trump already has deployed a trade tool (tariffs) to address non-trade related issues (migration and narcotics). Even if the Trump administration was content to compartmentalize these issues, Mexico and Canada will not assent to U.S. demands for major changes to the USMCA unless the threat of future tariffs abates.

While the Trump administration likely will not forgo the use of IEEPA and Section 232 for all time, it could take steps short of that to assuage Mexico and Canada's concerns. The USMCA negotiations offer an instructive precedent. After having invoked Section 232 to impose tariffs on steel and aluminum imports, including from Mexico and Canada, in 2018 President Trump instructed then-Secretary of Commerce Wilbur Ross to begin an investigation that could have led to Section 232 tariffs on auto imports. The tariffs were never imposed (indeed, the Trump administration never issued the report, which only came to light after Congress forced the issue during the Biden administration). But the episode spooked Mexico and Canada and led them to insist on a tariff ceasefire as a condition of closing the USMCA negotiations.[37]

The vehicle for providing such assurances was a side agreement with Canada and Mexico governing the use of future Section 232 tariffs on autos. The Trump administration did not abandon the possibility of imposing such tariffs entirely. But it agreed to give Canada and Mexico 60 days' notice[38] before doing so and further agreed to exempt a certain number of imported automobiles.[39]

The parties might craft similar instruments to address different scenarios under which the United States might use Executive tariff authorities in the future. The United States might, for example, agree not to impose new duties in exchange for verifiable commitments on migration (in the case of Mexico) or defense spending (in the case of Canada). Canada and Mexico might obtain exemptions from a new U.S. global tariff[40] the administration is contemplating so long as they take measures to stop transshipment. Such accommodations might not eliminate the potential for future tariff fights on the continent. But they could give Canada and Mexico sufficient peace of mind.

Whether they occur in the next few months or in the summer of 2026, the next round of USMCA negotiations will be a fraught endeavor, but not a futile one. All three countries have strong incentives to maintain a robust trading relationship and avoid the disruption that would accompany the agreement's demise. The last time the parties found themselves in this situation, the talks were difficult but, in the end, the negotiating teams found novel solutions that, at least for a time, strengthened rather than weakened continental ties. They can do so again.

Endnotes

1 C.J. Mahoney served as Deputy United States Trade Representative during the first Trump administration. He was one of the principal negotiators of the USMCA. Microsoft is a donor to the Brookings Institution. The conclusions and recommendations of any Brookings publication are solely those of its author(s), and do not reflect the views of the Institution, its management, or its scholars.

2 Canada and the United States last imposed double digit duties on wide swaths of goods crossing their shared border in the 1930s. https://www.nytimes.com/2025/01/18/world/canada/us-canada-trade-war-1930s.html

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4 The administration may also pursue additional levies under Section 232 of the Trade Expansion Act of 1962, the law President Trump invoked to impose tariffs on steel and aluminum imports in 2018.

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7 In Goldwater v. Carter, 444 U.S. 996 (1979), the Supreme Court vacated a lower court decision holding that President Carter lacked authority to terminate a mutual defense treaty with Taiwan without reaching the merits of the controversy; and even if the President has authority to withdraw unilaterally from treaties, it is unclear whether the same principle would apply to Congressional-Executive Agreements like USMCA.

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27 Of course, we also wanted to stimulate more investment in the United States. The primary tool for achieving that objective was the separate labor value requirement—a requirement that a certain percentage of cars be manufactured by workers who make at least $16 per hour.

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Plan México: Building a solid and competitive North America

The economic integration of North America is not a fortuitous phenomenon but rather the outcome of a long historical process that has aligned objectives and interests among three nations with vastly different trajectories. This process has been driven by structural factors, such as geographic proximity and demographic complementarity, which have consistently overcome the obstacles posed by contextual tensions at various stages. From the earliest trade agreements to the consolidation of cross-border value chains, the weight of regional interdependence has prevailed, even in the face of temporary challenges.

Today, we face a new period of scrutiny regarding regional integration, driven by profound geopolitical shifts and significant political transformations within each North American partner. These developments have created challenges that test the stability of supply chains and the regional cooperation painstakingly built over decades. However, history shows that the structural foundations of North America, such as its economic interdependence, are stronger than temporary crises. Regional collaboration continues to yield mutual benefits that, even amid tension, are too valuable to ignore. Past trade disputes and global crises have reinforced, rather than weakened, the bonds between the countries, solidifying the region as a resilient and competitive bloc. This legacy of resilience underscores that the structural dynamics of the region hold a weight that circumstantial crises cannot dismantle.

What should Mexico do regarding these questions about North American integration?

The most important step is maintaining clarity in Mexico about what must be done, irrespective of the uncertainty that has emerged. The priority is to focus on the productive transformation of the country. This involves designing and implementing an industrial policy that strengthens the national content of exports, reduces reliance on imports from outside the region, and develops more advanced productive capacities. This effort is not isolated; globally, countries are rediscovering the importance of industrial policies as a response to challenges such as global supply chain disruptions, the transition toward more sustainable economies, and the need to bolster resilience against future crises. Within this global reorientation, there is a renewed recognition for the role of the state as a key actor in allocating resources to strategic sectors, ensuring that economies are better prepared to compete in an uncertain global environment.

Mexico is no exception. The goal is not merely to maintain our position

Mexico must focus on consolidating its position as an indispensable partner in the region by leveraging the deep economic interdependence that binds North America together.

as the United States' main trading partner, but to establish ourselves as a strategic player within the region. A more advanced and resilient economy will not only benefit Mexico but also strengthen regional integration. In this context, it is imperative for North America to become more competitive, as it now faces global competition that did not exist at the beginning of the integration process. The key lies in ensuring that Mexico's industrial policy complements the strengths of the United States and Canada. Together, these efforts can create an interdependent industrial ecosystem that enhances North America's global competitiveness. Mexico must focus on consolidating its position as an indispensable partner in the region by leveraging the deep economic interdependence that binds North America together. This requires redoubling efforts in initiatives that strengthen domestic production and foster shared value chains with the United States and Canada. By prioritizing the development of strategic sectors and local talent, Mexico not only reinforces its economy but also sends a clear message: Regional integration is not a reversible trend but a cornerstone of shared prosperity.

Plan México: A commitment to the future

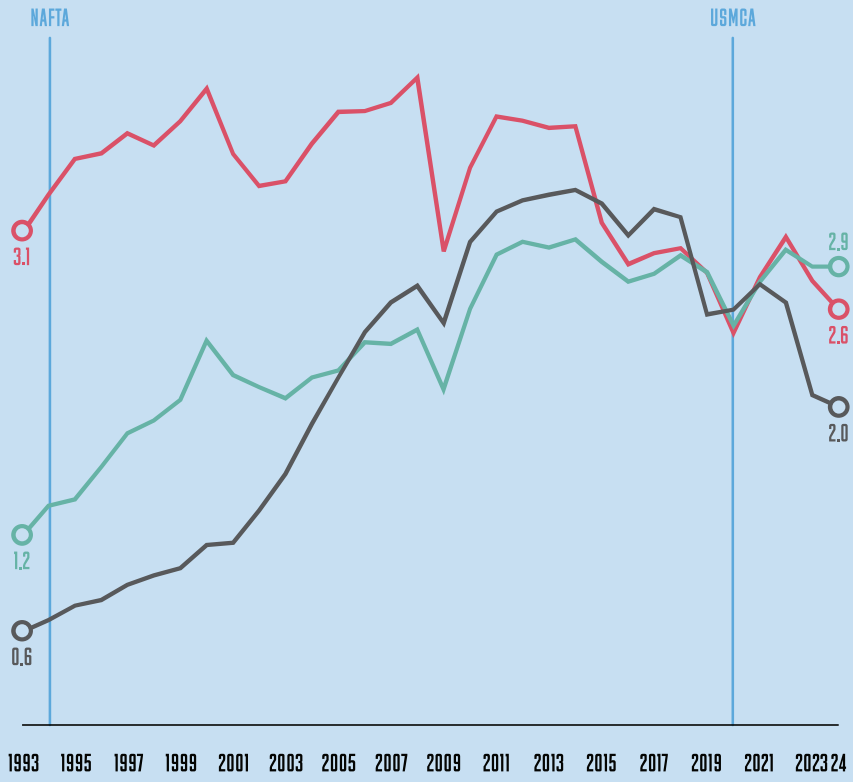
The *Plan México*, presented by President Claudia Sheinbaum, is not just a strategic tool but a commitment to the Nation's future. This plan aims to position Mexico as a reliable and competitive partner within regional value chains. Through actions that promote innovation, improve infrastructure, and strengthen small and medium-sized enterprises, the plan addresses current challenges while laying the foundation for a sustainable long-term productive model. Should the risks of de-regionalization not materialize, the *Plan México* will bolster the country's standing as an attractive partner. And if they do, it will enable Mexico to confront adversities with a more prepared and resilient economy. By maintaining a clear vision and coordinated actions, its effective implementation will ensure that the opportunities of regional integration translate into tangible benefits for the well-being of the Mexican people.

While current challenges may slow down the pace of integration, they will not alter its long-term trajectory. North America is built on solid foundations, and Mexico is committed to becoming a key partner in this regional project. The future of the region will continue to be defined by its integration, and Mexico is poised to be a vital contributor to its success.

Figure 1.

CANADA AND MEXICO OVERTAKE CHINA AS THE US' LARGEST TRADING PARTNER

U.S. total goods trade with Canada, Mexico, and China as a share of U.S. GDP



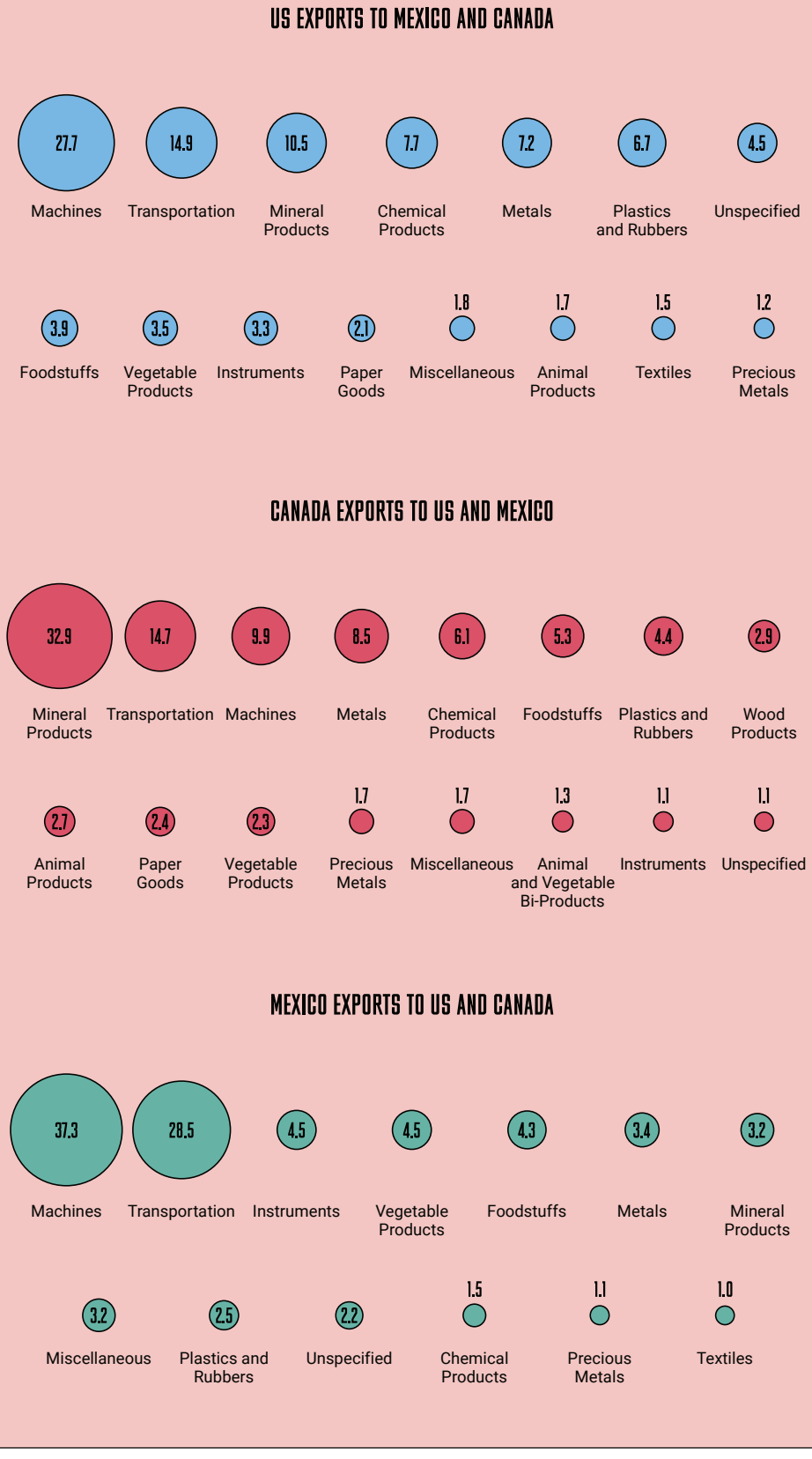
U.S. Census Bureau: Economic Indicators Division USA Trade Online. U.S. Import and Export Merchandise trade statistics. The World Bank, World Development Indicators. GDP (constant 2015 US$).

Rokas Tenys/Shutterstock.com

Figure 2.

TRADE IN THE SAME PRODUCTS HIGHLIGHTS THE IMPORTANCE OF SUPPLY CHAINS IN DRIVING TRADE ACROSS NORTH AMERICA

Product shares of USMCA exports to partners



Source: CEPI (Centre d'Etudes Prospectives et d'Informations Internationales), BACI Trade Database.

LIZ SHULER

President | AFL-CIO

Unfinished business: Centering workers' rights and fair competition in the USMCA joint review

As we approach the 2026 United States-Mexico-Canada Agreement (USMCA) joint review, it is vital to take stock of whether the agreement is living up to its promise to promote workers' rights and fair competition in the North American marketplace.

The USMCA is the first U.S. trade agreement to include both a review clause and a fixed expiration date if the parties cannot agree to extend the deal. During negotiations, we supported the inclusion of these innovations to ensure the agreement adapts to meet new challenges and delivers opportunity and prosperity for North American workers and businesses.

While the USMCA has fostered greater trade and investment across North America, serious challenges remain. If left unaddressed, it will undermine support for the agreement among organized labor and the broader public.

Unfortunately, since USMCA went into effect over four years ago, the U.S. trade deficit with Mexico has increased by 37% to $42 billion. Despite the agreement's stronger labor provisions, offshoring has continued apace with heavy job losses in the auto and aerospace sectors. Major multinationals like Stellantis, John Deere, and Case New Holland continue to use the threat of offshoring to Mexico to undermine the unions' ability to win long overdue wage and benefit increases at the bargaining table. For too many U.S. workers, there has been no change in the fundamental dynamic of "free trade" in North America.

The growing U.S.-Mexico trade deficit reflects the reality that Mexican workers in the manufacturing sector continue to make, on average, just a tenth of what their counterparts in the U.S. earn. Despite changes to Mexican labor laws and the positive impact of the Rapid Response Mechanism, few Mexican workers enjoy their right to freedom of association and collective bargaining in practice. Employer-controlled "protection unions" continue to thrive, and violence against supporters of independent unions remains common. Mexican labor institutions remain underfunded, and the government has proposed slashing the budget of the agency charged with implementing key aspects of its labor law reforms.

To address these challenges the 2026 joint review must be more than a box ticking exercise–it must identify concrete revisions to address offshoring while raising wages and standards for workers in Mexico. It must review and strengthen the agreement's rules of origin across the board, but particularly in the auto sector where the labor value content (LVC) provision has failed to raise wages and standards in North American

To address these challenges the 2026 joint review must be more than a box ticking exercise–it must identify concrete revisions to address offshoring while raising wages and standards for workers in Mexico.

auto supply chains. The parties must also eliminate the use of "alternative staging regimes," which auto multinationals have used to sidestep the agreement's rules of origin.

More broadly, the parties must increase cooperation to meet the economic and security threats posed by China and other non-market economies. Duty free access to the U.S. market has made Mexico an attractive location for Chinese companies looking to sidestep U.S. tariffs imposed to address pervasive state subsidies, dumping, intellectual property theft, and other unfair trade practices. Negotiations should start with Mexico agreeing to match the border measures that the U.S. and Canada have adopted to address unfairly traded Chinese EVs, steel, and aluminum. The USMCA cannot be a backdoor for the circumvention of our trade remedy laws.

A clear area of concern is the lack of concrete progress towards achieving USMCA's commitment to stop the import of goods produced with forced labor. While all three countries have passed laws or adopted regulations banning the importation of forced labor goods, Canada and Mexico have done little to enforce the ban in practice. This is unacceptable, and all three parties must deepen their cooperation and dedicate sufficient resources to ensure the North American market is closed to goods made with forced labor.

The parties should also consider adding new commitments to address issues that have become a higher priority since the agreement was negotiated, including critical minerals, semiconductors, and electric vehicles. These could include new cooperation mechanisms to address supply chain disruptions, incentives for high road labor and environmental practices, and screening mechanisms to ensure incoming Chinese investments do not pose a threat to strategic North American supply chains.

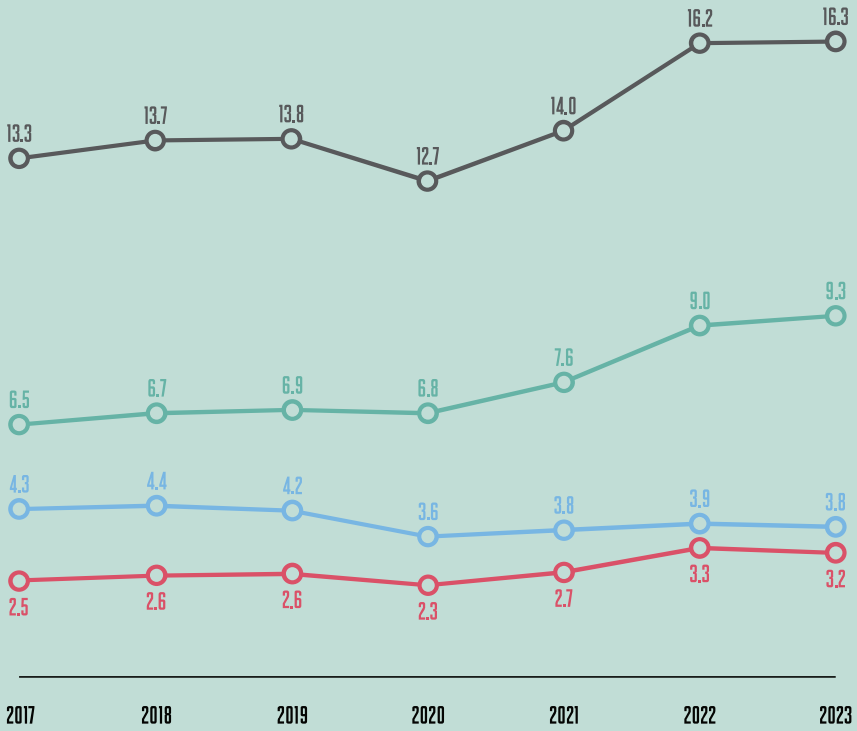
Finally, all three parties should commit to providing additional funding to build the capacity of Mexican workers to claim their rights under Mexico's historic labor law reforms. While important progress has been made, the job is far from done and is essential to creating a more level playing field for North American workers.

As we look ahead to the joint review, the AFL-CIO's support for extending the USMCA cannot be taken for granted. Much depends on the political will of the parties to address the agreement's shortcomings with an eye toward creating more sustainable and resilient supply chains. We look forward to the challenge ahead to make this agreement deliver dignity and fair competition for workers across North America.

Figure 3.

TRADE ACROSS NORTH AMERICA CONTINUES TO SUPPORT JOBS, WITH MEXICO GAINING THE MOST JOBS

Jobs supported by USMCA (millions)



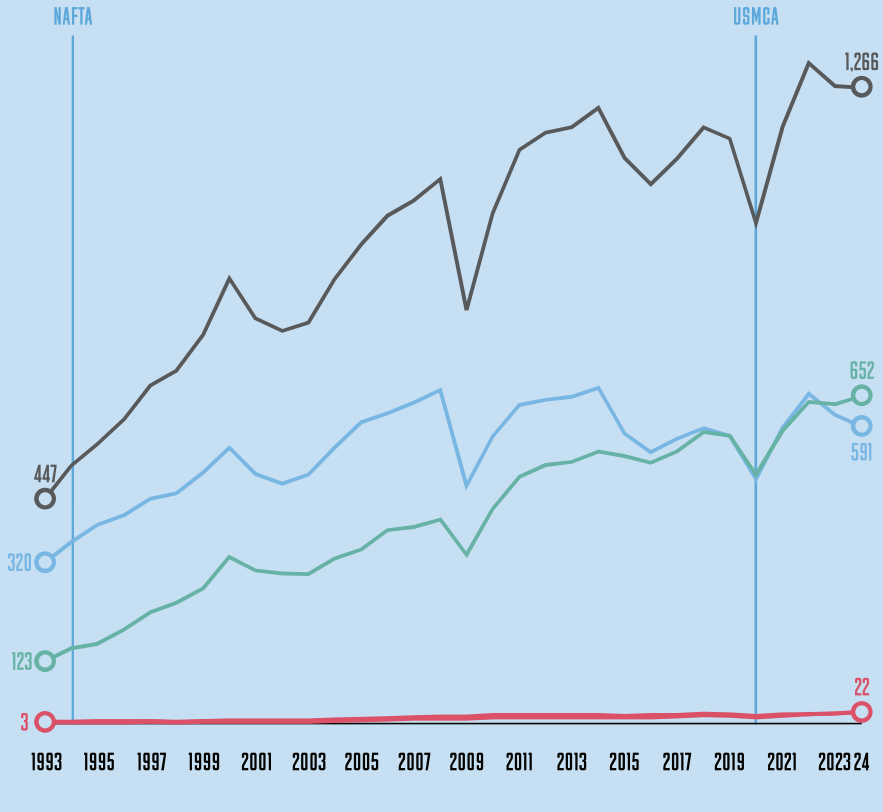
UNITED STATES · CANADA · MEXICO · NORTH AMERICA

Source: Brookings USMCA Tracker; Trade Partnership Worldwide LLC

Figure 4.

NORTH AMERICAN TRADE CONTINUES TO SOAR

Goods Trade Relationship (billions constant 2015 US$)



U.S-CAN · CAN-MEX · U.S-MEX · NORTH AMERICA

Source:U.S. Census Bureau, Statistics Canada, Banco de México.

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CANDACE LAING

President and CEO | Canadian Chamber of Commerce

Setting a North American economic security agenda

In recent years, a variety of disruptive global forces—including the COVID-19 pandemic, heightened geopolitical tensions, rising protectionism, and climate change—have shifted the way we think about international trade. As governments and businesses around the world navigate an increasingly fragmented and complex international landscape, economic security and resiliency have emerged as major priorities for policymakers.

For Canada, the U.S., and Mexico, the increasingly uncertain international environment presents risks, but it also offers a critical opportunity.

The United States-Mexico-Canada Agreement (USMCA) has expanded and modernized the provisions of the North American Free Trade Agreement (NAFTA), providing a stable and predictable framework for trade and investment within North America. Since coming into effect in 2020, there has been a remarkable 47% increase in trade within North America. This growth has positioned Mexico and Canada as the top two trading partners of the U.S. with both countries outpacing U.S.' trade with China in 2023 as well as in 2024.

The three North American countries, as members of one of the world's largest and most comprehensive trading blocs, are ideal partners for collaboratively addressing the shared economic and national security challenges that we face. Such challenges—ranging from supply chain disruptions, skills gaps in our workforces, to risks posed by new and emerging digital threats—weaken the resilience of the North American economies as well as our competitiveness on the global stage.

As we approach the 2026 review of the USMCA, Canada, the U.S., and Mexico should aim to adopt a robust North American economic security agenda. To be clear, although preserving the provisions of the USMCA should be a key priority for all three governments, the 2026 review also presents an opportunity to move beyond the status quo when it comes to the security and prosperity of the continent.

Establishing a North American economic security agenda

China's recent export restrictions[1] on critical minerals targeting the U.S. demonstrates why resilient North American supply chains are important. As part of a series of tit-for-tat measures between China and the U.S., the latest restrictions seek to curb China's exports of gallium, germanium, and antimony to the U.S. These are important inputs for defense technologies, semiconductors, solar cells, and other advanced technologies—all of which are vital to U.S.' national security.

The USMCA Competitiveness Committee should play a more significant role in advancing a cohesive and strategic competitiveness agenda for North America. In particular, the Committee should prioritize fostering resilient and competitive North American supply chains that are critical for preserving North American economic security.

Canada's natural resource wealth presents an obvious solution to the overreliance on China and other non-market economies for critical minerals. According to the U.S. Department of Defense's June 2021 review[2] of U.S. critical minerals supply chains, Canada has substantial resource potential for supplying U.S. demand for more than twenty strategic and critical minerals.

Canadian companies are well placed to meet the growing U.S. demand for a sustainable and reliable source of critical minerals. In fact, Vancouver-based metals producer Teck Resources Ltd., one of the world's largest integrated germanium producers, is already examining options for increasing their production capacity of germanium[3] in response to China's latest export restrictions.

To mitigate such vulnerabilities in regards to critical minerals supply chains as well as other strategic areas, the three governments should leverage their partnership to establish a renewed North American economic security agenda. As a starting point, this should include the following key measures.

The USMCA Competitiveness Committee should play a more significant role in advancing a cohesive and strategic competitiveness agenda for North America. In particular, the committee should prioritize fostering resilient and competitive North American supply chains that are critical for preserving North American economic security. Key supply chains for the committee's consideration should include automotive, aerospace and defense, critical minerals, energy, and life sciences.

Canada, the U.S., and Mexico, should prioritize strengthening cooperation and coordination on policy responses to unfair trade practices by China, as well as other non-market economies. While all three countries committed to jointly expanding collaboration on these matters at the fourth annual meeting of the USMCA Free Trade Commission, more deliberate and concrete action is required. As a first step, the three countries should coordinate efforts to address unfair trade practices related to electric vehicles (EVs), as well as risks posed by certain connected vehicles. While both Canada[4] and the U.S.[5] have acted on the risks posed by Chinese EVs, greater coordination and alignment with Mexico is needed.

Given our closely aligned economic and security interests, Canada and the U.S. should develop a new bilateral pact to advance common economic security interests. This pact should seek to enhance Canada-U.S. cooperation on

economic security, building upon key bilateral initiatives such as the 2021 Roadmap for a Renewed U.S.-Canada Partnership.[6] This new measure should be complementary to existing provisions of the USMCA and should be viewed as a model partnership that can eventually be expanded to include Mexico.

Towards a more prosperous and secure North America

The future of the North American economic partnership is increasingly uncertain as we approach the 2026 USMCA review.

Rather than turning inwards, erecting trade barriers, or implementing counter-productive tariffs, Canada, the U.S., and Mexico should instead lean into the North American economic partnership, creating the conditions to unleash the full potential of our industries. This means not only enhancing trade within North America, but also taking security considerations seriously—including those pertaining to our borders. Notably, Canada's 2024 Fall Economic Statement outlines the government's plans for a $1.3 billion investment[7] to enhance the security of the Canada-U.S. border.

For Canadian businesses, enhancing North American economic cooperation and a successful 2026 USMCA review are top priorities. In 2024, the Canadian Chamber organized multiple business-led trade missions to the U.S. on key areas where there are significant opportunities for shared growth. These missions have focused on critical minerals, life science supply chain resiliency, North American economic security, and artificial intelligence. Through these missions, Canadian businesses are proactively engaging with policymakers, businesses, and the wider North American public policy community to strengthen North American economic cooperation.

Given Canada will chair the upcoming USMCA Free Trade Commission meeting, and also holds the G-7 presidency in 2025, Canada has a unique opportunity to take a leadership role on these matters in the coming year.

The Canadian Chamber of Commerce, as the voice of the business community in Canada and host organization for B7 2025, is committed to collaborating with all three governments, as well as the business communities from all three countries. Working together, industry and government can create the conditions for a more secure and prosperous North America.

Endnotes

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2 https://www.whitehouse.gov/wp-content/uploads/2021/06/100-day-supply-chain-review-report.pdf
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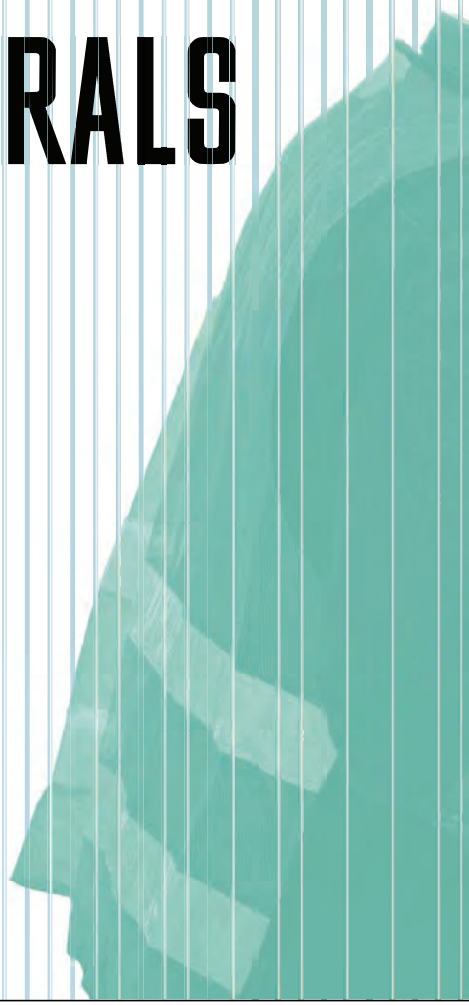
2

ESTABLISHING A CRITICAL MINERALS CLUB ACROSS NORTH AMERICA



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Secretary of State Marco Rubio and Treasury Secretary Scott Bessent have both signaled that the Trump administration will maintain a focus on rebuilding American manufacturing and securing international supply chains. At his confirmation hearing Rubio argued that the U.S. must ensure it "is not reliant on any single other nation for any of our critical supply chains."[1] Bessent's testimony noted that "we must secure supply chains that are vulnerable to strategic competitors."[2]

In the area of critical minerals, reducing dependence on China means working closely with allies and partners throughout the world. There are strong limits to the U.S.'s ability to reshore critical minerals supply chains.[3] First, economic deposits for many critical minerals are simply not present on U.S. territory. Second, the complex extraction and metallurgical expertise necessary to economically mine and process those minerals is distributed across multinational firms with global operations.

The upcoming USMCA review provides an opportunity to create a North American critical minerals club that significantly bolsters mineral production in the region. All three countries are heavily dependent on processed minerals from China, even though each possesses mineral resources and processing expertise.

Working together, the three countries could develop mines and processing projects for a range of critical minerals including: nickel, copper, lithium, manganese, phosphate, antimony, zinc (and therefore germanium), bauxite (and therefore gallium), and more. However, the policy problems plaguing mining development are complex.

Minerals supply chains are hampered by price uncertainty.[4] Western mining companies have been conservative because they fear being undercut by Chinese producers. Historically, long periods of high prices have been needed to induce investment. China's state-owned enterprises are not sensitive to profit rates and indeed Chinese political economy enables profit-sharing across the whole supply chain. Lower environmental standards also keep costs low.

This uncertainty has slowed project development in the West. Promising North American nickel and copper projects, for example, have been slowed by low international prices driven by low-cost Chinese-owned production in Indonesia and Latin America.[5]

Working together, the three countries could develop mines and processing projects for a range of critical minerals

There is recognition that strategic action is necessary in the sector. U.S. industrial policy through the Inflation Reduction Act (IRA) and the Bipartisan Infrastructure Law (BIL) created multiple tools to build the North American supply chain: The IRA's 30D critical minerals requirements, the IRA's 45X production credit, expanded use of the Defense Production Act to advance mine development, Loans Program Office guarantees, and BIL grants have all been used to bolster mineral production. In Canada, a new 30% investment tax credit for critical minerals extraction and processing was introduced in 2024.[6] In Mexico, a new national entity was created to drive investment into lithium mining.

These forward steps, while promising, have been insufficient to catalyze a revitalization of North American mining at the necessary scale. Chinese bans on gallium and germanium exports, as well as restrictions on graphite, have demonstrated the urgency of the need but have not catalyzed strong action.

A bold and ambitious initiative is needed to scale domestic industrial policy up to the international level. But this raises a series of difficult policy questions: What does international, collaborative industrial policy look like within North America? How can states cooperate to align trade, domestic industrial policy, and global market creation activities?

The USMCA review provides a platform where these ideas could be explored in a concrete case of real-world significance. Concrete action could be taken to build a North American approach to support mining and processing of critical minerals. The U.S., Mexico, and Canada should create a critical minerals club that would harmonize tariffs on imports of critical minerals from China, develop joint procurement to secure demand, and enable the three countries to create price certainty through co-investment or joint subsidies. High supply chain standards could also be used to backstop the North American market and protect it from metal made with low labor and environmental standards abroad.

The North American critical minerals policy landscape

In the last six years, each of the USMCA partners has begun the process of rebuilding the policy base needed to conduct strategic action in the minerals sector. These are essential first steps, but stronger domestic and international action will be needed to de-risk critical minerals supply chains.

In the U.S., the IRA established the section 30D electric vehicle credit and section 45X advanced manufacturing production tax credit to boost domestic mining and encourage mining in countries where the U.S. has a free trade agreement. Section 45X includes a permanent credit for 10% of production costs for domestic critical minerals. The initial guidance for the rule excluded material and extraction costs, which would have significantly reduced the value of the credit, but final rules allowed for these costs to be covered.[7]

Section 30D gives consumers a $7500.00 tax credit if two sets of supply chain requirements are met, included a friendshoring requirement for critical minerals. Half the credit, $3750.00, is conditional upon sourcing critical minerals components from free trade agreement countries. Treasury interpreted this to include all metal in the battery, from mined materials to electrode active materials. To reach the friendshored content percentages in the schedule, Treasury estimates the value-added at each step of the production chain; if the step takes place in an FTA country, then the corresponding percentage counts toward the target. The friendshoring requirement rises 10% per year from 40% in 2023 to 100% in 2028 and beyond.

The Biden administration also made use of the Defense Production Act (DPA) to support early-stage mine development. In the 2023 National Defense Authorization Act, Australia and the U.K. were included alongside Canada as “domestic sources” for materials, allowing DPA funds to be spent in these jurisdictions.[8] DPA funds have mostly been used for smaller development grants, such as $15.8 million to conduct feasibility studies for a tungsten mine in the Yukon or $8.3 million for a graphite mine feasibility study in Québec.[9] These funds have replaced early-stage investments from Chinese companies, which are now excluded from the Canadian market.[10]

Finally, the Biden administration implemented a 25% tariff on Chinese critical minerals starting in 2025. A 25% tariff on permanent magnets and graphite was delayed until 2026. Tariffs could act as a demand-side support for non-Chinese metals and thus can be considered part of a broader industrial strategy for domestic metals. However, these tariffs are unlikely to have a big impact on critical minerals development in the U.S. The U.S. does not currently import critical minerals in volume from China. Graphite ($83.6m) and Fluorspar ($42.5m) are the main imports from China.[11]

In Canada, the government has established a national critical minerals strategy supported by a critical minerals property investment tax credit for up to 30% of capital costs.[12] It also created a $C3.8 billion fund, which has been used to support mining infrastructure and development.[13] In some cases, it has co-invested alongside DPA funds.

In Mexico, President López Obrador created a state-owned company, LitioMx, to lead lithium extraction.[14] This was a shift in policy from President Enrique Peña Nieto's administration, which sought foreign investment in the sector. Mexico needs a plan to develop its broader critical minerals sector.[15]

A club with coordinated tools

Such efforts are an essential first step. But to create a bulwark against Chinese dominance in the international mining industry, the U.S. will need to work closely with allies to build supply and secure demand through a minerals club.

This club could combine a number of key features:

- Harmonized tariffs
- Co-investment through price guarantees
- Harmonized subsidies
- Joint procurement
- Labor, public safety, and natural resource standards

Working out a critical minerals club alongside USMCA negotiations would follow the path laid out by the first USMCA negotiation, which included a broader discussion about supply chains and the manufacturing landscape. United States Trade Representative Robert Lighthizer and his deputies worked hard to level the playing field between the U.S. and its partners on labor and environmental grounds. It also laid the groundwork for restricting Chinese content in North American supply chains. The "new way of trade" now has broad bipartisan support in Washington, D.C.[16]

The opportunity is to de-risk critical minerals while showing how to conduct robust joint industrial policy. Successful joint industrial policy must combine the tools laid out above into a coherent plan to increase supply through demand-side supports. In this schema, procurement, tariffs, and standards work together to create a secure North American market that cannot be undermined by dumping from abroad. Subsidies ensure that costs are under control and that displacing foreign metals does not create inflation.

Harmonized Tariffs. Harmonized tariffs are when countries agree to adopt the same tariffs against one or more countries. For example, Canada recently agreed to match U.S. tariffs on Chinese EVs.[17] The EU in contrast, also announced tariffs, but at much lower rates than the U.S.

A USMCA club could create a slate of harmonized critical minerals tariffs as the basis of a broader agreement. Trade within the club could be kept free. This would form the basis for more extensive cooperation on critical minerals and manufacturing more broadly.

Currently, U.S. tariffs are just on Chinese metals. But depending on how other tools in this club are calibrated, broader tariffs could be considered. After all, Chinese equity in mining firms is not captured in tariffs on metals originating in China.

Co-investment through Contracts for Difference (CfD). Investing in mining projects is challenging because of high uncertainties at all stages of development. Canada and the U.S. are already co-investing in early-stage mine development. But to have a catalytic effect on mining development in North America, investment in capital expenditure at a larger scale is needed.[18] There have been a number of proposals for policy tools to address the investment problem: price insurance, stockpiling, and defense procurement.[19]

Only price insurance has the capacity to create the long-term price certainty needed to catalyze investment. A price insurance instrument would guarantee a floor price for certain metals or projects. When market prices dip below the floor, a government entity covers the gap. This allows developers and investors to calculate a minimum internal rate of return, thereby making projects bankable. However, under a price insurance scheme, all the risk is taken on by the government, while the firms capture all the upside.[20]

A contract for difference (CfD) is like price insurance, but it creates shared risk and shared benefits. A CfD sets a strike price and, just as in price insurance, the government covers the gap. However, when market prices are above the strike price, the government keeps the upside. This is a justifiable return for taking on the risk. Mining companies are likely to resist this, as capturing upside is a key part of their business model. A revenue sharing agreement above the strike price could likely ameliorate these concerns.

CfDs could be offered to entire metals classes, or to specific projects. Given the existing landscape of subsidies, CfDs could be effectively deployed for specific projects, taking into account existing subsidies. That is, the appropriate level for the strike price could be calibrated based on the level of subsidy available and the expected rate of return given existing subsidies. The key is to coherently integrate all of the existing tools into the policy framework underlying the club.

In Canada, the Canada Growth Fund already has the authority to write contracts for difference for metals projects. In the U.S., legislation would be needed to ensure that the Loans Program Office or some new finance authority could write such contracts. In Mexico, it is likely PEMEX or another state-owned enterprise could write such a contract.

Harmonized subsidies. Subsidies can help firms compete and lower costs for customers. States can harmonize subsidies by offering the same or similar levels of subsidy to projects within their borders. This provides reliable project support within a club without creating an expensive subsidy race-to-the-top. USMCA negotiations could provide a platform to discuss aligning subsidies in the mining sector, even if subsidies are best left out of the deal itself.[21]

Harmonized subsides are important to prevent competition in zero-sum markets: where a project in one jurisdiction competes with a project in another. The good news is that in North America, very few metals could be considered zero-sum. For example, all three countries have strong lithium deposits, so investment in one country could be considered as competing with investments in another. Here, aligned subsidies may be necessary to establish trust and cooperation. Copper, nickel, graphite, and other metals are not zero-sum in the same way because there is enough room in the market for a number of good North American projects in each of those metals.

Right now, Canada and the U.S. have distinct tools, while Mexico has no broad sectoral support. Canada's 30% investment tax credit and the U.S.' 10% production credit are difficult to harmonize because one targets capital expenditure while another targets full production costs. One effort to make these comparable suggests that the targets are broadly aligned for lithium, but that there is a gap for graphite and nickel.[22] As it stands, this is not a problem in part because only lithium is truly a competitor metal between the U.S. and Canada. Analysis would be needed to assess whether Mexico's lithium fundamentals were strong enough to compete with subsidized lithium from further North. If so, perhaps the situation would count as harmonized. The key is not to meet some arbitrary benchmark but to ensure that all countries feel their interests are fulfilled within a cooperative framework for metals.

Joint procurement. Procurement can make a big difference in smaller metals markets like tungsten and antimony, which have important defense applications. There are opportunities to use government procurement, especially via tier 2 defense contractors, to create secure offtakes for mines. Antimony, chromium, cobalt, copper, gallium, germanium, molybdenum, niobium, rare earths, titanium, and tungsten are all important to the defense industry in North America. In many cases, these are likely to be the secondary metals in a mining project. But secure offtakes for them from North American metals producers could significantly alter project economics.

Procurement could also take place through strategic reserves. Strategic reserves of smaller metals with high China shares, such as gallium, germanium, rare earths, and antimony would be a good short-term step to buffer the market and safeguard national security. The U.S. already stockpiles critical minerals through the National Food and Strategic Reserves Administration and the Defense Logistics Agency. Canada and Mexico could join suit, especially as both countries look to build up their defense industrial base.

Labor, public safety, and natural resource standards. High labor, safety, and stewardship standards would provide another means to support North American supply. Mines pose risks to communities and wildlife. As we have seen in locations like Indonesia, inadequate protections

threaten livelihoods and health.[23] Strong protections in Canada and the U.S. do have a cost, but this need not create a disadvantage in the market.

The USMCA pioneered high labor and environmental standards. The "labor value content" provisions of the first USMCA were highly innovative.[24] They set benchmarks for the percentage of value that needed to be made with high wages. Environmental and public safety benchmarks for mining could be built into the agreement on harmonized tariffs.

Conclusion

A critical minerals club provides an opportunity to advance a modern joint industrial policy between the U.S., Canada, and Mexico in a critical sector.[25] To be successful, joint industrial policy must combine multiple tools into a comprehensive strategy that targets specific metals.

In the club proposed here, tariffs and subsidies work together to ensure that North American metals are competitive with other metals. Price guarantees through contracts for difference will make mines bankable investments, unlocking private capital. But the public, if it takes on the risk of paying during low price periods, should be compensated. That said, tariffs will help to keep internal prices higher, and reduce the overall burden of the contracts. To the extent that tariffs open price spreads, those price spreads reduce the burden on the government.

Politically, there are two important barriers. President Trump's bellicosity toward both neighbors—whether posturing or signaling real imperial desires—undermines the goodwill necessary to do a deal of this scale and importance.

Second, Canada has indicated willingness to protect markets from China, but Mexico may decline to do so. It has been hedging by working with and soliciting investment from both the U.S. and China. However, most foreign direct investment into Mexico has come from Western, Japanese, and Korean partners. It has benefitted from trade and investment with China, but its political economy is oriented toward the U.S. and its partners.

There is, nonetheless, a shared interest in developing minerals production in North America for both economic and geopolitical reasons. To do it right, a strategic, collaborative approach with multiple tools is needed.

Endnotes

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Chief Executive | Rio Tinto Aluminum

Better together: USMCA and North American critical minerals flows

The word "supply chain" was a term many people probably did not think about very much until a few years ago. Countries around the world are considering today whether their supply chains are well suited to the geopolitical dynamic of our time.

The minerals and metals needed to support the modern economy are one of the most economically and geopolitically significant supply chains—as evidenced by President Donald Trump highlighting the need to "assess the national security implications of the Nation's mineral reliance" in his executive order declaring a national energy emergency.

These concerns are by no means confined to the U.S.—the metals and minerals that underpin industrial production from technology, defense, energy systems, to electric vehicles—are not available everywhere or in the size, quality, standards, or stage of processing required by industry.

When it comes to critical minerals, countries want suppliers they can trust to reliably deliver at a scale and quality they can count on and enabled by relationships that will stand the test of time.

Delivering on these expectations requires a combination of access to capital, skilled workforce, capacity for innovation, rigorous health and environmental standards, and the ability to navigate geopolitical and macroeconomic volatility. In this context, the North American market has all the attributes to support the capital and technology-intensive projects that constitute the critical minerals supply chain. The new generation of mining and metals projects across the continent represent innovation through the secondary recovery of minerals from tailings, redevelopment of brownfield sites, new technologies to map ore bodies and increase recovery rates, and more efficient recycling of metals from end-of-life products.

All these initiatives benefit from cross-border infrastructure, frictionless trade flows, and joint government efforts between Washington and Ottawa to work with industry to build resilient supply chains in critical minerals and beyond. Cooperation in critical minerals gained speed in the first Trump administration, which created the first government critical minerals list and spearheaded efforts to bolster production from the domestic market and key allies like Canada.

For Rio Tinto, the USMCA is a foundational element of our U.S. and Canada operations, which are built around a spirit of collaboration. Among our 57,000 global employees, there are nearly 18,000 in Canada and the U.S. working in strong partnership with our unions and local communities.

Rio Tinto's business operation across the U.S. and Canada provide

For Rio Tinto, the USMCA is a foundational element of our U.S. and Canada operations, which are built around a spirit of collaboration.

numerous examples of how cross-border trade and investment supports U.S. and Canadian businesses and jobs. For example, the aluminums we deliver from Canada to almost 200 customers in the U.S. are not only the largest sources of aluminum supply to the U.S., but also the most competitive and lowest carbon alternative for those customers today. This includes providing abundant and affordable hydro-powered electricity from Quebec and British Columbia, which creates a strategic advantage for U.S. industries facing fierce global competition in sectors such as aerospace, automotive, and clean energy. Our Canadian teams are also the second largest supplier of high-grade iron ore and the largest supplier of titanium feedstock to the U.S. market, supporting jobs and production in the steel sector. In 2023, Rio Tinto became partners with North America's largest aluminum recycling business, Matalco.

To provide another example, responsibly produced copper and domestically mined borates are vital inputs into things from agriculture to defense equipment. Rio Tinto's copper project in Arizona will provide up to a quarter of the copper needed in America, and the acquisition of Arcadium Lithium will enable Rio Tinto to support a variety of energy storage and digital infrastructure applications across North America.

Finally, and importantly, because critical minerals are key to national resilience and security, we are working with government agencies to develop our supply of scandium, titanium, gallium, tellurium, among others, from our mining operations in Canada and the U.S.

Collectively, our investment program will allow a significant change for Canadian and U.S. self-sufficiency in strategic sectors. With USMCA renewal coming up in 2026, and a broad review of trade arrangements with the U.S. and Canada already underway, there has never been a more important time to demonstrate the benefits of cross-border, resilient supply chains for critical minerals.

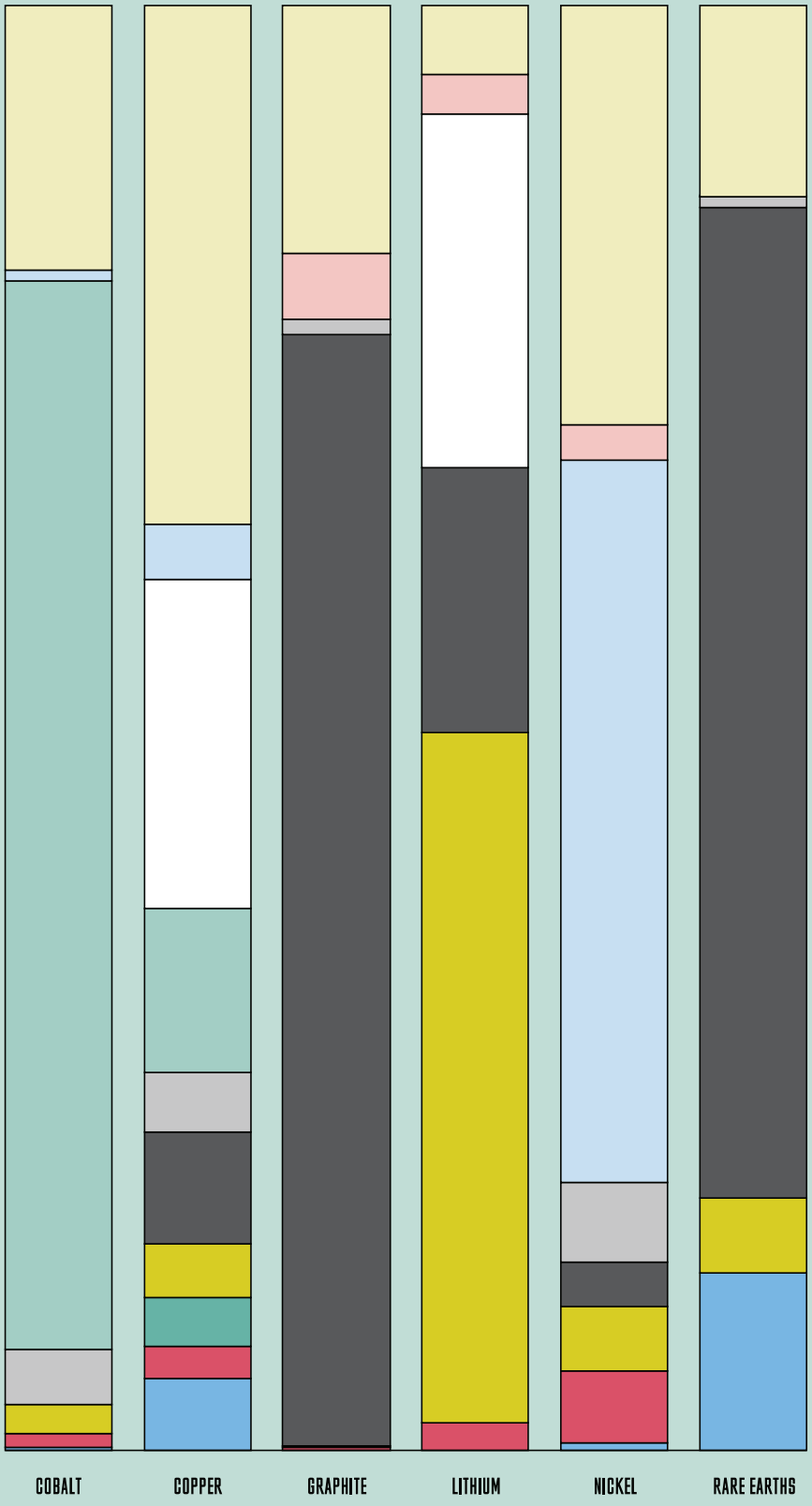
Endnotes

1 Rio Tinto is a donor to the Brookings Institution. The conclusions and recommendations of any Brookings publication are solely those of its author(s), and do not reflect the views of the Institution, its management, or its scholars.

Figure 5.

CHINA DOMINATES PRODUCTION OF KEY CRITICAL MINERALS

Percent share of 100



Source: USGS - Mineral Commodity Summaries.

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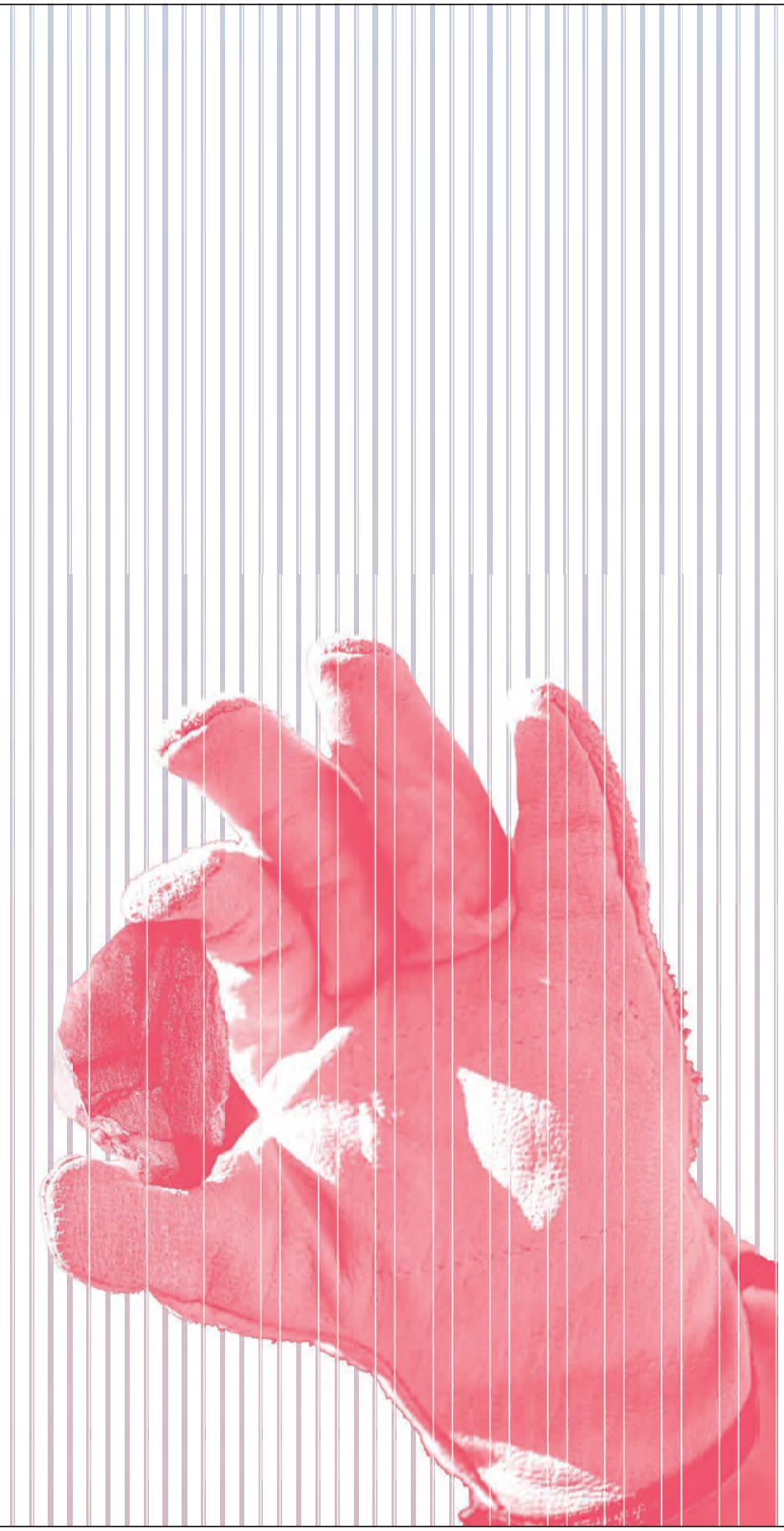
3

BROAD SUPPORT FOR PRIORITIZING RESPONSIBLE CRITICAL MINERALS DEVELOPMENT



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The United States, Canada, and Mexico have increasingly prioritized critical minerals as essential components of economic security, clean energy transitions, and advanced manufacturing. They acknowledge the need to develop critical mineral mining and processing capacity to reduce dependence on China and create more resilience in defense, energy, and digital economy supply chains. For the U.S., cooperation with Canada and Mexico in these sectors is paramount to achieve its supply chain diversification goals. The USMCA can provide both a forum and legislative framework to strengthen critical minerals cooperations.

In the United States, Republicans have highlighted that critical minerals will be a top priority for the Trump administration.[1] This follows on the policies of the first Trump administration, which already strongly prioritized expanding the domestic mining industry to reduce U.S. reliance on China.[2] The Biden administration also recognized the importance of critical minerals in building American competitiveness in downstream sectors such as batteries, semi-conductors, and other energy, defense, and digital economy applications.[3] In support of developing domestic critical mineral capacity, the Biden administration allocated several billion dollars to enhancing domestic extraction, processing, and recycling of critical minerals, aiming to reduce reliance on foreign sources.[4]

Mexico and Canada have also clearly recognized the importance of critical minerals for digital and decarbonization technologies. Mexican President Claudia Sheinbaum has emphasized the importance of lithium and copper for electric vehicle production and is working to position itself as a key supplier of critical minerals.[5] The Trudeau government's multi-billion Critical Minerals Strategy is intended to help bring that objective forward by allocating funding to expand critical minerals mining capacity and support the development of Canadian supply chains in processing and recycling.[6]

Despite the very clear prioritization of critical minerals security to bolster competitiveness, there remains a need for more robust policy measures and intergovernmental cooperation to diversify and onshore critical mineral supply chains. This underlines the importance of increasing collaboration through the USMCA. While tensions with respect to Chinese investments in Mexico in downstream sectors such as batteries and EVs will need to be addressed,[7] prioritizing USMCA cooperation on upstream and midstream critical mineral supply chains can help kickstart a new era of North American collaboration. For that to be

The United States, Canada, and Mexico have increasingly prioritized critical minerals as essential components of economic security, clean energy transitions, and advanced manufacturing.

successful, efforts will have to go beyond rhetoric and address structural dependencies on China for critical minerals and batteries. This includes by promoting impactful trade and investment frameworks bilaterally, through the USMCA, and via the Minerals Security Partnership that can facilitate the financing and development of resilient and responsible critical mineral supply chains across North America.

Policymakers may very well find increasing support with the broader public, as the public's understanding of the necessity for diversifying and onshoring critical minerals supply chains grows. For example, in the U.S., a recent survey revealed that 83% of so-called opinion leaders,[8] which included a bipartisan majority, consider expanding domestic mining to access mineral resources an important or top priority for policymakers. This shift in awareness is driven by recognition of the critical role minerals play in sectors such as healthcare (71%), semiconductors (69%), and defense (67%) and signals a slow but discernible shift in public perception toward the strategic importance of securing domestic supply chains. This can ultimately help provide backing to more USMCA cooperation on critical mineral supply chains.[9]

Why USMCA cooperation on critical minerals is essential to expanding domestic capacity

The U.S., Canada, and Mexico face similar challenges when it comes to expanding domestic mining and refining capacity. One challenge is that the U.S., Mexico, and Canada, like the rest of the world, are deeply reliant on Chinese processing capacity of critical minerals. To use critical minerals in downstream sectors such as defense, developing digital and clean energy technologies, these minerals need to be processed until the highest possible purity levels, often at 99.9999% purity. Today, China dominates mineral processing for several critical minerals.[10] This means that reducing dependence on China for critical minerals will require large investments into processing capacity, as well as developing the technological know-how and skilled workforce.[11]

A second challenge is that the U.S., Mexico, and Canada need secure access to affordable critical minerals (raw and processed) to bolster the North American competitiveness of downstream industries. On the one hand, this includes well-established, highly innovative sectors such as lithium-ion batteries, EVs, and semiconductors. Supported by the IRA and the Bipartisan Infrastructure Bill, the U.S. has received over $110 billion in EV and battery investments, of which 92% flowed to Republican-led states, and the development of this so-called battery belt is expected to remain strong in the next few years with 160 GWh of new battery manufacturing capacity expected to be added in 2025.[12] In total, the North American EV market is expected to grow from $62 billion in 2022 to around $230 billion by 2030,[13] including $53 billion in Mexico[14] and $13 billion in Canada.[15]

While it is difficult to pinpoint how much of that expected investment in Mexico and Canada is due to its own policies or its engagement with the U.S. via the USMCA, the fact the U.S. IRA tax credit for EVs stipulates that the vehicles need to be assembled in North America and the batteries in North America or U.S. FTA countries, extends those IRA subsidies to Canadian and Mexican producers.

The U.S., Canada, and Mexico also need to increase resilient supply chains of critical minerals for next-generation technologies in which North America still holds innovation and tech development competitiveness vis-à-vis China. This includes technologies such as iron nitride magnets, lithium-sulfur and lithium-metal batteries, silicon-anode, sodium-ion and iron-air flow batteries, advanced conductors for power grids, and perovskite solar cells, to name a few.[16] Many of those next generation technologies are mineral-intensive as well, and so it is in the interest of the three governments to start securing mineral supply for those novel technologies early on, much like China did during the last decade and a half for the current generation of lithium ion battery chemistries.

On the supply side, USMCA countries hold significant and often complementary roles with respect to mineral reserves and production. In terms of reserves, USMCA countries are largely complementary. The U.S. holds significant global reserves in Molybdenum (23%), Tellurium (11%), Lithium (4%), and Silver (4%). Mexico from its side holds reserves in Silver (6%) and Zinc (7%). Canada adds to that regional outlook with significant reserves of Niobium (9%), Selenium (6%), Titanium (4%), and Lithium (3%). For other minerals, the countries each hold smaller shares of global reserves, but they often produce more. If critical minerals security of supply is truly a strategic goal, then it is important to protect that production and facilitate, at the local, national, and regional level, responsible expansions where feasible.

In terms of production, the complementarity is largely similar. The U.S. produces significant global shares of Berrilyum (56%), Molybdenum (14%), Zirconium (7%), Zinc and copper (6% each), and Silver (4%). Mexico produces large amounts of Silver (24%), Molybdenum and Zinc (6% each), Cadmium (5%), Barium (4%), and Copper (3%). Canada is a big producer of Niobium, Cadmium, and Palladium (8%), Nickel, Aluminum, Tellurium, and Indium (4% each), Selenium (3%), and Copper (2%).

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SIGNIFICANT CRITICAL MINERALS PRODUCTION (>2% OF GLOBAL PRODUCTION) AND THEIR USES

	US (%)	M (%)	Ca (%)	Total (%)	Energy transition applications	Defense applications
Beryllium	55.9			55.9	Lightweight alloys for aerospace	Missile guidance, Radar systems
Silver	4	24.2		28.2	Solar panels, Electronics	Electronics, High-conductivity wiring
Molybdenum	13.7	6.1	0.3	20.1	Wind turbines, Hydrogen production	Aircraft engines, Armor
Cadmium		5.2	8	13.2	Batteries (Ni-Cd)	Electronics, Optics
Palladium	5		7.9	12.9	Hydrogen storage, Catalysts	Electronics, Catalytic converters
Zinc	6.1	6		12.1	Corrosion-resistant coatings, Batteries	Alloys, Protective coatings
Copper	5.6	3.4	2.4	11.4	Wind turbines, Solar panels, Wiring	Electronics, Communications
Niobium			8	8	High-strength steel for turbines	Jet engines, Structural components
Zirconium	6.9			6.9	Nuclear reactors, Hydrogen storage	Heat-resistant alloys
Aluminum	1.3		4.1	5.4	Lightweight materials for EVs, Solar panels	Aircraft, Armor, Lightweight vehicles
Nickel	0.5		4.4	4.9	Batteries (EVs, grid storage), Alloys	
Platinum	1.7		3.1	4.8	High-strength alloys, Armor plating	Electronics, Fuel cells
Tellurium			4.1	4.1	Solar panels (thin-film), Thermoelectrics	Electronics, Infrared detectors
Indium			3.9	3.9	Solar panels (CIGS), Electronics	Display technologies, Sensing devices
Barium		3.8		3.8	Drilling fluids, Electronics	Explosives, Signal flares
Selenium			3.3	3.3	Solar panels, Thermoelectrics	Electronics, Optoelectronics

Source: Critical Materials Monitor 2024[17] and author consultations with industry

Current USMCA engagement on critical minerals

U.S.–Canada cooperation so far could be a blueprint for North American cooperation on critical minerals but would need further strengthening on the policy side of the equation. While political cooperation has accelerated in recent years against a backdrop of increasing local demand for critical minerals, heightened geopolitical tensions, and the objective of both governments to increase security of supply for strategic industries such as defense, clean energy, and semiconductors, the scope and scale of U.S.–Canada governmental cooperation remains limited and insufficient to address these supply chain challenges. Extending cooperation and leveraging USMCA to facilitate the needed investment, develop common standards, and reduce regulatory barriers, should be the focus for all three governments going forward.

There is no doubt that U.S.–Canada business engagement is both wide and deep. Under the framework of the USMCA, the two countries serve as primary trading partners for critical minerals. Canadian exports of minerals (including non-critical minerals like iron ore) were valued at $61 billion in 2022, of which $41 billion or 67% was exported to the United States. Similarly, the first trading partner of U.S. mineral exports of $122 billion in 2022 was Canada, at $31 billion, or 25%. There is also extensive cross-border investment in critical minerals. For example, there are approximately 323 Canadian companies that have invested over $45 billion in the U.S. mining sector (including non-critical minerals) and 120 Canadian companies have invested over $11 billion in Mexico.[18]

The overarching strategy for U.S.–Canada cooperation on critical minerals was articulated in the U.S.–Canada Joint Action Plan on Critical Minerals in January 2020. It is notable for its scope, but results have remained largely aspirational, aside from some significant innovations (see below). The strategy helpfully identifies the multi-sectoral raison d'être for critical minerals cooperation as it links critical minerals to industrial development, innovation, defense supply chain resilience, information sharing, and multilateral cooperation. Having that multi-sectoral approach that encompasses the digital economies, clean energy, and national defense is essential, so the strategy should be applauded for that. However, the implementation of this strategy has been incremental and fragmented. While both governments have made public commitments to advancing these priorities, the absence of measurable benchmarks or timelines limits the ability to assess the effectiveness of this initiative.

So far, actual investment, which the industry agrees is what will be needed to develop an onshore critical mineral supply chain, has remained far too limited. Both under Trump and Biden, U.S. government investment through the Defense Production Act (DPA) Investment Program has been marginal relative to the scale of the supply chain challenges. Several U.S. and Canadian government co-investment initiatives have been announced into expanding cobalt and graphite production. For instance, Fortune Minerals Limited received $6.4 million from the United States, supplemented by $5.6 million from Natural Resources Canada, to support cobalt supply chain development. Similarly, Lomiko Metals Inc. secured $8.3 million from the U.S. government, with an additional $3.6 million from Canada, for graphite production. Other projects, including those led by Electra and Nano One Materials, have received comparable funding for cobalt and lithium iron phosphate technologies. While these investments represent progress, and while government co-investment can indeed help to unlock more private capital, the scale remains far too small

Extending cooperation and leveraging USMCA to facilitate the needed investment, develop common standards, and reduce regulatory barriers, should be the focus for all three governments going forward.

when juxtaposed against the magnitude of capital required to establish resilient and integrated critical mineral supply chains. The focus on cobalt and graphite, while essential, also underscores that the collaboration is more focused on existing battery supply chains than potential future mineral vulnerabilities.

Another area for cooperation on critical minerals is data sharing in the form of unified geological survey data. This was identified as a priority by the three presidents in the North American Leaders' Summit in 2023, which recognized the need to expand North American critical minerals resource mapping to collect details on resources and reserves through more in-depth collaboration between the Geological Surveys of each country.[19] This ultimately led to unification of critical minerals data by Canada, the U.S., and Australia.[20] While it is too early to judge on the practical utility, the standardization of information on resource potential can surely help advanced analytical techniques and AI applications in mineral exploration, and Mexico's future involvement could help expand the yield of exploration initiatives.

What is needed to accelerate USMCA cooperation on critical minerals supply chain?

Four immediate priorities arise for USCMA cooperation in the field of critical minerals. The upcoming USMCA review should serve as the platform to revisit how USMCA can support the development of critical mineral supply chains across North America. First, USMCA commitments can be used to align regulatory frameworks to create a more supportive environment for critical mineral mining and processing. This could include harmonizing regulations across the U.S., Canada, and Mexico to reduce bureaucratic barriers, improve cross-border investment conditions, and enable the development of integrated North American supply chains. Regulatory alignment can also help address policies that undermine investment like those in Mexico, where restrictive policies such as lithium nationalization and proposed bans on open-pit mining hinder cross-border investment and undermine critical mineral supply chains.

A second important issue for the negotiating table is the impact of various domestic policies on cooperation with USMCA partners. For example, Canada is recognized as "domestic" under the U.S. Defense Production Act, and under the Inflation Reduction Act's EV credits. However, under certain supply chain and processing partnerships under the Infrastructure Investment and Jobs Act, the "Buy America" provisions require domestic sourcing of constituent components including minerals for projects funded with federal funds, unless specific waivers

are granted. Similarly, in the CHIPS Act's support mechanisms to build out domestic semiconductor material supply chains, and the IRA production tax credits for critical minerals refining, Canada is not automatically considered as domestic.

Third, USMCA cooperation can focus on stockpiling and building joint processing capacity, which is the true bottleneck in the supply chain and a threat for downstream sectors in USMCA countries. An analysis by Columbia University's Center on Global Energy Policy shows that mineral acquisition for defense purposes would cost north of $6 billion today, whereas mineral acquisition for a stockpile that is able to offer some form of market stability would easily cost more than $40 billion. These are large amounts that showcase the need for burden-sharing among allies. Even with stockpiling, the remaining challenge is processing, where Chinese competitive advantages that were created with the help of state support now undermine the potential build-up of processing capacity elsewhere. Changing the status quo will require a multi-country approach, given the capital cost of processing facilities and given the fact that China's advantage is not only state support, but rather the development of an integrated and highly standardized supply chain that has created large incumbents that are able to outcompete global counterparts even without state support. Acknowledging the national security implications of this reality and the need to maximize economies of scale to stand a chance of competing with Chinese players should be recognized in the USMCA competitiveness committee and leaders' declaration alike.

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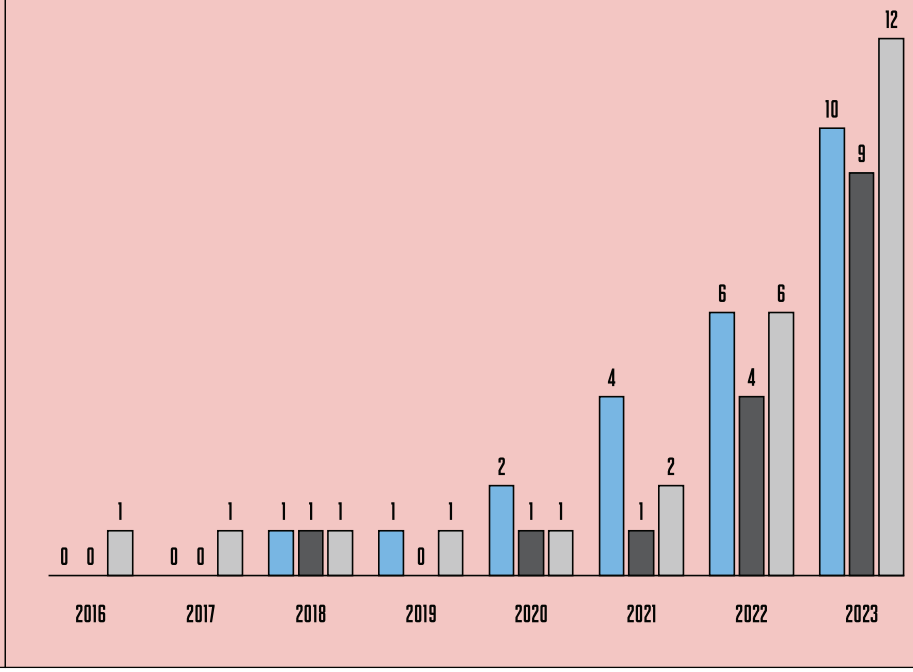
Fourth, USMCA can provide a platform to discuss the updating of the Defense Production Act to streamline approvals, increase project capacities, and raise budget cap. As mentioned, historical data indicates that DPA funding for such projects has been modest, often constrained by political sensitivities, particularly when involving foreign entities such as Canadian companies. By simplifying co-investment requirements and increasing funding allocations, the U.S. could catalyze larger joint ventures with allies like Canada and Australia, who are already recognized as domestic partners under Title III. This would align funding mechanisms with the scale of the challenge and enabling North America to better compete with China's dominance in mineral supply chains.

Currently, under Title III of the DPA, projects up to $50 million require congressional notification, while those exceeding this threshold necessitate explicit congressional approval. This process can introduce delays and uncertainties, particularly for larger-scale projects critical to national security. To address this bottleneck, revisions to the DPA should include raising the budget cap for expedited approvals, allowing more projects to bypass lengthy congressional approvals. For example, increasing the threshold to $150 million for specific critical mineral projects of acute national security concern could significantly enhance the Department of Defense's ability to quickly invest in strategic projects while maintaining transparency and oversight through Congress's notification process.

Figure 6.

THE IRA TURBOCHARGED BATTERY INVESTMENT ACROSS NORTH AMERICA

Battery refers to battery storage systems designed for grid use, utility scale projects, and storage solutions. Total Billion Constant 2015 US$



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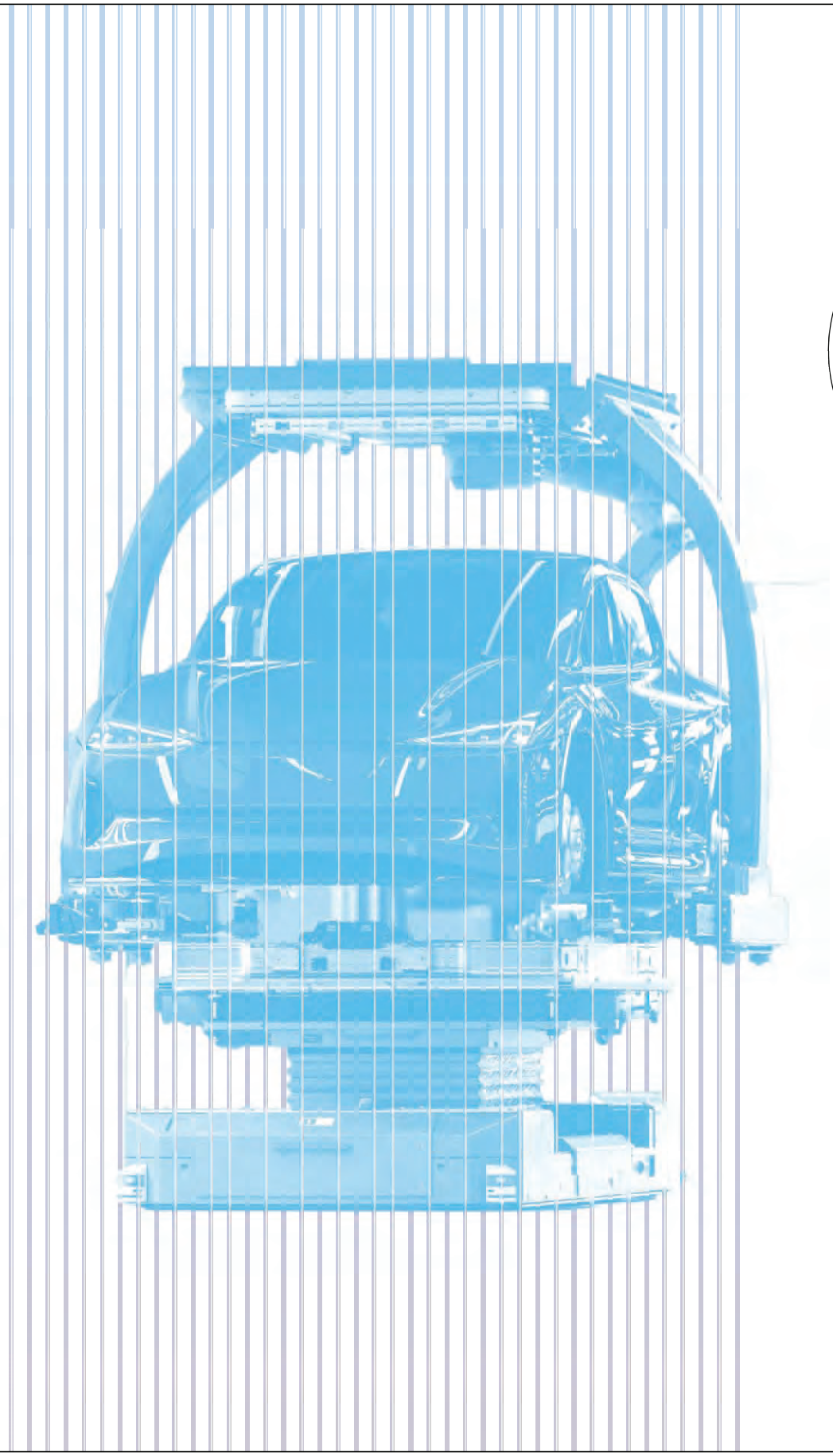
4

STAYING IN THE FAST LANE: WHY NORTH AMERICA CAN'T AFFORD TO SLOW DOWN ON EVS



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In 2026 the U.S., Mexico, and Canada will undertake an unprecedented review process through which they will decide whether to extend the United States-Mexico-Canada Agreement (USMCA), which went into effect in 2020. The automotive industry is deeply integrated across the three USMCA countries and is a driver of trade and jobs. However, the auto industry has faced many challenges since USMCA came into effect, including a global pandemic and a semiconductor shortage crisis. The industry is also navigating a rapid shift from internal combustion engine (ICE) toward electric vehicles (EVs). EVs are not only a key lever to decarbonize the way we move people and goods, they also represent a major economic opportunity. With countries around the world enacting EV policies and companies pushing the boundaries of innovation to compete in this space, the EV global market size is projected to grow from $437.62 billion in 2024 to $1.1 trillion by 2032.[1] Recognizing this opportunity, players around the world have moved swiftly and decisively to lead the EV transition. As the three governments gear-up for review of the USMCA in 2026, a key focus will be on how USMCA supports the auto industry and what more might be needed to enable a more competitive auto sector as it transitions to EVs.

A highly integrated supply chain...in transition

The role of the North American Free Trade Agreement (NAFTA) and then USMCA in supporting the integration of the automotive supply chain across the region is widely recognized. Building vehicles in North America necessitates multiple border crossings that are perfectly orchestrated to ensure maximum efficiency and involves an integrated supply chain that has been honed over decades. Ford's CEO Jim Farley explained the just-in-time approach:[2] If there is a problem on the Ambassador Bridge between Detroit and Windsor, Ford will run out of seats from its supplier in Canada to produce the F-150 in Detroit within an hour. Having an integrated supply chain for manufacturing automobiles means that much of the auto content that comes from Canada and Mexico contains high levels of U.S. value added. According to one estimate, vehicles built in Canada have an average of 50% of content from the U.S., and those assembled in Mexico had 35% of U.S. content.[3] The U.S. International Trade Administration estimated that around half of Mexico's imports of auto parts are from the U.S., and, after further processing, Mexico exported most of its finished auto parts (86.9%) back to the U.S.[4]

As the three governments gear-up for review of the USMCA in 2026, a key focus will be on how USMCA supports the auto industry and what more might be needed to enable a more competitive auto sector as it transitions to EVs.

The benefits of this integration, and the areas that need improvement, will be part of the 2026 review process. In doing so, the three countries should consider how the transition to EVs is changing the rules of the game—and how USMCA could serve as a tool to help the three partners take on the electrification challenge more effectively.

State of play

In 2020, USMCA established more rigorous provisions specific to the automotive sector for goods to qualify for duty-free treatment to encourage increased investment in vehicles and automotive parts production (for both ICE vehicles and EVs) in North America. These included Rules of Origin requirements to promote increased regional value content and a new provision related to labor value content to support higher-paying jobs and make U.S. workers more competitive.[5] The goal was clear: localize the supply chain as much as possible while ensuring that the economic benefits of this localization are shared by all three countries.

The transition to EVs has made the localization goal more difficult because it involves a substantial reconfiguration of the supply chain around batteries. Developing domestic battery production—along with EV production capacity via the retooling of ICE vehicle plants or by establishing new EV manufacturing plants—has therefore been the north star for the region the past few years. And these actions have borne fruit: Since USMCA came into effect, and thanks to policies and actions undertaken by the three partners, EV and battery related investments in North America through late 2024 are estimated at $249.6 billion.[6] Of these, 78% are in the U.S. ($195.9 billion), 20% in Canada ($46.9 billion), and approximately 3% in Mexico ($6.9 billion) (Figure 1). Still, substantial challenges remain: most of these investments will begin to come online between now and 2030, and lithium-ion battery production relies heavily on materials and components sourced from or processed in China.[7] Efforts to reduce the dependency on China will continue and will require collective and decisive action.

EV AND BATTERY-RELATED INVESTMENTS (IN BILLIONS) ACROSS NORTH AMERICA SINCE USMCA

	U.S.	Canada	Mexico
EV production	$54.2	$12.2	$6.2
Battery manufacturing	$141.6	$34.7	$0.7

Source: Data from The Big Green Machine.

New administrations in the U.S., Mexico, and Canada, a quest to decouple from and compete with China, and a push to develop domestic-first and regional-second supply chains to capture the EV opportunity, will be key factors driving decisionmaking for the three partners.

Indeed, China's early EV leadership and swift expansion into global markets have become thorny issues, impacting each of the partners and their relationship in different ways. Guided by a top-down strategy to target high-growth industries and aided by substantial government subsidies and massive investments in R&D, Chinese companies dominate the EV transition today. China produces two-thirds of the world's EVs, is responsible for 85% of global battery cell production, and controls the processing and refining of critical minerals.[8] This concentration creates vulnerabilities and risks for the partners and highlights the need to diversify EV supply chains away from China, and fast. It also underscores the need to boost innovation and invest in next-gen battery technologies such as solid-state batteries to carve out competitive advantages in the longer term.

The 2026 review will take place at a delicate time for the region—and the world. New administrations in the U.S., Mexico, and Canada, a quest to decouple from and compete with China, and a push to develop domestic-first and regional-second supply chains to capture the EV opportunity, will be key factors driving decisionmaking for the three partners. In the lead-up to the review, what's the state of play in each country?

United States

The U.S., the largest center of vehicle production and vehicle market in North America, is experiencing a clean energy manufacturing renaissance following the passage of the Inflation Reduction Act (IRA) in 2022. The IRA has led to over $110 billion in investments in the EV and battery sectors across the country,[9] including many that will benefit Republican states. Among other provisions, the IRA provides tax credits for vehicles and battery components manufactured or assembled in North America, thereby extending some of the benefits related to EV production to Canada and Mexico and encouraging further integration of the supply chain. Other policy tools, such as the Bipartisan Infrastructure Law's EV charging investment program and the Environmental Protection Agency's tailpipe emissions standards have also helped accelerate industry action around the EV transition and position the U.S. better vis-à-vis competing with China. Any action aimed at undoing these policies poses significant risks

to the progress made thus far and would harm U.S. manufacturing and trade. Sales of battery electric vehicles (BEVs) have increased overall and reached 8.9% market share[10] in late 2024. But these sales were uneven, leading OEMs to hedge their bets and in some cases delay previously announced production of EV models. The lack of affordable models is a key hurdle to increased uptake: The average price paid for an EV in late 2024, at $57,000, is 19% higher than the industry-wide average transaction price.[11] While efforts are underway, no U.S. automaker has yet been able to produce a sub-$30,000 EV, a price point considered crucial for mainstream adoption. Insufficient charging infrastructure to address the "range anxiety" issue and a negative public perception of EVs, given recent politicization, add to the challenges.

Mexico

Lower production costs, proximity to the U.S., and a large supplier base have made Mexico an automotive industry powerhouse. All "Big Three" companies produce EVs in Mexico: GM in Ramos Arizpe, Ford in Cuautitlán, and Stellantis in Toluca, with production expected to expand in 2025 and beyond. The vast majority of these vehicles are exported to the U.S. and other global markets.[12] The nearshoring trend that seeks to relocate supply chains closer to the final consumer market to minimize disruptions has benefited Mexico as more companies establish operations in the country. The supplier ecosystem also continues to grow: There were at least 312 suppliers of EV parts and components in Mexico in Q2 2024, up from 172 in Q2 of 2023.[13] There is momentum for Mexico to fully take advantage of this opportunity while finding ways to create more value add, including President Claudia Sheinbaum's new national flagship EV project, Olinia. To do so, however, the country will need to address challenges related to infrastructure, the supply and reliability of electricity, and workforce readiness and availability—all while complying with labor and environmental provisions outlined in the USMCA. More broadly, the new Sheinbaum administration has implemented a series of sweeping reforms that are creating uncertainty and unpredictability, none of which are conducive to a thriving business environment. These reforms include the overhaul of Mexico's judiciary, a measure to reinforce government participation over private investment in the energy sector, and the dissolution of independent regulators such as the Federal Economic Competition Commission (COFECE), the Energy Regulatory Commission (CRE), and the National Institute of Transparency, Access to Information and Data Protection (INAI), among others. Further complicating the picture, Chinese EV brands have entered the Mexican market in recent years, offering affordable, highly competitive products. BYD, the leading Chinese EV company, announced plans to open around 50 dealerships in the country by the end of 2024.[14] The penetration of Chinese EV brands, coupled with BYD's plans for setting up a plant in Mexico, are widely perceived in the U.S. as a move by Chinese companies to enter the U.S. market tariff-free by leveraging USMCA. To preempt this, the U.S. imposed 100% tariffs on all Chinese-made EVs as of September 27, 2024, and Canada also implemented a 100% tariff on Chinese EVs on October 1, 2024. Mexico, in turn, ended an exemption on the same date that had provided a 15%–20% reduction in import taxes for EVs from countries without free trade agreements since late 2020 and which had benefited Chinese companies. EVs are still a small part of the Mexican market—about 2.5% of total vehicle sales in mid-2024,[15] but sales have grown considerably in the past year (over 50% growth on BEV sales in 2024 relative to 2023[16]), a trend that is expected to continue.

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Canada

Canada, for its part, is leveraging its substantial mineral reserves, abundant renewable electricity and strong ESG credentials to position itself as a leader in the battery supply chain. The availability of nickel, cobalt, copper, lithium, and rare earth elements—all critical for EV and battery production—means that Canada has enormous potential to be a key player in this sector. Canada's 2022 Critical Minerals Strategy earmarked funding support to accelerate the development of the battery supply chain, and dedicated programs such as the Critical Minerals Research, Development, and Demonstration program are designed to support innovative processing technologies to advance Canadian mining projects toward production. The U.S. is also supporting this effort; The Department of Defense provided grants in the amount of $34.7 million to three Canadian companies involved in the cobalt and graphite supply chains in 2024.[17] Still, more investment is needed, and long production timelines involved in developing mining and refining operations for critical minerals has put pressure on Canada to act. Canada has also seen some investments in EV production, largely concentrated in the province of Ontario, which borders Detroit and is connected to the Michigan automotive ecosystem. Driven by strong policy support and incentives since 2019, EV adoption is growing in Canada: Zero-emission vehicle market share, including BEVs and plug-in hybrids (PHEVs), was 13.4% in mid-2024.[18]

The USMCA review: An opportunity for realignment

The actions taken and investments made across the U.S., Canada, and Mexico in the past few years have laid the foundations for North America in the EV transition. These investments across the EV and battery supply chain build on each country's comparative strengths, with the U.S. leading EV production and R&D across the region, Mexico providing labor-intensive manufacturing capabilities and a strong and resilient auto parts supplier ecosystem, and Canada producing critical minerals that will help to onshore the battery supply chain.

The USMCA review is an opportunity to double-down on the importance of trade and investment across North America in the development of the EV supply chain and to recalibrate the region's position in the EV race. In the lead-up to the USMCA review, the partners should consider three key opportunities:

1. Establish a North American Automotive Dialogue or similar dedicated platform for the three governments to discuss the current state of play, barriers, and opportunities with industry stakeholders. The dialogues should be designed to develop concrete strategies for:

    a. Increasing competitiveness of North American companies and their products;

    b. Boosting innovation in the EV space, particularly by making bolder investments in next-gen EV and battery technologies and supporting promising startups; and

    c. Bolstering EV adoption across the three countries to grow the market for the vehicles.

2. Design flagship projects or initiatives related to EV policy, infrastructure, or workforce that could be collaboratively implemented by the partners. Such projects can help signal the importance of competing in this transition and create new mechanisms for closer collaboration.

    a. On the policy front, the partners could consider further harmonization of relevant EV standards or regulations and increased support for technology transfer. The experience of the Association of Southeast Asian Nations (ASEAN) countries[19] in this regard could be a helpful reference for USMCA partners.

There is too much at stake, and decisive action is needed to fully realize the potential of the investments made so far and ensure a place for North America in this competitive race.

b. In terms of infrastructure, binational charging corridors such as the ones implemented between Michigan and Ontario[20] or San Diego and Tijuana[21] can be replicated in other border crossings to facilitate EV uptake and leverage existing integration.

c. Reskilling the current automotive workforce and developing new talent for EVs is an imperative across the region. The joint efforts[22] of the three partners to develop the semiconductor workforce in North America offers a relevant model that can be applied to EVs, tapping into existing—and creating new—industry and academic partnerships.

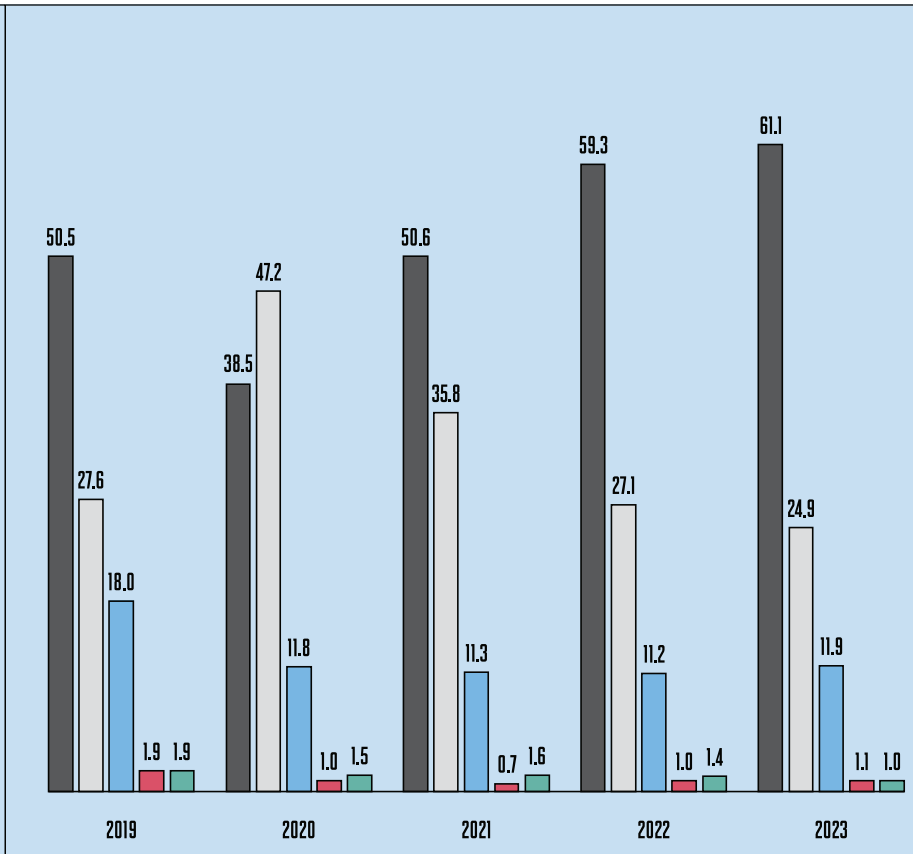
3. Develop a comprehensive blueprint that establishes a common approach with regard to China, and which takes into account implications for individual countries as well as the region. An overly narrow defensive focus based primarily on tariffs should be avoided as it risks reducing North American companies' global competitiveness in the longer term and boxing the region out of the most important technology transition faced by the automotive industry since its creation.

The U.S, Mexico, and Canada must stay in the fast lane when it comes to the EV transition. There is too much at stake, and decisive action is needed to fully realize the potential of the investments made so far and ensure a place for North America in this competitive race.

Figure 7.

CHINA'S EV SALES ARE LEADING GLOBALLY AND CAPTURING MARKET SHARE

Car sales are domestic



Source: IEA (2024), Global EV Outlook 2024.

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From mineral mines to assembly lines: How the USMCA can drive a regional critical mineral supply chain

The USMCA was created, negotiated, approved, and enacted during President Trump's first term. That would be a remarkable feat for any free trade agreement (FTA), but considering that the USMCA is the most comprehensive, high-standard, and innovative trade agreement in the world, it's an astonishing achievement.

And the timing could not have been better. Modernizing North American trade at the outset of the COVID-19 pandemic positioned the region for a rapid rebound with the U.S. as the engine of growth. This was most evident for the auto industry, which is the backbone of manufacturing across the region and a key contributor to growth, employment, and innovation. In 2023, the auto sector added more than $800 billion to the U.S. economy, about 11% of total manufacturing output, supporting nearly 10 million American jobs. Remarkably, every job with an auto manufacturer in the United States creates nearly 12 other jobs upstream (such as suppliers) and downstream (like dealerships).[2]

Auto supply chains throughout the U.S., Mexico, and Canada are so tightly knit that we don't merely sell vehicles to each other, we build them together, making North America the world's second largest auto-producing region. Working with its neighbors has also positioned the United States as the world's second largest a uto-manufacturing country. Toyota is proud to contribute to that title through our 10 U.S. plants, which support 190,000 jobs across America directly and with our dealer partners.

Under the USMCA, America's role as an auto-manufacturing powerhouse has been bolstered. The agreement has also been a success for U.S. workers, consumers, farmers, and firms, but in the spirit of kaizen, or continuous improvement, it could be enhanced, and its innovative mechanism to modernize allows all three parties to do just that.

The USMCA is a paradigm-shifting agreement that views FTAs as dynamic deals that can be updated to address new challenges and seize new opportunities. As the three parties convene for the 2026 review, it will be important to focus on strengthening the regional supply of critical minerals to meet forecasted demand for artificial intelligence, defense, energy, manufacturing, and technology. A comprehensive approach is essential to mitigate supply chain risks for materials that are highly vulnerable to disruptions, price shocks, and shortages. Firms and

innovators across the economy have a vested interest in shoring up this supply chain. That's certainly the case for Toyota's new battery plant in Liberty, North Carolina. Announced on the heels of the USMCA's enactment, this $14 billion plant will employ over 5,000 people to build batteries for hybrid, plug-in-hybrid, and electric vehicles. It is the largest investment in a single place that Toyota has made anywhere in the world.

A strategic critical mineral plan will help expand and secure regional supply chains, and the USMCA is the vehicle to drive it forward. Three steps towards this goal include:

Specifying strategic minerals: Establish a targeted list of strategic minerals that would be integral to qualification under the USMCA. Importantly, the list should differentiate high-value rare earths from bulk commodities in determining qualification rules and transition periods for complying with them. A cumulation rule would help accelerate the pace of mining, processing, and refining by counting operations across all three countries toward compliance. The "yarn forward" rule for textiles in the USMCA offers an example of how this could be adapted for critical minerals.

Securing access: Deploy financial tools to mitigate risks critical mineral projects face due to massive up-front costs and market volatility. Low-interest loans, tax credits, and public-private partnerships that target gaps in early-stage development, midstream processing, and co-product recovery can catalyze private capital and accelerate innovation. Aligning trade rules and remedies across all three markets will help protect these investments and secure access. From foreign investment screening for mining, processing, refining, and manufacturing operations to the application of anti-dumping and countervailing duty remedies, USMCA parties should develop and enforce regionwide rules.

Stabilizing prices: Set price bands for the specified minerals to protect infrastructure investments and long-term purchase agreements from price shocks due to dumping of those minerals on the global market. If a price for a commodity falls below the floor set in the price band, it would trigger collective action by USMCA parties, such as tariffs, stockpile releases, or tax credits. This would protect profitability for producers and purchasers that have complied with the agreement.

Since President Trump began negotiating the USMCA, Toyota has been committed to its success. While the agreement's novel mechanisms to evolve enable it to meet emerging 21st century conditions, the stability and predictability of the framework is foundational to attracting capital for multibillion dollar, multidecade investments. The transformational potential of the USMCA is just being realized as the three parties begin the review process. This is a prime opportunity to build upon the agreement's success to unleash North America's energy future and boost its manufacturing by securing the supply of critical minerals.

Endnotes

1 Toyota is a donor to the Brookings Institution. The conclusions and recommendations of any Brookings publication are solely those of its author(s), and do not reflect the views of the Institution, its management, or its scholars.

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SECURING THE MINERALS FOR NORTH AMERICAN ENERGY

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Introduction

As the world is coming to terms with the need to electrify to address the looming climate crisis, it is also coming to understand that electrification requires a significant quantity of minerals. This chapter focuses on a subset of critical minerals—those that are needed for the clean energy transition[1]—also known as "energy transition minerals."[2] Energy transition minerals such as lithium, graphite, copper, nickel, rare earth elements, and cobalt are essential building blocks for a clean energy economy; they are used in wind turbines and solar panels, electric vehicle batteries, renewable energy transmission, and more.[3] China dominates the energy transition minerals markets,[4] and the U.S., Canada, and Mexico are all focused on securing their supply chains for these same minerals. This chapter examines opportunities for North America to become more self-sufficient in terms of energy transition mineral supply while also moving toward more responsibly sourced minerals.

The drivers for increased appetite for energy transition minerals

The U.S., Mexico, and Canada have each established decarbonization goals in their existing Nationally Determined Contributions (NDCs). NDCs are documents submitted under the Paris Agreement to the United Nations Framework Convention on Climate Change that detail a country's climate commitment over the next five years. In February 2025, an updated set of NDCs are due to be submitted. The U.S. released their new NDC in December 2024, with a target to reduce emissions by 61%–66% below 2005 levels by 2035. While the Trump administration has withdrawn from the Paris Agreement, this target still serves as a guide for subnational action and could be adopted by a future U.S. president. Canada has yet to submit its new NDC but did announce a new emissions reduction target of 45%–50% below 2005 levels by 2035. Mexico's latest target is 35% reduction from a business-as-usual scenario by 2030. A successful and rapid energy transition is critical to meeting all three countries' goals and will necessitate adding significant new renewable energy capacity and electric vehicle capacity, which will lead demand for transition minerals to double or even triple over the coming years.[5]

Energy transition minerals sourcing within North America

At present, the U.S., Canada, and Mexico are neither mining nor processing significant quantities of any of the critical minerals needed for decarbonization.[6] Canada has a toehold in cobalt processing, as does the U.S. in rare earth extraction. While comparable data is not available for Canada or Mexico, according to the 2024 Mineral Commodity Summary from the U.S. Geological Service,[7] the U.S. is 100% net-import reliant for 16 critical minerals,[8] including graphite, and more than 50% reliant on imports for another 29 critical minerals, including rare earths (>95%), zinc (77%), cobalt (67%), and nickel (57%). It is also reliant for the minerals that are used to make aluminum (>75% import reliant for bauxite and 59% reliant for alumina).

Over the past several years, the U.S. has initiated a broad effort to increase critical minerals mining and processing domestically through the Inflation Reduction Act and the Bipartisan Infrastructure Law,[9] and the Trump administration appears committed to even stronger action to prioritize domestic mining and processing. Canada has made efforts to increase domestic mining, including investing[10] to improve access for critical minerals projects and reform the

As the world is coming to terms with the need to electrify to address the looming climate crisis, it is also coming to understand that such electrification requires a significant quantity of minerals.

permitting system for mining and other major projects. In 2022, Mexico's domestic mining value was $3.3 billion.[11] Mexico has an opportunity under President Claudia Sheinbaum to expand its mining sector by reopening to increased private investment in the sector.

North American trade in minerals is already important to all USMCA countries. The U.S. is the primary source of ore and metal imports to Canada and Mexico, at 56% and 65%, respectively. In fact, Canada imported more critical minerals from the U.S. than from other countries.[12] In 2022, the U.S. exported $2.28 billion worth of minerals to Mexico[13]—47% of Mexico's mineral imports come from the U.S. The U.S. was a dominant source for all Canadian and Mexican mineral imports, and Mexico was a dominant source of graphite for Canada, but Canada was not a dominant source for Mexican imports. Fifty-two percent of Canada's mineral exports went to the U.S. in 2022. Between 2019 and 2022, Canada was the United States' primary import source for magnesium, nickel, tellurium, vanadium, and zinc[14]—all listed critical minerals for which there is limited domestic mining in the U.S. In addition, during that same period, the U.S. imported about 20% of its refined copper from Canada. During the period from 2019–2022, Mexico was the United States' primary import source for fluorspar and a significant import source for graphite and copper.

While Mexico has significant reserves of lithium, it faces challenges to integrating its resources with the U.S. and Canada.[15] These impediments are due to organized crime and civil unrest. A ban by the former Lopez-Obrador administration on private lithium mining and processing activities also significantly curtailed investment. It is possible that President Sheinbaum will reverse this nationalist, anti-private sector approach.

China is another key exporter of critical minerals to North America. China supplied a greater number of nonfuel minerals to the U.S., 24 compared with 23 from Canada and eight from Mexico. Data from 2014 shows that countries outside North America accounted for more than half of ore and metal imports for the U.S., with Canada contributing 33% and Mexico only 10% of U.S. imports of critical minerals. North America's share of global mining production has dropped from around 11% in 2016 to about 4% in 2023. Although it maintains about a 10% share of production of copper and rare earth elements specifically.

The opportunity to expand sources of energy transition minerals extraction in North America also requires a better understanding of their availability. The Critical Minerals Mapping Initiative (CMMI)[16] is working to improve the knowledge base. The CMMI is a partnership

between the geological surveys in the U.S., Canada, and Australia. As Mexico is not part of the CMMI, the U.S. and Canada ought to consider having Mexico join this partnership. Additionally, the U.S. began the Earth MRI program in 2019, focused on mapping the U.S. surface and subsurface;[17] this program could be extended cooperatively with Canada and Mexico.

The path to responsibly sourced minerals

Understanding the risks associated with mineral extraction:

The extraction of critical minerals often causes significant negative impacts to both the environment and surrounding communities. Mining often has localized impacts (e.g., surface or groundwater pollution, air pollution, water consumption, waste management) and can also have global impacts (e.g., mercury pollution, greenhouse gas emissions) and system impacts (e.g., the sudden influx of mine workers contributing to social instability and increased crime rates).[18]

Environmental challenges associated with mining value chain activities can negatively impact ecosystem services from which workers, communities, and regions derive benefit. One study estimates that the overall ecosystem services cost caused by mining four commodities globally—aluminum, copper, gold, and iron ore—is estimated at about $5.4 billion per year,[19] with about two-thirds in forested areas. This has implications for livelihoods, health, well-being, and agency.[20]

Social challenges associated with mining value chain activities writ large (i.e., not exclusive to energy transition minerals) include hazardous working conditions and labor abuses (e.g., child and forced labor, especially in artisanal and small-scale mining), displacement of local communities, disregard for land rights and Indigenous peoples' rights, violations of the right to health, and threats to environmental defenders.[21]

Mining is also associated with challenges around the governance of the critical minerals value chain—from mining and processing to disposal and recycling. These challenges are not new, and the rapid increase in demand for critical minerals, along with the potential for significant economic gains to be realized in this push, makes the sector especially vulnerable to corruption risks. About 40% of the mineral production needed is expected to occur in countries with weak, poor, and failing resource governance.[22]

While no country or its companies are immune from irresponsible operations and mining disasters at home and abroad, the U.S., Canada, and Mexico have relatively strong laws and regulations that support responsible mining. In the U.S., almost all new mines must be reviewed pursuant to the National Environmental Policy Act and are subject to a network of strong environmental laws[23]—including the Clean Air Act, the Clean Water Act, and the Resource Conservation and Recovery Act—which govern every aspect of a mine's operation, require permits to be granted, and provide for state regulator oversight of operations. In Canada, there is a requirement to consult with and accommodate Indigenous groups.[24] In Mexico,[25] reforms to its mining laws in 2023 now allow concessions to be cancelled for

ecological concerns, no longer allow concessions in natural protected areas, require free prior and informed consent from Indigenous and Afro-Mexican communities, and establish permanent, nontransferable liability for waste generated through mining activities.[26]

In contrast, mining in China, the dominant source of transition minerals currently, has poor safety records and has caused significant domestic environmental degradation.[27]

Demand-side management and circularity

North America cannot and should not rely solely on mining to avoid supply chain challenges; the U.S., Canada, and Mexico should focus on demand management and minerals circularity to minimize the need for the creation of new mining operations.[28] Since primary minerals must be mined, the goal for sourcing is responsible mining. Secondary minerals, which are recycled, provide an opportunity to move beyond responsible sourcing to sustainable sourcing, meaning that minerals can be recovered at products' end-of-life as inputs for another production cycle, rather than extracting virgin resources. Sometimes called "above-ground mines," more recycling can minimize the need to develop new mines while also reducing solid and hazardous waste. According to the International Energy Agency's global analysis, a successful scale-up of recycling can lower the need for new mining activity by 25%–40% by 2050.[29]

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Given the expected increase in electric vehicles (EVs) on the road, recycling capacity for EV batteries has been rapidly expanding. In 2023, the U.S. had over 100,000 tons of EV battery recycling capacity,[30] with an additional 500,000 metric tons of capacity set to come online in the coming years. Canada is also making strides in EV battery recycling. Not only does it currently have six battery recycling plants, but some of North America's biggest recycling companies, such as Lithion, are Canadian. While there has been Chinese company interest and the Mexican government has evaluated developing EV battery recycling plants, there is a dearth of projects underway. Further, regional level battery recovery and recycling programs are expected to increase recycling rates.[31]

Better recycling will require designing batteries for recyclability,[32] more effective collection, developing high-standard recycling infrastructure, growing the domestic market for recycled content, and establishing enabling policies, regulations, and standards, including extended producer responsibility. The U.S., Canada, and Mexico should seek opportunities to develop regional recycling centers where feasible. Different collection protocols and facilities across North America are obstacles, across the board from consumer electronics to EV batteries.

In addition to end-of-life products containing desirable minerals, mine wastes and industry wastes also hold valuable stores of transition minerals. There are various efforts underway to obtain the necessary critical minerals without mining in greenfields, including recovery of rare earth elements from coal byproducts[33] and from legacy and active mine wastes. As these early-stage projects are proven, they can not only provide important minerals, they can also serve as a driver to clean up orphaned and abandoned mines and create new revenue streams at operating mines.[34]

The challenge of traceability

One significant challenge to ensuring that supplies of energy transition minerals are responsibly sourced within North America and other trusted countries is the ability to trace mineral products from their extraction site, through processing and refining, and as they are incorporated into final products such as EVs or photovoltaics that are imported into or built in North America.

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One significant challenge to ensuring that supplies of energy transition minerals are responsibly sourced within North America and other trusted countries is the ability to trace mineral products from their extraction site.

Progress is being made on traceability: The EU Battery Regulation[35] and IRA tax credits require supply chain tracing of critical minerals.[36] Voluntary assurance protocols including the Global Battery Alliance's Battery Passport,[37] as well as IRMA's[38] and Copper Mark's[39] chain of custody standards also support traceability. Blockchain technology is also being employed to support traceability.[40] To further the development of traceability requirements, the U.S., Canada, and Mexico should build traceability requirements into their government procurement policies.

Regulations and voluntary standards

Various voluntary standards exist or are being developed to allow miners to show that they are operating responsibly.[41] Voluntary approaches however need to be followed by mandatory standards in order to ensure that critical minerals are being extracted and refined consistent with preventing environmental degradation and addressing the social risks associated with mining—including providing local communities with a forum to have a voice in the process.

A range of efforts are also underway by governments and intergovernmental agencies to formalize responsible mining standards. These include the Minerals Security Partnership (MSP)[42] and the U.N. Secretary General's Panel on Critical Energy Transition Minerals. The MSP is a transnational association that aims to bolster global critical minerals supply. While this is a Biden administration initiative, President Trump has also committed to securing U.S. critical minerals supplies.[43] The MSP comprises 15 members including the U.S. and Canada and in September 2024, the MSP Forum announced that Mexico would join.[44] The work of the MSP Forum has two focal areas. First, it aims to develop projects that support and accelerate the implementation of sustainable critical minerals production. Second, the MSP Forum will host a policy dialogue that will identify policies for boosting sustainable production and local capacities, facilitate regulatory cooperation to foster fair competition, transparency, and predictability, and promote high environmental, social, and governance (ESG) standards in critical mineral supply chains.[45]

In September 2024, The U.N. Secretary-General's Panel on Critical Energy Transition Minerals released a set of seven high-level voluntary principles to address challenges often linked to mining.[46] These principles focus on human rights; environment and biodiversity; justice and equity; development (through benefit sharing, value addition, and economic diversification);

fair investments, finance, and trade; good governance (through transparency, accountability, and anti-corruption measures); and multilateral and international cooperation. The Panel has also proposed establishing a high-level expert advisory group housed in the U.N. to accelerate greater benefit-sharing, value addition, and economic diversification in energy transition mineral value chains, as well as responsible and fair trade, investment, finance, and taxation. Other proposed initiatives focus on global traceability and transparency, mining legacy issues, and financial assurance, artisanal and small-scale mining, and implementation of material efficiency and circularity approaches.

While both the MSP and the U.N. effort hold significant promise, the U.S., Canada, and Mexico cannot wait for a complete set of protocols to emerge through either of these processes. Enforcement of existing laws in each country and enhancement of those laws as needed is the most valuable way to drive responsible production of energy transition minerals.

Where there are not sufficient strong, widespread, and well-enforced regulatory and legal regimes, high-bar voluntary schemes that implement credible assurance processes can be useful tools. The main voluntary initiatives used in North America that provide purchasers with information on performance are RMI, IRMA, the ICMM principles, Copper Mark, and Toward Sustainable Mining.[47] While differences among these initiatives exist, they are increasingly comparable in terms of the underlying standards, and tools are available to compare them.[48]

Using purchasing power to drive improved performance

The U.S., Mexico, and Canada could form a buyers' club—setting minimum standards for responsible procurement. In doing so, they should engage the voices of non-buyer stakeholders, such as government regulators, civil society, and communities directly affected by mining activities. Decisions about what constitutes "good enough" standards should not be determined solely by the governments as buyers; rather, they should be decided with, or at least incorporate perspectives from, those impacted by mining. Decision making processes should include carefully planned mechanisms to collect and incorporate these perspectives. Without this inclusive engagement, minimum standards could inadequately address local concerns and priorities, potentially undermining trust and leading to opposition or conflict.

A range of efforts are also underway by governments and intergovernmental agencies to formalize responsible mining standards.

Recommendations

As the U.S., Canada, and Mexico seek to shore up their supply chains of energy transition minerals:

- All three countries should take steps to encourage domestic mining and processing without loosening protections for the environment and nearby communities including Indigenous peoples. This can be done through a range of incentives such as the ones being offered in the U.S. via the IRA and the Bipartisan Infrastructure Law and Canada through its Critical Minerals Strategy and Clean Technology Manufacturing investment tax credits.

- All three countries should encourage and favor investment from North American allies in mining and processing projects in country. Mexico, in particular, should reverse decisions by the previous administration that were unfriendly to private investment in lithium mining and processing.

- The U.S. and Canada should include Mexico as a member of the Critical Minerals Mapping Initiative to support increased discoveries of valuable energy transition minerals.

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Where there are not sufficient strong, widespread, and well-enforced regulatory and legal regimes, high-bar voluntary schemes that implement credible assurance processes can be useful tools.

Further, to ensure that their energy transition mineral supply chains are responsibly sourced, all three countries should take the following actions in order of priority:

- First, they should ensure that they are working on demand reduction by designing systems and products with lower demand for critical minerals (e.g., smaller batteries), and driving circularity in their mineral supply chains (e.g., reusing by extending the use life of products and components and recycling or bringing materials from waste streams back into the economy).

- Second, they should ensure that their domestic regulatory systems drive responsible sourcing from both environmental and social perspectives, and they should look for opportunities to exploit domestic resources and to work collaboratively to support one another's supply chains, including through increased efforts around primary processing and recycling. This could include the U.S., Canada, and Mexico working through existing schemes such as the MSP to agree to seek minerals that meet accepted ESG standards as a basis for sourcing critical minerals. The USMCA commitments on technical standards can ensure these standards become basis for domestic regulation.

- Third, they should establish a range of options to ensure that imports are responsibly sourced. This can include common approaches to tracing imports of critical minerals to understand their environmental and human rights impacts and restricting imports of critical minerals that fail to meet North American standards.

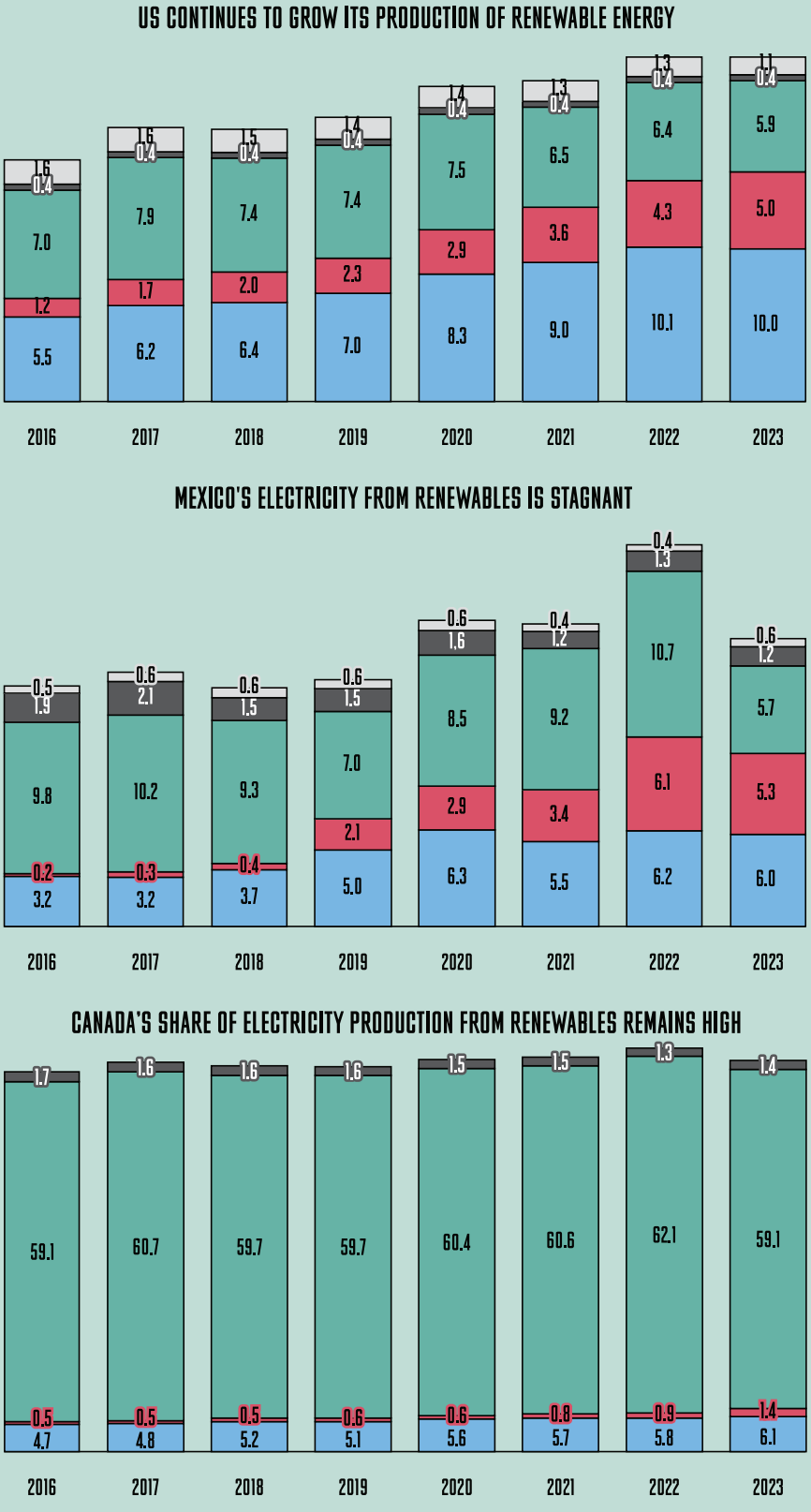
- Fourth, the U.S., Mexico, and Canada should use government procurement to drive standards for responsible sourcing of critical minerals, including requirement of traceability across the critical minerals supply chain. Under the USMCA Government Procurement chapter, this could include giving suppliers from each country preferential access.

- Finally, they should look to voluntary assurance protocols to obtain minerals from projects that have provided assurance on their practices coupled with best-in-class tracing of the minerals from the mine site to the products being purchased in the U.S., Canada, and Mexico.

Figure 8.

RENEWABLE ENERGY PRODUCTION ACROSS NORTH AMERICA

Percentage of electricity produced through renewable sources. Combustible renewables include solid biofuels, biogases, liquid biofuels, and municipal renewable waste.



Source: IEA, Monthly Electricity Statistics.

Endnotes

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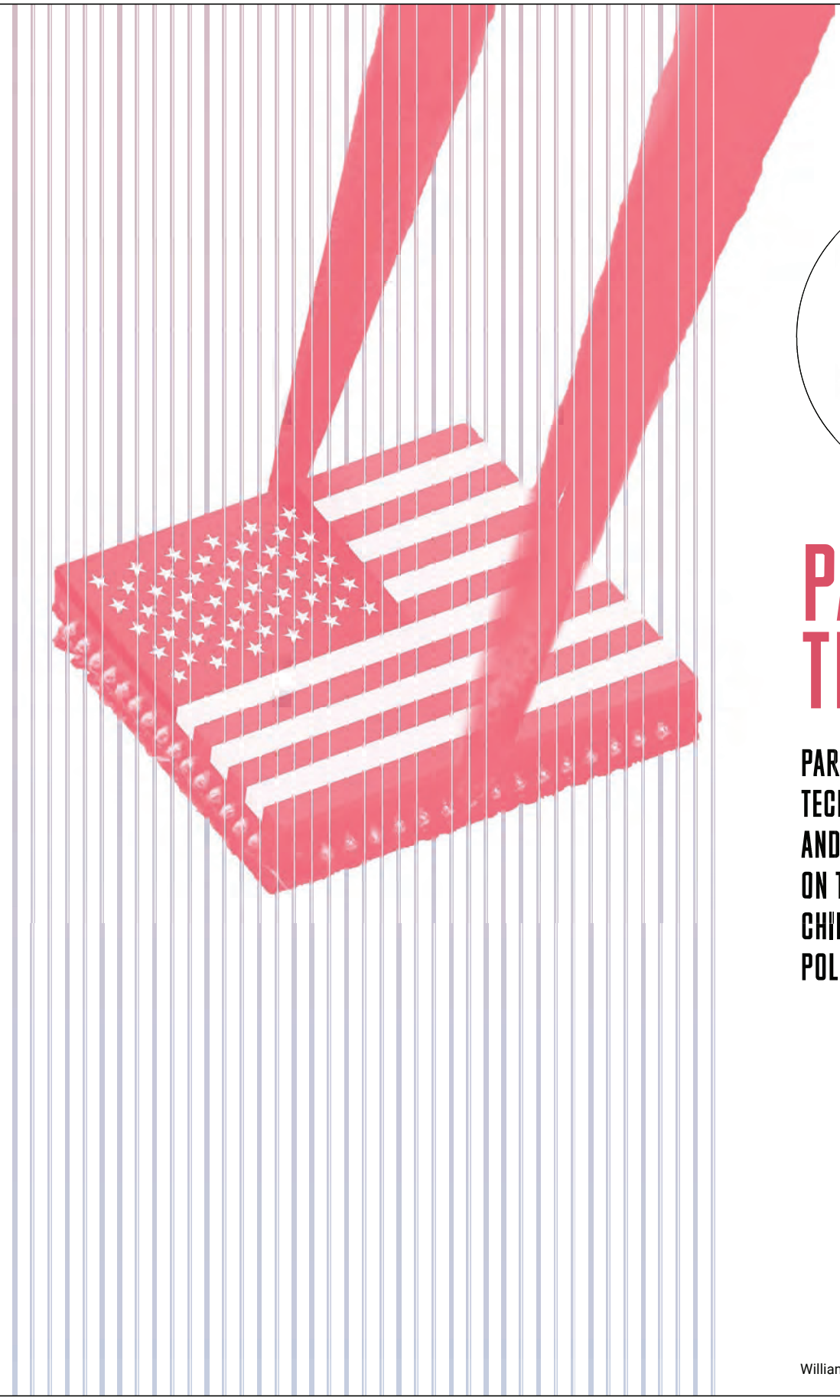
6

BUILDING A NORTH AMERICAN SEMICONDUCTOR ECOSYSTEM: LONG-TERM FOCUS NEEDED



PAUL TRIOLO

PARTNER AND GLOBAL TECHNOLOGY POLICY LEAD | DGA-ASG AND HONORARY SENIOR FELLOW ON TECHNOLOGY, CENTER FOR CHINA ANALYSIS | ASIA SOCIETY POLICY INSTITUTE

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Introduction

The U.S. CHIPS and Science Act, enacted in August 2022, primarily focuses on bolstering domestic semiconductor manufacturing and research within the United States. However, the legislation also allocates $500 million over five years to the International Technology Security and Innovation (ITSI) Fund, managed by the U.S. Department of State. This fund aims to facilitate collaboration with international partners to enhance global semiconductor supply chain security and diversification. This includes growing efforts to foster and develop a North American ecosystem that can support key elements of the semiconductor supply chain over the long term that can act as a supporting mechanism for the front-end manufacturing-focused CHIPS Act funded efforts to reshore advanced node capabilities within the United States. Here the U.S. is banking on the importance of both Mexico and Canada for help to meet U.S. goals around building semiconductor manufacturing capacity and supply chains in North America. This includes taking advantage of trade frameworks such as the U.S.-Mexico-Canada Agreement (USMCA) to support trade in the technologies and components key to semiconductor supply chains and to reduce investment risks.

U.S. funding efforts under the ITSI framework are beginning to ramp up, and 2025 will be a key year for the program in North America. While the funding aspects of the ITSI framework are focused on countries with less-developed capabilities to support semiconductor supply chains with a particular focus on expanding cooperation with Mexico, other important players such as Canada are also part of the mix. These players are participating in efforts to assess gaps in key areas that could be boosted via partnerships and contribute to the overall growth of a North American ecosystem that can support advanced node semiconductor manufacturing and packaging over the next decade.

Mexico is the focus so far of ITSI efforts in 2024, but aperture in 2025 will expand in the Americas

In March 2024, the U.S. Department of State announced a partnership with the government of Mexico to explore opportunities for expanding and diversifying the global semiconductor ecosystem. This collaboration, under the ITSI Fund, began with a comprehensive assessment of Mexico's existing semiconductor industry, regulatory framework, workforce, and infrastructure needs. Key stakeholders, including state governments, educational institutions, research centers, and companies, participated in this analysis alongside Mexico's Secretariat of Economy. The insights gained are intended to inform future joint initiatives aimed at strengthening and growing Mexico's role in the semiconductor sector.

U.S. funding efforts under the ITSI framework are beginning to ramp up, and 2025 will be a key year for the program in North America.

The focus of international collaborations under the CHIPS Act and ITSI framework has predominantly been on partnerships with countries like Mexico to enhance regional semiconductor supply chains. As noted, several key stakeholders have participated to enhance Mexico's semiconductor ecosystem. These include:

- **Educational institutions:** Arizona State University (ASU) has been instrumental in workforce development initiatives and will remain one of the centerpieces of the entire ITSI-backed effort in North America and in other countries that ITSI is focusing on in Asia. ASU launched the "English for the Semiconductor Industry" course, benefiting over 10,000 participants across Mexico. Additionally, ASU conducted "train the trainer" workshops in Hermosillo and Tempe, focusing on semiconductor education.[1]

- **Research centers:** This collaboration involves comprehensive assessments of Mexico's semiconductor ecosystem, including research capabilities. This suggests the involvement of national research institutions in the evaluation process.[2]

- **Companies:** The partnership includes engagement with private sector entities. For instance, over 350 professionals from Skyworks, an electronics manufacturer with facilities in Mexicali, have participated in the semiconductor English course.[3]

As of late 2024, the general thrust of progress with Mexico under the ITSI partnership was becoming clearer. Based on current initiatives and strategic objectives, the following developments are anticipated:

- **Workforce development initiatives:** Building on existing collaborations, such as the partnership with ASU to provide semiconductor industry training, further programs are expected to enhance the skills of Mexican professionals in semiconductor assembly, testing, and packaging (ATP). These initiatives aim to align educational curricula with industry needs and promote greater participation of women in the semiconductor sector. [4]

- **Policy and regulatory reforms:** Efforts are likely to continue in strengthening Mexico's regulatory framework to attract semiconductor investments. This includes establishing coordination mechanisms across government institutions and stakeholders, developing a national semiconductor strategy, and facilitating trade of relevant inputs through streamlined customs processes.[5]

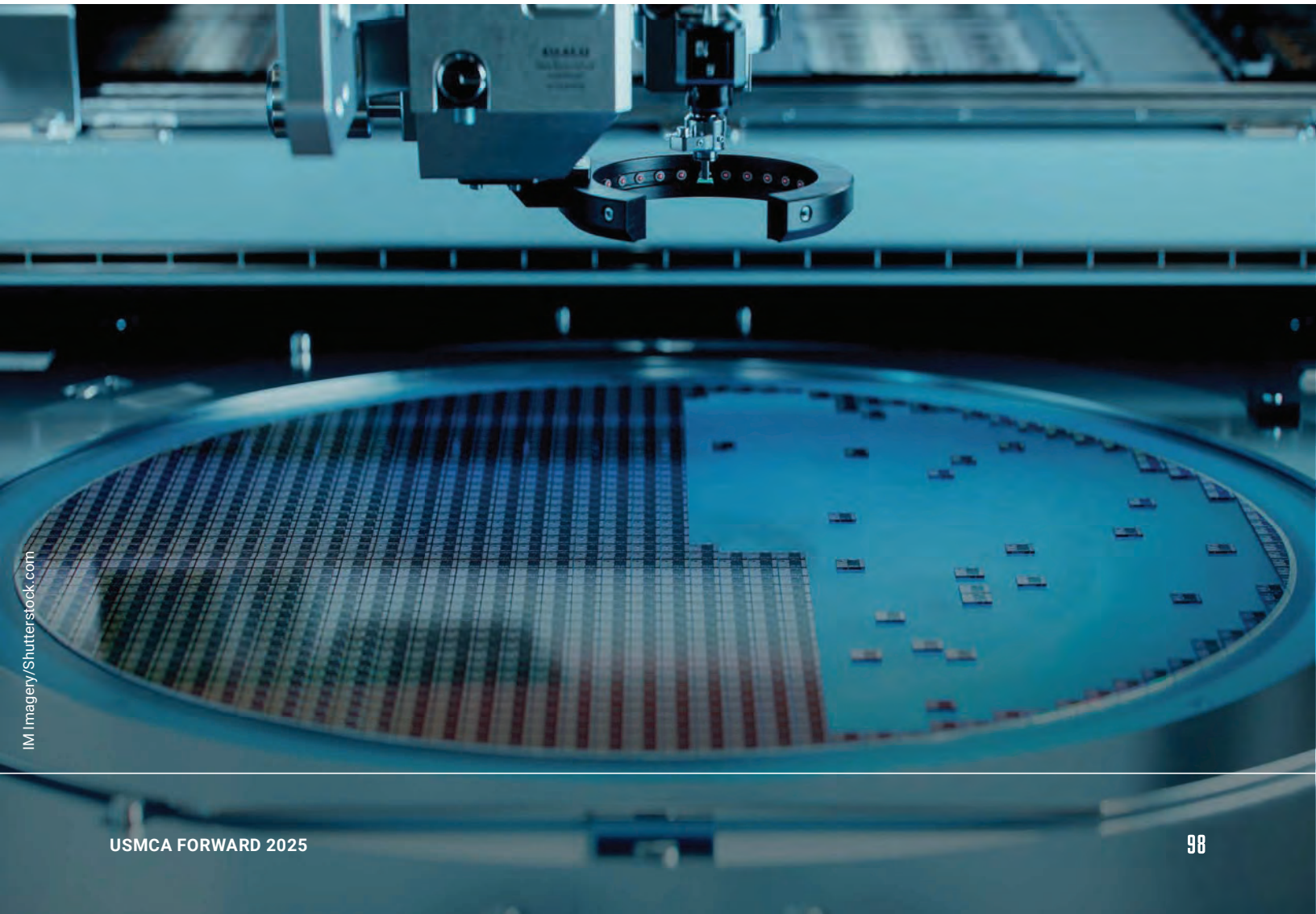
- **Supply chain development:** Programs may focus on promoting the development of Mexican small and medium-sized enterprises (SMEs) within the North American semiconductor supply chain, fostering partnerships between U.S. and Mexican firms and facilitating the sourcing of inputs from within Mexico to support semiconductor manufacturing operations.[6]

This collaboration underscores a multisectoral approach, involving educational institutions, research centers, and companies, to strengthen and diversify Mexico's role in the global semiconductor supply chain. The ITSI approach in the Americas includes partnerships with Costa Rica and Panama, in addition to Mexico.

2025 will be key for launching new efforts and focusing investment in a North American ecosystem for semiconductor development

Early in 2025, several important initiatives will be coming together to drive further progress in the development of a broader North American ecosystem designed to support advanced semiconductor manufacturing centered in the United States and driven by CHIPS Act funding.

First, the CHIPS Act funding process saw significant progress in the last few months of 2024 as the Biden administration finalized agreements and began issuing awards to major front-end manufacturing firms including TSMC, Samsung, Intel, and Micro. The CHIPS Program Office in 2025 will be shifting from investment to portfolio management as it monitors progress across the CHIPS Act recipients and identifies gaps where further funding under a notional CHIPS 2.0 could assist in building out a sustainable ecosystem.



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Under the ITSI effort, in February 2025, the collaborative efforts between Mexico and ASU will be formally launched. In addition, ecosystem reviews under an ITSI-funded program at the Organization for Economic Cooperation and Development (OECD) will be released through the first quarter of 2025. The OECD, through ITSI funding,[7] is working through the Committee on Industry, Innovation and Entrepreneurship (CIIE) and the Committee on Digital Economy Policy (CDEP) and pursuing a number of efforts on semiconductor supply chains.[8] These country reviews will include Mexico, Panama, and Costa Rica in the Americas, and Vietnam and the Philippines in Asia. The reviews will cover critical areas such as supporting infrastructure, energy-related capacity, and the skills gap.

In addition, in mid-January the Dominican Republic hosted a critical meeting of the Americas Partnership for Economic Prosperity (APEP) countries, including Mexico, Canada, and Costa Rica. The APEP effort is designed to reinforce economic cooperation in the hemisphere and to specifically support the development of more resilient and secure supply chains, meaning key technology-related inputs such as semiconductors.[9] This meeting focused on the issue of financing, which is considered a major missing piece in the Americas for funding efforts to build out resilient and secure supply chains in complex technology sectors such as semiconductors. The focus of these efforts, in alignment with ITSI, is on workforce development and a supplier ecosystem. While the U.S. has a long and rich history of financing via venture capital and private equity, particularly the so-called "patient equity" required for sectors such as semiconductors, this approach to financing has lacked broader uptake in the rest of the Americas.

The APEP meeting will tackle issues around how to develop a financial framework for funding elements of a North and Central American semiconductor manufacturing ecosystem. In addition, via ITSI and APEP, the goal is to educate policymakers under the new Mexican administration—President Claudia Sheinbaum has indicated semiconductors are a top priority, and hence, Mexico's partnership with ITSI is of major importance—and among the other APEP countries on efforts to galvanize resources to support building a semiconductor manufacturing ecosystem capable of supporting advanced front-end manufacturing in the U.S. As part of this effort, the U.S. government will provide input about what countries need to gain access to funding via organizations such as the U.S. International Development Finance Corporation

(DFC), the International Finance Corporation (IFC), and private venture capital. In addition, ITSI is also partnered with key industry associations such as SEMI and the Semiconductor Industry Association (SIA), which will also participate in the APEP conference.

In addition, in early 2025, there will be another iteration of the Government Leaders Forum (GLF) held in Tempe, Arizona, with ASU.[10] The GLF in the context of ITSI is a platform where key decisionmakers and industry leaders come together to discuss and collaborate on issues related to global semiconductor supply chain security and workforce development, facilitated by the U.S. Department of State and ASU, leveraging funds from the ITSI fund established under the CHIPS Act. In November 2024, a GLF event—with partners including SIA—was held at ASU's Tempe campus and included leaders from Costa Rica, the Philippines, and Vietnam to discuss workforce development and boosting collaboration in the ATP sector among key U.S. allies in Asia and the Americas. The early 2025 meeting will include leaders from Mexico, Panama, and Indonesia and focus on these same two issues.

This trifecta of events in early 2025—Americas Partnership for Economic Prosperity, Government Leaders Forum, and the Mexico/ASU launch—will go a long way to determine the future trajectory of all of these efforts overseen by the ITSI Fund and the State Department to drive progress on developing a viable semiconductor system in the Americas to support advanced semiconductor manufacturing. These efforts will pick up steam in 2025 at TSMC fabrication facilities in Arizona, and in 2026–2028 at facilities under construction by Intel in Arizona, Ohio, and Oregon, and Samsung in Texas.

One major ongoing challenge is accelerating the development of ATP capacity in the U.S.—the vast majority of ATP capacity currently resides in Asia with much advanced packaging being proprietary and includes separate complex supply chains. The CHIPS Program Office and ITSI are intent on avoiding a situation where leading front-end manufacturing firms are producing advanced semiconductors in the U.S. and then shipping them back to Asia for packaging and testing. TSMC facilities in Arizona, for example, will be doing pilot production in early 2025, including likely for graphics processing unit (GPU) leader Nvidia, but they will need to ship all production back to Taiwan for packaging as all of TSMC's proprietary chip-on-wafer-on-substrate (CoWoS) packaging capacity is currently in Taiwan.[11] As of early 2025, the Trump administration was reportedly in discussions with both TSMC and Intel about potential collaboration around bringing advanced packaging to U.S.-based locations as part of a broader reassessment of CHIPS Act funding and potential restructuring of Intel's manufacturing and foundry operations.

In addition, the overall effort will benefit in early 2025 from the release of the OECD studies, which will show just how quickly particular countries are moving to address the challenges around issues such as workforce development. While there has been considerable progress over the past year to address all the challenges facing development of a robust supportive ecosystem for semiconductor manufacturing in the Americas, there are political realities that mean progress in 2025 will face challenges. For example, while the ASU engagement efforts are well organized and supportive, getting to government agreements that will ensure the programs can move forward will require some time and effort.

ITSI personnel have provided regular updates on progress to congressional staff, and they have stressed that the program is part of foreign assistance and should not be viewed as industrial policy. In addition, support in the new administration appears likely as ITSI does not have issues similar to the CHIPS Act around the many guardrails that the U.S. Department of Commerce included as part of the awards process, such as mandated child care, that some in Congress see as going beyond the intent of the CHIPS Act. It remains unclear how the new Trump administration will view the CHIPS Act overall and specific pieces such as ITSI, and there could be pressure to reduce or hold up funding until the new administration has assessed the program. The new Department of Government Efficiency (DOGE) under Tesla CEO Elon Musk could also become involved in this area.

Looking ahead, some uncertainty on the horizon

Finally, Canada's efforts in this arena will evolve in 2025. Ottawa is a participant in APEP and also an important partner in the OECD's work on semiconductor supply chains. But Canada has a well-developed education system and does not require the same type of attention and funding around issues such as workforce development as the primary ITSI partners. The U.S. Commerce Department's Workforce Center of Excellence[12] under the National Semiconductor Technology Center (NSTC) will be a deep well of semiconductor workforce and other information that Canada and all the ITSI partners can access. U.S. officials are putting a lot of effort into the Workforce Development Center of Excellence and because all countries in the Americas including Canada will need to upgrade their workforce—and Canada has major educational institutions that provide a major advantage—the country is likely to play a larger role overall in the coming years in the development of a long-term and sustainable semiconductor supply chain ecosystem in the Americas.

Support for the entire effort from the incoming Trump administration also remains a potential challenge, though given the bipartisan support for the CHIPS Act and the fact that CHIPS funding has gone to a number of "red states," it is likely that the new administration will continue support for CHIPS programs, including ITSI. As noted above, there could be some

Sustained government support and political will, along with financial and industry support, will determine the degree to which Commerce Secretary Gina Raimondo's vision of a U.S.-centered manufacturing capacity of around 20% of advanced node semiconductor manufacturing by 2030 can become a reality.

pause in the program to review progress as the new administration takes a hard look at the overall CHIPS effort, and then this could be followed by a restructuring and rebranding of the program. In 2025, ITSI will also review new grant proposals from Costa Rica, the Philippines, Mexico, and Vietnam, determine where to build new programs, and assess what is missing in terms of policies and regulatory reforms. The funding for ITSI for 2025 has been appropriated and will likely move forward as part of the National Defense Authorization Act (NDAA), and the success of programs in 2025 will be a major factor in terms of getting renewed funding in 2026 for the overall effort.

Sustained government support and political will, along with financial and industry support, will determine the degree to which Commerce Secretary Gina Raimondo's vision of a U.S.-centered manufacturing capacity of around 20% of advanced node semiconductor manufacturing by 2030 can become a reality. This would require support from greater workforce development and packaging ecosystems in North America and throughout the Americas.

Finally, Trump's proposed across the board 25% tariffs on imports from Mexico and Canada could upend these opportunities for regional cooperation around building semiconductor manufacturing capability. These tariffs would call into question the ongoing viability of USMCA and thereby raise investment risks. It would increase the cost of trade in components for building semiconductor supply chains. Perhaps most importantly, given anticipated retaliation from Canada and Mexico in terms of tariffs on U.S. imports, these tariffs would likely ignite a trade war that could spill over into other areas of North American cooperation, including around semiconductors. This would ultimately undermine the U.S. goal to reduce dependencies on Asia for semiconductor manufacturing.

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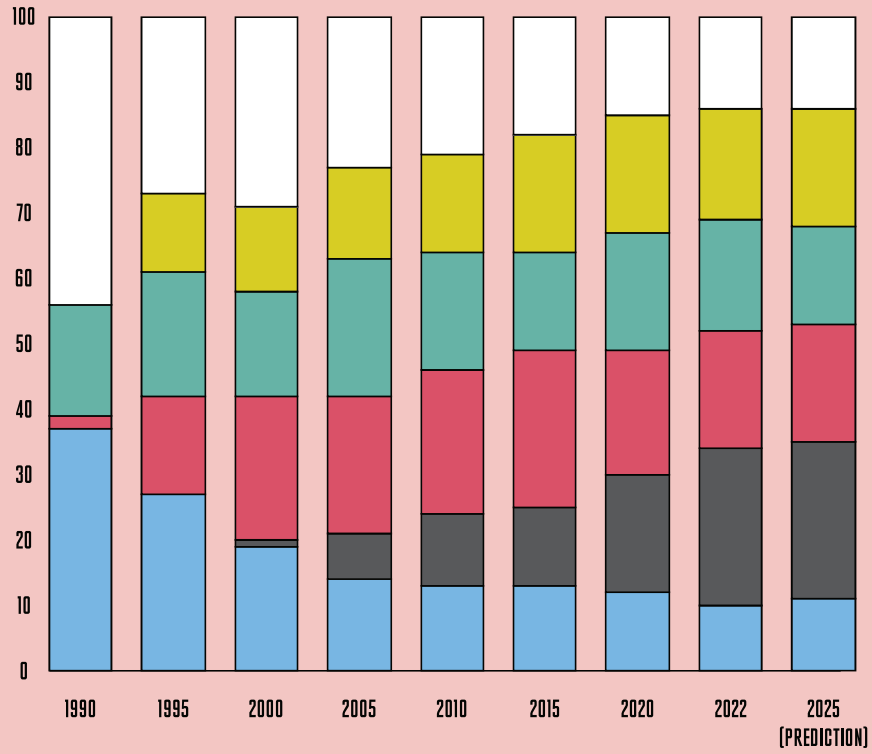
Figure 9.

US LOST SEMICONDUCTOR MANUFACTURING CAPACITY TO ASIA

Percentage

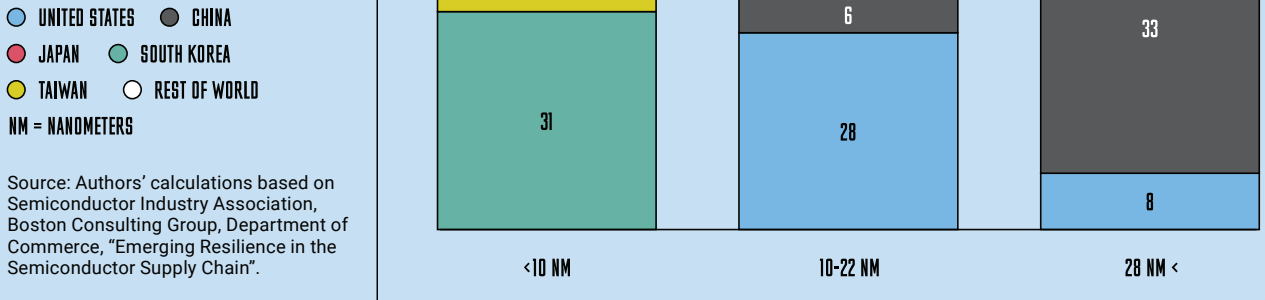


Source: Authors' calculations based on Semiconductor Industry Association, Boston Consulting Group, "Emerging Resilience in the Semiconductor Supply Chain".

Figure 10.

US PRODUCTION OF CUTTING-EDGE CHIPS HAS BEEN COMPLETELY OFFSHORED (2022)

Percentage



Source: Authors' calculations based on Semiconductor Industry Association, Boston Consulting Group, Department of Commerce, "Emerging Resilience in the Semiconductor Supply Chain".

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Harnessing USMCA to drive growth in strategic industries: Building an integrated manufacturing platform

The United States, Mexico, and Canada negotiated the United States-Mexico-Canada Agreement (USMCA or agreement) to promote more balanced, reciprocal trade, confront barriers to trade that did not exist when NAFTA entered into force in 1994, and grow their respective economies. The parties also negotiated innovative and strong rules of origin to support North American manufacturing in industrial goods like automobiles, auto parts, chemicals, and steel-intensive products.

The economic benefits of the agreement are undeniable. USMCA has increased total nominal North American trade by 50% since July 1, 2020, when it entered into force. In 2023, the parties exchanged $1.88 trillion in goods and services, which is roughly the size of the entire Mexican economy.

In turn, Mexico and Canada have surpassed China as the United States' top trading partners. Similarly, intraregional investment has significantly increased, with capital investment in North America growing 134% since USMCA entered into force.

As we approach USMCA's fifth anniversary and the review of the agreement slated for July 1, 2026, the parties should assess whether the USMCA could do more to support an integrated North American manufacturing platform. This is particularly important because the future of North American competitiveness and security depends on building manufacturing capacity and adopting artificial intelligence (AI) technology in advanced industrial sectors.

Enhancing USMCA to support strategic industries

The global trading system is currently governed by intense competition for market share in the production of advanced technologies and products. Governments have deployed industrial policy to capture the economic and security benefits associated with new foundational technologies since the dawn of the digital economy. Government-led "Industry 4.0" initiatives, beginning in Germany in 2011, and followed by the United States, China, Japan, Korea, and the European Union, have directed resources to private companies to make manufacturing more connected, sustainable, and efficient. By facilitating trade in critical minerals, data, and energy, USMCA can accelerate the next phase of this digitally enhanced industrial revolution.

Critical minerals are essential for producing batteries, semiconductors, and other high-tech components that form the backbone of modern advanced manufacturing industries. North America is uniquely positioned to develop an integrated supply chain for critical minerals due to its vast natural resources. Canada is the primary exporter to the United States of nickel, a key component in stainless steel and solar panels. Mexico has one of the world's largest lithium resources, an important component of batteries, machinery, and equipment. The United States and Mexico are two of five countries with 65% of the global supply of identified unmined copper, an essential component in most electronic systems.

At the same time, AI has the capacity to greatly enhance manufacturing efficiency and reduce manufacturing costs through predictive maintenance, quality control, and process optimization. AI-enabled manufacturing requires data-intensive cross-border activities such as cloud computing and data collection from connected devices.

AI training, processing, and data storage also require a substantial and secure energy supply. A recent Lawrence Berkley National Lab report found that data-center power demand more than doubled between 2017 and 2023, largely due to the growth in AI servers.[1] To meet this growing need, North America will require not only innovative power generation strategies but also infrastructure allowing cross-border energy transmission.

USMCA is the primary mechanism for integrating the North American economies. The agreement contains innovative chapters designed to promote good regulatory practices, incentivize cross-border investment and data flows, protect intellectual property rights, and eliminate tariff barriers to the trade in goods. The USMCA parties should approach the six-year review with a view to determining how each of the agreement's chapters could be updated to support the development of manufacturing in advanced industrial sectors. Such updates could include:

- Strengthening investment protections to incentivize critical mineral extraction and processing.
- Reinforcing digital trade commitments to protect cross-border data flows.
- Enhancing intellectual property protections to encourage AI technology adoption.
- Expanding market access provisions to facilitate the trade in oil, gas, and electricity across borders.

Engaging stakeholders to ensure a successful review

The upcoming USMCA review is an opportunity to thoughtfully evaluate where USMCA's implementation has fallen short. Each party needs to uphold its existing USMCA commitments or renegotiate those it can no longer honor.

The business community supported USMCA's ratification because of the importance of continued integration of the North American economy. U.S. policymakers established a constructive stakeholder feedback loop during the USMCA negotiation and ratification process. As U.S. policymakers approach the USMCA review, they should engage stakeholders through the public consultation mechanisms set forth in USMCA's implementing legislation, as well as through informal advisory committees. Only with robust public-private sector consultation can we use the agreement to unleash the next phase of the advanced manufacturing revolution.

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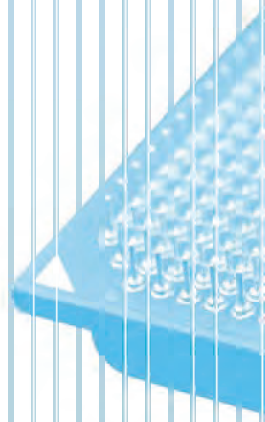
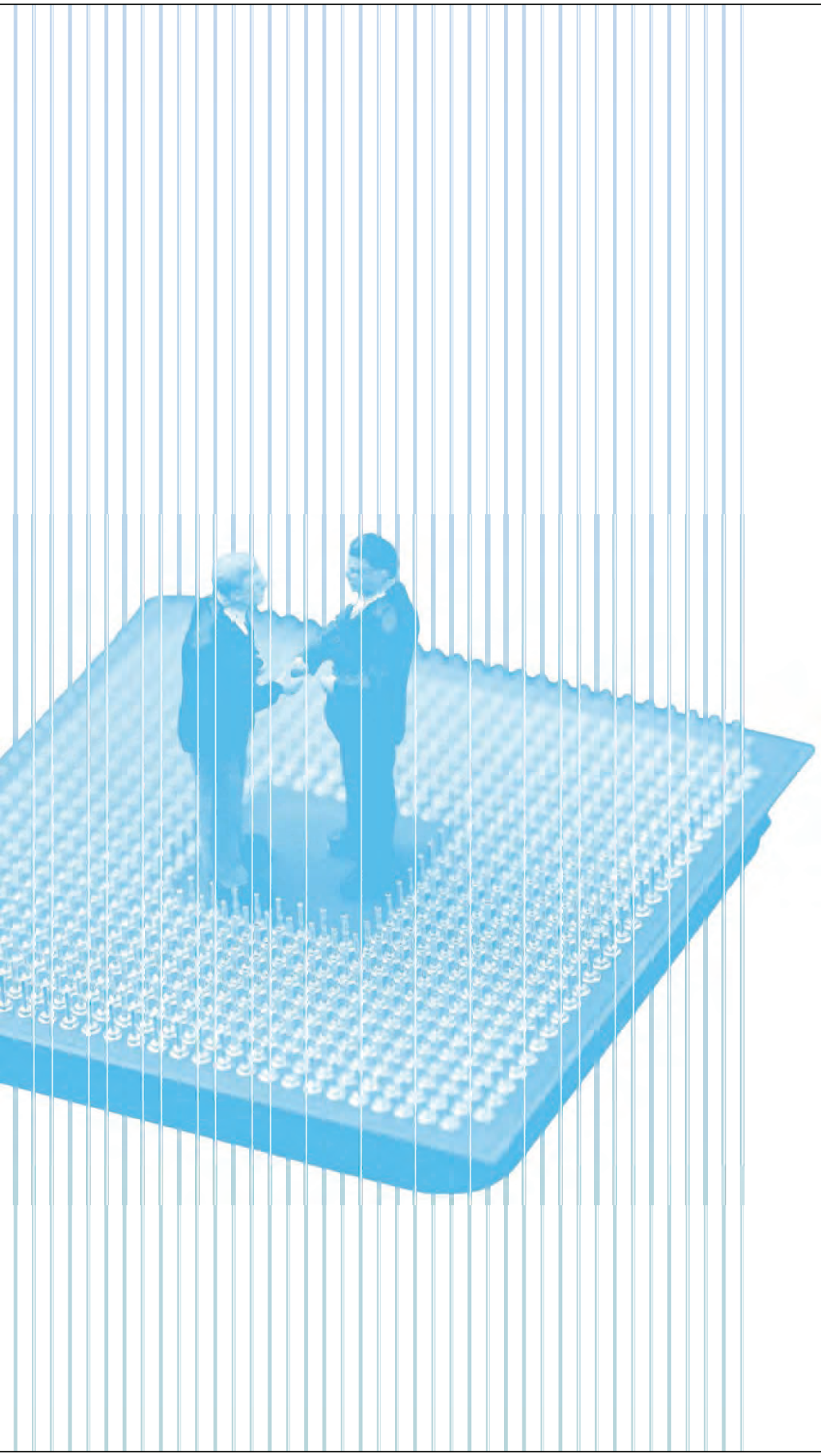
7

THE ROLE OF POLICIES ON TECHNOLOGY AND AI FOR INNOVATION AND INCREASED COMPETITIVENESS IN NORTH AMERICA





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Introduction

The global artificial intelligence (AI) market is poised for extraordinary growth, projected to reach $3,527.80 billion by 2033, with an annual growth rate of over 30% from 2024 to 2033.[1] North America holds a dominant position in this market, generating approximately $100 billion per year in revenues.[2] And with global competition in AI rising, the importance of the United States–Mexico–Canada Agreement (USMCA) for developing AI is clear.

China has emerged as a fierce competitor in the AI race. In 2017, Beijing unveiled an ambitious plan—the "New Generation Artificial Intelligence Development Plan"[3]—to become the leader in AI development with the goal of becoming the world's primary AI innovation center by 2030. While the United States still leads globally in AI, China has made remarkable progress and may lead in AI in some areas. For instance, China has surpassed the U.S. in AI and machine learning (ML) patents since 2021.[4] China is also making significant progress developing large language models (LLMs).[5]

U.S. competition with China in AI also included access to the most advanced semiconductors. Taiwan's TSMC produces over 90% of the world's advanced computer chips.[6] This concentration exposes the AI supply chain to risk, particularly given tensions between China and Taiwan. In addition, despite restrictions on access to cutting-edge chips, Chinese developers have made significant strides in AI by optimizing less powerful chips and finding loopholes to acquire restricted ones.[7] The new Chinese DeepSeek model exemplifies this strategy; it was developed at a fraction of the cost of comparable models by using fewer advanced technology chips.[8] This progress underscores the stakes for North America as it seeks to remain competitive.

The USMCA offers a unique opportunity to strengthen North America's leadership in AI. The agreement has already laid the groundwork for digital trade by establishing rules that reduce barriers to cross-border data flows and trade in digital goods and services. However, its provisions have yet to address the challenges and opportunities presented by frontier technologies such as AI.

The USMCA offers a unique opportunity to strengthen North America's leadership in AI. The agreement has already laid the groundwork for digital trade by establishing rules that reduce barriers to cross-border data flows and trade in digital goods and services.

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Context: Overview of the state of AI and technology across North America

The U.S. continues to be a leader in the AI technology race today, topping global rankings in the categories of innovation capacity and technology sector maturity.[9] This feat is driven largely by its position as home to many of the world's largest technology companies, with private AI investment totaling $67.2 billion in 2023.[10]

While the U.S. lacks a national AI regulation, the country also stands out in governance, thanks to a clear technological vision from the government and AI-specific regulatory initiatives in states such as California and New York. At the federal level, a notable initiative includes former President Joe Biden's 2022 "Blueprint for an AI Bill of Rights", designed to guide the development and use of AI to protect people's privacy and civil rights. However, as part of President Donald Trump's focus on limiting AI governance–the biggest example of which has been his and JD Vance's opposition to regulation[11]–arguing that it stifles innovation and undermines the U.S. in the technological race with China, President Trump announced an Executive Order on AI in January of this year.

The United States' approach to consolidate its AI leadership is closely tied to its national security priorities.[12] For example, the U.S.' goal of staying ahead of China on AI has led it to implement export controls on high-end AI chips. The Biden administration's "AI Diffusion Rule" in January 2025 aims to further restrict the flow of advanced AI technologies—including chips and models—to adversarial nations including China. Another key Biden policy is the "Chips and Science Act" launched in 2022, which is designed to bolster domestic semiconductor manufacturing and reduce U.S. reliance on TSMC for high-end chips. Despite criticism from President Trump, who argued that the policy benefits corporations more than U.S. chip manufacturing, Republicans have indicated that the Act is "not on the agenda to be repealed."[13]

The U.S. continues to be a leader in the AI technology race today, topping global rankings in the categories of innovation capacity and technology sector maturity.

Canada also boasts a world-leading AI ecosystem.[14] In 2017, Canada was the first country to publish a National AI Strategy—the "Pan-Canadian AI Strategy"[15]—and one of the first to propose AI regulation through the "Artificial Intelligence and Data Act (AIDA)"[16] as part of Bill C-27 in 2022, although AIDA looks unlikely to become law. In 2024, former Prime Minister Justin Trudeau announced a $2.4 billion package to boost the Canadian AI sector.[17] This funding is intended to accelerate AI adoption in sectors such as agriculture, healthcare, and manufacturing, with a focus on supporting AI researchers, start-ups, and scale-ups in Canada. Furthermore, in November 2024, the Canadian Artificial Intelligence Safety Institute[18] was launched to ensure the safe development and deployment of AI technologies.

In contrast, Mexico ranks considerably lower when it comes to AI compared to its North American counterparts. This is partly due to the lack of a national AI vision, despite strong scores in terms of data availability, the data's representativeness of the country's citizens, and governance and ethics.[19] Although there have been notable efforts to promote AI in Mexico in recent years, government involvement, particularly at the national level, has been limited. In 2018, the "Towards an AI Strategy in Mexico: Harnessing the Benefits of AI"[20] report laid the groundwork for the national "IA-MX 2018 Strategy."[21] However, the strategy was never implemented following the election of President Lòpez Obrador that same year. Since then, Mexico has introduced over 60 AI-related legislative proposals. However, none have been approved. While there has been notable progress in AI governance, most initiatives have been spearheaded by civil society and the industry with limited involvement from the government.

When it comes to the direction of Mexico's new administration under President Claudia Sheinbaum, several elements indicate a renewed interest in digital technology and AI in particular. These include the establishment of the Digital Transformation and Telecommunications Agency to enhance government technological capabilities, the creation of the Ministry of Science, Humanities, Technology, and Innovation (SECIHTI)[22] for the country's scientific, humanistic, technological, and innovation policy, and the inauguration of the Senate Commission for the Analysis, Follow-up, and Evaluation of the Application and Development of Artificial Intelligence in Mexico to define an AI framework. Mexico's "National Industrialization and Shared Prosperity Strategy"[23] has also made semiconductors manufacturing a top priority, aiming to double export growth, reduce external dependency by 10%, and foster the development of local suppliers, leveraging its already robust foundation in the semiconductor supply chain.[24]

The building blocks of the USMCA for cross-border collaboration on responsible AI

As trade and security are increasingly intertwined, the upcoming USMCA review should address how the agreement can be used to also strengthen security in the region. For example, the U.S.' AI Diffusion Rule restricts the sales of high-performance processors and AI licenses to all but 18 allied countries, including Canada—but not Mexico. This exclusion could be related to Mexico's less robust technology regulatory framework.[25] Given the prioritization of chips and semiconductors, the USMCA offers a valuable opportunity to increase tripartite collaboration, shaping a more resilient and secure regional supply chain that reduces dependency on external markets. As Secretary of State Marco Rubio has pointed out, "Relocating our critical supply chains to the Western Hemisphere would clear a path for our neighbors' economic growth and safeguard Americans' own economic security."[26] This agreement could provide valuable support to the existing efforts, specifically within The Americas Partnership for Economic Prosperity, aimed at enhancing the region's competitiveness in the semiconductor industry.[27]

Another key element to increasing North America's AI competitiveness is maintaining flows of cross border data flow. At the heart of the USMCA's digital chapter is a strong commitment to allowing data flow across the region, which has been advantageous for industry using data to develop innovative business models and has fostered innovation and enhanced regional competitiveness in AI.[28] However, the USMCA's Digital Trade chapter[29] has also elicited concerns about privacy protection and the adequacy of existing regulatory frameworks to address the challenges emerging with AI technologies.[30] While the chapter includes provisions to protect personal information and allows for intervention based on "legitimate public policy objectives"[31] critics highlight gaps in addressing issues such as AI-related bias, surveillance, and

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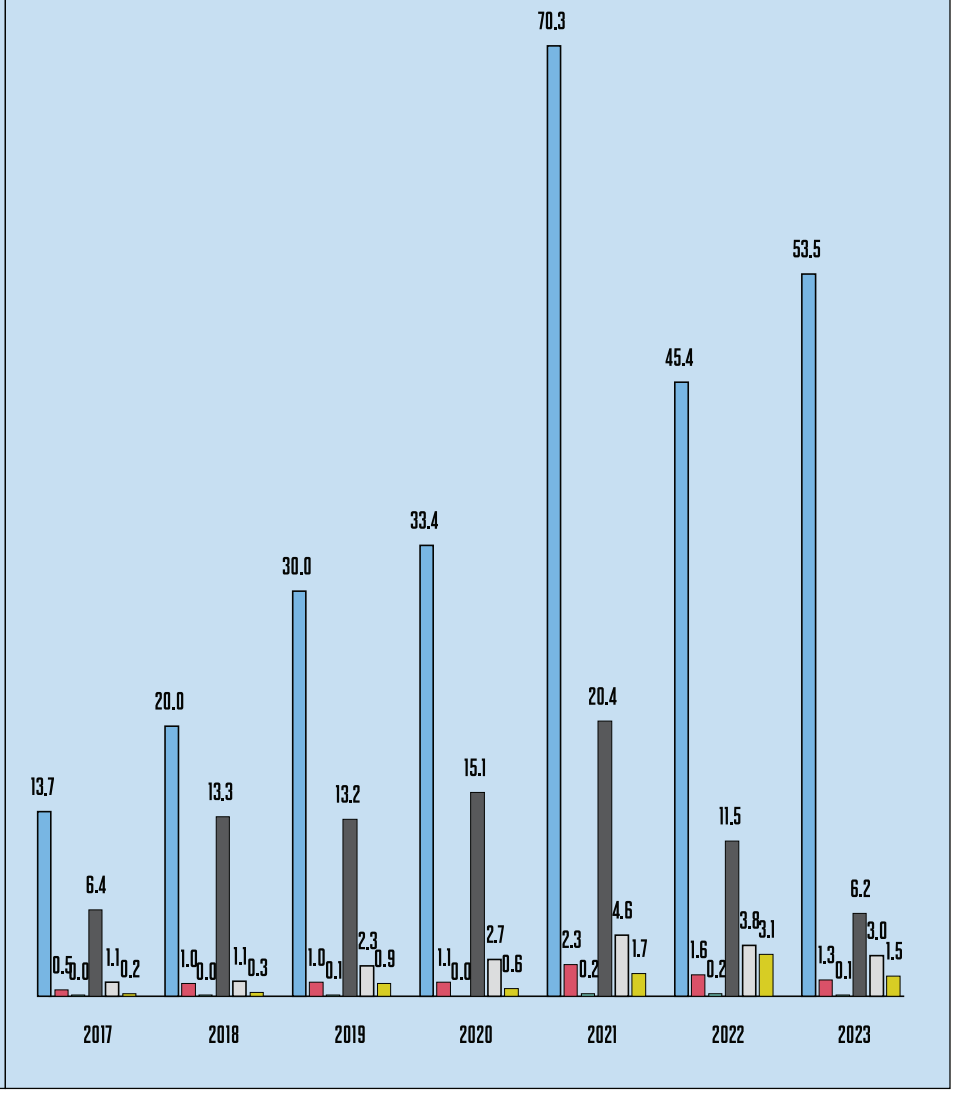
misinformation. The joint review process could serve as an opportunity to establish regional data privacy frameworks and standards that meet international best practices when it comes to privacy, including transparency, access, right to deletion, and consent.

Another primary area to address in the USMCA review relates to the intellectual property (IP) provisions. The application of IP law to generative AI remains uncertain, including with respect to inventions created by algorithms, ownership of AI-produced works, and the protection of proprietary AI models. USMCA review should explore opportunities to update IP for AI, including standardized and clear definitions for AI-generated works, joint ownership models for cross-border collaborations, and simplified patent applications within the USMCA region to reduce administrative hurdles and encourage innovation. Harmonizing IP standards across North America would not only simplify cross-border innovation but also enhance the region's competitiveness by fostering a collaborative ecosystem.

Figure 11.

US DOMINATES PRIVATE INVESTMENT INTO AI STARTUPS

Total amount of private investment received for AI startups. USD billions (Constant 2015 US$)



Source: Quid, 2023. Data last updated in March 2024.

AI leadership also depends on a highly skilled workforce. USCMA review could develop strategies to promote specialized skilling programs across North America, such as apprenticeship models, AI-focused vocational training, and cross-border academic partnerships. New policies could also encourage the mobility of AI talent across borders, such as streamlined visas for tech workers within the USMCA. In order to enhance competitiveness, the region could focus talent development in regions with more cost-effective labor. As Mexico embraces its new industrialization strategy centered around semiconductors, strategic investments in talent development within its key digital hubs could represent an opportunity to further unlock the region's potential.

Finally, while each USMCA member country currently approaches AI governance differently, the agreement presents a unique opportunity to align perspectives and develop common guidelines for developing responsible and trustworthy AI. The inclusion of principles on privacy and cybersecurity concerns in the USMCA establishes a precedent for developing principles for AI. Doing so would position the USMCA as a leading trade agreement on AI that supports innovation as well as responsible development and use of AI.

Conclusion

While the USMCA renegotiations are likely to center around the priorities of the Trump administration, such as drug trafficking and migration, negotiators must keep in mind the strategic importance of AI in maintaining the region's global competitiveness and competing against China.

Enhancing semiconductor supply chain resilience, strengthening data flow frameworks, adjusting IP provisions, fostering regional talent pipelines, and developing a shared AI governance framework will further bolster North America's ability to remain competitive while also addressing key security concerns. Quoting Secretary of State Marco Rubio "Making America great again also means helping our neighbors achieve greatness."[32] By harnessing the collective strength of its three member nations, the USMCA can position the region as an unparalleled leader in AI.

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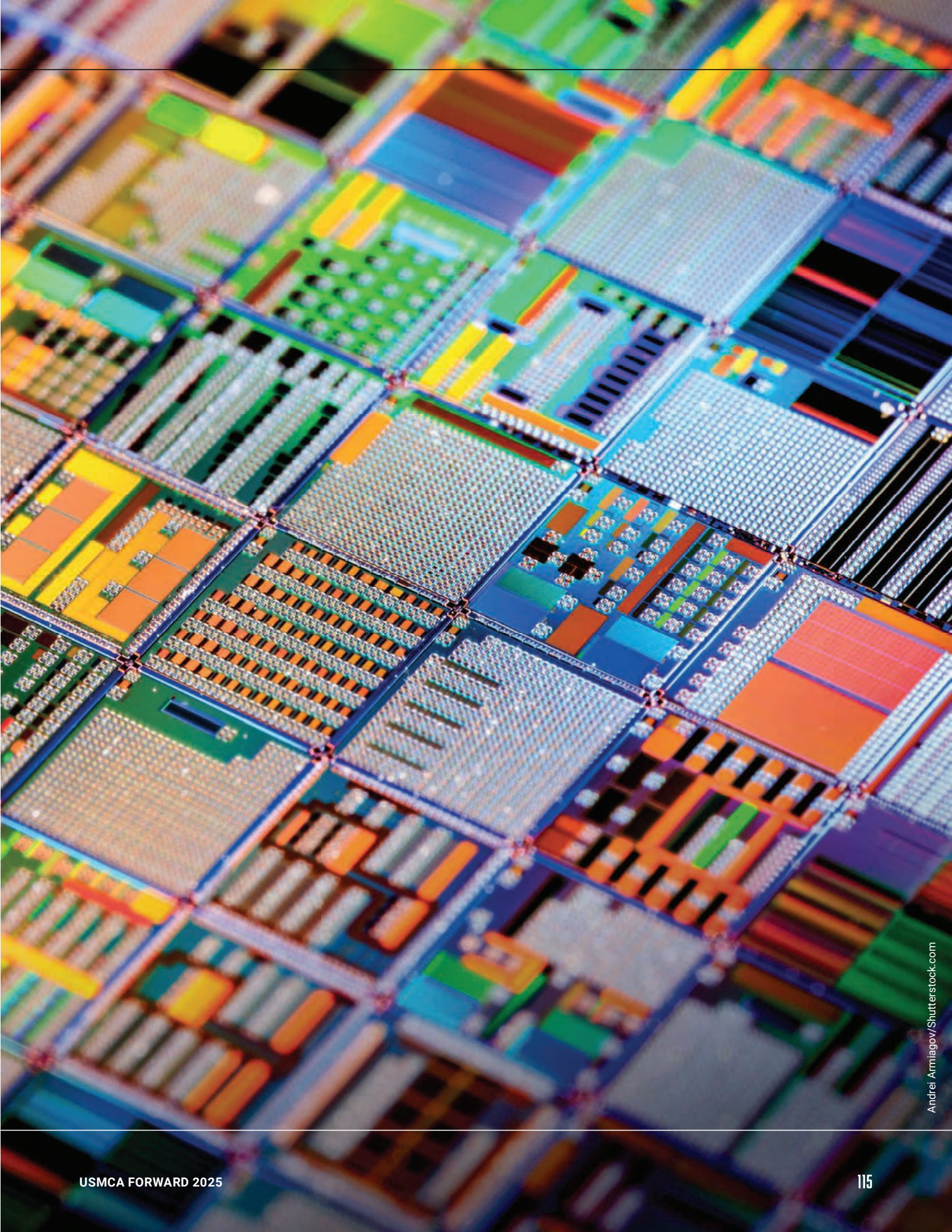

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PEDRO CASAS ALATRISTE

Execuitve VP and CEO | American Chamber of Commerce of Mexico (AmCham)

North American Golden Age

For over 100 years, the American private sector's investment in Mexico has built a strong community through the American Chamber of Commerce of Mexico (AmCham). As the most significant investors in the Mexican economy, we've seen the economic dynamics between our two countries evolve over dramatically different global circumstances while building a profound and strategic integration that benefits Mexican and U.S. industries and workers.

Since the USMCA came into effect three and a half years ago, Mexico has become the U.S.' largest trading partner, with a total goods exchange valued at $797.9 billion in 2023 and an average annual growth of 14.18% (U.S. Census Bureau). Going forward, Mexico can play an even greater role in building a more secure and resilient regional market.

There are at least four key industries with significant high potential for expanding U.S.-Mexico trade and investment: electromobility, medical devices and health, semiconductors, and the agro-industry. Within these industries lies the region's competitive advantage and the need to solidify hemispheric security and self-sustaining independence. However, for these opportunities to be realized, four investment enablers must be addressed:

First, the energy grid. Mexico must increase its energy generation capacity, improve its distribution and transmission, and finally move toward a stable and cleaner grid.

Second, security and the rule of law. According to the latest Security Survey by AmCham/ Mexico, 58% of companies invest between 2% and 10% of their annual budget in security, while 4% invest more than 10%. This is an "additional tax" that directly reduces competitiveness. Additionally, recent constitutional reforms have substantially changed the Judicial Power and eliminated independent regulatory agencies. These changes impose significant challenges for investors to reorganize and understand the new status quo.

Third is human capital. It is almost a given that whenever you speak to company leaders, they will share their struggle to find talent. According to the Mexican Institute for Competitiveness (IMCO), 75% of companies in Mexico report problems finding skilled workers. This challenge is most pronounced in medium (87%) and large (86%) companies. The most affected sectors include manufacturing (85%), wholesale trade (82%), energy (82%), and agricultural activities (82%).

Fourth is infrastructure: Mexico has underinvested in maintaining highways, railways, airports, ports, and border infrastructure. Investment in infrastructure should grow in a reasonable proportion to our trade, but this has not been the case in the last four decades.

Additionally, there is the "dragon in the room": China. While U.S.

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concerns about Chinese investment in Mexico appear disproportionately loud, given the limited Chinese investment so far, it is an issue of growing political significance. To better understand the scope of the problem, it is helpful to dissect it into three parts:

One is Mexican imports from China of finished goods (22% of total Mexican imports from China) destined for the Mexican market. Unfair competition challenges key industries in Mexico, such as the auto sector and textiles. Additionally, Mexico has seen an increase in the import of small packages from China, where it is said that fentanyl precursors are being introduced to the country. The Mexican government should intervene to ensure a fair and level playing field. Potentially, a regional solution is to align tariffs with the U.S. and strengthen Mexico's foreign investment screening regime.

Another problem is the imports of intermediate goods (16% of Mexican imports from China, predominantly electronics, automotive components, chemicals, and textiles) used in supply chains that include the production of goods destined for the U.S. Mexico must reduce its reliance on Chinese sourcing, increase regional suppliers, and strengthen North American content, especially in specific industries that directly impact regional security. AmCham member companies are already working on this with the Mexican government.

Third is the import of capital goods (65% of total imports from China, such as machine tools, telecommunications equipment, and heavy machinery). Mexico must ensure it does not become a productive platform for exporting Chinese goods to the U.S. While specialized Chinese tools and machinery are sometimes used, we must keep regional content as the base of our traded goods.

Mexico and the U.S. have built sophisticated and globally competitive manufacturing operations in many strategic industries, such as automotive, electronics, and manufacturing. Today, around 40% of Mexican manufacturing includes inputs from the U.S., further supporting U.S. manufacturing and jobs. Moreover, many small and medium-sized enterprises (SMEs) also participate in these supply chains—around 49,000 U.S. SMEs exported over $110 billion to Mexico in 2022.

The USMCA review process could support the need to accelerate the improvement of the abovementioned investment enablers while correcting recent violations of the agreement and reducing the uncertainty created by repeated tariff threats. Co-production within North America will be critical as the U.S. evolves to ensure stable economic growth and rebuild America's competitive industrial base. "America first" cannot be achieved by "America alone." It is clear who to move forward with and why.