ATLANTIK-BRÜCKE CANADA

De-Risking Supply Chains through Middle Power Industrial Policy: Exploring Volkswagen's Investment in Canada

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Acknowledgements

This paper was prepared for presentation to the Atlantik-Brücke Canada German-Canadian Conference, in June 2023. The author gratefully acknowledges support from Atlantik-Brücke Canada for development of this work, and research assistance from Magdelena Steen at Carleton University.

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EXECUTIVE SUMMARY

The 2022 passage of the Inflation Reduction Act in the United States has kickstarted investment in green technology and transportation through eye-watering corporate tax incentives. The estimated subsidies are so large that they create disincentives for global firms to invest anywhere but the United States, raising concerns about the capacity of other countries to compete. In response, Canada has matched US incentives for a handful of greenfield investments in the electric vehicle (EV) sector.

This paper analyzes the largest of those projects in the Canadian province of Ontario, a new Volkswagen EV battery plant announced in 2023 for the small community of St. Thomas. Details surrounding the investment are presented and situated within the broader challenges of accelerating Canada's critical mineral supply chain capacity.

The Volkswagen investment reflects a policy reversal by the Trudeau government regarding industrial subsidies, from refusing to engage in subsidy races to attract Amazon's new headquarters in 2017, to dollar-for-dollar matching of US incentives to lure EV plants in 2023. It is argued that the unique design and sectoral focus of the Inflation Reduction Act, combined with dramatic changes to the global geoeconomic context over the intervening period, have driven Canada's shift to embrace of US-led industrial policy.

The broader implications for supply chain de-risking and friend-shoring among middle power countries are then considered. As the Washington Consensus that embraced globalization, free markets, and liberalized trade comes to an end, we are living through a transition period in which alternate models are being tested. While they must respond and adapt to the new context, countries such as Canada and Germany should avoid becoming inextricably committed to the big industrial policy experiments underway. Middle powers can also work to de-risk their own exposure to disruptive and unilateral global players by increasing their trade with, and mutual reliance on, one another. In addition, they can advocate for the interests of poor countries that may be vulnerable to exclusion from 'friend-shored' supply chains, to avoid further fracturing global trade.

RÉSUMÉ

L'adoption par les États-Unis en 2022 du *Inflation Reduction Act* a contribué à stimuler les investissements dans les technologies vertes et les transports grâce à des mesures fiscales très séduisantes pour les entreprises. Les subsides attendus sont si importants qu'ils détournent les firmes d'envergure mondiale de tout projet d'investissement en dehors des États-Unis, faisant craindre aux autres pays de ne pouvoir soutenir la concurrence. La réponse du Canada a consisté à égaler les incitatifs mis en place par les Américains dans le domaine du véhicule électrique (VE) par des investissements destinés à de nouveaux projets.

Cette note se centre sur l'analyse du plus important projet du genre, une nouvelle usine de production de batteries pour les VE de la société Volkswagen, qui doit être implantée dans la petite communauté de St Thomas en Ontario. Les détails relatifs à cet investissement vont server à mieux comprendre les défis de capacité plus larges que rencontre le Canada dans sa gestion de la chaine d'approvisionnement des ressources minérales critiques.

L'investissement dans l'usine Volkswagen reflète un changement d'attitude à l'égard des subventions à l'industrie de la part du gouvernement Trudeau, qui est passé du refus en 2017 de soutenir les efforts pour attirer Amazon quand la compagnie cherchait à construire un nouveau siège social à une politique en 2023 où on se promet d'égaler au dollar près toutes les mesures incitatives américaines dans le secteur des VE. Le design et le caractère ciblé des mesures prévues dans le *Inflation Reduction Act,* combinés avec les changements géo-économiques, ont semble-t-il conduit le Canada à se plier aux orientations de la politique industrielle américaine.

Pour les économies de taille moyenne, il y a des implications plus larges à ces stratégies de gestion des chaines d'approvisionnement basées sur la réduction des risques et les affinités politiques. Alors que le consensus de Washington au sujet de la mondialisation, de l'économie de marché et du libre-échange tire à sa fin, nous vivons une époque de transition dans laquelle de nouveaux modèles sont mis à l'épreuve. Des pays comme le Canada ou l'Allemagne, tout en tentant de répondre et de s'adapter au nouveau contexte, ne peuvent se contenter de suivre le mouvement en cédant aux expériences du jour en matière de politique industrielle. Les puissances moyennes peuvent aussi œuvrer pour réduire leur exposition au risque et diminuer l'impact des stratégies égoïstes des grands joueurs mondiaux en accroissant leurs relations commerciales et en se faisant confiance. De surcroît, elles peuvent donner une voix aux pays plus pauvres et à leurs intérêts, pour éviter une fracture de l'ordre économique mondial au nom du commerce et de l'approvisionnement fondé sur les affinités.

INTRODUCTION

In the past year, two German leaders made official visits to Canada, each lasting several days and covering multiple provinces. Chancellor Olaf Scholz's August 2022 visit to meet Canadian Prime Minister Justin Trudeau focused on support for Ukraine, energy security, trade and climate action. Only six months after Putin's illegal invasion of Ukraine, Scholz's visit focused heavily on reinforcing the Western security alliance in the face of Russian aggression, and on seeking new forms of energy cooperation to address German dependence on Russian gas. Though Scholz was unsuccessful in his bid for more liquified natural gas exports from Canada, the two leaders instead focused on critical minerals and electric vehicle (EV) supply chains, in keeping with their shared commitment to accelerating the green transition (Prime Minister of Canada's Office, 2022).

In April 2023, German President Frank-Walter Steinmeier brought a high-level business delegation to further advance bilateral trade partnerships and investment in such areas as EVs, artificial intelligence, and transportation. Although Canada and Germany already enjoy strong bilateral relations, these back-to-back visits served to signal a deliberate intent by both countries to strengthen cooperation with other like-minded middle powers, and beyond their respective regional power centers in North America and Europe.

Yet, the 2023 visit by Steinmeier also demonstrated a shift by Canada and Germany toward greater acceptance of US-led industrial policy. In fact, American industrial policy – itself a product of US competition with China – can be credited for the largest German auto sector investment ever made in Canada. Closer examination of Volkswagen's battery plant investment in Canada is worthwhile to understand how 'friend-shoring' – a term first coined by US Treasury Secretary Janet Yellen to make supply chains more resilient and secure through strengthening partnerships with trusted friends and allies – is playing out among middle power economies such as Canada and Germany (US Treasury Department, 2022).

VOLKSWAGEN'S FRIEND-SHORING INVESTMENT IN CANADA

Upon Steinmeier's arrival to Canada, the visit was abuzz with the announcement that Volkswagen (VW) would build one of five battery manufacturing plants for electric vehicles (EVs) in the small community of St. Thomas, Ontario. With a $5.2 billion (USD)[1] investment by VW, the 'gigafactory' could employ as many as 3,000 people and produce one million vehicle batteries annually beginning in 2027. It is set to be North America's largest battery plant, including six assembly lines and covering 370 acres (Leblanc & Blouin, 2022; Platt, 2023).

But VW would never have selected Canada had it not been for Biden's industrial policy. This is because the company was working simultaneously with the Americans to locate new EV manufacturing and battery plants in the US to take

[1] All dollar figures in the paper are expressed in $US dollars adjusted for month and year (Bank of Canada, 2023).

advantage of billions in tax incentives being offered by US lawmakers via the *Inflation Reduction Act* (IRA) (Text - H.R.5376 - 117th Congress, 2022). The IRA enshrines in law a massive spending bill designed to accelerate manufacturing and investment in the green transition, and includes $370 billion (USD) in tax incentives to encourage corporations to build EVs and battery supply chains in the US until 2032 (Ellerbeck, 2023). By tying his climate agenda to job creation and national security concerns in this manner, Biden was able to generate the broad political coalition necessary to pass the bill through Congress (The White House, 2023).

The IRA also includes tax credits of up to $7,500 (USD) to Americans who purchase certain EVs. In its draft form, the bill limited tax credits to US-made vehicles in keeping with Biden's intention to use the legislation to attract investment to the US. However, deep opposition by Canada and Mexico, combined with an aggressive lobbying effort in Washington, led Biden to modify the final version of the *Act* to include all vehicles made in North America. It should be noted that Canada could have instead launched a dispute settlement case over the IRA via the US-Mexico-Canada-Agreement (USMCA). However, launching a formal dispute would have been of little practical use to Canada since any legal victory would have come long after automakers had already relocated to the US after chasing IRA incentives (Lilly, 2022).

Thus, in the months following the IRA's passage into law, Volkswagen announced a new EV facility for South Carolina in March 2023, with $1.3 billion (USD) in tax incentives via the IRA. The $2 billion (USD) factory is scheduled to open in 2026, employing 4,000 workers to produce 200,000 EVs (Naughton, 2023; Shepardson, 2023). Volkswagen intended to complement the South Carolina vehicle plant with a US-based battery plant, with $10 billion (USD) in IRA incentives.

Yet just as industry watchers anticipated the announcement of a battery plant in the US deep south, VW instead selected St. Thomas, Ontario. To lure VW to Canada, Industry Minister Francois-Philippe Champagne agreed to match the IRA subsidies. Specifically, up to $9.6 billion (USD) will be provided by the federal government to Volkwagen, $520 million (USD) in capital grants, but the rest in the form of production tax credits. Such credits only become available to the company after the plant is operational: credits are tied to production levels for the first decade of production. In addition, the province of Ontario will provide an additional $370 million (USD) in incentives (Leblanc & Blouin, 2022). These are astronomical incentives for Canada that were offered specifically to match those the US would have provided VW under the IRA. In fact, the Canadian contract with Volkswagen is tied directly to the IRA: if the terms of the IRA are modified or repealed, Canada's offers to VW will be adjusted accordingly.

FROM POLITICAL NARRATIVE TO BUSINESS REALITY

The Volkswagen case offers just one example of the rapid acceleration of investment playing out in North America. In the US, companies have committed upwards of $200 billion in new investments linked to Biden's industrial policy since August 2022, involving virtually all major vehicle manufacturers (Chu &

Roeder, 2023). Canada has also attracted billions in new corporate investments for battery and EV production from LG Energy and Stellantis, Honda, and General Motors (Cywinski, 2022; Government of Ontario, 2022). As exciting as this sounds, enthusiasm should be moderated by the reality that most of this investment remains at the announcement stage, and projects could be cancelled or downgraded as they become shovel ready. This likelihood has been downplayed by all governments involved, since any admission that the subsidies represent maximum estimates also implies that the EV projects themselves may be more modest in scope and job numbers than advertised.

Perhaps more important than Canada's offered subsidies will be the capacity of all levels of government to cooperate on the regulatory processes needed for projects to succeed. Although Canadian officials have committed to accelerating approvals, Canadian governments have a poor record of converting foreign investment in large natural resource projects into reality, due in part to slow and politicized regulatory approval processes (Cattaneo, 2017; Finance Canada, 2023; Lilly & Li, 2022). For the battery plants themselves, environmental assessments, land rezoning, and permitting must be streamlined to allow the battery plants to proceed. Not without some controversy, the province of Ontario has used Minister Zoning Orders to accelerate some projects, completing the site plan approvals for the LG-Stellantis plant in Windsor in less than one year (Campbell, 2022; Government of Ontario, 2019).

No less daunting will be Canada's ability to transform its raw critical mineral potential into the refined materials needed for the new battery plants. There are currently no Canadian-mined minerals being refined or processed for battery production in Canada. Although some mining companies can increase extraction of cobalt in existing copper and nickel mines in the short-term (IEA, 2021), most critical mineral deposits in Canada are in remote locations, and will take more than a decade to establish operational mines (Natural Resources Canada, 2022). Indigenous consultation must also be completed, and profit-sharing agreements negotiated with affected communities. Furthermore, extracting and refining the minerals needed for so-called 'clean' EVs remains a dirty business, generating toxic waste, depleting local water resources, and exposing populations to a variety of health problems. As such, along the entire value chain, critical mineral projects in Canada must overcome a range of legal, regulatory and environmental hurdles (IEA, 2021; Kramarz et al., 2021).

Until Canada's critical mineral resources are developed, new battery plants such as Volkswagen's must rely on imports of the processed minerals needed: China controls 70-90% of global supply of various minerals. China also has more experience and can produce at a lower price, requiring Canada to compete on environmental, social and governance (ESG) factors. The market value of reflecting those ESG standards as well as national security imperatives in a fully scaled friend-shored context remain untested, adding to the uncertainty of these long-term investments in countries such as Canada (IEA, 2021; Kramarz et al., 2021; Lilly, 2020).

CASCADING GEOPOLITICAL FORCES ADD MOMENTUM TO AMERICAN INDUSTRIAL POLICY

What can be learned by middle powers such as Canada and Germany from the Volkswagen case? First, middle powers can compete for investment with large powers such as the US and China if they are prepared to engage in the subsidy game. However, this is relatively new ground for Canadian policy makers who have shied away from subsidizing greenfield investment for decades. For example, when Amazon invited Canadian cities to bid for its planned $5 billion second headquarters (HQ2) in 2017-18, Canadian policy makers refused to match the billions in tax incentives being offered by American cities, viewing subsidy wars with the US as unwinnable for Canada. Instead, three levels of Canadian government touted Canada's high standard of living, generous government-funded health and social benefits, and educated, open society as reasons Amazon should locate north. Toronto ultimately lost the bid, and the role that subsidies may have played is not known. Since then, Amazon's HQ2 project has been mired in controversy in the US, and in March 2023, Amazon announced it was suspending the project. In this sense, the Amazon HQ2 case may offer a cautionary tale surrounding the promise versus the reality of such politically-charged initiatives for attracting stable investment (Dastin, 2017; Fox, 2018; Roth, 2023; The Associated Press, 2018; Thompson, 2018).

Yet, the Amazon example remains relevant to the Volkswagen case because, despite the fact that the same Canadian politicians have remained in power throughout, their attitudes to corporate subsidies have completely reversed. What a difference a global pandemic, a war in Europe, an increasingly hostile China, and a Democratic president have made to Canada's outlook. Certainly, each of these factors has contributed to the Trudeau government's shift toward supporting industrial policy.

First, the Covid-19 pandemic had an acute effect on global supply chains, beginning in 2020 and lasting for several years. At times, serious supply chain vulnerabilities and shortages were life threatening, particularly with respect to medical supplies and vaccines. While many of these impacts were temporary and eased over time, the export controls placed on vaccines and medical equipment by some producing countries eroded trust among trading partners. Countries such as Canada that relied on US imports of vaccines and medical masks reacted strongly, duplicating production within their borders to ensure they would not be vulnerable to export controls by a trade partner in future (Lilly & Walter, 2023).

Putin's 2022 full-scale invasion and illegal war on Ukraine was a second factor, prompting the Western alliance to rally and revisit preconceptions about trade as a peacebuilding endeavor with unreliable partners. Dependence on Russian gas exports highlighted Europe's vulnerability, with energy bills rising 300% in 2022. During her visit to Canada in March 2023, European Union (EU) President von der Leyen spoke of the EU's interest in securing energy alternatives from trusted allies such as Canada (European Commission, 2023b). Her comments echoed those of Chancellor Scholz in Canada six months earlier, outlining the clear role Germany sees for Canada as a stable and reliable trade partner and a replacement provider for Russian energy (Press and Information Office of the Federal Government, 2022).

Meanwhile, China's increasingly aggressive actions toward neighbouring states including Taiwan, its role in the Covid-19 pandemic, its efforts to monopolize critical mineral supply chains and strategic goods such as semiconductors, its disregard for human rights in Xinjiang, and Xi's 'no-limits' support for Putin all served to bolster concerns among western countries about China's intentions. Thus, allies have become more inclined to work with the Biden Administration to address China's actions than they had been under Trump (European Commission, 2023c; Hampson et al., 2022).

Still, Biden's full-throated support for an American focused industrial policy when he first came into office was regarded by allies as distinctly unhelpful to their goals of cooperating with the US on the serious international issues outlined above. Instead of devoting their energy to tackling those big issues together, American allies were simultaneously engaged in trade disputes with the US that distracted from those efforts (Lilly, 2022). In particular, although Canada and Mexico's concerns with the EV tax credit were addressed in the final version of the IRA, major vehicle exporting countries in Asia and Europe continued to object to the *Act* after it became law. Recognizing that the US needed other countries to fully deliver on its economic and foreign policy plans, Biden's team began broadening its narrative around the IRA to be an opportunity for allies to work together on "supply chain diplomacy" to diversify trade among trusted partners while improving mutual economic security and resilience (The White House, 2022, 2023; US Treasury Department, 2023).

To deliver on his new narrative, Biden would need to implement the IRA more flexibly than the legislation was written. In April 2023, US Trade Representative Katherine Tai tabled a creative solution through regulatory amendments to the IRA. These further expand eligibility for the EV tax credit and critical mineral content requirements to include US imports from countries that have trade agreements with the US. Further, the amendments define trade agreements to include comprehensive trade agreements such as USMCA and the Korea-US agreement, but also narrow sectoral agreements with allies such as the US's 2023 critical mineral agreement with Japan. It is expected that the EU will also qualify under mini-deal negotiations around green standards (O'Donnell, 2023).

Despite the warranted criticism by trade policy experts of the US's weakening of the classification of trade agreements (Manak, 2023), Washington's new approach will achieve its goal of avoiding confrontation with its 'friends', and some will even become willing enablers of America's friend-shoring agenda. As stated by White House's national security advisor Jake Sullivan in April 2023, "This is how we will turn the IRA from a source of friction into a source of strength and reliability" (The White House, 2023).

Certainly, the change in approach by the Biden Administration has led to a major shift in tone by Canada, from criticism to praise. During Biden's visit to Ottawa in March of 2023, Prime Minister Trudeau extolled the benefits of the IRA to members of parliament:

"Mr. President, with the Inflation Reduction Act, you are creating the jobs of today and tomorrow for the middle class in America. And this also means more clients for Canadian critical minerals processors, for our clean-energy innovators, for our integrated auto workers, for our farmers, growers and producers, and so many others. It is an example of how we can make progress at home and as partners." (Prime Minister of Canada, 2023)

Canada's new position on the IRA was reiterated and expanded upon a few weeks later by Deputy Prime Minister Chrystia Freeland to an audience in Washington: "[T]he IRA is an historic and transformative piece of legislation—one that will change the world for the better. It is good for the United States, it is good for Canada, and it is good for the world." She went on to outline in detail the benefits of the IRA and Biden's industrial policy for Canada (Deputy Prime Minister of Canada, 2023).

MIDDLE POWER REACTION: INDUSTRIAL POLICY FOR DE-RISKING

As important as the above factors have been to influencing Canada's shift in support for industrial subsidies since the Amazon case five years earlier, the public and long-term nature of the IRA's provisions themselves have also likely played a role. Unlike the one-off investments such as Amazon's HQ2 location that tend to be opportunistic and negotiated in secret, the IRA is seeking to accelerate generational industrial transformation in specific sectors on an accelerated timeline. To do so, the legislation makes incentives available to any firms that qualify for the next decade.

Under this scenario, Canadian officials believed they must either match American incentives or standby and watch investment move to the US. To be clear, the level of subsidization being offered by the US is so transformative that it was expected to disrupt investments already planned for Canada, in addition to any greenfield investment (Leblanc & Blouin, 2022). Thus, in Budget 2023, Deputy Prime Minister Freeland set about de-risking Canda's exposure to the US's new IRA subsidies by tabling its own targeted production and capital investment tax credits, with funds earmarked specifically for the Volkswagen deal (Finance Canada, 2023). Yet at that same April 2023 speech in Washington in which Freeland embraced the IRA and its provisions, she also signaled that Canada and its allies could not engage in a subsidy race to the bottom, lest it "deplete our national treasuries and weaken the social safety nets that are the foundation of effective democracies". She went on to indicate that countries must work together to avoid creating a negative spiral in this regard, pointing to the EU's expertise in encouraging investment without triggering corporate subsidy wars (Deputy Prime Minister of Canada, 2023).

Meanwhile, the EU has also responded to the IRA through its Green Deal Industrial Plan, designed to provide targeted support and encourage investment in clean energy, transportation and innovation in the EU. The EU has also created flexibility to allow its member states to develop their own time-limited national funds in response to stimulus measures adopted by competitors such as the US, China and others (European Commission, 2023a). Germany is in the midst of developing its own matching incentives to those of the IRA, and to reduce its exposure to China (Bloomberg, 2023). While there are a range of perspectives within the EU regarding China as a competitor versus a security threat and rival, both the EU and Germany view it as essential to de-risk their supply chains from China's monopoly on critical minerals, its state-sponsored forced technology transfer by foreign companies, and embedded carbon in its exports (Bond et al., 2022; Dempsey, 2023; European Commission, 2023c).

For its part, Volkswagen has also been de-risking its own corporate growth strategy, both for North America and China. By establishing its EV presence in both Canada and the US, VW can reduce its exposure to unpredictable political decisions by future governments in either country. For example, there is a realistic potential that the US could eventually impose national security export controls on raw materials used to make EV batteries, as it has done on semiconductor components to China (Beattie, 2023; US Commerce Department, 2022). As a number of manufacturers including Volkswagen locate different aspects of their production process across USMCA countries, it also encourages North American governments to reduce border delays for traded goods and components.

The North American plants are part of Volkswagen's plans to offset Volkswagen's declining market share in China: its sales in China have dropped consistently since 2019 as consumers have shifted to domestic brands. In addition, supply-chain challenges including concerns about forced labour in Xianjing and rising energy costs have increased the risks to Volkswagen of operating in China (Boston, 2022; Cheng, 2022). VW's plan to establish more manufacturing capacity in North America is consistent with localization trends among global auto brands such as Toyota, Hyundai and Kia for the last decade. In the post Covid-19 world where supply chains are shortening, where energy and environmental costs associated with shipping large items are high, and where tariff-free treatment is essential to competitive pricing, the trend to 'build where you sell' has grown even further (Arthapan, 2018). VW has confirmed its intention to sell the vehicles and batteries manufactured in North America within the USMCA region.

As Canada and Germany experiment with friend-shoring, they can also work constructively to ensure the trend does not favour only the interests of rich countries led by the US. For while many countries are clear about who the US's 'friends' are, and even its 'adversaries', they are far from certain about the status of the rest, those 'in-between' countries, as Deputy Prime Minister Freeland awkwardly referred to them in October 2022 (Deputy Prime Minister of Canada, 2022). Furthermore, after several years of US tariffs on China, there is little evidence that companies who leave China are reshoring manufacturing to the US, or even nearshoring to countries such as Canada. Instead, companies leaving China are typically remaining in the Indo-Pacific and moving to other low-cost jurisdictions such as Vietnam and Malaysia which have mixed records on human rights, societal freedoms and carbon emissions (Bown, 2022; Dollar, 2023).

Thus, it is important to consider how supply chain components from such countries will be treated in a friend-shored trading future. For, if they cannot see their place in global value chains with western trading partners, China will make room for them on its terms. In this way, cooperative efforts by Germany and Canada to advocate for the inclusion of emerging economies such as Indonesia in critical mineral supply chains, and in Chancellor Scholz's climate club concept, are positive and forward looking (Press and Information Office of the Federal Government, 2022, 2023).

CONCLUSION: WHAT IS GOOD VALUE IN A FRIEND-SHORED CONTEXT?

In pure economic terms, the Volkswagen investment represents a huge gamble for Canada and the company. Yet, in this broader geopolitical context of uncertainty, attempts to evaluate the investment on its economic merits alone are both naïve and impractical. Instead, the project must be considered in relation to these broader factors and US securitized trade policy. For these reasons, it is simply too early to determine whether the billions in promised subsidies by Canada represent a worthwhile investment. Much about the investment remains uncertain and the bulk of subsidies will not flow until at least 2028 after the plant is operational. Slight changes in any number of assumptions underlying the forecasting model for the investment will influence the case for government support, from job numbers and production volumes to the competition between EVs and hydrogen as future energy sources. In addition, a future change in political leadership in either the US or Canada may impact the level of subsidies offered under the deal.

Canada's close geographic and trade relationship to the US has led its political leaders to determine that they must engage in targeted projects to stimulate transition to the green economy while avoiding job losses to the US due to the IRA's incentives. Yet in the face of great uncertainty, it is vital that Canadian officials have inserted a series of relief valves and parachute clauses into the contract with Volkswagen to protect taxpayers, should the entire experiment be a bust. At the same time, now that Canadian governments have resolved to invest, success depends on their willingness to fully commit and help accelerate the approval processes that will secure future industries in Canada. In doing so, governments may soon find that cutting cheques to attract companies was the easy part.

Just as it is too early to judge whether the Volkswagen investment represents a good one for Canadians or Germans, it is also too soon to determine the long-term prospects for the return of industrial policy among western countries. As the Washington Consensus that embraced globalization, free markets, and liberalized trade comes to an end (The White House, 2023), we are in the midst of the transition to a replacement model. During this period of sandbox experimentation with alternatives, middle power countries such as Canada and Germany should avoid becoming overly exposed to the big industrial policy experiments underway.

In the meantime, there is value in middle powers such as Germany and Canada increasing their partnerships with one another during this transition period, thereby avoiding conferring even greater concentration of power, resources and technological advantage to either China or the US. As globalization fractures the planet along regional lines, economic partnerships such as those between Germany and Canada can serve as the glue helping to hold the pieces together. In addition, stable democracies such as Canada and Germany should continue to highlight the advantage of their societies for corporate investment beyond the subsidy race. Canada's clean electricity, publicly funded health care systems, and access to skilled labour – including openness to immigration – demonstrate strategic advantages for Canada. German engineering strength, its education and skills training system, and its science and innovation ecosystem are attractive to advanced science, engineering and manufacturing firms. Canada and Germany's broader societal assets have taken decades to build at significant cost to taxpayers, and should not be pocketed as preemptive concessions by companies seeking to invest.

Finally, the Volkswagen case offers just one example of new industrial partnerships being formed between a German company and Canadian governments with the active support and encouragement of the German government. There will continue to be additional opportunities for economic cooperation moving forward, especially since Germany's ratification of CETA last year. Thus, while both countries will continue to be most strongly influenced by their regional contexts in North America and Europe, this transatlantic partnership offers a good example of how like-minded middle powers can use friend-shoring to enhance their mutual security and resilience while also de-risking their exposure to larger, unilateral players.

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