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GEOPOLITICS OF THE INFLATION REDUCTION ACT

GROUP C3

Mira Bawadekji – 3296581

Barthélemy Gadret – 3224778

Victoria Gandy – 3298360

Marco Trentanni – 3088764

Jesus Edel Castellanos Carranza – 3296190



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1. Introduction

This paper aims to analyze the impacts and implications of the Inflation Reduction Act and to understand the geopolitical risks and opportunities that could be in play. Our research is supported by an interview we have conducted with Professor Michael Spence, Canadian-American economist and Nobel laureate.

The Inflation Reduction Act (IRA), enacted on August 16, 2022, is a series of legislative laws that mark a significant milestone in the United States' new industrial policy and its commitment to fighting climate change. Contrary to what its name suggests, it has little to do with inflation, especially in the short term. In fact, it is the largest US investment (approximately US\$370bn) in the history of the world, especially in clean energy, aligning with the country's commitments under the Paris Agreement. "It is essentially a set of incentives that amount to subsidies to attract investment in various aspects of the climate change agenda, energy efficiency, technology (...)" (Spence interview, 2024). It provides incentives both on the demand and supply side of the economy with up to US\$216bn in corporate tax incentives and US\$43bn tax cuts for consumers as well as US\$82bn of grants. These tax credits and other financial incentives cover a vast array of green energy production such as solar panels, wind turbines, batteries, electric vehicles, inverters, the extraction and refining of critical minerals, and others (Mazzocco, 2022).

The IRA is born in the context of an urgent need to reduce greenhouse gas emissions globally. Additionally, deteriorating relations between the US and China, characterized by economic competition and geopolitical shifts, have made clear the importance of reshaping the US industrial strategy and competing with China's dominance in critical supply chains for green technology. Furthermore, domestic concerns about inflation have heightened the urgency for action. Therefore, the IRA aims to position the US as a major actor in the fight against climate change by incentivizing domestic manufacturing, technology production and innovation. It seeks to reduce US dependence on other countries and rebuild its industrial capacity to compete with China. The motives of such a policy are controversial and widely debated but "whatever the defects in the IRA are, it's probably better to have the United States with the central government involved in climate change agenda than the alternative, which is being out of it completely (...) if it's compared with doing nothing, then it's better" according to Prof. Michael Spence.

The IRA utilizes various means funded by the federal government to achieve these goals. It draws in investments through industrial, climate, and trade policies including the Infrastructure Investment and Jobs Act and the CHIPS and Science Act. Tax credits, loans, and grants are among the mechanisms employed. In order to access funds, there is no one-size-fits-all approach:

- National firms should present their project as a solution to issues agreed on by most US voters: reshoring jobs and countering China’s grip on critical supply chains. There remain partisan divides on decarbonization;
- States have differing approaches to the environment, with some like California more receptive to communications linked to decarbonization, while others will react poorly;
- Local communities engaged by highlighting the economic and employment benefits of a project is critical. With many local groups taking a “not in my backyard” starting stance to manufacturing plants, firms will need to work hard to bring local communities on board.

The IRA is facing remarkable criticism about its motives, efficiency and impacts. Many are skeptical about the fact that the US took a stance to do things in a non-cooperative way, some view the IRA as a form of green nationalism or even protectionism. Others seem to be considering it as a shift from the “market knows best” approach in the competition against China. Moreover, there is a debate about whether cooperation would be more effective in addressing climate change, especially considering China’s pivotal role as a supplier in crucial sectors. However, if protectionism gains momentum - with the US, China, EU, and others moving towards closed markets - it could lead to a trend of “slowbalization” in the coming years, hindering the diffusion of low-cost clean technologies across borders.

The next paragraphs explore the context and implications of the IRA on China, the European Union, and Latin American countries. We decided to focus on these regions of the world as they tend to be those most impacted by this policy. They analyze the main sectors impacted, provide recommendations, and discuss considerations regarding future geopolitical relations.

2. China and IRA

As the IRA unfolds, it becomes evident that its objectives extend beyond climate goals, encompassing strategic economic interests and trade dynamics challenging China’s dominant position in critical sectors.

2.1 China’s rise and IRA’s objectives

One cannot stress the motivations behind the IRA without mentioning the economic competition in which the US and China are engaged. Since the entry of China into the World Trade Organization (WTO) in 2001, the equilibria of global trade have been disrupted. China originally built its manufacturing sector on cheap and labour-intensive goods that attracted multinationals from all around the world. Yet, China’s booming economy has been shifting from low-value-added industries to capital-intensive and high-technology goods. This historical shift has driven greater attention among historical industrial nations. Rich countries are becoming increasingly dependent on trade with China, in particular the US. They had a considerable trade imbalance with China in 2023 of up to \$280bn dollars (United States

Census Bureau, 2024). In total, the American economy is thought to have lost \$1m in manufacturing jobs between 1997 and 2011 because of China's integration into the global trade system (The Economist, 2024). China's figures are impressive. It has exported more than 5 million cars in 2023, more than any other country, and this could be only the beginning as China's cheap EVs will flood the European and American markets (China's biggest carmaker, BYD, sold 0.5 million electric vehicles (EVs) in the fourth quarter of 2023) (Ibid). Reaction from the US intending to curb the negative dynamic for the US manufacturing sector did not await Biden's presidency. Trump had allegedly already started a trade war with China by considerably increasing tariffs on Chinese imports and is thinking of going further if he gets elected in 2024, although the previous trade war had rather questionable consequences for the US (Stein, 2024). Protectionist measures did not succeed in tackling the increasing American dependency on Chinese imports. Besides, China itself is not exempt from criticism as it has for long disregarded the WTO rules of free trade by building its state capitalism where the government and state-owned banks can pour subsidies, equity injections and concessional loans into the economy which considerably distorts the global market.

2.2 IRA potential impacts on China's economic sectors

Despite ambitious objectives in terms of GHG reduction (the government aims for a 40% cut by 2032) (Financial Times, 2023) motivated by the delay of the US in terms of per capita emissions (Spence interview, 2024), the IRA does not aim solely to tackle climate issues. Biden's administration seemingly implemented this package to favor domestic production and respond partly to the growing Chinese dominance in many highly strategic sectors for the energy transition. Before considering the potential disruptions caused by the IRA on China's economy, it is important to stress China's near monopoly on the clean energy and battery markets, which are the main markets targeted by the act.

Indeed, China dominates the mid and downstream value chain of batteries and is a major producer and processor of rare earth elements and other key materials (lithium and copper) (Tsafos, 2022). It produced over 80% of global anodes, electrolytes and LFP precursors in 2021 while its capacity share of lithium processing averaged 58% in 2022 (Chu and Lee, 2021). In terms of finite products, China produces 3/4 of all lithium-ion batteries (Nuccitelli, 2023). This advance enabled China to sell more than 3.3 million electric vehicles on its domestic market in 2021, this is more than the entire world combined, a study says (Mathiesen and Coleman, 2022). Similarly, in the renewable market, China is well ahead of any other country in the world, it is home to 85% of solar cell manufacturing capacity (Mazzocco, 2022). This supply glut has caused the prices to drop by 50% in 2023 and US imports to surge.

As a result, the IRA attempts to challenge this lead through several mechanisms. For instance, the "Clean Vehicle Tax Credit" offers consumers up to US\$7,500 for the purchase of a new electric vehicle (EV), US\$3,750 per each requirement satisfied: 1) the car is produced in North America, 2) the battery and raw materials used in the production must satisfy local content requirements. As shown by Figure 1, a large share of critical minerals must come directly from

a country with a foreign trade agreement with the US or must have been processed in the US, and this is increasing over the next years. These specific requirements on the supply chain underline the willingness of the American authorities to decrease their dependence on Chinese components and favor other partner countries in their supply chain. However, doubts have arisen regarding the eligibility of EVs for US tax credits due to China's dominant position in the supply chain of key battery materials. With China controlling over 99 per cent of the global market for battery-grade graphite and 69 per cent of the market for synthetic graphite used in battery anodes, South Korea has warned that EV manufacturers may struggle to meet the criteria for the US subsidies (Davies and Jung-a, 2024).

In the long run, besides its climatic ambitions, the IRA aims both to bring back on US soil strategic firms and industries for the energetic transition and secure the supply chain of some key materials. This willingness to regain control over the supply chain was already kicked off with the Chip and Science Act right before the IRA, which plans to invest \$52bn dollars to incentivize research in semiconductor and production of the very strategic chips (Financial Times, 2023) and "has components of it that is designed to prevent China from being the dominant player" (Spence interview, 2024). The energy security policy that the IRA is pursuing will nonetheless struggle to disrupt China's clean energy production in the short run due to the significant head start that it has taken. Indeed, China has been pursuing similar public policies for longer, by granting significant public subsidies and other discriminatory trade practices to encourage domestic production of clean energy and electric vehicles which Professor Spence called "aggressive state intervention". But IRA is a long-term strategy and could well participate in relaunching industrial output in some states that had suffered from deindustrialization. Indeed, the US put a 14% tariff on solar component imports from most countries that rise to 25% for goods made from China as well as anti-dumping and countervailing duties on Chinese solar panels that exceed 200%. So far, Chinese solar panels remain cheaper than US-made solar panels both using cells produced in the US and South East Asia partner countries. The price gap is around 8 cents (US\$) per watt between a solar panel fully made in the US and those imported from China, even after IRA subsidies (Chu and Sevastopulo, 2024). Figure 2 stresses that in the short run, China should remain in a quasi-monopolistic position regarding solar energy production. Similarly, the US cannot get out of China's dominance in the blink of an eye because of the dominant position of China on the whole supply chain. On the contrary, American companies such as Ford sign partnerships with Chinese battery' producers to lower the final cost of their EVs. These partnerships also come with specific rules such as the licensing of technology and access to intellectual property which could ultimately enable American firms to relocate the whole supply chain in the US (Brunelli, 2024).

2.3 China-US, a new trade war?

Thus, the IRA stems from a new ideological ground in the US, the fact that free trade is not a zero-sum game anymore but rather a game with losers and winners. Beyond just setting

protectionist measures, the IRA and the latent discourse of US politicians on Chinese competition are raising concerns within the American population. As a result, Chinese firms engaging in joint ventures in the US to circumvent the IRA are sometimes facing increasing distrust from workers themselves (Chu, 2024). China should not worry in the short term because of the considerable lead it has taken and of its impressive industrial capacities (“incremental green energy production in China is bigger than the next 8 players added up” according to Prof. Spence) but could well respond by increasing tariffs and therefore escalate into a new trade war that will eventually penalize consumers throughout the world, although this hypothesis is not acknowledged by all because of the “many common interests” (Spence interview, 2024) between major powers.

2.4 Recommendations

Despite opening to the world economy in the early 1980s and its subsequent entry into the WTO in 2001, China kept a planned economy where the border between the private and the public sectors is rather blurry. As a result, the Chinese government has had the political and financial abilities to implement “central planning subsidies” (Spence interview, 2024) and to support its production in a very Keynesian way through state-owned banks and enterprises. Hence, in the short run, China will not need to react to the IRA as it has already implemented financial mechanisms (public subsidies, tax credits...) that make the goods they produce cheaper than in the US. Nonetheless, there are a few ways in which China could respond to the IRA:

1. **Encourage Chinese firms to export more.** Indeed, as Professor Spence mentions, China’s growth is slowing down partly because of its low domestic demand. Chinese firms should therefore turn to manufacturing exports as a “growth engine” (ibid). With the lead they have taken, Chinese firms have a significant comparative advantage in terms of cost of production, regardless of the IRA’s measures;
2. **Chinese firms must also revise their stakes in foreign firms.** This will enable firms to circumvent the anti-dumping and countervailing duties of the IRA which can also apply to Chinese firms operating in other countries. To benefit fully from the IRA tax credit, EV companies cannot include minerals or materials produced by companies with more than 25% ownership by foreign entities of concern (China is one of them) (Brunelli, 2023). Thus, Chinese firms holding stakes in foreign entities must act accordingly to benefit from those tax credits;
3. **Develop partnerships with American firms to bypass the IRA.** For instance, China’s Contemporary Ampere Technology (CATL), the world’s largest battery producer, made a partnership with Ford under specific rules that enable the firm to benefit from the IRA subsidies (Brunelli, 2023). Because of China’s cleantech dominance, Chinese firms should not worry about the effects in the coming year of the IRA, especially because American firms need the technologies produced in China in their supply chain. Knowing that, Chinese firms should develop partnerships with US-based firms to secure the demand in the long run.

Overall, China has no reason to regard the IRA as a threat in the short term as it holds more than half of the world's manufacturing capacities in almost every clean tech sector (Dlouhy, 2024). The measures provided in the IRA will therefore take several years or even decades to considerably disrupt the current equilibria of the market. Yet, the Chinese government should prepare its national companies to produce in a world with increasing competition and rising concerns regarding sovereignty matters.

3. EU AND IRA

With the introduction of the IRA, the European Union (EU) has to question its trading relations as well as its internal challenges. President Macron's blunt comment addressing the IRA as incompatible with WTO norms intensifies the debate on how the EU should navigate its relationship with the US while protecting its own interests.

3.1 IRA impact on EU economic sectors

The implications of the IRA for EU competitiveness are substantial but need to be analyzed on a sector basis: we focus on batteries, hydrogen production, clean energy and EVs.

3.1.1 Batteries

The surge of EVs and the increased substitution of internal combustion engine vehicles with batteries is making the sector quite attractive. According to McKinsey (2023), battery demand is expected to grow annually by about 30 per cent by 2030. The IRA has introduced significant incentives to onshore battery supply chains, aiming to reduce China's grip on the industry. The "Advanced Manufacturing Tax Credit" provides cost support to shave the average production expense for US-made battery packs by nearly 30%, making US batteries globally competitive. After the IRA, costs would be brought even below those currently faced in China, leaving the EU behind with a higher average production cost (Figure 3).

The battery sector is of considerable strategic interest to the EU, especially given the relevance of the car manufacturing industry in the region and its future implications. Continued reliance on Asian batteries and components could put European EV manufacturers at a serious disadvantage vis-à-vis foreign producers that are better placed to secure adequate battery supply (namely Chinese and US EV manufacturers). The IRA should be seen as a wake-up call for addressing this sector to close the investment gap and reduce potential damage in the future. A significant risk arises from the possibility that major players in the sector may be drawn by incentives in the US, reassessing their investment priorities. Tesla has recently decided to review its German investments and focus on the North American market to benefit from the IRA. Northvolt, a Sweden-based battery developer and manufacturer, has also recently chosen to establish an EV battery plant in Canada. The magnitude of the impact would be amplified when considering its effects on the future workforce demand in the EU.

68% of Europe's battery production capacity is at risk, with Germany, Hungary, Spain and Italy facing the greatest vulnerability (T&E, 2023).

3.1.2 Hydrogen production

The clean hydrogen market is currently small but expected to expand dramatically, potentially reaching US\$250bn by 2030 and US\$1tn by 2050 (total addressable market, Goldman Sachs 2022). The IRA makes clean hydrogen very cheap in the US by extending subsidies per kg of clean hydrogen as well as cheap clean electricity needed for production. In short, the cost of hydrogen in the US would drop by 75% and it is expected to reach 0 by 2030 (Figure 4).

Hydrogen and hydrogen-based fuels can help cut emissions in tough-to-clean sectors like heavy industry and long-distance transport. There are also other indirect economic advantages. Since it will be heavily utilized in clean industrial manufacturing, regions leading in the hydrogen field increase their chances of securing a larger market share of future industrial production. The EU is in a good starting point in the clean hydrogen race: in recent years, it has been very active in R&D with EU companies filing more patents than other regions in the world (an average of 29% share of international patenting, IEA 2023). However, so far, the EU provides mostly initial investment support for hydrogen projects, not continuous subsidies to lower the price of hydrogen. In practice, the EU's focus has been on lowering CAPEX, not OPEX. Similar to what we've observed with batteries, there's a risk of the EU lagging behind in the global competition for hydrogen. The IRA could draw substantial investments, potentially establishing the US as the primary destination for hydrogen initiatives.

3.1.3 Clean energy

Regarding other clean energy sources like solar and wind, the IRA lowers costs through various financial supports, primarily the production tax credit and the investment tax credit. However, EU-based companies are expected to continue to serve the EU market without facing particular risks from the IRA. Specifically, solar and wind energy are not easily tradable due to the large iceberg costs associated with transportation. Moving operations to the US would essentially entail forfeiting their EU market share, which is why EU producers are unlikely to relocate from the EU area (Gros et al., 2023). As far as equipment manufacturing is concerned, the risk could be that certain European manufacturers of clean energy equipment relocate to the US to take advantage of the IRA. An example is the global power giant Enel which recently confirmed the construction of a US\$1bn solar equipment plant in the US state of Oklahoma.

3.1.4 Electric vehicles

The automotive industry is the backbone of the European economy, accounting for over 7% of the EU's total GDP (ACEA, 2023). In particular, in 2022, one in five cars sold in the EU was an electric vehicle. The IRA extends existing purchasing incentives to accelerate the

deployment of electric vehicles (EVs) in the US (see paragraph 2.2). North American-produced cars qualify for a US\$7,500 subsidy, equivalent to a 15% tariff equivalent for a US\$55,000 car or 10% for a US\$80,000 car (price limit). However, the fact that the car is made in North America is only a first condition. Meeting local content thresholds for batteries and materials is necessary to receive the two US\$3,750 subsidy halves. This incurs extra costs not faced by European-produced cars, while there is also a possibility that no EV manufacturer will be granted this, considering China's dominance in the EV supply chain (see paragraph 2.2). As a result, the actual disadvantage for foreign producers is less than US\$7,500, around 10-15%, depending on the added expense of sourcing locally. Additionally, most European EVs exported to the US wouldn't qualify for the subsidy due to their luxury positioning (Hüther and Matthes, 2023). Therefore, the sector is primarily impacted by the factors discussed regarding batteries rather than direct car sales. Car manufacturers are not concerned about selling their luxury EVs in the US, but they face the risk of future competitiveness loss due to advancements in US battery technology and consequent car development.

3.2 EU's response so far

The Green Deal Industrial Plan (GDIP) represents the EU's strategy in response to challenges posed by the IRA and other geopolitical developments. Its main objectives include boosting technological advancements, manufacturing and production of net-zero products and energy supply over the next decade. This is aimed at securing high-quality jobs and maintaining the competitiveness of European industry, while also increasing resilience and reducing dependencies in critical supply chains (particularly in energy-related sectors). The GDIP complements efforts under the European Green Deal and REPowerEU, the latter aimed at reducing reliance on Russian fossil fuels and accelerating the green transition. The GDIP is built on four pillars: establishing a simplified regulatory environment, facilitating access to financing for the clean tech sector, enhancing workforce skills, and promoting open trade to strengthen supply chains. The Commission proposed the Net-Zero Industry Act to enhance the regulatory framework for European strategic projects, along with the Critical Raw Materials Act to address challenges related to secure and sustainable access to critical raw materials. While the size, mechanisms and time horizons of these policies differ significantly from the IRA, the EU is responding to the ongoing industrial and technological competition. However, it remains committed to openness and international trade.

3.3 Recommendations

It is premature to discuss potential weaknesses in the implemented policies, as many are still under discussion or awaiting introduction, and the IRA itself may undergo future revisions. However, we propose four main actions that should be considered in the EU policy framework to reduce its economic vulnerabilities along the whole supply chain and remain competitive in the global market:

1. **Focus on key sectors.** An EU response should focus on those sectors in which the EU has a realistic chance of gaining international competitiveness. Our analysis suggests that this includes rising industries such as hydrogen and batteries but excludes commodified goods such as solar panels that the EU can expect to import from a range of sources, reducing the supply concentration risk. Making hydrogen affordable will be essential for keeping other downstream sectors competitive and the EU is already in a good position to lead the industry. Similarly, battery production will be a crucial source of value-added in the automotive sector.
2. **Funding at the EU level.** “The extreme decentralization of the fiscal side of the European structures. That's the problem. You don't have to centralize everything, but if you want to have a big impact, then you need to centralize the investments” (Spence interview, 2024). The financial support must be made at the European level with a common budget since not all Member States might have the required investment capacity. Joint support from the EU level would avoid economic divergence and harness the efficiency gains of the single market. The commission proposed an “EU Sovereignty Fund” but the scope, timing and financing sources remain unclear as it also faced strong opposition among the members. Moreover, incentives and tools should be set concerning both CAPEX and OPEX.
3. **Focus on external trade strategies and partnerships.** Diversification is key to reducing the exposure from China and expanding economic connections. The EU should sign new Free Trade Agreements (FTAs), such as the agreement with Rwanda and ongoing discussions with Mercosur for an Association Agreement. The EU would have the opportunity to diversify its critical raw materials imports and strengthen its economic security as Argentina and Brazil are mineral-rich countries and are partners with Chile and Peru. In terms of volume, the EU's exports to Mercosur were €45bn in goods in 2021 and €17bn in services in 2020 (European Union, 2024).
4. **Impose concentration limits on European firms' imports.** European businesses currently import 78% of their lithium needs from Chile and over 98% of the EU's Rare Earth Elements needs from China. To address this, the EU should consider implementing diversification requirements, including setting maximum thresholds for imports from a single foreign country and translating them into concrete regulations (Findeisen and Wernet, 2023). Additionally, the EU is overly reliant on importing many key clean tech goods, particularly from China. The heavy reliance on China for solar panels is a clear example: being commodified goods, the EU can source them from other countries such as India to reduce its dependence on Chinese suppliers.

3.4 EU-US, strengthening alliance or increasing geopolitical tension?

The EU viewed the election of Biden as a significant relief from the openly aggressive stance of his predecessor towards the EU. While Biden may adopt a more moderate tone, he remains committed to the 'America First' approach of his predecessor. However, by maintaining open communication channels with the US and directing investments towards key sectors, Europe

can mitigate the negative aspects of the IRA while still leveraging its benefits. "Under plausible scenarios, the increase in market size due to the IRA will be large enough to offset the negative impact of the local content requirements, allowing EU producers to significantly increase exports to the US" (Gros et al., 2023). Although no negotiations on the IRA have been finalized, the US does not appear to be heavily focused on reducing reliance on the EU, but rather primarily on China. In the future, positive opportunities for the EU could arise through partnerships like those established between the US and Canada or Mexico. Rather than triggering a trade war, the expansion of green industries in the EU and the US may lead to cooperation between the two, facilitating the green transition, as suggested by Prof. Spence: "the best outcome for this would be if the United States and Europe sort of work together to try to figure out how to make sure that climate doesn't have adverse competitive effects on anyone". Ultimately, the EU may benefit from increased demand as the US and other countries reduce their reliance on China.

4. IRA impact on other countries

Countries and companies worldwide are looking for opportunities to continue growing in the US market. Across many sectors, companies are looking for strategies to take advantage of these tax benefits. South Korea, with Samsung, developed an entire line aligned with the IRA to reduce energy. Other cases are Woodside and Fortescue, Australian companies that are accessing incentives for hydrogen production. A thorough analysis would be necessary to assess the specific impacts across different regions worldwide. However, for the purpose of this discussion, we will focus on Latin America. The advantageous geographical proximity of Latin American countries to the US presents both opportunities and challenges. For these developing countries, which have some of the most abundant and cheapest sources of renewable energy in the world, the IRA could either serve as a catalyst for market entry or pose barriers to competitiveness in the US market.

4.1 Latin America

According to José Goldemberg, former Brazilian environment minister and minister of science and technology, "The act is entirely directed to activities in the United States, but it will influence the policies of countries in Latin America and the Caribbean (LAC), which will benefit from the technological advances resulting from heavy investments in clean fuels, vehicles and clean electricity. Of particular interest to LAC countries are 'clean fuels' for which US\$8.6bn in tax credits are in the act". Latin American countries could therefore also benefit by enhancing their competitiveness, accelerating their energy transition, and improving climate resilience. However, for that to be the case, steps need to be taken to transfer this knowledge and facilitate greater trade integration in areas like energy technology and climate-smart agricultural products. The emphasis on domestic manufacturing and supply chain resilience could create opportunities for local industries to develop their activities, attracting investment and stimulating economic growth. For example, this is critical for projects located

in remote or isolated areas that are largely disconnected from existing demand centres, such as the Atacama Desert or Patagonia, and whose easiest path forward is to produce clean hydrogen.

4.1.1 The example of Chile

Chile has a natural abundance of renewable energy and has what it takes to become a potential leader in clean energy production, particularly in solar and wind power. However, the introduction of the IRA and its measures created a significant challenge to Chile's clean energy ambitions. The IRA prioritizes domestic manufacturing and favors sourcing materials from allied countries, potentially diminishing Chile's competitiveness in the global markets and limiting its ability to capitalize on its renewable energy potential and compete on the world stage. But in November 2023, Chilean officials engaged in discussions with the US to leverage the benefits of the IRA in attracting investments in the country's lithium sector. Chile, known for its abundant lithium resources - 9.3 million metric tons (Statista, 2023) - sees an opportunity to capitalize on the IRA's provisions to boost its lithium industry. By aligning with the IRA's objectives, Chile aims to attract investment from US companies and strengthen its position in the global lithium market.

4.1.2 The example of Mexico

Mexico is an example of how it has become an answer for multiple companies while trying to find a solution for the automobile industry and the IRA legislation. In 2023, Mexico received a total investment of US\$36 billion from foreign investors (Gobierno de México, 2024). 41% of the total manufacturing investment went into the automobile industry. Tesla was among the top investors, investing more than US\$5 billion after carefully selecting Mexico to develop a facility and compete with countries such as China, Germany, and others. This example is a precise observation of how IRA changes the behavior of companies to gain the tax benefit implied by the IRA and benefit a developing country. Other top foreign companies, from automotive to energy and distinct sectors investing in Mexico in 2023 that could benefit from IRA, are Toyota, BMW, Mercedes Benz, Nissan, Ford, GM, Bosch, Termium, Sempre Energy, TC Energy, British Petroleum, Iberdrola, Samsung, and LG (Gobierno de México, 2024).

4.1.3 Recommendations

Latin American countries face several risks, putting them in a dangerous position and limiting the positive impacts the IRA could have on them:

1. **Fragmentation of Energy Policies:** the fragmentation of energy policies across Latin American countries is a significant barrier to bi-regional cooperation;
2. **Fossil fuels dependency:** this dependency poses environmental and economic risks, as well as vulnerability to fluctuations in global energy markets.

By adopting a proactive approach and leveraging the potential synergies, Latin American countries can navigate the effects of the IRA and use it to their advantage for economic

growth and sustainable development. Taking the example of Chile, Argentina and Peru which have great access to lithium and copper, they can capitalize on their abundant resources and attract investments from the US that need those critical materials for the production of EV batteries. The EU is already doing so since leaders in Brussels have announced a significant investment package of €45bn in July 2023 to Latin America and the Caribbean, with a focus on accelerating the transition to clean energy. The investment package covers a wide range of projects, including critical minerals extraction and a focus on hydrogen production for the energy transition.

Latin American countries need to begin taking steps in order to develop their industry and use their critical materials. The question relies on whether it will be possible to build a new trade model in the long run. This would imply that the US and the EU fund the clean transition in exchange for critical minerals from developing countries, enabling them to keep some power, control, and leverage over their resources and accelerate their development in the meantime. For this to be effective, countries of Latin America also need to work on the fragmentation of energy policies across the region, with varying levels of commitment to renewables and differing regulatory frameworks.

5. Conclusion

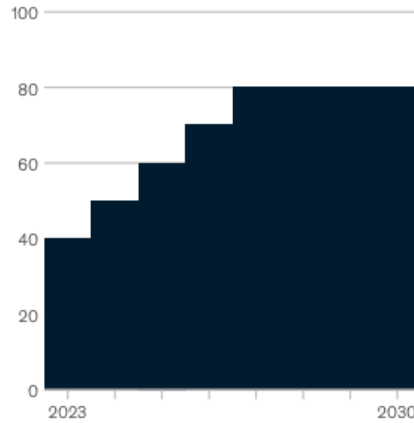
Besides climate considerations, the IRA could perhaps mark the end of the Washington consensus that promoted trade liberalization and minimalist state intervention in the economy as the condition for growth and prosperity. Indeed, the American strategy is arguably driven by matters of national sovereignty and energy security. It also aims to respond to the significant advance taken by China in green energy production which is strongly encouraged by the Chinese government through several mechanisms. The EU and other major actors are seemingly changing their strategy regarding the role of governments and public subsidies in the market to limit the expected negative consequences of what is viewed by some as an aggressive protectionist policy. Yet, we cannot assert with confidence that the world is undergoing a radical shift from unregulated free trade to closed regional markets, or that we are witnessing the twilight of “the end of history” that was theorized by Francis Fukuyama after the fall of the USSR. Rather, it appears that global powers are becoming more cautious about their economic sovereignty in an increasingly unstable world but have too much to lose to turn their backs on the rest of the world, especially as the supply chain needed for the green transition involves technologies and raw materials from all regions of the globe.

6. Appendix

Figure 1

The Inflation Reduction Act includes a modified tax credit for electric vehicles and batteries—including new content requirements.

Share of critical minerals for EV battery production extracted or processed in a country with FTA with US,¹ %



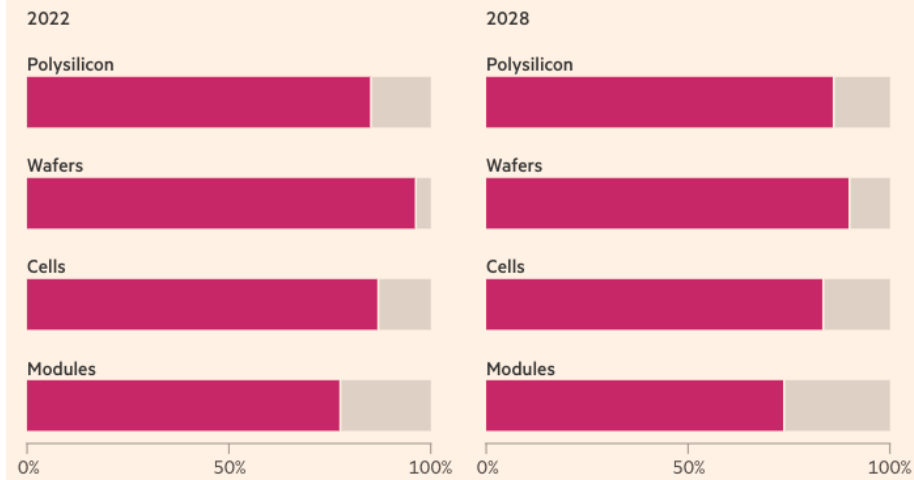
Source: McKinsey (2022)

Figure 2

China's grip on solar supply chain expected to persist through the decade

Share of supply chain by component

China Rest of the world

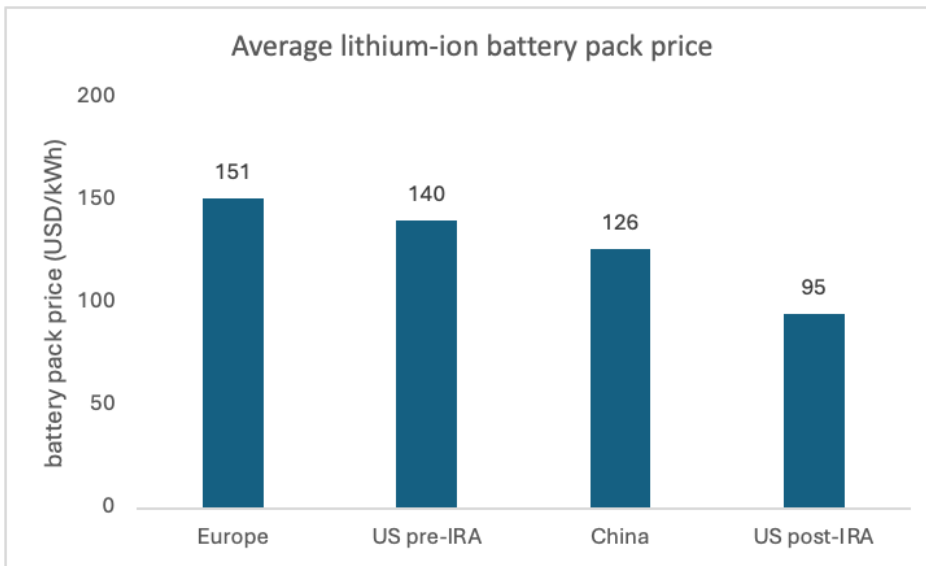


Source: International Energy Agency
FT graphic: Amanda Chu / @amandalan chu

FINANCIAL TIMES

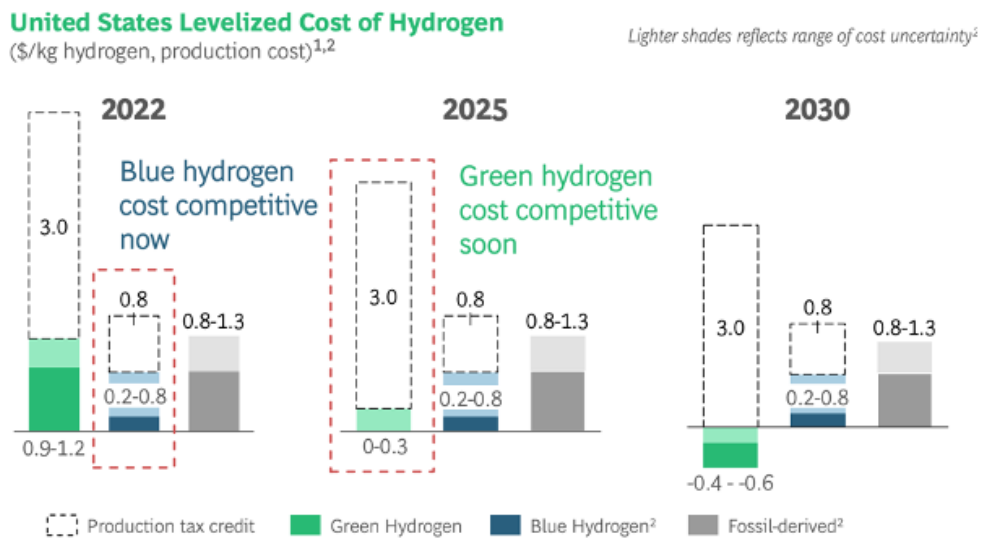
Source: FT (2024)

Figure 3



Assuming US\$45/kWh production tax credit for cells and packs under the IRA in the US
 Source: BloombergNEF (2023)

Figure 4



Source: BCG (2022)

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